

HEBER CITY CORPORATION
75 North Main Street
Heber City, UT 84032
Heber City Council Meeting

February 6, 2024

4:00 p.m. Work Meeting
6:00 p.m. Regular Meeting

TIME AND ORDER OF ITEMS ARE APPROXIMATE AND MAY BE CHANGED AS TIME PERMITS

I. WORK MEETING - 4:00 P.M.

1. Gratitude Award (Trudy Brereton and Kathryn North; Wasatch Behavioral Health - Wasatch County) - *5 min*
2. Review of Tree Subcommittee Recommendations (Melanie Funk, Tree Subcommittee Chair) - *10 min*
3. Harvest Village Development (Part of the Crossings Annexation) (Tony Kohler, Community Development Director) - *30 min*
4. Capital Facilities Master Plan (Russ Funk, Bart Mumford) - *60 min*

II. BREAK - 15 MIN

III. REGULAR MEETING - 6:00 P.M.

1. Call to Order
2. Pledge of Allegiance (Heidi Franco, Mayor)
3. Prayer/Thought by Invitation (Sid Ostergaard, Council Member)

IV. CONFLICT OF INTEREST DISCLOSURE:

V. AWARDS, RECOGNITION, and PROCLAMATIONS:

1. Oath of Office for New Police Officer Jared Fezy
2. Utah Community Forestry Council Award

VI. CONSENT AGENDA:

1. Approval of January 16, 2024, City Council Meeting Minutes and January 18, 2024, Annual City Council Strategic Retreat Meeting Minutes (Trina Cooke, City Recorder)
2. Quarterly Disposition of Police Department Evidence (Jeremy Nelson, Deputy Police Chief)
3. Planning Commission and Audit Committee Nominees (Heidi Franco, Mayor)

4. Resolution 2024-01 Heber Light and Power Board of Director's Compensation (Heidi Franco, Mayor)

VII. PUBLIC COMMENTS: (3 min per person/20 min max)

VIII. GENERAL BUSINESS ITEMS:

1. Fiscal Year 2023 Audit Presentation (Jon Haderlie) - *15 min*
2. Arts Advisory Board TAP Tax Grant Program (Phil Jordan) - *10 min*
3. Justice Court SWOT Analysis (Judge Randy Birch) - *5 min*
4. Code of Conduct and Ethics Form and Training (Jeremy Cook, City Attorney) - *20 min*
5. Monthly Development Report (Jamie Baron, Planning Manager) - *10 min*

IX. ACTION ITEMS: (Council can discuss; table; continue; or approve items)

1. Public Hearing: Ordinance 2024-03 Adopting the Heber City Facilities Master Plan including the Heber City Capital Facilities Plans, Impact Fee Facility Plans, and Impact Fee Analyses and Council Consideration to Adopt (Russ Funk, Bart Mumford) -
2. Approval of Use of Eminent Domain to Acquire Property for a Roundabout on Heritage Farms Parkway (Russ Funk, City Engineer, Jeremy Cook, City Attorney) - *10 min*
3. Ordinance 2024-02 Updating the C-3 Commercial Zone, C-3 Design Criteria and Parking Regulations within the C-3 Zone (Tony Kohler, Community Development Director) - *40 min*
4. Ordinance 2024-05 Removing Section 5.26.045 Notice of Short-Term Rental Restriction (Jeremy Cook, City Attorney) - *10 min*
5. Election of Mayor Pro Tem per Municipal Code 2.08.020 (Heidi Franco, Mayor) - *5 min*
6. Council's Policy & Budget Priorities for Fiscal Year 2024-2025 (Matt Brower, City Manager) - *10 min*

X. COMMUNICATION:

XI. ADJOURNMENT:

Ordinance 2006-05 allows Heber City Council Members to participate in meetings via telecommunications media.

In accordance with the Americans with Disabilities Act, those needing special accommodations during this meeting or who are non-English speaking should contact Trina Cooke at the Heber City Offices 435.657.7886 at least eight hours prior to the meeting.

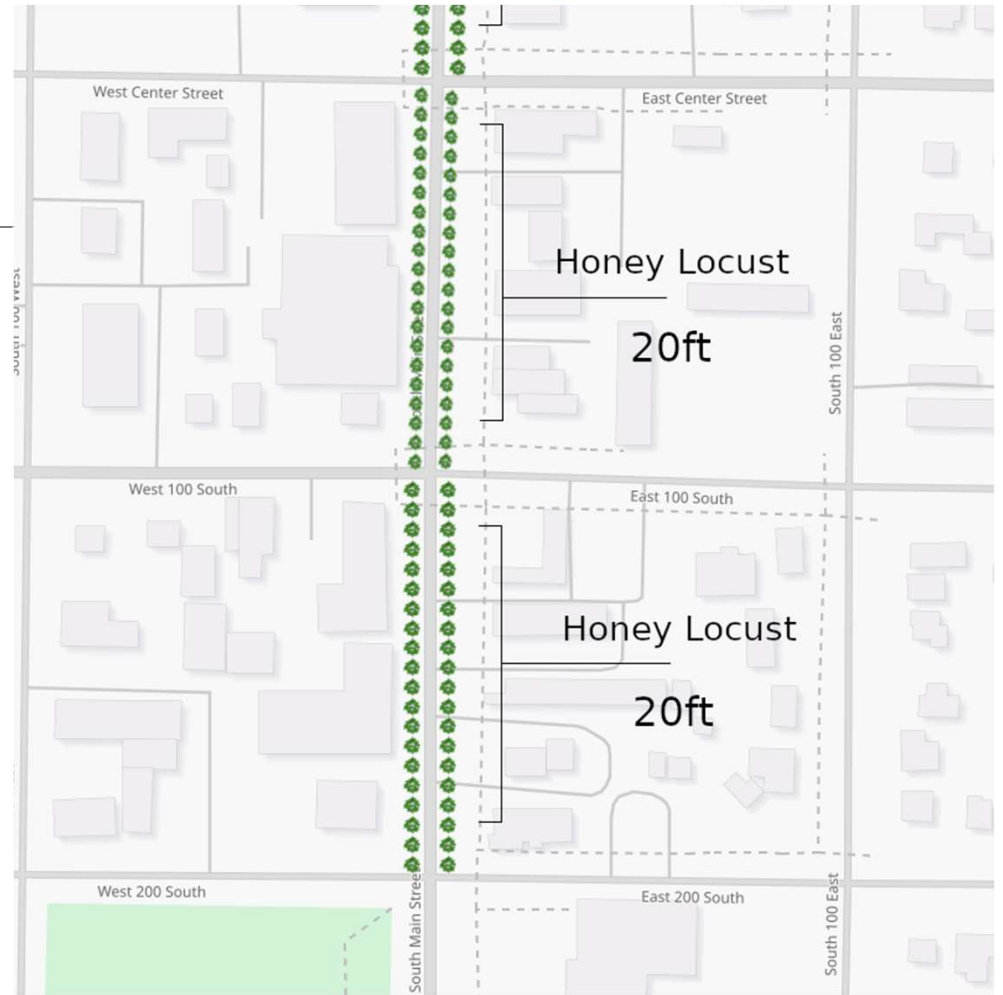
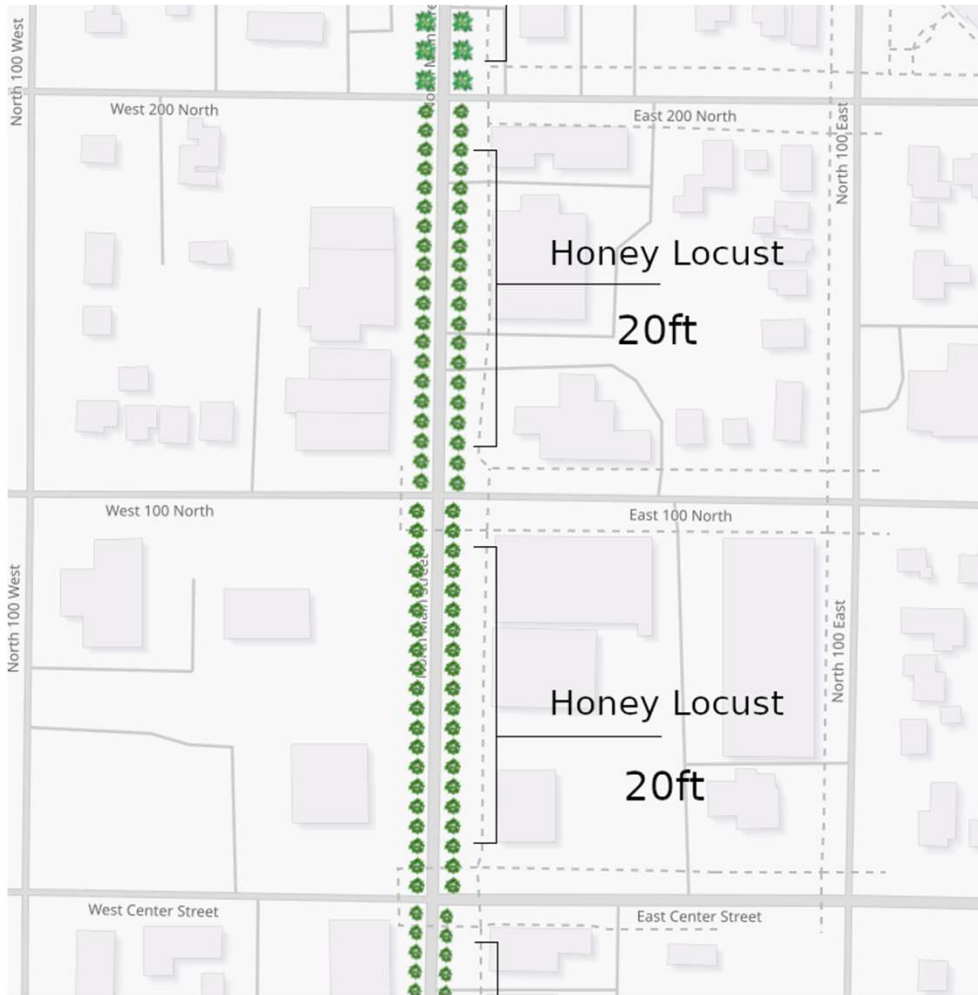
Posted on February 1, 2024, in the Heber City Municipal Building located at 75 North Main, the Heber City Website at www.heberut.gov, and on the Utah Public Notice Website at <http://pmn.utah.gov>. Notice provided to the Wasatch Wave.

Heber City Tree Committee Presentation to City Council

EVALUATION OF OUR CITY FORESTS



















Heber City Council Staff Report

MEETING DATE: 2/6/2024
SUBJECT: Harvest Village Development (Part of the Crossings Annexation)
RESPONSIBLE: Tony Kohler
DEPARTMENT: Planning
STRATEGIC RELEVANCE: Community Development

SUMMARY

RECOMMENDATION

BACKGROUND

DISCUSSION

FISCAL IMPACT

CONCLUSION

ALTERNATIVES

1. Approve as proposed
 2. Approve as amended
-

3. Continue
 4. Deny
-

POTENTIAL MOTIONS

Alternative 1 - Approval - Staff Recommended Option

I move to **approve** the **item** as presented, with the findings and conditions as presented in the conclusion above.

Alternative 2 - Approve as Amended

I move to **approve** the **item** as amended, as follows.

Alternative 3 - Continue

I move to **continue** the **item** to another meeting on , with direction to the applicant and/or Staff on information and / or changes needed to render a decision, as follows:

Alternative 4 - Denial

I move to **deny** the **item** with the following findings.

ACCOUNTABILITY

Department: Planning
Staff member: Tony Kohler, Community Development Director

EXHIBITS

1. CC-02-06-24-Harvest Village-alk



Harvest Village Development

Petitioners: Neil Goldman Andy Dorobek

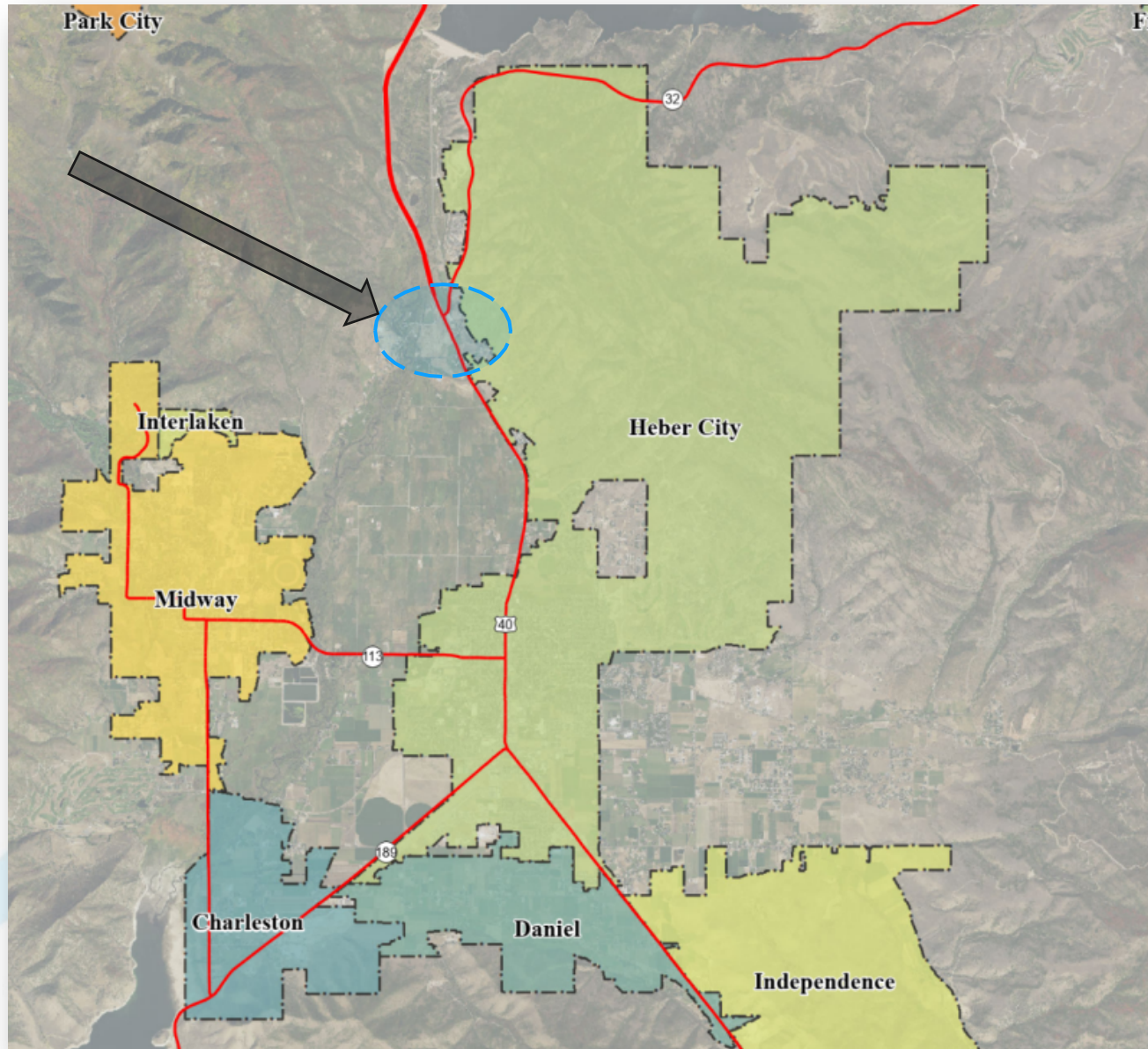
February 6, 2024

Question

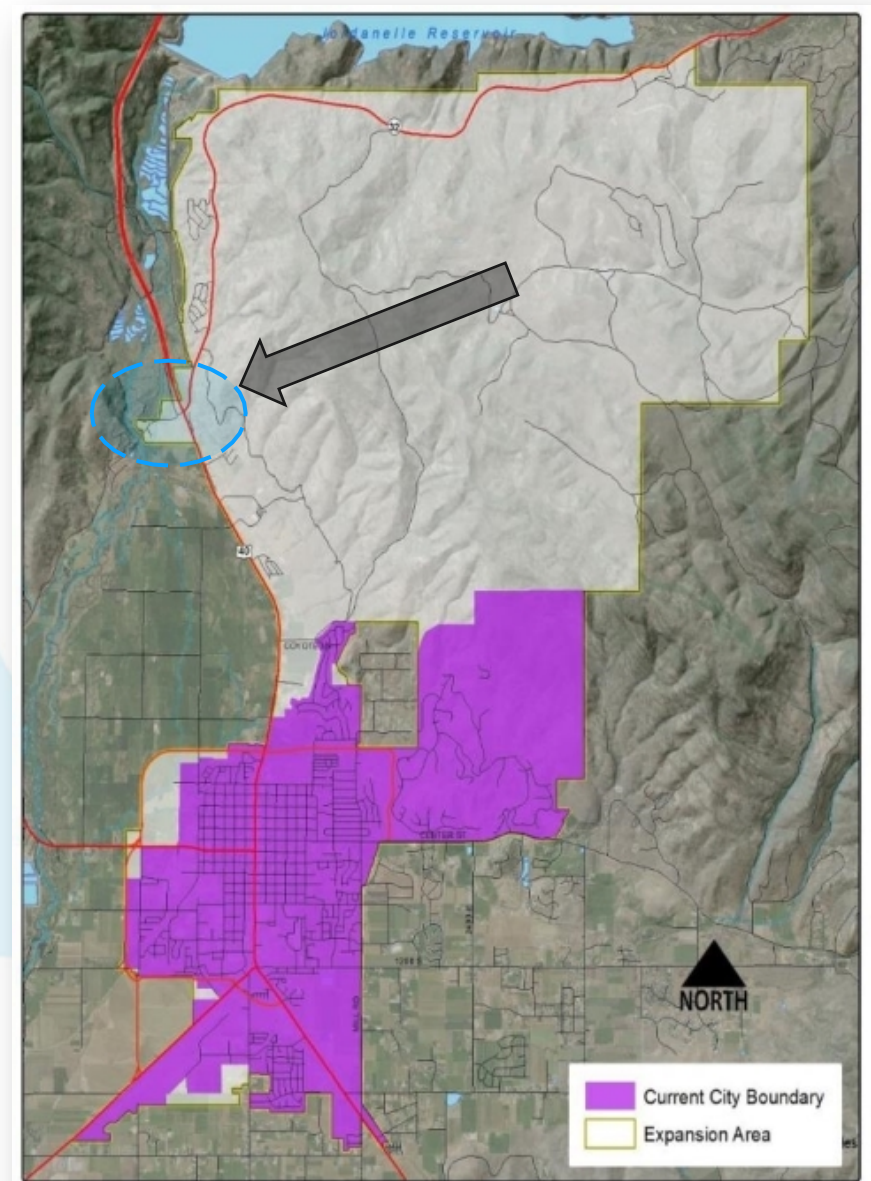
- Should Crossings Annexation be formally considered by the City?

Location

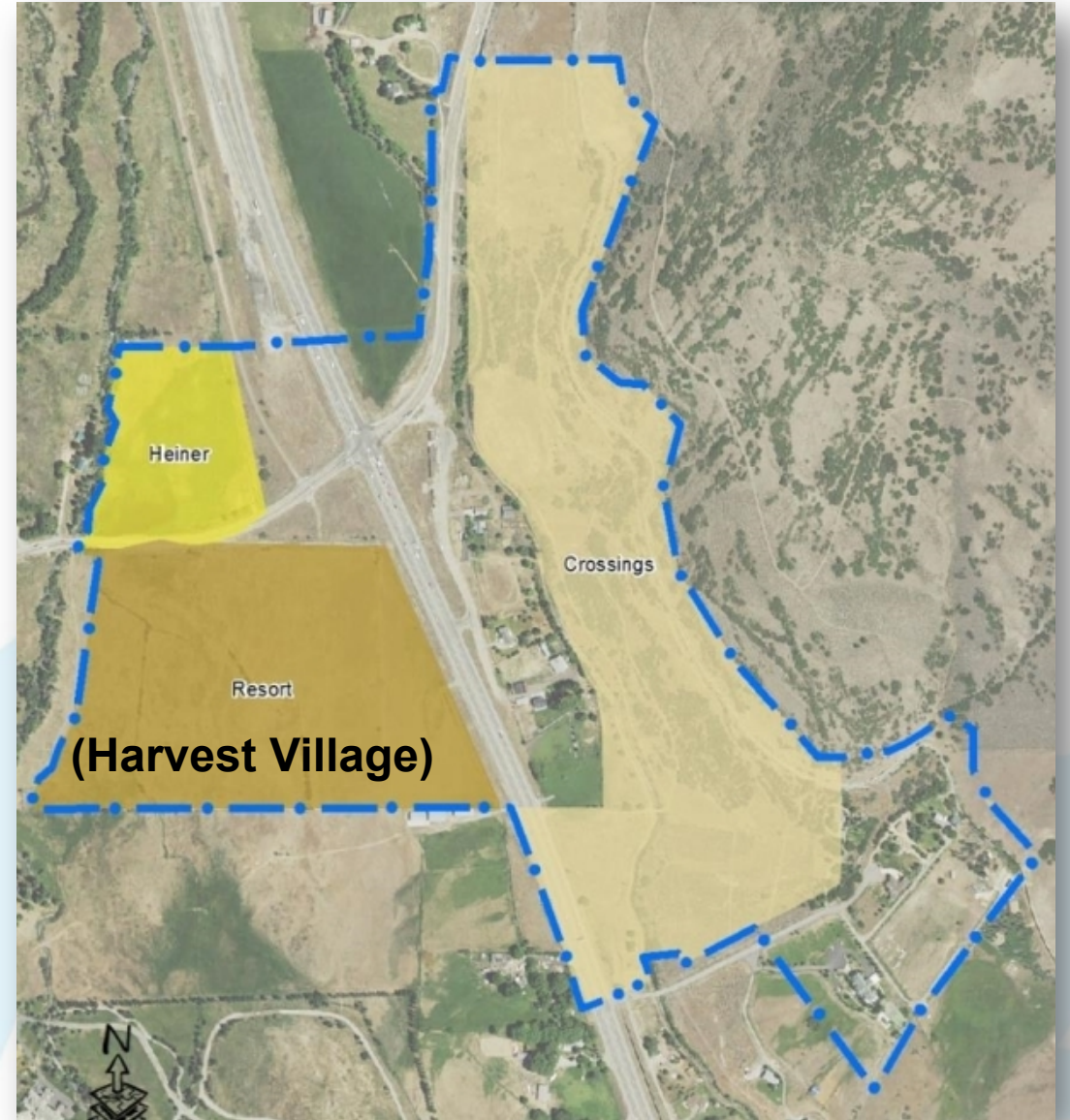
Vicinity Map



Annexation Policy Plan

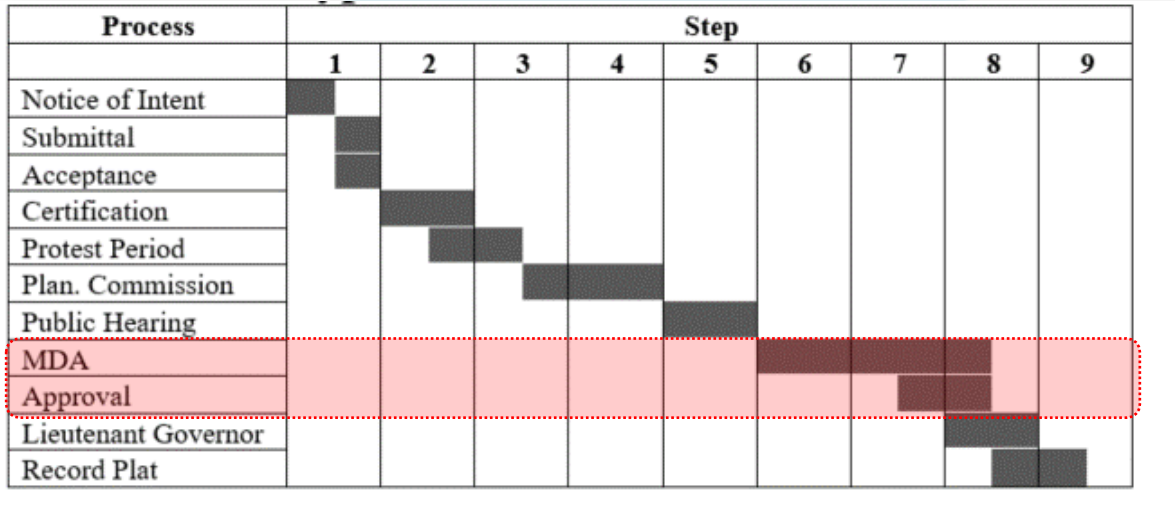


Crossing Annexation Boundaries

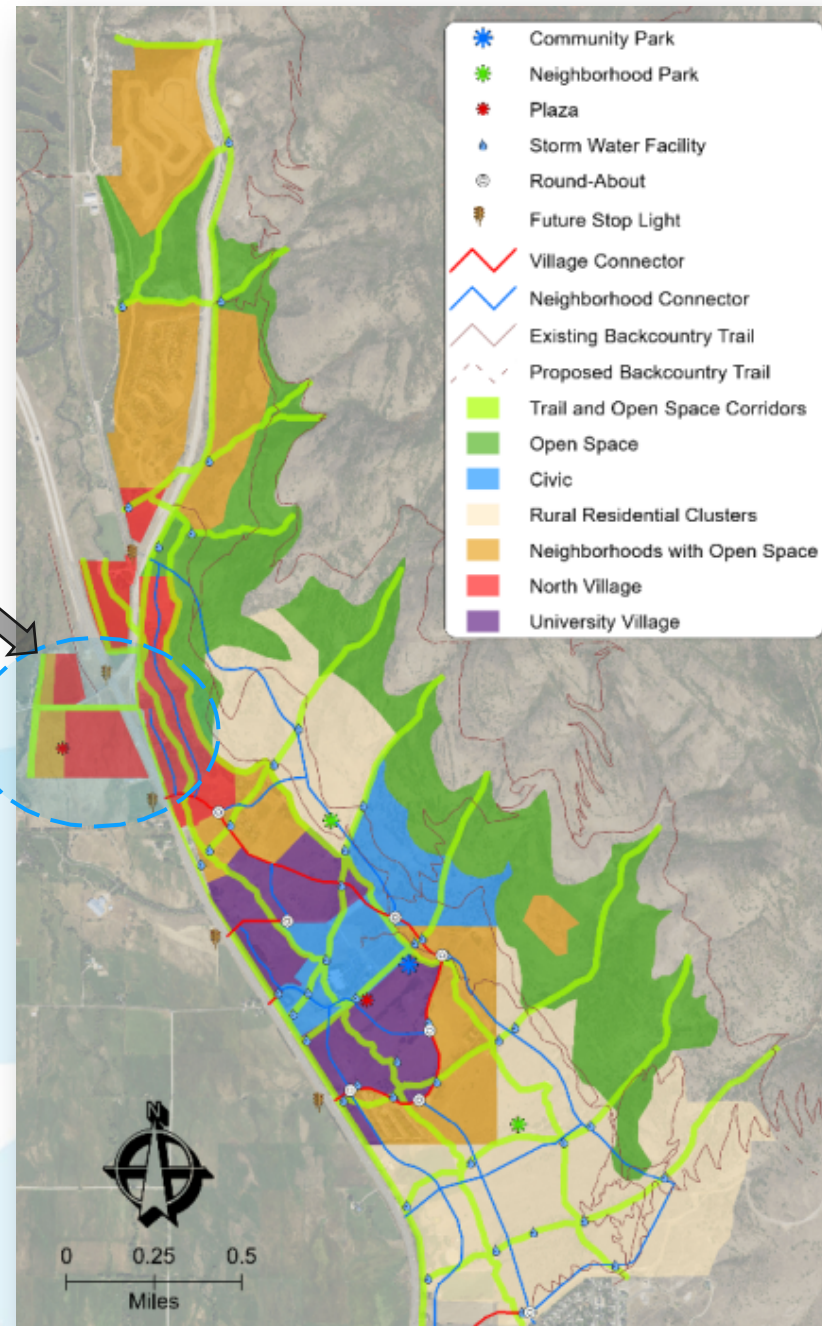
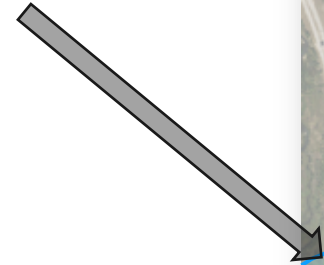


Annexation Background

Petition Submitted	3/16/2020
Petition Accepted	4/7/2020
Petition Certification	4/16/2020
End Protest Period	5/15/2020
Planning Commission Review	5/26/2020
City Council Review	June 2020 – Dec 2021



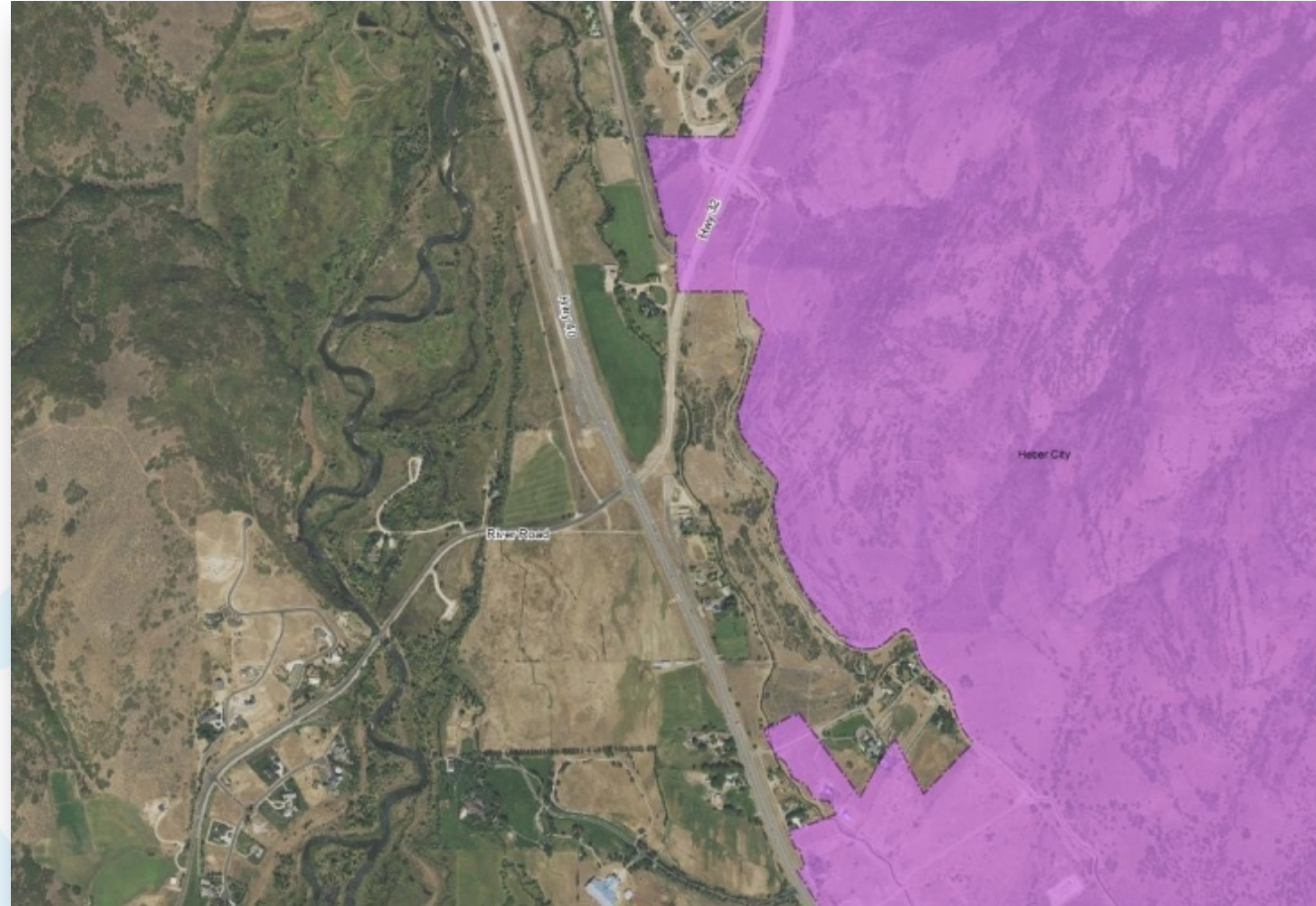
NVOZ Map



Development Information

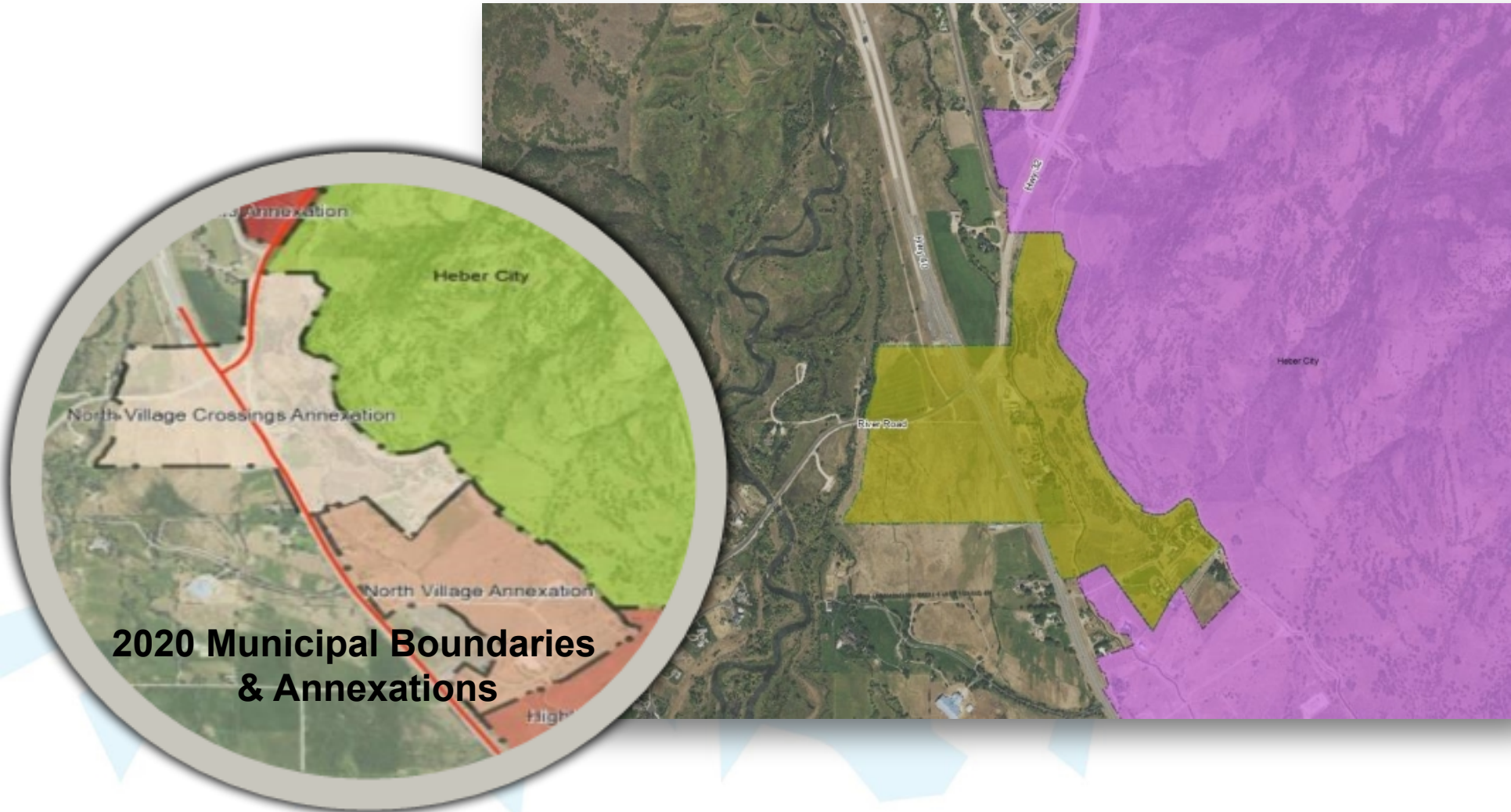
Crossing Annexation	139.21 acres
Resort (Harvest Village) Area	38.93 acres
County MDA	370 ERUs (9.5/ERU)
Proposed ERUs	247 ERUs + 67 Workforce ERUs (314 total ERU) 6.34 ERU/acre (8.07 ERU/acre with Workforce)
City Zoning	NV (4.5 ERU/acre) 124.38 ERU NOS (3.5 ERU/acre) 39.51 ERU
City Zoning ERUs	163.89 ERUs

Current City Limits

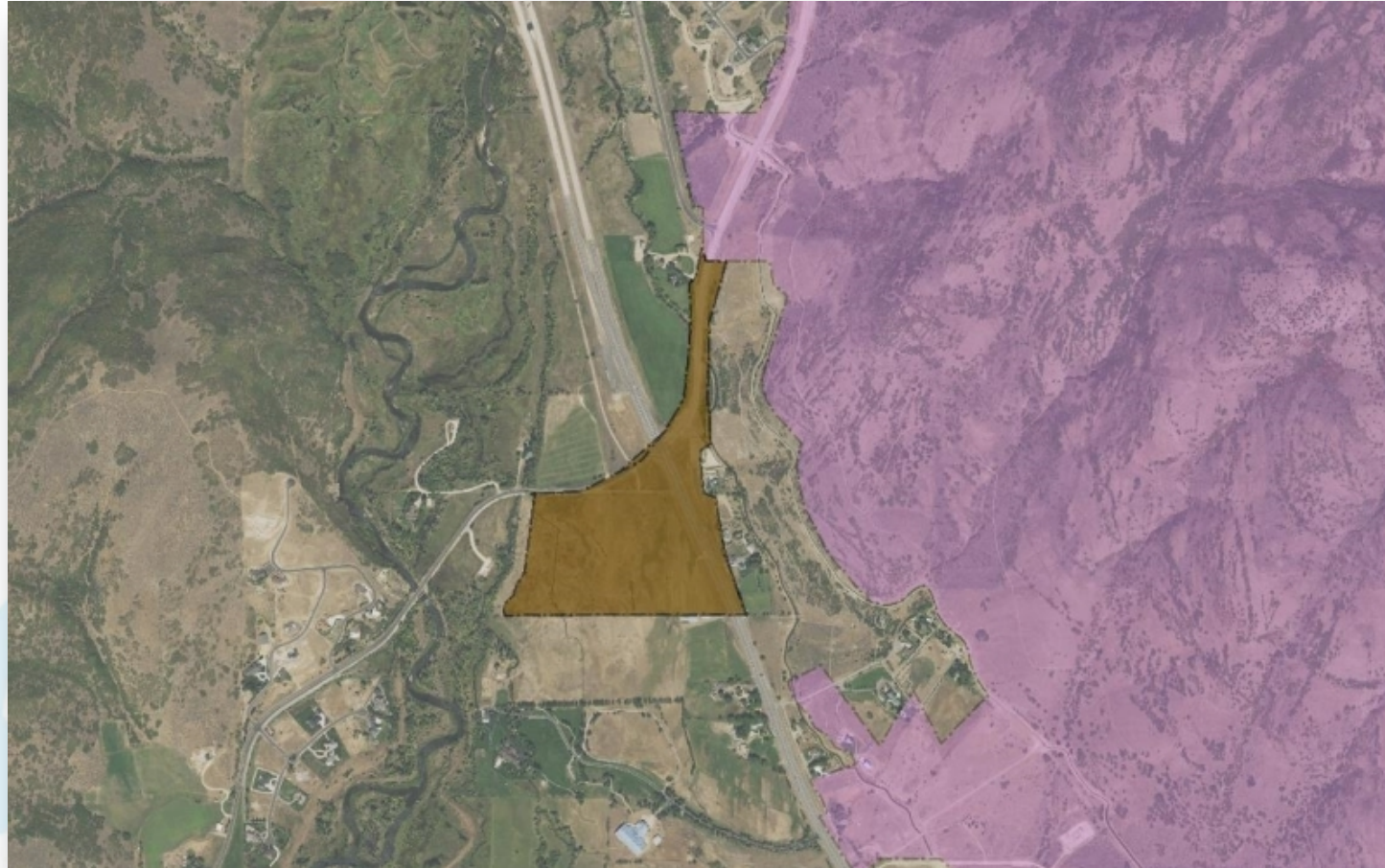


Boundary of Crossings Annexation

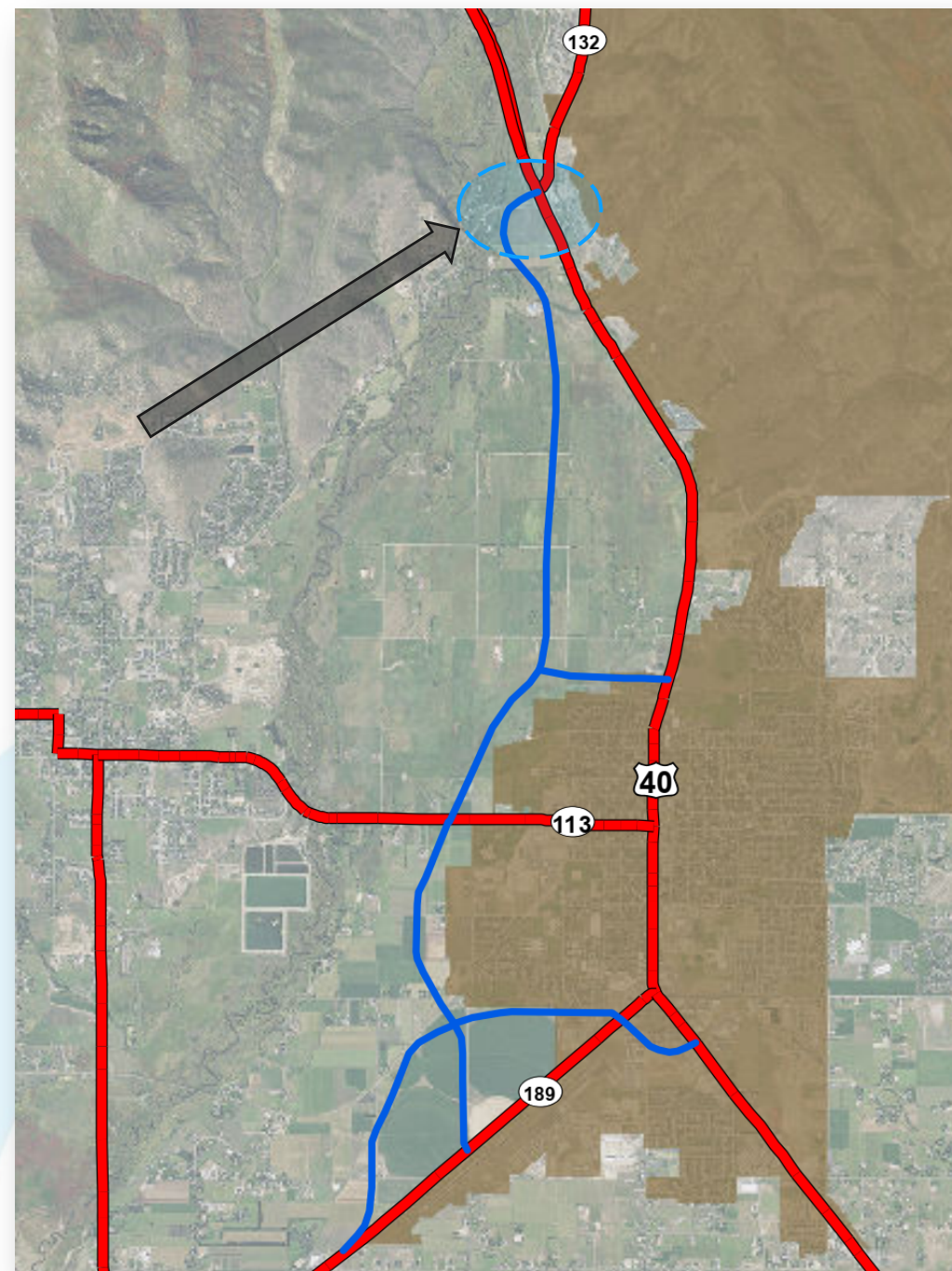
2024 Municipal Boundaries



Potential Modified Annexation



5 Bypass Alternatives



Petitioner's Presentation



Heber City Council Staff Report

MEETING DATE: 2/6/2024

SUBJECT: Public Hearing: Ordinance 2024-03 Adopting the Heber City Facilities Master Plan including the Heber City Capital Facilities Plans, Impact Fee Facility Plans, and Impact Fee Analyses and Council Consideration to Adopt

RESPONSIBLE: Russ Funk, Bart Mumford

DEPARTMENT: Engineering

STRATEGIC RELEVANCE: Community and Economic Development
Infrastructure Sustainability

SUMMARY

The purpose of this item is to present the proposed 2023 updates to the Heber City Culinary Water, Sanitary Sewer, Streets, Storm Drain, and Pressurized Irrigation Master Plans, including updated Impact Fee Facility Plans, and Impact Fee Analyses (Master Plan). Also to receive input from the Council, hold a Public Hearing, and seek adoption of the plan, including the proposed impact fee enactment language, by Ordinance.

RECOMMENDATION

1. Hold a Public Hearing
 2. Provide input to staff as necessary
 2. Approve Ordinance 2024-03 adopting the Plans and Fees as proposed.
-

BACKGROUND

The last version of the Master Plan was completed and adopted in 2018 and updates are generally completed every 5 years. The City contracted with Horrocks Engineers in 2022 to provide an update to the plan, and staff has been working with Horrocks for over a year on the update.

The intent of the Master Plan is to help ensure that infrastructure is planned and built to meet the overall needs of the community and not limited to the needs of individual developments. Improvements that are over-sized to meet a larger community or system need are called "System Improvements". If the need for a System Improvement is generated by future growth in order to maintain the City's established Level of Service (LOS), then the project should be paid for (at least in

part) by future growth and development. The mechanism to charge future growth for their proportionate cost of the improvements is by assessing Impact Fees. Impact Fees cannot be used to cure an existing deficiency or for projects that are not identified in the Master Plan.

A presentation summarizing the plan highlights is attached to this staff report. A table summarizing the existing and proposed impact fees is included below:

Facility		Jan 2024 Impact Fee	Recommended Impact Fee	Units
Culinary Water	Residential	\$2,826	\$2,778	ERU*
	Non-Residential	\$2,826	\$2,778	0.75 -inch
		\$5,024	\$4,939	1.0 - inch
		\$11,304	\$11,113	1.5 - inch
		\$20,095	\$19,757	2.0 - inch
		\$45,215	\$44,453	3.0 - inch
		\$80,383	\$79,028	4.0 - inch
Sewer		\$2,207	\$1,417	ERU*
Streets	Single Family	\$2,153	\$4,070	Dwelling Unit
	Multi Family	\$1,252	\$2,304	Dwelling Unit
	Non-Residential**	\$126	\$269	Trip
Pressurized Irrigation	Residential	\$1,131	\$844	ERU*
	Non-Residential	\$0.16	\$0.12	Irrigated SF
Total per ERU (typical)		\$8,317	\$9,110	ERU*

DISCUSSION

During the 2024 Council Retreat there was a discussion about the new Envision Central Heber Plan and how street improvements along 100 East and 100 West are critical to that plan. The proposed Master Plan for streets follows the historical plan of Collector Roads on 100 East and 100 West. This use is not compatible with the new vision for the downtown area. As mentioned during the retreat, we will need to revisit the 100 East and 100 West Collector road recommendation and look at alternate ways to provide the needed capacity. However, since we have the draft plan completed and want to get the new proposed impact fees in place as soon as possible, our recommendation is to move forward with adoption of the plan for now, and pursue an update to the street portion of the plan.

In addition, the scope of the existing plan did not specifically look at Main Street or the intersections of city roads with Main Street. Staff recommends including this analysis into the proposed update.

Another item to consider is whether or not the City Council wants to continue the 45% subsidy of non-residential Street Impact Fees. In the past, the City has elected to subsidize street impact fees to make it easier for commercial businesses to develop. This was done as an incentive since these businesses generate tax revenue for the City. If the decision is made to continue the non-residential subsidy, it should be understood that the City will actually need to fund the subsidy from another account and place it in a fund to ensure we have enough money to complete the projects in the plan.

FISCAL IMPACT

The total cost of all projects identified in the plan to be constructed within the 20-year planning period is roughly \$136 Million. The portion of these improvements that are impact fee eligible is just over \$61 Million. The remaining funds for the projects will be made up of developer contributions, City operating funds, and grants where applicable. The operating portion will be roughly \$13.5 Million.

CONCLUSION

Although an amendment to the streets portion of the Master Plan is proposed, it is recommended to approve the current version of the entire Master Plan as presented including the Impact Fee Enactment Ordinance. Staff will then move forward with an amendment as directed by Council.

Per the requirements of Section 11-36a-401 (2) of Utah State Code, the new impact fees will become effective 90 days after the impact fee enactment is approved. If approved during the February 6th meeting, the new impact fees will go into effect on May 6, 2024.

ALTERNATIVES

1. Approve as proposed
2. Approve as amended
3. Continue
4. Deny

POTENTIAL MOTIONS

Alternative 1 - Approval - Staff Recommended Option

I move to **approve** the **item** as presented, with the findings and conditions as presented in the conclusion above.

Alternative 2 - Approve as Amended

I move to **approve** the **item** as amended, as follows.

Alternative 3 - Continue

I move to **continue** the **item** to another meeting on , with direction to the applicant and/or Staff on information and / or changes needed to render a decision, as follows:

Alternative 4 - Denial

I move to **deny** the **item** with the following findings.

ACCOUNTABILITY

Department: Engineering
Staff member: Russ Funk, City Engineer

EXHIBITS

1. Master Plan Overview Presentation
2. Master Plan IFFP IFA Document
3. Master Plan Appendices

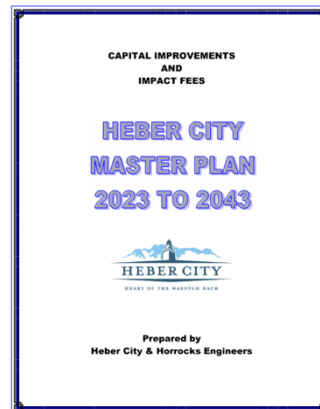
Heber City Facilities Master Plan Update 2023 - 2043

- GENERAL UPDATE FOR CULINARY WATER, SEWER, STREETS, STORM DRAIN, AND PRESSURIZED IRRIGATION
- CITY COUNCIL WORK MEETING - FEBRUARY 6, 2024



- Plan for future needs
- Maintain quality level of service
- Provide equitable funding mechanisms

Master Plan – Capital Facilities Plan – Impact Fee Analysis

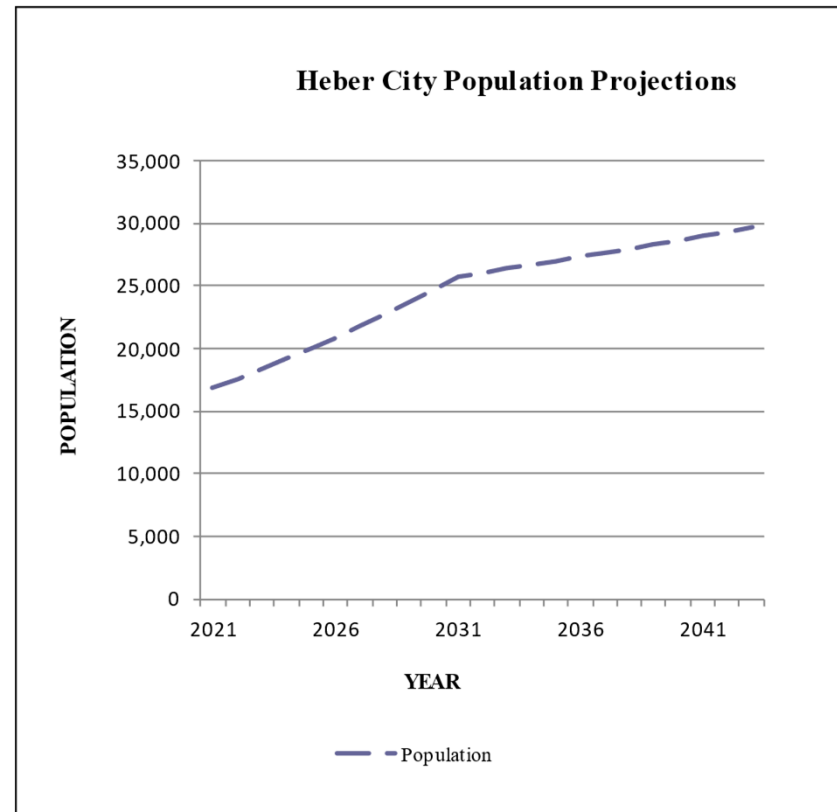


Presentation

- Changes between 2018 and 2023 Facility Master Plans
 - Population / Land Use
 - Water System
 - Sewer System
 - Street System
 - Storm Drain System
 - Pressurized Irrigation System
 - Improvement Costs
 - Impact Fee Summary
 - Questions?

Population Projection

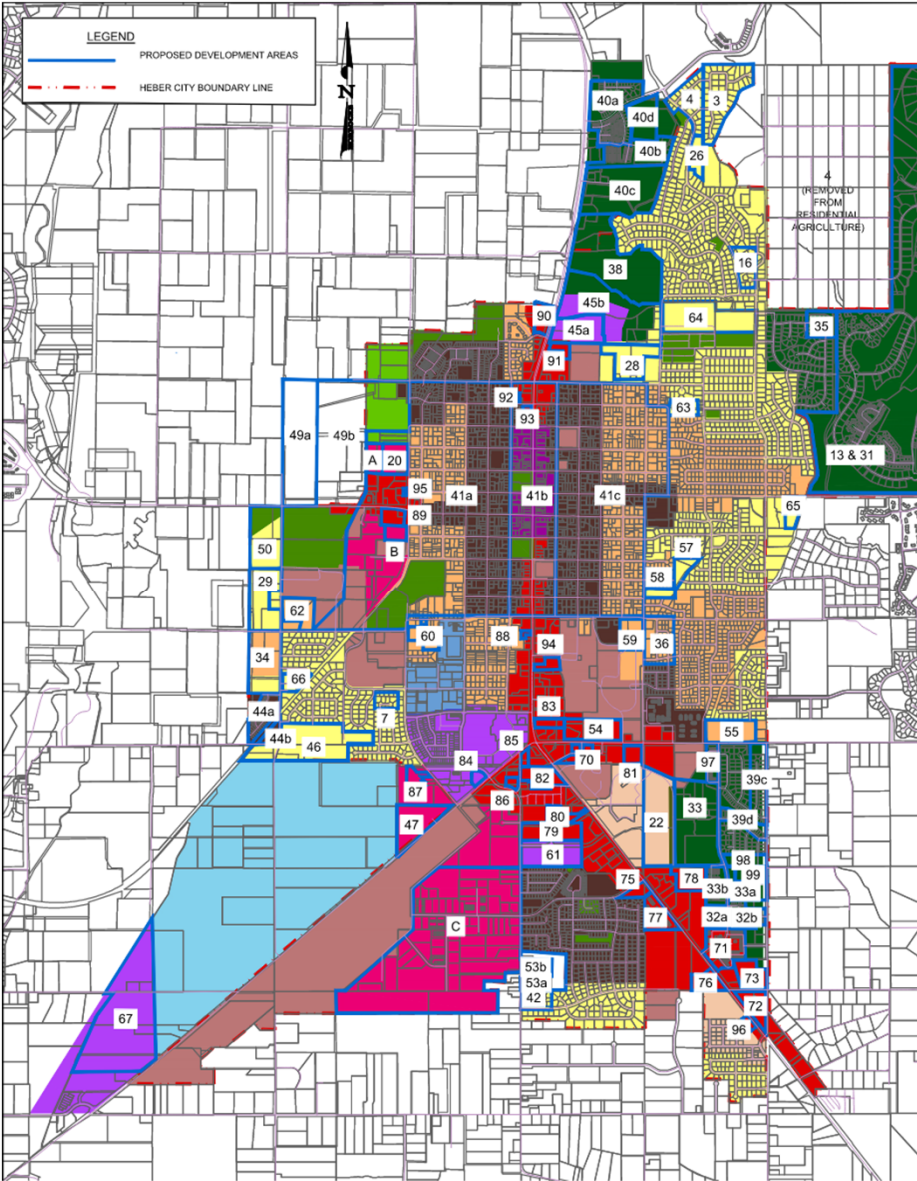
- Heber City continues to experience high growth
- Used higher than State growth projections
- Growth rate 4.33% to 2031, reducing to 1.19% to 2043
- 2023 Pop 18,347
- 2043 Pop 29,682
- Excludes North Village areas



Land Use Projection

- Ultimate population based on land use is 36,353
- 2043 population of 29,682 is 82% of ultimate
- Multi family units estimated to make up 46% of new growth
- Study area excludes north of Coyote Ln (N. Village/Sorensen)
- Study area includes potential annexations (HVSSD South)

Land Use Map



Culinary Water

2017 - 2040 Prior Master Plan

- 5,800 to 9,666 ERUs w/o RedL
- Indoor Use: 400 gpd/ERU
- Outdoor Use: 437 gpd/ERU
- Avg Use: 3.16 to 4.71 mgd
- Peak Day Use w/PI: 6.32 to 9.42 mgd
- Sources Good to 2040 w/PI
- Storage Good to 2040 w/PI
- Indoor Wtr Rights: 0.43 af
- Outdoor Wtr Rights: 3.0 af
- Impact Fee + Infl: \$2,826/ERU

2023 - 2043 Proposed Master Plan

- 7,090 to 11,188 ERUs w/o RedL
- Indoor Use: No Change (State Reduction)
- Outdoor Use: No Change
- Avg Use: 3.57 to 5.21 mgd
- Peak Day Use w/PI: 6.80 to 10.08 mgd
- Source Good to 2028 w/PI (State Reduction)
- Storage Good to 2033 w/PI (State Reduction)
- Indoor Wtr Rights: No Change
- Outdoor Wtr Rights: No Change
- Impact Fee: \$2,778/ERU

Future Water System

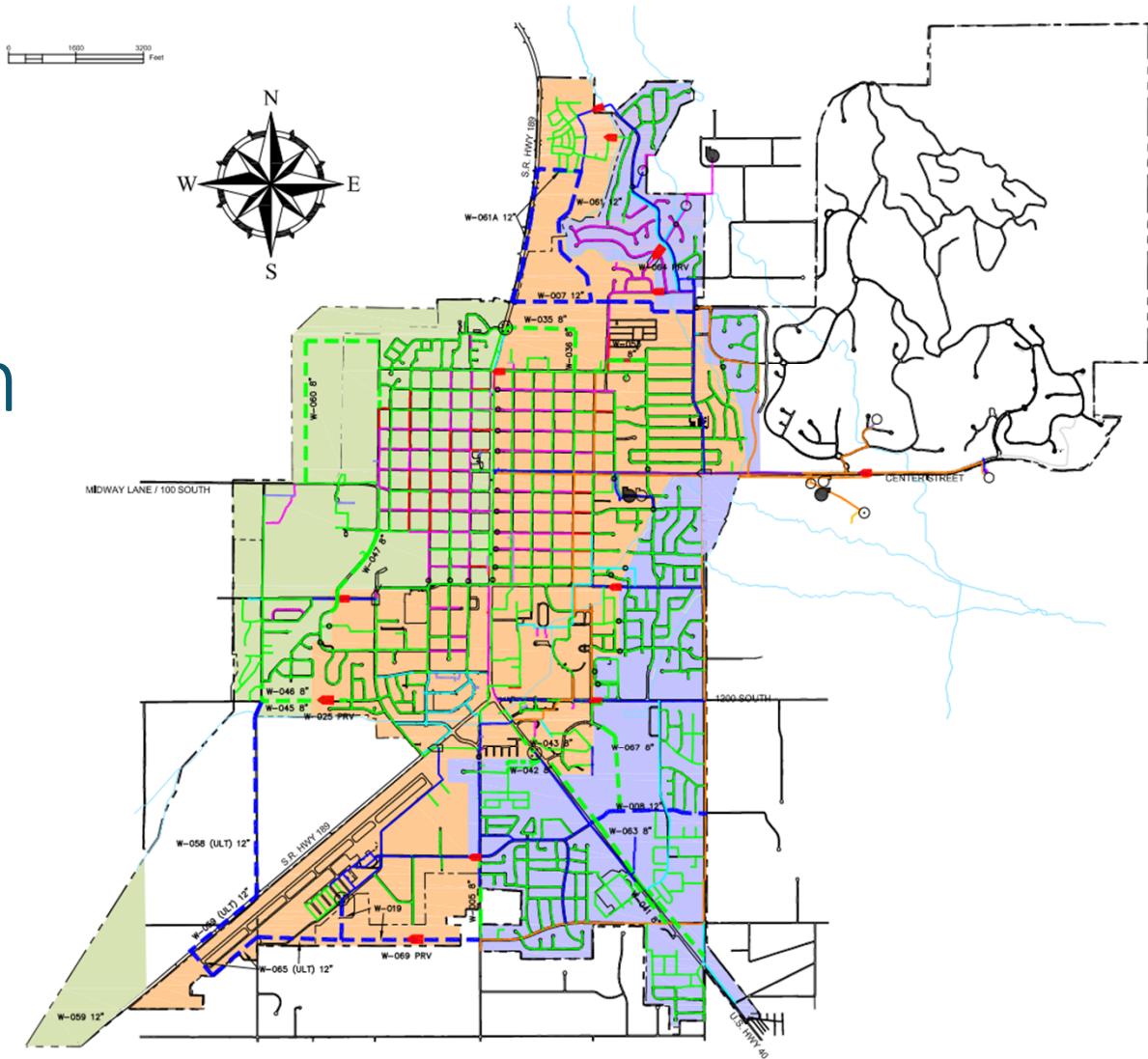


FIGURE 4-1
HEBER CITY
FUTURE CULINARY
WATER SYSTEM

- ULTIMATE BUILDOUT BOUNDARY
- HEBER CITY BOUNDARY
- EXISTING ROADS
- ACTIVE PRV
- INACTIVE PRV
- WELL PUMP
- ACTIVE BOOSTER PUMP
- INACTIVE BOOSTER PUMP
- SPRING
- TANK
- CLOSED VALVES

EXISTING WATER LINES

PIPE SIZE (Inches)	PIPE COLOR
4	Red
6	Green
8	Blue
10	Orange
12	Purple
18	Yellow
20	Light Blue

FUTURE WATER LINES

PIPE SIZE (Inches)	PIPE COLOR
8	Green
10	Blue
12	Orange
●	FUTURE PRV
○	FUTURE CLOSED VALVES

FUTURE TANK AND SOURCE LOCATION TO BE DETERMINED

WATER ZONES

ZONE NAME	ZONE COLOR
EAST ZONE (LINDSAY HGL 5960)	Light Blue
MCAUGHTON (HGL 5890)	Orange
WEST ZONE (BROADHEAD HGL 5735)	Green

FOR EXISTING REVISIONS, SEE OTHER MAP (42)

Water Project Costs

ULT	CIP #	Recommended Improvements	Size (in)	Total Cost	Funding Proportionate Share Analysis							
					Operating		Developer		Other ¹		Impact Fee	
					%	\$	%	\$	%	\$	%	\$
	W-005	Daniel Road - 2200 S to 2400 S (8")	8	\$222,712	0%	\$0	0%	\$0	0%	\$0	100%	\$222,712
	W-007	East Bypass - US 40 to Mill Rd (12")	12	\$1,560,004	0%	\$0	59%	\$917,283	0%	\$0	41%	\$642,722
	W-008	1900 South - US 40 to Mill Rd (12")	12	\$725,292	0%	\$0	59%	\$426,472	0%	\$0	41%	\$298,821
	W-019	2400 South - Daniel Rd to Airport Rd (12")	12	\$1,606,502	0%	\$0	59%	\$944,623	0%	\$0	41%	\$661,879
	W-025	1250 South PRV		\$321,119	0%	\$0	0%	\$0	0%	\$0	100%	\$321,119
	W-027	New Source Development (2400 gpm)		\$4,491,059	0%	\$0	0%	\$0	100%	\$4,491,059	0%	\$0
	W-028	Master Plan Updates every 5 years (4 times)		\$240,000	0%	\$0	0%	\$0	0%	\$0	100%	\$240,000
	W-029	Aerial Digital Map Updates (4 times)		\$19,200	0%	\$0	0%	\$0	0%	\$0	100%	\$19,200
	W-035	700 North - 400 E to Main St. (8")	8	\$383,177	0%	\$0	100%	\$383,177	0%	\$0	0%	\$0
	W-036	400 East - 700 N to 500 North (8")	8	\$456,066	0%	\$0	100%	\$456,066	0%	\$0	0%	\$0
	W-041	US 40 - 2200 S to 2400 S (West) (8") *	8	\$311,390	0%	\$0	0%	\$0	0%	\$0	100%	\$311,390
	W-042	1500 South - Dusty Baker Ln (150 E) to US 40 (8")	8	\$239,627	0%	\$0	100%	\$239,627	0%	\$0	0%	\$0
	W-043	US 40 - 1300 S to 1700 S (West) (8")	8	\$224,432	0%	\$0	100%	\$224,432	0%	\$0	0%	\$0
	W-045	1200 South - 850 W to 1200 W (8")	8	\$373,208	0%	\$0	100%	\$373,208	0%	\$0	0%	\$0
	W-046	1200 West - 1200 S to 1100 S (8")	8	\$351,206	0%	\$0	100%	\$351,206	0%	\$0	0%	\$0
	W-047	600 West - 450 S to 650 S (8")*	8	\$541,367	0%	\$0	0%	\$0	0%	\$0	100%	\$541,367
	W-053	550 North - 550 E to 750 E (8")	8	\$435,722	80%	\$348,578	0%	\$0	0%	\$0	20%	\$87,144
	W-054	Future Tank Storage (1.4 MG)		\$4,693,525	0%	\$0	0%	\$0	0%	\$0	100%	\$4,693,525
ULT	W-058	Southfield Rd- SR 189 to 1100 S	12	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
ULT	W-059	SR 189 - 2500 S to South Field Road (12")	12	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	W-060	500 North to Midway Lane (8")	8	\$887,627	0%	\$0	100%	\$887,627	0%	\$0	0%	\$0
	W-061	Hwy 40 or Ostler Pk Rd- 1600 N to 900 N (12")	12	\$1,010,537	0%	\$0	59%	\$594,196	0%	\$0	41%	\$416,341
	W-063	US 40 - 1500 S to 1200 E (East) (8")	8	\$958,973	0%	\$0	100%	\$958,973	0%	\$0	0%	\$0
	W-064	Valley Dr PRV		\$393,120	100%	\$393,120	0%	\$0	0%	\$0	0%	\$0
ULT	W-065	2400 South - 850 West to US 189 (12")	12	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	W-066	Heber City Public Works Facility Exp Ph 1		\$318,438	0%	\$0	0%	\$0	0%	\$0	100%	\$318,438
	W-067	600 East - 1300 S to Hidden Cr Ln (8")	8	\$443,923	0%	\$0	100%	\$443,923	0%	\$0	0%	\$0
	W-068	Heber City Public Works Facility Exp Ph 2		\$1,346,177	0%	\$0	0%	\$0	0%	\$0	100%	\$1,346,177
	W-069	2400 South PRV		\$321,119	0%	\$0	0%	\$0	0%	\$0	100%	\$321,119
TOTAL EXPENDITURES				\$22,875,524		\$741,698		\$7,200,813		\$4,491,059		\$10,441,954



Water Rights & Use

- Municipal (Converted into wells) = 7025 af > Current Avg

Water Right	Flow (cfs)	Depletion Limit (ac-ft/yr)	Volume / Flow Right	Notes
Water Rights presently Used by City's Culinary System				
55-7052		1,071.34	Flow	Upper Broadhead Spring (1941 change app 0.05 to 2.5 cfs)
55-1392	2.36	1,708.56	Flow	Upper Broadhead Spring
55-947	2.00	1,447.93	Flow	Well #1
55-5780	0.25	105.00	Both	Valley Hills Well
55-8534	0.1036	75.00	Volume	Valley Hills Well (Mohr Spring Exchange; E1053)
55-8420	0.0889	64.4	Volume	Valley Hills Well; diversion limited to 50% or 64.4 ac-ft
55-1351	0.0990	71.64	Volume	Hospital Well; total diversion 95.53 ac-ft; depletion per OSE 71.64 ac-ft
55-4360			Volume	Hospital Well (see 55-1351)
55-3346	1.00	723.97	Flow	Source: Hospital Well, Supplemental Supply ¹
55-12327	0.0118	8.53	Volume	3 Existing underground water wells; depletion factor
55-894	0.0017	1.25	Volume	3 Existing underground water wells; depletion factor
55-12708	0.0057	4.14	Volume	3 Existing underground water wells; depletion factor
55-13325	1.7376	1,257.98	Volume	VH Well, HW, No. 1, Upper BS; Depletion value in OSE (Used by PI)
55-13016	0.6707	485.59	Volume	VH Well, HW, No. 1, Upper BS; Depletion value in OSE (Used by PI)
Subtotal	8.33	7,025.31		

Sanitary Sewer

2017 - 2040 Prior Master Plan

- 7,090 ERUs (w/o RedL)
- Avg User Flow: 335 gpd/ERU
- Avg Plant flow: 2.21 mgd
- Ann Flow: 807 mg/yr
- Infiltration: 3 yr avg 16.2%
- Impact Fee: \$2,207/ERU

2023 - 2043 Proposed Master Plan

- 11,188 ERUs (w/o RedL)
- Avg User Flow: 312 gpd/ERU
- Avg Plant Flow: 3.49 mgd
- Ann Flow: 1,274 mg/yr
- Infiltration: 3 yr avg 15.0 %
- Impact Fee: \$1,417/ERU

Future Sewer System

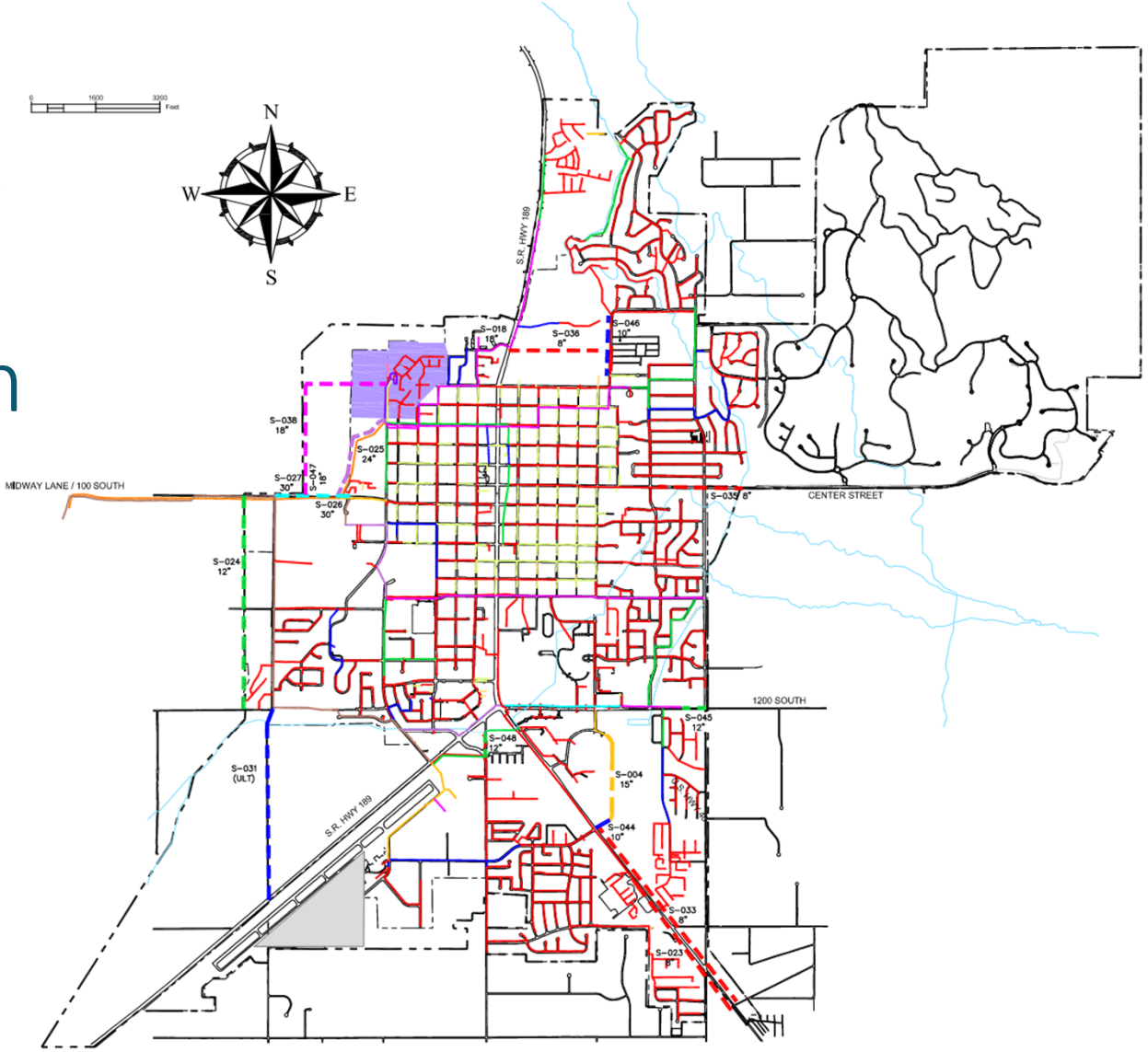


FIGURE 5-1
HEBER CITY
FUTURE
SEWER SYSTEM

--- ULTIMATED BUILDOUT BOUNDARY
--- HEBER CITY BOUNDARY
--- EXISTING ROADS

EXISTING SEWER LINES

PIPE SIZE (Inches)	PIPE COLOR
6	Blue
8	Green
10	Yellow
12	Orange
15	Red
18	Purple
21	Light Blue
24	Light Green
30	Light Yellow
36	Light Orange

EXISTING PRIVATE 6" FORCED MAIN
EXISTING PRIVATE LIFT STATION
EXISTING PRIVATE LIFT STATION AREA
TO BE ELIMINATED WITH S-038

FUTURE SEWER LINES

PIPE SIZE	PIPE COLOR
8	Blue
10	Green
12	Yellow
15	Orange
18	Red
21	Purple
24	Light Blue
30	Light Green

FUTURE PRIVATE LIFT STATION
AIRPORT AREA THAT MAY NEED TO BE
SERVED BY PRIVATE LIFT STATION(S)
EXISTING SEPTIC SYSTEMS

Sewer Project Costs

ULT	CIP #	Recommended Improvements	Size (in)	Total Cost	Funding Proportionate Share Analysis							
					Operating		Developer		Other ^{1,2}		Impact Fees	
					%	\$	%	\$	%	\$	%	\$
ULT	S-004	600 East - 1300 S to Hidden Cr Ln (15")	15	\$706,421	0%	\$0	53%	\$374,403	0%	\$0	47%	\$332,018
	S-020	Aerial Digital Map Updates (4 times)		\$19,200	0%	\$0	0%	\$0	0%	\$0	100%	\$19,200
	S-021	Master Plan Update (4 times)		\$336,000	0%	\$0	0%	\$0	0%	\$0	100%	\$336,000
	S-023	US 40 - Center Creek Dr to 2200 S (West) (8")	8	\$1,378,041	0%	\$0	100%	\$1,378,041	0%	\$0	0%	\$0
	S-024	1500 West - 100 S to 1200 S (12")	12	\$1,069,267	0%	\$0	100%	\$1,069,267	0%	\$0	0%	\$0
	S-025	Sage Brush/Spring Cr Canal - 300 N to 100 S (24")	24	\$1,523,623	0%	\$0	0%	\$0	100%	\$1,523,623	0%	\$0
	S-026	SR 113 - 800 W to 930 W (30")	30	\$1,032,613	0%	\$0	0%	\$0	0%	\$0	100%	\$1,032,613
	S-027	SR 113 - 930 W to South Field Rd (30")	30	\$1,062,120	0%	\$0	0%	\$0	0%	\$0	100%	\$1,062,120
	S-031	South Field Rd - US 40 to 1200 S (10")	10	\$0	0%	\$0	0%	\$0.00	0%	\$0	0%	\$0
	S-033	US 40 - Center Creek Dr to E Airport Rd (East) (8")	8	\$854,153	0%	\$0	100%	\$854,153.02	0%	\$0	0%	\$0
	S-035	Center Street - 800 E to 1300 E (8")	8	\$772,234	0%	\$0	100%	\$772,234.35	0%	\$0	0%	\$0
	S-036	900 North - Main St to 500 E (8"/10")	8	\$710,991	0%	\$0	100%	\$710,990.58	0%	\$0	0%	\$0
	S-037	Heber City Public Works Facility Exp Ph.1		\$305,225	0%	\$0	0%	\$0.00	0%	\$0	100%	\$305,225
	S-038	500 N and 600 W to 50 N and 1000 W (18")	18	\$1,695,018	0%	\$0	47%	\$796,658.48	28%	\$475,792	25%	\$422,568
	S-041	Heber City Public Works Facility Exp Ph.2	0	\$1,421,174	0%	\$0	0%	\$0	0%	\$0	100%	\$1,421,174
	S-044	E Airport Rd - US 40 to 600 E (10")	10	\$121,449	0%	\$0	73%	\$88,294	0%	\$0	27%	\$33,156
	S-045	1200 South - 1000 E to 1200 E (12")	12	\$575,763	0%	\$0	62%	\$354,094	20%	\$115,153	19%	\$106,516
	S-046	550 East - Valley Hills Dr to 600 N (10")	10	\$956,064	0%	\$0	73%	\$695,059	0%	\$0	27%	\$261,006
	S-047	1000 West - 50 North to 100 South (18")	18	\$584,944	0%	\$0	100%	\$584,944	0%	\$0	0%	\$0
	S-048	Daniels Road - 1320 South to 1475 South (12")	12	\$341,857	0%	\$0	0%	\$0	0%	\$0	100%	\$341,857
	TOTAL EXPENDITURES			\$15,466,157		\$0		\$7,678,138		\$2,114,567		\$5,673,452



Streets

2017 - 2040 Prior Master Plan

- Minor Local: 60' ROW / 32' Pave(Old MP)
- Major Local: 64' ROW/ 36' Pave
- Minor Collector: 66' ROW / 44' Pave
- Major Collector: 72' ROW / 50' Pave
- Minor Arterial: >72' ROW / >50' Pave
- Bypass: Local Project?
- Impact Fee: Non-Res \$126/Trip
(Includes \$103, 45% sub)
- Impact fee: Res \$2,153/Unit
- Impact fee: Multi \$1,252/Unit

2023 - 2043 Proposed Master Plan

- Minor Local: 56' ROW / 26' Pave
- Major Local: 62' ROW/ 32' Pave
- Minor Collector: 68' ROW / 38' Pave
- Major Collector: 80' ROW / 48' Pave
- Minor Arterial: >90' ROW / >60' Pave
- Bypass: UDOT Study / Sponsor
- Impact Fee: Non-Res \$269/Trip
(Includes \$221, 45% sub)
- Impact fee: Res \$4,070/Unit
- Impact fee: Multi \$2,304/Unit



Future Streets

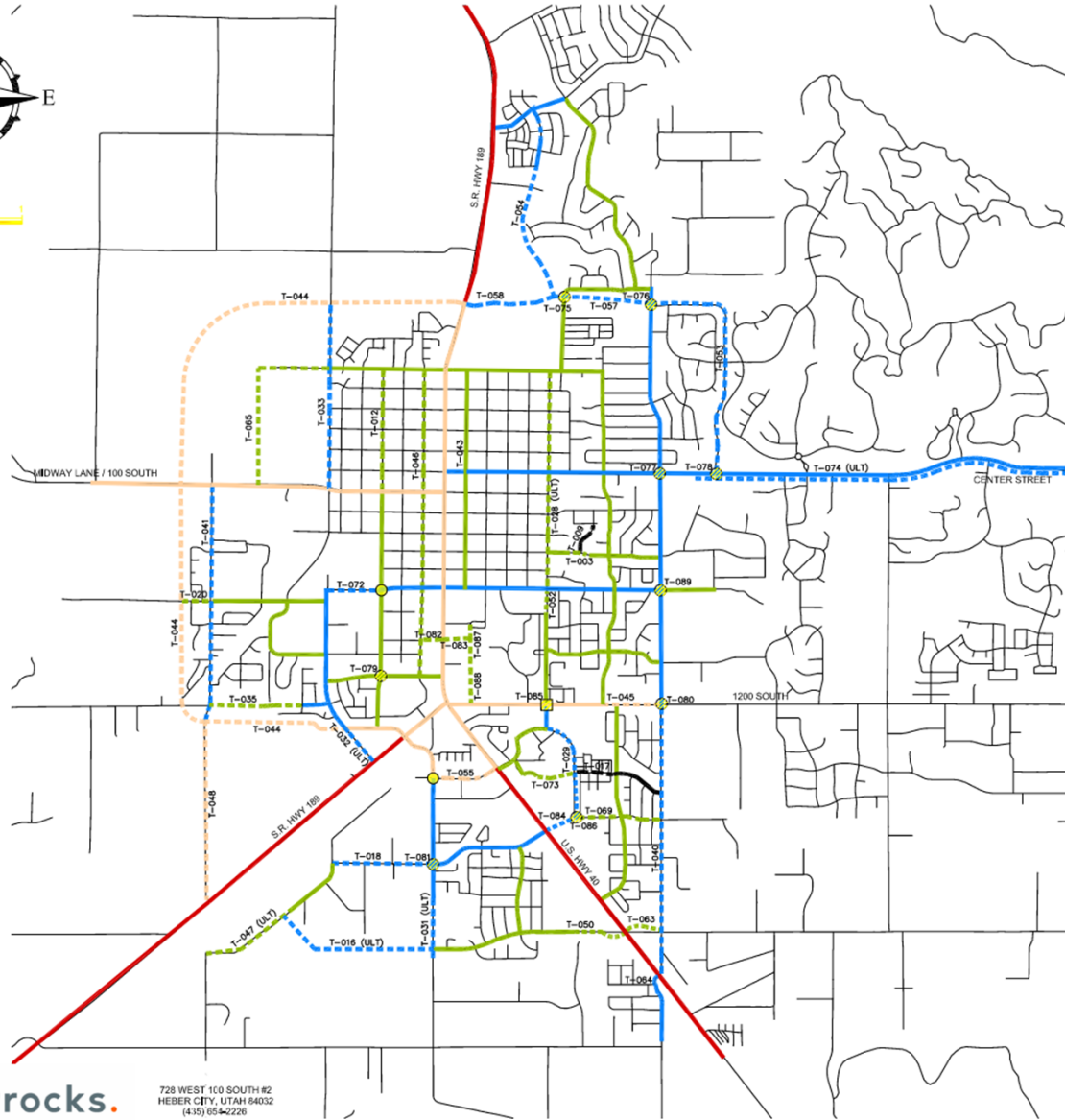
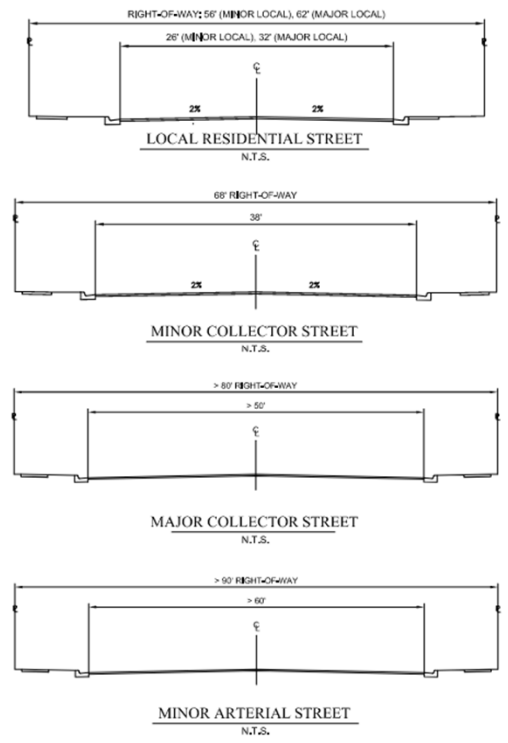


FIGURE 6-1
HEBER CITY
STREET SYSTEM
MASTER PLAN

- EXISTING LOCAL STREET
- EXISTING MINOR COLLECTOR
- EXISTING MAJOR COLLECTOR
- EXISTING MINOR ARTERIAL
- EXISTING PRINCIPAL ARTERIAL
- - - NEW OR UPGRADED LOCAL STREET
- - - NEW OR UPGRADED MINOR COLLECTOR
- - - NEW OR UPGRADED MAJOR COLLECTOR
- - - NEW OR UPGRADED MINOR ARTERIAL
- - - NEW OR UPGRADED PRINCIPAL ARTERIAL
- EXISTING ROUNDABOUT
- FUTURE ROUNDABOUT
- FUTURE SIGNAL



Streets Project Costs

ULT CIP #			Recommended	Total Cost			Funding Proportionate Share Analysis					
			Improvements		Operating	Developer	Other ¹		Impact Fee			
			ROW	%	\$	%	\$	%	\$	%	\$	
ULT	T-003	400 South - 600 East to 700 East & Bridge	68	\$722,290	0%	\$0	0%	\$0	0%	\$0	100%	\$722,290
	T-009	600 East - 200 South to 400 South	62	\$548,976	0%	\$0	100%	\$548,976	0%	\$0	0%	\$0
	T-012	300 West - 500 North to 100 South	68	\$478,440	44%	\$210,240	0%	\$0	0%	\$0	56%	\$268,200
	T-016	2400 South - Daniel Rd to South Airport Rd	68	\$0	0%	\$0	91%	\$0	0%	\$0	0%	\$0
	T-017	1600 South - 600 East to Sawmill Blvd	62	\$609,973	0%	\$0	100%	\$609,973	0%	\$0	0%	\$0
	T-018	Airport Road - Daniel Rd to Hangers	68	\$1,243,693	8%	\$99,495	38%	\$472,603	0%	\$0	54%	\$671,594
ULT	T-020	650 South - 1200 West to West Bypass	68	\$725,231	5%	\$36,262	0%	\$0	0%	\$0	95%	\$688,970
	T-028	500 East - 500 North to 600 South	68	\$0	13%	\$0	0%	\$0	0%	\$0	0%	\$0
ULT	T-029	600 East - 1300 South to Hidden Cr Ln	80	\$3,523,529	0%	\$0	78%	\$2,748,353	0%	\$0	22%	\$775,176
	T-031	Daniels Rd - 2100 South to 2500 South	80	\$0	11%	\$0	35%	\$0	0%	\$0	0%	\$0
ULT	T-032	Industrial Pkwy - West Bypass to SR189	68	\$0	12%	\$0	31%	\$0	0%	\$0	0%	\$0
ULT	T-033	600 West - West Bypass to 100 South	80	\$2,614,531	10%	\$261,453	0%	\$0	0%	\$0	90%	\$2,353,078
	T-035	1200 South - 700 West to Southfield Rd	68	\$2,648,397	0%	\$0	78%	\$2,065,750	0%	\$0	22%	\$582,647
	T-040	1200 East - 1200 South to US40 *	80	\$3,952,199	9%	\$355,698	31%	\$1,225,182	0%	\$0	60%	\$2,371,319
	T-041	Southfield Rd - 100 South to 1200 South & RR	80	\$3,926,577	29%	\$1,138,707	31%	\$1,217,239	0%	\$0	40%	\$1,570,631
	T-042	Master plan Update (4 times)		\$240,000	0%	\$0	0%	\$0	0%	\$0	100%	\$240,000
	T-043	100 East - 500 North to 600 South Historic	82	\$2,730,601	100%	\$2,730,601	0%	\$0	0%	\$0	0%	\$0
	T-044	West Bypass - 900 North to 1300 South UDOT	104	\$0	0%	\$0	0%	\$0	0%	\$0	100%	\$0
	T-045	1200 South - 820 East to 1200 East	90	\$980,222	9%	\$88,220	53%	\$519,517	0%	\$0	38%	\$372,484
	T-046	100 West - 500 North to 1000 South Historic	82	\$3,780,832	11%	\$415,892	31%	\$1,172,058	0%	\$0	58%	\$2,192,883
	T-047	South Airport Rd - 670 West to 1200 West	68	\$0	12%	\$0	38%	\$0	0%	\$0	0%	\$0
	T-048	Southfield Rd - 1200 South to SR189 UDOT	104	\$0	0%	\$0	0%	\$0	0%	\$0	100%	\$0
	T-050	2400 South - 700 East to US40	68	\$1,444,580	0%	\$0	36%	\$520,049	0%	\$0	64%	\$924,531
	T-052	500 East - 600 South to 720 South	68	\$601,908	0%	\$0	0%	\$0	0%	\$0	100%	\$601,908
	T-053	East Bypass - Center St to 1050 East	80	\$4,383,286	0%	\$0	100%	\$4,383,286	0%	\$0	0%	\$0
	T-054	Ostler Peak Rd - 1800 North to 900 North	80	\$6,088,658	0%	\$0	78%	\$4,749,153	0%	\$0	22%	\$1,339,505
T-055	South Bypass - Daniel Rd to US40	80	\$2,225,578	0%	\$0	0%	\$0	67%	\$1,500,039	33%	\$725,538	
T-057	East Bypass - 1050 East to 550 East Cemetery	80	\$1,551,606	0%	\$0	0%	\$0	97%	\$1,500,403	3%	\$51,203	



Streets Project Costs (Cont.)

ULT CIP #			Recommended	Total Cost		Funding Proportionate Share Analysis						
			Improvements		Operating	Developer	Other ¹	Impact Fee				
			ROW	%	\$	%	\$	%	\$	%	\$	
ULT	T-058	East Bypass - 550 East to Main St	80	\$3,241,647	0%	\$0	78%	\$2,528,484	0%	\$0	22%	\$713,162
	T-059	Downtown Angle Parking - 400 North to 500 South	84	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	T-063	Intersection Alignment US40 & 2400 South	80	\$1,117,475	4%	\$44,699	31%	\$346,417	0%	\$0	65%	\$726,359
	T-064	Intersection Alignment US40 & Mill Rd	80	\$869,148	4%	\$34,766	31%	\$269,436	0%	\$0	65%	\$564,946
	T-065	500 North to Midway Ln	68	\$4,710,588	0%	\$0	91%	\$4,286,635	0%	\$0	9%	\$423,953
	T-067	Heber City Public Works Facility Exp Ph1		\$486,246	0%	\$0	0%	\$0	0%	\$0	100%	\$486,246
	T-068	Heber City Public Works Facility Exp Ph2		\$1,696,673	0%	\$0	0%	\$0	100%	\$1,696,673	0%	\$0
	T-069	1900 South - Mill Rd to 600 East	68	\$2,093,595	0%	\$0	91%	\$1,905,171	0%	\$0	9%	\$188,424
	T-070	Downtown Angle Parking - 400 North to 500 South	84	\$554,696	0%	\$0	0%	\$0	0%	\$0	100%	\$554,696
	T-072	600 South - 300 West to 650 South Restripe		\$27,600	0%	\$0	0%	\$0	0%	\$0	100%	\$27,600
ULT	T-073	Providence Dr - 1500 South to 600 East	68	\$1,564,962	0%	\$0	91%	\$1,424,115	0%	\$0	9%	\$140,847
	T-074	Center St Widening - 1400 East to the East	80	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	T-075	Roundabout at 900 North & 550 East		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-076	Roundabout at 900 North & Mill Rd		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-077	Roundabout at Mill Rd & Center St		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-078	Roundabout at 1400 East & Center St		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-079	Roundabout at 300 West & 1000 South		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-080	Roundabout at Mill Rd & 1200 South		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-081	Roundabout at Airport Rd & Daniel Rd		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-082	850 South - 100 West to Main St	66	\$1,403,461	3%	\$42,104	0%	\$0	41%	\$581,033	56%	\$780,325
	T-083	850 South - Main St to 120 East	66	\$2,222,147	3%	\$66,664	0%	\$0	97%	\$2,155,483	0%	\$0
	T-084	Airport Rd - US40 to 600 East	80	\$1,127,529	8%	\$90,202	0%	\$0	0%	\$0	92%	\$1,037,327
	T-085	Traffic Signal at 1200 South & 500 East		\$345,000	0%	\$0	0%	\$0	0%	\$0	100%	\$345,000
	T-086	Roundabout at Airport Rd & 600 East		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-087	120 East - 790 South to 1000 South	66	\$1,403,461	3%	\$42,104	46%	\$645,592	0%	\$0	51%	\$715,765
	T-088	120 East - 1000 South to 1200 South	66	\$1,052,596	3%	\$31,578	0%	\$0	0%	\$0	97%	\$1,021,018
	T-089	Roundabout at Mill Rd & 600 South	0	\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
TOTAL EXPENDITURES				\$73,905,932		\$5,688,685		\$31,637,989		\$7,433,631		\$29,145,627



Storm Drain

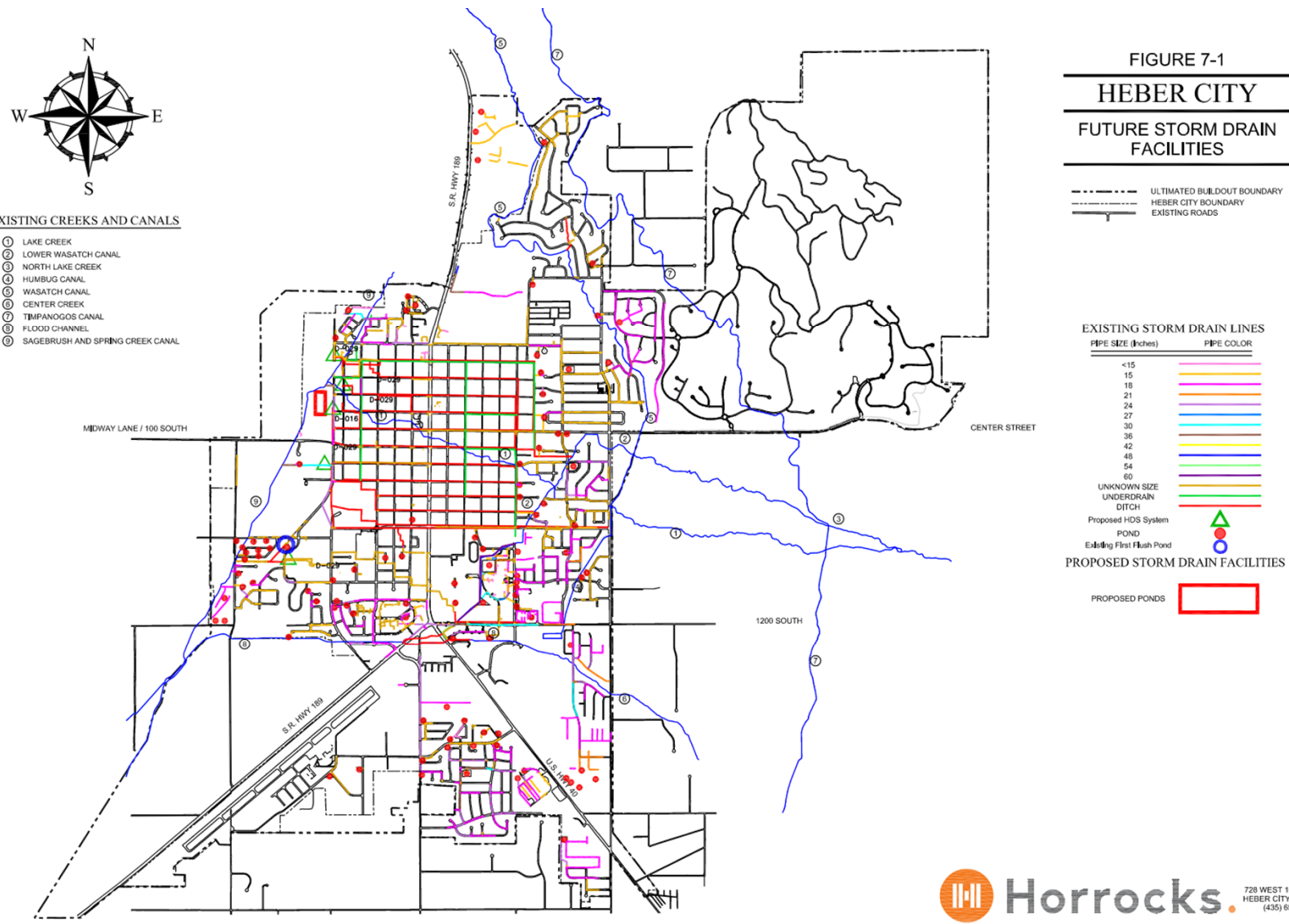
2017 - 2040 Prior Master Plan

- Central Heber First Flush Improvements: Started
- MS4: Designation Anticipated
- Design Manual: Recommend
- Storm Wtr Mgmt Plan: Recommend
- Impact fee: \$0
- Utility fee: \$5.55/mo

2023 - 2043 Proposed Master Plan

- Central Heber First Flush Improvements: Continue
- MS4: No Change
- Design Manual: Adopted
- Storm Wtr Mgmt Plan: No Change
- Impact fee: No Change
- Utility fee: \$15.20/mo

Future Storm Drain System



Storm Drain Project Costs

ULT	CIP #	Recommended Improvements	Total Cost	Funding Proportionate Share Analysis							
				Operating		Developer		Other		Impact Fee Eligible	
				%	\$	%	\$	%	\$	%	\$
	D-015	Ditch Storm Drain System Improvements	\$1,621,474	100%	\$1,621,474	0%	\$0	0%	\$0	0%	\$0
	D-016	First Flush Detention Pond(s) - Central Heber	\$1,380,083	100%	\$1,380,083	0%	\$0	0%	\$0	0%	\$0
	D-022	Maintain Existing SD/Ditch System (20 times)	\$2,400,000	100%	\$2,400,000	0%	\$0	0%	\$0	0%	\$0
	D-023	Master Plan Updates every 5 years (4 times)	\$48,000	100%	\$48,000	0%	\$0	0%	\$0	0%	\$0
	D-025	Storm Water Management Program	\$336,000	100%	\$336,000	0%	\$0	0%	\$0	0%	\$0
ULT	D-026	Install SD System in Old Town Heber	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	D-028	Heber City Public Works Facility Exp Ph 2*	\$830,603	0%	\$0	0%	\$0	0%	\$0	100%	\$830,603
	D-029	HDS Before First Flush Pond	\$1,200,000	100%	\$1,200,000	0%	\$0	0%	\$0	0%	\$0
TOTAL EXPENDITURES			\$7,816,160		\$6,985,557		\$0		\$0		\$830,603



Pressurized Irrigation (PI)

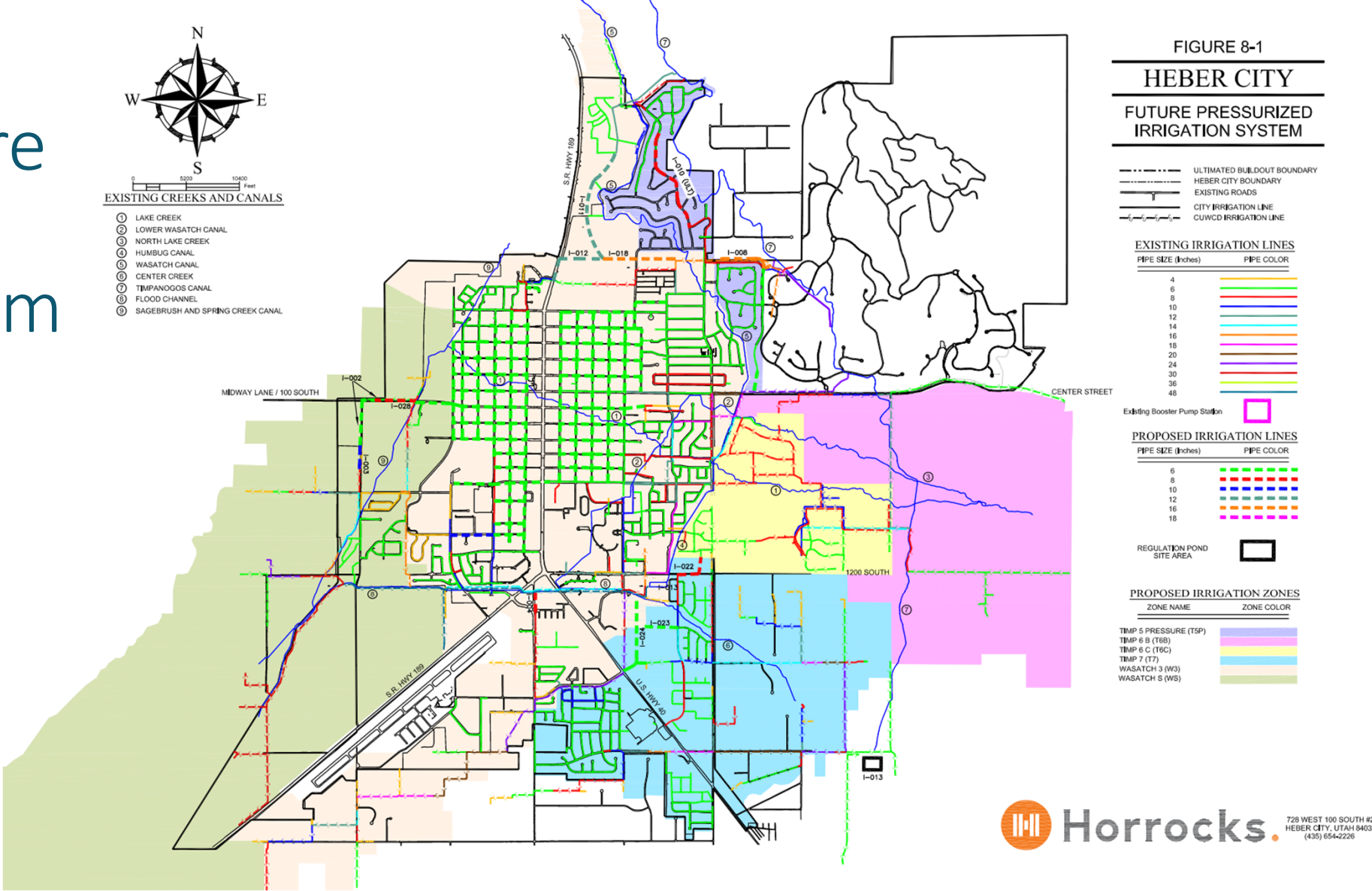
2017 - 2040 Prior Master Plan

- 3,882 - 9,289 ERUs w/o RedL & NonPI
- Outdoor Use: 437 gpd/ERU
- Avg Use: 1.70 to 4.06 mgd
- Peak Day Use: 5.78 to 13.08 mgd
- Start Central Heber PI Conv
- Impact Fee: Res \$1,131/ERU
- Impact Fee: Non Res \$0.16/sf

2023 - 2043 Proposed Master Plan

- 5,405 - 10,427 ERUs w/o RedL & NonPI
- Outdoor Use: No Change
- Avg Use: 2.36 to 4.56 mgd
- Peak Day Use: 8.03 to 15.49 mgd
- Complete Central Heber PI Conv
- Impact Fee: Res \$844/ERU
- Impact Fee: Non Res \$0.12/sf

Future PI System



PI Project Costs

ULT		CIP #	Recommended Improvements	Total Cost			Funding Proportionate Share Analysis						
					Operating		Developer		Other ¹		Impact Fee		
			Size (in)		%	\$	%	\$	%	\$	%	\$	
ULT	I-001	Central Heber Pressurized Irrigation Project		\$9,086,772	0%	\$0	0%	\$0	100%	\$9,086,772	0%	\$0	
	I-002	1200 W 430 S to 1100 W 100 S (6")	6	\$266,875	0%	\$0	54%	\$144,113	0%	\$0	46%	\$122,763	
	I-003	1200 West - 430 S to 500 S (10")	10	\$409,018	0%	\$0	45%	\$184,058	0%	\$0	55%	\$224,960	
	I-004	Daniel Rd - 1450 S to 1300 S (8")	8	\$246,758	0%	\$0	65%	\$160,393	35%	\$86,365	0%	\$0	
	I-008	East By-pass - 1500 E to 1240 E	16	\$558,029	0%	\$0	100%	\$558,029	0%	\$0	0%	\$0	
	I-010	Valley Hills Blvd - Mill Rd to Callaway Dr (8")*	8	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0	
	I-011	300 East - East Bypass to 1600 N (10")	10	\$593,309	0%	\$0	30%	\$177,993	0%	\$0	70%	\$415,316	
	I-012	East Bypass - US 40 to 300 E (12")	12	\$290,736	0%	\$0	55%	\$159,905	45%	\$130,831	0%	(\$0)	
	I-013	Regulation Pond(s) (6 ac-ft)		\$1,834,457	0%	\$0	0%	\$0	0%	\$0	100%	\$1,834,457	
	I-014	Aerial Digital Map Updates (4 times)		\$23,040	0%	\$0	0%	\$0	0%	\$0	100%	\$23,040	
ULT	I-015	Master Plan Updates every 5 years (4 times)		\$288,000	0%	\$0	0%	\$0	0%	\$0	100%	\$288,000	
	I-016	Regulation Pond(s)		\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0	
	I-018	East Bypass - 800 E to 300 E (16")	16	\$845,222	0%	\$0	23%	\$194,401	77%	\$650,821	0%	\$0	
	I-022	1200 S Sawmill Blvd to 1050 S 1100 E (8")	8	\$161,482	0%	\$0	60%	\$96,889	0%	\$0	40%	\$64,593	
	I-023	Becca Rd - 600 E to Sawmill Blvd (6")	6	\$339,840	0%	\$0	65%	\$220,896	35%	\$118,944	0%	\$0	
	I-024	600 East - 1300 S to US 40 (6")	6	\$469,555	0%	\$0	50%	\$234,778	50%	\$234,778	0%	\$0	
	I-026	Heber City Public Works Facility Exp Ph 1		\$35,676	0%	\$0	0%	\$0	0%	\$0	100%	\$35,676	
	I-027	Heber City Public Works Facility Exp Ph 2		\$149,501	0%	\$0	0%	\$0	0%	\$0	100%	\$149,501	
	I-028	100 South - 1100 W to 900 W (8")	8	\$252,282	0%	\$0	100%	\$252,282	0%	\$0	0%	\$0	
	TOTAL EXPENDITURES				\$15,850,552	\$0	\$2,383,736	\$10,308,511	\$3,158,305				



PI Water Rights / Shares

- Irrigation Shares (Unconverted for outdoor and future) = 2,266 AF
- Existing Shares - Approved Development - Central Heber = 118 AF Balance

Irrigation Company	Irrigation		
	Shares	diversion ac-ft /share	ac-ft
Daniels Irrigation	137	0.75	103
Extension Irrigation	371	0.30	111
Sage Brush Irrigation	6	0.30	2
Spring Creek Irrigation	74	0.60	44
Timpanogos Irrigation	20	1.85	38
Timpanogos Class D	136	3.00	409
Wasatch Irrigation	452	3.40	1,535
Other	-	-	24
Total			2,266

Irrigation Share Use	Purpose ERU	Average Use				Diversión Shares Used ² ac-ft
		gpd/ERU	gpd	gpm	ac-ft	
City Banked Irrigation Shares						2,266
Vacant Lots Use (indoor use)	1,074	264	283,536	197	318	(460)
Vacant Lots Use (outdoor use)	1,074	437	469,338	326	526	(526)
Future Central Heber PI System ¹	1,550	669	1,036,950	720	1,162	(1,162)
Irrigation Share Balance						118



Cost of Improvements

Facility	Estimated Cost of Recommended Improvements (2023 dollars)
Culinary Water	\$22,875,524
Sanitary Sewer	\$15,466,157
Streets	\$73,905,932
Storm Drain	\$7,816,160
Pressurized Irrigation	\$15,850,552
TOTAL	\$135,914,324

Impact Fee Eligible Portion: \$61,372,603 or 45% of Total



Cost of Improvements

Facility		Jan 2024 Impact Fee	Recommended Impact Fee	Units
Culinary Water	Residential	\$2,826	\$2,778	ERU*
	Non-Residential	\$2,826	\$2,778	0.75 - inch
		\$5,024	\$4,939	1.0 - inch
		\$11,304	\$11,113	1.5 - inch
		\$20,095	\$19,757	2.0 - inch
		\$45,215	\$44,453	3.0 - inch
		\$80,383	\$79,028	4.0 - inch
Sewer		\$2,207	\$1,417	ERU*
Streets	Single Family	\$2,153	\$4,070	Dwelling Unit
	Multi Family	\$1,252	\$2,304	Dwelling Unit
	Non-Residential**	\$126	\$269	Trip
Pressurized Irrigation	Residential	\$1,131	\$844	ERU*
	Non-Residential	\$0.16	\$0.12	Irrigated SF
Total per ERU (typical)		\$8,317	\$9,110	ERU*

* Equivalent Residential Unit. ** Fee reduced and subsidized by City from other funding.

Note: Heber City has a Parks and Trails impact fee covered in a separate master plan, and no Storm Water impact fee.



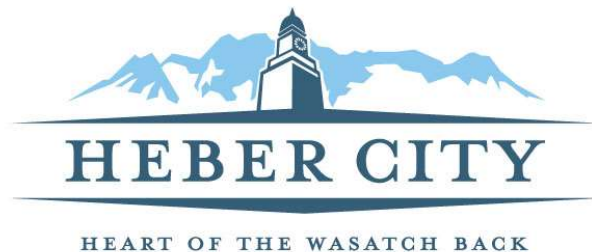
Conclusion & Recommendations

- Recommend collecting data and applying for state water use reduction.
- Confirm continuation of Non-Residential 45% Streets Impact Fee Subsidy Policy.
- Other Council Priorities and Master Plan Changes?
- Next Steps:
 - Hold Public Hearing
 - Adopt Master Plan and New Impact Fees

DRAFT

CAPITAL IMPROVEMENTS AND IMPACT FEES

HEBER CITY MASTER PLAN 2023 TO 2043



January 16, 2024

**Prepared by
Heber City & Horrocks Engineers**

Heber City Master Plan 2023 to 2043

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Chapter 1

Executive Summary

1.1 Document Purpose and Organization

Heber City is responsible for providing public services to customers within a current area of approximately 5,848 acres (9.1 square miles) in Wasatch County per the City's latest General Plan. This area excludes the North Village and Jordanelle Ridge areas which are served by others and addressed in other studies. It is estimated that over 21% of the City's service area is currently being developed, has the potential to develop, or will redevelop at some point in the future.

Accelerated population growth in Heber City has increased the demand on the existing public facilities throughout the City. To continue to adequately service the City's increasing population, the public facilities which consist of culinary water, sanitary sewer, streets, storm drainage, and pressurized irrigation were analyzed and are reported in this document. This document recommends capital improvements necessary to increase the capacity of these facilities to meet the demands of the projected population through the year 2043 and to maintain the current City Level of Service (LOS) for those facilities. This document also reports the associated improvement costs and impact fees that were calculated.

This document is a compilation of the Heber City master plan, long term public facilities plan, impact fee facilities plan, and impact fee analysis, hereafter collectively called the "Master Plan". This Master Plan document combines these elements into one comprehensive study.

In developing the various impact fees documented in this report, Heber City has complied with the requirements set forth by the Utah Impact Fees Act – As Amended, 2023. The impact fees have been calculated using methods that insure they are proportionate and reasonably related to the service demands of the future development.

Organization of the Master Plan Document

The first three chapters of this document summarize the purpose of this Master Plan, provide a basis for impact fees, and projected population growth for Heber City. These chapters yield the general foundation for this report which is necessary to analyze each facility through a 20-year planning period.

Heber City's culinary water, sanitary sewer, streets, storm drain, and pressurized irrigation systems were analyzed through the 20-year planning period. Chapters 4 through 8 document the findings of the analysis for each facility type, respectively. A separate appendix contains the additional data and material supporting this document.

1.2 Summary of Capital Improvement Costs

Recommended capital improvements to existing facilities were analyzed and reported in their respective chapters. These improvements are necessary to maintain the current Level of Service (LOS) to Heber City residents during future growth. Impact fees are not used to improve LOS to Heber City residents for any public facilities in this study. Projects which may improve existing LOS are paid for by operating funds.

Estimated costs of the recommended improvements are summarized in Table 1-1 by facility type. The improvement costs are in 2023 dollars and are the costs for all public facilities during the 20-year planning period. Contingencies, engineering, legal and administrative fees are also included. These improvements will be funded through a combination of impact fees, developer contributions, City operating funds, and other funds such as grants or other public entity funds.

Table 1-1 Estimated Cost of Recommended Improvements

Facility	Estimated Cost of Recommended Improvements (2023 dollars)
Culinary Water	\$22,875,524
Sanitary Sewer	\$15,466,157
Streets	\$73,905,932
Storm Drain	\$7,816,160
Pressurized Irrigation	\$15,850,552
TOTAL	\$135,914,324

All public facilities projected through the 20-year planning period were determined based on the need created by both future residential and non-residential growth. The cost of each facility was determined from sound estimating procedures using historic construction cost records for each facility, current land acquisition costs, typical engineering costs, and normal construction contingencies. Each individual project was analyzed to determine if the costs should be funded by impact fees, and if so, what percentage would be paid for by the impact fees. The costs to be funded by impact fees for all projects within a facility type were totaled. The remaining costs (not impact fee eligible) were distributed to one or more of the other funding sources and totaled. These cost distributions and totals can be seen in each chapter in the table listing the estimated cost of each improvement. Costs for any excess capacity in existing facilities have not been included in the cost totals of this study unless noted otherwise. Most of any excess capacity has previously been paid for by impact fees, and the benefit should go to new development.

1.3 Summary of Fees

Impact Fees

Although the total build-out for Heber City will probably not come for several decades, proper planning of the City's public facilities should occur now. The collection of impact fees from new development is one way to offset the costs of adding capacity to the existing infrastructure. This section recommends the impact fees for the 20-year planning period based on the Heber City's most recent zoning and planning area map, projected population growth, and respective facilities that are required because of the growth during this period. All necessary public facilities projected through the 20-year planning period have been determined and are shown in each respective chapter. The impact fees for each capital facility sector (culinary water, sanitary sewer, streets, storm drain, and pressurized irrigation) were calculated by comparing total costs of improvements to be paid for by impact fees and the number of new residential and non-residential units that will need the improvements.

It is essential that any impact fees collected are expended within six years. To ensure Heber City properly expends impact fee funds, an expenditure plan has been created for each impact fee fund. All the improvements within the 20-year window have been grouped into five-year incremental improvement periods. Projects that were expected to occur first were planned for the 2024 to 2028 period. The remaining projects were planned into the most feasible five-year window up to the year 2043.

The impact fee amount was calculated by taking the total cost of improvements associated with impact fees, plus the necessary bond interest payments, divided by the projected new growth number for 20-years. The growth number is presented as: equivalent residential units (ERU's) for culinary water, pressurized irrigation, and sewer, and as trips generated by traffic for streets. The impact fees for all years are shown in 2023 equivalent dollars. Bonding is anticipated in some instances when impact fees collected prior to the improvement projects is not expected to be sufficient to cover projected costs. By considering the full 20-year window to determine the projected impact fees, and then grouping the projects into the five-year increments, the impact fees are distributed evenly to all development within the 20-year plan. If the impact fee revenue for the first five years does not cover all the improvements planned for that period, bonds will be required to cover the remaining costs. Development within the 20-year planning window will all pay equally for future projects so that earlier developments only pay their fair share of facilities that will also benefit later developments.

Table 1-2 summarizes the proposed impact fees for the facilities including culinary water, sanitary sewer, streets, and pressurized irrigation. There is not an impact fee proposed for storm water with this analysis since these improvements are incorporated in with streets. The table shows the projected impact fees collected every five years for all the facilities and the incremental improvement costs scheduled to expend the collected impact fees within that period. It also shows the impact fee running balance, after adjusting for bond payments, for each five-year increment. The tables in each facility chapter show the bond account balance. For information on the projected ERU's, trips, or newly developed area associated with each impact fee, please see each respective section.

Table 1-2 Expenditure Plan Summaries

Facility	2024-2028 5-year			2029-2033 5-year		
	Collected Impact Fees	Improvement Costs	Impact Fee Balance ¹	Collected Impact Fees	Improvement Costs	Impact Fee Balance ¹
Culinary Water	\$4,489,802	\$6,525,508	\$4,294	\$3,789,660	\$2,743,036	\$68,226
Sanitary Sewer	\$2,290,083	\$2,400,678	\$9,406	\$1,932,966	\$1,880,441	\$4,126
Streets	\$12,282,925	\$16,360,165	\$11,248	\$10,573,047	\$8,208,806	\$22,968
Pressurized Irrigation	\$1,364,683	\$1,921,136	\$3,547	\$1,151,874	\$1,063,811	\$1,852
Facility	2034-2038 5-year			2039-2043 5-year		
	Collected Impact Fees	Improvement Costs	Impact Fee Balance ¹	Collected Impact Fees	Improvement Costs	Impact Fee Balance ¹
Culinary Water	\$1,497,527	\$806,288	\$6,773	\$1,608,661	\$367,122	(\$0)
Sanitary Sewer	\$763,834	\$1,227,227	\$2,927	\$820,519	\$165,106	\$0
Streets	\$4,543,684	\$3,614,769	(\$639)	\$4,931,870	\$961,886	\$0
Pressurized Irrigation	\$455,176	\$86,679	(\$15,964)	\$488,955	\$86,679	\$0

¹ Balance includes estimated bond costs. Actual will vary based improvement costs and bond amounts. Goal is to end with balance close to zero.

The Heber City service area for culinary water, sanitary sewer, and pressurized irrigation in this report includes everything within the City boundary, excluding the Red Ledges private development, the North Village area, and the Jordanelle Ridge area. Water, sewer, and irrigation services in Red Ledges are provided by the Twin Creeks Special Service District (TCSSD). Water, sewer, and irrigation in the North Village and Jordanelle Ridge areas are provided by the North Village Special Service District (NVSSD). Impact fee calculations for facilities and revenue in the excluded areas have not been included in this master plan. The plan proposes that all Heber City developments, except for the areas mentioned, pay the impact fees recommended for culinary water, sanitary sewer, and pressurized irrigation.

The Heber City service area for public streets and the associated storm drainage include everything within the City boundary and Red Ledges, excluding the North Village and Jordanelle Ridge areas. Impact fee calculations for facilities and revenue in the excluded areas have not been included in this report. The plan proposes that all Heber City developments, except for the areas mentioned, pay the impact fees recommended for streets.

Table 1-3 shows a comparison of the previous and the recommended impact fees. The recommended impact fees will help fund the improvements necessary to enable the City to provide utility services according to City and State standards.

Table 1-3 Summary of previous and recommended impact fees. (SEC. 15.16.090)

Facility		Jan 2024 Impact Fee	Recommended Impact Fee	Units
Culinary Water	Residential	\$2,826	\$2,778	ERU*
	Non-Residential	\$2,826	\$2,778	0.75 - inch
		\$5,024	\$4,939	1.0 - inch
		\$11,304	\$11,113	1.5 - inch
		\$20,095	\$19,757	2.0 - inch
		\$45,215	\$44,453	3.0 - inch
		\$80,383	\$79,028	4.0 - inch
Sewer		\$2,207	\$1,417	ERU*
Streets	Single Family	\$2,153	\$4,070	Dwelling Unit
	Multi Family	\$1,252	\$2,304	Dwelling Unit
	Non-Residential**	\$126	\$269	Trip
Pressurized Irrigation	Residential	\$1,131	\$844	ERU*
	Non-Residential	\$0.16	\$0.12	Irrigated SF
Total per ERU (typical)		\$8,317	\$9,110	ERU*

* Equivalent Residential Unit. ** Fee reduced and subsidized by City from other funding.

Note: Heber City has a Parks and Trails impact fee covered in a separate master plan, and no Storm Water impact fee.

Annual Adjustment Of Impact Fees

Since growth rates, property values, inflation, zoning, and other variables which affect public facilities change from year to year, it is in the best interest of Heber City to ensure that the impact fees are adjusted periodically.

The City has adopted a policy that adjusts the cost of improvements and impact fees on an annual basis to account for inflation. The adjustment is based on an industry accepted construction cost index. The index that will be used is the Engineering News Record (ENR) 20 City Construction Cost Index. The ENR December 2023 index of 13,514.76 will be deemed the base index. An annual adjustment to fees will be made each January 1st based on the percentage change between the most recent December index and the December index of the prior year.

Impact Fee Exemptions

The impact fees recommended in this study must be assessed as recommended to generate sufficient revenue to cover the improvement costs that have been identified. From time to time the City receives requests to exempt all or a portion of impact fees on a given project. If the City desires to exempt any of the fees identified, they must at the same time identify an alternate source of funding that will replace the amount waived.

Utility Fees

Utility fees were not analyzed in this study.

Chapter 2

Impact and Utility Fee Summary

2.1 Administration of Impact Fees

An impact fee is a one-time charge with the purpose of raising revenue for new or expanded public facilities necessitated by development. Impact fees are imposed as a condition of receiving development approval. Under the Impact Fee Act, such facilities must have a useful life of ten years or more. They must also be owned or operated by or on behalf of a local government, special service district, or qualifying private entity. An impact fee is expressly distinguished from a tax, a special assessment under the special improvement or special district act, a building permit fee, a hook-up fee, a fee for project improvements, or other reasonable permit or application fees such as conditional use or subdivision application fees (The Utah Land Use Institute, April 2014, *Utah Impact Fee Handbook and Checklists*).

Impact fees cannot be used to correct existing public facility deficiencies or for routine maintenance activities. The premise behind impact fees is based on the critical assumption that if no development were allowed, the existing facilities would adequately serve the existing level of development within the City. Therefore, the recommended improvements, outlined in Chapters 4 through 8 for each facility, represent improvements needed to accommodate new growth and to maintain the existing Level of Service (LOS) for these facilities within Heber City.

Refer to Table 1-3 in the Executive Summary for a summary of current and recommended impact fees. The proposed impact fees will fund the necessary improvements outlined above and described in Chapters 4 through 8.

2.2 Proportionate Share Analysis

Impact fees are a form of development exaction. An exaction is generally a fee, in-kind requirement, or dedication of land imposed on development to offset the burdens created by that development on municipal services. Exactions provide only a secondary benefit to existing residents. Much has been written about U.S. Supreme Court decisions, such as *Dolan v. Tigard* (1994) 114 S.ct.2309, and Utah Supreme Court decisions, such as *B.A.M Development v. Salt Lake County*, 2008 UT 74, 196 P.3d 601 (Utah 2008), and how they mandate the balancing of burdens created by and imposed upon development. The impact fee seeks to do this. (The Utah Land Use Institute, 2014, *Utah Impact Fee Handbook and Checklists*).

Impact fees for Heber City are proportionate and related to the capital facility service demands of development. The impact fees presented in this document are based on the Impact Fees Act which includes seven evaluation factors set forth by the Utah Supreme Court decision known as *Banberry Development Corp. vs. South Jordan City*. These seven factors are incorporated into

the following objectives used for the Heber City impact fee analysis, and ensure newly developed properties bear only their equitable share of the capital costs in relation to the benefits conferred:

1. Impact fees for culinary water, pressurized irrigation, sewer, and streets are based on the anticipated cost of system improvements for each facility needed to serve existing and future development. The costs are generated using local cost factors and construction practices typical to the area. No existing facility costs or excess capacity costs are included in the impact fee calculations for Heber City, with the exception of the Heber City Public Works Facility Exp Ph 1 (W-066, S-037, T-067, and I-026). This project has been included in the impact fee analysis to pay off that portion of debt attributed to growth. All other existing excess capacity has been previously paid for by impact fees and/or operating funds. New development will benefit from excess capacity in existing facilities.
2. Public facilities will be financed by a combination of operating and non-operating funds. Revenue sources may include: user fees, special assessments, bonds, general taxes, grants, impact fees, and intergovernmental transfers. Impact fees fund non-operating projects.
3. The extent to which developed properties in Heber City have already contributed to the cost of existing capital facilities (by such means as user charges, special assessment, or payment from the proceeds of general taxes), have been take into account in the impact fee analysis.
4. The extent to which developed properties in Heber City contribute to the cost of both new and existing capital facilities in the future has been identified in the impact fee analysis.
5. Newly developed properties should be evaluated regarding the facilities that have been provided by the owners or developers as compared to common facilities provided by Heber City in other parts of the City. Credits may be available for system improvements identified in the City Master Plan. Administrative procedures for credits are outlined in an impact fee ordinance.
6. Extraordinary costs, if any, required to service newly developed properties are addressed through administrative procedures that allow independent studies to be submitted to Heber City.
7. The time-price differential inherent in fair comparisons of the amount paid at different times is addressed in the evaluation of any debt service credits for each type of impact fee. All costs in the impact fee calculations are given in current dollars with no assumed inflation rate over time. Necessary cost adjustments can be made as part of the annual evaluation and update of impact fees.

The following provisions need to be considered during collection of impact fees:

1. The service area for the streets capital facilities is City-wide, excluding the North Village and Jordanelle Ridge areas. The service area for the remaining public facilities (culinary water, pressurized irrigation, and sanitary sewer facilities) includes the entire City, excluding the Red Ledges, North Village, and Jordanelle Ridge areas. Separate geographic zones for the collection and expenditure of impact fees may be considered when a disproportionate share of the public facility cost is attributable to specific locations.
2. Heber City may adjust the standard impact fee at the time the fee is charged to:
 - Respond to unusual circumstances in specific cases.
 - Respond to a request for a prompt and individualized impact fee review for a development activity of the state, school district, or charter school.
 - Ensure that the impact fees are imposed fairly.
 - Take into account studies and data submitted by the developer.
 - Allow a credit for developer contributions toward projects identified in the master plan that offset the need to collect impact fees, such as dedicating land for a planned improvement; building and dedicating improvements beyond what is needed to serve a development; or dedicating a public facility that the City and developer agree will reduce the need for a master planned improvement.

2.3 Administration of Utility Fees

Utility fees are monthly fees Heber City uses to generate sufficient revenue to fund respective operating expenses for various facilities. Operating expenses include the monies used for personnel and contractual services, materials, supplies, depreciation, maintenance, and other miscellaneous expenses. The existing population should fund operating expenses.

The scope of this study does not include the review, analysis, or revisions to any existing utility fees for culinary water, sewer, streets, or irrigation systems. All other City fees such as taxes, hookup fees, or other fees other than impact fees are also not covered in this study.

Chapter 3

Projected Population Growth

3.1 Introduction

A pleasant living environment and a high growth rate along the Wasatch Front have caused Heber City to experience a large increase in population over the past ten years. This growing population places additional burdens on the City's public facilities. To continue providing adequate service to Heber City and maintain the current level of service to the residents of Heber City, the user capacity of the facilities must be analyzed and improved to match population growth.

The projected conditions relating to Heber City's infrastructure and facilities are based upon several assumptions such as present growth rates, economic stimuli, environmental and recreational development, and residential development. As these factors change, the projected conditions made in this Master Plan also change. To help minimize the effect of changing conditions, the recommendations made in this master plan are based upon the methodology described in this chapter within the planning period.

This master plan excludes the North Village and Jordanelle Ridge areas of the City. These areas are covered under separate master plans.

3.2 Methodology for Determining Projected Population

The method for projecting population through the year 2043 for Heber City is based on the State of Utah 2020 Census Estimates and the projected City growth rate. This rate was determined by estimating the number of vacant lots in subdivisions that are recorded or accepted, the number of lots in subdivisions that are approved but un-recorded, and number of potential lots in future subdivisions as shown in Table 3.2 below. It was assumed that by the year 2027 all the vacant lots will be built and by the year 2031 all the approved un-recorded lots would be built. By the year 2043 it was assumed that half of the potential lots in future subdivisions would be built. The grow rates were then determined based on these assumptions. The population projection to year 2043 is also compared to the projected ultimate population which is based on the current population plus generated population from projected future land development within Heber City limits and known annexations. Population projected from future development is based on the current Heber City General Plan Land Use Map. The 2043 projected population based on growth rate is currently less than then the projected Heber City ultimate population based on land use.

3.3 Results of Calculation

Figure 3-1 shows graphically the population projection to year 2043. This method assumes an average growth rate of 4.33% per year through 2031 and then it drops to 1.19% per year through 2043. The 2021 population of 16,856 was used from 2020 Census Data, and then the 2023 and future populations were estimated based on the projected growth rates described above. The estimated population is expected to increase by approximately 61.8%, from 18,347 to 29,682 people by the year 2043.

For this study where the Red Ledges area population is included, it is assumed they will have 1,682 full time residents by 2043, and assumes that 45% of the projected homes in Red Ledges will be occupied by full time residents. The remaining homes are assumed to be secondary, non-full time residents which are excluded.

Figure 3-1

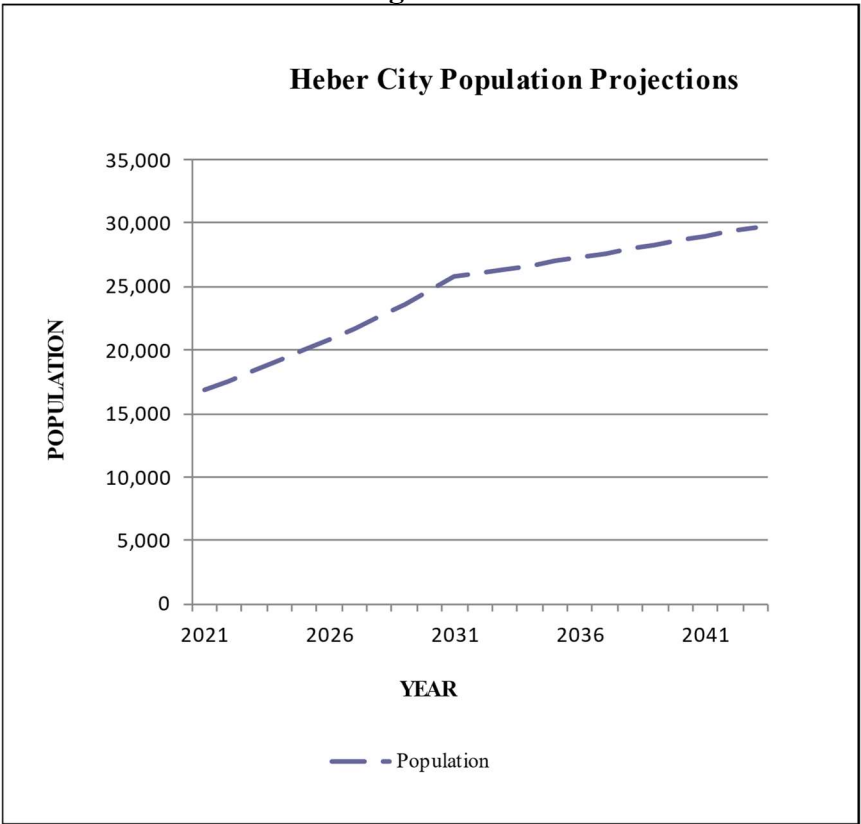


Table 3-1 lists the population growth rates projected through the year 2043. If the population increases faster than projected, the revenue generated from impact fees will need to be monitored to ensure funds are spent within the time prescribed by law. If the population increases slower than projected, the revenue generated may be insufficient and financing alternatives may need to be considered to complete projects. It is recommended that the Master Plan be updated periodically to minimize these types of revenue changes.

Table 3-1 Heber City Population Projections In Annual Increments

Year	% Chg	Total Pop	Chg Pop	Calc Growth Rates
2021		16,856		Avg Chg/Yr (2021-2031)
2022	4.33%	17,586	730	
2023	4.33%	18,347	761	
2024	4.33%	19,142	794	Avg Chg/Yr (2032-2043)
2025	4.33%	19,971	829	
2026	4.33%	20,835	865	
2027	4.33%	21,738	902	
2028	4.33%	22,679	941	
2029	4.33%	23,661	982	
2030	4.33%	24,685	1,025	
2031	4.33%	25,754	1,069	
2032	1.19%	26,061	306	
2033	1.19%	26,371	310	
2034	1.19%	26,685	314	
2035	1.19%	27,002	318	
2036	1.19%	27,323	321	
2037	1.19%	27,649	325	
2038	1.19%	27,978	329	
2039	1.19%	28,310	333	
2040	1.19%	28,647	337	
2041	1.19%	28,988	341	
2042	1.19%	29,333	345	
2043	1.19%	29,682	349	
Total Change (2023-2043)			11,335	
Estimate 2023			18,347	
Estimate 2043			29,682	

Table 3-2 lists the future residential developments in Heber City using the planned land uses in the City's General Plan. The table calculates the new residential units and ultimate population assuming the currently undeveloped land will develop at the allowed densities. Vacant lots in the existing subdivisions are also included to accurately project the ultimate population. The known number of units per development are used in some instances. The ultimate population is estimated by multiplying the total new projected number of units by the average number of persons per household, and then adding this number to the existing population. The 2020 U.S. Census reported Heber City as having an average of 3.12 persons per home.

Table 3-2 Heber City's Developments and Ultimate Population

Residential		
Development #	Subdivisions (Recorded and Accepted w/ Vacant Lots)	Vacant Lots
3	Cove at Valley Hills	7
4	Cove Estates Phase 1 & 2	4
13	Red Ledges	562
16	Valley Hills Early Phases	4
35	Stone Creek Phase 4	6
36	Wasatch Vista Plat C	42
42	The Orchard	15
61	Klein Huis	100
71	Old Mill	164
79	Sequoia	142
32a	Sawmill 2B	49
32b	Sawmill 1B	66
33a	Sawmill 4	21
33b	Sawmill 5	61
39c	Brookside Phase 3	26
39d	Brookside Phase 4	10
40a	Coyote Ridge Phase 1-5	136
40b	Springs at Coyote Ridge	108
44b	Parkview Place	43
97	Sawmill Ph 1A	70
	Subtotal	1,636
	Subdivisions (Recorded Not Accepted)	Units
	Subtotal	0
	Subdivisions (Plans Approved Not Recorded)	Units
34	Kimball Villas	64
	Subtotal	64
	Approved But Not Recorded and Subdivisions in Process	Units
26	Cove at Valley Hills Plat Amendment (Final)	3
28	Heber City Park	2
29	Meadows at Southfield Plat A and B (Final)	46
31	Red Ledges 4A and 4B	54
31	Red Ledges (Preliminary)	128
33	Sawmill Phase 6	326
40d	Coyote Ridge Phase 6	44

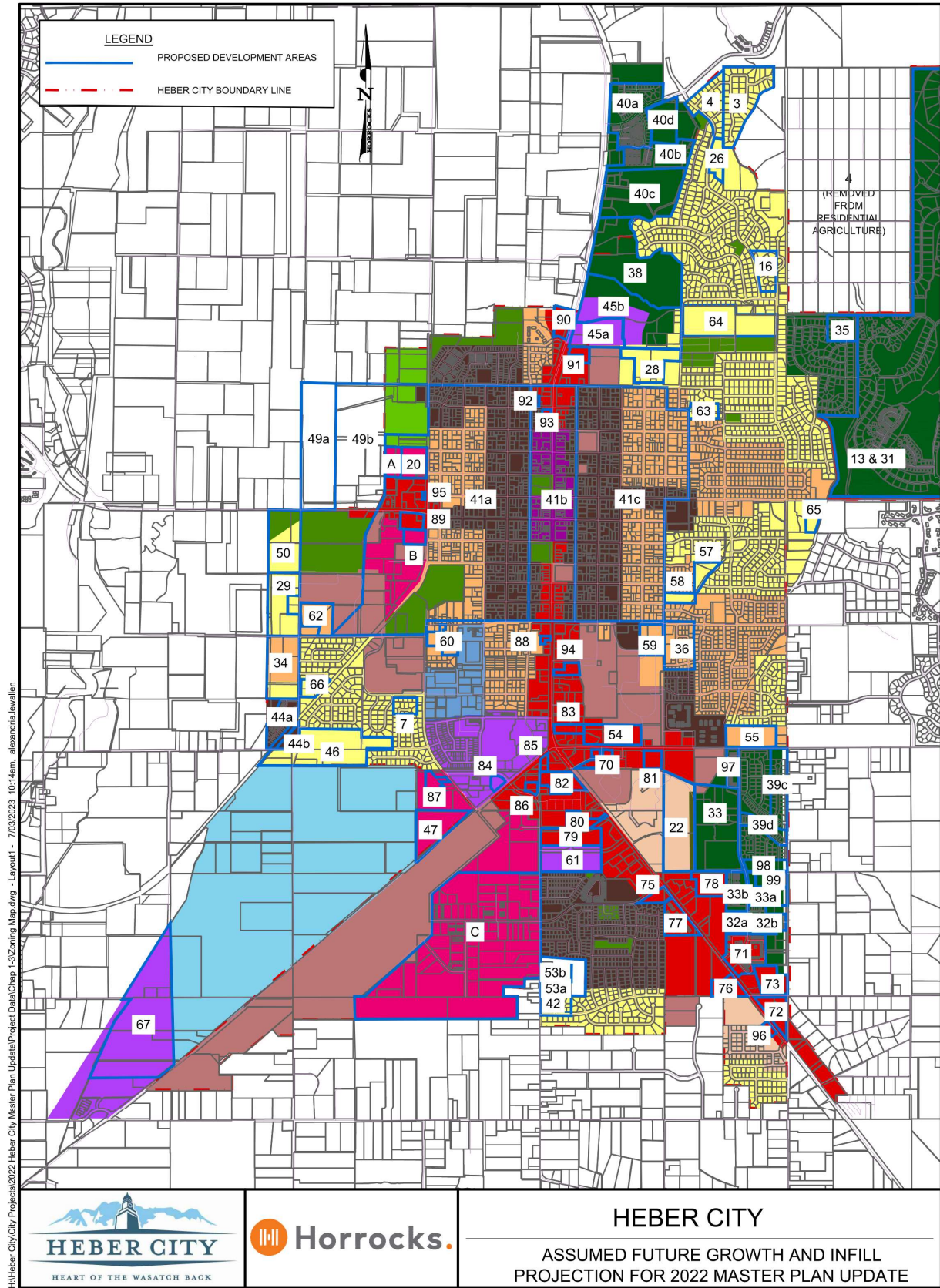
44a	Madison Meadows	11
45a	Smith's	10
45b	New London	655
	Subtotal	1,279

Development #	Potential Future Developments and Annexations	Estimated Units
38	Bassett	150
40e	Coyote Ridge Phase 7	17
41a	600 W to 100 W	180
41b	100 W to 100 E	720
41c	100 E to 500 E	180
46	Stewart and Witt (check with 3.5 units per acres)	40
50	Wasatch County (campground)	63
55	1200 South 1200 East (3.5 units per acre) (13.8 acres)	37
57	300 South 500 East (3.5 units per acre) (4.4 acres)	12
58	500 South 500 East (3.5 units per acre) (3 acres)	11
59	400 East 600 South (3.5 units per acre) (7.6 acres)	27
60	600 West 550 South (3.5 units per acre) (5.9 acres)	11
62	600 South 1200 West (4 units per acre) (10.7 acres)	43
63	400 North 600 East (R-1, 2.5 Units per acre) (4.6 acres)	12
64	Cemetery Plots	0
66	900 South Field Road Zone Change (3.5 units per acre) (4 acres)	14
67	Southwest Annexation (4 units per acre) (66 acres)	264
40c	Future Coyote	356
49a	Spring Creek	332
49b	Wasatch Highschool and MTECH	232
53a	2000 S Daniel Rd (2.5-3.5 units per acre) (13.7 Acres)	41
53b	Church	0
98	Sawmill 7	22
99	Forest Service	30
	Subtotal	2,792
	Residential Total	5,771

Potential Additional Population (3.12 per Unit)	18,006
Potential Total Population (Current Population 18,347)	36,353

Since the City will not develop to its maximum density and boundary in this study's 20-year planning window, interim 2043 residential units and population have been projected. The development units listed in Table 3-2 are distributed among the 20-year boundary and zones shown in Figure 3-2. All zones shown in Figure 3-2 are assumed for this study and require approval from the City before the land is developed. The ultimate population based on the land use projections are higher than the 2045 population projections, however, the units match up well and support the population projection approach used in this study.

Figure 3-2 Heber City Estimated Future Land Use



Chapter 4

Culinary Water System

4.1 Summary & Recommendations

Introduction

This chapter identifies the existing condition of the culinary water system as well as recommended improvements to meet the projected 20-year population demands. Impact fees are based on implementing the recommended improvements.

Future conditions in Heber City were analyzed by projecting the population through the year 2043 and calculating the number of connections or equivalent residential units (ERU's). Based upon the historical culinary water demand and the projected average yearly, peak daily, and peak instantaneous demand categories, the culinary flows are projected through the planning period. These flows are used to determine the required capacities of the culinary water source, storage, and distribution systems. Recommendations are made to maintain the current Level of Service (LOS) and provide the needed capacity for the projected population in the three categories. Water rates and connection fees are studied separately and not a part the recommendations.

The Heber City Design Criteria used in this study are summarized below:

- Demand:
 - Average Yearly - Indoor 400 gpd/ERU
 - Average Yearly - Outdoor w/o PI 437 gpd/ERU (based on 3.0 af/ac)
 - Peak Day - Indoor Average Yearly x 2.0
 - Peak Day - Outdoor Average Yearly x 3.4
 - Peak Instantaneous - Indoor Peak Day Indoor x 2.0
 - Peak Instantaneous - Outdoor Average Yearly Outdoor x 4
 - Residential Fire 1,500 gpm @ 2hrs
 - Commercial Fire 2,500 gpm @ 2hrs
- Storage:
 - Indoor Operational 400 gal/ERU
 - Outdoor Operational w/o PI 874 gal/ERU
 - Fire 300,000 gal
- Pressure:
 - Minimum Static 60 psi
 - Maximum Static 130 psi
 - Minimum Peak Day 40 psi
 - Minimum Peak Instantaneous 30 psi
 - Minimum Peak Day + Fire 20 psi
- Pipe Sizes:
 - Minimum 8-inches
- Velocities:
 - Maximum Peak Day 5 fps
 - Maximum Peak Day + Fire 10 fps

Projected Population

Heber City's population is expected to increase by approximately 61.8%, from 18,347 to 29,682 by the year 2043, excluding the North Village and Jordanelle Ridge areas. This is based on an analysis of recorded lots, unrecorded lots that have received approval, and potential future developments. At this growth rate, it is projected that an additional 4,478 ERU's (11,727-7,249 ERUs) from Residential and Non-Residential development will be added. Of these, 380 ERU's (538 - 158 ERUs) have been deducted for the Red Ledges area which is served by Twin Creeks Special Service District (TCSSD). Heber City's culinary water system is therefore estimated to have a total of 11,188 ERU's, or an additional 4,098 ERU's, by 2043. Growth beyond 2043 to Ultimate build out will be addressed in future Master Plan updates.

Projected Culinary Water Use

Using 11,188 ERU's in 2043, it is projected that the City's average culinary water use will be 5.21 million gallons per day (mgd) (11,188 ERU @ 400 gpd/ERU + 7,090 ERU @ 104 gpd/ERU) for indoor and outdoor use. Peak Day flows will be 7,956 gallons per minute (gpm) (11,188 ERU @ 400 gpd/ERU x 2.0 PF + 7,090 ERU @ 104 gpd/ERU x 3.4 PF). This use would be much higher if pressurized irrigation systems were not installed with new developments. It is estimated that 1,550 customers in the central part of Heber City do not have a secondary source of water. Installation of pressurized irrigation to 626 of these customers is currently underway. If the entire pressurized irrigation were installed in Central Heber, the projected 2043 peak flow of 7,956 gpm could be reduced by an additional 954 gpm during summer peak use (1,550 - 626 ERUs @ 437 gpd/ERU x 3.4 PF).

A draft report by Zions Public Finance which is an analysis of downtown absorption suggests that the downtown population will increase by 535 residents. The study suggests that to accommodate growth in the downtown area, there needs to be redevelopment, and highlights the use of 4-story apartment buildings. For the purposes of this report, the assumption is made that the apartment buildings will use xeriscape, and therefore the increase in culinary outdoor demand in the downtown area will be negligible. There will however be approximately 171 ERU's added to the culinary system in the future ERU estimate for indoor use.

Recommended Culinary Water System Improvements

Capital improvements recommended to meet the projected population demands are shown in Figure 4-1. These recommendations were determined using a computer model of Heber City's culinary water system, projected culinary water flows, and input from City officials. A detailed listing of the recommended improvements is given below. Completed or deleted projects from previous master plans have been removed from the listing.

Projects labeled as "Ultimate" are beyond the 20-year planning window and therefore the improvement cost and associated populations served have been excluded from impact fee calculations.

W-005 Daniel Road – 2200 S to 2400 S (8-inch): An 8-inch pipeline should be constructed from where the 12-inch water line currently ends in Daniels Road at approximately 2200 South to the 8-inch water line at approximately 2400 South. This line is needed to provide flow and pressure to the south end of City, and loop the dead-end lines in Daniels Road for future development. This line runs through a portion of Daniel Road in Daniel City without developers to pay for it, therefore impact fees will be used.

W-007 East Bypass - US 40 to Mill Road (12-inch): A 12-inch line should be constructed along the East Bypass and Valley Hills Drive from US 40 to Mill Road. This line is needed for the future development in this area. Development will install the line within the future roads as the area develops, with impact fees paying for over-sizing above 8-inch.

W-008 1900 South - US 40 to Mill Rd (12-inch): A 12-inch line should be constructed along 1900 South from US 40 to Mill Road to provide flow to the area east of US 40 between 1200 South and 2400 South. Development will install the line within the future roads as the area develops, with impact fees paying for over-sizing above 8-inch. Approximately 425 was installed by the Sawmill Community Phase 5 between Sawmill Blvd and Alley 4.

W-019 2400 South- Daniel Rd to Airport Rd (12-inch): A 12-inch line should be constructed in 2400 South from Daniels Road to 850 West, then north along 850 West to Airport Road to serve the area South of the airport. Development will install the line within the future roads as the area develops, with impact fees paying for over-sizing above 8-inch.

W-025 1250 South PRV: A PRV should be installed on 1250 South and approximately 900 West between the high and low pressure zones, to loop the system and provide adequate fire flow in the lower zone. This PRV will help provide adequate capacity for the new development area in the lower zone. Impact fees pay for this PRV.

W-027 New Source Development (2400 gpm): A new source, independent of existing water sources, should be identified. Timing for when this source will be needed and fully developed will depend on yields from existing sources and whether they can be expanded. It will also depend on demands from future growth, system loss improvements, and pressurized irrigation continuance. If pressurized irrigation continues to be installed in new development and Central Heber, the quantity of culinary water used will be reduced and eliminate the need for a new source in the next 7 years.

W-028 Master Plan Update: The Master Plan should continue to be reviewed annually with major updates every five years.

W-029 Aerial Photography Update: The Aerial Photography should be updated every five years.

W-035 700 North - 400 E to Main St (8-inch): An 8-inch pipeline should be constructed in 700 North from 400 East to the west side of Main Street. This line is necessary to supply adequate pressures to this area and to supply adequate fire flow and capacity from increased demands due to the infill of new homes and business in this area. Developers in this area should install this line.

W-036 400 East - 700 N to 500 N (8-inch): An 8-inch pipeline should be constructed in 400 East from 700 North to 500 North. This line is necessary to supply adequate pressures to this area and to supply adequate fire flow and capacity from increased

demands due to the infill of new homes and business in this area. Developers in this area should install this line.

W-041 US 40 – 2200 S to 2400 S (Center Creek Road) (West) (8-inch): An 8-inch pipeline should be constructed along US 40 from 2200 South to 2400 South on the west side of US 40. This line is needed to loop the water line on US 40 and for future demands. There is not a developer here that will likely put this water line in, therefore, impact fees will pay for 100% of this line.

W-042 1500 South – Dusty Baker Lane (1500 E) to US 40 (8-inch): An 8-inch pipeline should be constructed at approximately 1500 South from 150 E to US 40. This line is needed to loop the water line on US 40 and supply adequate fire flow and capacity to new development in this area. Developers in this area should install this line.

W-043 US 40 – 1350 S to 1450 S (West) (8-inch): An 8-inch pipeline should be constructed along US 40 from approximately 1350 South to approximately 1450 South as shown on Figure 4-1 on the west side of US 40. This line is needed to loop the water line on US 40 and supply adequate fire flow and capacity to new development in this area and outside this area. Developers in this area should install this line.

W-045 1200 South – 850 W to 1200 W (8-inch): An 8-inch pipeline should be constructed in 1200 South from 850 West to 1200 West. This line is needed to loop the water line and to supply adequate fire flow and capacity to new development in this area and outside this area. Developers will likely install this line.

W-046 1200 West – 1200 S to 1100 S (8-inch): An 8-inch pipeline should be constructed in 1200 West from 1200 South to 1100 South. This line is needed to loop the water line and to supply adequate fire flow and capacity to new development in this area and outside this area. Developers will likely install this line.

W-047 600 West – 450 S to 650 S (8-inch): An 8-inch pipeline should be constructed in 600 West from approximately 450 South to 650 South. This line is needed to loop the water line and to supply adequate fire flow and capacity to new development on the west side of town. There is not a developer here that will put this water line in, therefore, impact fees will pay for 100% of this line.

W-053 550 North – 550 E 750 E (8-inch): An 8-inch Pipeline should be constructed from 550 East to 750 East. This line is needed to replace the existing 4-inch pipe that currently does not supply adequate fire flow for this road. It is assumed future growth contributes 20% towards the need for this project, therefore, impact fees will pay for 20% of this project.

W-054 Future Tank Storage (1.4 mg): Additional storage will be necessary. A new location will need to be found or one of the existing tanks will need to be expanded to meet the future storage demands. However, if pressurized irrigation continues to be installed in Central Heber and new development, the quantity of culinary water used will be reduced and eliminate the need for new tank storage in the next 7 years. The cost for this project will remain in the impact fee analysis since the funds generated will be

needed for either new storage or to help fund the pressurized irrigation system. W-054 is in the 2023 to 2043 planning window and assumes the funds will be used to complete the pressurized system.

(Ultimate) W-058 South Field Rd - US 189 to 1200 S (12-inch): A 12-inch Pipeline should ultimately be constructed from along South Field Road from US 189 to 1200 South. The 12-inch diameter is specifically for the requirements of this area, therefore, if annexed, the developers will install this line if constructed.

(Ultimate) W-059 US 189 - 2500 S to South Field Rd (12-inch): A 12-inch Pipeline ultimately should be constructed from along US 189 from the 2500 South to South Field road. The 12-inch diameter is specifically for the requirements of this area, therefore, if annexed, the developers will install this line if constructed.

W-060 500 North to Midway Ln (8-inch): An 8-inch Pipeline should be installed from 500 North through the future development to Midway Lane (100 South). This line is needed to supply water service to the new High School and development in this area. The annexation and developers will install this line.

W-061 US 40 or W-061A Ostler Peak Rd – 1600 North to 900 North (12-inch): A 12-inch Pipeline should be installed along the east side of US 40 or along Ostler Peak Lane from 1600 North to 900 North to tie into project W-007. This line is needed for the future development in this area. Development will install the line within the future roads as the area develops, with impact fees paying for over-sizing above 8-inch. A portion of this line near 1700 North has been constructed with Coyote Springs development.

W-063 US 40 – 1500 S to 1200 E (East) (8-inch): An 8-inch pipeline should be constructed along US 40 from 1500 South to 1200 East on the east side of US 40. This line is needed to supply water service to new development along US 40. Developers in this area should install this line. Approximately 700 LF of this line has been completed with Strawberry Storage.

W-064 Valley Drive PRV: An existing PRV near Valley Drive is currently not functioning and should be re-built as a working PRV. This is a maintenance project to be funded by operating funds.

(Ultimate) W-065 2400 South – 850 W to US 189 (12-inch): A 12-inch pipeline should ultimately be constructed in 2400 South between South Airport Road and US 189. This line is needed to loop the water line and to supply adequate fire flow and capacity to new development in this area. There is no one developer here that will put this water line in, therefore, impact fees will pay for 100% of this line if constructed.

W-066 Heber City Public Works Facility Expansion Ph.1: The Heber City Public Works Department Building was expanded in 2018 to accommodate growth and maintain the same level of service on the City's street system. Impact fees were used to pay for the Water portion of this expansion which was debt funded with payments continuing through the master plan 20-year window. See Appendix A for construction cost allocation.

W-067 600 East – 1300 S to Hidden Creek Ln (8-inch): An 8-inch Pipeline should be installed along 600 East from 1300 South to Hidden Creek Lane (1900 South). This line is needed to supply water service to the development in this area. The developers will need to install this line.

W-068 Heber City Public Works Facility Expansion Phase 2: The Heber City Public Works Department Building and Maintenance Site will be expanding to maintain the current level of service that the Public Works department currently provides in maintaining the culinary water system. Phase 2 will likely commence around 2028. Impact fees will pay for all of this phase since it is only needed for future growth.

W-069 2400 South PRV: A PRV should be installed on 2400 South between the high and low pressure zones to loop the system and provide adequate fire flow in the lower zone. The PRV will help provide capacity for the new development area in the lower zone. Impact fees should pay for this PRV.

Source Protection

Heber City has submitted the Drinking Water Source Protection plans for each of its wells and spring as required by section R309-600 and R309-605 of the Utah Administrative Code. Heber City must also submit an Annual Consumer Confidence Report on water quality.

Water Rights

Water usage compared to water rights should be reviewed on a yearly basis to determine if changes need to be made. It is recommended in this study that the City continue expanding its pressurized irrigation system into Central Heber to help reserve culinary water for indoor purposes and extend its water rights and culinary supplies.

Heber City currently has municipal water rights with an allowable depletion of 7,025 ac-ft. Approximately 1,744 ac-ft of these rights come from Change applications filed in 2019 and 2020 for Timpanogos and Wasatch Irrigation Company shares. The Change applications converted 379 Timpanogos shares (486 ac-ft) and 535 Wasatch shares (1,258 ac-ft) to municipal use with the flexibility to use them for either culinary (Depletion) or irrigation (Diversion) purposes. They are currently being used for the existing pressurized irrigation system.

Approximately 5,282 ac-ft of depletion water rights, which excludes the previously mentioned Wasatch and Timp converted shares, are available for use in the culinary water system. These municipal rights are sufficient to meet the 2023 culinary system average demands.

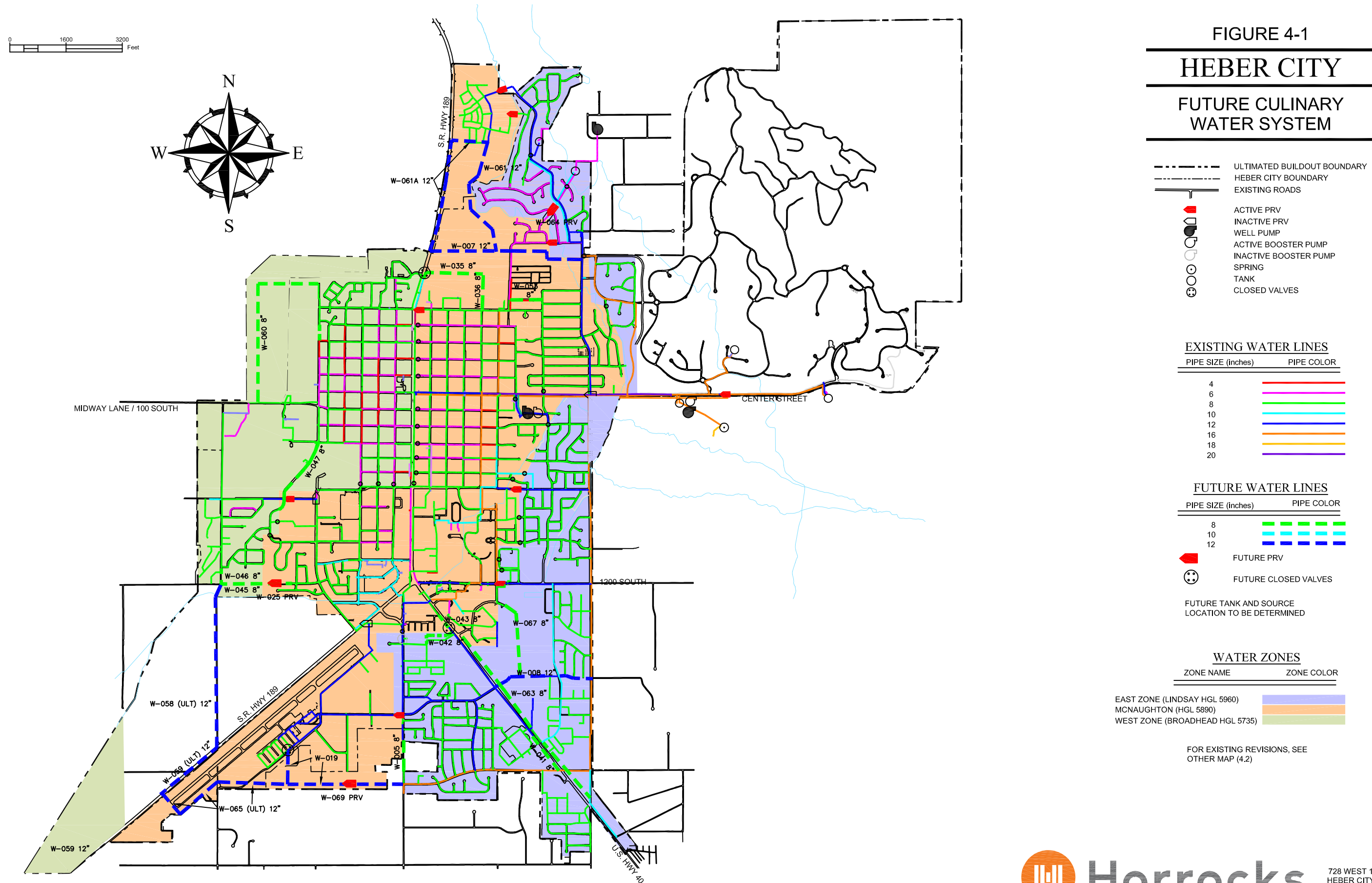
It is estimated that an additional 4,098 (11,188 - 7,090) ERU's will connect to the system by 2043. Approximately 1,229 ac-ft (4,098 ERU's x 0.30 ac-ft/ERU) of municipal depletion water rights will be needed for indoor use from these connections. This will require the City, over the next 20-years as growth occurs, to continue to do additional conversions of the irrigation shares transferred to the City by development to meet the needs of the culinary system.

Heber City currently has approximately 2,266 ac-ft of diversion water rights in irrigation shares that have not been converted to municipal use. Since the City does not meter all pressurized irrigation connections, culinary water use data has been used to estimate outdoor use and the

water rights needed for the pressurized irrigation system and is discussed further in Section 4.3 and in Chapter 8 Pressurize Irrigation. The City is currently in the process of retrofitting secondary water services with meters and should be completed by 2028. At that point metered data can be used in future master plan updates.

All water has been adjudicated in Heber Valley. Therefore, additional water rights cannot be obtained for new wells unless it is purchased from agriculture or obtained through land annexations and/or developments. Because of this, it is recommended that the City continue requiring annexed land to provide the required water for indoor and outdoor use for each new development. Water right acquisition is not part of the impact fee analysis in this study.

I:\Heber City\City Projects\2022 Heber City Master Plan Update\Project Data\2022 Master Plan Maps\Fig 4.1 Water Future 2022.dwg - Layout11 - 12/20/2023 03:37pm, ChuckR



Operation

Heber City has converted its water meters to be read remotely. This conversion has decreased operating costs and enhanced the water billing process by allowing monthly water billings to be based on actual flows instead of estimated flows. Meters are currently read year-round. Heber City has also adopted a Water Conservation Plan which provides guidelines for water conservation and will help reduce water consumption as it is followed.

System losses have been normal over the last several years according to City production records. Typical municipal systems lose between 15-25% of the water flowing through the system. Heber City has historically averaged yearly losses between 3 and 17%, however, the City does not have current loss data due to errors in the production data. It is recommended that the City continue to leak test major water lines to find and correct the losses through the pipes. It is also recommended that the SCADA system, control valves, and metering for the water system be checked for accuracy and continue to be monitored and maintained.

Although recent system losses are unknown, water use per ERU measured at the meter has not significantly decreased in recent years. Therefore, water losses are not creating an increase or decrease in metered water use per ERU for this study. Any improvement projects completed by the City to correct water loss deficiencies are not funded by impact fees.

Impact Fee Recommendations

It is recommended that Heber City revise the current minimum culinary water system impact fee from \$2,826 to a rate of \$2,778 per ERU (0.75-inch diameter). All residential connections, including but not limited to apartments, trailers, condos, and houses, will be charged the minimum impact fee of 1 ERU or greater.

Historic reviews of water use data in Heber City in the past have shown no consistent measurable difference in indoor water use between individual homes, apartments, or trailer connections. No reduction has therefore been made for different residential uses. Outdoor water on new residential homes is generally provided through the secondary irrigation system instead of the culinary system, and therefore is not included in the indoor use portion for new construction.

4.2 Culinary Water Use

From the projected population, the additional future number of culinary connections is determined along with the number of future ERU's. Using State design regulations and historical culinary demands, the future water demands, including average yearly, peak daily, and peak instantaneous demands, are projected through the planning period.

Projected Population

The projected population for Heber City from 2023 to 2043 is discussed in Chapter 3 - Projected Population Growth. The 2023 population was estimated to be 18,347. The 2043 Heber City population was projected to be 29,682.

Historical Culinary Water Use

From 1999 through 2005 the amount of water Heber City billed all connections through their meters averaged 472 gallons per day (gpd) per ERU for both indoor and outdoor usage. For the

years 2006 through 2010 the average was approximately 395 gpd. For the years 2011 through 2015 the average was approximately 360 gpd. For the years 2016 through 2021, the average was approximately 299 gpd. This does not include losses from the sources to the meter. This shows that through conservation programs and pressurized irrigation water, the City has reduced the billed culinary water usage per residential connection. Heber City’s historical water usage data is contained in Appendix B.

Equivalent Residential Unit’s (ERU's)

Water usage from typical residential connections differs from the usage of commercial, church, government, and other non-residential connections. To evaluate residential and non-residential connections on an equal basis, Equivalent Residential Unit’s (ERU’s) are used to equate the different types of connections. For this study, ERU’s per non-residential connection were approximated by dividing the historical metered winter water use of commercial, church, and government use by the average residential gpd per ERU and by the total number of non-residential connections. Between 2019 and 2021, the average ERU’s calculated per non-residential connection was approximately 4.1.

In terms of ERU’s, 2023 had 5,143 residential units (5,302 - 159 Red Ledges ERU's) and 1,948 non-residential ERU’s (475 non-residential conn @ 4.1 ERU/conn), connected to the system.

The total number of projected residential, church, government, and commercial ERU’s, are shown in Table 4-1. Red Ledges ERU’s are subtracted from the Residential ERU’s to get the total.

Table 4-1 Projected New ERU’s in Five Year Intervals

Year	Residential Units	Non-Residential ERU's	New ERU's	Red Ledges ERU's	Total ERU's*
2023 (est)	5,302	1,946		(159)	7,090
2024-2028	1,252	459	1,711	(36)	8,765
2029-2033	1,067	392	1,459	(79)	10,146
2034-2038	464	170	635	(92)	10,688
2039-2043	493	181	674	(174)	11,188
Total	8,578	3,149		(539)	11,188

* Residential Units have been adjusted for Red Ledges

Indoor and Outdoor Water Use

Culinary water used by a connection can be divided into indoor and outdoor water use categories. These categories vary widely based on several factors, i.e., residential or non-residential, availability of pressurized irrigation, amount of landscaping, etc. Therefore, the methodologies used in planning and developing fees also take these variables into account. For example, a commercial restaurant with no landscaping may use the same amount of water in the summer as in the winter. However, an office building in a location where pressurized irrigation is not available may use up to three times more water in the summer than in the winter if it has a large amount of vegetative landscaping. Impact Fees are collected based on projected use.

Indoor Water Use

The State of Utah Public Drinking Water Rules (R309-510) require that sources provide sufficient supply to meet Peak Day indoor water demands. The rules recommend using 800

gpd/ERU for Peak Day demands (2 x 400 gpd/ERU). Heber City's current indoor average winter use metered at the home was 180 gpd/ERU, between October and May of 2019 to 2021. The 2018 master plan showed the average indoor use metered at the home to be 219 gpd/ERU, between October and May of 2014 to 2016. This suggests the City's overall use is continuing to decline.

Water production records measured at the source from 2019 to 2023 are not available. However, production records from the previous master plan showed the average winter production amount to be 264 gpd/ERU. Comparing connection metered use with source production use shows that there are some losses in the system. Until more accurate records are available, this report will continue using 264 gpd/ERU as the indoor average residential amount produced at the source.

Minimum sizing requirements for water sources, storage tanks, and water lines are specified in R309-510. Utah Code 19-4-14 supersedes some of the statewide requirements by directing the Division of Drinking Water (DDW) to establish system-specific requirements for public water systems where data is available. Until DDW sets these system-specific sizing requirements for a water system, the statewide standards of R309-510 apply. The system-specific requirements are based on the three most recent years of water use data collected and reported to the Division of Water Rights. This data is used to determine the system-specific Peak Day and Average Yearly demands per ERU. Once approved by DDW these new system-specific demands can then be used in lieu of the general statewide planning criteria.

Since the City does not have water source production data for the current year to estimate Peak Day and Average Yearly demands over the last three years, the City will continue using the State requirement of 400 gpd/ERU for Average Yearly, and 800 gpd/ERU for Peak Day indoor water use demand calculations. These numbers are in terms of a depleted municipal water use.

Outdoor Water Use

State Drinking Water Rules require that sources provide sufficient supply to meet Peak Day and Average Yearly outdoor water demands in addition to the indoor requirements. Compliance with this rule was evaluated three different ways. 1) Using the State Drinking Water Rule procedure, 2) Estimating actual usage from City records, and 3) Using State Division of Water Rights Rules.

Outdoor Use per State Drinking Water Rule Procedure:

- Determine consumptive water use zone in which Heber City resides (Zone 2).
- Determine the Peak Day and Average Yearly demands using Table 510-3 found in State Rule R309-510.

Using this procedure results in an estimated Peak Daily demand for Heber City sources of 4,032 gpd/ac (2.8 gpm/ac), or an Average Yearly demand of 1,098 gpd/ac (1.23 af/ac).

To convert outdoor usage from a per acre basis to a per ERU basis, several subdivisions in Heber City were surveyed. The observations indicated that on 0.25 to 0.5 acre lots, 70% of the lot is available for irrigation, and of that amount, 70% on average is irrigated. This study therefore assumes that, on average, 49% of a typical lot is irrigated (70% x 70%). It also assumes that there are three (3) connections per gross acre for residential land use. Using these assumptions, and the State Drinking Water criteria, results in a Peak Day demand of 659 gpd/ERU, and an Average Yearly demand of 179 gpd/ERU as shown below.

$$\frac{4,032 \text{ gal}}{\text{irr ac} - \text{day}} \times \frac{0.49 \text{ irr ac}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{3 \text{ ERU}} = 659 \text{ gpd/ERU}$$

$$\frac{1.23 \text{ ac-ft}}{\text{irr ac} - \text{yr}} \times \frac{0.49 \text{ irr ac}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{3 \text{ ERU}} \times \frac{325,851 \text{ gal}}{1 \text{ ac-ft}} \times \frac{1 \text{ year}}{365 \text{ day}} = 179 \text{ gpd/ERU}$$

Outdoor Use per City Records:

Outdoor water use by City residents is estimated by dividing the Average Yearly outdoor water demand on the culinary system by the number of residents that do not have access to pressurized irrigation. It is estimated that 1,685 ERU's (924 Central Heber + 241 Valley Hills + 520 Other) use the culinary system for all their outdoor use. The "Other" ERU's were calculated to be 434 ERU's by subtracting Central Heber and Valley Hills ERU's from the total customers on City records that have culinary, but no pressurized irrigation connection, then increasing this number by 20% to assure all customers without pressurized irrigation are captured.

The 2018 master plan estimated Heber City's Average Yearly outdoor use at its sources (2014 to 2016) on the culinary system to be 770,559 gpd. Dividing this by 1,918 ERU's resulted in 402 gpd/ERU or 2.76 ac-ft per irrigated acre as shown below.

$$\frac{402 \text{ gal}}{\text{ERU} - \text{day}} \times \frac{3 \text{ ERU}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{0.49 \text{ irr ac}} \times \frac{1 \text{ ac-ft}}{325,851 \text{ gal}} \times \frac{365 \text{ day}}{1 \text{ yr}} = \frac{2.76 \text{ ac-ft}}{\text{irr ac} - \text{yr}}$$

For this master plan current production data was unavailable, therefore outdoor demand at the sources was approximated by adding system losses back to metered use data. A 17% loss in demand at the source is equivalent to a 20.5% increase in the demand at metered connections. Example calculations are shown below:

$$\frac{\text{Percent Loss in Production Water}}{} = \frac{(264 \text{ gpd/ERU} - 219 \text{ gpd/ERU})}{264 \text{ gpd/ERU}} = 17\%$$

$$\frac{\text{Percent Increase from Conn. Use}}{} = \frac{(264 \text{ gpd/ERU} - 219 \text{ gpd/ERU})}{219 \text{ gpd/ERU}} = 20.5\%$$

The current three year average outdoor metered connection use is 667,714 gpd. Increasing this number by 20.5% results in an average outdoor source use of 804,595 gpd. This approximated production demand results in an Average Yearly demand of 348 gpd/ERU (804,595 gpd / 2,311 ERU's) solely using culinary for outdoor use or 2.4 ac-ft per irrigated acre. This suggests that outdoor use may be trending downward, but it cannot be verified until additional production data is available.

Outdoor Use per Division of Water Rights Duty:

One other method for calculating outdoor use is using the Utah Division of Water Rights duty value. The duty value is an allowable Average Yearly diversion amount of 3.0 ac-ft/ac which converts to 437 gpd/ERU for outdoor watering, assuming three connections per acre and 49% of a lot is irrigated.

$$\frac{3 \text{ ac-ft}}{\text{irr ac} - \text{yr}} \times \frac{0.49 \text{ irr ac}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{3 \text{ ERU}} \times \frac{325,851 \text{ gal}}{1 \text{ ac-ft}} \times \frac{1 \text{ year}}{365 \text{ day}} = 437 \text{ gpd/ERU}$$

Of the three methods analyzed, the Division of Water Rights Duty of 437 gpd/ERU appears to best represent the average outdoor demand experienced in Heber City. This usage was used in the 2018 master plan and is slightly higher than the 402 gpd/ERU estimated at that time when City source production records were available. To be conservative, and until accurate production data is again available, 437 gpd/ERU will continue to be used in this study.

All significant future development is assumed to have pressurized irrigation available, therefore the total amount of culinary water used outdoors should not increase and has been held constant for this report. If, however, pressurized irrigation continues to be installed in Central Heber, future tank and source needs projected within the 20-year planning period may be postponed, or possibly eliminated. It is estimated that the average outdoor demand on the culinary system would be reduced to 47 gpd/ERU (2,311 - 1,550 ERU's @ 437 gpd/ERU and 7,090 Total ERUs) if pressurized irrigation is installed in Central Heber. Historic meter connection and water production data are shown in Appendix B.

The outdoor Peak Day demand used in this study is 1,486 gpd/ERU using a peaking factor of 3.4. The Peak Day peaking factor comes from multiplying a factor of 2.0 for the irrigation occurring over a 6-month use period, by a factor of 1.7 for the hottest days during that period.

The outdoor use numbers in this section are in terms of a diversion water use. Additional information on diversion, depletion, and outdoor use from the pressurized irrigation system are covered in Chapter 8 Pressurized Irrigation.

Projected Number of Water Connections

The projected number of new residential water connections is determined using the growth numbers in Chapter 3. The residential connections are assumed to increase at the same rate as population growth. In 2023 there were estimated 5,143 (5,302 - 159) residential connections, not including Red Ledges.

Commercial, church/government, and other non-residential connections are also assumed to increase at a rate equal to the City's projected population growth rate. In 2023 there were 475 commercial, church, and government connections.

In Heber City, there were no agricultural connections in 2023, therefore, agricultural connections will not be counted in the future non-residential connections.

Projected Areas of Development.

To relate the projected population to the improvements needed to serve them, the areas expected to be developed also need to be determined. The areas projected to be developed by the increased population are determined based upon the existing zoning regulations, available land within City limits, and land presently planned to be annexed.

City officials have anticipated where and how future development will occur. This study uses the General Plan Land Use map from Heber City's Planning department for the planning area which is shown in Figure 3-2. More detailed information concerning the future development areas and

locations is shown in Chapter 3 Population.

Projected Culinary Water Use

Utah State regulations require sources to be capable of meeting peak daily flows, storage to meet average daily flows, and the distribution system to meet peak instantaneous or peak day plus fire flows whichever is greater. In Heber City peak day plus fire flow is the governing condition.

A definition of the flows required by the City's culinary water system will be given in the following paragraphs. These flows will be used to determine culinary water improvements needed to meet the projected demands of the population.

Average Yearly Flow

The Average Yearly flow is the total annual flow divided by 365 days.

Peak Daily Flow

Peak Daily flow is the maximum day flow during the year. For Heber City, historical production records for the last three years are unavailable, therefore the State requirement and prior master plan Peak Day flow of 2.0 times the indoor Average Yearly flow will continue to be used.

The outdoor Peak Day demand is based on a 6-month use period with the peak months being July and August. This equates to a factor of 2.0 for the 6-month period and an additional 1.7 peaking factor for the hottest days, for a total peaking factor of 3.4.

Peak Instantaneous Flow

Peak instantaneous flow is the maximum flow for any given hour during the year. The water system will reach Peak Instantaneous demand conditions during the summer when both indoor and outdoor water use is high. This large demand can increase velocity which reduces pressure.

Rule R309-510-9 states that the hydraulic model must either apply an instantaneous peaking factor or use actual Peak Instantaneous flow data to account for indoor Peak Instantaneous demand.

Alternatively, rule R309-510-9 also states that the Peak Instantaneous demand for a single pipeline can be calculated for indoor use using Equation (1). The variable N in the equation is the total number of ERU's on the pipeline; Q is in gallons per minute (gpm).

$$\text{Equation (1)} \qquad Q=10.8N^{.64}$$

According to Rule R309-510-9, Equation (1) should only be used to estimate the flow required for N connections from a single pipeline and should not be used to estimate node or junction demands utilized in hydraulic analysis.

State of Utah Code allows the hydraulic model to apply an instantaneous peaking factor to account for Peak Instantaneous indoor demand, that criteria of 2.0 times the Peak Day demand is being used for this report.

Outdoor Peak Instantaneous demand using this method is calculated by multiplying the Average Yearly outdoor culinary demand by four which equates to approximately 7.43 gpm per irrigated

acre or 1,748 gpd/ERU (437 gpd/ERU or 1.86 gpm/ac x 4). The factor of 4.0 is derived from the total water being used over 6-months of the year, with a peak instantaneous factor of 2.0 applied. This is more than the amount that would be determined using Table 510-7 in the State Rule R309-510-9 for the Heber City area, which would be 5.60 gpm per irrigated acre. See Chapter 8 Pressurized Irrigation Use.

$$\frac{437 \text{ gal}}{\text{ERU} - \text{day}} \times \frac{1 \text{ day}}{24 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{3 \text{ ERU}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{0.49 \text{ irr ac}} = \frac{1.89 \text{ gpm}}{\text{irr ac}}$$

To facilitate the methodology used calculate future needs, the Outdoor Peak Instantaneous demand of 1,748 gpd/ERU is spread across the City's total culinary 7,090 ERU's for 2023, resulting in a prorated outdoor use number of 415 gpd/ERU (1,748 gpd/ERU x 1,685 ERU / 7,090 ERU).

Heber City does not have a historical record of the combined Peak Instantaneous flow; therefore, the State criteria is used in this study.

System Losses

Distribution systems have inherent losses that are a function of the size of pipe, joint construction, temperature, and age of the system. Typical municipal systems lose as much as 10 to 25% of the water flowing through the system. Losses are based on comparing the total yearly metered flow from the sources with the total yearly flow metered at connections. Heber City's highest yearly loss for the past three years is unavailable due to inaccurate production data, so for the purposes of this report, the previous master plan loss of 17% will continue to be used. This is a conservative assumption because several water replacement projects have been completed since the last master plan update, further reducing leakage. It recommended that the City continue to leak test major water lines in an ongoing effort to reduce pipeline losses. It is also recommended that the SCADA system, control valves, and metering for the water system continue to be checked and monitored for accuracy and proper functioning to further minimize system losses.

Fire Flow

Heber City has adopted the Uniform Fire Code to determine the fire flows required for buildings within the City. The fire code determines the size and duration of flow that will be required. The amount of fire flow required for a building is based on the type of construction, square footage, and distance from other buildings.

For this study fire flows will be calculated using a minimum of 1,500 gpm for 2 hours for residential and 2,500 gpm for 2 hours for commercial uses. This criterion was implemented based on recommendations from the Wasatch County Fire Chief. In cases where fire flow requirements for buildings exceed these criteria, fire sprinkling will be required.

Summary of Projected Water Flows

Total projected water use through the year 2043 includes indoor and outdoor culinary usage and fire flows. Water losses inherent in the system are included in the numbers used. Average Yearly indoor and outdoor usage is calculated using 400 gpd per ERU for indoor use plus 437 gpd per ERU for those units which only use culinary water for outdoor use.

As previously mentioned, it is estimated that approximately 1,685 ERU's (924 Cent Heber + 241 Vly Hills + 520 Other) solely use the culinary system for outdoor use and/or do not have pressurized irrigation available. To facilitate the methodology used to take these users into account, and calculate future needs, the design outdoor usage of 437 gpd/ERU was spread across the City's total 2023 ERU's of 7,090, resulting in a new outdoor use number of 104 gpd/ERU. It is assumed that the total outdoor use number will either stay constant or be further reduced as pressurized irrigation continues to be installed in all new developments. If the City's policy on pressurized irrigation changes in the future, then these assumptions will need to be revisited. Table 4-2 shows the projected demands throughout the planning period.

Table 4-2 Required Minimum Capacities for Indoor and Outdoor Water Use

Year	Number of ERU's*	Average Yearly Demand (mgd)	(ac-ft)	Peak Day Demand (mgd)	(gpm)	Peak Day Demand w Cent Heber PI (mgd)	(gpm)	Peak Day + Fire (gpm)	Peak Instantaneous (gpm)
2023	7,090	3.57	4,003	8.18	5,680	6.80	4,726	8,180	9,921
2028	8,765	4.24	4,753	9.52	6,611	8.15	5,656	9,111	11,783
2033	10,146	4.80	5,372	10.62	7,377	9.25	6,423	9,877	13,316
2038	10,688	5.01	5,615	11.06	7,679	9.68	6,725	10,179	13,919
2043	11,188	5.21	5,839	11.46	7,956	10.08	7,002	10,456	14,474

* Residential Units have been adjusted for Red Ledges

Years 2023-2043 assume no additional outdoor demand will be added to the system.

4.3 Culinary Water System Analysis and Level of Service

Heber City's present culinary water system's capacity and Level of Service (LOS) were checked by analyzing the source, storage, and distribution systems. Heber City uses the State's minimum sizing requirements for water facility design and operation per Rule R309-510 to determine their minimum LOS. The statewide standards described in R309-510 are used in this master plan until DDW sets system-specific sizing requirements which are based on three years of reporting data of Peak Day Demand and Average Yearly Demand; Peak Day Demand is the total source flow into the water system to meet the demand on the day of the highest consumption in a year, and Average Yearly Demand is the total quantity of water produced for the system in a year. Future master plan updates will use design criteria based on the most recent three years of the system's actual water source data if DDW has set the system-specific sizing requirements as a requirement, and provided the data is available. Future improvements needed to maintain the existing LOS were determined and recommended to maintain the capacity to meet the projected population's demands. This section describes the present system, design parameters, and recommendations for needed improvements.

SOURCES

Heber City's culinary water system is presently served by three wells and one spring. The status of these source capacities was evaluated by analyzing water rights, amount of water physically provided, and peak daily flow requirements. Improvements needed by Heber City's sources will be discussed along with the Division of Drinking Water's Drinking Water Source Protection Rule.

Water Rights

Water used by Heber City is obtained from springs and wells that have municipal water rights. The City owns both culinary and irrigation water rights. Some of the irrigation water rights are from land that was annexed into the City. In this chapter, both the municipal and irrigation water rights will be discussed.

Water rights state the legal amount of water the City has the right to access. State regulations require that the City's water sources be legally and physically capable of meeting peak daily flows. Heber City has both culinary water rights, and shares in irrigation companies. Heber City presently has thirteen water rights converted for culinary use, one which is an exchange right (55-8534), and one which is a supplemental supply (55-3346). Heber City's water rights and the available flow are summarized in Table 4-3.

Table 4-3 Heber City's Water Rights

Water Right	Flow Depletion Limit (cfs)	(ac-ft/yr)	Volume / Flow Right	Notes
Water Rights presently Used by City's Culinary System				
55-7052		1,071.34	Flow	Upper Broadhead Spring (1941 change app 0.05 to 2.5 cfs)
55-1392	2.36	1,708.56	Flow	Upper Broadhead Spring
55-947	2.00	1,447.93	Flow	Well #1
55-5780	0.25	105.00	Both	Valley Hills Well
55-8534	0.1036	75.00	Volume	Valley Hills Well (Mohr Spring Exchange; E1053)
55-8420	0.0889	64.4	Volume	Valley Hills Well; diversion limited to 50% or 64.4 ac-ft
55-1351	0.0990	71.64	Volume	Hospital Well; total diversion 95.53 ac-ft; depletion per OSE 71.64 ac-ft
55-4360			Volume	Hospital Well (see 55-1351)
55-3346	1.00	723.97	Flow	Source: Hospital Well, Supplemental Supply ¹
55-12327	0.0118	8.53	Volume	3 Existing underground water wells; depletion factor
55-894	0.0017	1.25	Volume	3 Existing underground water wells; depletion factor
55-12708	0.0057	4.14	Volume	3 Existing underground water wells; depletion factor
55-13325	1.7376	1,257.98	Volume	VH Well, HW, No. 1, Upper BS; Depletion value in OSE (Used by PI)
55-13016	0.6707	485.59	Volume	VH Well, HW, No. 1, Upper BS; Depletion value in OSE (Used by PI)
Subtotal	8.33	7,025.31		

1. See water right summaries for use restrictions.

2. See Appendix B for additional water right information and other water rights unavailable for use.

The following are short summaries for each of the water rights presently being used by the City's culinary water system.

55-7052 Water right 7052 was filed in 1941. The source of the water is from Upper Broadhead Springs, located approximately 1.7 miles east of Heber City. Per the change application a 1577 filed on February 13, 1941 the water right claims 2.5 cfs (1,122 gpm) for a 213 day period from April 1 to November 1, and 0.05 cfs (22.4 gpm) for a 152 day period from November 1 to March 1. This water right is subject to the state change number a1577. The change is not supplemental.

55-1392 Water right 1392 was filed in 1960. Water right 1392 provides a flow of 2.36 cfs (1,059 gpm) from the Upper Broadhead Spring. In the proof of appropriation on June 20, 1950, the Upper Broadhead Spring was tested to produce a total of 4.86 cfs (2,181 gpm). This is the accumulated flow between water rights 7052 and 1392. Although the water right shows that 2,181 gpm can be taken from the

spring, the minimum amount produced by the spring was approximately 800 gpm in 1992. Aggregating the water rights could allow all of 2,181 gpm to be taken from one point of diversion, depending on how the aggregation of the spring water would affect other water-right holders of the spring. This water right is subject to the state change number a3011.

55-947 Water right 947 was filed in 1959. The source of the water right is a well at 1800 East Lake Creek Road, which is the location of the City's Well#1. The water right is for 2.0 cfs (898 gpm) year around. The well was test-pumped at 1,190 gpm when it was drilled in 1959. When the well was proofed on June 12, 1962, the maximum flow was 1,180 gpm, and the average was 1,160 gpm.

55-5780 Water right 5780 was filed in 1976. The source of the water right 5780 is an underground well drilled in 1973 that provides water for Valley Hills Estates. The water right allows 0.25 cfs (112 gpm) or 105 acre-feet to be taken. The well was tested to pump 780 gpm with an 86 foot drawdown after 20 hours. When the proof was filed in 1983, the well averaged 750 gpm, 563 gpm above the available water right. This water right is subject to state change number a9298.

55-8534 Water right 8534, exchange 1053 was filed in 1976. The water right allows 75 acre-ft to be exchanged from Mohr Spring to the Valley Hills well.

55-8420 Water right 8420, filed in 1993, is a water right for the use of 128.75 acre-feet of water represented by 25.75 shares of stock in the Wasatch Irrigation Company. With change application number a17355, the point of diversion was changed from the Provo River to the Valley Hills well, and the use changed from irrigation to municipal. The total annual diversion was limited to 50% of the amount allocated to 25.75 shares of stock, or 64.4 acre-feet whichever is the lesser quantity. This water right is also owned by Wasatch Irrigation Company.

**55-1351
& 55-4360** Water right 1351 was filed in 1957 and water right 4360 was filed in 1970 for a combined use of 102.546 acre-feet of water represented by 33.23 shares of irrigation and stock water. The water was diverted from two springs and a drain. With change application a22574 filed in 1998, the point of diversion for both water rights was changed to the city's Hospital Well with the total amount of water allowed for diversion limited to 95.53 acre-feet to ensure that the historic consumption or depletion of 71.64 acre-feet annually is not exceeded. The change is not supplemental.

55-3346 Water right 3346 was filed in 1977, but the original well was constructed in 1934. The flow of the water right is 1 cfs (448.8 gpm). This well has been renovated and is in use by the City. If the water right use is not municipal there are restrictions on the period of use. If the water right use is municipal, the period of use has no restrictions. This water right is strictly supplemental to the following rights: 55-947, 55-1351, 55-1392, 55-3346, 55-4360, 55-5780, 55-7052, 55-8420, and E1053.

- 55-12327** Water right 12327 was filed in 1954 for the use of 12.36 acre-feet of water with the City's under drain system named as the source. With change application a33961 filed in 2008, the source was changed to all three existing Heber City wells. This right has a depletion limit of 8.53 acre-feet.
- 55-894** Water right 894 was filed in 1958 for the use of 0.015 cfs of water from a private well. With change application a33606 filed in 2007, the source was changed to all three existing Heber City wells. This right has a depletion limit of 1.25 acre-feet.
- 55-12708** Water right 12708 was filed in 1954 for the use of 0.155 cfs or 6 acre-feet of water from an underground drain which is the City's underdrain system. With change application a41022 filed in 2015, the source was changed to all three existing Heber City wells for the use of 6 acre-feet. This right has a depletion limit of 4.14 acre-feet.
- 55-13325** Water right 13325 filed on 04/14/2021 for the use of 1830.7585 acre-feet of water represented by 535.31 shares of stock in the Wasatch Irrigation Company. With change application number a47110, the point of diversion remained at the Provo River with additional points of diversion added; i.e. the Valley Hills Well, Hospital Well, Well No. 1, and Upper Broadhead Springs; and the use changed from irrigation to municipal. The maximum diversion is 1,830.75489 acre-feet with a limited amount of water reasonably necessary to deplete 1,257.977 acre-feet per the State Engineer Opinion letter. This water right is also owned by Wasatch Irrigation Company and are currently being used for the existing pressurized irrigation system.
- 55-13016** Water right 13016 filed on 05/15/2019 for the use of 1198.71 acre-feet of water represented by 379.37 shares of stock in the Timpanogos Irrigation Company. With change application number a45202, the point of diversion remained at the Provo River with additional points of diversion added; i.e. the Valley Hills Well, Hospital Well, Well No. 1, and Upper Broadhead Springs; and the use changed from irrigation to municipal. The maximum diversion is 703.73 acre-feet with a limited amount of water reasonably necessary to deplete 485.5936 acre-feet per the State Engineer Opinion letter. This water right is also owned by Timpanogos Irrigation Company and are currently being used for the existing pressurized irrigation system.

Heber City water rights are a combination of flow and volume rights. Flow rights for municipal use allow the City to use that amount of flow year-round, if the maximum volume right is not exceeded. Volume rights may or may not have a maximum flow rate associated with them but the total volume the City can utilize is set by the maximum ac-ft value of the water right over the usage period. After comparing the water rights with the water use data from the wells, Heber City will need to convert additional irrigation shares to municipal water rights to keep from over utilizing the current water rights during certain times of use as growth continues.

Irrigation Shares

Heber City currently owns 452 Wasatch irrigation shares, 136 shares of Timpanogos Class D shares, and 20 Timpanogos irrigation shares, along with a variety of other company shares which are summarized in Table 4-4. The acre feet for these shares are listed in the share's terms. They are currently used for pressurized irrigation or leased out for other irrigation purposes and have not been converted to a municipal water use. As demand on the culinary system increases a portion of these shares will be converted. Table 4-4 shows the shares with their respective diversion and converted municipal water equivalents.

Table 4-4 Heber City's Irrigation Water Rights and Municipal Conversion

n Company	Irrigation			Municipal Conversion			
	Shares	Diversion (ac-ft /share)	(ac-ft)	Depletion per 1 acre (ac-ft)	Depletion Allowed (ac-ft)	(cfs)	(gpm)
Daniels Irrigation	137	0.75	103	2.07	71	0.098	44.0
Extension Irrigation	371	0.30	111	2.07	77	0.106	47.6
Sage Brush Irrigation	6	0.30	2	2.07	1	0.002	0.8
Spring Creek Irrigation	74	0.60	44	2.07	30	0.042	18.9
Timpanogos Irrigation	20	1.85	38	2.07	26	0.036	16.2
Timpanogos Class D	136	3.00	409	2.07	282	0.389	174.8
Wasatch Irrigation	452	3.40	1,535	2.07	1,059	1.463	656.7
Other	-	-	24	-	-	-	-
Total			2,266		1,547	2.14	959

Irrigation Shares are based on water rights with irrigation of crops specified as the beneficial use of the water and as such have both a diversion amount and a consumption/depletion amount specified for that water use. To understand the water "use" it is necessary to distinguish between diverted water and consumed or depleted water. Diverted water is water withdrawn from a natural water system and put to a beneficial use as defined by the Utah Division of Water Rights. Consumed or depleted water is the portion of the diverted water that is consumed by plants, humans, or livestock and is not returned to the water system. The difference between the diverted water amount and depleted water amount is called return flow. Return flow is the portion of diverted water that is not consumed or depleted and that returns to the natural water system (i.e. water absorbed into the soil and returned to the aquifer or excess run off at the end of a field).

The Heber Valley Special Service District Treatment Plant is treated as 100% consumptive per the State's Municipal Conversion requirements. This means that any share of irrigation water converted to indoor municipal use is considered fully consumed or depleted since the water will flow through the City's municipal sewer system to the treatment plant. When the Division of Water Rights evaluates irrigation water shares that are to be changed from irrigation use to indoor municipal use, only the depletion rate of the uses are considered. Therefore, a higher diversion rate of water must be submitted to account for the return flow (i.e., the portion of water that would have gone back into the hydrologic system and not been consumed had it remained as irrigation water). The volume of water that makes up the return flows, had it been used for irrigation, cannot be counted towards indoor use since it is pass-through water due to the nature

of the use.

The amount of irrigation water or irrigation shares required to be submitted for indoor use in Heber City is calculated using a ratio of the States outdoor watering duty verses how much water would be consumed by the crops being irrigated and not returned to the hydrologic system. Heber City is in Water Right Area 55 of the Utah Division of Water Rights Area Maps. This area has an irrigation diversion duty in the amount of 3.0 ac-ft/acre and a depletion rate of 2.07 ac-ft/acre of irrigated land. Collection of water rights/shares for indoor use must be based on the total amount of water that would have been depleted by the historic uses and not by how much was diverted.

The City's indoor usage requirement is 400 gpd/ERU (0.45 ac-ft/ERU), which is the amount of water that is depleted/consumed per ERU per day. This amount is multiplied by the ratio of the amount of irrigation water that would have been diverted from the canal/stream for irrigation purposes by the amount that water that would have been depleted by the plants and/or evaporated. The result is the amount of irrigation water shares that needs to be submitted per ERU to allow the portion of irrigation water that would not have been depleted to remain unused. During the change application process from irrigation to municipal use the Utah Division of Water Rights evaluates the depletion amount of the historic uses and proposed uses of this water and reconciles the diversion amount allowed for each use.

$$0.45 \text{ ac-ft depletion} \quad x \quad \frac{3.0 \text{ ac-ft diversion}}{2.07 \text{ ac-ft depletion}} = 0.65 \text{ ac-ft diversion}$$

The State of Utah Administrative Code Rule R309-510 suggests an Average Yearly demand of 146,000 gal/ERU (400 gpd/ERU); however, actual water production data is used to estimate water right needs. Production meter data shows that the average indoor use has been closer to 264 gpd/ERU, therefore, Heber City collects water rights per ERU according to the following calculation:

$$\frac{0.296 \text{ ac-ft (264 gpd)}}{\text{depletion}} \quad x \quad \frac{3.0 \text{ ac-ft diversion}}{2.07 \text{ ac-ft depletion}} = \frac{0.429 \text{ ac-ft (383 gpd)}}{\text{diversion}}$$

SOURCE

Source Capacity Requirements

Utah State Public Drinking Water rules (R309-510) require that sources provide sufficient supply to meet Peak Day and Average Yearly demands.

Source Capacity

Heber City has four sources of water to meet its culinary water demands. Table 4-5 lists the current pump capacity, source capacity, and water right associated with each source. Section R309-510-7 of the State Code requires these sources to be capable of meeting the Peak Day and Average Yearly demand conditions. Heber City's maximum recorded Peak Day demand in the past 15 years occurred in 2010 at a rate of 4,590 gpm. The maximum annual recorded use in the past 15 years occurred in 2012 at 2,457 ac-ft. This compares with a current capacity of 5,620 gpm or approximately 9,114 ac-ft. While the current capacity is more than adequate to satisfy the Average Yearly demand, additional capacity is needed to meet future Peak Day demands. With

the installation of a pressurize irrigation system in Central Heber, additional source capacity wouldn't be needed until 2030.

It should be noted that the outdoor demands on the culinary system have reduced in the past several years on account of the installation and activation of a pressurized irrigation system in portions of Heber City, shifting demand to the pressurized irrigation system. As system losses are reduced, water conservation efforts are active, and future developments connect to the pressurized irrigation system, the need for additional source capacity may be postponed till 2028 or longer.

Table 4-5 Individual Source Capacity Data

Description	No. Pumps	Column Depth (ft)	Est.Source Capacity ³ (gpm)	Current Continuous Pumping Capacity ² (gpm)	(ac-ft)	Existing Depletion Water Rights ⁴ (ac-ft)
Valley Hills Well	1	300	720	750	1,210	244
Hospital Well	1	120	3,000	3,000	4,839	796
Well No. 1	1	213	1,400	1,400	2,258	1,448
Upper Broadhead Spring ¹	NA	NA	500	500	807	2,780
Water Rights Converted to Combined Wells						14
Water Rights Converted to Combined Wells/Spring (2021 Timp transfer)						486
Water Rights Converted to Combined Wells/Spring (2021 Wasatch transfer)						1,258
Total			5,620	5,650	9,114	7,025

¹ Minimum flow for this spring is 500 gpm. The maximum is 2,500 gpm.

² Current Capacity is the current pump rated capacity and minimum spring capacity.

³ Estimated Source Capacity is from DDW or City records.

⁴ Data Obtained from Water Right Analysis Prepared by Horrocks Engineers December 1, 2022.

Current Broadhead Booster Pump rated capacity is 1400 gpm each pump.

Source Recommendations

Table 4-6 shows a summary of the additional capacity required from City sources in the future. As can be seen in the table, the City will need to increase its capacity to meet demand. If water conservation efforts continue to reduce water consumption, and pressurized irrigation water use increases, the City may be able to delay increasing its source capacity. If pressurized irrigation continues to be installed in Central Heber, the reduced quantity of culinary water, approximately 954 gpm (1,550 - 626 ERUs @ 437 gpd/ERU x 3.4 PF) will postpone the need for a new source until 2030. However, funds for the pressurized irrigation system installation costs would need to be allocated.

Table 4-6 Source Capacity Needs Summary

Year	Peak Day (gpm)	PD (w/PI) (gpm)	Current Capacity (gpm)	Remaining Capacity (gpm)	Rem Cap (w/PI) (gpm)
2023	5,680	4,726	5,620	(60)	894
2028	6,611	5,656	5,620	(991)	(36)
2033	7,377	6,423	5,620	(1,757)	(803)
2038	7,679	6,725	5,620	(2,059)	(1,105)
2043	7,956	7,002	5,620	(2,336)	(1,382)

Note: Table shows remaining capacity if a pressurized irrigation is installed in Central Heber.

In 2002 a consultant, Kleinfelder, was retained to review the capacity of existing City sources and make recommendations on the development of additional supplies. The top alternatives identified in the study are listed below:

- Replace Well No. 1 or drill a second well at the same location. Potential additional yield is 500 gpm to 1,500 gpm.
- Install a larger pump in the Hospital Well. Potential additional yield is 1,700 gpm. This recommendation was completed, and the Hospital Well capacity was increased in 2010 to a total of 3,000 gpm.
- Identify and develop new well East of the City's Lindsey tank site. Potential yield is greater than 500 gpm.

It is recommended that the City continue to investigate the development of additional source capacity at its existing locations and consider pursuing an exploratory well at a new location that could be acquired by the City. The new location could be held in reserve for future development in case one of the existing sources fails or additional capacity is needed.

It is also recommended that the City continue expanding its pressurized irrigation system to areas where it is not currently provided. As demonstrated in Table 4-6, the source capacity may not meet current peak day demands. However, if pressurized irrigation continues to be installed, in combination with conservation and leak detection programs, an adequate culinary water supply will be available to meet the peak day demands for another 4+ years. In the meantime, priority should be given to correcting system metering deficiencies so that the collection of accurate source production data can resume and the conclusions and recommendations in this study can be confirmed.

Drinking Water Source Protection Program

The State Division of Drinking water requires all culinary water sources to have Drinking Water Source Protection Plans in place. The City has source protection plans in place for each of its existing sources. The original delineation reports were prepared by Hansen, Allen and Luce Engineers in 1996, and Horrocks Engineers prepared the source protection plans in 1998. Horrocks Engineers updated the plans in 2004 and they were approved. Updates for the wells were completed by Horrocks Engineers at the end of 2020. Updates for the spring was completed by Horrocks Engineers at the end of 2017, and another one will be completed at the end of 2023. One ongoing concern of these plans is the Broadhead Spring. The spring is located approximately 1000 feet west of a dairy and stock pond and the City must take precautions that contaminants do not infiltrate the spring, especially during spring high water run-off. Currently the City chlorinates this spring to avoid problems if any contamination occurs.

The City now has an agreement with the County, which requires development encroaching on the source protection zones to be reviewed by the City. This provides an opportunity to identify any additional measures that need to be taken to protect City's water sources prior to developments being approved.

STORAGE

Storage Requirements

State Drinking Water Rules recommend providing storage consisting of three components: 1) operational or equalization storage, 2) fire suppression storage, and 3) emergency storage.

Operational storage is sized for the Average Yearly demand to meet the combined indoor and outdoor demands for one day. The indoor portion is calculated using the State storage criteria for indoor use based on 400 gpd/ERU. The outdoor portion is calculated using the City's Average Yearly outdoor use of 437 gpd/ERU, for those without pressurize irrigation, and then doubled to 874 gpd/ERU because the total outdoor use only occurs during the six-month summer irrigation season. Approximately 24% of Heber City's current ERU's use culinary water for outdoor irrigation while the remaining ERU's have pressurized irrigation available. For convenience in calculating the Operational storage volume, the Average Yearly outdoor use of 437 gpd/ERU is spread over all City ERU's, resulting in an equivalent use of 104 gpd/ERU. The total use of 608 gal/ERU (400 gpd/ERU indoor + 104 gpd/ERU outdoor x 2) was used to calculate the Operational storage volume.

Fire suppression storage is based on the flow rate and duration required by the local fire department. Currently the fire department has indicated that for planning purposes, 180,000 gallons (1,500 gpm for 2 hours) is acceptable for residential areas, and 300,000 gallons (2,500 gpm for 2 hours) is acceptable for commercial areas. Since the City's water system is mostly interconnected and storage in the highest tank benefits the majority of the system, fire suppression storage of 300,000 gallons will be located in the highest tank.

Emergency storage is not provided in storage calculations. This is due to the availability of multiple sources of supply. If it is determined that a higher level of reliability in the City's water system is needed, emergency storage may be added to the criteria.

Available Storage

Heber City presently has five storage reservoirs in the culinary system as listed in Table 4-7 with a total capacity of 4.85 mg.

Table 4-7 Heber City Reservoirs

Name	Capacity (mg)	High Water Elev	Low Water Elev	HGL Elev	Type
Valley Hills No. 1	0.25	5892	5870	5890	Concrete Rectangular
Valley Hills No. 2	0.5	5892	5870	5890	Concrete Circular
Broadhead	1	5745	5725	5735	Concrete Rectangular
McNaughton	1.1	5892	5870	5890	Concrete Circular
Lindsay Hill	2	5972	5950	5960	Concrete Circular
TOTAL	4.85				

Storage Recommendations

Table 4-8 shows the summary of the storage capacities needed for Heber City through the year 2040, including indoor, outdoor, and fire storage.

Table 4-8 Storage Capacity Projections

Year	Indoor Use Storage (mg)	Outdoor Use Storage (mg)	Outdoor Use Storage (w/PI) (mg)	Fire Storage (mg)	Storage Required (mg)	Storage Required (w/PI) (mg)	Storage Available (mg)	Storage Remaining (mg)	Storage Remaining (w/PI) (mg)
2028	3.51	1.47	0.67	0.30	5.28	4.47	4.85	(0.43)	0.38
2033	4.06	1.47	0.67	0.30	5.83	5.02	4.85	(0.98)	(0.17)
2038	4.28	1.47	0.67	0.30	6.05	5.24	4.85	(1.20)	(0.39)
2043	4.48	1.47	0.67	0.30	6.25	5.44	4.85	(1.40)	(0.59)

Note: Table shows remaining storage if a pressurized irrigation is installed in Central Heber.

Table 4-8 shows that available storage does not meet required storage, but if a pressurized irrigation system continues to be installed in Central Heber, the outdoor storage demand will decrease by 0.81 mg (1,550 ERUs - 626 ERU's currently being installed @ 437 gpd/ERU x 2), and the existing available storage of 4.85 mg will meet the future needs of Heber City until 2030 or beyond. It is anticipated that outdoor use and storage requirements will not increase, or may even be reduced, as future development connects to the pressurized irrigation system and water conservation efforts are met.

It is recommended that the City continue installing a secondary irrigation system in the Central part of Heber to reduce system storage demand. It is also recommended that additional storage be planned for. The additional storage will be needed in the event growth estimates or storage criteria change, higher pressure zones are added to the system, or the pressurized irrigation system is not installed in new development areas. A new storage facility is included in the impact fee analysis, however, if pressurized irrigation is installed in Central Heber, the additional storage can be postponed for at least 9+ years.

DISTRIBUTION SYSTEM

The capacity of Heber City's existing distribution system will be discussed in this section. Improvements will then be recommended to meet the projected water demand in areas of future development. Figure 4-2 shows the existing distribution system. Heber City has approximately 180 miles of culinary water lines that convey and distribute water.

Distribution System Requirements

State Drinking Water Administrative Rule R309-510-9 and R309-105-9 require the distribution system to be able to meet the peak instantaneous demand or the Peak Day demands plus Fire flow, and still maintain a minimum of 20 psi at all connections within the system. For Heber City Peak Day plus Fire is the governing condition.

Computer Model of Culinary Water System

The Bentley WaterGEMS computer program was used to model Heber City's water system. The program requires that all pipes, elevations at intersections, wells, tanks, sources, well pumps, booster pumps, and pressure reducing valves (PRV) be entered into the model as they are constructed. System demands are then entered in. The program calculates static pressure throughout the system based on the given elevations. Available fire flows can also be determined. The program determines the available fire flows at various locations based on the user defined parameters, such as required flow and residual pressure. An extended period simulation was also run to monitor the entire system through a given time period. Tanks, pumps, pipes, demand nodes, and other system elements are modeled and can be graphed through the time period.

After the model is run and problem areas are defined, improvements can be modeled to bring the system up to the minimum level of service (LOS). Determining which improvements in the system will bring the system up to the minimum LOS in the most economical manner is an iterative process.

The following scenarios were modeled for Heber City's culinary water system with the model results contained in Appendix B:

- 1. Fire flow and 24 hour extended period simulation for existing conditions*
- 2. Fire flow and 24 hour extended period simulation for ultimate build-out conditions*

The existing water system was modeled and calibrated. The areas that are nearing minimum LOS were identified. Improvements were determined that would allow minimum fire flows and pressures to be preserved throughout the existing system. These improvements are recommended in this section and were shown previously in Section 4.1, Figure 4-1.

Heber City's General Plan map was used to determine future development densities, and the projected number of ERU's in undeveloped areas were determined. The additional demand projected for undeveloped areas was added to the present demand. From this information, the ultimate build-out water system was modeled, and the future improvements were identified to provide the fire flows and pressures to maintain the culinary water LOS in Heber City.

I:\Heber City\City Projects\2022 Heber City Master Plan Update\Project Data\2022 Master Plan Maps\Fig 4.2 Water Exist 2022.dwg - Layout1 - 12/20/2023 03:35pm, ChuckR

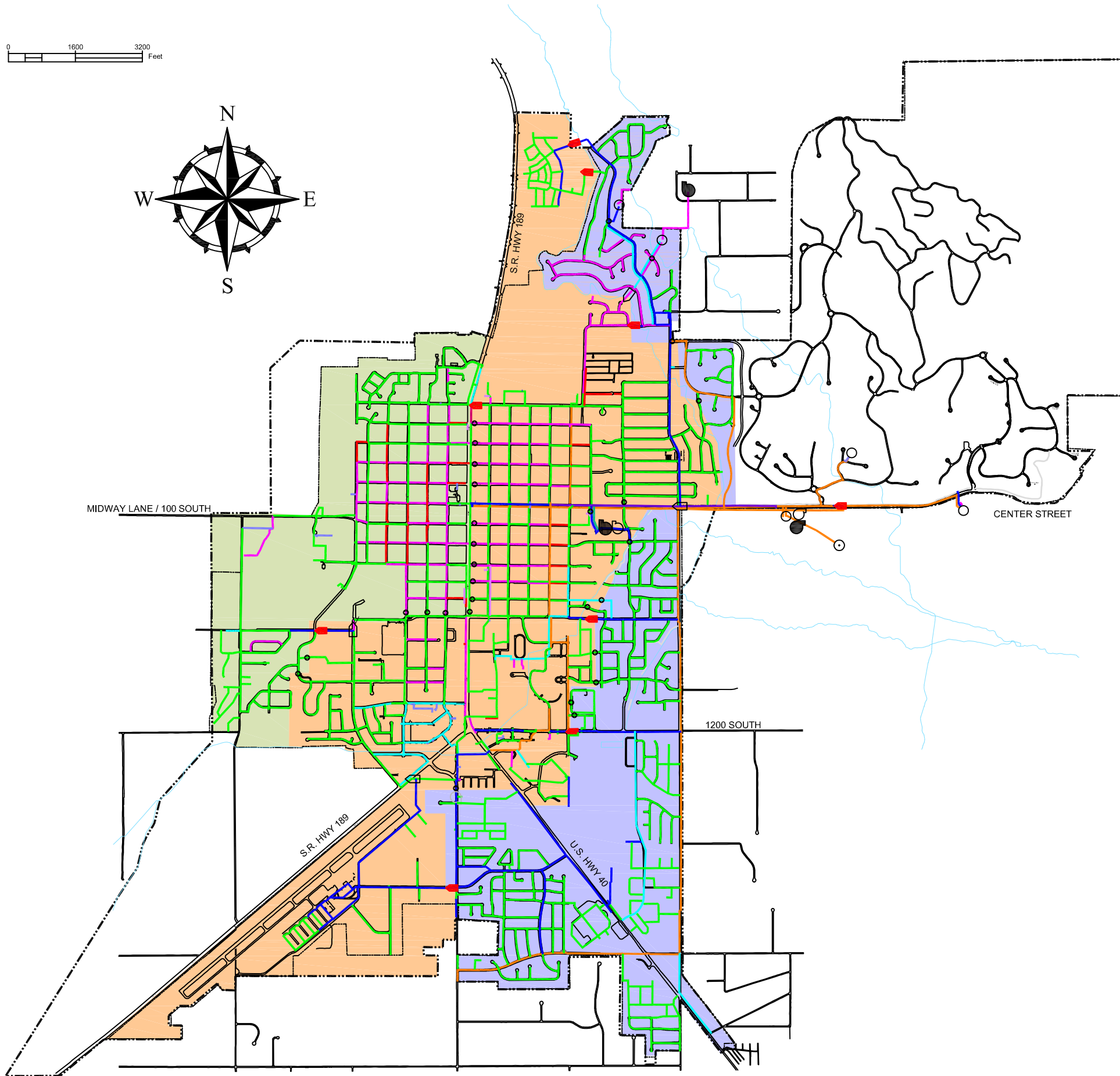
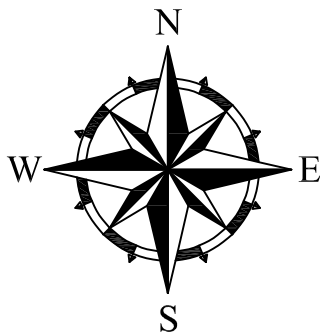
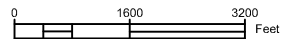


FIGURE 4-2

HEBER CITY

EXISTING CULINARY WATER SYSTEM

- ULTIMATE BUILDOUT BOUNDARY
- HEBER CITY BOUNDARY
- EXISTING ROADS
- ACTIVE PRV
- INACTIVE PRV
- WELL PUMP
- ACTIVE BOOSTER PUMP
- INACTIVE BOOSTER PUMP
- SPRING
- TANK
- CLOSED VALVES

EXISTING WATER LINES

PIPE SIZE (inches)	PIPE COLOR
<4	
4	
6	
8	
10	
12	
14	
16	
18	
20	
UNKNOWN	

WATER ZONES

ZONE NAME	ZONE COLOR
-----------	------------

EAST ZONE (LINDSAY HGL 5960)	
MCNAUGHTON (HGL 5890)	
WEST ZONE (BROADHEAD HGL 5735)	

Distribution System Recommendations

The entire culinary water system was modeled for both present and projected populations for instantaneous conditions with fire flow demand, and a 24-hour extended period simulation. Heber City's existing storage capacity is presently adequate for average daily flows and fire flows.

Recommended improvements and estimated costs are shown in Table 4-9. The costs of the improvements include construction costs, engineering costs, legal and administrative fees and contingencies. The total estimated cost for the recommended improvements is \$22,875,524. These estimated costs will assist in determining the impact fees. A breakdown of the project costs and assumptions are shown in Appendix B.

It should again be noted, that if pressurized irrigation water continues to be installed in the central part of Heber projects W-027 and W-054 (new source and storage facilities) may be postponed, reduced in size, and a portion of the funds for these projects shifted to the pressurized irrigation system improvement project I-001.

Table 4-9 Heber City's Estimated Cost of Water Improvements

ULT	CIP #	Recommended Improvements	Size (in)	Total Cost	Funding Proportionate Share Analysis							
					Operating		Developer		Other ¹		Impact Fee	
					%	\$	%	\$	%	\$	%	\$
	W-005	Daniel Road - 2200 S to 2400 S (8")	8	\$222,712	0%	\$0	0%	\$0	0%	\$0	100%	\$222,712
	W-007	East Bypass - US 40 to Mill Rd (12")	12	\$1,560,004	0%	\$0	59%	\$917,283	0%	\$0	41%	\$642,722
	W-008	1900 South - US 40 to Mill Rd (12")	12	\$725,292	0%	\$0	59%	\$426,472	0%	\$0	41%	\$298,821
	W-019	2400 South - Daniel Rd to Airport Rd (12")	12	\$1,606,502	0%	\$0	59%	\$944,623	0%	\$0	41%	\$661,879
	W-025	1250 South PRV		\$321,119	0%	\$0	0%	\$0	0%	\$0	100%	\$321,119
	W-027	New Source Development (2400 gpm)		\$4,491,059	0%	\$0	0%	\$0	100%	\$4,491,059	0%	\$0
	W-028	Master Plan Updates every 5 years (4 times)		\$240,000	0%	\$0	0%	\$0	0%	\$0	100%	\$240,000
	W-029	Aerial Digital Map Updates (4 times)		\$19,200	0%	\$0	0%	\$0	0%	\$0	100%	\$19,200
	W-035	700 North - 400 E to Main St. (8")	8	\$383,177	0%	\$0	100%	\$383,177	0%	\$0	0%	\$0
	W-036	400 East - 700 N to 500 North (8")	8	\$456,066	0%	\$0	100%	\$456,066	0%	\$0	0%	\$0
	W-041	US 40 - 2200 S to 2400 S (West) (8") *	8	\$311,390	0%	\$0	0%	\$0	0%	\$0	100%	\$311,390
	W-042	1500 South - Dusty Baker Ln (150 E) to US 40 (8")	8	\$239,627	0%	\$0	100%	\$239,627	0%	\$0	0%	\$0
	W-043	US 40 - 1300 S to 1700 S (West) (8")	8	\$224,432	0%	\$0	100%	\$224,432	0%	\$0	0%	\$0
	W-045	1200 South - 850 W to 1200 W (8")	8	\$373,208	0%	\$0	100%	\$373,208	0%	\$0	0%	\$0
	W-046	1200 West - 1200 S to 1100 S (8")	8	\$351,206	0%	\$0	100%	\$351,206	0%	\$0	0%	\$0
	W-047	600 West - 450 S to 650 S (8")*	8	\$541,367	0%	\$0	0%	\$0	0%	\$0	100%	\$541,367
	W-053	550 North - 550 E to 750 E (8")	8	\$435,722	80%	\$348,578	0%	\$0	0%	\$0	20%	\$87,144
	W-054	Future Tank Storage (1.4 MG)		\$4,693,525	0%	\$0	0%	\$0	0%	\$0	100%	\$4,693,525
ULT	W-058	Southfield Rd- SR 189 to 1100 S	12	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
ULT	W-059	SR 189 - 2500 S to South Field Road (12")	12	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	W-060	500 North to Midway Lane (8")	8	\$887,627	0%	\$0	100%	\$887,627	0%	\$0	0%	\$0
	W-061	Hwy 40 or Ostler Pk Rd- 1600 N to 900 N (12")	12	\$1,010,537	0%	\$0	59%	\$594,196	0%	\$0	41%	\$416,341
	W-063	US 40 - 1500 S to 1200 E (East) (8")	8	\$958,973	0%	\$0	100%	\$958,973	0%	\$0	0%	\$0
	W-064	Valley Dr PRV		\$393,120	100%	\$393,120	0%	\$0	0%	\$0	0%	\$0
ULT	W-065	2400 South - 850 West to US 189 (12")	12	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	W-066	Heber City Public Works Facility Exp Ph 1		\$318,438	0%	\$0	0%	\$0	0%	\$0	100%	\$318,438
	W-067	600 East - 1300 S to Hidden Cr Ln (8")	8	\$443,923	0%	\$0	100%	\$443,923	0%	\$0	0%	\$0
	W-068	Heber City Public Works Facility Exp Ph 2		\$1,346,177	0%	\$0	0%	\$0	0%	\$0	100%	\$1,346,177
	W-069	2400 South PRV		\$321,119	0%	\$0	0%	\$0	0%	\$0	100%	\$321,119
TOTAL EXPENDITURES				\$22,875,524		\$741,698		\$7,200,813		\$4,491,059		\$10,441,954

NOTES:

- "Other" includes grants, special assessments, and previously collected impact fees.
- A total of ±\$4,500,000 listed in the "Other" column is funded by the existing impact fee account as of April 17, 2023. Applied to W-027
- Assumed 5.0% interest rate on bonds. All bonds assumed to be paid off by 2043.
- Projects W-027 and W-054 will be reduced in size if the PI system continues to be installed in Central Heber. Assume 1/2 of the funding for projects W-027 and W-054 will go toward the PI system in Central Heber that replaces part of the need for these projects.
- The aerial digital map and Master Plan update needs to be done four times in the next 20 years. The total cost is divided by four in the Impact Fee Expenditure Plan Improvement Costs.
- ERUs based on 2042 ERU projection minus Red Ledges full time units because they are served by Twin Creeks and do not pay sewer impact fees. Red Ledges added 380 ERUs (1,186 / 3.12) in 2021.
- Projects with * have been partially completed with previous CIP projects.
- Valley Hills Plats A-H have water impact fees reduced by \$325 per agreement with developer for constructing a portion of the Valley Hills #2 Tank

4.4 Economic Feasibility Analysis

The two types of funding for Heber City's water system are operating and non-operating. Independently, these two funds should generate sufficient revenue to fund the respective needs of the water system. Operating expenses include the monies used for personnel and contractual services, betterment and replacement type capital improvement projects, materials, supplies, depreciation, and other operating expenses. Revenue to fund these operating expenses is generated from waster user fees.

Non-operating expenses comprise expansion type capital improvement projects, developer reimbursements, master planning, aerial mapping, and bond repayment. The revenue for non-operating expenses is generated from impact fees. Generally, operating expenses should be funded by the existing connected population, and non-operating expenses necessary for future development should be paid by the future population by way of impact fees.

In this section, only the non-operating expenses are discussed. Projected revenue and expenditures have been analyzed to determine if present fees are sufficient to fund the recommended improvements and other related expenditures.

Impact Fee Fund

The Impact Fee Fund or capital project fund is used to fund improvements needed to meet the increased demands due to growth. Revenue is currently generated from the “impact fee” charged to new development. This revenue is used for capital improvement projects and debt service.

The impact fee can be used to fund capital improvements, including construction costs, land acquisition, material costs, planning, surveying, and engineering fees provided for and related directly to the construction of the system improvements; and debt service charges to the principal and interest on bonds, notes or other obligations issued to pay the cost of the system improvements. This revenue can also be used to fund annual Master Plan reviews and Master Plan updates approximately every five years.

Developer Contributions

The City has a policy that developers are responsible for 100% of the cost of on-site improvements needed to serve their development. Developers are also responsible for extending any off-site services needed to serve their development. However, reimbursement for a portion of these costs may be available through reimbursement agreements or impact fees if the facilities have previously been identified in this Master Plan. The City's policy for culinary water lines is to reimburse the incremental over-sizing cost for lines above 8-inches, unless the oversized line is needed specifically to meet the demands of the development.

Currently, the water impact fee charged to residential units in new development is \$2,826 per 0.75-inch connection and \$5,024 per 1-inch connection. Table 4-10 shows the new impact fee recommendations for residential and non-residential connections.

Table 4-10 Recommended Impact Fees

Residential Connections		
Size (in)		Impact Fee per ERU
75		\$2,778
> 0.75		\$2,778
Non-Residential Connections		
Size (in)	Area of Pipe (in ²)	Impact Fee
75	0.442	\$2,778
1	0.785	\$4,939
.5	1.767	\$11,113
2	3.142	\$19,757
3	7.069	\$44,453
4	12.566	\$79,028

The impact fees are based on the estimated total cost for improvements, with bond interest added, of \$11,385,649 (\$10,441,954 + \$943,695) over the next 20 years; and the projected number of new residential and non-residential ERU's of 4,098 shown in Table 4-11.

The money generated from the recommended impact fees should generate sufficient revenue to fund the recommended capital improvements and bond re-payments and excludes the operating portion of the improvements identified in Table 4-9.

Table 4-11 Projected Impact Fee Revenue and Projected New Connections.

Impact Fee Expenditure Plan							Collected vs Cost	Bond Loan Plus Payments	Fund Running Balance
Year	ERUs ²	Impact Fee Collected (\$)	Available Funds (\$)	Improvement Projects ^{1,3}			Improvement Costs (\$)		
2024	295	\$819,611		W-028	W-042	W-060			\$0
2025	308	\$855,730		W-029	W-043	W-061			\$0
2026	323	\$897,405		W-066	W-047	W-067			\$0
2027	337	\$936,302		W-007	W-053				\$0
2028	353	\$980,755	\$4,489,802	W-027	W-054		\$6,525,508	(\$2,035,706)	\$2,040,000
2029	369	\$1,025,209		W-028	W-035	W-063			(\$196,538)
2030	386	\$1,072,440		W-029	W-036	W-064			(\$196,538)
2031	403	\$1,119,672		W-066	W-041	W-068			(\$196,538)
2032	102	\$283,391		W-008	W-045	W-069			(\$196,538)
2033	104	\$288,948	\$3,789,660	W-025	W-046		\$2,743,036	\$1,046,624	(\$196,538)
2034	105	\$291,726		W-028					(\$196,538)
2035	106	\$294,504		W-029					(\$196,538)
2036	108	\$300,061		W-066					(\$196,538)
2037	109	\$302,839		W-019					(\$196,538)
2038	111	\$308,396	\$1,497,527				\$806,288	\$691,238	\$33,462
2039	113	\$313,953		W-028					(\$249,662)
2040	114	\$316,731		W-029					(\$249,662)
2041	116	\$322,288		W-066					(\$249,662)
2042	117	\$325,066		W-005					(\$249,662)
2043	119	\$330,623	\$1,608,661				\$367,122	\$1,241,539	(\$249,662)
	4,098	\$11,385,649					\$10,441,954	\$943,695	(\$943,695)

Estimated New ERU's = 4,098

Impact Fee per ERU (no bonding) = \$2,548
Impact Fee per ERU with Bond Interest = \$2,778

NOTES:

1. Project order in which development will occur in City is approximated and will change as development dictates.
2. 2043 projected Residential and Non-Residential ERU's minus Red Ledges because Red Ledges does not pay water impact fees.
3. W-028, W-029, and W-066 are divided by 4 to spread over 20 year window.
4. Must borrow sufficient funds to cover shortfall in fees collected. Must keep Fund Running Balance low to insure fees are spent in 6 years.

To keep abreast of inflation and increasing construction costs, the impact fees should be reviewed annually to ensure that the required funding will be available.

In addition to the impact fees, a fee is also charged to cover the cost of the meter installation and inspection when a developer connects to the system. For a 0.75-inch meter which includes a Transmitter, the cost is approximately \$600. A 1-inch meter with Transmitter is \$700, and a 1.5-inch meter with Transmitter is \$1,662.

Chapter 5

Sanitary Sewer System

5.1 Summary and Recommendations

Introduction

This chapter identifies the existing condition of the sanitary sewer system as well as recommended improvements to meet the projected 20-year population demands. Impact fees are based on implementing the recommended improvements.

Heber City's sewer system was evaluated for the projected population, number of connections or equivalent residential units (ERU's), and sewer flows. Using State design requirements, population per household, and historical sewer flows, the flows were projected and analyzed through the planning period to determine the respective capacities in collector and interceptor lines. Then, using the potential areas of development and the projected sewer flow, improvements were recommended.

Heber City provides sewer capacity to entities outside the City boundary. Twin Creeks Special Service District (TCSSD) has a connection at 600 South 1200 East. Projected demands for TCSSD and its impact on the City's system have been included in this study, along with a future second connection at 1200 South 1200 East. The City has also agreed to provide capacity to Charleston at a future connection at 1200 South 1200 East and planned for in this study. TCSSD and Charleston's existing and future flows will use excess capacity in several existing Heber City sewer lines and impact several new projects, i.e., S-026, S-027, S-045.

The Heber City Design Criteria used in this study are summarized below:

- | | | |
|------------------|-------------------------------|----------------------|
| • Flow: | - Average Yearly | 312 gpd/ERU |
| | - Peak Hour Collector Lines | Average Yearly x 4.0 |
| | - Peak Hour Interceptor Lines | Average Yearly x 2.5 |
| • Pipe Capacity: | - Maximum | 75% of Full Capacity |
| Pipe Sizes: | - Minimum | 8-inches |
| • Velocities: | - Minimum | 2 fps |
| | - Maximum | 15 fps |

Projected Population

Heber City's estimated population is expected to increase by approximately 61.8%, from 18,347 to 29,682 people by the year 2043, excluding the North Village and Jordanelle Ridge areas. This is based on an analysis of recorded lots, unrecorded lots that have received approval, and potential future developments. At this growth rate, an additional 4,478 (11,727-7,249) sewer ERU's will be added. Of these, 380 ERU's have been deducted for the Red Ledges area which is served by Twin Creeks Special Service District (TCSSD). Heber City's sewer system is therefore estimated to have a total of 11,188 ERU's, or an additional 4,098 ERU's, by 2043. Growth beyond 2043 to Ultimate build out will be addressed in future Master Plan updates.

Projected Sewer Flow

Using 11,727 projected equivalent residential units in 2043, the average yearly flow will increase by 510 mg, from 825 mg to 1,335 mg, over the next 20 years.

City sewer records show an increase of 19.4% in flow during the summer months as compared to the winter months between the years 2006 and 2022. This increase has slightly dropped in recent years to 17.1% for the last 10-year average and 15% for the last 3-year average. Most of the summer increase is assumed to be from infiltration and inflow, and the City's actions over the years to reduce this inflow appear to be working. The City should continue to take steps to further reduce infiltration and inflow as it costs tens of thousands of dollars annually to treat this additional flow.

Recommended Sewer System Improvements

Capital improvements recommended to meet the projected population's sewer flows are shown in Figure 5-1. These recommendations were determined by using a computer model of Heber City's sewer system and input from City staff. A detailed listing of the recommended improvements is given in the following paragraphs.

Projects labeled as "Ultimate" are beyond the 20-year planning window and therefore the improvement cost and associated populations served have been excluded from impact fee calculations.

S-004 600 East - 1300 to Hidden Cr Ln (15"): A 15-inch line should be constructed along 600 East from 1300 South to Hidden Creek Lane. Once this development is designed, the slope of the line is known, and the exact location of the loadings is determined, the size of this line should be verified.

S-020 Aerial Photography Update: The aerial photography of the city system should be updated every 5 years. This aids in modeling and mapping the sanitary sewer system, planning, and preliminary project design.

S-021 Master Plan Update: The facilities master plan should have major updates every five years. As part of the annual update flows should be analyzed, maps revised, sanitary sewer system modeled, and impact fees evaluated.

S-023 US 40 - Center Creek Dr to 2200 S (West) (8"): An 8-inch line should be constructed on the west side of US 40 from approximately Center Creek Dr, tying into the existing sewer at 2200 South. This will serve the Highway Commercial Zone in this

area. Development should pay for this line.

S-024 1500 W- 100 S to 1200 S (12"): A 12-inch line should be constructed on the west side of Heber City from 100 South to 1200 South. This will serve the future developments in this area. The 12-inch diameter assumes minimum slope and is not needed for additional capacity; therefore, this is 100% developer responsibility.

S-025 Sage Brush & Spring Creek Canal - 300 N to 100 S (24"): A 24-inch line should be constructed along the Sage Brush and Spring Creek Canal from the intersection of 600 West 300 North to 100 South. This will ultimately be needed to accommodate future growth on the north side of Heber.

S-026 SR 113 - 800 W to 930 W (30"): A 30-inch line should be constructed along SR-113 from approximately 800 West to 930 West. This will replace the existing 15-inch line at this location. Completion of this project is partially dependent on TCSSD continuing to pass flow through Heber City's system. This project may possibly be postponed if TCSSD discontinues use of the system. It is recommended that this project be paid for by impact fees.

S-027 SR 113 - 930 W to South Field Rd (30"): A 30-inch line should be constructed along SR 113 from 930 West to South Field Road. The line is needed for future Heber City growth as well as to accommodate the TCSSD flow. This project may possibly be postponed if TCSSD discontinues use of the system. It is recommended that this project be paid for by impact fees.

(Ultimate) S-031 South Field Rd – US 40 to 1200 S (10"): A 10-inch line should ultimately be constructed on South Field Road from US 40 to 1200 South. Once this development is designed, the slope of the line is known, and the exact location of the loadings is determined, the size of this line needs to be verified. (Sewer from the Airport has not been included in this line). This line is needed for a future planned annexation south of 300 South. The annexation and developers will install and pay for all of this line.

S-033 US 40 - Center Cr Dr to E Airport Rd (East) (8"): An 8-inch line should be constructed on the east side of US 40 from Center Creek Dr to East Airport Road. This line should connect to S-004. Development should pay for this line.

S-035 Center Street - 800 E to 1300 E (8"): An 8-inch line should be constructed along Center Street from 800 East to 1300 East. The line is needed for the annexation east of 1200 East, just south of Center Street. Development should pay for this line.

S-036 900 North - Main St to 500 E (8/10"): An 8-inch to 10-inch line should be constructed along 700 North from Main Street to 500 East. The line is needed for the development in this area. The line connects to S-018 and is 100% Developer funded.

S-037 Heber City Public Works Facility Expansion Ph.1: The Heber City Public Works Department Building was expanded in 2018 to accommodate growth and maintain the same level of service on the City's street system. Impact fees were used to pay for the sewer portion of this expansion which was debt funded with payments continuing

through the master plan 20-year window. See Appendix A for the construction cost allocation.

S-038 500 North and 600 West to 50 North and 1000 West (18"): An 18-inch line should be constructed from 500 North and 600 West to 50 North and 1000 West through the future development on the northwest side of Heber City. The line is needed for the new High School and development in this area, and the size has been estimated based on the slope needed to service this entire low-lying area, rather than capacity. The 18-inch diameter assumes minimum slope with no additional drop through manholes while utilizing shallow T-manholes. The City should consider seeking a variance per State Code R317-3-2 to reduce minimum allowed slope on sewer line and potentially install smaller diameter pipe. Development should install and pay for a portion with help from impact fees and other contributions.

S-041 Heber City Public Works Facility Expansion Ph.2: The Heber City Public Works Department Building and Maintenance Site will be expanding to maintain the current level of service that the Public Works department currently provides in maintaining the sanitary sewer system. Phase 2 will likely commence around 2028. Impact fees will pay for all of this phase since it is only needed for future growth.

S-044 East Airport Road - US 40 to 600 E (10"): A 10-inch line should be constructed along East Airport Road from US 40 to approximately 600 East. Once this development is designed, the slope of the line is known, and the exact location of the loadings is determined, the size of this line should be verified. Development should install and pay for a portion with help from impact fees.

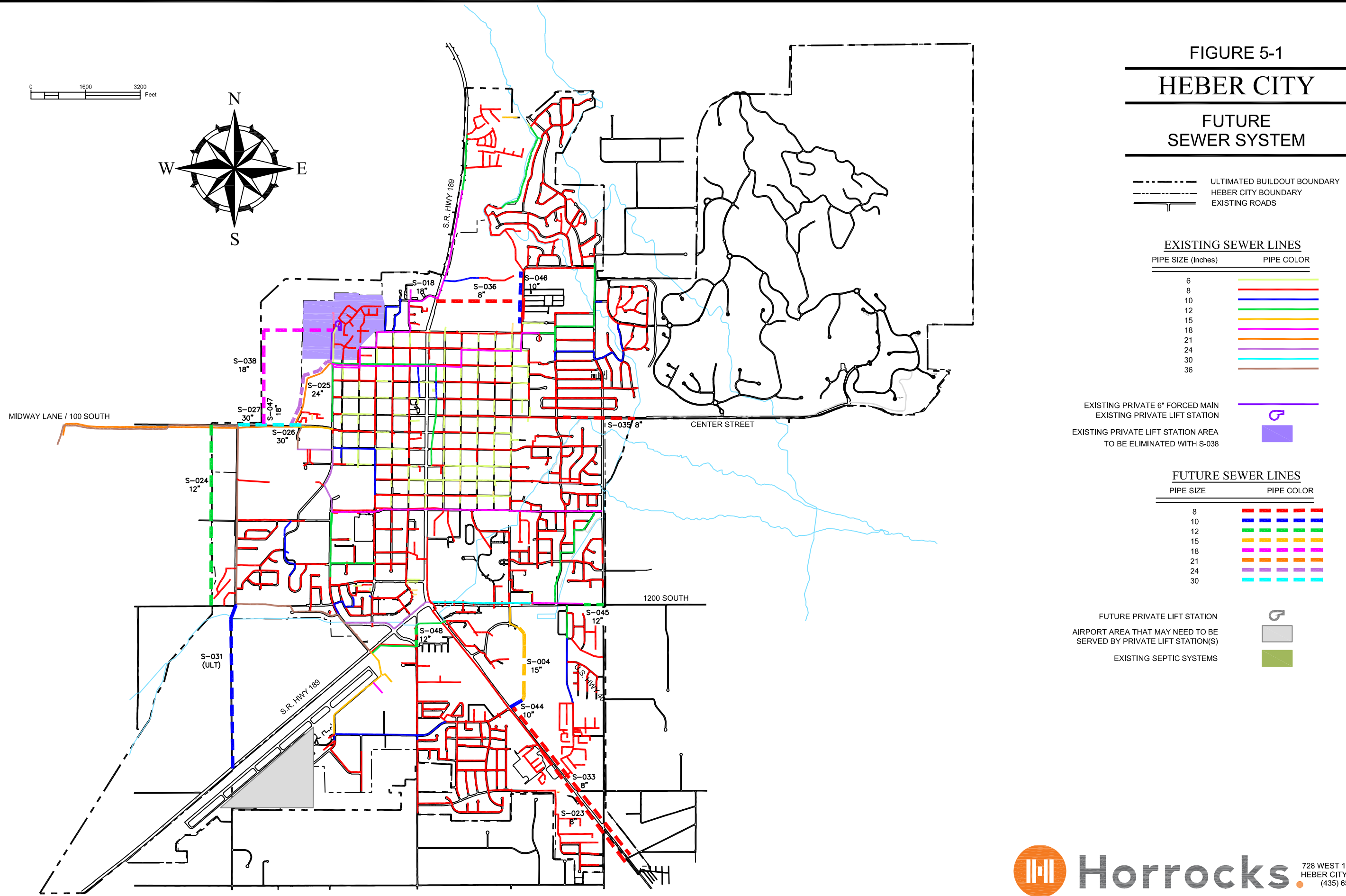
S-045 1200 South - 1000 E to 1200 E (12"): A 12-inch line should be constructed along 1200 South from approximately 1000 East to 1200 East. This line is needed for future Twin Creek flow at 1200 East, however, the developer to the north may also need to connect to this line. Either TCSSD or the development to the north will install this line and pay their portion respectively. Development should install and pay for a portion with help from impact fees and other contributions.

S-046 550 East - Valley Hills Dr to 600 N (10"): A 10-inch line should be constructed in 550 East from Valley Hills Drive to 600 North. This line should replace the existing 8-inch line at this location. This line is needed for future projected flow from the development directly north of the Cemetery. The Developer should install the 8-inch portion, with impact fees pay for the oversizing. Development should install and pay for a portion with help from impact fees.

S-047 1000 West - 50 North to 100 South (18"): An 18-inch line should be constructed along 1000 West from 50 North to 100 South. The line is needed for the new High School and is 100% Developer funded.

S-048 Daniels Road – 1320 South to 1475 South (12"): A 12-inch line should be constructed along Daniels Road from 1320 South to 1475 South. The line is needed for future Heber City growth and shall be paid for with impact fees.

I:\Heber City\City Projects\2022 Heber City Master Plan Update\Project Data\2022 Master Plan Maps\Fig 5.1 Sewer Future 2022.dwg - Layout1 - 12/20/2023 02:35pm - ChuckR



Infiltration and Inflow

Sewer flows typically increase during the summer months when compared to the winter months. A majority of the summer increase is likely from infiltration and inflow. High water table occurs during the spring and summer months, typically due to irrigation, but can also be due to above average Winter and Spring precipitation. As mentioned previously, infiltration and inflow appear to be following a decreasing trend based on recent water and sewer flow records. The reduced infiltration in recent years could be due to the continued expansion of the pressurized irrigation system, which has lowered the groundwater table. In addition to changes in the ground water, it could also be due to maintenance and repairs to the existing sewer infrastructure. If the reduction is mainly due to reduced levels of ground water unrelated to the pressurized irrigation, the City will see increased infiltration during times of normal or above normal ground water. The City should continue to monitor sewer lines for opportunities to reduce infiltration to lower treatment costs from the Heber Valley Special Service District (HVSSD).

System Capacity Improvements

The existing sewer system will need various upgrades to have sufficient capacity to meet the needs of the projected growth and maintain the current Level of Service (LOS). Figure 5-1 shows the additional lines needed to handle the flow generated from the growth projected through the planning period.

Currently HVSSD has a treatment capacity of 4.0 mgd. Heber City is using approximately 29% and Midway City is using another 26% of the total capacity of the plant. However, TCSSD flow makes up approximately 13% of the Heber City's flow or approximately 4% of the total capacity of the treatment plant. Jordanelle Special Service District makes up 7% of Midway City's flow and 2% of the total capacity of the treatment plant. HVSSD recently expanded their treatment plant and installed a mechanical component to ensure discharge limitations do not affect their ability to service the Heber Valley in the future. As of 2022, the plant is at 55% capacity. The plant is still considered 100% consumptive.

HVSSD also collects a separate impact fee from all new connections to the sewer systems that flow to the HVSSD sewer treatment plan, including Heber City's sewer system. Costs for any excess sewer capacity in existing Heber City facilities have not been included in the cost totals of this study except for the debt service specifically noted on project S-018. Most of any excess sewer capacity has been previously paid for by impact fees, and the benefit should go to new development.

Impact Fee Recommendations

Due to the reduction of new capital improvements needed, the Sewer Impact Fee should be lowered from the current \$2,151 to a new fee of \$1,417 per Equivalent Residential Unit (ERU) to generate sufficient revenue to fund the recommended improvements. However, to keep abreast of inflation and construction costs, the sewer rates and impact fees should be updated every year according to the change in the construction cost index.

5.2 Sewer Flow Data

Future conditions in Heber City will affect the sewer flow and the improvements needed to meet increased flow. Information used to determine the future conditions are:

- Present growth rates and future projected population growth rates
- Existing sewer flow
- Existing ERUs
- Projected residential and non-residential development areas

As this information changes, so will the timing of when recommended improvements are needed. This study will limit recommendations to all improvements needed by the end of the 20-year planning period. Interim phasing or timing of improvements will be determined and periodically adjusted by the City as information is accumulated.

Heber City's population has been projected through the planning period. The projected number of sewer connections was determined based upon the projected population and the percent of the population connected to the system. To determine where the projected sewer flows will occur, the potential areas of development were analyzed. Using historical sewer flows and State design requirements, the sewer flows have been projected through the planning period.

Projected Population

The projected population for Heber City during the planning period to 2043 is discussed in Chapter 3 - Projected Population. The 2023 population is estimated to be 18,347. The 2043 Heber City population is projected to be 29,682.

Equivalent Residential Connections

Sewer flow from residential connections differs from commercial, church, government, and other non-residential connections. To evaluate residential and non-residential connections on an equal basis, Equivalent Residential Unit's (ERU's) are used to equate the different types of connections. For this study, it is assumed that most water used during the winter is discharged into the sewer system. ERU's per non-residential connection were approximated by dividing the historical metered winter water use of commercial, church, and government use by the average residential gpd per ERU, and by the total number of non-residential connections. Between 2019 and 2021, the average ERU's calculated per non-residential connection was approximately 4.1.

In terms of ERU's, 2023 had 5,143 residential units (5,302-159 Red Ledges ERU's) and 1,948 non-residential ERU's (475 non-residential conn @ 4.1 ERU/conn), connected to the system.

The total number of projected residential, church, government, and commercial ERU's, are shown in Table 5-1. Red Ledges ERU's are subtracted from the Residential ERU's to get the total.

Table 5.1 Projected New ERU's in Five Year Intervals

Year	Residential Units	Non-Residential ERU's	New ERU's	Red Ledges ERU's	Total ERU's*
2023 (est)	5,302	1,946		(159)	7,090
2024-2028	1252	459	1711	(36)	8,765
2029-2033	1067	392	1459	(79)	10,146
2034-2038	464	170	635	(92)	10,688
2039-2043	493	181	674	(174)	11,188
Total	8,578	3,149		(539)	11,188

* Residential Units have been adjusted for Red Ledges

Historical Sewer Flow

Heber City's total yearly sewer flow, excluding TCSSD, steadily increased between 2000 and 2008 from 299 mg to 362 mg. Then after 2008 the flow began fluctuating as shown in Figure 5-2. The average yearly sewer flow between 2008 and 2022 has ranged from a low of 320 mg to a high of 392 mg. The City also experiences seasonal flow fluctuations between the summer and winter months as shown in Figure 5-3. Over the past three years, winter flows have averaged 140 gpd/ERU and the summer flows have averaged 164 gpd/ERU. This increase is thought to be related to seasonal infiltration from ground water and other inflow occurring during the summer. Heber City historical sewer flow data is contained in Appendix C.

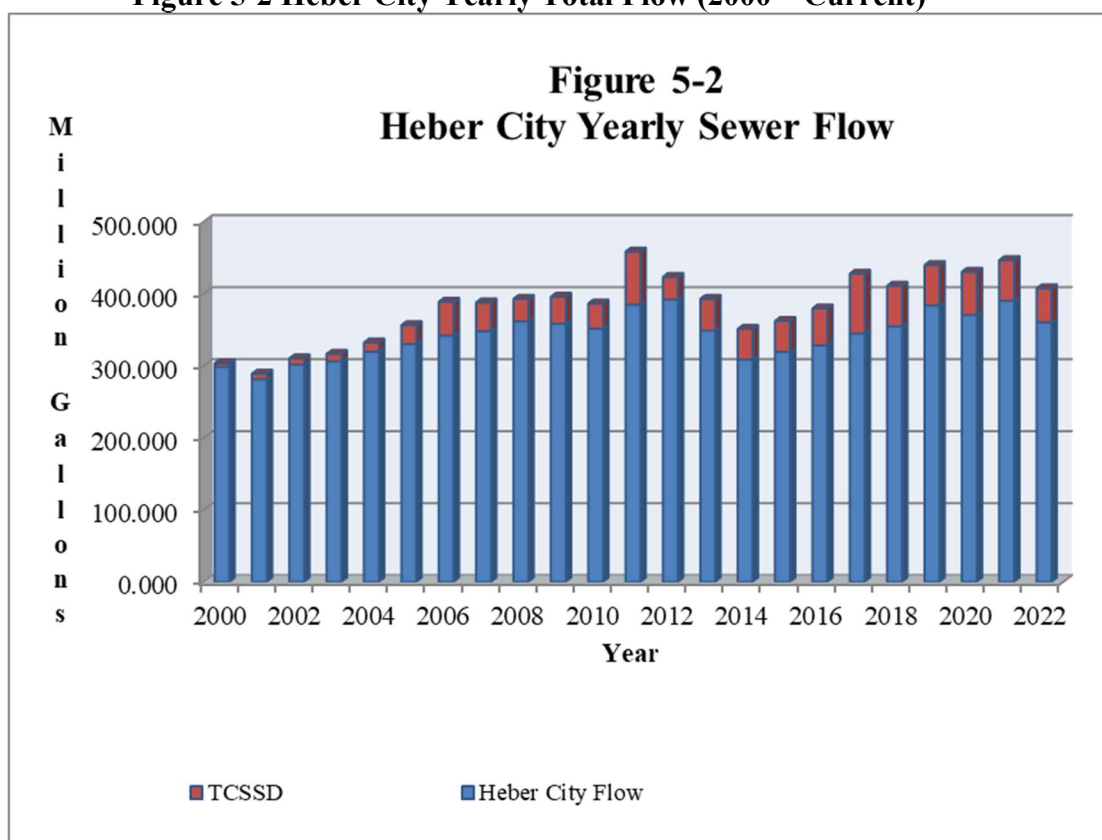
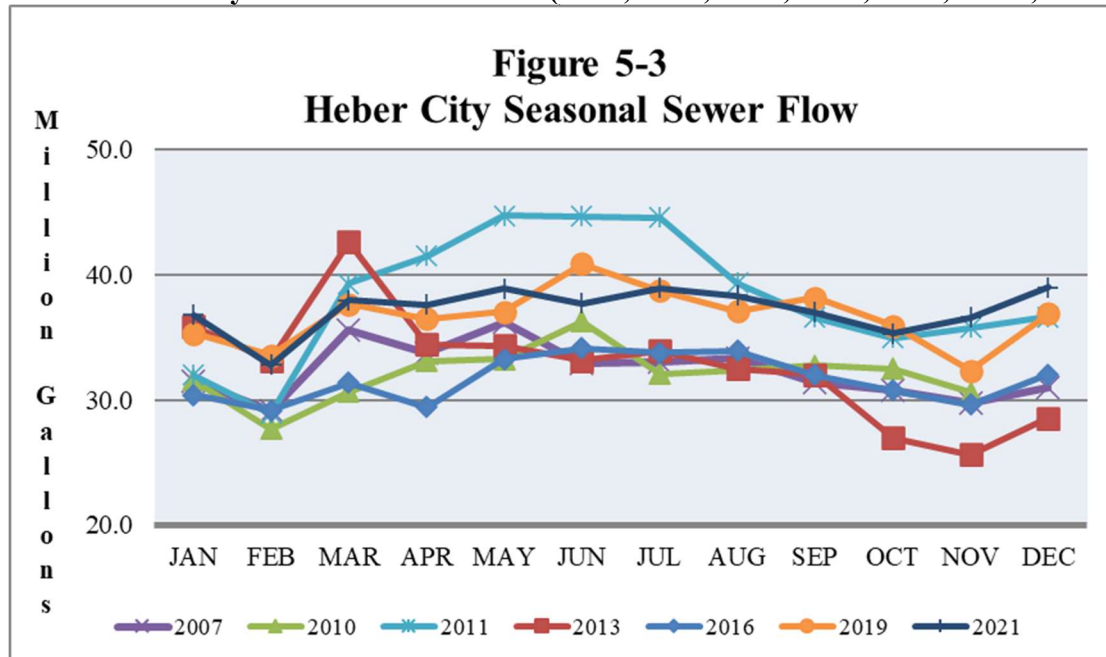
Figure 5-2 Heber City Yearly Total Flow (2000 – Current)

Figure 5-3 Heber City Seasonal Sewer Flow (2007, 2010, 2011, 2013, 2016, 2019, and 2021)



Calculation of Sewer Flow

The State of Utah Administrative Rule R317-3-2 included in Appendix C contains the requirements for sewer system design. New sewer systems are designed based on an annual average rate of flow of 100 gallons per capita per day. This includes an allowance for infiltration, and the rate may be higher if there is probability of large amounts of infiltration entering the system. Design flow is calculated from this base flow plus a peaking factor. A peaking factor of 2.5 is used for interceptor and outfall sewers, and 4.0 is used for laterals and collector sewers. Using the City's average population estimate of 3.12 people per household, as discussed in Chapter 3, the average yearly flow is approximately 312 gpd per residential connection. This is lower than some of the average historical flows in the City, but higher than the average flow in recent years. Possible reasons for a downward trend could include expanded use of the secondary irrigation system and/or a reduced ground water table. To be prudent the study will follow the State requirements of 312 gpd per ERU and evaluate it again during the next master plan update if the trend continues.

Projected Number of Sewer Connections

The projected number of new residential sewer connections are determined using the growth numbers in Chapter 3. The residential connections are assumed to increase at the same rate as population growth. In 2023 there were approximately 5,148 residential sewer connections, not including Red Ledges which is served by Twin Creek Special Service District.

Commercial, church/government, and other non-residential connections are assumed to increase at a rate equal to the population growth. In 2023 there were approximately 475 commercial, church, and government sewer connections.

Infiltration and Inflow

Infiltration and inflow increase flow in the sewer lines and can cause higher sewer treatment costs. If these additional flows are large, they may cause the flow to exceed the capacity of the lines. In 1939, Heber City constructed a large portion of the existing sewer system. The sewer lines were constructed using caulked mortar joints, which have since developed leaks. These leaking joints have acted as subsurface drains allowing groundwater to infiltrate into the sewer line during the summer months.

A study conducted in 1972 showed that Heber City had an average increase of more than eight times the amount of winter flow during the summer months when irrigation water was delivered to the City. From 1972 to 1976, subsurface drains were installed in Heber City to reduce the infiltration into the system. Additional lines were installed in 1983 to further reduce the infiltration by draining groundwater away from sewer lines. These additional drains reduced the amount of flow to the HVSSD by approximately 91 mg a year.

Further reductions in infiltration occurred when the Wasatch County Water Efficiency Project was constructed by the Central Utah Conservancy District. In 2001 this project was completed and began operation in Heber City and Wasatch County. It replaced much of the flood irrigation with a pressurized irrigation system that lowered the groundwater table in the area. The current ditch system in Heber City continues to convey irrigation water to the central portions of town without pressurized irrigation. Prior to 2006, there was not flow control on the ditches. As of 2006, the ditches are controlled and turned off during non-use times. Figure 5-3 shows the effects of the seasonal irrigation on sewer infiltration.

While major strides have been made to reduce infiltration and inflow in Heber City's sewer system, it continues to make up an estimated 15% of the flow during the summer and should be monitored for opportunities for further reductions. Observing high flow lines in late evening or early morning, when low flow is present, could indicate excessive infiltration. Observing seasonal surcharging may indicate infiltration or other inflow problems. Based on the problems found, decisions can be made on the type of improvements needed. Improvement options may include the following:

- Fix existing leaking manholes
- Slip-line leaking pipes
- Replace leaking pipes
- Construct new drainage lines

These improvements can reduce sewer flow and lower treatment costs from the HVSSD. As the population grows, Heber City should explore additional opportunities to reduce infiltration and inflow.

Summary of Projected Sewer Flow

The projected population, historical sewer flow, and design criteria were used to project the sewer flow through the year 2043. The State design requirements for new sewer systems are 100 gallons per capita per day which includes infiltration and inflow. Heber has on average 3.12 persons per household. This equates to an average yearly flow of 312 gpd per ERU. This is lower than some Heber City historical flows which include infiltration, but higher than recent average yearly flows.

Sewer lines are designed to provide capacity for the Peak Hourly flow with the lines at no more than 75% of full capacity. The ratio of the Peak Hourly flow to the Average Yearly flow is referred to as the peaking factor. Peaking factors are higher for collector lines than for outfall or interceptor lines because the peak is reduced as the distance from the source increases. Peaking factors for Heber City are based on the State Department of Environmental Quality (DEQ) recommendations of 2.5 for interceptor and outfall sewers and 4.0 for laterals and collector sewers. Table 5-2 shows the projected Average Yearly flow through the planning period with additional contributions agreed to from TCSSD and Charleston at the HVSSD outfall line. The TCSSD ultimate peak build out flow will be 3,310 gpm per agreement, divided among two connections (1200 East 600 South, and 1200 East 1200 South). There is a potential Charleston peak build out flow of 698 gpm at the 1200 West and 1200 South connection, although it is not part of this study, and is shown in Table 5-2 for information only. The sewer model was analyzed using Heber City's system capacity and both TCSSD and Charleston's peak flows added at a 6% growth rate. The impact of these connections on the City's system was previously analyzed in a Sewer Capacity and Fee Analysis for Twin Creeks report by Horrocks Engineers dated 8/27/21. The agreement and study are included in the Appendix C.

Table 5-2 Projected Sewer Flow in Five-Year Increments

Year	Projected ERU's*	Average Yearly (gpd / ERU)	Heber Flow (mgd)	Heber Flow (mg)	TCSSD Flow (mg)	Charleston Flow (mg)
2023	7,090	312	2.21	807	47	0
2028	8,765	312	2.73	998	84	0
2033	10,146	312	3.17	1,155	112	149
2038	10,688	312	3.33	1,217	150	199
2043	11,188	312	3.49	1,274	225	300

* ERU's have been adjusted for Red Ledges

5.3 Sewer System Analysis and Level of Service

Heber City's sewer system was analyzed to find the existing capacity and Level of Service (LOS). Future improvements needed to maintain the existing LOS were determined. This section describes the existing sewer system, along with a discussion of the concerns and improvements necessary to maintain the current LOS with future population growth. State and Heber City standard requirements will be used as criteria to analyze the sewer system. Information obtained from a computer sewer model of Heber's system will be presented with the recommended improvements needed to meet the projected population's sewer flow. Figure 5-4 shows the existing sewer system.

Level of Service

The existing sewer system of Heber City serves its residents with no interruption. Each pipe in the system is checked to ensure it is in good condition and large enough for its designated flow. Heber City has approximately 83 miles of sewer lines that collect the sewer and convey it to the HVSSD with 36-inch and 21-inch outfall lines. Collection lines in the city range from 6-inch to

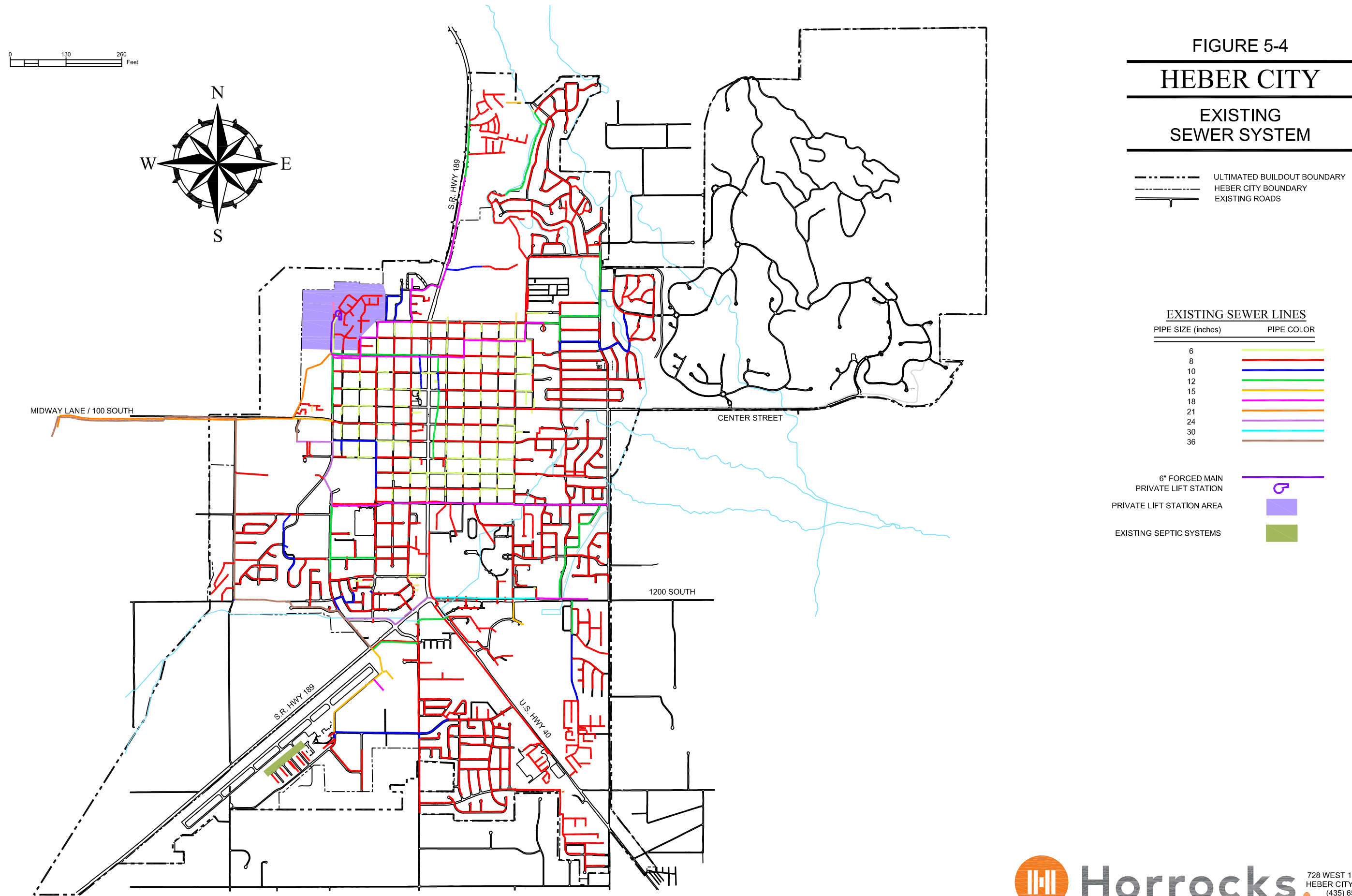
18-inch mains and carry over 400 mg per year. Originally, Heber City's sewer system was setup with two main trunk lines located along 600 West and 300 North, which carried all of the flow from the City to an outfall line located at 600 West 300 North. Flows from 600 West were diverted at 100 South and carried to the outfall line along Midway Lane. Two new 18-inch main trunk lines were later constructed. One line was constructed along 300 North and 400 North, which conveys all of the flow from the Valley Hills area and new development on the east side of Heber. The other 18-inch line was constructed along 600 South to service TCSSD and development in the south and east portions of Heber.

The ERU capacity of incremental sewer line sizes is shown in Table 5-3. The capacity is calculated at 75% of full capacity, using minimum slopes, a PVC roughness coefficient, and an appropriate peaking factor. As discussed in the previous section, outfall and interceptor lines experience smaller peaks than collector lines do, therefore a smaller peaking factor is used. Table 5-3 shows the sewer line capacities and the current sewer LOS that existing residents in Heber City experience.

Table 5-3. Sewer Line Capacity by Pipe Size

Size	Percent of Full Capacity	Min. Slope @ 2 fps	Capacity @ Min. Slope	PF	Capacity @ 312gpd * PF
(in)		(ft/ft)	(mgd)		ERU
8	75	0.00334	0.44	4	353
10	75	0.00248	0.69	4	553
12	75	0.00194	0.99	4	793
15	75	0.00144	1.54	2.5	1,974
18	75	0.00113	2.22	2.5	2,846
21	75	0.00092	3.03	2.5	3,885
24	75	0.00077	3.95	2.5	5,064
30	75	0.000571	6.17	2.5	7,910
36	75	0.000449	8.9	2.5	11,410

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Computer Model of Sewer System

A computer program called *SewerGEMS CONNECT* was used to model Heber City's sewer system. The program uses the flows generated by each sewer connection to calculate the full flow, maximum flow, and flow velocity for each pipe. From the output of the model, the amount of sewer flowing in each line can be approximated. Information for the existing sewer system, including the pipe diameters, lengths, manhole locations, and invert elevations, were obtained from a survey completed in 2002 by Horrocks Engineers for Heber City, and from mapping produced by Heber City in 2017.

Using the ultimate buildout conditions and the anticipated zoning in undeveloped areas, the projected number of future ERU's were calculated. However, not all of the future commercial zone ERU's are known and some of this information was estimated or not modeled. Flows metered at HVSSD and a few other chosen locations in Heber City were used to calibrate the existing sewer system model. The additional flows generated by the future ERU's were entered into the sewer model, producing projected sewer flows into the existing and newly proposed interceptor lines. The model was run to determine upgrades needed for demands on the existing sewer system and the additional demands placed on the system in the future.

The existing sewer system was modeled using peaking factors to determine the peak hour flow. Any mains approaching a service level of 75% of full capacity were identified as in need of expansion. Detail for the models runs are shown in Appendix C.

The following lines are nearing capacity and will need to be upsized to accommodate additional flow: 1) The 15-inch main in 100 South running from 800 West to 930 West. This main will need to be up-sized soon from 15-inches to 30-inches. 2) The 8-inch main in 550 East from Valley Hills Drive to 600 North. This main will need to be upsized soon from 8-inches to 10 inches. 3) The 8-inch line in Daniels Road from 1320 South to 1475 South will need to be upsized soon from 8 inches to 12 inches.

The other mains in the existing sewer system have sufficient remaining capacity to handle the additional future flows except for the following: 1) The 21-inch line from 930 West and South Field Road along 100 South will ultimately need to be replaced with a 30-inch line. 1) The 21-inch line that runs along the Sagebrush and Spring Creek Canal between 300 North and 100 South will ultimately needed to be replaced with a 24-inch line.

Additional sewer facilities that will need to be constructed to maintain the current sewer LOS as the City develops to the North, South, and East are shown in Figure 5-1. These make up the backbone sewer system and generally consist of mains 10-inches and larger.

A summary of the recommended future improvements and estimated costs are shown in Table 5-4. Improvements generated by future growth are shown. With contingencies, engineering, construction management and inspection, the total estimated cost is \$15,466,157. A breakdown of the project costs and assumptions are shown in Appendix C.

Table 5-4 Heber City's Estimated Cost of Future Sewer Improvements

ULT		CIP #	Recommended Improvements	Total Cost	Funding Proportionate Share Analysis								
					Operating		Developer		Other ^{1,2}		Impact Fees		
					%	\$	%	\$	%	\$	%	\$	
					Size (in)								
ULT	S-004	600 East - 1300 S to Hidden Cr Ln (15")		15	\$706,421	0%	\$0	53%	\$374,403	0%	\$0	47%	\$332,018
	S-020	Aerial Digital Map Updates (4 times)			\$19,200	0%	\$0	0%	\$0	0%	\$0	100%	\$19,200
	S-021	Master Plan Update (4 times)			\$336,000	0%	\$0	0%	\$0	0%	\$0	100%	\$336,000
	S-023	US 40 - Center Creek Dr to 2200 S (West) (8")		8	\$1,378,041	0%	\$0	100%	\$1,378,041	0%	\$0	0%	\$0
	S-024	1500 West - 100 S to 1200 S (12")		12	\$1,069,267	0%	\$0	100%	\$1,069,267	0%	\$0	0%	\$0
	S-025	Sage Brush/Spring Cr Canal - 300 N to 100 S (24")		24	\$1,523,623	0%	\$0	0%	\$0	100%	\$1,523,623	0%	\$0
	S-026	SR 113 - 800 W to 930 W (30")		30	\$1,032,613	0%	\$0	0%	\$0	0%	\$0	100%	\$1,032,613
	S-027	SR 113 - 930 W to South Field Rd (30")		30	\$1,062,120	0%	\$0	0%	\$0	0%	\$0	100%	\$1,062,120
	S-031	South Field Rd - US 40 to 1200 S (10")		10	\$0	0%	\$0	0%	\$0.00	0%	\$0	0%	\$0
	S-033	US 40 - Center Creek Dr to E Airport Rd (East) (8")		8	\$854,153	0%	\$0	100%	\$854,153.02	0%	\$0	0%	\$0
	S-035	Center Street - 800 E to 1300 E (8")		8	\$772,234	0%	\$0	100%	\$772,234.35	0%	\$0	0%	\$0
	S-036	900 North - Main St to 500 E (8"/10")		8	\$710,991	0%	\$0	100%	\$710,990.58	0%	\$0	0%	\$0
	S-037	Heber City Public Works Facility Exp Ph.1			\$305,225	0%	\$0	0%	\$0.00	0%	\$0	100%	\$305,225
	S-038	500 N and 600 W to 50 N and 1000 W (18")		18	\$1,695,018	0%	\$0	47%	\$796,658.48	28%	\$475,792	25%	\$422,568
	S-041	Heber City Public Works Facility Exp Ph.2		0	\$1,421,174	0%	\$0	0%	\$0	0%	\$0	100%	\$1,421,174
	S-044	E Airport Rd - US 40 to 600 E (10")		10	\$121,449	0%	\$0	73%	\$88,294	0%	\$0	27%	\$33,156
	S-045	1200 South - 1000 E to 1200 E (12")		12	\$575,763	0%	\$0	62%	\$354,094	20%	\$115,153	19%	\$106,516
	S-046	550 East - Valley Hills Dr to 600 N (10")		10	\$956,064	0%	\$0	73%	\$695,059	0%	\$0	27%	\$261,006
	S-047	1000 West - 50 North to 100 South (18")		18	\$584,944	0%	\$0	100%	\$584,944	0%	\$0	0%	\$0
	S-048	Daniels Road - 1320 South to 1475 South (12")		12	\$341,857	0%	\$0	0%	\$0	0%	\$0	100%	\$341,857
		TOTAL EXPENDITURES			\$15,466,157		\$0	\$7,678,138		\$2,114,567		\$5,673,452	

NOTES:

1. "Other" includes grants, special assessments, previously collected impact fees, and fund from Twin Creeks Special Service District.
2. A total of \$1,974,000 listed in the "Other" column is funded by the existing impact fee account as of April 17, 2023. Applied to S-025, S-038.
3. Assumed 5.0 % interest rate on bonds. All bonds assumed to be paid off by 2043.
4. The Aerial Digital Map (S-020) and Master Plan Updates (S-021) need to be done four times in the next 20 years. The total cost is divided by four in the Impact Fee Expenditure Plan Improvement Costs.
5. ERU's based on 2042 ERU projection minus Red Ledges full time units because they are served by Twin Creeks and do not pay sewer impact fees. Red Ledges 2042 added units =380 (1,186/3.12)

5.4 Economic Feasibility Analysis

The two types of funding for Heber City's sewer system are operating and non-operating funds. Independently, these two funds should generate sufficient revenue to fund the respective needs of the sewer system. Operating expenses include the monies used for personnel and contractual services, betterment and replacement type capital improvement projects, materials, supplies, depreciation, and other operating expenses. Revenue to fund these operating expenses is generated from sewer user fees.

Non-operating expenses comprise expansion type capital improvement projects, developer reimbursements, master planning, aerial mapping, and bond repayment. The revenue for non-operating expenses is generated from impact fees. Generally, operating expenses should be funded by the existing users, and non-operating expenses necessary for future development should be paid by the future development through impact fees.

In this section, only the non-operating expenses are discussed in detail. Projected revenue and expenditures have been analyzed to determine if present fees are sufficient to fund the recommended improvements and other related expenditures.

Impact Fee Fund

The Impact Fee fund or capital project fund is used to fund improvements needed to maintain the current LOS and meet the increased flows due to the growth. Revenue is generated from the “impact fee” charged to new development. This revenue is used to fund the capital improvement projects and debt service.

The impact fee amount is calculated by taking the total cost of improvements associated with impact fees, plus the necessary bond interest payments, divided by the projected new ERU’s for 20 years. The impact fees for all 20 years are shown in 2023 equivalent dollars. Bonding is necessary when projects were grouped into five-year windows and insufficient impact fees are collected to cover the projected improvement costs.

Development occurring within the 20-year planning window will pay equally for recommended projects. Earlier developments only pay their fair share of facilities that also benefit later developments.

Since the order in which development will occur throughout the City is not known exactly, the project order may change as development dictates project needs. Table 5-5 also illustrates how the collected impact fee money will be expended within the required six years from the time of collection. The five-year windows allow for a one-year buffer to ensure compliance with the law’s six-year expenditure requirement. The fees should be analyzed at each five-year Master Plan Update to keep abreast of inflation and rising construction costs.

Other funding Sources

Table 5-5 lists other funding sources that could be potential resources of money. Bonds are listed, and the anticipated bond debt service payments are figured into the impact fee calculation. Potential grants have not been included as a funding source. Any grants that may be awarded in the future would reduce funding requirements. Heber City does not currently charge any special assessment fees.

Developer Contributions

The City has a policy that developers are responsible for 100% of the cost of on-site improvements needed to serve their development. Developers are also responsible for extending any off-site services needed to serve their development. Reimbursement for a portion of these costs may be available through reimbursement agreements or from impact fees to oversize facilities identified in this Master Plan. The City will reimburse developers for over-sizing of mains above 8-inches (or above the minimum size required for the development) as impact fee funds are available.

Currently, the sewer impact fee charged to new development is \$2,207 per ERU and assumed 163 gpd/ERU average yearly flow at the connection. Table 5-5 shows the new calculated impact fee based on the estimated cost of the required improvements every five years. With bond interest added, the estimated total cost for improvements over the next 20 years is \$5,807,402 (\$5,673,452 + \$133,951). The projected number of new residential and non-residential ERU’s is 4,098. The recommended new impact fee is \$1,417 per ERU with 140 gpd/ERU used to estimate ERU’s from average yearly flow at the connection.

The money generated from the recommended impact fee and the projected number of

connections should generate sufficient revenue to fund the recommended capital improvements and bond re-payments, and excludes the operating portion of the improvements identified in Table 5-4.

Table 5-5 Projected Impact Fee Revenue and Expenditure Plan

Impact Fee Expenditure Plan								Collected vs Cost	Bond Loan Plus Payments	Fund Running Balance
Year	ERUs ²	Impact Fee Collected (\$)	Available Funds (\$)	Improvement Projects ^{1,3}			5-year Improvement Costs (\$)			
2024	295	\$418,054		S-020	S-025	S-045		(\$110,594)	\$0	
2025	308	\$436,476		S-021	S-026	S-048				
2026	323	\$457,733		S-037	S-035					
2027	337	\$477,573		S-004	S-036					
2028	353	\$500,247	\$2,290,083	S-024	S-038		\$2,400,678	\$120,000	\$9,406	
2029	369	\$522,921		S-020	S-041			\$52,526	(\$11,561)	
2030	386	\$547,013		S-021	S-044					
2031	403	\$571,104		S-037	S-046					
2032	102	\$144,547		S-023						
2033	104	\$147,382	\$1,932,966	S-033			\$1,880,441	(\$11,561)	\$4,126	
2034	105	\$148,799		S-020				(\$463,393)	(\$11,561)	
2035	106	\$150,216		S-021						
2036	108	\$153,050		S-037						
2037	109	\$154,467		S-027						
2038	111	\$157,302	\$763,834				\$1,227,227	\$508,439	\$2,927	
2039	113	\$160,136		S-020					(\$131,668)	
2040	114	\$161,553		S-021						
2041	116	\$164,387		S-037						
2042	117	\$165,804								
2043	119	\$168,639								
	4,098	\$5,807,402	\$820,519				\$165,106	\$655,413	(\$131,668)	\$0
	4,098	\$5,807,402					\$5,673,452	\$133,951	(\$133,951)	

Estimated New ERU's⁵ =

4,098⁴

Impact Fee per ERU (no bonding) = \$1,384
Impact Fee per ERU with Bond Interest = \$1,417

NOTES:

1. Project order in which development will occur in City is approximated and will change as development dictates.
2. 2040 projected Residential and Non-Residential ERU's minus Red Ledges because Red Ledges does not pay sewer impact fees.
3. S-020, S-021, and S-037 are divided by 4 to spread over 20 year window.
4. Must borrow sufficient funds to cover shortfall in fees collected. Must keep Fund Running Balance low to insure fees are spent in 6 years.

Assessing Sewer Impact Fees

Although sewer facilities are designed for an average yearly flow of 312 gpd/ERU which includes inflow and infiltration, impact fees are assessed using 140 gpd/ERU for non-residential connections since they are calculated at the ERU connection location prior to any inflow and infiltration. Single family and multi-family residential connections are assessed 1 ERU per unit regardless of size. This is because water meter records have not shown a consistent measurable difference in the indoor usage among various types of residential units.

Non-residential connections have significant variations from one to another and require a more detailed method to calculate the proper impact fee when a building permit is requested. The method used is based on the water fixtures proposed for the connection, and other available information, to estimate the impact on the sewer system. Non-residential connections are assumed to generate wastewater in quantities equal to their average metered water use. Sewer

fixtures are counted, weighted according to unit values from the International Plumbing Code, and multiplied by the flow per fixture unit to estimate the average flow that would be generated from the connection.

An example is given of how this method works. If a new retail property has two toilets that have a value of four fixture units each, and two sinks that have a value of two fixture units each, the property would be assigned a total of 12 fixture units. The average yearly flow for similar use properties would be determined from City or other meter records, for example 11 gpd per fixture unit. Multiplying the two values together results in an estimated flow for the new connection of 132 gpd. Dividing estimated flow by 140 gpd/ERU, which is the historical 3-year average yearly flow at the source, equates to 0.94 ERU's for the non-residential connection. Table 5-6 lists the unit values used for various types of fixtures per the International Plumbing Code, Table 709.1. The minimum ERU's allowed by Heber City for new non-residential properties is 1 ERU per connection, therefore the 0.94 ERU's, from the example above, would be rounded to 1.

Table 5-6. Fixture Type and Unit Value (IPC Table 709.1)

FIXTURE TYPE	UNIT VALUE
Automatic clothes washers – Commercial	3
Automatic clothes washers – Residential	2
Bathroom group - (≤ 1.6 gpf)	5
Bathroom group - (> 1.6 gpf)	6
Bathtub – w/wo shower or whirlpool	2
Bidet	1
Combination sink and tray	2
Dental lavatory	1
Dental unit or cuspidor	1
Dishwashing machine – Domestic	2
Drinking fountain	0.5
Emergency floor drain	0
Floor drain / Janitor Sink	2
Kitchen sink - Domestic	2
Kitchen sink - Domestic w/grinder or dishwasher	2
Laundry tray	2
Lavatory - (Restroom)	1
Shower	2
Sink	2
Urinal	4
Urinal - (≤ 1.0 gpf)	2
Wash sink - (circular or multiple) each set of faucets	2
Water closet - Flushometer tank, Public or Private	4
Water closet - (≤ 1.6 gpf) Private	3
Water closet - (> 1.6 gpf) Private	4
Water closet - (≤ 1.6 gpf) Pubic	4
Water closet - (> 1.6 gpf) Public	6

Chapter 6

Street System

6.1 Summary and Recommendations

Introduction

Heber City's future street plan contains six road classifications: Minor Local, Major Local, Minor Collector, Major Collector, Minor Arterial, and Principal Arterial. This Street System Master Plan designates each future street as one of these types. At a minimum, developers are required to provide Minor or Major Local streets within their developments consistent with this master plan. Traffic generated by the development itself may facilitate the need for streets larger than locals. Developers are required to provide the street classification necessary to accommodate the development.

Residents in the county and other areas outside of Heber City limits also impact the City's street system. Mountainland Association of Governments (MAG) traffic data for the Heber Valley has been incorporated into the study to help determine the City's future street system needs. Future planned development areas, MAG traffic information, and the City's most recent Transportation General Plan have all been used to determine the recommendations for future street improvements throughout Heber City.

The Heber City Design Criteria used in this study are summarized below:

- Road Width:

- Minor Local	ROW 56 feet	Asphalt 26 feet
- Major Local	ROW 62 feet	Asphalt 32 feet
- Minor Collector	ROW 68 feet	Asphalt 38 feet
- Major Collector	ROW $\geq$ 80 feet	Asphalt 50 feet
- Minor Arterial	ROW $\geq$ 90 feet	Asphalt $\geq$ 60* feet
- Principal Arterial	ROW per UDOT	Asphalt varies

- Trip Generation:

- Single Family	8.32 Average Trips/Unit
- Townhomes	7.20 Average Trips/Unit
- Multi-family	6.74 Average Trips/Unit
- Non-Residential	152 Average Trips/Unit

Projected Population

Heber City's population is expected to increase by approximately 61.8%, from 18,347 to 29,682 by the year 2043. This increase in population will generate more traffic on the city streets.

Street System Master Plan

Figure 6-1 shows the Street System Master Plan. The existing and future streets shown in the master plan reflect the major network of streets, transportation needs, and improvements for the fully developed City under the present 20-year zoning plan and existing City limit restraints. Future streets are those that should be constructed to meet the needs of the projected population and traffic growth. New future streets will generally be constructed by developers, and existing streets that need to be improved will be constructed by a combination of the City, UDOT, developers, and other potential stakeholders.

Development Standards

Heber City's streets mainly comprise five typical street classifications: Minor Local, Major Local, Minor Collector, Major Collector, and Minor Arterial. The Principal Arterial streets are generally owned and maintained by UDOT. The Master Plan designates each existing and future major street as one of these classifications as shown in Figure 6-1. A description of the widths and typical costs of the respective streets are shown in Table 6-1. Developers are required to construct Minor and/or Major Local streets depending on input from Heber City Planning and Engineering, unless the Street Master Plan recommends a larger street to be constructed. The developer may be reimbursed from impact fees for the upgraded street costs depending on the street classification needed for the development itself.

H:\Heber City\City Projects\2022 Heber City Master Plan Update\Project Data\Chap 6 Streets\Figures\Fig 6.1 Streets Future 2017.dwg - Layout1 - 1/19/2024 01:48pm, ChuckR

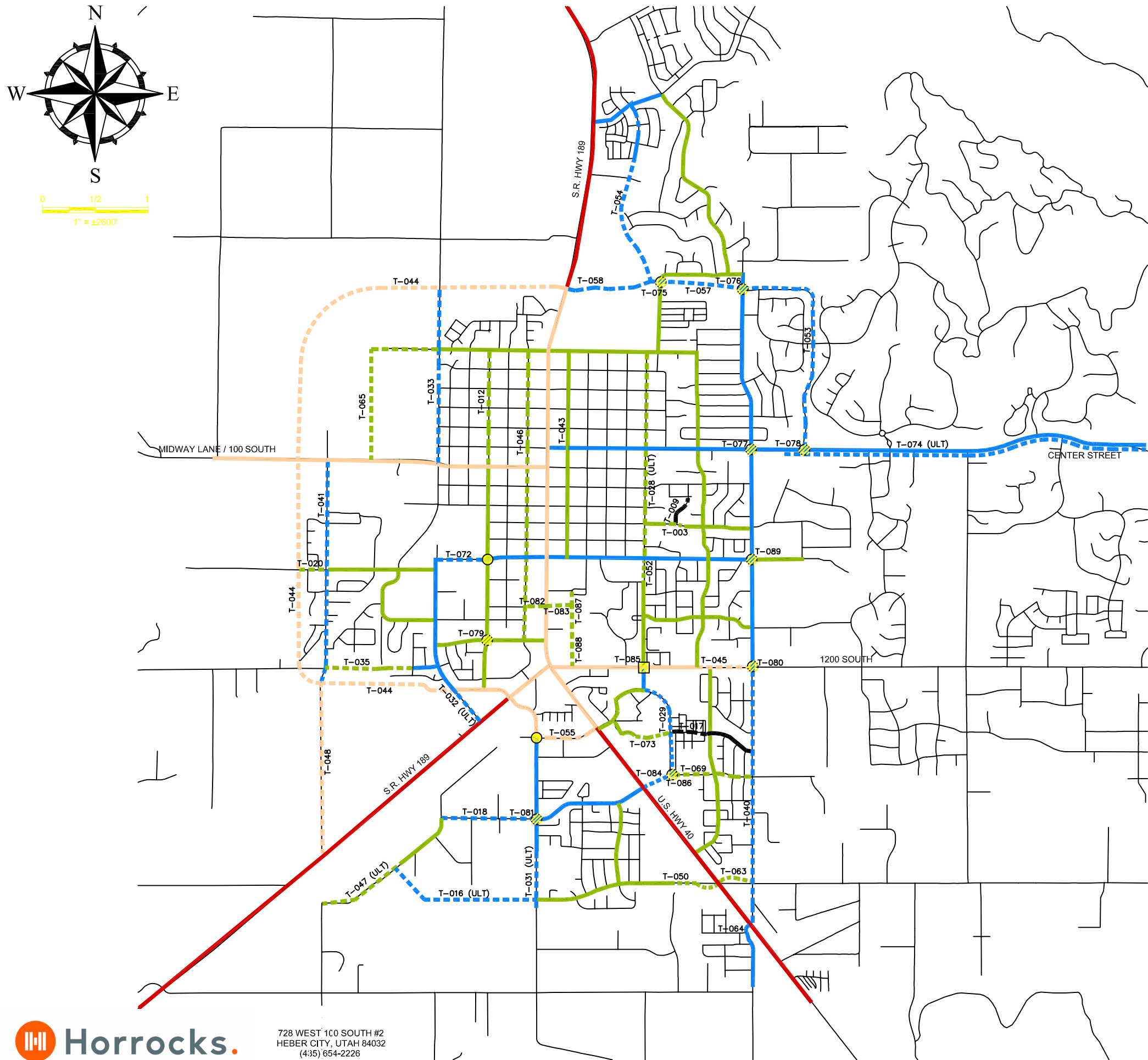
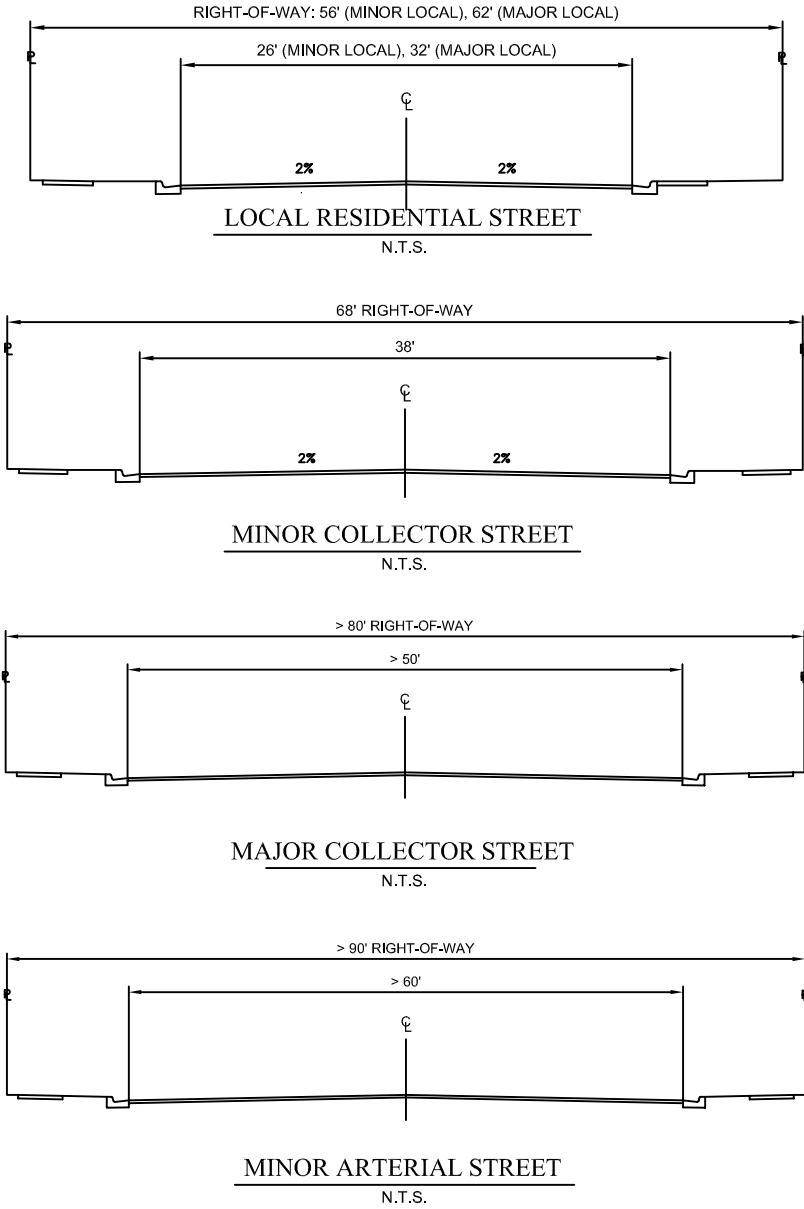


FIGURE 6-1
HEBER CITY
STREET SYSTEM
MASTER PLAN

- EXISTING LOCAL STREET
- EXISTING MINOR COLLECTOR
- EXISTING MAJOR COLLECTOR
- EXISTING MINOR ARTERIAL
- EXISTING PRINCIPAL ARTERIAL
- NEW OR UPGRADED LOCAL STREET
- NEW OR UPGRADED MINOR COLLECTOR
- NEW OR UPGRADED MAJOR COLLECTOR
- NEW OR UPGRADED MINOR ARTERIAL
- NEW OR UPGRADED PRINCIPAL ARTERIAL
- EXISTING ROUNDABOUT
- FUTURE ROUNDABOUT
- FUTURE SIGNAL



728 WEST 100 SOUTH #2
HEBER CITY, UTAH 84032
(435) 654-2226

Table 6-1 Heber City's Portion of Cost and Street Size Requirements

Classification	Right-of-Way Width (ft)	Paved Width (ft)	Cost Increase from Major Local (\$/LF)
Minor Local	56	26	N/A
Major Local	62	32	N/A
Minor Collector	68	38	\$102.80
Major Collector	80	>50	\$308.39
Minor Arterial	90	>60	\$479.72

* See Current Heber City Standard Drawing Cross Section. If pavement width varies cost per LF is \$14.60.

Upkeep and Maintenance

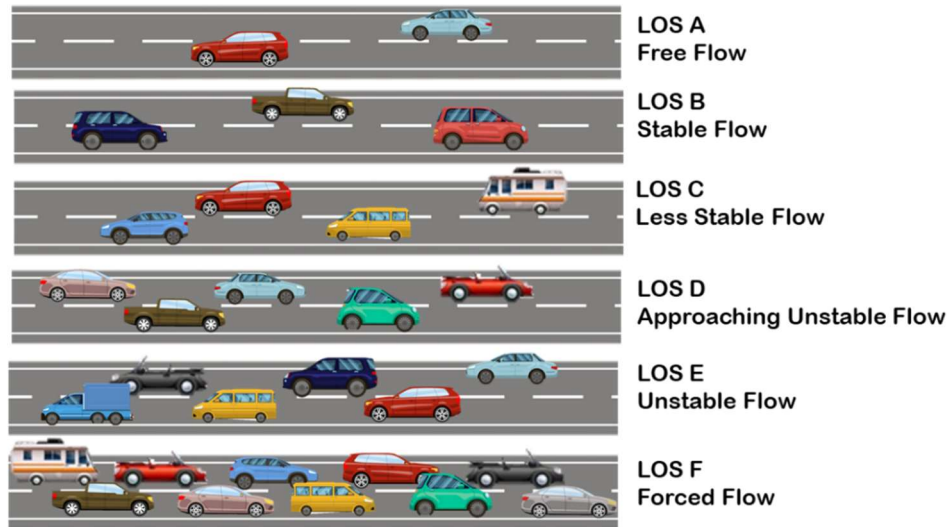
Not only do the road widths and classification need to be appropriate for the traffic conditions, but acceptable street conditions need to be maintained. It is recommended that Heber City do preventive maintenance to keep ahead of any road deterioration, and quickly give attention to streets that need to be repaired or replaced. The street's life can be increased by doing asphalt pavement spot repairs with FOG seals, slurry seals, or chip seals every 5-6 years, while also crack sealing at 2 to 3 year intervals, or as needed. 2-inch asphalt overlays with asphalt spot repairs are anticipated every 10 to 15 years. Asphalt spot repairs include replacing failed sections of the asphalt and possibly the base and subbase materials depending on the depth of the failure. Milling the asphalt should also be considered prior to placing a 2-inch overlay depending on the thickness of the existing asphalt. It is anticipated that all asphalt and some of the sub-base material will need to be replaced every 15 to 20 years, depending on the road classification, change in loading conditions, and increases in truck or heavy equipment traffic. Based on the road conditions found, a decision should be made as to the type of improvement needed, i.e. chip seal, slurry seal, FOG seal, 2-inch overlay, asphalt spot repair, reconstruction, etc. The original design of the street will be a factor in the street's life. Heber City should continue to research, discover, and implement new materials and methods for road maintenance and upkeep.

Level of Service

Street systems offer a wide range of choices in terms of services provided. The characteristics of streets are often evaluated in terms of travel time, frequency, comfort, reliability, convenience, and safety. The term Level-Of-Service (LOS) is used to describe the relative value of these attributes.

The current LOS on Heber City streets is the following: Minor and Major Locals operate at a LOS of A, Minor and Major Collectors operate at a LOS of C or better depending on the time of day. At LOS C, stable operation is provided, but flows approach the range at which an increase in volume immediately results in a deterioration of service. Table 6-2 describes in more specific terms the LOS A through F.

Figure 6-2 Level of Service



Recommended Street System Improvements

Capital improvements recommended to meet the projected population are shown in Figure 6-1. These recommendations were determined by projecting the future areas of development, reviewing the adopted Heber City Transportation General Plan, comparing MAG's traffic count data, and incorporating input from City Officials. A detailed listing of the recommended improvements is given in the following paragraphs.

Local Street Improvements

T-009 600 East: 600 East should be constructed as a Local street between 200 South and 400 South.

T-017 1600 South: 1600 South should be constructed as Local street between approximately 600 East and Sawmill Boulevard.

Minor Collector Street Improvements

T-003 400 South: 400 South should be constructed as a Minor Collector between 600 East and 700 East. This project also includes a bridge across the Wasatch Canal.

T-012 300 West: 300 West should be improved as a Minor Collector between 500 North and 100 South. This project includes sidewalk on one side of the road. The sidewalk is included in the impact fees costs because once the road is widened for future growth, the walking area on the shoulder will be removed. The walking area needs to be replaced with sidewalk.

(Ultimate) T-016 2400 South: 2400 South should be constructed as a Minor Collector between Daniels Road and South Airport Road.

T-018 Airport Road: Airport Road should be improved to a Minor Collector between Daniels Road and Hangers.

T-020 650 South: 650 South should be improved to a Minor Collector between 1200 West and the West Bypass.

(Ultimate) T-028 500 East: 500 East should be improved to a Minor Collector between 500 North and 600 South. This project includes installing sidewalk on one side of the street. This quantity will fill in the gaps of sidewalk that are missing on this street. The sidewalk is included in the impact fees costs because once the road is widened for future growth, the existing walking area on the shoulder will be replaced with sidewalk.

T-035 1200 South: 1200 South should be constructed as a Minor Collector between 700 West and Southfield Road.

T-043 100 East: 100 East should be improved to a Minor Collector between 500 North and 600 South.

T-046 100 West: 100 West should be improved to a Minor Collector between 500 North and 1000 South.

(Ultimate) T-047 South Airport Road: South Airport Road should be improved to be a Minor Collector between 670 West and 1200 West.

T-050 2400 South: 2400 South should be constructed as a Minor Collector between approximately 700 East and US 40.

T-052 500 East: 500 East should be constructed as a Minor Collector between 600 South and 720 South.

T-065 500 North to Midway Lane: A Minor Collector should be construction between 500 North and Midway Lane on the northwest side of town.

T-069 1900 South: 1900 South should be constructed as a Minor Collector between Mill Road and approximately 600 East.

T-073 Providence Drive: Providence Drive should be constructed as a Minor Collector between approximately 1600 South and approximately 600 East.

T-082 850 South: 850 South should be constructed as Minor Collector between 100 West and Main Street.

T-083 850 South: 850 South should be constructed as Minor Collector between Main Street and 120 East

T-087 120 East: 120 East should be constructed as a Minor Collector between 800 South and 1000 South.

T-088 120 East: 120 East should be constructed as a Minor Collector between 1000 South and 1200 South.

Major Collector Street Improvements

T-029 600 East: 600 East should be constructed as a Major Collector between 1300 South and Hidden Creek Lane.

(Ultimate) T-032 Industrial Parkway: Industrial Parkway should be improved to a Major Collector between 910 South and Highway 189. This project may be adjusted once recommendations are available from UDOT's Bypass Environmental Study.

T-033 600 West: 600 West should be constructed as a Major Collector between the West Bypass and 100 South.

T-040 1200 East: 1200 East should be improved to a Major Collector between 1200 South and US 40 where not already completed by developers.

T-041 Southfield Road: Southfield Road should be improved to a Major Collector between 100 South and 1200 South. Project includes widening railroad crossing and installation of crossing arms at approximately 1000 South.

T-053 East Bypass- Center Street to 1050 E (Red Ledges): The East Bypass road should be constructed as a Major Collector between Center Street and 1050 East. A small portion of this road just east of 1050 East has already been constructed.

T-054 Ostler Peak Road: Ostler Peak Road should be constructed as a Major Collector between Coyote Canyon Parkway and 900 North. A portion of this road just north of 1800 North has been constructed.

T-057 East Bypass – 1050 E to 550 E: The East Bypass road should be constructed as a Major Collector at approximately 900 North between 1050 East and 550 East along the east side of the City Cemetery.

T-058 East Bypass – Main St 550 E: The East Bypass road should be constructed as a Major Collector at approximately 900 North between 550 East and Main Street.

T-072 600 South: 600 South should be restriped as a 3-lane roadway without parking between 300 West and to the west to 650 South.

T-084 Airport Road: Airport Road should be constructed to the east of US 40 as a Major Collector.

Minor Arterial Street Improvements

T-044 West Bypass: A Minor Arterial should be constructed between 900 North and 1300 South along the west edge of Heber City. This will be a UDOT project.

T-045 1200 South: 1200 South should be improved to a Minor Arterial between 820 East and 1200 East.

T-048 Southfield Road: Southfield Road should be improved to a Minor Arterial between 1200 South and SR 189. The street should be coordinated with the alignment of the West Bypass alignment to ensure access to Southfield Road. This will be a UDOT project.

T-055 South Bypass: A Minor Arterial should be constructed between Daniel Road and US 40.

Intersection Improvements

T-063 Intersection Alignment US 40 and 2400 South: Intersection at US 40 and 2400 South needs to be aligned perpendicular to US 40 and improved to a Major Collector. This project includes any improvements needed to widen 2400 South to Mill Road.

T-064 Intersection Alignment US 40 and Mill Road: Intersection at US 40 and Mill Road needs to be aligned perpendicular to US 40 and improved to a Major Collector.

T-075 Roundabout 900 North & 550 East: Install a roundabout at the intersection of 900 North and 550 East when it meets warrants for an All-Way Stop control.

T-076 Roundabout 900 North & Mill Road: Install a roundabout at the intersection of 900 North and Mill Road when it meets warrants for an All-Way Stop control.

T-077 Traffic Signal or Roundabout at Mill Road & Center Street: Install a traffic signal or a roundabout at the intersection of 1400 East and Center Street when it meets warrants for a traffic signal.

T-078 Roundabout 1400 East & Center Street: Install a roundabout at the intersection of 1400 East and Center Street when it meets warrants for an All-Way Stop control.

T-079 Roundabout 300 West & 1000 South: Install a roundabout at the intersection of 300 West and 1000 South when it meets warrants for an All-Way Stop control.

T-080 Traffic Signal or Roundabout at 1200 South & Mill Road: Install a traffic signal at the intersection of Mill Road and 1200 South when it meets warrants for a traffic signal.

T-081 Roundabout Airport Road & Daniel Road: Install a roundabout at the intersection

of Airport Road and Daniel Road when it meets warrants for an All-Way Stop.

T-085 Traffic Signal at 1200 South & 500 East: Install a traffic signal at the intersection of 1200 South and 500 East when it meets warrants for a traffic signal.

T-086 Roundabout Airport Road & 600 East: Install a roundabout at the intersection of Airport Road, 600 East, and Hidden Creek Lane when it meets warrants for an All-Way Stop.

T-089 Traffic Signal or Roundabout at 600 South & Mill Road: Install a traffic signal or roundabout at the intersection of Mill Road and 600 South when it meets warrants for a traffic signal.

Other Improvements

(Ultimate) T-031 Daniels Road: Daniels Road should be improved to a Major Collector between 2300 South and the City limit at approximately 2500 South. This road is currently in the Daniel City boundary and not within Heber City. If the road comes into the City in the future, this project includes road widening and installing sidewalk on one side of the street.

T-042 Annual Master Plan Update.: Every five years an annual master plan update should be performed to update the city infrastructure maps. All new development should be included in the update process.

(Ultimate) T-059 Downtown Angled Parking: Streets in the downtown area between 100 West and 100 East, 400 North to 500 South, should be improved to a 54-foot asphalt width to accommodate angled parking per the City's adopted Transportation General Plan.

T-067 Heber City Public Works Facility Expansion Ph.1: The Heber City Public Works Department Building was expanded in 2018 to accommodate growth and maintain the same level of service on the City's street system. Impact fees were used to pay for the streets portion of this expansion which was debt funded with payments continuing through the master plan 20-year window. See Appendix A for the construction cost allocation.

T-068 Heber City Public Works Facility Expansion Ph.2: The Heber City Public Works Department Building and Maintenance Site will be expanding to maintain the current level of service that the Public Works department currently provides in maintaining the City's street system. Phase 2 is anticipated in 2028. Impact fees will pay for all of this phase since it is only needed for future growth.

T-070 Downtown Angled Parking (partial): Streets in the downtown area between 100 West and 100 East, 400 North to 500 South, should be improved to a 54-foot asphalt width to accommodate angled parking per the City's adopted Transportation General

Plan. This project assumes a portion of the parking will be needed in the next 20 years.

(Ultimate) T-074 Center Street east of East Bypass: The Center Street Road to the east of the East Bypass road can only be expanded with coordination of the county as the roadway is on the City boundary. The ultimate build of this roadway could be a Major Collector with 5-lanes.

Feasibility Recommendations

The existing street impact fees (January 2024) are \$229 per trip generated. City subsidies reduce this to \$126 for Non-Residential. This equates to \$2,153 per Single-Family Residential unit, and \$1,252 per Multi-Family Residential unit. The new estimated street impact fee will increase to \$504 per trip generated. If City subsidies remain at 45%, the fee would reduce to \$277 for Non-Residential. The Single-Family Residential fee will increase to \$3,626 and the Multi-Family residential fee will increase to \$2,371. These funds will generate sufficient revenue to fund the recommended capital improvements.

The City Council has requested that the Non-Residential per trip impact fee continue to be subsidized at 45% to reduce the burden on businesses that generate revenue for the City. This will require that the City general fund or another source be identified to make up the difference described later in this chapter.

To keep abreast of increasing inflation and construction costs, the street impact fees should be analyzed annually to make sure funding is available for improvements and capital expenditures.

6.2 Future Conditions

Introduction

A variety of factors will affect the traffic and the street improvements needed to meet the future growth in Heber City. Some of the sources of data used to determine the future traffic conditions and the proposed street improvements are:

- Population growth rates
- Mountain Land Association of Governments (MAG) Traffic and Transit Counts
- Utah Department of Transportation (UDOT) Corridor Preservation Study
- Utah Department of Transportation (UDOT) Road Classification Map
- Various Traffic Studies
- Projected Residential and Non-Residential development
- Heber City Transportation Plan

As these factors change, the timing of improvements recommended in this study could be affected. To help minimize this effect, the recommendations made in this study will be based upon the number of people served by Heber City's street system rather than time periods and/or external factors beyond the City's control.

Projected populations were used to determine where the new streets should be constructed based on the potential areas of development. Existing traffic patterns and Average Daily Traffic counts (ADT) were used to help project future traffic patterns and potential areas in need of road improvements. MAG's future traffic models of the Heber Valley were compared with Heber City's adopted General Transportation Plan and UDOT's Road Classification Map for Heber City. Each road within Heber City was checked to confirm future road classifications and needed road widths to accommodate the projected growth.

Projected Population

The projected population for Heber City from 2023 to 2043 is discussed in Chapter 3, Projected Population. The 2023 population is estimated to be 18,347. The 2043 Heber City population is projected to be 29,682.

6.3 Street System Analysis and Level of Service

Street Impact Fees Administration

An impact fee is a one-time fee with the purpose of raising revenue for new or expanded public facilities required to serve new development and maintain the existing level of service. Impact fees cannot be used to correct existing roadway deficiencies or for routine maintenance activities. The premise behind impact fees is based on the critical assumption that if no new development were allowed, the existing street system would adequately serve the existing level of development in the City. Therefore, the recommended roadway improvements, outlined in the Street System Master Plan Update, are used in the development of the impact fees. These improvements are growth related and are needed to accommodate the projected growth to maintain a minimum level of service "C".

Trip Generation Rates

Each area associated with a land use in the Heber City General Plan will generate traffic trips as the land is developed. The residential land uses allow for a variety of housing types. Each housing type was found in the *Institute of Transportation Engineers (ITE) Trip Generation Manual 11th Edition*, and the number of trips associated with each type was determined. Six categories were chosen, Single Family Detached Housing, Single Family Attached Housing, Multifamily Housing (Low-Rise), Multifamily Housing (Mid-Rise), Senior Housing Single Family, and Senior Housing Multifamily to reflect most of the housing in Heber City. These housing types and respective trips they generate were used to determine a proportionate share of improvement costs needed for each type. The multifamily and high-density housing were averaged together to simplify the impact fee calculation and distribution of impact fees. This is discussed further in the next section. The trip generation rates for residential land uses are summarized in Table 6-3 below. See Appendix D for ITE Trip Generation information.

Table 6-3 Residential Trip Rates

Dwelling Unit Type	Trips Generated per Day
Single Family Detached Housing (210)	9.43
Single Family Attached Housing (215)	7.20
Multifamily Housing (Low-Rise) (220)	6.74
Multifamily Housing (Mid-Rise) (221)	4.54
Senior Adult Housing – Single-Family (251)	4.31
Senior Adult Housing – Multifamily (252)	3.24

Because of the wide range of different types of Commercial and Industrial development that occur in Heber City, non-residential impact fees are determined on an individual basis. The fee is based on the amount of new trips generated by the individual business. For this study an average of 152 new trips per day per business was used based the average number of trips prior businesses have generated in the City. Each departure or arrival from a business or residence is counted as a trip, i.e., one car equals two trips.

Table 6-4 shows the improvement costs over the next 20 years. The distribution of costs between operating funds, corridor preservation funds and/or UDOT, developer contributions, and impact fees are shown in the table as well. The projects listed in Figure 6-1 may be built in any order.

Table 6-4 Heber City's Estimated Cost of Street Improvements

ULT CIP #		Recommended		Total Cost		Funding Proportionate Share Analysis							
		Improvements		Operating		Developer		Other ¹		Impact Fee			
		ROW		%	\$	%	\$	%	\$	%	\$		
ULT	T-003	400 South - 600 East to 700 East & Bridge	68	\$722,290	0%	\$0	0%	\$0	0%	\$0	100%	\$722,290	
	T-009	600 East - 200 South to 400 South	62	\$548,976	0%	\$0	100%	\$548,976	0%	\$0	0%	\$0	
	T-012	300 West - 500 North to 100 South	68	\$478,440	44%	\$210,240	0%	\$0	0%	\$0	56%	\$268,200	
	T-016	2400 South - Daniel Rd to South Airport Rd	68	\$0	0%	\$0	91%	\$0	0%	\$0	0%	\$0	
	T-017	1600 South - 600 East to Sawmill Blvd	62	\$609,973	0%	\$0	100%	\$609,973	0%	\$0	0%	\$0	
	T-018	Airport Road - Daniel Rd to Hangers	68	\$1,243,693	8%	\$99,495	38%	\$472,603	0%	\$0	54%	\$671,594	
	T-020	650 South - 1200 West to West Bypass	68	\$725,231	5%	\$36,262	0%	\$0	0%	\$0	95%	\$688,970	
ULT	T-028	500 East - 500 North to 600 South	68	\$0	13%	\$0	0%	\$0	0%	\$0	0%	\$0	
	T-029	600 East - 1300 South to Hidden Cr Ln	80	\$3,523,529	0%	\$0	78%	\$2,748,353	0%	\$0	22%	\$775,176	
ULT	T-031	Daniels Rd - 2100 South to 2500 South	80	\$0	11%	\$0	35%	\$0	0%	\$0	0%	\$0	
ULT	T-032	Industrial Pkwy - West Bypass to SR189	68	\$0	12%	\$0	31%	\$0	0%	\$0	0%	\$0	
	T-033	600 West - West Bypass to 100 South	80	\$2,614,531	10%	\$261,453	0%	\$0	0%	\$0	90%	\$2,353,078	
	T-035	1200 South - 700 West to Southfield Rd	68	\$2,648,397	0%	\$0	78%	\$2,065,750	0%	\$0	22%	\$582,647	
	T-040	1200 East - 1200 South to US40 *	80	\$3,952,199	9%	\$355,698	31%	\$1,225,182	0%	\$0	60%	\$2,371,319	
	T-041	Southfield Rd - 100 South to 1200 South & RR	80	\$3,926,577	29%	\$1,138,707	31%	\$1,217,239	0%	\$0	40%	\$1,570,631	
	T-042	Master plan Update (4 times)		\$240,000	0%	\$0	0%	\$0	0%	\$0	100%	\$240,000	
	T-043	100 East - 500 North to 600 South Historic	82	\$2,730,601	100%	\$2,730,601	0%	\$0	0%	\$0	0%	\$0	
	T-044	West Bypass - 900 North to 1300 South UDOT	104	\$0	0%	\$0	0%	\$0	0%	\$0	100%	\$0	
	T-045	1200 South - 820 East to 1200 East	90	\$980,222	9%	\$88,220	53%	\$519,517	0%	\$0	38%	\$372,484	
	T-046	100 West - 500 North to 1000 South Historic	82	\$3,780,832	11%	\$415,892	31%	\$1,172,058	0%	\$0	58%	\$2,192,883	
	ULT	T-047	South Airport Rd - 670 West to 1200 West	68	\$0	12%	\$0	38%	\$0	0%	\$0	0%	\$0
		T-048	Southfield Rd - 1200 South to SR189 UDOT	104	\$0	0%	\$0	0%	\$0	0%	\$0	100%	\$0
	T-050	2400 South - 700 East to US40	68	\$1,444,580	0%	\$0	36%	\$520,049	0%	\$0	64%	\$924,531	
	T-052	500 East - 600 South to 720 South	68	\$601,908	0%	\$0	0%	\$0	0%	\$0	100%	\$601,908	
	T-053	East Bypass - Center St to 1050 East	80	\$4,383,286	0%	\$0	100%	\$4,383,286	0%	\$0	0%	\$0	
	T-054	Ostler Peak Rd - 1800 North to 900 North	80	\$6,088,658	0%	\$0	78%	\$4,749,153	0%	\$0	22%	\$1,339,505	
	T-055	South Bypass - Daniel Rd to US40	80	\$2,225,578	0%	\$0	0%	\$0	67%	\$1,500,039	33%	\$725,538	
	T-057	East Bypass - 1050 East to 550 East Cemetery	80	\$1,551,606	0%	\$0	0%	\$0	97%	\$1,500,403	3%	\$51,203	
	T-058	East Bypass - 550 East to Main St	80	\$3,241,647	0%	\$0	78%	\$2,528,484	0%	\$0	22%	\$713,162	
	ULT	T-059	Downtown Angle Parking - 400 North to 500 South	84	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
		T-063	Intersection Alignment US40 & 2400 South	80	\$1,117,475	4%	\$44,699	31%	\$346,417	0%	\$0	65%	\$726,359
	T-064	Intersection Alignment US40 & Mill Rd	80	\$869,148	4%	\$34,766	31%	\$269,436	0%	\$0	65%	\$564,946	
	T-065	500 North to Midway Ln	68	\$4,710,588	0%	\$0	91%	\$4,286,635	0%	\$0	9%	\$423,953	
	T-067	Heber City Public Works Facility Exp Ph1		\$486,246	0%	\$0	0%	\$0	0%	\$0	100%	\$486,246	
	T-068	Heber City Public Works Facility Exp Ph2		\$1,696,673	0%	\$0	0%	\$0	100%	\$1,696,673	0%	\$0	
	T-069	1900 South - Mill Rd to 600 East	68	\$2,093,595	0%	\$0	91%	\$1,905,171	0%	\$0	9%	\$188,424	
	T-070	Downtown Angle Parking - 400 North to 500 South	84	\$554,696	0%	\$0	0%	\$0	0%	\$0	100%	\$554,696	
	T-072	600 South - 300 West to 650 South Restripe		\$27,600	0%	\$0	0%	\$0	0%	\$0	100%	\$27,600	
	T-073	Providence Dr - 1500 South to 600 East	68	\$1,564,962	0%	\$0	91%	\$1,424,115	0%	\$0	9%	\$140,847	
		ULT	T-074	Center St Widening - 1400 East to the East	80	\$0	0%	\$0	0%	\$0	0%	\$0	0%
T-075			Roundabout at 900 North & 550 East		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
T-076		Roundabout at 900 North & Mill Rd		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000	
T-077		Roundabout at Mill Rd & Center St		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000	
T-078		Roundabout at 1400 East & Center St		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000	
T-079		Roundabout at 300 West & 1000 South		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000	
T-080		Roundabout at Mill Rd & 1200 South		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000	
T-081		Roundabout at Airport Rd & Daniel Rd		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000	
T-082		850 South - 100 West to Main St	66	\$1,403,461	3%	\$42,104	0%	\$0	41%	\$581,033	56%	\$780,325	
T-083		850 South - Main St to 120 East	66	\$2,222,147	3%	\$66,664	0%	\$0	97%	\$2,155,483	0%	\$0	
T-084		Airport Rd - US40 to 600 East	80	\$1,127,529	8%	\$90,202	0%	\$0	0%	\$0	92%	\$1,037,327	
T-085		Traffic Signal at 1200 South & 500 East		\$345,000	0%	\$0	0%	\$0	0%	\$0	100%	\$345,000	
T-086		Roundabout at Airport Rd & 600 East		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000	
T-087		120 East - 790 South to 1000 South	66	\$1,403,461	3%	\$42,104	46%	\$645,592	0%	\$0	51%	\$715,765	
T-088	120 East - 1000 South to 1200 South	66	\$1,052,596	3%	\$31,578	0%	\$0	0%	\$0	97%	\$1,021,018		
T-089	Roundabout at Mill Rd & 600 South	0	\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000		
TOTAL EXPENDITURES				\$73,905,932		\$5,688,685		\$31,637,989		\$7,433,631		\$29,145,627	

NOTES:

1. "Other" includes grants, special assessments, and previously collected impact fees.
2. A total of \$4,500,000 listed in the "Other" column is funded by the existing impact fee account as of April 17, 2023. Applied to T-082, T-083, T-068
3. For projects T-055 and T-057 a \$1.5M grant is included in "other" for each project.
4. The aerial digital map and Master Plan update needs to be done four times in the next 20 years. Total cost is divided by four in the Impact Fee Expenditure Plan Improvement Costs.
5. Assumed 5.0 % interest rate on bonds with payoff by 2043
6. Projects with * have been partially completed with previous CIP projects.

6.4 Economic Feasibility Analysis

Impact Fee Fund

The impact fee amount was calculated by taking the total cost of improvements associated with impact fees, plus the necessary bond interest payments, divided by the projected new trips, based on the future zoning and population increases for 20 years. The impact fees for all 20 years are the same and are shown in 2023 equivalent dollars. Bonding becomes necessary when projects are grouped into five-year windows because there are insufficient impact fees collected during the early years to cover the projected improvement costs.

By considering the full 20-year window to determine the projected impact fees, and then grouping the projects into five-year increments, the impact fees are distributed evenly to all developments in the 20-year plan. Development within the 20-year planning window will all pay equally for future projects; therefore, earlier developments only pay their fair share of facilities that also benefit later developments. These numbers in this report exclude the North Village area of Heber City which are covered by a separate master plan.

Using the trip rates shown in Table 6-3, the total number of projected trips were calculated and presented in Table 6-5 with additional detail in the Appendix D. The average trip rate for Residential was calculated using a weighted proportion of Single Family Detached and Attached Housing trips per day, and Multi-Family Average trips per day. Approximately 45.7% of the future proposed residential development will be multi-family development, therefore the weighted average residential trip rate is 6.67 trips per unit.

Table 6-5 Projected Trip Ends in Year 2043

Category	Est 2023 Units	New 2023 to 2043 Units	Total 2043 Units	Trip Rate	Total Trips
Residential	5223	3,227	8,450	6.67	56,329
Non-Residential	475	293	768	152	116,691
Total Trips					173,020

Developer Contributions

The City has a policy that developers are responsible for 100% of the cost of on-site improvements needed to serve their development. Streets are required to be extended either through or along the front of a development to the farthest property line to facilitate extension by future adjacent property owners. Developers are also responsible for extending off-site, full width street improvements needed to serve their development. Reimbursement for a portion of these costs may be available through reimbursement agreements for the purpose of collecting funds from future adjacent property owners that front the street. The City also reimburses developers the cost to upgrade streets from a major local to a minor collector, major collector, or minor arterial if they are identified in this Master Plan and impact fee funds are available.

Currently the street impact fee charged to new development is \$2,153 per unit for Single-Family, \$1,252 per unit for Multi-Family, and \$126 per trip for Non-Residential. To continue funding the street improvements necessary to provide safe roads and access to property for future growth, it

is recommended that Heber City assess street impact fee of \$4,070 per unit for Single Family, \$2,304 per unit for Multi-Family, and \$490 per trip generated for Non-Residential. The revenue collected will generate the funds required to construct the necessary improvements to accommodate the growth in Table 6-5, and to maintain the minimum level of service.

The impact fees are based on the estimated total cost for improvements, with bond interest added, of \$32,331,526 (\$29,145,627 + \$3,185,900) over the next 20 years; and the projected number of new trips added by growth of 66,048 trips as shown in Table 6-6.

Table 6-6 Projected Impact Fee Revenue and Expenditure Plan.

Impact Fee Expenditure Plan									Collected vs Cost	Bond Loan Plus Payments	Fund Running Balance
Year	Trips	Impact Fee Collected (\$)	Available Funds (\$)	Improvement Projects ^{1,2}					Improvement Costs (\$)		
2024	4,700	\$2,300,723		T-042	T-040	T-058	T-076	T-087			
2025	4,765	\$2,332,542		T-067	T-041	T-063	T-078	T-088			
2026	4,985	\$2,440,235		T-020	T-045	T-064	T-080	T-089			
2027	5,208	\$2,549,397		T-029	T-055	T-065	T-083				
2028	5,434	\$2,660,028	\$12,282,925	T-033	T-057	T-075	T-085		\$16,360,165	(\$4,077,240)	\$11,248
2029	5,664	\$2,772,616		T-042	T-050	T-073					
2030	6,048	\$2,960,590		T-067	T-068	T-077					
2031	6,284	\$3,076,116		T-003	T-069	T-081					
2032	1,798	\$880,149		T-035	T-070	T-084					
2033	1,805	\$883,576	\$10,573,047	T-046	T-072	T-086			\$8,208,806	\$2,364,241	\$22,968
2034	1,812	\$887,002		T-042	T-054						
2035	1,819	\$890,429		T-067	T-079						
2036	1,826	\$893,855		T-012							
2037	1,833	\$897,282		T-018							
2038	1,992	\$975,115	\$4,543,684	T-052					\$3,614,769	\$928,914	(\$639)
2039	2,000	\$979,031		T-042							
2040	2,007	\$982,458		T-067							
2041	2,015	\$986,374		T-082							
2042	2,023	\$990,290									
2043	2,030	\$993,717	\$4,931,870						\$961,886	\$3,969,984	\$0
66,048		\$32,331,526							\$29,145,627	\$3,185,900	(\$3,185,900)

NOTES:

1. Project order in which development will occur in City is approximated and will change as development dictates.

2. T-042, T-067 are divided by 4 to spread over 20 year window.

3. Must borrow sufficient funds to cover shortfall in fees collected. Must keep Fund Running Balance low to insure fees are spent in 6 years.

Estimated Total Trips = 66,048	Impact Fee per Trip (No Bonding) = \$441
Estimated Total Non-Res Trips = 44,536	Non-Residential Impact Fee per Trip (w/Bond Interest) = \$490
Estimated Total Residential Trips = 21,512	Single Family Impact Fee per ERU (w/Bond Interest) = \$4,070
Average Trips per Single-Family Unit = 8.32	Multi-Family Impact Fee per ERU (w/Bond Interest) = \$2,304
Average Trips per Multi-Family Unit = 4.71	
	Non-Residential Impact Fee per Trip Subsidized @ 45% = \$269
	Total Amount Needed to Fund Subsidy = \$9,810,480
	Annual Amount Needed to Fund Subsidy = \$490,524

The City Council has historically had a policy of subsidizing 45% of the Non-Residential trip impact fee to reduce the burden on businesses generating revenue for the City. Continuing this policy will reduce the Non-Residential street impact fee to \$269 per trip and will require the City general fund or another source be identified to make up the difference. It is estimated that over the next 20 years, new business will generate an additional 44,536 trips. To keep the Non-Residential impact fee at \$269 per trip, the City will need to provide approximately \$9,810,480 (44,536 trips @ 45% of \$490 per trip) from other sources or approximately \$490,524

(\$9,810,480 / 20 yr) per year. This Non-Residential subsidy is only applicable to businesses generating property tax revenue for Heber City. All others pay the full streets impact fee.

Road Fund Sources

Class B and C road funds are part of a funding program established by the Utah Legislature in 1937 as a means of aiding counties and incorporated municipalities for the improvement of roads and streets throughout the State. 30% of state highway user taxes and fees are allocated to the class B and class C road account. This is a restricted account to be used for the construction and maintenance of county roads and municipal streets that have been documented as eligible for funding according to regulations governing this fund. Class B and C road funds are distributed bi-monthly using the formula prescribed in Utah Code 72-2-108(2-5). The UDOT small urban fund is another source that dedicates funds to small urban communities who demonstrate a qualified need for transportation improvements.

Chapter 7

Storm Drain System

7.1 Summary and Recommendations

Introduction

Population growth in Heber City has increased storm water runoff into the existing storm drain system throughout the City. The amount of precipitation runoff that is produced from a given area is related to the amount of water that infiltrates into the soil and/or is retained by vegetation. When soil and vegetation conditions are altered to cause less infiltration and retention, a larger amount of runoff results. Constructing impervious surfaces such as roads, sidewalks, driveways, and homes in previously open areas increase the volume of water, rate of runoff, and concentration of pollutants in the runoff. These issues can change the hydrology and water quality, and result in a variety of problems, including habitat modification, increased flooding, decreased aquatic wildlife diversity, and increased sedimentation and erosion.

This chapter evaluates the storm drain requirements for the ultimate 2043 boundary area. Calculations and recommendations are based on the most recent City zoning and annexation plan. Recommendations are made to ensure that the system remains adequate to meet the projected increases in storm water flow and water quality requirements. As development occurs, storm drain systems will continue to be required, with historic discharge allowed where feasible and full retention when necessary. Recommended City improvements include improving the existing ditch system, providing a first flush detention pond system, adding hydrodynamic separators at strategic locations, annual maintenance and cleaning of existing storm drain facilities, and implementing a storm water management program.

The design criteria in this document are for use on public and private projects within the City. There are other adopted documents that also reference requirements related to City storm drain systems within the City. These documents include the Heber City Standard Specifications and Drawings, the Heber City Municipal Code. Also the newly adopted Storm Water Design Manual that provides design guidelines and requirements for new developments within the City.

The Heber City Design criteria used in this study are summarized below:

- | | | |
|---------------------------|---|--------------------------|
| • Peak Flow | - Rational Method (< 100 ac) | Q=CIA |
| | - “C” per improvements and soil | 0.10-0.95 |
| | - “I” | 100-yr storm |
| | - SCS Method (>100 ac) | |
| • Allowable Release Rate: | - Discharge feasible | 0.10 cfs/ac |
| • Basin Capacity: | - Detention w/0.10 cfs release rate | 24-hr / 25-yr storm |
| | - Retention w/0.0 cfs release rate | 24-hr / 100-yr storm |
| | - 80 th Percentile storm retention | |
| • Pipe Capacity: | - Peak Flow @ 100% Full | 10-yr storm @ $\leq T_c$ |
| • Pipe Sizes (Mains): | - Minimum | 18 inches |

- Velocities: - Minimum 2 fps
- First Flush - Minimum 2-yr storm
- Pre-treatment - Minimum 2-yr storm

Note: See Heber City Storm Water Design Manual for more detailed information.

Projected Population

Heber City's population is expected to increase by approximately 61.8%, from 18,347 to 29,682 by the year 2043, excluding the North Village and Jordanelle Ridge areas. This is based on an analysis of recorded lots, unrecorded lots that have received approval, and potential future developments. At this growth rate, it is projected that an additional 4,478 (11,727-7,249) ERU's from Residential and Non-Residential development will be added. Of these, 380 ERU's have been deducted for the Red Ledges area which is a private community that maintains its own storm drain system. Heber City's storm drain system is therefore estimated to have a total of 11,347 ERU's, or an additional 4,098 ERU's, by 2043. Growth beyond 2043 to Ultimate build out will be addressed in future Master Plan updates.

Discharge Standard

Heber City has adopted a 0.10 cfs per acre maximum release standard for undeveloped areas; i.e. areas outside Central Heber. This rate is assumed to be the historical undeveloped flow and has been used in previous storm drain master plans. For example, a 10-acre housing development would be able to have a post-development discharge rate of 1.0 cfs (10 acres x 0.10 cfs/acre) provided there is a suitable point to discharge to. If the historic flow is found to be less than the 0.1 cfs per acre, this shall be the allowed post-development discharge. To ensure that flow from new developments do not exceed 0.10 cfs per acre, detention basins with controlled discharge are required. In cases where there is no suitable point to discharge to, retention basins are required.

Storm Drain System

Heber City controls storm water runoff through sumps, catch basins, collection pipes, street curb and gutter networks, irrigation ditches, flood channels, and detention basins. Storm drain pipes shall be designed to have the capacity to pass the flow expected from 10-year storm events at a duration equal to or less than the time of concentration (Tc). All developments shall demonstrate the ability to safely pass storms that exceed the 10-year pipe capacity up to a 100-year storm event without flooding. All detention basins and sumps shall be sized to handle flows expected from 24-hour, 25-year storm events with an allowable discharge of 0.10 cfs. All retention basins and sumps shall be sized to capture the flow from 24-hour, 100-year storm events without any overflow. The minimum pipe size for storm drain mains shall be 18-inch. The minimum pipe size for storm drain laterals to single catch basins shall be 15-inch.

Water Quality Measures

Heber City currently controls storm water quality through storm drain facilities such as retention and detention basins, oil separators, pollutant removal devices, and controlled discharge features. Current City ordinances help control runoff pollutants and roadway contamination from building construction.

Utah Pollution Discharge Elimination System (UPDES) permits are required on construction sites larger than one acre and on sites less than one acre if they are part of a common larger development. With this Master Plan revision, measures to control water quality are recommended to be continued and implemented. The measures include public outreach, facilities

inventory mapping, official construction site storm water runoff control, pollution prevention, and good housekeeping. In addition to new water quality control measures implemented with the Master Plan, an official Storm Water Management Program should be created and implemented.

As Heber City's population grows, its water quality measures will come under increased State scrutiny. In the future, the State may designate Heber as a Small MS4 community and require a discharge permit to be obtained. Although Heber City is not currently on the Utah MS4 list, it is anticipated to become an MS4 community in the future. LID is required by the Utah Department of Environmental Quality as part of an MS4 Program. To prepare for future compliance with the MS4 storm water discharge program and to reduce post-development storm water run-off in general, developments within Heber City must retain and treat the 80th percentile rainfall event as part of Low Impact Development (LID) requirements. LID measures can also help achieve the onsite retention and treatment requirements. One of the considerations in determining the eligibility of a community for a permit is if its population has exceeded 10,000 people. Heber's population is past the 10,000 mark and the continued growth is therefore creating a need for increased water quality measures. Without growth, it would be very unlikely that the State would consider regulating Heber City's storm water quality, and it would remain as it currently is. This study recommends several water quality improvements, including a First Flush Pond for Central Heber, Hydro Dynamic Separators (HDS), and a Storm Water Management Program (SWMP), to address these growth-related issues.

Recommended Improvements

The recommended capital improvements are shown in Figure 7-1. This figure provides a guide for the location of planned future new storm drain facilities and improvements. The figure also shows existing facilities.

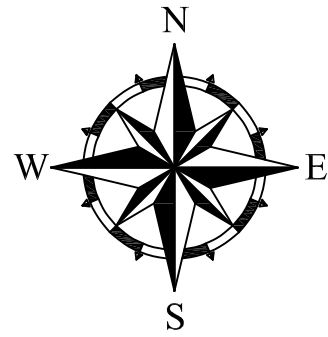
The recommendations that are provided were determined by creating a Bentley StormCAD V8 XM model and Pond Pack model of the central portion of the City. The modeling was performed with the 2010 Master Plan update. These models combine contour data, contributing area, and surface information with conveyance system input to produce peak flows through the network for specified storm events. Pipes sizes are optimized to minimize cost while ensuring that adequate capacity is provided for the high-intensity, short-duration storm that is most likely to strain the limits of pipe performance.

First flush pond recommended volumes are based on the SCS Type II 2-year 24 hour storm event models in PondPack, where the existing condition of the Central Heber was modeled to estimate the required collection volume based on the current irrigation ditch system (see Figure X). Factors such as runoff curve number, time of concentration, and outflow curve types, were taken into account to ensure that inflow and outflow hydrographs are as accurate as possible and a reasonable balance is obtained between performance and cost. Note that only the required volume of the pond is called out as part of this report. The actual area needed is based on a number of adjustable factors including depth of pond, release rates, sediment loading, elevation of outlets, etc. These issues cannot be finalized until the design and construction phase.

HDS systems shall be sized to treat the peak runoff flow rate generated by the 2-year storm event equal to or less than T_c , when using the Rational Method. The storm duration and distribution that creates the highest flow rate during a 2-year storm event shall be used when other runoff computation methods are used.

It is recommended that when a pipeline is designed the size should be verified for the actual contributing area. Similarly, site constraints of a first flush detention pond(s) may make it necessary to adjust the location, depth, etc. of the pond(s) when it is designed. In generating the recommendations for this report, dozens of detailed alternatives were considered with respect to location of a facility, contributing area to each pipe and pond, time of concentration, and other factors. To ensure that the City improvements are fully understood, subsequent master plans should also analyze the improvements during each update.

It is important to note that the use and capacity of existing canals, streams, and irrigation ditches, were not evaluated as part of this report. A capacity analysis of these facilities was beyond the scope of this Master Plan update. The capacity of these facilities is not being improved with this study nor by the Capital Facilities which may be funded by impact fees. Heber City runoff discharging into these channels may be restricted due to their use for spring runoff passing through the City or summer irrigation. For this reason the City has assumed that runoff from development will only be released at historic rates or 0.10 cfs/acre, to avoid adversely impacting the channels.



EXISTING CREEKS AND CANALS

- ① LAKE CREEK
- ② LOWER WASATCH CANAL
- ③ NORTH LAKE CREEK
- ④ HUMBUG CANAL
- ⑤ WASATCH CANAL
- ⑥ CENTER CREEK
- ⑦ TIMPANOGOS CANAL
- ⑧ FLOOD CHANNEL
- ⑨ SAGEBRUSH AND SPRING CREEK CANAL

MIDWAY LANE / 100 SOUTH

CENTER STREET

1200 SOUTH

S.R. HWY 189

U.S. HWY 40

FIGURE 7-1

HEBER CITY

FUTURE STORM DRAIN FACILITIES

- ULTIMATED BUILDOUT BOUNDARY
- - - HEBER CITY BOUNDARY
- EXISTING ROADS

EXISTING STORM DRAIN LINES

PIPE SIZE (inches)	PIPE COLOR
<15	Light Blue
15	Blue
18	Dark Blue
21	Light Green
24	Green
27	Dark Green
30	Light Yellow
36	Yellow
42	Orange
48	Red
54	Dark Red
60	Brown
UNKNOWN SIZE	Light Purple
UNDERDRAIN	Dark Purple
DITCH	Black

- Proposed HDS System
- POND
- Existing First Flush Pond

PROPOSED STORM DRAIN FACILITIES

PROPOSED PONDS



Horrocks.

728 WEST 100 SOUTH #2
HEBER CITY, UTAH 84032
(435) 654-2226

Capital Improvements

Capital improvements required to meet the existing and future storm water control needs of Heber City are given in the following paragraphs. Projects labeled as “Ultimate” are beyond the 20-year planning window and therefore the improvement cost and associated populations served have been excluded from the impact fee calculations.

D-015 Ditch Storm Drain System Improvements: This project is to correct deficiencies within the existing irrigation ditch system in the central part of Heber City (Existing Ditch Map in Appendix E). The project is to improve the ditch system to facilitate storm drain conveyance. Improvements include the following: pipe, outlet, and pollutant removal devices at each discharge point, identify and install pipe in abandoned ditch locations, and divert dead-ends into channels.

D-016 (Ultimate) First Flush Detention Ponds: This project is to construct a pond or ponds to capture the 2-year storm event (first flush) from the central part of Heber City which currently uses the ditch system as a storm drain system. The existing pond for School House Estates was converted to a detention pond for the existing subdivision and a first flush pond for the area in Heber City between Main Street and 500 West and 600 South and 1000 South. The location for remaining first flush pond(s) has not been identified at this time because property would need to be identified which is not in the scope of this masterplan, but they could potentially be installed in addition to HDS systems at those corresponding HDS locations

D-022 Maintain Existing Storm Drain and Ditch System: As part of the Storm Water Management Program, the existing storm drain system needs to be maintained. Each year the system will be inspected and cleaned, and records kept of maintenance.

D-023 Master Plan Update: The Master Plan should continue to have yearly updates with major updates every five years.

D-025 Storm Water Management Program: The project consists of creating a Storm Water Management Program (SWMP), implementing the SWMP, and enforcing the SWMP. The SWMP is necessary due to City growth.

(Ultimate) D-026 Central Heber Storm Drain System in Old Town Heber: This drainage system consists of a network of pipes to replace the existing ditch system. It may ultimately be needed if curb and gutter is installed in the old part of Heber City.

D-028 Heber City Public Works Facility Expansion Phase 2: The Heber City Public Works Department Building and Maintenance Site will be expanding to maintain the current level of service that the Public Works department currently provides in maintaining the storm drain system. Phase 2 will likely commence around 2028. All of Phase 2 will be paid for by impact fees, however, there is not currently a recommended impact fee for storm drain, therefore, the storm drain portion of the cost will need to come from another fund until a storm drain impact fee is implemented.

D-029 Hydrodynamic Separators prior to First Flush Ponds: It is proposed that the existing ditch system go through an HDS prior to entering a first flush pond. There are 4

proposed areas, and one first flush pond that is already functional to handle first flush for the part of Central Heber between 600 S and 1000 S and 500 West to Main Street, where HDS should be installed. These shall differ and are in addition to pollutant discharge devices mentioned in D-015 description.

Impact Fee Recommendations

Heber City currently does not charge an impact fee for growth related storm drain projects within the City. Projects that are not 100% developer responsibility are funded through revenue from the City's storm drain utility fee. This fee currently ranges between \$11.83 per acre per month to \$15.20 per unit depending of the nature of the property.

7.2 Storm Water Runoff

Future growth in Heber City has the potential to affect the storm water flows and water quality of the downstream channels and water bodies of the Heber Valley. It is imperative that control guidelines are followed and needed improvements are implemented to ensure proper storm water control now and in the future. The hydrology and water quality of the Heber Valley should not be adversely affected by Heber City growth. Some of the sources and criteria used to determine future storm water control needs are:

- Growth rates
- Environmental regulations of EPA, FEMA, and DEQ
- Residential / non-residential development
- City General Plan and zoning maps
- County and Provo River Watershed requests

As these factors change, the recommendations made in this study could be affected. To minimize the effect of changing future conditions, recommendations made in this report are based upon future zoning, planned roadway improvements, recent water quality regulations, and the impact they may have upon future land uses. Storm drain improvement projects should be completed in conjunction with water quality needs and land development.

Projected Population

The projected population for Heber City from 2023 to 2043 is discussed in Chapter 3 - Projected Population Growth. The 2023 population was estimated to be 18,347. The 2043 Heber City population was projected to be 29,682.

Historical Storm Drainage

The City has historically had a restrictive discharge policy of 0.10 cfs per acre. This policy was established when Heber City saw increased development and no regional drainage conveyance facilities existed. Prior to establishing this policy, the mechanism for handling runoff was existing irrigation ditches and canals in both developed and undeveloped areas. To avoid overwhelming the existing system, the City limited runoff to no more than what historically occurred. In recent years discharges above 0.10 cfs per acre have been detained on site by individual developments. In cases where no suitable discharge point is available, 100 percent of the drainage has been retained on the development site. Currently the City has several detention/retention ponds scattered throughout the more recently developed areas as shown in the

City Storm Drain Facilities list in Table 7-2. These ponds help safeguard water quality downstream and provide flood protection.

As water quality regulations become more restrictive, the City will need a regulated system to convey and treat storm water runoff. The City recently adopted a Storm Water Design Manual that further establishes these regulations for new developments in detail. Systematic water quality control will be provided through improved maintenance of the existing facilities and implementing a storm water management program.

The central portion of Heber City (500 N to 600 S) does not currently have all the required water quality measures, other than the natural cleaning action of the ditches, roadside swales themselves, and a few oil separator snouts. This area needs additional processes to address water quality. The first flush pond, ditch improvements, and HDS proposed for this area will be a step toward reducing pollutant loading in runoff from these portions of the City.

Calculation of Storm Runoff

There are a variety of methods available for calculating runoff. The method used needs to be accurate for the available input and conditions of the site being evaluated. The limitations of each method must also be considered. Refer to the City's Storm Water Manual for the appropriate methodology to use when designing for new development.

Future Growth

The projected number of residential and non-residential storm drain users is determined using the growth numbers in Chapter 3. Total storm drain numbers projected for 2043 equal 8,578 residential units and 3,149 non-residential equivalent residential units (ERU's). Of these, 380 ERU's have been deducted for the Red Ledges area which is a private community that maintains its own storm drain system. Heber City's storm drain system is therefore estimated to have a total of 11,347 ERU's, or an additional 4,098 ERU's, by 2043, spread over a total of 6,655 gross acres.

Future capital facility projects are associated with water quality requirements, storm drain conveyance, and maintenance of facilities related to existing conditions and overall City-wide growth. The projects are proposed to be funded by the storm drain utility fee which is paid by existing and new users.

Modeling of Storm Water Runoff

The storm water runoff from Central Heber has historically been uncontrolled. The existing irrigation ditch system in this area has been used to convey storm water runoff to downstream streams and canals. Since this system has provided an acceptable level of service in the past it is anticipated that this area will continue to be served through these conveyance systems for the foreseeable future. A pressurized irrigation system may be installed in this area in the future. Once this takes place, additional capacity for storm water will be available in the ditches. Runoff quantities may not increase from what they are projected today, but water quality should be addressed.

In the previous 2018 Master Plan update, storm drain models were created for the central portion of Heber City using both StormCAD V8 XM and PondPack. StormCAD was used to model the pipe sizes using the Rational Method, and PondPack was used to model the ponds using the SCS

Type II 24 hour storm. The area was divided into four main drainage areas.

- Area 1 extends from 500 N to 200 N (500 W to 600 E)
- Area 2 extends from 200 N to 200 S (600 W to 600 E)
- Area 3 extends from 200 S to 600 S (500 W to 600 E)
- Area 4 extends from 600 S to 1000 S (600 W to Main)

Each area has a discharge point on the west end, similar to the existing ditch system layout. Two scenarios were modeled. A model of existing conditions was set up in PondPack with the time of concentration and curve number based on runoff through the existing ditch system. Peak flow from several storm events (2-yr, 10-yr, & 25-yr) was modeled based on the existing conditions. Each ditch was not modeled. A model of future conditions was set up in both PondPack and StormCAD with the time of concentration and runoff coefficients (C) based on the existing streets having curb & gutter and the ditch system being piped. The street layout was based on the master street plan. Necessary pipe sizes were determined for the 10-year storm event, and peak flow from several storm events (2-yr, 10-yr, & 25-yr) was modeled based on the potential future conditions.

Table 7-1 below summarizes each area in Central Heber. The table shows the respective pond volumes for the existing ditch conditions and ultimate conditions if curb & gutter is installed, and the ditches are piped. A first flush pond is recommended which could utilize one single pond or four separate pond locations. This pond(s) are recommended to help remove discharge pollutants created from existing users and future growth and traffic in the central portion of Heber City. Area 4 volumes were removed from Table 7-1 in the 2017 update, because the detention pond west of School House Way just south of 600 South was modified to function not only as a detention pond, but a first flush pond as well. However a HDS shall be installed upstream of this pond to enhance water quality measures.

Table 7-1 Central Heber Pond Summary

Area ID ²	Area (acres)	Existing Conditions Pond Volume (ac-ft)			Ultimate Conditions ¹ Pond Volume (ac-ft)		
		First Flush	10 Year	25 Year	First Flush	10 Year	25 Year
Area 1	175	4.3	7.7	11.2	4.8	8.3	11.7
Area 2	248	2.0	4.0	7.6	2.3	4.8	8.3
Area 3	246	1.2	2.3	5.6	1.4	3.1	6.0
Total	669	7.4	14.0	24.4	8.5	16.2	26.0

1. Ultimate conditions assumes curb & gutter and ditches piped through central part of Heber

2. Area 1=500 N to 200 N 500 W to 600 E, Area 2= 200 N to 200 S 600 W to 600 E, Area 3= 200 S to 600 S 500 W to 600 E

3. See Appendix E for additional information

Summary of Projected Storm Water Runoff

There are standard practices for estimating storm water runoff. The above listed Rational and SCS methods need to be followed to maintain historic or less than historic storm water runoff in Heber City. Water quality also needs to be considered. New development should continue to retain and/or detain storm water to keep discharge equal to or less than historic, and help improve or maintain water quality downstream. New development should also implement LID's. An LID is a Low Impact Development with the goal of improving water quality by reducing the amount of storm runoff generated by a project by relying on infiltration or evaporation to handle

runoff where it is generated; they basically try to mimic the historic drainage to not increase flows to downstream waterways and conveyance systems. The existing areas in Heber which do not have water quality control measures need consideration to ensure protection of the downstream water quality. Measures to provide additional water quality support include additional first flush pond(s) and HDS for the central part of Heber.

7.3 Storm Water Control and Level of Service

Types and Purpose of Storm Drain System

The purpose of the storm drain system is to create a system that detains runoff and/or safely conveys storm water to prevent flooding and/or pollution from the 2-year, 25-year and 100-year storm events. The recommended control methods for handling storm runoff in Heber City are:

- Retention of storm water to eliminate downstream discharge and to capture pollutants.
- Detention of storm water to control release rates into drainage facilities and help settle pollutants before they are discharged downstream.
- 80th percentile rainfall retention in detention/retention basins.
- Project specific designed pretreatment pollutant removal devices of varying types and sizes (HDS).
- LID's.
- Construction site runoff control.
- Detention basins for pollution control capturing the "first flush" 2-year event, for areas that historically have direct discharge.
- Regular maintenance and good housekeeping are key.
- Public education on pollutant control.
- Facility inventory management.

Detaining and retention of storm water runoff are good methods to help control water quality. Detention of water allows oil skimming and a large amount of sediment to settle out of the water before it is released into the streams. Pretreatment type devices such as Stormceptors, or other HDS are effective, but need to be regularly maintained to remain effective, just as with all inlets, sumps, and ponds. The Environmental Protection Agency (EPA) presently regulates the water quality released into streams from large cities. Although Heber is not considered a large city, the EPA has plans to place water quality restrictions on smaller cities in the future. In anticipation of stricter water quality regulations in the future, the City should continue to develop more advanced storm water control measures as well as provide additional storm water regulations. The newly adopted design manual enforces some of these advanced measures for new development.

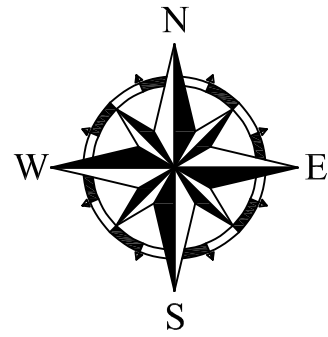
Existing Conditions and LOS

Heber City's existing storm drain facilities are shown in Figure 7-2. Much of the Central Heber has historically discharged storm water into existing irrigation ditches and canals. Most of the new developments since about 1980 have had storm drain systems installed. The systems consist of pipes, inlets, sumps, oil separators, and ponds which collect storm water and control it. Some of these systems discharge the storm water after it has been detained. However, they have been installed per Heber City's requirements and, as a result, the storm drain Level of Service (LOS) in all new developments in Heber City has been maintained, and follows the design criteria used

in this study.

Central Heber does have a slightly lower LOS than newer developments (after 1980) in the City. This area of town does not currently have retention or detention ponds and is lacking HDS. While the City has grown in the last 20 years, the storm water runoff and pollution discharge in this area has not measurably increased. However, as the City continues to grow it is anticipated that, additional traffic, businesses, and people will increase the impervious surface in this area of the City as well, which will in turn increase the storm water runoff and pollution. As a result of this growth, additional measures will need to be incorporated in order to maintain the existing LOS and ensure that downstream water bodies are not affected. The capacities of the irrigation ditches and canals are unknown and are not included in the scope of work in this report. However, the size of a “first flush” type of pond(s) has been analyzed. HDS are also recommended upstream of first flush ponds.

Table 7-2 is a list of Heber City’s developments which have public storm drain systems. Ponds, the discharge from those ponds, and the pollution prevention devices associated with each development are listed.



EXISTING CREEKS AND CANALS

- ① LAKE CREEK
- ② LOWER WASATCH CANAL
- ③ NORTH LAKE CREEK
- ④ HUMBURG CANAL
- ⑤ WASATCH CANAL
- ⑥ CENTER CREEK
- ⑦ TIMPANOGOS CANAL
- ⑧ FLOOD CHANNEL
- ⑨ SAGEBRUSH AND SPRING CREEK CANAL

MIDWAY LANE / 100 SOUTH

CENTER STREET

1200 SOUTH

S.R. HWY 189

U.S. HWY 40

FIGURE 7-2

HEBER CITY

EXISTING STORM DRAIN FACILITIES

- ULTIMATED BUILDOUT BOUNDARY
- - - HEBER CITY BOUNDARY
- EXISTING ROADS

EXISTING STORM DRAIN LINES

PIPE SIZE (inches)	PIPE COLOR
<15	
15	
18	
21	
24	
27	
30	
36	
42	
48	
54	
60	
UNKNOWN SIZE	
UNDERDRAIN	
DITCH	
EXISTING FIRST FLUSH POND	
PONDS & SUMPS	

Table 7-2 – Heber City Storm Drain Storage Facilities

Public Facility (Name)	Storage Facility(s)	Volume (cf) ¹	Volume (ac-ft)	Sumps (each)	Discharge (cfs)	Pollution Protection
Alpine Acres	pond/underground rock	51,330		0	0	pond
Alpine Meadows Phase 1	pond	12,775		0	1.24	pond
Alpine Meadows Phase 2	pond/underground rock	23,172		-	0	pond
Aspen Point	pond/underground rock	37,411		-	8.7" orifice	snout, pond
Birmingham Subdivision	pond	10,364		0	0	pond
Broadhead Estates Phase I	pond & stormtech system	3,221		-	0.898	stormtech, snout
Broadhead Estates Phase II	2 ponds, sump	12,740		1	2.5" Orifice	snout
Cedar Meadows	pond w/sump	17,604		2	12" pipe no known restrictions	pond
Cottages at Valley Station Phase 2 & 3	3 ponds, sumps	35,479		3	none	snouts, ponds
Country Meadow Estates	7 ponds	11,354		0	none	ponds
Cove Estates Pond	pond w/sumps	118,805		4	none	snout, pond
Crews Court	stormtech system	2,387		-	none	stormtech, snout
Daniels Gate Daniels Gate B	pond w/ sump	33,098		1	none	snout, pond
District at Valley Station	ponds w/sumps	4,290		3	none	snouts, ponds
Elmbridge	ponds	34,203		0	4.4" & 1.8" orifices	snout, ponds
Greenfield Town Homes	pond w/ sump	35,200		1	none	pond
Habitat for Humanity 400 W 300 N	sumps	2,164		2	none	sumps
Harvest Fields	pond w/ sump	18,000		1	none	snout, ponds, sump
Hat Creek	pond	18,690		0	5.6" orifice and overflow	pond
Heber City Public Safety Building	pond	4,000		0	none	snout, pond
Heber Gateway Plaza Phase 1	pond w/sump	21,319		1	4.3" Orifice, 1.06 cfs	snout, pond
Heber Landing Subdivision Phase 1	pond w/sump	24,700		1	none	pond
Heber Meadows Phase 1	pond w/ sump	31,541	0.7200	2	none	snout, pond
Heber Meadows (2800 S Mill Road Sump)	sump			1	none	snout, pond
Hog Business Park	sumps with underground rock	57,000	0.3300	4	none	snout, sump
Last Stand	pond w/sump	7,910		1	none	pond, snout
Liberty Station & Liberty Crossing	2 stormtech systems	14,400		0	none	stormtech, snout
Majestic Mountain Acres/Noble/Browing	pond w/ stormtech systems	36,237		0	none	stormtech, snout
Mayers Meadows Subdivision	stormtech system	11,204		0	none	stormtech, snout
Meadows at South Field	pond w/sumps	25,708		10	none	pond, snout
Mill Road Estates Phase 1 and 2	pond		2.2000	0	1.1	pond
Mill Road Estates Phase 3	pond	3,400		0	3" orifice	pond, snout
Mill Road Estates Phase 4	pond	7,701		0	3" orifice	pond, snout
Mountain Meadows Phase 1 & 2	none	0		0	100%	none
Mountain View Estates	pond	12,500		0	overflow at 35.67"	pond
Murfield Phase 1	pond	6,431		0	1.00	pond
Murfield Phase 2	pond	57,115		0	yes not sure how much	pond
Murfields Phase 4A and 4B	pond	10,219		0	1.16	pond
My Mountain Home Plat A and B	pond	18,180		0	15" pipe unlimited	pond
My Mountain Home Plat C	pond	6,000		0	0	pond
Old Mill Country Estates	pond	42,250		0	5.4" orifice	pond
Park Properties	sump	500		1	none	snout
Pine Meadows	pond /sump	15,000		3	15" pipe no known restrictions	pond
Power Industrial Park	pond	6,000		0	0	pond, snout
Sage Acres	pond	18,000		0	overflow to canal	pond
School House Way Estates & First Flush Pond	storage pond and first flush	113,256	3.2900	1	16" orifice with overflow box	snout, pond
Silver Ridge Properties	underground rock storage	12,250	0.2800	3	none	snout
Swiftcreek Subdivision	pond w/sump	6,872		1	none	pond, snout
The Cove at Valley Hills	pond w/sump	118,804	2.7270	4	none	pond
Timp Meadows	pond	18,000		0	15" pipe no known restrictions	pond
Timp Meadows East	pond	39,000		0	15" pipe no known restrictions	pond
Timp Meadows North	Pond	64,856		0	none	pond
Timp View Crossing	pond w/sumps	7,083		3	none	pond, snout
Valley Heights Subdivision	pond w/sumps	20,940		12	none	pond, snout
Valley Station	pond/sump with underground	32,565		1	1.68	Vortechs (3 ea)
Walgreens	sump	1,000		1	none	sumps
Wasatch Vista	pond w/sump	70,225		1	2.75	pond, snout
Wheeler Park Phase 1 and 2	pond w/ sump and	214,515	4.9200	1	none	pond, snout
Willow Creek Estates	underground rock storage	5,328		1	none	snout
Wing Point (Private?)	pond /underground rock	21,000		2	none	pond
Witt Commercial	pond w/sump	8,581		1	none	pond, snout
Valley Hills Drive 800 North Basin	pond	5,472		0	discharge to ditch possible	pond
David Fields Commercial (public)	sump	842		1	none	sump
Sorenson Dental Office	sump	828		2	none	sump
Street Inlets and Catch Basins, City Wide	n/a	varies		n/a	varies	varies

1. Volume is maximum and includes freeboard if there is any.

Design Requirements

Storm water runoff collection in Heber City is provided through a collection pipes, ditches, curb & gutter, detention basins, retention basins, sumps, streams, canals and a variety of other collection and storage type facilities. The design and sizing of these facilities is based on storm water runoff. Peak runoff from existing land or developed areas can be determined by a variety of approved models. Refer to the City's Storm Water Manual for methodology.

Ground Water

There are certain areas of Heber City which have had shallow ground water tables in the past. In 1983 a network of subsurface drains were installed in 500 East and 600 East. This drain system is shown on Figure 7-2. All new development is required to complete a geotechnical report which includes recommendations on ground water levels in the development area. If shallow ground water is discovered, or it is found that there is potential for shallow ground water from streams, channels, or canals nearby, development is required to provide means of controlling the ground water for all infrastructure and buildings. Additionally, retention basins and other water quality devices need to be designed such that they do not contaminate groundwater.

Storm Water Management Program

Considering the growth of Heber City, an official Storm Water Management Program is needed. Heber City and/or the Heber Valley will soon be classified as a small municipal separate storm sewer system (MS4). The Utah Department of Environmental Quality (DEQ) Division of Water Quality has storm water management regulations and guidelines to help facilitate storm water control for a small MS4. The program could be a combined effort between Wasatch County and Heber City.

The following are guidelines Heber City currently has in place which support proper storm water management:

1. Heber City Ordinance 15.08.080 was put in place to help facilitate a variety of items with respect to home construction. The ordinance provides some building site storm water control requirements, and it also helps control debris and dirt in the roadway to reduce storm drain system contamination.
2. Construction sites greater than one acre or projects less than one acre that are part of a larger common plan of development are required to obtain a Utah Pollutant Discharge Elimination System (UPDES) permit. With the permit, the site must also have an approved Storm Water Pollution Prevention Plan (SWPPP). All SWPPP plans are reviewed by the City Engineer.

In addition to the items listed above, Heber City will continue implementing the following storm water control guidelines:

1. Public Education and Outreach: City will continue public education and outreach efforts to promote a change in behavior by the public to reduce water quality impacts associated with pollutants in storm water runoff. This will include education efforts targeting residents, businesses, developers/contractors, and industrial facilities. The education and outreach will focus on specific pollutants and pollutant sources that impact downstream receiving waters including: sediments (dirt, clay, sand), fertilizer/pesticides (nutrients such as phosphorus and nitrogen), and chemicals/ hazardous wastes (oil/grease, fuels,

paint, cleaning products, etc). It is recommended the City work with the Provo River Watershed group and Wasatch County to identify specific guidelines and distribution packets.

2. Storm Water Facilities Inventory: The City will maintain a record map of all storm drain facilities, including all inlets, manholes, culverts, pipes, ponds, storage facilities, sumps, oil separator boxes, pollutant removal devices, discharge points, canals, streams, flood channels, and other pertinent storm drain facilities that discharge into State waters.
3. Construction Site Storm Water Runoff Control: City will develop and adopt an ordinance that requires the use of erosion and sediment control practices at construction sites. The ordinance shall at a minimum be equivalent with the technical requirements set forth in the UPDES Storm Water General Permit for Construction Activities found at <http://waterquality.utah.gov/UPDES/stormwatercon.htm>. The ordinance shall include the following: Sanctions to ensure compliance, for construction projects disturbing greater than or equal to one acre, and to projects less than one acre that are part of a larger common plan of development. Require construction operators to prepare a Storm Water Pollution Prevention Plan (SWPPP) and apply sediment and erosion control BMP's as necessary to protect water quality, reduce pollutant discharge, and control waste such as, but not limited to, discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste. It is recommended that the City use ordinance language previously approved and used by the Provo River Watershed Council.
4. Pollution Prevention and Good Housekeeping: The City will prepare an operations and maintenance program to complete and track the following items: Perform annual inspections to identify when cleaning and maintenance of public storm drain facilities is needed. Clean all inlets, ponds, canals, streams, and other pertinent public storm drain facilities of all debris, trash, oil accumulations, and excess sediment buildup. Repair any failures of installed public infrastructure. Maintain all access to public storm drain facilities. Monitor the drainage of all storage facilities and facilitate the proper discharge or infiltration of water from storm drain facilities to reduce stagnant water areas. Prioritize storm sewer system maintenance, with the highest priority areas being maintained at the greatest frequency. Prepare a schedule for street and public owned parking lot sweeping. Follow inspection checklists and record keeping procedures for all cleaning and maintenance. See Heber City Public Works for checklists, procedures, and guidelines.

The four storm water control items listed above are a good start to direct Heber City towards adopting the necessary programs for a beneficial storm drain system. The DEQ Division of Water Quality general permit for storm water discharge from small MS4s contains more extensive guidelines and procedures that will help Heber City implement an official Storm Water Management Program (SWMP). The following is a summary of the key components in a SWMP:

1. Provisions to develop, implement, and enforce a SWMP designed to reduce the discharge of pollutants from the MS4, protect water quality, and satisfy the appropriate water quality requirements of the Utah Water Quality Act.
2. Six Minimum Control Measures:
 - a. Public Education and Outreach and Storm Water Impacts
 - b. Public Involvement/Participation
 - c. Illicit Discharge Detection and Elimination (IDDE)
 - d. Construction Site Storm Water Runoff Control

- e. Long-Term Storm Water Management in New Development and Redevelopment (Post-Construction Storm Water Management)
- f. Pollution Prevention and Good Housekeeping for Municipal Operations
- 3. Shared Responsibility: Implementation of one or more of the six minimum measures may be shared with another entity, or the entity may fully take over the measure.
- 4. Provisions to review and Update the Storm Water Management Program

There are additional requirements of a small MS4, other than the SWMP, when implementing a storm water discharge permit, such as non-storm water discharge control, record keeping, permit conditions, and penalties. Guidelines outlining requirements for small MS4 permits may be found at https://www3.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf. It includes the specific details and requirements for the four items listed above for the SWMP. A recommended project in the next several years is that Heber City, with the involvement of Wasatch County, adopt a voluntary SWMP that focuses on the four items required of a SWMP, listed above. The official SWMP documents should be created within the next two to three years, implemented as soon as possible, and followed until the EPA and DEQ decide a mandatory Permit for Discharge is required.

Wasatch County

Heber City has a cooperative agreement with Wasatch County to maintain flood channels, canals, and streams that pass seasonal runoff through the City. City storm drain systems must therefore be designed to avoid adversely impacting these existing flood channels. To minimize any impact, this study assumes most facilities will only introduce historical flows into existing flood channels.

The County is currently looking into doing a study to combine storm drain efforts with the City and potentially install regional detention facilities for water quality purposes. In June 2000 a study was done recommending four basins be constructed to reduce the amount of sediment and phosphorus entering the Provo River system. As the City designs its own facilities, mutually beneficial opportunities should be investigated to incorporate features enhancing water quality and reducing the economic impact to both the City and County. As part of the SWMP's six minimum control measures, Heber City will work to reduce pollutant discharge to streams and water bodies which affect Wasatch County and other users downstream Heber City will also coordinate with Wasatch County in the steps to create a Storm Water Management Program that will provide benefit countywide.

New Development

The new Heber City Storm Water Design Manual that was adopted in 2022 provides guidelines for new developments. Design requirements for new development outlined in this document, in particular LID's are a requirement by the Utah Department of Environmental Quality as part of an MS4 program. Therefore in preparation for the future compliance with the MS4 program, developments in Heber City shall comply with the guidelines outlined in the manual.

Discharge Agreements

Heber City currently has agreements with groups and entities around Heber City related to storm drainage facilities. The following is a summary of those regulations.

- Wasatch County canal maintenance agreement
- Central Utah Water Conservancy District canal maintenance agreement
- Spring Creek and Sage Brush Canal maintenance and discharge agreement.

7.4 Economic Feasibility Analysis

Costs of the proposed new improvements are shown in Table 7-9. The estimated material and installation cost for the pipe improvements, 20-year maintenance program, storm water management program, and the storm drain portion of the public works expansion project is \$7,816,160. This number is based on material and labor rates that are current as of 2023, and estimates should be updated regularly to reflect changes in price.

New developments are not required to pay storm water impact fees. The funding for the proposed projects must come from the storm drain utility fee, unless other funding sources such as grants, or other programs are identified. These funds will need to generate sufficient revenue to complete the items lists in Table 7-9 or they may not be completed.

Utility Fee Methodology

Zion's Bank completed a study in 2012 which evaluated the storm drain utility fee. The Zion's study recommended a direct approach of using a per unit charge for all residential properties less than one acre; and a gross acreage charge for all non-residential properties, and multifamily properties greater than one acre. Undeveloped properties are not subject to the fees.

Table 7-9 Estimated Cost of Storm Drainage Improvements.

ULT	CIP #	Recommended Improvements	Total Cost		Funding Proportionate Share Analysis					
			Operating		Developer		Other		Impact Fee Eligible	
			%	\$	%	\$	%	\$	%	\$
ULT	D-015	Ditch Storm Drain System Improvements		\$1,621,474	100%	\$1,621,474	0%	\$0	0%	\$0
	D-016	First Flush Detention Pond(s) - Central Heber		\$1,380,083	100%	\$1,380,083	0%	\$0	0%	\$0
	D-022	Maintain Existing SD/Ditch System (20 times)		\$2,400,000	100%	\$2,400,000	0%	\$0	0%	\$0
	D-023	Master Plan Updates every 5 years (4 times)		\$48,000	100%	\$48,000	0%	\$0	0%	\$0
	D-025	Storm Water Management Program		\$336,000	100%	\$336,000	0%	\$0	0%	\$0
	D-026	Install SD System in Old Town Heber		\$0	0%	\$0	0%	\$0	0%	\$0
	D-028	Heber City Public Works Facility Exp Ph 2*		\$830,603	0%	\$0	0%	\$0	100%	\$830,603
	D-029	HDS Before First Flush Pond		\$1,200,000	100%	\$1,200,000	0%	\$0	0%	\$0
	TOTAL EXPENDITURES			\$7,816,160		\$6,985,557		\$0		\$830,603

* Impact fee eligible, however, no impact fee has been calculated or proposed for Storm Drain

Operating and Impact Fee Funds

All recommended improvements, including the Storm Water Management Program and the Heber City Public Works Facility Expansion Phase 2 will be funded by operating funds. Therefore, new developments are not required to pay storm water impact fees. The need for a storm drain impact fee will be evaluated again at a later time.

Operating Fund & Storm Drain Utility Fee

The maintenance of the storm drainage and ditch systems are funded by the storm drain utility fee charged to all existing residential and non-residential users. This fee covers the cost of storm drain projects benefiting existing users, including the Storm Water Management plan, street sweeping, and canal/ditch maintenance. The current fee is \$15.20 per month for all residential properties, and multi-family properties less than or equal to one acre; and \$11.83 per month per gross acre for multi-family properties greater than 1 acre. For Non-Residential it is \$15.20 per month for properties less than or equal to 1 acre, and \$11.83 per month per gross acre for non-residential properties greater than one acre. The storm drain utility fee should be reviewed annually to keep abreast of increasing inflation and construction costs.

Chapter 8

Pressurized Irrigation System

8.1 Summary & Recommendations

Introduction

This chapter identifies the existing condition of the pressurized irrigation (PI) system as well as recommended improvements to meet the projected 20-year population demands. Impact fees were calculated based on implementing the recommended improvements.

Future conditions in Heber City were analyzed by projecting the population through the year 2043 and calculating the number of connections or equivalent residential units (ERU's). Based upon historical PI demand and the projected average yearly, peak daily, and peak instantaneous demands, the PI flows are projected through the planning period. These flows are used to determine the required capacities of the PI system within Heber City. The Central Utah Water Conservancy District (CUWCD) supplies Heber City with irrigation water and storage for peaking. Recommendations are made to maintain the current Level of Service (LOS) and provide the needed capacity for the projected population. Additional infrastructure is also considered for areas which do not currently have PI available. User fees and impact fees are studied to determine the feasibility of the recommendations.

Heber City's water system provides water for both city and some irrigation company connections. For this study, all connections will be treated as City connections.

The Heber City Design Criteria used in this study are summarized below:

- Demand:
 - Average Yearly Outdoor 437 gpd/ERU (based on 3.0 af/ac)
 - Peak Day Average Yearly Demand x 3.4
 - Peak Instantaneous Peak Day x 2.0
 - Storage
 - CUWCD for Heber 437 gal/ERU
 - Pressure
 - Minimum Static 50 psi
 - Maximum Static 120 psi
 - Minimum Peak Day 40 psi
 - Minimum Peak Instant 30 psi
 - Pipe Sizes
 - Minimum 6-inches
 - Velocities:
 - Maximum Peak Day 5 fps
 - Maximum Peak Instant 8 fps
- Outdoor watering - Assume average lot size of 0.33 acres, 49% irrigated.

Projected Population

Heber City's population is expected to increase by approximately 61.8%, from 18,347 to 29,682 by the year 2043, excluding the North Village and Jordanelle Ridge areas. With this growth, it is projected that an additional 4,478 (11,727-7,249) ERU's from Residential and Non-Residential development will be added. Of these, 380 ERU's must be deducted for the Red Ledges area which is served by Twin Creeks Special Service District and 761 ERU's for those without access

to the PI system. Heber City's PI system is therefore estimated to have a total of 10,427 ERU's, or an additional 5,648 ERU's, by 2043. The 5,648 ERU's includes 1,550 ERU's converted from the culinary system in Central Heber after 2028. Growth beyond 2043 to Ultimate build out will be addressed in future Master Plan updates.

Projected Pressurized Irrigation Use

Using 10,427 projected ERU's in 2043, it is calculated that 10,758 gallons per minute (gpm) will be required to meet Peak Day flows. It is also projected that an average yearly demand of 4.56 million gallons per day (mgd) will be used. The usage per ERU is estimated to be 437 gpd/ERU spread over 12 months or 874 gpd/ERU over the 6-month irrigation season. This is calculated using the average residential lot size of Heber City subdivisions which use PI and the percent of each lot on average that is irrigated. The average residential lot size with PI available is 0.33 acres, and on average 49% of each lot is irrigated.

Recommended Irrigation System Improvements

Capital improvements recommended to meet the projected demands are shown in Figure 8-1. These recommendations were determined by the use of a computer model of Heber City's PI system, projected demands, and input from CUWCD and water use data. A detailed list of the recommended improvements is given below.

Projects labeled as "Ultimate" are beyond the 20-year planning window and therefore the improvement cost and associated populations served have been excluded from impact fee calculations.

I-001 Central Heber Pressurized Irrigation: The proposed project is to provide PI water to the Central Heber. There are approximately 1,550 water users within this area. The source of water for the PI system would be from Wasatch Irrigation Company delivered via the Timpanogos the Wasatch canals. Connection points would be on the Wasatch Canal near the Creamery Spring (1200 North on the Wasatch Canal), the Timpanogos Canal through the gravity feed at the T5 pump station of the WCWEP system, the Timpanogos Canal near Lake Creek Road, and the W3 pump station of the WCWEP system. These lines will be Heber City lines. W-027 and W-054 culinary water projects are in the 2024-2028 planning window. Funds from these projects will be used to help fund the PI system in Central Heber since this project postpones and reduces the size of the culinary source and storage needed in the future. Unless a larger bond is obtained, the PI system in Central Heber must be completed in phases from 2023 to 2043.

I-002 1200 W 430 S to 1100 W 100 S (6-inch): A 6-inch line should be constructed from the existing pressurized system between 1200 West 430 South and 1100 West 100 South to connect into the proposed 6 inch line in 1200 West (South Field Road). Development should install and pay for a portion of this 6-inch line and impact fees should pay for Heber City's portion.

I-003 1200 West – 430 S to 500 S (10-inch): A 10-inch line should be constructed in 1200 West from the existing line at approximately 500 South to the proposed 6-inch line at approximately 430 South. Development will install and pay for a portion of this line, and impact fees should pay for Heber City's portion of over sizing above 6-inch.

I-004 Daniel Rd –1450 S to 1300 S (8-inch): An 8-inch line should be constructed from

the existing pressurized water system in Daniel Road at approximately 1450 South to tie into the 14-inch line at approximately 1300 South. Development will most likely install and pay for a portion of this line, and impact fees will need to pay for Heber City's portion of over sizing this line above 6-inch.

I-008 East By-pass – 1500 E to 1240 E 16-inch pipeline: A 16-inch line should be constructed in the East By-pass Road from approximately 1500 East 1240 East. This line will replace the existing gravity 16 inch in at this location because the existing line does not match the new elevation of the By-pass road. Development will install 100 percent of this line. This will be a CUWCD line.

(Ultimate) I-010 Valley Hills Blvd – Mill Rd to Callaway Dr (8-inch): An 8-inch line should ultimately be constructed along Valley Hills Boulevard from Mill Road (1050 East) to the existing line in Valley Hills Boulevard near Callaway Drive. This line is necessary to feed and loop pressurized irrigation to this area.

I-011 300 East – East Bypass to 1600 N (10-inch): A 10-inch line should be constructed on 300 East from the East Bypass through the property just to the east of US 40 to connect to the pipeline at the Wasatch Canal near Coyote Lane. This line is necessary to feed and loop PI to this area. Development should install and pay for a portion of this 6-inch line and impact fees should pay for Heber City's portion of the oversizing.

I-012 East Bypass – US 40 to 300 E (12-inch): A 12-inch line should be constructed in US 40 and 800 North from approximately 700 North to approximately 300 East (I-011). The existing line in this area from the canal will be replaced with this line. Development should install and pay for a portion of this 6-inch line and impact fees should pay for Heber City's portion of over sizing this line.

I-013 Regulation Pond(s) (6 ac-ft): Regulation ponds are necessary to maintain peak day flow in Heber City. Approximately 1 ac-ft per 60 irrigated acres is necessary for flow regulation. These ponds are operated and maintained by the CUWCD. The location of these ponds are shown on Figure 8-1. Heber City needs to pay for the City's share to install these facilities since residential irrigation patterns are contributing to the need for ponds. Development will pay for a portion of this storage though impact fees to accommodate City growth.

I-014 Aerial Photography Update: The Aerial Photography should be updated every five years.

I-015 Master Plan Update: The Master Plan should continue to have yearly updates with major updates every five years.

(Ultimate) I-016 Regulation Pond(s): Regulation ponds are necessary to maintain peak day flow in Heber City. Approximately 1 ac-ft per 60 irrigated acres is necessary for flow regulation. The location of regulation ponds needed beyond the 20-year planning period is unknown. Heber City will need to help pay for the cost to install these facilities since residential irrigation patterns are contributing to the need for ponds. Impact fees will pay for the portion of the pond that is required for Heber City's growth in the future.

I-018 East Bypass – 800 E to 300 E (16-inch): A 16-inch line should be constructed in 900 North from approximately 800 East to approximately 300 East (I-011 and I-012). The existing line in this area from the canal will be replaced with this line. Development should install and pay for a portion of the 6-inch line and impact fees should pay for Heber City’s portion of over sizing this line.

I-022 1200 South Sawmill Blvd to 1050 S 1100 E (8-inch): An 8-inch line should be constructed between 1200 South Sawmill Blvd and 1050 South 1100 East. Development should install and pay for a portion of this 6-inch line and impact fees should pay for Heber City’s portion of over sizing this line.

I-023 Becca Rd – 600 E to Sawmill Blvd (6-inch): A 6-inch line should be constructed in Becca Road from 600 East to Sawmill Boulevard. Development should install and pay for a portion of the 6-inch line.

I-024 600 East – 1300 S to US 40 (6-inch): A 6-inch line should be constructed in 600 East from approximately 1300 South to US 40. Development should install and pay for a portion of the 6-inch line.

I-026 Heber City Public Works Facility Expansion Ph.1: The Heber City Public Works Department Building was expanded in 2018 to accommodate growth and maintain the same level of service on the City’s street system. Impact fees were used to pay for the irrigation portion of this expansion which was debt funded with payments continuing through the master plan 20-year window. See Appendix A for the construction cost allocation.

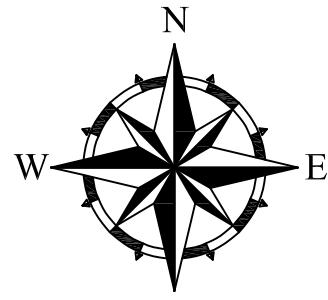
I-027 Heber City Public Works Facility Expansion Phase 2: The Heber City Public Works Department Building and Maintenance Site will be expanding to maintain the current level of service that the Public Works department currently provides in maintaining the pressurized irrigation system. Phase 2 will likely commence around 2028. Impact fees will pay for all this phase since it is only needed for future growth.

I-028 100 South from 1100 West to 900 West (8-inch): An 8-inch pipeline should be constructed at approximately 1100 West to 900 West along 100 South. This is needed to supply adequate capacity to the new High School. The new High School Development should pay for this line.

Water Rights

All water is in the process of being adjudicated in Heber Valley. Therefore, additional water rights cannot be obtained unless it is purchased from agriculture or obtained through land annexations and/or developments. Because of this, it is recommended that the City continue requiring annexed land to provide the required water for outdoor use for each new development.

Heber City currently has approximately 2,266 ac-ft of irrigation water shares. Irrigation shares are reduced by the State Engineer when converted to municipal water rights. Heber City only converts irrigation shares to municipal water rights for indoor use. Irrigation water through the pressurized irrigation system is used through the Heber City owned irrigation shares. Water Rights are discussed in more detail in section 8.3.



0 5200 10400 Feet

EXISTING CREEKS AND CANALS

- ① LAKE CREEK
- ② LOWER WASATCH CANAL
- ③ NORTH LAKE CREEK
- ④ HUMBUGH CANAL
- ⑤ WASATCH CANAL
- ⑥ CENTER CREEK
- ⑦ TIMPANOGOS CANAL
- ⑧ FLOOD CHANNEL
- ⑨ SAGEBRUSH AND SPRING CREEK CANAL

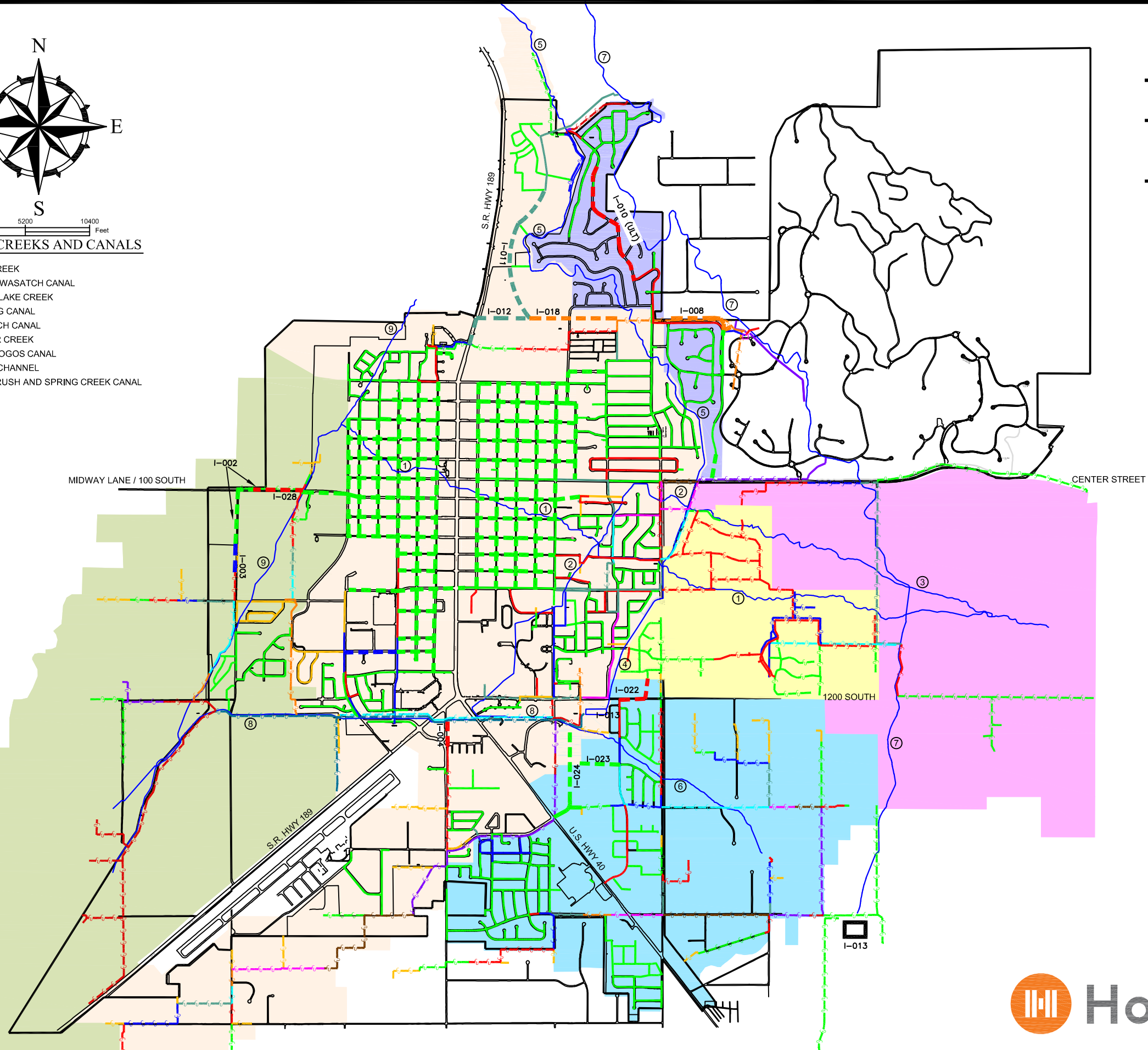


FIGURE 8-1

HEBER CITY

FUTURE PRESSURIZED IRRIGATION SYSTEM

- ULTIMATE BUILDOUT BOUNDARY
- HEBER CITY BOUNDARY
- EXISTING ROADS
- CITY IRRIGATION LINE
- CUWCD IRRIGATION LINE

EXISTING IRRIGATION LINES

PIPE SIZE (inches)	PIPE COLOR
4	Orange
6	Green
8	Red
10	Blue
12	Cyan
14	Light Blue
16	Yellow
18	Pink
20	Brown
24	Purple
30	Dark Red
36	Light Green
48	Dark Blue

Existing Booster Pump Station



PROPOSED IRRIGATION LINES

PIPE SIZE (inches)	PIPE COLOR
6	Green
8	Red
10	Blue
12	Cyan
16	Yellow
18	Pink

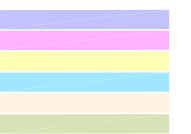
REGULATION POND SITE AREA



PROPOSED IRRIGATION ZONES

ZONE NAME	ZONE COLOR
-----------	------------

- TIMP 5 PRESSURE (T5P)
- TIMP 6 B (T6B)
- TIMP 6 C (T6C)
- TIMP 7 (T7)
- WASATCH 3 (W3)
- WASATCH S (WS)



728 WEST 100 SOUTH #2
HEBER CITY, UTAH 84032
(435) 654-2226

Operation

Central Heber does not have PI water available. A series of open ditches provide a majority of the irrigation water for this area, with some also being provided through Heber City's culinary water system. There are approximately 1,550 water users within this area. Most of the areas of Heber City located outside the central portion currently receive PI via the Wasatch County Water Efficiency Project (WCWEP) system constructed by Central Utah Water Conservancy District (CUWCD). Water for the existing open ditches comes from the Wasatch Canal. There are approximately 452 shares of Wasatch Irrigation Company stock held by users within Central Heber.

CUWCD supplies PI water to Heber City through metered connections on their system. Heber City is billed for this irrigation water use, and holds the irrigation water shares in behalf of City users. Historically the City hasn't metered PI water at individual connections but recently began a meter retrofit program to install meters. Until the retrofit program is complete the City continues to charge users a flat irrigation utility fee based on lot size. Heber City has adopted a Water Conservation Plan that provides guidelines for water conservation and helps reduce water consumption. However, as growth continues, meters and other strategies will continue to be utilized to help control PI water consumption.

Impact Fee Recommendations

It is recommended that Heber City revise the current pressurized irrigation impact fee from \$1,131 to a rate of \$844 per ERU. And for non-residential development, the fee should be revised from \$0.16 per irrigated square feet to \$0.12 per irrigated square feet.

8.2 Pressurized Irrigation Use

From the projected population, the additional future number of PI connections is determined along with the number of future ERU's. Using State design criteria and historical demands, the future water demands, including the average yearly, peak daily, and peak instantaneous demands, are projected through the planning period.

Projected Population

The projected population for Heber City from 2023 to 2043 is discussed in Chapter 3, Projected Population Growth. The 2023 population is estimated to be 18,347. The 2043 Heber City population was projected to be 29,682.

Historical Pressurized Irrigation Use

Heber City does not have historic metered PI use data. According to Heber City's PI supplier, CUWCD, historic PI use has been near the duty value used by Utah Division of Water Rights to calculate the diversion amount allowed for outside watering which is an average yearly demand of 3.0 ac-ft/acre. Heber City has historically approximated PI use by taking the difference between summer and winter use from source production records on the culinary water system and dividing it by the number of users without PI service on that system. Since this data is unavailable for the current master plan update, the prior master plan use of 402 gpd/ERU or 2.76 ac-ft per irrigated acre will continue to be used. See the outdoor water estimates in the "Outdoor Water Use" section of Chapter 4.

Equivalent Residential Unit's

Pressurized irrigation usage from typical residential connections differs from commercial, church, government, and other non-residential connections. To evaluate residential and non-residential connections on an equal basis, Equivalent Residential Unit's (ERU's) are used to compare non-residential connections. To calculate non-residential ERU's, culinary water use data was used. For this study, ERU's were approximated by dividing the historical metered winter culinary water usage of commercial, church, and government businesses by the total number of connections. This resulted in an average of 4.1 ERU's per non-residential connection between 2018 and 2021. In terms of ERU's, 2023 had approximately 5,405 PI ERU's (both residential and non-residential) connected to the system (7,249 - 1,844 ERU w/o PI) as shown in Table 8-1.

The total number of projected residential, church, government, and commercial ERU's, are shown in Table 8-1 in increments to 2043. The residential ERU's are shown for Central Heber, where currently PI is not available. These ERU's will be included in the total PI ERU's, once the system is installed in Central Heber, after 2028. There are approximately 761 ERU's outside the Central Heber area, that do not have PI available. These are also shown in Table 8-1. All PI connections within Heber City limits are counted in the estimated ERU number.

Table 8-1 Projected Pressurized Irrigation ERU's

Year	Residential Units	Non-Residential ERU's	Cent Heber ERU's	No-PI ERU's*	New ERU's	Red Ledges ERU's	Total ERU's**
2023 (est)	5,302	1,946	(924)	(761)		(159)	5,405
2024-2028	1,252	459	924		2,635	(36)	8,004
2029-2033	1,067	392			1,459	(79)	9,385
2034-2038	464	170			635	(92)	9,927
2039-2043	493	181			674	(174)	10,427
Total	8,578	3,149		(761)		(539)	10,427

* Approximate. ** Residential Units are adjusted for Red Ledges, and 626 new Cent Heber conn with remainder installed by 2028.

Pressurized Irrigation Use

The Division of Drinking Water estimates outdoor use in Section R309-510 of the Utah Administrative Code. Heber City is in map Zone 2 based on the Division of Drinking Water's water use map. State Drinking Water Rules require that water providers deliver sufficient supply to meet Peak Day and Average Yearly outdoor water demands at the source. The State Engineers procedure for estimating outdoor water use is as follows:

- Determine consumptive water use zone in which Heber City resides (Zone 2).
- Determine the Peak Day and Average Yearly demands using Table 510-3 found in State Rule R309-510.

The following are outdoor water use estimates for the Heber Valley which are based on this Code.

- Average Yearly Demand: 1,098 gpd, 1.23 acre-feet/irrigated acre
- Peak Day Demand: 4,032 gpd, 2.80 gpm/irrigated acre
- Peak Instantaneous Demand: 5.60 gpm/irrigated acre (Table 510-7)

To convert outdoor usage from a per acre basis to a per connection basis several subdivisions

were surveyed. The observations indicated that on 0.25 to 0.5 acre lots, 70% of the lot is available to be irrigated, and of that available amount, 70% on average is irrigated. This study has therefore assume that, on average, 49% of a typical lot is irrigated. It has also assumed that there are three connections per acre for residential land use. These assumptions and the State Drinking Water criteria result in a Peak Day demand of 659 gpd/ERU, and an Average Yearly demand of 179 gpd/ERU.

$$\frac{4,032 \text{ gal}}{\text{irr ac} - \text{day}} \times \frac{0.49 \text{ irr ac}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{3 \text{ ERU}} = 659 \text{ gpd/ERU}$$

$$\frac{1,098 \text{ gpd}}{\text{irr acr}} \times \frac{0.49 \text{ irr ac}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{3 \text{ ERU}} = 179 \text{ gpd/ERU}$$

This method results in significantly lower use than Heber City's average outdoor culinary water use of 402 gpd/ERU at the source, estimated from production records between 2016 and 2019 and based on the average usage for residential connections which irrigate with culinary water. Therefore, a second method has been used in this study.

The second method of determining outdoor usage is by using the duty value used by Utah Division of Water Rights to calculate the diversion amount allowed for outside watering. This method is also used for estimating outdoor (irrigation) water right requirements for new development in the City. Heber City is considered a higher cooler valley, and the irrigation duty amount is 3 ac-ft per irrigated acre. The irrigation season is described as April 1 to October 31. This method results in an Average Yearly demand of 3.0 ac-ft/acre which converts to 437 gpd/ERU using three connections per acre and 49% irrigated landscaping per lot. The Utah Division of Water Rights duty amount 437 gpd/ERU slightly higher than the City's average metered outdoor culinary water use of 402 gpd/ERU, however, it was used in this study because it appears conservative and comparable to past City source production records.

All future development will have PI; therefore, the number of ERU's using culinary water for outdoor use should decrease. Projected total City outdoor water use from the culinary system is assumed to remain constant for this study. However, as the PI system expands into portions of Central Heber, overall, PI water use will increase.

The Peak Day demand for PI is based on a 6-month use period with the peak months being July and August. This equates to a factor of 2 for the 6-month period and additional 1.7 peaking factor for the hottest days, for a total peaking factor of 3.4. The resulting peak day demand is 1,486 gpd/ERU (437 gpd x 3.4), which equates to 6.32 gpm per irrigated acre which is greater than the peak day demand of 2.80 gpm per irrigated acre as outlined Table 510-3 of R309-510-9. This was determined from information gathered from CUWCD.

$$\frac{1,486 \text{ gal}}{\text{ERU} - \text{day}} \times \frac{1 \text{ day}}{24 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{3 \text{ ERU}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{0.49 \text{ irr ac}} = \frac{6.32 \text{ gpm}}{\text{irr ac}}$$

The peak instantaneous demand is determined by multiplying the peak day demand of 1,486 gpd/ERU, by the nighttime peaking factor of 2.0. This results in a peak instantaneous demand of 2,970 gpd/ERU. This was determined from information gathered from CUWCD.

$$\frac{437 \text{ gal}}{\text{ERU} \cdot \text{day}} \times \frac{1 \text{ day}}{24 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{3 \text{ ERU}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{0.49 \text{ irr ac}} = \frac{1.86 \text{ gpm}}{\text{irr ac}}$$

$$\frac{2,970 \text{ gal}}{\text{ERU} \cdot \text{day}} \times \frac{1 \text{ day}}{24 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{3 \text{ ERU}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{0.49 \text{ irr ac}} = \frac{12.63 \text{ gpm}}{\text{irr ac}}$$

There are approximately 1,550 users in Central Heber with new connections currently being installed to 626 users. Using 437 gpd per ERU, peaked at the outdoor peaking factor of 3.4, results in a peak day demand of 954 gpm for PI use. Estimated PI Use and projected future use are shown in Appendix F.

Projected Number of Pressurized Irrigation Connections

The projected numbers of new residential pressurized irrigation connections are determined using the growth numbers in Chapter 3. The residential connections are assumed to increase at the same rate as population growth in addition to the new connections from a pressurized irrigation system in Central Heber City. In 2023 there were an estimated 3,458 residential PI connections (7,249 Total - 1,550 Cent Heber + 626 currently being installed - 761 Other - 159 RedL - 475 Non-Res x 4.1).

Commercial, church/government, and other non-residential connections are assumed to increase at a rate equal to the City's projected population. In 2023 there were approximately 475 commercial, church, and government connections or 1,948 PI ERUs assuming 4.1 ERUs per connection.

Agricultural connections are used to water livestock and irrigate fields. There are several agricultural connections within Heber City limits. CUWCD supplies the water to these connections.

Projected Areas of Development

To relate the projected population to the improvements needed to serve them, the areas expected to be developed need to be determined. The areas projected to be developed by the increased population are determined based on existing zoning regulations, available land within City limits, and land presently being annexed.

City officials have anticipated where and how future development will occur. This study uses a building and planning map provided by Heber City's Planning department for the planning area, shown in Figure 3-2.

System Losses

Distribution systems have inherent losses that are functions of the size of pipe, joint construction, temperature, and age of the system. Typical municipal systems lose as much as 15-25% of the water flowing through the system. Heber City does not have the measurement means to determine the leakage within the pressurized irrigation system. It is recommended that the City monitor potential losses in the pressurized irrigation system.

Summary of Projected Water Flows

Projected Average Yearly outdoor water demand for the PI system is shown in Table 8-2 The PI water demand is based on 437 gpd/ERU, the number of PI connections, the assumption that all new development will have PI available, and that a percentage of the existing culinary users will

switch to PI for their outdoor use in the future.

Table 8-2 Required Minimum Capacities Pressurized Irrigation Use

Year	Number of ERU's*	Average Yearly Demand (mgd)	Average Yearly Demand (ac-ft)	Peak Day Demand (mgd)	Peak Day Demand (gpm)	Peak Instantaneous (gpd)	Peak Instantaneous (gpm)
2023	5,405	2.36	2,646	8.03	5,576	16.06	11,153
2028	7,080	3.09	3,466	10.52	7,305	21.04	14,610
2033	9,385	4.10	4,594	13.94	9,682	27.89	19,365
2038	9,927	4.34	4,859	14.75	10,242	29.50	20,484
2043	10,427	4.56	5,104	15.49	10,758	30.98	21,516

* Residential Units are adjusted for Red Ledges, and 626 new Cent Heber conn with remainder installed by 2028.

8.3 Pressurized Irrigation System Analysis and Level of Service

Heber City's present PI system's capacity and Level of Service (LOS) were checked by analyzing the distribution systems. Heber City uses the State's minimum sizing requirements for water facility design and operation per Rule R309-510 to determine their minimum LOS for the distribution system. Future improvements needed to serve projected population demands are sized to maintain the existing capacities and LOS. This section describes the present system, design parameters, and recommendations for needed improvements.

Sources

Heber City's PI system is presently supplied by CUWCD and their sources.

Water Rights

All water is being adjudicated in Heber Valley. Therefore, additional water rights cannot be obtained for new culinary wells unless it is purchased from agriculture or obtained through land annexations and/or developments. Because of this, it is recommended that the City continue requiring annexed land to provide the required water for indoor and outdoor use for each new development. After irrigation shares are obtained, they can be converted to water rights for municipal use.

Irrigation Shares

Heber City currently owns 452 Wasatch irrigation shares, 136 Timpanogos Class D irrigation shares, 20 Timpanogos irrigation shares, and variety of other company shares which are summarized in Table 8-3. These shares are currently used for the existing pressurized system or leased out for irrigation purposes and have not been converted to municipal water use.

Change applications were filed in 2019 and 2020 for Timpanogos and Wasatch Irrigation Company shares which converted approximately 1,744 ac-ft of the irrigation rights that the City held. The Change applications converted 379 Timpanogos shares (486 ac-ft) and 535 Wasatch shares (1,258 ac-ft) to municipal use but retained the flexibility to use them for either culinary (Depletion) or irrigation (Diversion) purposes. Though these rights were converted, they continue to be used for the existing pressurized irrigation system.

Table 8-3 shows the current shares and the respective municipal water conversion rates used in Heber City for converting irrigation shares to municipal use. When converting from irrigation to municipal use in Heber City, the State allows 2.07 acre-ft depletion per acre of irrigation water.

Table 8-3 Heber City's Irrigation Shares and Municipal Conversion

Irrigation Company	Irrigation			Municipal Conversion			
	Shares	Diversion (ac-ft /share)	(ac-ft)	Depletion per 1 acre (ac-ft)	Depletion Allowed (ac-ft)	(cfs)	(gpm)
Daniels Irrigation	137	0.75	103	2.07	71	0.098	44.0
Extension Irrigation	371	0.30	111	2.07	77	0.106	47.6
Sage Brush Irrigation	6	0.30	2	2.07	1	0.002	0.8
Spring Creek Irrigation	74	0.60	44	2.07	30	0.042	18.9
Timpanogos Irrigation	20	1.85	38	2.07	26	0.036	16.2
Timpanogos Class D	136	3.00	409	2.07	282	0.389	174.8
Wasatch Irrigation	452	3.40	1,535	2.07	1,059	1.463	656.7
Other	-	-	24	-	-	-	-
Total			2,266		1,547		959

Heber City currently has approximately 2,266 ac-ft of diversion irrigation water rights. Table 8-4 shows the current irrigation water share allotted use. Development that has been completed, with water shares previously supplied to the City, will use 986 (460 + 526 ac-ft) ac-ft for both culinary water and PI water use. Up to 1,162 ac-ft of water will be needed for the PI system being installed in Central Heber. This leaves the City with a balance of 118 ac-ft.

Additional irrigation shares and water rights should continue to be collected from all new development, as recommended and discussed in Chapter 4 - Culinary Water, to insure Heber City has adequate irrigation water rights for projected growth.

Table 8-4 Heber City's Irrigation Share Balance

Irrigation Share Use	Units	Average Use				Diversion Shares Used ²
	(ERU)	(gpd/ERU)	(gpd)	(gpm)	(ac-ft)	(ac-ft)
City Banked Irrigation Shares						2,266
Vacant Lots Use (indoor use)	1,074	264	283,536	197	318	(460)
Vacant Lots Use (outdoor use)	1,074	437	469,338	326	526	(526)
Future Central Heber PI System ¹	1,550	669	1,036,950	720	1,162	(1,162)
Irrigation Share Balance						118

¹ Average day for Central Heber is higher due to larger irrigated area.

² Average indoor use must be converted from depletion to diversion for comparable water right shares. Depletion x 3 / 2.07 = Diversion shares.

Storage

Heber City's PI system is presently supplied by CUWCD and their respective storage facilities.

DISTRIBUTION SYSTEM

The capacity of Heber City's existing PI distribution system will be discussed in this section. Improvements will then be recommended to meet the projected water demand in areas of future development. Figure 8-2 shows the existing distribution system.

Distribution System Requirements

The distribution system needs to be able to meet the Peak Day demand and maintain 40 psi at all connections. It must also meet the peak instantaneous while maintaining a minimum of 30 psi at all connections within the system.

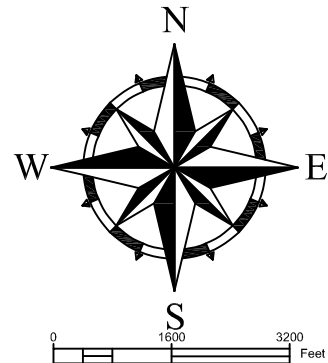
Computer Model of Pressurized Irrigation System

A computer program called *WaterGEMs Connect Edition* was used to model Heber City's water system. The program requires that all pipes, elevations at intersections, sources, reservoirs, canals, pumps, and pressure reducing valves (PRV) be entered into the model as they are constructed. System demands are then entered in. The program calculates static pressure throughout the system based on the given elevations. Sources, pumps, pipes, demand nodes, and other system elements are modeled and can be graphed throughout the time period.

After the model is run and problem areas are defined, improvements can be modeled to bring the system up to the minimum level of service (LOS). Determining which improvements in the system will bring the system up to the minimum LOS in the most economical manner is a trial and error process.

The existing PI system was modeled and calibrated. The areas that are nearing minimum LOS were identified. Improvements were determined that would allow minimum flows and pressures to be preserved throughout the existing system. These improvements are recommended in this section and were shown previously in Section 8.1, Figure 8-1.

Heber City's General Plan map was used to determine future development densities, and the projected number of ERU's in undeveloped areas were determined. The additional demand projected for undeveloped areas was added to the present demand. From this information, the ultimate build-out water system was modeled, and the future improvements were identified to provide the necessary flows and pressures to maintain the pressurized irrigation LOS in Heber City.



EXISTING CREEKS AND CANALS

- ① LAKE CREEK
- ② LOWER WASATCH CANAL
- ③ NORTH LAKE CREEK
- ④ HUMBUG CANAL
- ⑤ WASATCH CANAL
- ⑥ CENTER CREEK
- ⑦ TIMPANOGOS CANAL
- ⑧ FLOOD CHANNEL
- ⑨ SAGEBRUSH AND SPRING CREEK CANAL

FIGURE 8-2

HEBER CITY

EXISTING PRESSURIZED IRRIGATION SYSTEM

LEGEND

- ULTIMATED BUILDOUT BOUNDARY
- HEBER CITY BOUNDARY
- EXISTING ROADS
- CITY IRRIGATION LINE
- CUWCD IRRIGATION LINE

EXISTING IRRIGATION LINES

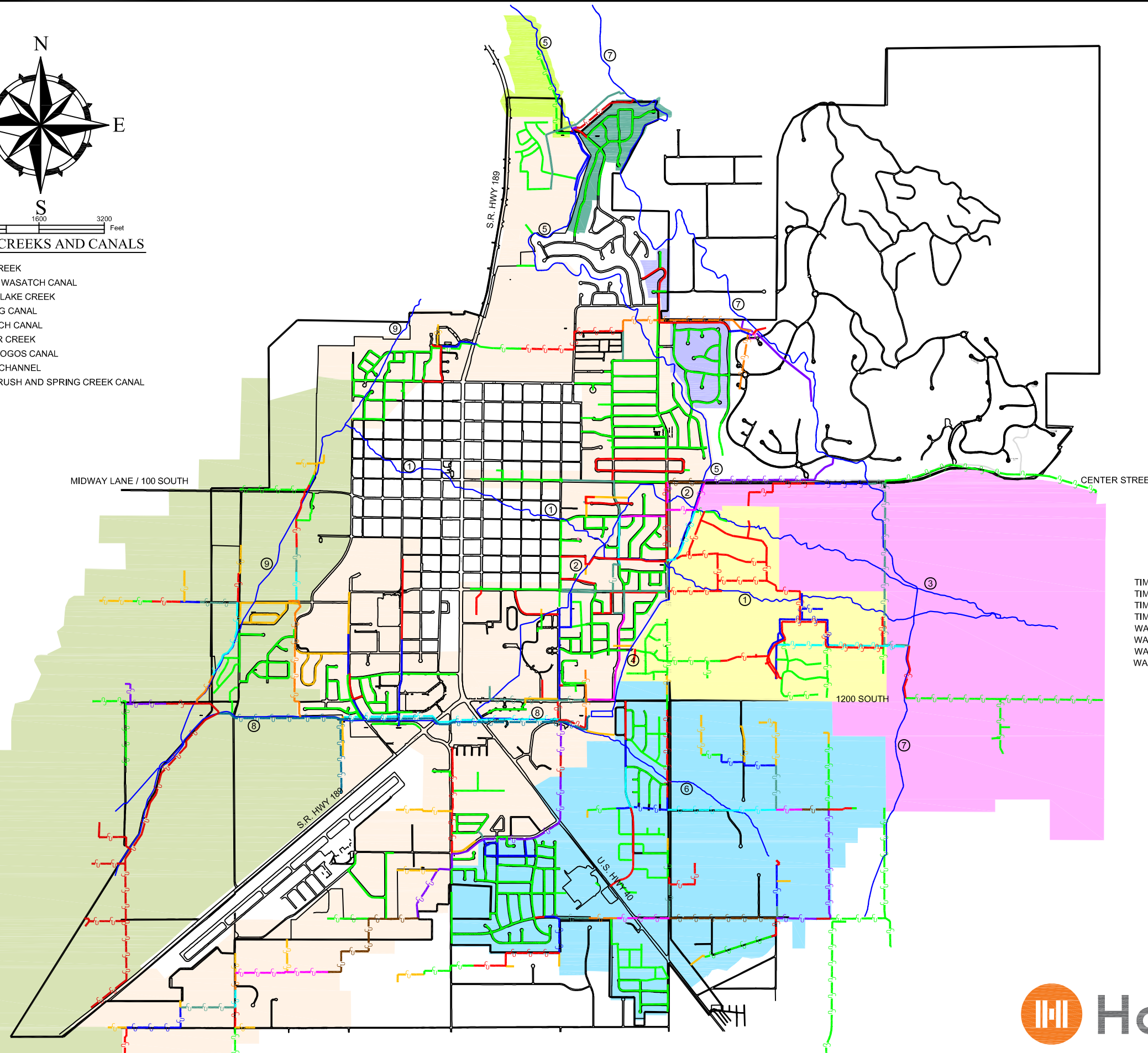
PIPE SIZE (inches)	PIPE COLOR
4	Orange
6	Yellow
8	Red
10	Blue
12	Green
14	Cyan
16	Light Blue
18	Pink
20	Brown
24	Purple
30	Dark Red
36	Light Green
48	Dark Blue

Existing Booster Pump Station



IRRIGATION ZONES

ZONE NAME	ZONE COLOR
TIMP 5 PRESSURE (T5P)	Light Purple
TIMP 6 B (T6B)	Yellow
TIMP 6 C (T6C)	Light Blue
TIMP 7 (T7)	Light Green
WASATCH 1 PRESSURE (W1P)	Light Blue
WASATCH 1 GRAVITY (W1G)	Light Green
WASATCH 3 (W3)	Light Blue
WASATCH S (WS)	Light Green



728 WEST 100 SOUTH #2
HEBER CITY, UTAH 84032
(435) 654-2226

Distribution System Recommendations

The entire Heber City portion of the PI system and key elements of the CUWCD pressurized irrigation system was modeled for both present and projected populations for instantaneous conditions and a 24-hour extended period simulation. Water system information and recommendations were obtained from CUWCD and incorporated into the recommended future water system and water model. Deficiencies for the future system were identified which helped expose the ideal locations for the future waterline projects.

Recommended improvements and estimated costs are shown in Table 8-5. The costs of the improvements include construction costs, engineering costs, legal and administrative fees and contingencies. The total estimated cost for the recommended improvements is \$15,850,552.

The most significant project in the proposed PI program is the Central Heber Pressurized Irrigation Project (I-001). The total cost to install PI in Central Heber is estimated to be \$9,086,772. Installing this system, along with continuing to require PI for new development can reduce or postpone the need for both the Culinary Water Source (W-027) and Storage Tank (W-054) projects till 2030 or beyond. A portion of the funding from these culinary water projects is proposed to be used to pay for the Central Heber irrigation project (I-001). The total impact fee revenue proposed to be transferred to I-001 is approximately \$5,440,438. These leaves \$9,511,066 in funding to be paid for by grants or other means.

Table 8-5 Heber City's Estimated Cost of Pressurized Irrigation Improvements

ULT	CIP #	Recommended Improvements	Size (in)	Total Cost	Funding Proportionate Share Analysis							
					Operating		Developer		Other ¹		Impact Fee	
					%	\$	%	\$	%	\$	%	\$
ULT	I-001	Central Heber Pressurized Irrigation Project		\$9,086,772	0%	\$0	0%	\$0	100%	\$9,086,772	0%	\$0
	I-002	1200 W 430 S to 1100 W 100 S (6")	6	\$266,875	0%	\$0	54%	\$144,113	0%	\$0	46%	\$122,763
	I-003	1200 West - 430 S to 500 S (10")	10	\$409,018	0%	\$0	45%	\$184,058	0%	\$0	55%	\$224,960
	I-004	Daniel Rd - 1450 S to 1300 S (8")	8	\$246,758	0%	\$0	65%	\$160,393	35%	\$86,365	0%	\$0
	I-008	East By-pass - 1500 E to 1240 E	16	\$558,029	0%	\$0	100%	\$558,029	0%	\$0	0%	\$0
	I-010	Valley Hills Blvd - Mill Rd to Callaway Dr (8")*	8	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	I-011	300 East - East Bypass to 1600 N (10")	10	\$593,309	0%	\$0	30%	\$177,993	0%	\$0	70%	\$415,316
	I-012	East Bypass - US 40 to 300 E (12")	12	\$290,736	0%	\$0	55%	\$159,905	45%	\$130,831	0%	(\$0)
	I-013	Regulation Pond(s) (6 ac-ft)		\$1,834,457	0%	\$0	0%	\$0	0%	\$0	100%	\$1,834,457
	I-014	Aerial Digital Map Updates (4 times)		\$23,040	0%	\$0	0%	\$0	0%	\$0	100%	\$23,040
ULT	I-015	Master Plan Updates every 5 years (4 times)		\$288,000	0%	\$0	0%	\$0	0%	\$0	100%	\$288,000
	I-016	Regulation Pond(s)		\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	I-018	East Bypass - 800 E to 300 E (16")	16	\$845,222	0%	\$0	23%	\$194,401	77%	\$650,821	0%	\$0
	I-022	1200 S Sawmill Blvd to 1050 S 1100 E (8")	8	\$161,482	0%	\$0	60%	\$96,889	0%	\$0	40%	\$64,593
	I-023	Becca Rd - 600 E to Sawmill Blvd (6")	6	\$339,840	0%	\$0	65%	\$220,896	35%	\$118,944	0%	\$0
	I-024	600 East - 1300 S to US 40 (6")	6	\$469,555	0%	\$0	50%	\$234,778	50%	\$234,778	0%	\$0
	I-026	Heber City Public Works Facility Exp Ph 1		\$35,676	0%	\$0	0%	\$0	0%	\$0	100%	\$35,676
	I-027	Heber City Public Works Facility Exp Ph 2		\$149,501	0%	\$0	0%	\$0	0%	\$0	100%	\$149,501
I-028	100 South - 1100 W to 900 W (8")	8	\$252,282	0%	\$0	100%	\$252,282	0%	\$0	0%	\$0	
TOTAL EXPENDITURES				\$15,850,552		\$0	\$2,383,736		\$10,308,511		\$3,158,305	

NOTES:

1. "Other" includes grants, special assessments, contributions from WCWEP, and/or previously collected impact fees.
2. Project I-001 may be subsidized by funding from Projects W-054 and W-027 since this project offsets source and storage capacity to be built by the culinary projects. It is assumed that a water saving grant may also be available to help pay for part of I-001 as the project is constructed. The project will be funded by impact fee money and grants combined in the "Other" column of I-001 per the following allocation: 1) \$2,246,000 from Culinary Source project (W-027), 2) \$2,347,000 from Culinary Tank (W-054), and 3) the remainder from Water Saving or other grants. If City is unable to obtain grants or other funding, portions of the Central Heber PI replacement project will be postponed or scaled back.
3. Assumed 5.0% interest rate on bonds. All bonds for impact fees assumed to be paid off by 2043.
4. The Aerial Digital Map and Master Plan update needs to be done four times in the next 20 years. The total cost is divided by four in the Impact Fee Expenditure Plan Improvement Costs.
5. A total of ±\$1,199,000 listed in the "Other" column is funded by the existing impact fee account as of April 17, 2023. Applied to I-002 through I-027, excluding I-013.
6. ERUs based on 2042 ERU projection minus Red Ledges 380 (1,186 / 3.12) full time units served by Twin Creeks. Non-PI users on culinary that will be converted have been excluded.
7. All new irrigation lines will be owned by Heber City. All oversizing is for Heber City future capacity needs.

8.4 Economic Feasibility Analysis

The two types of funding for Heber City's pressurized irrigation system are operating and non-operating funds. Independently, these two funds should generate sufficient revenue to fund the respective needs of the irrigation system. Operating expenses include the monies used for personnel and contractual services, betterment and replacement type capital improvement projects, materials, supplies, depreciation, and other operating expenses. Revenue to fund these operating expenses is generated from irrigation user fees.

Non-operating expenses comprise expansion type capital improvement projects, developer reimbursements, master planning, aerial mapping, and bond repayment. The revenue for non-operating expenses is generated from impact fees. Generally, operating expenses should be funded by the existing connected population, and non-operating expenses necessary for future development should be paid by the future population by way of impact fees.

In this section, only the non-operating expenses are discussed. Projected revenue and expenditures have been analyzed to determine if present fees are sufficient to fund the recommended improvements and other related expenditures.

Impact Fee Fund

The Impact Fee Fund or capital project fund is used to fund improvements needed to meet the increased demands due to growth. Revenue is currently generated from the “impact fee” charged to new developments. This revenue is used for capital improvement projects and debt service.

The impact fee can be used to fund capital improvements, including construction costs, land acquisition, material costs, planning, surveying, and engineering fees provided for and related directly to the construction of the system improvements; and debt service charges to the principal and interest on bonds, notes or other obligations issued to pay the cost of the system improvements. This revenue can also be used to fund annual Master Plan reviews and Master Plan updates approximately every five years.

Developer Contributions

The City has a policy that developers are responsible for 100% of the cost of on-site improvements needed to serve their development. Developers are also responsible for extending any off site services needed to serve their development. However, reimbursement for a portion of these costs may be available through reimbursement agreements or impact fees if the facilities have previously been identified in this Master Plan. The City’s policy for pressurized irrigation pipelines is to reimburse the incremental over-sizing cost for lines above 6-inches, unless the oversized line is needed specifically to meet the needs of the development.

Currently, the irrigation impact fee that is charged to new development is \$1,103 per ERU for residential development and \$0.016 per irrigated square foot for non-residential development. Based on the estimated cost of the required improvements in Table 8-5, with bond interest added, the total cost for improvements over the next 20 years is \$3,460,689 (\$3,158,305 + \$302,383). The projected number of new residential and non-residential ERU’s is 4,098. The recommended new impact fees are \$844 per ERU for residential development and \$0.12 per irrigated square foot for non-residential.

All new development pays the irrigation impact fee which will generate sufficient revenue to fund the recommended capital improvements and bond re-payments shown in Table 8-6 and excludes the operating portion of the improvements identified in Table 8-5.

Table 8-6 Projected Impact Fee Revenue and Projected New Connections.

Impact Fee Expenditure Plan							Collected vs Cost	Bond Loan Plus Payments	Fund Running Balance
Year	ERUs ²	Impact Fee Collected (\$)	Available Funds (\$)	Improvement Projects ¹		5-year Improvement Costs (\$)			
2024	295	\$249,122		I-014	I-012			\$0	\$0
2025	308	\$260,101		I-015	I-013			\$0	\$0
2026	323	\$272,768		I-026	I-018			\$0	\$0
2027	337	\$284,591		I-001	I-023			\$0	\$0
2028	353	\$298,102	\$1,364,683	I-004	I-024	\$1,921,136	(\$556,453)	\$560,000	\$3,547
2029	369	\$311,614		I-014	I-011			(\$53,952)	(\$50,405)
2030	386	\$325,970		I-015	I-022			(\$53,952)	(\$104,356)
2031	403	\$340,326		I-026	I-027			(\$53,952)	(\$158,308)
2032	102	\$86,137		I-002				(\$53,952)	(\$212,260)
2033	104	\$87,826	\$1,151,874	I-003		\$1,063,811	\$88,063	\$126,048	\$1,852
2034	105	\$88,671		I-014				(\$77,263)	(\$75,411)
2035	106	\$89,515		I-015				(\$77,263)	(\$152,673)
2036	108	\$91,204		I-026				(\$77,263)	(\$229,936)
2037	109	\$92,049						(\$77,263)	(\$307,198)
2038	111	\$93,738	\$455,176			\$86,679	\$368,497	(\$77,263)	(\$15,964)
2039	113	\$95,427		I-014				(\$77,263)	(\$93,226)
2040	114	\$96,271		I-015				(\$77,263)	(\$170,489)
2041	116	\$97,960		I-026				(\$77,263)	(\$247,751)
2042	117	\$98,804						(\$77,263)	(\$325,014)
2043	119	\$100,493	\$488,955			\$86,679	\$402,276	(\$77,263)	\$0
4,098		\$3,460,689				\$3,158,305	\$302,383	(\$302,383)	

Estimated New ERU's⁶ = 4,098
Average Irrigated SF per Residential Unit = 7,114
Total Estimated New Irrigated SF = 29,153,172

Impact Fee per Irrigated SF with Bond Interest = \$0.12
Impact Fee per ERU with Bond Interest = \$844

Estimated New ERU's⁶ = 4,098

Impact Fee per Irrigated SF with Bond Interest = \$0.12
Impact Fee per ERU with Bond Interest = \$844

NOTES:

1. Project order in which development will occur in City is approximated and will change as development dictates.
2. 2043 projected Residential and Non-Residential ERU's minus Red Ledges because Red Ledges does not pay PI impact fees.
3. I-014, I-015, and I-026 are divided by 4 to spread over 20 year window.
4. Must borrow sufficient funds to cover shortfall in fees collected. Must keep Fund Running Balance low to insure fees are spent in 6 years.
5. If Fund Running Balance has excess funds at end of 5 yr window then use to pay off debt sooner.

To keep abreast of inflation and increasing construction costs, the impact fees should be reviewed annually to ensure that the required funding will be available.

Until pressurized irrigation is installed in Central Heber, ditch irrigation will continue to be available to residents with existing irrigation shares. Currently a yearly \$22.07 per share fee is assessed by the City with a \$10.00 minimum fee for this service.

**HEBER CITY CORPORATION
75 North Main Street
Heber City, UT 84032
Heber City Council Meeting
January 16, 2024**

DRAFT Minutes

**4:30 p.m. OPMA Training
4:45 p.m. Closed Session
5:00 p.m. Work Meeting
6:00 p.m. Regular Meeting**

I. COUNCIL TRAINING: OPEN AND PUBLIC MEETINGS ACT (OPMA) - 4:30 P.M.

Mayor Franco called the meeting to order at 4:32 p.m. and welcomed everyone present.

City Council Present:

Mayor Heidi Franco
Council Member Yvonne Barney
Council Member Aaron Cheatwood
Council Member Mike Johnston
Council Member Sid Ostergaard
Council Member Scott Phillips

Staff Present:

City Manager Matt Brower
Chief of Police Parker Sever
City Engineer Russ Funk
City Attorney Jeremy Cook
City Recorder Trina Cooke

Staff Participating Remotely: City Engineer Russ Funk, Engineering Department Administrative Assistant Desiree Muheim, Engineering GIS Technician Shiona Howard, and Accounts Payable Technician Wendy Anderson.

1. Open and Public Meetings Act (OPMA) Annual Training (Jeremy Cook, City Attorney) - 15 min

City Attorney Jeremy Cook provided the 2024 annual Open and Public Meetings Act (OPMA) training for the City Council as required by State Code. Mayor Franco asked that the training be offered to all the City's committees and advisory boards.

II. CLOSED SESSION - 4:45 P.M.

City Council Present:

Mayor Heidi Franco
Council Member Yvonne Barney
Council Member Aaron Cheatwood
Council Member Mike Johnston
Council Member Sid Ostergaard
Council Member Scott Phillips

Staff Present:

City Manager Matt Brower
City Engineer Russ Funk
City Attorney Jeremy Cook
City Recorder Trina Cooke

Motion: Council Member Barney made the motion to enter Closed Session. **Second:** Council Member Johnston made the second. **Voting Yes:** Council Members Phillips, Ostergaard, Cheatwood, Barney, and Johnston. **Voting No:** None. The **Motion Passed Unanimously, 5-0**, and the meeting entered Closed Session at 5:02 p.m.

1. Strategy session to discuss the purchase, exchange, or lease of real property (Matt Brower, City Manager)

Motion: Council Member Phillips moved to adjourn the Closed Session and return to the open meeting. **Second:** Council Member Cheatwood made the second. The Closed Session adjourned at 5:45 p.m.

III. WORK MEETING - 5:00 P.M.

Mayor Franco called the Work Meeting to order at 5:46 p.m. and welcomed everyone present.

City Council Present:

Mayor Heidi Franco
Council Member Yvonne Barney
Council Member Aaron Cheatwood
Council Member Mike Johnston
Council Member Sid Ostergaard
Council Member Scott Phillips

Staff Present:

City Manager Matt Brower
Assistant City Manager Mark Smedley
Community Development Director Tony Kohler
City Planner Jacob Roberts
Chief of Police Parker Sever
City Engineer Russ Funk
Finance Director Sara Jane Nagel
City Attorney Jeremy Cook
City Recorder Trina Cooke

Staff Participating Remotely: Human Resources Manager Cherie Ashe, Public Works Director Matthew Kennard, Assistant City Manager Mark Smedley, City Engineer Russ Funk, Finance Director Sara Jane Nagel, Accounting Technician Wendy Anderson, Airport Manager Travis Biggs, and Engineering GIS Tech Shiona Howard.

Also Present: Michael O'Connor, Michael Moulton, Del Barney, Clayton Vance, Cal Johnson, Matt Taylor, Adam Long, Adam Thompson, Tori Broughton, Karin Beck, Thomas M Hansen, and others who did not sign in or whose signatures were illegible.

Also Attending Remotely: (Names are shown as signed in online) Grace Kloepper - KPCW, John Janson, Phil Jordan, Jason Norlen, Danny Hill, and Brock M.

1. Possible Development Agreement to construct 8 town homes at 460 W 200 S (Jamie Baron, Planning Manager) - *20 min*

Community Development Director Tony Kohler described the request of the petitioners for a zone change and development agreement to convert a single-family home lot into a multifamily townhome structure. He shared images of the proposed development as included in the attached meeting materials. Petitioners Michael O'Connor and Matt Taylor explained the intention was to provide accessible workforce housing. Council, Staff, and the petitioners discussed the details of the proposal.

Consensus of Council majority was to allow the petitioners to proceed with the zone change and development agreement process.

2. Review Ordinance 2023-46 Master Development Agreement (MDA) for 22 South 100 West Clayton Vance (Jacob Roberts, Planner) - *20 min*

City Planner Jacob Roberts presented the zone change request from the petitioner from a residential R-3 zone to a C-3 commercial zone. He shared images of the proposed building design, including color options, and the location on a map as found in the attached meeting materials. The Planning Commission had held a public hearing and forwarded a positive recommendation to the City Council. Community Development Director Tony Kohler reviewed the policy questions before Council and suggestions to address utility easement concerns. City Engineer Russ Funk described the difficulties faced with undergrounding powerlines and decreased utility easement right-of-ways. Council discussion included parking concerns, road width, and right-of-way requirements.

City Manager Matt Brower suggested that the Council extend the upcoming Annual Council Retreat by one hour in order to continue the discussion.

IV. BREAK - 10 MIN

V. REGULAR MEETING - 6:00 P.M.

1. Call to Order - Mayor Franco

Mayor Franco called the Regular City Council Meeting to order at 7:05 p.m. and welcomed everyone present.

2. Pledge of Allegiance (Sid Ostergaard, Council Member)

Council Member Sid Ostergaard led the recitation of the Pledge of Allegiance.

3. Prayer/Thought by Invitation (Yvonne Barney, Council Member)

Council Member Yvonne Barney shared a prayer.

VI. CONFLICT OF INTEREST DISCLOSURE:

Council Member Yvonne Barney indicated she would recuse herself from the vote for the Planning Commissioner nominations as her husband was one of the nominees. Mayor Franco proposed the nominees be voted upon separately in order for Council Member Barney to vote on the other nominees.

VII. CONSENT AGENDA:

1. January 2, 2024, City Council Meeting Minutes (Trina Cooke, City Recorder)

2. Planning Commissioner Nominations by Mayor (Heidi Franco, Mayor)

The Mayor removed Consent Agenda Item Two to approve the nomination of the Planning Commissioners from the Consent Agenda in order to be discussed during the Action Items Agenda.

Mayor Franco reviewed the qualifications for Planning Commissioner nominee and acting Planning Commission Alternate, Robert Wilson. She asked for the amount of time in the remaining terms of the two vacancies being filled. The vacation of the seat previously held by Oscar Covarrubius had five years remaining in the term. The vacation of the seat previously held by Sid Ostergaard had two years remaining.

Motion: Council Member Barney moved to confirm the nomination of Mr. Robert Wilson to fulfill the remaining five years of the Planning Commissioner term as vacated by Oscar Covarrubius. **Second:** Council Member Ostergaard made the second. **Voting Yes:** Council Members Phillips, Ostergaard, Cheatwood, Barney, and Johnston. **Voting No:** None. The **Motion Passed Unanimously, 5-0.**

Council Member Barney recused herself from the discussion and vote for the nomination of Del Barney.

Mayor Franco reviewed the qualifications for Planning Commissioner nominee Del Barney and indicated she was nominating him to fulfill the remaining two years in the term for the seat vacated by Sid Ostergaard.

Council discussion resulted in the request to remove the nomination of Del Barney in order to avoid the possibility of appearing inappropriate to the public that a City Council Member and Planning Commission were married. Mayor Franco defended her nomination of Del Barney and felt he was fair and qualified. Council agreed with the Mayor's characterization of Mr. Barney.

Mayor Franco asked for a motion. No motion was put forth. Mayor Franco withdrew her remaining nominations to the Planning Commission.

3. Cancellation of March 5, 2024, City Council Meeting due to Utah State Legislative Caucus (Heidi Franco, Mayor)
4. Confirmation of Aaron Cheatwood Appointment to the City Audit Committee (Heidi Franco, Mayor)

Motion: Council Member Johnston moved to approve Consent Agenda items One, Three, and Four, and for Item Three to hold a Work Meeting on March 5 to end no later than 6:00 p.m. **Second:** Council Member Ostergaard made the second. **Voting Yes:** Council Members Johnston, Ostergaard, Cheatwood, Barney, and Phillips. **Voting No:** None. The **Motion Passed Unanimously, 5-0.**

VIII. PUBLIC COMMENTS: (3 min per person/20 min max)

Evan Thompson had submitted his name and resume to be nominated to the Planning Commission and felt he was qualified. He listed his qualifications and asked for the definition of diversity the Council was looking for in Commissioner nomination. Mayor Franco responded that she felt Mr. Thompson was very qualified, but she was looking for more diversity in experience.

IX. GENERAL BUSINESS ITEMS:

1. Historic Preservation Commission (Michael Moulton, Historical Chair) - *20 min*

Chairman of the Historical Preservation Commission Michael Moulton presented the intent of the Commission to expand their authority. He introduced fellow Commissioner Scott Lythgoe. The Commission felt they had been working for years with no action and asked for more action from the Council. He felt other cities were excelling with their historical preservation. Mr. Moulton shared the Commission's priorities including:

- preservation of the old Rio Grande Heber Creeper Depot - \$50k budget request for earnest money to purchase buildings from the current owner
- designation of Center Street as a Historic District
- establish a historic living history site for London Springs, the original settlement in the Valley
- further budget requests for memorial signage, a reconnaissance-level survey, and special events
- formally adopt a historic Preservation Master Plan

Mr. Moulton felt the Historic Preservation plan should be a focus of the Envision Central Heber plan. Council Member Johnston felt it was important for the government to insist on historical and heritage preservation. Council discussion surrounded the importance of historical preservation and ideas for the City to improve.

2. Tree Committee (Melanie Funk, Tree Subcommittee Chair) - *10 min*

Assistant City Attorney Mark Smedley apologized on behalf of the Tree Committee Chair Melanie Funk, as she was unable to attend that evening. She hoped to return at the next meeting to present to Council. Council reviewed the presentation and discussed trees in the downtown area, how to prevent the trees lining Main Street from dying, and the existing bike racks on Main Street.

3. Audit Committee (Sara Nagel, Finance Manager) - 10 min

Chair of the Audit Committee Del Barney described the Audit Committee's role within the City. They had reviewed independent auditors to audit the City. He expressed the Committee's support for Finance Director Sara Nagel. Mr. Barney shared the goal of the Committee to familiarize themselves with City procedures in order to minimize the City's risk of audit violations.

4. Building Department SWOT Analysis (Wes Greenhalgh, Building Official) - 5 min

Community Development Director Tony Kohler presented the SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis for the Building Division as attached in the meeting materials.

Council Member Barney suggested the City work with the CAPS (Center for Advanced Professional Studies) program at the high school to offer internships to encourage interest in the building inspector trade.

5. Planning Department SWOT Analysis (Tony Kohler, Community Development Director) - 5 min

Community Development Director Tony Kohler presented the SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis for the Planning Division as attached in the meeting materials.

6. Prosecutor's Office SWOT Analysis (J. Mark Smedley, Asst. City Manager) - 5 min

Assistant City Manager and City Prosecutor Mark Smedley presented the SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis for the Prosecution Department as attached in the meeting materials.

7. Engineering Department SWOT Analysis (Russ Funk, City Engineer) - 5 min

City Engineer Russ Funk presented the SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis for the Engineering Department as attached in the meeting materials.

8. Airport SWOT Analysis (Travis Biggs, Airport Director) - 5 min

Heber Valley Airport Manager Travis Biggs presented the SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis for the Airport as attached in the meeting materials.

9. Road Projects Status Update (Russ Funk, City Engineer) - 10 min

City Engineer Russ Funk provided the update for the local, ongoing, roads projects.

X. ACTION ITEMS: (Council can discuss; table; continue; or approve items)

Mayor Franco returned the discussion to Consent Agenda Item Two: Planning Commissioner Nominations by Mayor. She noted both Action Agenda Items, One and Two, would be postponed to a future meeting.

1. Ordinance 2024-02 Updating the C-3 Commercial Zone, C-3 Design Criteria and Parking Regulations within the C-3 Zone (Tony Kohler, Community Development Director) - 40 min

Item One on the Action Items agenda was postponed to the February 6 City Council Meeting.

2. Evans Property Acquisition (Russ Funk, City Engineer, Jeremy Cook, City Attorney) - 10 min

Item Two on the Action Items agenda was postponed to the February 6 City Council Meeting.

XI. COMMUNICATION:

City Manager Matt Brower shared details for the upcoming 2024 Annual City Council Retreat scheduled for the coming Thursday, January 18, and Saturday, January 20, and asked Council to consider the priorities they wished to propose.

Heber City, Wasatch County, and the School District would nominate two members of each elected body to form an ad-hoc committee to protect the desires of each for the future bypass route. Council Members Phillips and Cheatwood would represent Heber City.

Mayor Franco asked the Engineering Staff to reach out to the Utah Geological Survey to identify any sensitive lands found when they mapped the top of the ridge the year prior.

XII. ADJOURNMENT:

Motion: Council Member Phillips moved to adjourn. **Second:** Council Member Ostergaard seconded the motion. The meeting adjourned at 9:50 p.m.

Trina N. Cooke, City Recorder

**HEBER CITY CORPORATION
Public Safety Building – Community Room
301 South Main Street
Heber City, UT 84032**

**Special City Council Meeting
January 18, 2024**

5:00 p.m. 2024 Annual City Council Strategic Planning Retreat – Day 1

DRAFT Minutes

I. WELCOME – 5:00 P.M. Mayor Franco and Matt Brower

Mayor Heidi Franco called the meeting to order at 5:08 p.m.

City Council Present: Mayor Heidi Franco
Council Member Yvonne Barney
Council Member Aaron Cheatwood
Council Member Mike Johnston
Council Member Sid Ostergaard
Council Member Scott Phillips

Staff Present: City Manager Matt Brower
Assistant City Manager Mark Smedley
Community Development Director Tony Kohler
Planning Manager Jamie Baron
City Engineer Russ Funk
Chief of Police Parker Sever
Building Official Wes Greenhalgh
Finance Director Sara Jane Nagel
Human Resources Manager Cherie Ashe
Public Works Director Matthew Kennard
Heber Valley Airport Manager Travis Biggs
Parks and Cemetery Director Mark Rounds
IT Specialist Anthon Beales
City Attorney Jeremy Cook
City Recorder Trina Cooke
Justice Court Judge Randy Birch

Also Present: Planning Commissioner Phil Jordan, Colin Hilton, Planning Commissioner Dave Richards, Michele Mounteer, Tori Broughton, and others who did not sign in or whose signatures were illegible.

- 1) Check-in
- 2) Overview

- ✓ Ground rules & logistics details
- ✓ Parking Lot of Ideas & Action Register

City Manager Matt Brower reviewed the agenda layout for Day 1 of the 2024 Annual City Council Strategic Planning Retreat.

II. GUEST SPEAKER – 5:15 P.M. Colin Hilton, CEO Utah Olympic Legacy Foundation

Colin Hilton shared a presentation as included in the meeting materials and recording. He described the Utah Olympic Legacy Foundation's (UOLF) purpose and efforts to keep Utah's 2002 Olympic venues open to the public and encourage youth and families use of the facilities. He shared steps the UOLF were taking for the next Olympics, and what Heber City could do as well to prepare to be a host community, when the games returned to Utah.

Luke Bodensteiner, General Manager at Soldier Hollow, reviewed the activities offered at the facility and advised of upcoming events. Volunteers would be needed for upcoming events.

III. CELEBRATING 2023 VICTORIES – 5:45 p.m. Leadership Team

Each department shared a brief presentation of achievements from 2023.

IV. PUBLIC COMMENTS: – 6:30 p.m.

County Council Member Luke Searle expressed appreciation for the City Council and Staff and the work they did, including the Retreat.

V. STATE OF THE ADMINISTRATION: – 6:50 Scott Burnett and Matt Brower

- ✓ Economic Outlook--Federal, State & Local

Scott Burnett with Zions Corporate Investments and Liquidity Management provided a wide range of economic information including market projections, historic economic patterns, current inflation status, as well as record-low unemployment in Utah, as can be found detailed in the meeting recording.

- ✓ Acknowledgements

City Manager Matt Brower highlighted accomplishments of Staff and the City in 2023.

- ✓ Council Priorities Score – Card Summary

During the previous year's Retreat, Council had established 22 Action Items and 14 Budget and Policy Priorities. 17 of the Action Items had been completed and five were still ongoing.

The Budget and Policy Priorities items were all underway and ongoing.

✓ General Financial Overview

Mr. Brower provided an overview of incomes for the City including property tax, utility billing, and sales tax. He noted the small percentage of property taxes collected received by Heber City. He reviewed some of the many City budgeting funds. He noted that the necessary income to buy a home in Heber had more than tripled in the past seven years and shared a graph of projected future growth through 2050.

✓ Review of Key Trends

Mr. Brower reviewed past years sales tax revenue trends for the City.

✓ Priority Recommendations

Mr. Brower listed seven recommended priorities for Council consideration:

1. Transforming Downtown
2. Envision Heber 2050 and Envision Central Heber
3. Complete Council Priorities from the previously established list
4. Fiscal Year 2025 – Year of Infrastructure and Parks and Open Space
5. Support of the Arts: murals, roundabouts installations, and decorative utility boxes
6. Fiscal Sustainability – Short and Long-term
7. Affordable Housing

VI. STRATEGIC TOPICS: – 8:10 P.M. Community Development Director Tony Kohler
Heber Valley Airport Manager Travis Biggs

1. Short-Term Rentals Policy Recommendation (45 min)

Community Development Director Tony Kohler provided a presentation regarding possible requirements, regulations, and challenges faced by the City for short-term rentals as found in the attached meeting materials. Council discussion ensued.

Resident Michele Mountheer explained that she owned two short-term rentals and considered it a business. She felt the neighbors of the rentals were her most important customers and that short-term rentals self-governed. She shared stories and situations of managing her rentals.

2. Heber Valley Airport – Master Plan Execution & Settlement Compliance (30 min)

This item was bypassed due to lack of time remaining in the meeting.

VII. WRAP-UP/OVERVIEW of DAY ONE: – 9:25 p.m. Mayor Franco

The meeting adjourned at 9:47 p.m. Day two of the Annual Strategic Retreat would begin at 8:30 a.m. Saturday, January 20, 2024.

Trina Cooke, City Recorder



Heber City Council Staff Report

MEETING DATE: 2/6/2024
SUBJECT: Quarterly Disposition of Police Department Evidence
RESPONSIBLE: Jeremy Nelson
DEPARTMENT: Police Department
STRATEGIC RELEVANCE: The police department is asking the city council's approval to purge evidence items that have been adjudicated through the courts and/or attorney's offices. Purging of items of evidence decreases storage capacity. The police department is also asking permission to surplus Radar/LIDAR equipment.

SUMMARY

The police department is responsible for purging evidence seized for crimes that occur within Heber City. The police department is seeking approval to purge evidence, which then may be destroyed or auctioned according to state law and department policy. Old Radar & LIDAR equipment that no longer works or functions also needs to be surplussed, according to state law and department policy.

RECOMMENDATION

It is the recommendation of the police department for the city council to approve the purge of evidence that has been adjudicated through the courts and/or proper attorney's office. It is also recommended to surplus old/nonfunctioning equipment.

BACKGROUND

The Heber City Police Department routinely purges evidence and surplus equipment from storage that has been adjudicated through the court system, a proper attorney's office, or property that no longer needs to be held. This property must be purged, by either being destroyed or auctioned, according to state law and department policy.

DISCUSSION

FISCAL IMPACT

No fiscal impact to the city.

CONCLUSION

It is the recommendation of the police department for evidence items, and old/non-functioning equipment that no longer needs to be held to be purged, by destroying or auctioning the items, per state law and department policy.

ALTERNATIVES

1. Approve as proposed
2. Approve as amended
3. Continue
4. Deny

POTENTIAL MOTIONS

Alternative 1 - Approval - Staff Recommended Option

I move to **approve** the item as presented, with the findings and conditions as presented in the conclusion above.

Alternative 2 - Approve as Amended

I move to **approve** the item as amended, as follows.

Alternative 3 - Continue

I move to **continue** the item to another meeting on , with direction to the applicant and/or Staff on information and / or changes needed to render a decision, as follows:

Alternative 4 - Denial

I move to **deny** the item with the following findings.

ACCOUNTABILITY

Department: Police Department
Staff member: Jeremy Nelson, Deputy Police Chief

EXHIBITS

1. Jan 2024 Purge
2. Purge List Continued

Record List - Total:448

Number	Incident	Property number	Description	Location
3735	0603-0555	H5011	.380 AMMO	HCPR
3736	0603-0555	H5040	.380 AMMO	HCPR
3738	0603-0555	H5014	.380 AMMO	HCPR
3739	0603-0555	H5013	.380 AMMO	HCPR
3740	0603-0555	H5012	.380 AMMO	HCPR
3778	0603-0555	H5076	VHS TAPE	HCPR
3500	0803-0890	H7342	PRINTS	HCPR
7829	0804-0302	H9761	COMPUTER LAPTOP	HCPR
3510	0809-0434	H7310	DOCUMENT	HCPR
3509	0809-0619	H7322	DOCUMENT	HCPR
7207	1004-0744	H9410	22 PLINKSTER RIFLE	HCPR
8381	1105-0901	H10158	US MILITARY WW1 1917 RIFLE	HCPR
8382	1105-0901	H10159	RUGER .22	HCPR
10994	1209-0700	H11683	FINGERPRINTS	HCPR
10992	1209-0700	H11681	FINGERPRINTS	HCPR
10993	1209-0700	H11682	FINGERPRINTS	HCPR
16559	1211-0139	H11869	FLASH DRIVE	HCPR
11459	1301-0218	H12028	\$10.00 CONTERFEIT BILL	HCPR
11462	1301-0292	H12033	2 EMPTY CANS OF STRAY PAINT	HCPR
11536	1302-0093	H12090	5 AMMO SLUG WOLF	HCPR
11564	1302-0093	H12089	MOSSBERG 12G	HCPR
11697	1303-0002	H12212	VEH PART	HCPR
11698	1303-0002	H12211	VEH PART	HCPR
11699	1303-0002	H12210	BLOOD	HCPR
11773	1303-0315	H12291	DVD	HCPR
11835	1303-0464	H12280	BLUE BACK PACK	HCPR
11840	1303-0464	H12268	RUGER 10-22	HCPR
11792	1303-0464	H12276	I POD	HCPR
11784	1303-0464	H12279	DRUGS	HCPR
11783	1303-0464	H12278	RED CARD HOLDER	HCPR
11777	1303-0464	H12271	LEOPARD HAND BAG	HCPR
11776	1303-0464	H12269	NEXTAR GPS	HCPR
12353	1307-0539	H12615	CLOTHING	HCPR
12354	1307-0539	H12622	SD CARD	HCPR
12358	1307-0539	H12613	CLOTHING	HCPR
12397	1307-1302	H12698	DVD	HCPR
12398	1307-1302	H12699	RECIEPT	HCPR
12654	1308-1188	H12876	BUSINESS CARDS	HCPR
12471	1308-1188	H12832	I PAD MINI	HCPR
12473	1308-1188	H12833	BLK I PAD WITH WHITE CORDS	HCPR
12469	1308-1188	H12847	COIN PURSE 2 BLACK STAPLES	HCPR
12468	1308-1188	H12846	YELLOW BAG WITH BEADS	HCPR
12467	1308-1188	H12845	BAG WITH TERO CARDS	HCPR
12470	1308-1188	H12831	I PAD MINI	HCPR
12522	1308-1287	H12860	PREPAID CARD	HCPR
12692	1309-1345	H12987	THEFT/WALMART SURV	HCPR
12802	1309-1345	H13012	CHARGER	HCPR
13927	1402-0631	H13464	CELL PHONE & ROCKSTAR	HCPR
15055	1409-1097	H14345	BB GUN	HCPR
15056	1409-1097	H14342	BB GUN	HCPR
15270	1411-0382	H14488	PROP GUN - FAKE-	HCPR
15547	1501-0655	H14832	.243 RIFLE	HCPR
15549	1501-0655	H14838	PT738 .380	HCPR
15548	1501-0655	H14833	REMINGTON 870 X2	HCPR
15546	1501-0655	H14831	RUGER .22 W/SCOPE	HCPR
15545	1501-0655	H14830	M&P 15 W/SCOPE	HCPR
15544	1501-0655	H14826	SPRINGFIELD XD 9MM	HCPR

15543	1501-0655	H14825	SPRINGFIELD XD 45	HCPR
15541	1501-0655	H14836	KNIFE	HCPR
15538	1501-0655	H14835	8 GUN MAGS	HCPR
15537	1501-0655	H14834	.380 AMMO	HCPR
15921	1503-0289	H15054	DVD	HCPR
16564	1503-0289	H15725	CD	HCPR
15868	1503-0329	H15032		HCPR
16126	1505-0065	H15240	DVD	HCPR
16416	1507-0393	H15543	SAFE	HCPR
16421	1507-0393	H15547	BONG	HCPR
16422	1507-0393	H15548	DISHES	HCPR
16578	1508-0087	H15709	RING	HCPR
16574	1508-0093	H15707	SAVAGE RIFLE	HCPR
16575	1508-0093	H15718	.308 CASING	HCPR
16979	1511-0248	H16340	BULLET FRAGMENT	HCPR
16999	1511-0248	H16346	R HAND GUN RESIDUE	HCPR
16998	1511-0248	H16347	LEFT HAND GUN RESIDUE	HCPR
16995	1511-0248	H16370	TANK TOP	HCPR
16994	1511-0248	H16369	BRA	HCPR
16993	1511-0248	H16368	CD	HCPR
16992	1511-0248	H16371	CD-INTERVIEW	HCPR
16982	1511-0248	H16343	DVD DOMESTIC	HCPR
16981	1511-0248	H16342	BULLET FRAGMENT	HCPR
16980	1511-0248	H16341	BULLET FRAGMENT	HCPR
16978	1511-0248	H16339	BULLET FRAGMENT	HCPR
16977	1511-0248	H16338	BULLET FRAGMENT	HCPR
16975	1511-0248	H16336	BUMPER DEBRIS	HCPR
16974	1511-0248	H16330	UNCLE MIKE BLK HOLSTER	HCPR
16973	1511-0248	H16333	SHELL CASING	HCPR
16972	1511-0248	H16334	SHELL CASING	HCPR
16971	1511-0248	H16335	SHELL CASING 2	HCPR
16970	1511-0248	H16345	9MM MAGAZINE	HCPR
16969	1511-0248	H16344	AMMUNITION	HCPR
16968	1511-0248	H16331	TAURUS HANDGUN	HCPR
16967	1511-0248	H16348	SHOTGUN	HCPR
16961	1511-0248	H16350	DVD	HCPR
16960	1511-0248	H16349	DVD	HCPR
16976	1511-0248	H16337	BULLET FRAGMENT	HCPR
17812	1603-0800	H17097	AMER EAGLE 1000 RIFLE CARTRIDG	HCPR
17816	1603-0800	H17101	PELLET RUGER BLK HANDGUN	HCPR
17815	1603-0800	H17100	COLT PEACE PELLET GUN	HCPR
17814	1603-0800	H17102	PELLET PEACE BOX AND 6 PELL	HCPR
17810	1603-0800	H17099	BOX OF 9MM LUGER 1000 CARTRIDE	HCPR
17811	1603-0800	H17098	AMER EAGLE 1000 RIFLE CARTRIDG	HCPR
17813	1603-0800	H17095	KNIFE PACIFIC BLACK SILVER	HCPR
18781	1607-1472	H17983	HANDGUN 9MM KEL TEC	HCPR
18782	1607-1472	H17985	AMMO HORNADY LUGER 9MM	HCPR
18783	1607-1472	H17986	GUN CASE BLK KEL TEC	HCPR
18937	1608-1000	H18162	SHOTGUN US CARBINE	HCPR
18936	1608-1000	H18161	SHOTGUN GLENFIELD	HCPR
19898	1701-0277	H18712	COLORADO ID	HCPR
19897	1701-0277	H18714	HULME SS,BC,ID	HCPR
19900	1701-0277	H18728	IDAHO CAR REGISTRATION	HCPR
19899	1701-0277	H18713	BLANK WELLS FARGO CHECKBOOK	HCPR
19896	1701-0277	H18711	ID WORK ACCESS CARD	HCPR
19894	1701-0277	H18707	ZIONS CHECK BOOK	HCPR
19892	1701-0277	H18725	CAR HANDICAP WINDOW SIGN	HCPR
19890	1701-0277	H18710	COLORADO ID, SSC	HCPR
19889	1701-0277	H18708	4 VARIOUS ID CARDS	HCPR
19888	1701-0277	H18706	BLUE DEBIT CARD	HCPR
19993	1701-1202	H18829	KNIFE MACHETTE	HCPR
20118	1702-0803	H18963	CAMILLUS KNIFE TAN HANDLE	HCPR

20392	1702-0803	H19087	CD/DVD INTERVIEW	HCPR
20393	1702-0803	H19086	CD/INTERVIEW	HCPR
20394	1702-0803	H19085	CD/INTERVIEW	HCPR
20154	1702-1048	H18985	HANDGUN M&P SHIELD 9	HCPR
20348	1703-1198	H19187	MASTER CAPITAL ONE CREDIT CARD	HCPR
20437	1704-1032	H19266	BLUE BANDANA	HCPR
20953	1707-1231	H19812	2 CASINGS	HCPR
21165	1710-1106	H20304	SOFT GUN CASE	HCPR
21164	1710-1106	H20298	SHOT GUN	HCPR
21162	1710-1106	H20300	BLUE BANDANA	HCPR
21161	1710-1106	H20301	RED BANDANA	HCPR
21163	1710-1106	H20299	3 BOXES WINCHEST 20 GAUGE AMMO	HCPR
21271	1710-1258	H20449	INTERVIEW CD	HCPR
21272	1710-1258	H20450	CD INTERVIEW	HCPR
21209	1710-1259	H20314	RUGER GRY BLK P345	HCPR
21210	1710-1259	H20315	CLIP	HCPR
21211	1710-1259	H20316	BLK HOLSTER	HCPR
21231	1711-0343	H20384	PELLET GUN	HCPR
21305	1711-0343	H20515	CD SURVEILLANCE	HCPR
21319	1712-0663	H20547	BLK TAURUS HAND GUN	HCPR
21321	1712-0663	H20548	3 KNIVES	HCPR
22508	1803-0726	H21220	CD-SURVEILLANCE	HCPR
22340	1803-0726	H21154	CASE COVER	HCPR
22337	1803-0726	H21152	PLUM WNSR KOHLS	HCPR
22298	1803-0726	H21168	I.D. CARD	HCPR
22338	1803-0726	H21151	MISC CLOTHING WALMART	HCPR
22354	1803-1126	H21198	SCREEN,PICK,ZAGS,ROLL PARAPH	HCPR
22355	1803-1126	H21196	MARIJUANA IN PILL BOTTLE	HCPR
23134	1807-0091	H21802	CLOTHESLINE	HCPR
23175	1807-0091	H21835	CD/DVD 911 CALL	HCPR
23176	1807-0091	H21834	CD-DVD	HCPR
23355	1808-0682	H22019	ONE CASING REMINGTON 22	HCPR
23406	1808-1222	H22084	BLK POCKET KNIFE	HCPR
23408	1808-1222	H22086	WING EARRINGS	HCPR
23407	1808-1222	H22085	FINGERNAIL CLIPPERS	HCPR
23405	1808-1222	H22083	BLUE FLASHLIGHT	HCPR
23403	1808-1222	H22087	SMALL GLASS CONTAINER DIRT	HCPR
23402	1808-1222	H22082	BLK DIGITAL WATCH	HCPR
23401	1808-1222	H22081	GRN JACKET	HCPR
23404	1808-1222	H22088	COVER GIRL COMPACT MAKEUP CONT	HCPR
23450	1808-1469	H22119	GO PRO BLK	HCPR
23442	1808-1469	H22125	HEROIN IN BULLET CANISTER	HCPR
23443	1808-1469	H22124	HEROIN	HCPR
23444	1808-1469	H22123	SPOON	HCPR
23445	1808-1469	H22126	LEATHERMAN WITH HEROIN ON BLAD	HCPR
23446	1808-1469	H22122	SYRINGE	HCPR
23447	1808-1469	H22121	GLASS PIPE	HCPR
23448	1808-1469	H22120	PARA-CASE,SPOON,SYRINGES	HCPR
23454	1808-1469	H22119	GO PRO CAM EQUIP	HCPR
23945	1812-0282	H22636	BLK BULLET BOX SOMETHING INSID	HCPR
23944	1812-0282	H22638	HANDGUN BLK/BLU	HCPR
23942	1812-0282	H22645	LABEL	HCPR
23943	1812-0282	H22637	KEYS AND FOB	HCPR
24080	1812-0721	H22728	AMERICA FIRST ACCESS CARD	HCPR
24076	1812-0721	H22797	CD/DVD INTERVIEW	HCPR
24077	1812-0721	H22798	CD/DVD INTERVIEW	HCPR
24078	1812-0721	H22799	CD/DVD INTERVIEW	HCPR
24079	1812-0721	H22745	CELL BLK LG	HCPR
24081	1812-0721	H22761	MISC NOTES	HCPR
24082	1812-0721	H22759	PREPAID CARDS	HCPR
24083	1812-0721	H22722	LIBRARY CARD	HCPR
24084	1812-0721	H22721	HOTEL GUEST LIST KEY	HCPR

24085	1812-0721	H22723	CREDIT CARD PACKER SANITATION	HCPR
24086	1812-0721	H22725	PLATINUM WENDOVER REWARDS	HCPR
24087	1812-0721	H22739	WHITE SAMSUNG TABLET	HCPR
24088	1812-0721	H22758	MISC MAIL	HCPR
24089	1812-0721	H22743	PURPLE BLK FLASHLIGHT	HCPR
24090	1812-0721	H22719	TOYOTA KEY	HCPR
24091	1812-0721	H22733	SKI GOGGLE	HCPR
24092	1812-0721	H22760	PLANNER	HCPR
24075	1812-0721	H22800	CD/DVD INTERVIEW	HCPR
24094	1812-0721	H22750	MEXICAN PESOS	HCPR
24031	1812-0721	H22738	HYDROLIC GEAR IN RED BOX	HCPR
24015	1812-0721	H22734	NOTEBOOK	HCPR
23982	1812-0721	H22712	STEERING WHEEL SWAB #1	HCPR
23983	1812-0721	H22713	STEERING WHELL DNA SWABB #2	HCPR
23988	1812-0721	H22718	LISA, MICKEY MOUSE PINK TOYOTA	HCPR
23996	1812-0721	H22729	DRIVE PRIVIL,OTHER CARDS	HCPR
23997	1812-0721	H22746	WHITE CELL WITH PINK BLING	HCPR
23998	1812-0721	H22731	2 WINDOW BREAKERS	HCPR
23999	1812-0721	H22730	CERTIFICATE OF TITLE	HCPR
24000	1812-0721	H22732	WYOMING DL	HCPR
24001	1812-0721	H22720	GMC FOB AND KEY	HCPR
24002	1812-0721	H22727	ONE MEMBER CARD	HCPR
24003	1812-0721	H22742	TEAL FLASHLIGHT	HCPR
24004	1812-0721	H22724	2 BANK CARDS	HCPR
24005	1812-0721	H22726	IMPOUND FORM	HCPR
24006	1812-0721	H22749	BLK GLOVES	HCPR
24012	1812-0721	H22748	CLR CUP	HCPR
24013	1812-0721	H22747	CLR CUP	HCPR
24014	1812-0721	H22757	CUP	HCPR
24029	1812-0721	H22737	DRILL BIT IN YELLOW BOX	HCPR
24240	1812-0721	H23040	CD PHONE DOWNLOAD	HCPR
24859	1903-0163	H23595	DVD EXTRACTION FROM H23168	HCPR
24368	1903-0556	H23205	VAPE JUICE	HCPR
24367	1903-0556	H23201	VARIOUS KNIFES	HCPR
24655	1904-0715	H23403	PARA-BAGGIE	HCPR
24656	1904-0715	H23404	16 OXYCODONE	HCPR
24696	1904-1003	H23451	SUNGLASS CASE	HCPR
24702	1904-1003	H23462	POCKET KNIFE	HCPR
24685	1904-1052	H23465	CONTAINER AND 2 PIPES	HCPR
24686	1904-1052	H23464	MARIJUANA	HCPR
24749	1904-1181	H23496	E CIG RED	HCPR
24750	1904-1181	H23497	VAPE JUICE	HCPR
24917	1905-1513	H23672	WEAPON EQUILIZER FOR PUNCHING	HCPR
24906	1905-1513	H23660	DISY POWERLINE PELLET GUN	HCPR
24916	1905-1513	H23673	PYRAMID TOBACCO	HCPR
25004	1906-1274	H23764	GOLD GORILLA THC	HCPR
25006	1906-1274	H23762	MARIJUANA	HCPR
25117	1907-0914	H23905	THC TIP PARAPHERNALIA	HCPR
25116	1907-0914	H23906	PLASTIC BOTTLE HOME MADE PIPE	HCPR
25180	1907-1290	H23939	BB/PELLET SIG 1911 GUN	HCPR
25182	1907-1290	H23941	COCAINE ON MONEY	HCPR
25181	1907-1290	H23944	DABS	HCPR
25179	1907-1290	H23942	MUSHROOM	HCPR
25178	1907-1290	H23948	PARAPHERNALIA	HCPR
25175	1907-1290	H23943	MARIJUANA	HCPR
25174	1907-1290	H23940	LSA/ACID	HCPR
25173	1907-1290	H23947	BAGS	HCPR
25172	1907-1290	H23946	MARIJUANA DRINK	HCPR
25171	1907-1290	H23949	PACKAGING MATERIAL	HCPR
25177	1907-1290	H23945	VAPE CARTRIDGES	HCPR
25271	1908-0809	H24084	POLKA DOT PURSE/ QTIP BOX INSI	HCPR
25294	1908-1453	H24138	GOLD JEWELRY	HCPR

25497	1910-0011	H24367	MARIJUANA NIKE BAG	HCPR
25502	1910-0011	H24377	MARIJUANA	HCPR
25494	1910-0011	H24365	PARA-EMPTY JUUL POD,BLISTER PA	HCPR
25496	1910-0011	H24368	SANDWICH BAG WITH MARIJUANA	HCPR
25890	1912-0882	H24768	NIKE SWEAT PANTS	HCPR
25893	1912-0882	H24767	NIKE SWEATER	HCPR
25892	1912-0882	H24769	UNDERWEAR	HCPR
25891	1912-0882	H24770	T- SHIRT	HCPR
25889	1912-0882	H24766	NIKE SHOES	HCPR
25888	1912-0882	H24717	SOCKS	HCPR
25853	1912-0882	H24715	SUNGLASSES	HCPR
25852	1912-0882	H24716	CAMEL SNUS CHEW	HCPR
25849	1912-0882	H24710	SHELL CASING 9MM	HCPR
25846	1912-0882	H24714	SWAB FOR GSR	HCPR
25844	1912-0882	H24713	CD- SURVIELLANCE	HCPR
25903	2001-0188	H24797	BLK TAC-FORCE KNIFE	HCPR
25990	2001-0695	H24874	SAMSUNG PHONE RED	HCPR
25989	2001-0695	H24876	PHONE, TABLET, CAMERA	HCPR
25976	2001-0695	H24862	UT TEMP OPERATOR SMITH	HCPR
25982	2001-0695	H24848	VERSACHECK	HCPR
25979	2001-0695	H24850	HP INK 2PACK	HCPR
25978	2001-0695	H24852	RECEIPTS	HCPR
25977	2001-0695	H24863	SOCIAL SECURITY RAAGEL	HCPR
25997	2001-0695	H24865	3 SHOTGUN AMMO	HCPR
25975	2001-0695	H24861	UTAH IDENTITY TEMP OPERATOR	HCPR
25988	2001-0695	H24875	LG CELL PHONE BLK	HCPR
25973	2001-0695	H24855	BLK METAL BOX	HCPR
25972	2001-0695	H24860	CHECKS	HCPR
25971	2001-0695	H24856	VANILLA GIFT CARD	HCPR
25970	2001-0695	H24857	STAPLES CREDIT CARD	HCPR
25969	2001-0695	H24858	GREEN DOT CREDIT CARD	HCPR
25968	2001-0695	H24859	KROGER VISA	HCPR
25967	2001-0695	H24853	CARD MAKER	HCPR
25966	2001-0695	H24849	PREMIUM WHITE PAPER	HCPR
25965	2001-0695	H24851	RULED NOTEBOOK BLK	HCPR
25998	2001-0695	H24866	REMINGTON 870	HCPR
25974	2001-0695	H24864	IDENTITY JUHILUBA DL	HCPR
25999	2001-0695	H24867	LOCKOUT TOOLS	HCPR
26051	2002-0136	H24967	WINCHESTER SHELL CASING	HCPR
26082	2002-0642	H25003	URINE	HCPR
26282	2003-1304	H25278	10 EMPTY NATURAL LIGHT CANS	HCPR
26256	2003-1304	H25250	CO2 CARTRIDGES	HCPR
26255	2003-1304	H25249	BLACK EYEGLASSES	HCPR
26254	2003-1304	H25253	EMPTY BEER CAN	HCPR
26252	2003-1304	H25252	SILV EXPELLED CO2	HCPR
26251	2003-1304	H25251	SILV BB PELLETS DAISY BRAND	HCPR
26253	2003-1304	H25207	2 EMPTY BEER CANS	HCPR
26249	2003-1304	H25254	BEER CANS	HCPR
26248	2003-1304	H25257	FULL BLU BEER CANS	HCPR
26247	2003-1304	H25208	BB PELLET GUN SIG SAUER	HCPR
26250	2003-1304	H25255	RED/WHITE HAT	HCPR
26224	2003-1380	H25217	FOIL, BAG, STRAW PARAPHERNALIA	HCPR
26223	2003-1380	H25218	10 BLUE ZANAX PILLS	HCPR
26222	2003-1380	H25216	3 PERSCRIP BOTTLES WITH PILLS	HCPR
26257	2004-0114	H25264	SILVER CTR RING	HCPR
26259	2004-0114	H25263	BLACK PHONE	HCPR
26513	2004-0114	H25401	AMERICA FIRST E SWEAT	HCPR
26613	2005-0539	H25422	BLUE BATTERY, ONE	HCPR
26614	2005-0539	H25420	BLACK MAGAZINE	HCPR
26611	2005-0539	H25418	9MM AMMUNITION	HCPR
26612	2005-0539	H25419	AR-15 BULLETS	HCPR
26609	2005-0539	H25416	FIREARM	HCPR

26608	2005-0539	H25417	FIREARM	HCPR
26610	2005-0539	H25421	BLACK MAGAZINES, TWO	HCPR
26615	2005-0660	H25427	BLOOD	HCPR
26639	2005-0660	H25428	AMOXICILLIN, 1 BOTTLE	HCPR
26640	2005-0660	H25429	HYDROCODONE, 1 BOTTLE	HCPR
26670	2006-0963	H25533	GLASS PIPE	HCPR
26762	2006-0963	H25627	CD- JUVENILE FIT INTERVIEW	HCPR
26759	2006-1087	H25594	PIPE	HCPR
26758	2006-1087	H25597	UTAH PLATE	HCPR
26843	2007-1162	H25761	BB GUN	HCPR
26949	2007-1805	H25820	PARAPHERNALIA	HCPR
27090	2008-1224	H25941	BERGER KNIFE	HCPR
27189	2009-0228	H26103	GREEN TOOL BOX	HCPR
27255	2009-0881	H26210	SUSPECT INTERVIEW DOMESTIC	HCPR
27417	2009-1399	H26431	UT DL	HCPR
27416	2009-1399	H26432	CHASE FREEDOM CARD	HCPR
27415	2009-1399	H26433	UTAH HORIZON ATM CARD	HCPR
27418	2009-1399	H26430	PASSPORT ID	HCPR
27413	2009-1399	H26435	TURBO VISA CARD	HCPR
27412	2009-1399	H26436	WELLS FARGO DEBIT CARD	HCPR
27414	2009-1399	H26434	VISA DEBIT TURBO CARD	HCPR
27422	2009-1399	H26411	UTAH DL LICENSE DUNCAN	HCPR
27407	2009-1399	H26399	RED WALLET	HCPR
27425	2009-1399	H26408	UT DL CRUZ	HCPR
27426	2009-1399	H26407	UT DL KENDRICK	HCPR
27435	2009-1399	H26416	CITI BANK - DUMAS	HCPR
27436	2009-1399	H26415	VISA ELK CARD - YOUNG	HCPR
27437	2009-1399	H26414	AFCU ATM CARD-- LUND	HCPR
27438	2009-1399	H26413	UCCU DEBIT- MEZA BABUENA	HCPR
27439	2009-1399	H26400	WALLET, CHECKBOOK, UINTA ID	HCPR
27444	2009-1399	H26402	TURQUOISE WALLET- FUNNEL	HCPR
27411	2009-1399	H26437	FIRST COMMUNITY CARD	HCPR
27423	2009-1399	H26410	UT DL HAYCOCK	HCPR
27388	2010-0284	H26459	METH	HCPR
27376	2010-0284	H26467	CARD AND TOOTER PARAPHERNALIA	HCPR
27387	2010-0284	H26460	THC CARTRIDGE	HCPR
27371	2010-0284	H26440	BUBBLE PIPE	HCPR
27372	2010-0284	H26456	3 METAL TWIST WITH RESIDUE	HCPR
27373	2010-0284	H26455	6 OXY PILLS IN METAL TWIST	HCPR
27374	2010-0284	H26445	5 MARIJUANA PIPES	HCPR
27375	2010-0284	H26457	BUBBLE PIPE	HCPR
27377	2010-0284	H26466	METH KIT	HCPR
27378	2010-0284	H26444	VAPE CARTRIDGE	HCPR
27389	2010-0284	H26458	BLK CASE	HCPR
27380	2010-0284	H26442	3 TOOTERS	HCPR
27381	2010-0284	H26441	BAGGIES	HCPR
27382	2010-0284	H26465	BAGGIES WITH TRACE METH	HCPR
27383	2010-0284	H26464	7 PIPES	HCPR
27384	2010-0284	H26463	BAGS	HCPR
27385	2010-0284	H26462	SCALE	HCPR
27386	2010-0284	H26461	CONTAINER BLK	HCPR
27379	2010-0284	H26443	CONTAINER WITH GRN LEAFY	HCPR
27466	2011-0041	H26566	SILVER KITCHEN KNIFE	HCPR
27565	2011-0704	H26636	SS CARD	HCPR
28306	2101-0890	H26915	USA ID CARD	HCPR
28308	2101-0890	H26928	CHECK	HCPR
28307	2101-0890	H26914	USA RESIDENT CARD	HCPR
28305	2101-0890	H26916	SS CARD	HCPR
28061	2101-0890	H26906	UTAH ID CARD	HCPR
28303	2101-0890	H26918	SS CARD	HCPR
28302	2101-0890	H26919	SS CARD	HCPR
28134	2101-0890	H26921	SS CARD	HCPR

28304	2101-0890	H26917	SS CARD	HCPR
28627	2103-1086	H27241	CD SURVEILLANCE	HCPR
28657	2103-1255	H27215	LIQUID XANAX	HCPR
28656	2103-1255	H27207	URINE	HCPR
28655	2103-1255	H27214	ID DL	HCPR
28651	2103-1255	H27208	STOLEN CHECKS	HCPR
28648	2103-1255	H27211	CREDIT CARDS	HCPR
28647	2103-1255	H27210	SSN CARD	HCPR
28645	2103-1255	H27209	PERSONAL INFORMATION	HCPR
28630	2103-1255	H27217	CARD READER	HCPR
28629	2103-1255	H27204	6 SYRINGES HEROIN	HCPR
28659	2103-1255	H27232	T MOBILE PURPLE CASE CELL PHON	HCPR
28624	2103-1255	H27212	CLT WHITE BAGGGIE METH	HCPR
28628	2103-1255	H27206	SCALE	HCPR
28614	2103-1255	H27219	DOCUMENT BANK STATEMENT	HCPR
28615	2103-1255	H27218	BLANK CARDS	HCPR
28605	2103-1255	H27235	CONTAINERS CAMERA EQUIP	HCPR
28606	2103-1255	H27213	SSN, DL	HCPR
28607	2103-1255	H27225	MISC CHECKS	HCPR
28608	2103-1255	H27226	BANK STATMENT	HCPR
28604	2103-1255	H27216	CHECK STUBS IN RED FILE	HCPR
28610	2103-1255	H27221	DOCUMENT IMPOUND SALE FORM	HCPR
28611	2103-1255	H27222	SSN AND DL	HCPR
28612	2103-1255	H27223	MAIL	HCPR
28613	2103-1255	H27220	BANK STATEMENT	HCPR
28609	2103-1255	H27224	BANK STATEMENT	HCPR
28705	2104-0478	H27294	APPLE I PHONE	HCPR
28719	2104-0478	H27293	SUSPECT INTERVIEW	HCPR
28779	2104-0478	H27313	THUMB DRIVE	HCPR
28819	2105-0070	H27409	PARAPHERNALIA PIPE	HCPR
29698	2109-1413	H28152	5 SILVER .380 AMMO	HCPR
29694	2109-1413	H28148	MINI BUTLER HANDGUN	HCPR
29695	2109-1413	H28150	CHARTER ARMS .380	HCPR
29696	2109-1413	H28151	HOLSTER	HCPR
29699	2109-1413	H28149	.22 HAND GUN	HCPR
30165	2201-0884	H28574	RED CASE	HCPR
30530	2203-1357	H28997	JACKSON CARE HEALTH CARD	HCPR
30945	2206-0273	H29361	BLOOD BROKEN GLASS	HCPR
30946	2206-0273	H29354	MARLBORO CIGARETTE	HCPR
30947	2206-0273	H29352	PILL BOTTLE	HCPR
30948	2206-0273	H29353	4 METFORMIN	HCPR
30949	2206-0273	H29355	CAMERA	HCPR
30950	2206-0273	H29336	PAPER CUP	HCPR
30951	2206-0273	H29337	EMPTY WATER BOTTLE	HCPR
30952	2206-0273	H29335	EMPTY GATORADE BOTTLE	HCPR
30953	2206-0273	H29363	QSEE BLK CAMERA	HCPR
30954	2206-0273	H29360	QSEE CAMERA	HCPR
30955	2206-0273	H29356	BLOOD SWAB	HCPR
30956	2206-0273	H29345	BLOOD SWAB	HCPR
30957	2206-0273	H29343	BLOOD SWAB	HCPR
30958	2206-0273	H29334	BLOOD SWAB	HCPR
30959	2206-0273	H29332	BLOOD SWAB	HCPR
30960	2206-0273	H29330	BLOOD SWAB	HCPR
30961	2206-0273	H29362	BLOOD SWAB	HCPR
31052	2206-0273	H29392	USB SURVEILLANCE	HCPR
31053	2206-0273	H29385	USB SURV VIDEO	HCPR
30944	2206-0273	H29359	ORANGE BOTTLE CAP	HCPR
30943	2206-0273	H29358	BLOOD ON BROKEN GLASS	HCPR
32477	2206-0273	H30946	USB DOWNLOAD IWRCFL	HCPR
30941	2206-0273	H29344	BLOOD BROKEN GLASS	HCPR
30916	2206-0273	H29318	BLOODY TISSUES	HCPR
30917	2206-0273	H29319	CROWBAR	HCPR

30918	2206-0273	H29320	BLOOD ON BROKEN GLASS #1	HCPR
30919	2206-0273	H29321	BLOOD ON BROKEN GLASS #2	HCPR
30921	2206-0273	H29324	BUCCAL LEFT SIDE MOUTH	HCPR
30922	2206-0273	H29323	BUCCAL RIGHT SIDE MOUTH	HCPR
30923	2206-0273	H29351	SILVER MOTOROLA	HCPR
30929	2206-0273	H29379	RUGER RED TIP 9MM (50)	HCPR
30930	2206-0273	H29380	STICK	HCPR
30931	2206-0273	H29364	AMMO 223 (1)	HCPR
30932	2206-0273	H29365	1 RUGER RED TIP	HCPR
30933	2206-0273	H29329	BLOOD ON BROKEN GLASS	HCPR
30934	2206-0273	H29331	EMPTY CAN	HCPR
30935	2206-0273	H29333	BROEKN GLASS WITH BLOOD	HCPR
30936	2206-0273	H29339	BROKEN GLASS	HCPR
30937	2206-0273	H29340	BLOOD BROKEN GLASS	HCPR
30938	2206-0273	H29341	WATER BOTTLE CAP	HCPR
30939	2206-0273	H29338	BLOOD BROKEN GLASS	HCPR
30940	2206-0273	H29342	BROKEN GLASSS WITH BLOOD	HCPR
30942	2206-0273	H29357	COCA COLA CAN	HCPR
32478	2206-0273	H30945	CD FORENSIC IWRCFL	HCPR



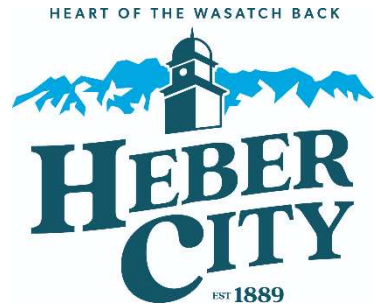
**Heber City Police Department
Equipment Surplus List**

- Kustom Signals Inc. Pro Laser III, S.N.: PL10274 – Non Functioning
- Kustom Signals Inc. Pro Laser III, S.N.: PL21067 – Non Functioning
- Laser Technology Inc. Ultra Lyte LR B LTi 20/20, S.N.: UX024304 – Non Functioning
- Laser Technology Inc. Truspeed LTi 20/20, S.N.: TS005503 – Missing Parts, Non Functioning

HEBER CITY COUNCIL STAFF REPORT

MEETING DATE: 2/6/24

**SUBJECT: Nomination of Three Planning Commissioners
And One Member to the Audit Committee**



RESPONSIBLE: Mayor Heidi Franco

STRATEGIC RELEVANCE: Necessary Administrative Item

SUMMARY

Three Planning Commissioner seats are open; one voting and two alternates. There are up to three openings on the Audit Committee open.

RECOMMENDATION

City Council can consider approving the three nominated Planning Commissioners and one Audit Committee member as listed in the agenda materials.

BACKGROUND

For the Planning Commission:

In December 2023, there were two openings for voting members of the Planning Commission, as well as two openings for the non-voting alternates. The Mayor posted the openings for these positions on the city website in December, and the City newsletter in January 2024. The Mayor received feedback from several on the City Council as to what questions/issues they were interested in for applicants. The Mayor interviewed all applicants regarding those questions/issues, etc., and selected the following candidates—one for a voting member and two alternates. The Mayor also confirmed job duties and time commitment with each applicant. The Council approved a previous voting Planning Commissioner at the Jan 16, 2024 meeting.

Per City Code 18.12.105.B:

“The Commission shall consist of seven voting members, plus two non-voting alternates. Alternates shall vote in the event that said alternates participates on the Commission in place of voting members. All members shall be appointed by the Mayor with the consent of the City

Council from among qualified electors of the City. Members shall be selected without respect to political affiliation and may receive compensation per City Policy.”

Also in City Code 18.12.115A.:

“The term of office for the alternate(s) shall be for two years. Thereafter, the terms of office for each appointive member, except for the alternate(s), shall be six years. Vacancies occurring otherwise than through the expiration of term shall be filled by appointment by the Mayor, with the consent of the City Council.”

For the Audit Committee:

Per City Resolution 2022-15, The Audit Committee makes recommendations to the City Council regarding financial matters, including selecting the external auditor, internal control improvements, internal audit scope, review of the completed audit, review of hotline complaints, and other financial policies as necessary. The Committee consists of three to five voting members and two non-voting ex officio members consisting of the City Manager and Finance Manager. The citizen/financial expert members serve four year terms. The Committee meets at the City Administrative Offices as scheduled. It is anticipated that the Committee will meet 3-5 times annually. Audit Committee members should have the necessary experience and skills to provide effectively:

Independence. The audit committee should be independent of both management and the auditor, thus enhancing the integrity of the financial reporting.

Communication. Audit committees are effective communication intermediaries between management, the auditor, and the governing authority. Auditing and financial reporting involve increasingly complex and specialized processes that are generally not fully understood by the members of a government’s governing authority. The members of the audit committee help magnify the governing authority’s effectiveness through independent communication of complex and specialized issues.

Accountability. Accountability is enhanced by the synergy between the elected officials with ultimate responsibility for financial reporting and internal controls and the audit committee members with the education and experience necessary to advise the governing body on complex financial reporting and internal control matters.

Member Experience and Skills. Public sector audit committee members should collectively possess the experience and skills necessary to carry out the Committee’s responsibilities with respect to the financial audit and internal controls. While it is recommended that most committee members come from outside the government, familiarity with the public sector environment and governmental accounting is helpful. Individual members should possess the following knowledge, skills, and abilities:

- Knowledge of the entity, its environment, and constituency.
- Knowledge of and experience in accounting, auditing, and financial reporting.
- Practical interpersonal and communication skills and the political savvy to keep the discourse focused on the subject matter rather than on personalities and politics.
- Understanding and appreciation for management’s responsibility to establish and monitor internal controls.

DISCUSSION

N/A

FISCAL IMPACT

N/A

ALTERNATIVES

N/A.

POTENTIAL MOTIONS

N/A

1. Planning Commissioner nominees: Tori Broughton, Greg Royall, Jami Hewlitt.

- **Tori Broughton**, emailtorib@gmail.com (For a Two-Year Voting Term, February 2024-February 2026)

Address	214 W 600 S
City	Heber City
State	UT
Zip Code	84032
Background/Experience/Qualifications	- A decade of experience managing small businesses that serve the local community and are primarily located in downtown areas. - Cultivated an understanding of small western towns undergoing growth, gaining insights into the dynamics of community development and evolution.

- As a homeowner in our downtown district, I have a personal investment in the community's progress and well-being.

- Actively engaged in the local business scene by operating a business on Main Street, providing firsthand knowledge of how city planning decisions impact local commerce and community vibrancy.

Why I want to serve on the Planning Commission

I am dedicated to ensuring that our city's growth is in line with our community's values, advocating for sustainable growth that not only preserves our unique character but also amplifies our economic potential. Collaborating with fellow community members, I hope to contribute insights that champion a downtown revitalization, steering our city towards a future everyone can enjoy.

See also attached resume.

Greg Royall, offroyall@yahoo.com (For a Two-Year Alternate Term, February 2024-February 2026)

Address	275 N Waterside Rd
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City	Heber
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State	UT
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Zip Code	84032
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Background/Experience/Qualifications

For the last six years I've worked with UDOT on highway safety. I am currently a National Highway Traffic Incident Management (TIM) instructor, I work closely with UDOT Traffic Operations Center (TOC). I have sat on the state Zero Fatalities Committee, Arrive Alive, Defensive Driving, Slow Down Move Over and several others. Traffic safety has been a priority with my day-to-day work.

I also develop plans for building evacuation, public safety, parking, etc.

I've been a member of the community since 1975. I have 35 years of public service experience dealing with public matters both on a law-enforcement end and private end.

Why I want to serve on the Planning Commission

I simply want to serve because I want to do what's best for the community. No agendas to uphold for anybody in the valley.

Jami Hewlitt, [<jami67@msn.com>](mailto:jami67@msn.com), (For a Two-Year Alternate Term, February 2024-February 2026)

Address 266 E 300 S

City Heber

State UT

Zip Code 84032

Background/Experience/Qualifications Seasoned entrepreneur with a robust background in the construction and tourism industry. Highly motivated and eager to lend combined knowledge and skills to enhance the quality of life in the Heber Valley. Operates well in both individual and team capacities, leveraging seasoned work ethic to quickly adapt to different processes and drive objectives.
See attached resume.

Why I want to serve on the Planning Commission

Thank you for the opportunity to apply for the Planning Commission Chair. It's clear that you're looking for a candidate that is extremely familiar with the responsibilities associated with the role, and can perform them confidently. I am certain that I have the necessary skills to successfully do the job adeptly and perform above expectations. I am a hard-working professional who has been consistently praised as results-oriented by my coworkers and management. Over the course of my 34-year career, I've developed a skill set directly relevant to the Planning Commission Chair role you are hiring for, including extensive knowledge in tourism, construction, and small business ownership. Overall, I have consistently demonstrated problem-solving, creative thinking and planning abilities in every aspect of my life, and I invite you to review my detailed achievements in the attached resume. I look forward to putting my experience and skills hard at work for the people of Heber Valley. Thank you for your consideration.

Audit Committee Nominee: Michael Smiley *(for a four-year term, February 2024 – February 2028.)*

Michael C. Smiley
1285 N Oquirrh Mountain Drive, Heber City, UT
Michael.Smiley@mac.com

I understand Heber City is looking to fill an open Audit Committee position. As a resident of Heber City, I would like to be considered for this position. I have substantial finance experience, including serving as Audit Committee Chairman of Twin Disc, a \$300 million global public company, and CFO of Zebra Technologies, a \$4 billion global public company. I have a BS in Accounting from BYU and an MBA from the University of Chicago. I have attached my resume for your consideration and would greatly appreciate discussing this opportunity at your convenience.

See attached Resume.

TORI E. BROUGHTON

emailtorib@gmail.com – (970) 596-7217

RELEVANT EXPERIENCE

Trek Bicycle Company

11/2022 to Present

Retail Manager

- Implement strategies to improve customer experience, increase sales, increase profitability.
- Mentor talent for future opportunities.
- Be the favorite community bike shop.

Trek Bicycle Company

01/2022 to 11/2022

Business Development Manager

- Manage North American retail acquisitions from due diligence through contract negotiation and deal closing.
- Project managed store openings, leading large teams through processes ranging from visual merchandising to operational setup.

Trek Bicycle Company

11/2017 to 01/2022

District Retail Manager

- Worked directly with company owned stores across Washington, Idaho, Colorado, and New Mexico
- Guided Trek Store Managers in implementing new strategies to improve customer experience, sales, and profitability.
- Uphold brand standards and maintain consistency across all stores.
- Cultivate top talent for future opportunities.

Trek Bicycle Company

10/2014 to 11/2017

Visual Presentation Specialist

- Manage the visual aspects of new store openings, remodels, and acquisitions. This includes ordering all fixtures.
- Manage seasonal floor sets, visual assets for marketing promotions, and store appearance for 10 stores across 3 states.
- Conduct merchandising training for Trek direct retail staff.
- Lead consumer clinics at direct retail stores. Flat tire repair, basic maintenance, and product clinics.
- Analyze merchandising strategy through Ascend sell through reports.

Trek Bicycle Company

12/2012 to 10/2014

Factory Demo Product Specialist

- Managed yearly regional event calendar including dealer demos, event demos, employee clinics, and regional ride camps. This includes planning, promotion, and execution of event.
- Educated dealers via product clinics and shop rides on new product and technologies.
- Submitted weekly field reports including event recaps, expense reports, etc.
- Managed all logistics of event participation.
- Created and preformed professional presentations.
- Maintained fleet of up to 50 high end bikes ranging from road to downhill.

Light & Motion Industries, Inc.**02/2012 to 08/12**Field Promotions Manager

- Represent the company at 24 hour races, tradeshow, and other industry and consumer events throughout North America and Canada.
- Managed the company Sprinter van, scheduling and performing demos and administering education on lighting products to key retailers and consumers. Also maintained records of van demo equipment and sales inventory
- Provided product, merchandizing, and consumer feedback to product development and marketing staff.
- Implemented and maintain measures to track R.O.I. for demo program and events.

Trek Bicycle Company**01/2008 to 02/2012**Women's Product Specialist

- Work autonomously to educate Trek dealers on sales techniques, selling to women, purchasing and merchandising and technical product information.
- Provide consumers with the knowledge and experience they need to feel confident purchasing from the Trek family as well as in their cycling endeavors.
- Gain insight into female market and present product information at Ladies Nights and free bicycle test rides, presenting technical product information to consumers, and answering their questions and concerns.
- Maintain an efficient twelve-month travel schedule through 6 states and two Canadian provinces.
- Represent Trek Bicycles at various trade shows (Sea Otter, RAGBRAI, Trek Tri, etc.)

Jami Hewlett

PLANNING COMMISSION

CONTACT

- ☎ (435) 513-5859
- ✉ jami67@msn.com
- 📍 Heber, Utah 84032

SKILLS

- Business Management
- Cost Reduction
- Time Management
- Strategic Decision-Making
- Schedule Management
- Waste Reduction
- Problem-Solving
- Collaboration and Teamwork
- Adaptability
- Design Coordination
- Hardworking and Reliable

PROFESSIONAL SUMMARY

Seasoned entrepreneur with a robust background in the construction and tourism industry. Highly motivated and eager to lend combined knowledge and skills to enhance the quality of life in the Heber Valley. Operates well in both individual and team capacities, leveraging seasoned work ethic to quickly adapt to different processes and drive objectives. Resourceful and results-driven with a passion for growth and efficiency to meet needs in a cost effective way.

EXPERIENCE

June 2016 - Present

Owner

Hewlett Life and Health Insurance , Heber, Utah

- Demonstrated excellent communication skills when discussing insurance policies with customers to ensure they were fully informed of their coverage options.
- Used company software to analyze customer coverage needs, write quotes, and issue policies.
- Built and maintained relationships with clients to support satisfaction.
- Set appointments with prospective clients to present suitable insurance packages.

January 2016 - Present

Owner

Summit Property Management, Park City, Utah

- Managed the daily operations related to customer service, inventory management, and marketing.
- Maintained a high standard of customer service through quality assurance checks.
- Negotiated contracts and agreements with business partners, vendors, and customers.
- Hired skilled personnel to handle challenges and obligations of business.
- Defined strategic plans and kept business on track to meet objectives.
- Maximized revenue and long-term net worth by producing results and performance.
- Invested in employees, using training to keep them at the top of their game.

July 2016 - July 2022

Manager

TGONE Construction, Park City, Utah

- Manage all aspects in the construction industry including accounts payable, human resources, project management.
- Monitored team productivity and performance to support goals.
- Oversaw multiple projects simultaneously and ensured tasks were efficiently completed.
- Monitored the progress of construction projects, identifying and resolving any issues that arose.
- Planned and coordinated construction projects from start to finish, ensuring adherence to deadlines, budgets, and quality standards.

January 2004 - July 2006

Manager

Deer Valley, Park City, Utah

- Successfully managed a team of over 30 staff members in an upscale resort, developing strong leadership and problem-solving skills.
- Implemented cost-saving measures that improved operational efficiency without compromising quality or service levels while increasing profits by 100%.
- Developed effective systems for monitoring and evaluating employee performance, providing constructive feedback when necessary.

January 2003 - January 2006

Manager

Claim Jumper , Heber, Utah

- Managing all areas of operations including marketing, human resources, profitability and sales growth; daily decision making, staff support, guest interaction, scheduling; planning while upholding standards, product quality and cleanliness;
- Provided support for customers by addressing complaints quickly and efficiently, displaying exceptional customer service skills.

July 1993 - July 2003

Resort Associate

Homestead, Midway, Utah

- Held various positions while obtaining a broad range of knowledge in the tourism industry with numerous promotions throughout a ten year period.

September 1996 - May 1998

Associate

Chamber of Commerce, Cedar, Utah

- Collaborated closely with advertising agencies and PR firms on promotional campaigns and initiatives.
- Conducted market research and analyzed data to identify areas of improvement in the tourist sector.
- Researched current trends in the industry to identify potential growth opportunities.
- Developed and implemented tourism marketing strategies to increase visitor numbers.

Steering Committee

Envision Heber, Heber, Utah

EDUCATION

June 1998

**Bachelor of Science (B.S.) in Advertising, Public Relations,
Business**

Southern Utah University, Cedar City, UT, US

May 1996

Associate in Science (A.S.)

Snow College, Ephraim

CERTIFICATIONS

- Real Estate License
- Insurance License

Greg Royall

Over the last 10 years, **six of which were with UDOT I have dedicated my time with the goal of highway safety in mind. I am currently a National Highway Traffic Incident Management (TIM) instructor, I work closely with UDOT Traffic Operations Center (TOC)** where coordinated efforts take place across the State to minimize traffic congestion during events major traffic hazards and crashes.

I am currently Part 107 Certify Unmanned Aircraft System (UAS) this certification is used to map vehicle crashed for Local and State Agencies, map slide paths for avalanche control in our local canyons and UODT drone pilots are used to inspect overhead traffic signs to minimize the use off traffic control to cut down on commuter delays.

I have sat on **the Zero Fatalities Committee, Arrive Alive, Defensive Driving, Slow Down Move Over and several others.** Traffic safety has been a priority with my day-to-day work.

I also **develop plans for building evacuation, public safety, parking, etc.**

I'm also on an Incident management team to be on-call on heavily traveled metro highways to provide support to motorists, to assist law enforcement officials in accident management and clean-up to assure the incident restoration or continuation of traffic flow. Provides service for motorists on heavily traveled metro freeways and associated state roads through quick response for repair and removal of disabled vehicles, traffic control for accident assistance and clean up or other incidents impeding or interrupting traffic movement. Acts as a first responder to crash scenes, which may involve providing first aid and/or dealing with hazardous materials.

Other Job Duties:

Detects and eliminates or minimizes safety hazards.

Develops appropriate safety and/or service plans to alleviate risk, provide protection, etc.

Directs traffic, removes traffic hazards, assists the motoring public with directions, when they have mechanical breakdowns, and provides other courtesies.

Monitors, transmits, and receives information over multiple radio frequencies to detect emergencies, exchange information or provide dispatch services.

Responds and administers first-aid treatment to anyone in need.

Receives and evaluates incoming calls, determines whether emergency or routine and prioritizes each; determines who needs to respond to call, relays instructions and questions.

Uses and maintains emergency equipment, emergency lights and communications equipment, etc.

MICHAEL C. SMILEY

1285 N. Oquirrh Mountain Drive
Heber City, Utah 84032

Mobile: 435 671 1504
Email: Michael.Smiley@mac.com

CFO, FINANCIAL EXECUTIVE & CORPORATE DIRECTOR

A respected corporate board member and successful CFO in public and private structures who brings a wealth of governance and global operational experience in strategic planning, carve-out and integration, Board leadership, and financial planning and analysis. Extensive background in business turnarounds and M&A activity by navigating cultural hurdles and garnering trust through highly collaborative style. Guided by respect, accountability, integrity, and creativity instrumental in advising the senior team on corporate strategy. Known for market and financial insights and effective work on Audit and Finance committees.

**GOVERNANCE • M&A • RESTRUCTURING • STRATEGIC PLANNING • RISK MANAGEMENT • GLOBAL/FOREIGN COMPANIES • CARVE-OUTS & INTEGRATION
BUSINESS PLANNING • CAPITAL STRUCTURE • CAPITAL RAISING • P&L • COST CONTROL &
CONTRACT NEGOTIATIONS • WORKING CAPITAL MANAGEMENT • FOREIGN JV'S • FX • FINANCIAL ANALYSIS • IT • IR**

CAREER SNAPSHOT

PEKING UNIVERSITY, Beijing, China & TONGJI UNIVERSITY, Shanghai, China **2018 to 2021**

Adjunct Professor

Taught post-graduate level Advanced Academic English Writing and Listening, Speaking and Critical Thinking. Developed academic curriculum to achieve university exam standards. Implemented **Canvas Learning Management System** to support administration of assignments, attendance, examinations, and supplementary educational materials. Edited **"Fundamentals of English Writing"**, academic writing textbook.

TWIN DISC CORPORATION, Racine, WI, USA **2010 to Current**

Board Chairman, Audit Committee Chairman,

Chairman of Twin Disc Corporation, a public, global producer of commercial marine and transmission equipment. Also served as Audit Committee Chairman.

ZEBRA TECHNOLOGIES, Lincolnshire, IL, USA **2008 to 2016**

Chief Financial Officer

Led finance, IT, and corporate services functions with 500 global employees. Tripled company valuation, increased sales 17% per annum, grew EPS 15% per annum. Nominated by CEO and chosen as 2014 finalist for Chicago CFO of the year for large public companies.

TELLABS, Naperville, IL & Ballerup, Denmark **2002 to 2008**

General Manager — Tellabs Denmark A/S, Ballerup, Denmark

2004 to 2008

Transformed Danish company from yearly loss leader business unit to 2nd most profitable in company portfolio.

Vice President, International Finance/Treasurer/Interim CFO, Naperville, IL, USA

2002 to 2004

Elevated from Treasurer to interim CFO with oversight of \$2B business during major corporate restructure.

GENERAL SEMICONDUCTOR, Chicago, IL; Melville, NY, USA & Taipei, Taiwan **1997 to 2002**

Vice President, Finance, Asia/Pacific — Taipei, Taiwan

2000 to 2002

Championed strategic business transition from Europe to Asia.

Vice President, Treasurer, Melville, NY, USA

1997 to 2000

Worked with CEO and CFO to evaluate acquisition opportunities and positioned company to realize maximum value of future sale. Established treasury/FP&A organization for public company spinoff.

EARLY CAREER: Foundational experience as **Assistant Treasurer** at **General Instrument**, serving as key member of team separating GI into three public companies; and at **GATX Corporation**. **Senior Treasury Analyst** at **Intel Corp.** and **Supervising Auditor** at **Coopers & Lybrand**.

BUSINESS/FINANCE LEADERSHIP IN DETAIL

ZEBRA TECHNOLOGIES, Lincolnshire, IL, USA

2008 to 2016

NASDAQ listed \$3.6B global provider of enterprise asset intelligence solutions with 7,000+ employees where 55% of sales is outside America.

Chief Financial Officer

Sought out for global experience to partner with CEO and provide strategic vision amidst company transition from specialty printing company to enterprise asset intelligence/IoT solutions provider. Mitigated risk arising from 3 previous acquisitions while defining criterion for future M&A. Helmed business process improvement initiatives and initiated programs to drive international growth.

Partnered with CEO in Redefining Strategic Focus and Bringing Business into Alignment

- **Realized \$42M gain after analyzing acquisitions** and advocating for sale of \$190M non-core business.
- **Increased specialty printing market share from 7% to 20%+** edging out competitors in China. Expanded strategy to India and South East Asia.
- **Slashed discretionary spending** and non-core activities to remain cash flow positive during 2009 downturn.
- **Worked with CEO to respond to activist shareholder actions** resulting in exit of investor and preservation of shareholder base.
- **Implemented single global ERP system** that set stage for major acquisition of Motorola's Solutions Enterprise.

Moved Zebra from a Products Company to a Strategic Solutions Company

- **Executed \$2.5B carve-out acquisition** of Motorola Solutions' Enterprise business — a company 2.5X size of Zebra.
- **Raised \$3.4B in capital** while leading all financial aspects of acquisition and investor communications.
- **Helmed restructuring and integration** of tax strategy, accounting, financial planning, investor communications, and IT.

TELLABS, Naperville, IL, USA & Ballerup, Denmark

2002 to 2008

NASDAQ listed \$2B global provider of telecommunications networking products.

General Manager— Tellabs Denmark A/S — Ballerup, Denmark

2004 to 2008

Earned distinction as only finance executive in Tellabs to move into line management role. Charged with complete P&L responsibility, strategic planning, product management, and marketing. Led team of 7 senior leaders and 180+ employees in Europe and India.

Turned Around Loss Leading Danish-Based Global Product Development Company to 2nd Most Profitable Business in Portfolio

- **Overcame cultural hurdles as outsider and won buy-in to collaborate** on refocusing product development.
- **Generated \$20M of top line growth** by leading development of award-winning 6325 Edge Node product, an advanced and cost competitive telecommunications network element popular in global emerging markets.
- **Reduced \$15M in overhead expenses** through facility relocation, staff downsizing, and establishment of joint venture operation in India.
- **Negotiated a 45% ownership stake** in Indian telecommunication equipment company to boost presence in Indian market and leverage lower cost resources.

Vice President, International Finance/Treasurer/Interim CFO — Naperville, IL, USA

2002 to 2004

Recruited as Treasurer for ability to raise capital and quickly transitioned to international finance role, leveraging previous experience in Asia/Pacific. Elevated to interim CFO to helm major corporate restructuring after exit of CFO. As Vice President, International Finance, managed \$440M business and team of 50 finance and accounting professionals in Europe, Latin America, and Asia.

Orchestrated Major Corporate Restructuring and Realignment Strategies for 8 Lines of Business during Telecom Industry Crash

- **Eliminated \$100M in annual cost** after targeting cost reduction and realignment during transition period.
- **Instituted first product line P&L reports** and led senior management planning process to achieve profitability and growth targets despite challenging market conditions.
- **Realized first quarterly operating profit for international business lines in more than 2 years** by refocusing international activities on high-value products and optimized cost structures.
- **Saved \$16M and exceeded company expectations by \$1M** through sublease of 40 vacant properties in distressed real estate market environment.

GENERAL SEMICONDUCTOR, Melville, NY, USA & Taipei Taiwan**1997 to 2002***\$500M global manufacture of semiconductors; spun off by General Instrument in 1997 and acquired by Vishay Intertechnology in 2001.***Vice President, Finance—Asia/Pacific—Taipei, Taiwan****2000 to 2002**

Leveraged language and cultural experience to lead \$250M key revenue generating region, including 12 manufacturing and sales offices across China, Taiwan, Japan, Singapore, and Korea. Directed three group controllers who led a 40-person multinational workforce.

Enhanced Value of Company after Winning Buy-In to Move Forward with Controversial Relocation Plan to Asia

- **Persuaded board and executive leadership** to move forward with relocation after presenting strategic business plan to close company's flagship manufacturing operation in Ireland, relocated operations to company locations in Taiwan and China, and outsourced assembly processes to Chinese vendor.
- **Garnered \$20M in annual savings upon completion.**

Vice President, Treasurer—Melville, NY, USA**1997 to 2000**

Transitioned into General Instrument's semiconductor subsidiary upon spin-off from General Instrument to create publicly traded global corporation. Held responsibility for corporate finance, capital markets, banking and rating agency relations, foreign exchange, credit and collections, and defined benefit and contribution plan assets.

Collaborated with CEO and CFO in Setting Strategic Direction

- **Recapitalized company through issuance of \$175M convertible subordinated notes, which was instrumental in allowing company to weather market downturn and maximize company's valuation for future sale.** Prepared registration, and marketing materials. Negotiated terms and played instrumental role in presenting to institutional investors.
- **Determined impact of potential strategies on shareholders.**
- **Positioned company to accelerate top-line growth** by evaluating acquisitions in U.S. and Asia to provide necessary scale.

EARLY CAREER HIGHLIGHTS

GENERAL INSTRUMENT, Chicago, IL, USA**1996 to 1997***NYSE listed \$2B global provider of broadband cable television equipment, hybrid fiber coaxial cable, and discrete semiconductors.***Assistant Treasurer**

Played key role in executing restructure of company into 3 publically traded companies. Orchestrated financing, addressed existing credit agreements and debt, and set up foreign exchange hedging program. Managed cash, banking relationships, foreign exchange, and interest rate risk management as well as defined benefit and contribution plan assets. Collaborated with major banks, capital markets, and executive leadership to win approval for treasury related activities required to establish independent companies.

- **Negotiated three revolving credit facilities** totaling \$1.3B to capitalize each of three companies.
- **Converted \$500M of junior subordinated convertible notes** and arranged \$175M in back-up credit to settle pending lawsuit.

GATX CORPORATION, Chicago, IL, USA**1991 to 1996***\$1.4B NYSE listed asset-based provider of distribution assets and financial services.***Assistant Treasurer, Corporate Finance**

Gained depth of experience in negotiations, projections, working with commercial and investment banks and how to craft transactions in alignment with company vision. Managed capital markets, corporate finance, interest rate risk management, and defined benefit and contribution plan assets programs. Prepared and led board, banking, and rating agency presentations. Led 6-member financial and valuation team.

- **Facilitated \$1.5B in aggregate of public and private corporate financings** in collaboration with investment and commercial bankers.
- **Generated \$30M** after executing sale of three environmentally problematic distribution properties.

ITEL CORPORATION, Chicago, IL, USA**1987 to 1991***\$1.5B NYSE asset-based equipment lessor, wire & cable distributor, and financial services provider.***Senior Treasury Analyst, Financial Analyst (1987 to 1991)**

Led financial analysis of container leasing business that led to its eventual sale. Came to appreciate value of open dialogue and relationship building while gaining on-the-ground experience in strategic decision making.

COOPERS & LYBRAND, Chicago, IL, USA

1984 to 1987

Big Four Public Accounting Firm

Supervising Auditor, Staff Auditor

Earned quick promotion after being recruited to program with reputation for turning new college grads into industry pros.

Gained ability to function effectively with others in a team setting while learning about business processes, and accounting.

EDUCATION, AWARDS & BOARD POSITIONS

MBA, University of Chicago, Chicago, IL, USA 1989

BS, Accounting, Brigham Young University, Provo, UT, USA 1983

CPA, State of Illinois, USA (inactive)

Chicago Large Company **CFO of the Year, Finalist** 2015

University of Chicago CFO Forum, Advisory Board, 2012 to 2017

Bernie's Book Bank, Board Member, Literacy initiative to bring books to under-resourced children, 2011 to 2014

American Chamber of Commerce in Denmark, Board Member, 2006 to 2008

MEDIA QUOTATIONS & PUBLICATIONS

"Leadership in Finance: Zebra Technologies' Michael Smiley," *CFO.com*

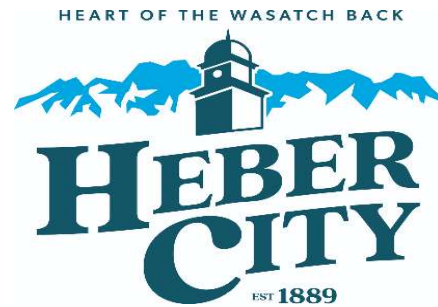
"Internet of Things: Our Programmable World," *TechWeek* 2013, Chicago, IL, USA

"Activist Investors Go Big," *Wall Street Journal*, blgs.wsj.com



HEBER CITY COUNCIL STAFF REPORT

MEETING DATE: 2/6/24



SUBJECT: Approval of Resolution 2024 - 01 on Compensation for Service on the Heber Light and Power Company Board of Directors.

RESPONSIBLE: Mayor Heidi Franco

STRATEGIC RELEVANCE: Necessary Administrative Item

SUMMARY

Every year, Heber City passes a Resolution on HL&P Board of Directors compensation per the Heber Light and Power Organizational Agreement and state code requirements.

RECOMMENDATION

City Council can approve Resolution to continue HL&P compensation to Board Directors.

BACKGROUND

N/A

DISCUSSION

N/A

FISCAL IMPACT

N/A

CONCLUSION

Recommend approval.

ALTERNATIVES

N/A.

POTENTIAL MOTIONS

N/A

ACCOUNTABILITY

Department: Mayor's Office

Staff member: N/A

EXHIBITS

1. Resolution No. 2024 - 01, Compensation for Service on the Heber Light & Power Company Board of Directors.

Resolution No 2024 - 01

Compensation for Service on the Heber Light & Power Company Board of Directors

WHEREAS the Heber Light and Power Company (“Company”) is an energy services interlocal entity created by Heber City, Midway City, and Charleston Town to provide electric service to customers within the municipalities and surrounding areas; and

WHEREAS the Company’s Organization Agreement provides that the Heber City Mayor shall serve as Chair on the Company’s Board of Directors and a Director; and that the Mayor shall appoint two Heber City Council members to serve as Directors also; and

WHEREAS the Company’s Budget includes annual stipends to the Mayor of \$7295.04, payable monthly for service as Chair and Director on the Company’s Board, and an annual stipend of \$5703.84 to each Director respectively, payable monthly for their service.

WHEREAS, the Heber City Council has analyzed as required by Utah Code ANN. § 11-13-403, the duties and responsibilities of the Mayor’s and Director’s service on the Company’s Board and considered the compensation for the Mayor’s and Director’s service and time commitment on the Board.

NOW THEREFORE, BE IT RESOLVED BY THE HEBER CITY COUNCIL AS FOLLOWS:

1. The Company’s annual stipends to the Mayor and Directors fairly reflect the responsibilities and duties of a Chair or Director serving on the Company’s Board and does not duplicate the City’s compensation for the Mayor’s service as Mayor, or for the Directors’ service as council members on the Heber City Council.
2. Pursuant to Utah Code Ann. § 11-13-403, the Heber City Council hereby approves the City’s receipt of the Mayor’s and two Council Members respective stipends as compensation for service on the Company’s Board during Calendar Year 2024.
3. The Heber City Recorder is hereby directed to provide the secretary of the Company’s Board of Directors with an executed copy of this Resolution.

ADOPTED and PASSED this _____ day of _____, 2024 by the following vote:

	AYE	NAY
Council Member Mike Johnston	_____	_____
Council Member Yvonne Barney	_____	_____
Council Member Scott Phillips	_____	_____
Council Member Aaron Cheatwood	_____	_____
Council Member Sid Ostergaard	_____	_____

APPROVED:

Mayor Heidi Franco

ATTEST:

_____ Date: _____

Trina Cooke, City Recorder



Heber City Council Staff Report

MEETING DATE: 2/6/2024
SUBJECT: Fiscal Year 2023 Audit Presentation
RESPONSIBLE: Jon Haderlie
DEPARTMENT: Finance
STRATEGIC RELEVANCE:

SUMMARY

On August 1, 2023, City Council approved the service agreement with Larson & Company, PC to provide audit services for the FY2023. Larson & Company completed their audit and issued their report on December 20, 2023. A representative from the firm will review the audit reports and opinions with Council.

RECOMMENDATION

BACKGROUND

DISCUSSION

FISCAL IMPACT

CONCLUSION

ALTERNATIVES

POTENTIAL MOTIONS

ACCOUNTABILITY

Department: Finance
Staff member: Sara Nagel, Finance Manager

EXHIBITS

1. 2023 Financial Report

**HEBER CITY CORPORATION
HEBER CITY, UTAH
BASIC FINANCIAL STATEMENTS**

For The Year Ended June 30, 2023

Together with Independent Auditor's Report

HEBER CITY CORPORATION

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INDEPENDENT AUDITOR'S REPORT

Honorable Mayor and City Council Members
Heber City

Report on the Audit of the Financial Statements

Opinions

We have audited the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of Heber City as of and for the year ended June 30, 2023, and the related notes to the financial statements, which collectively comprise Heber City's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of Heber City as of June 30, 2023, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of Heber City and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Financial Statements

Heber City's management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America; and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about Heber City's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgement and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Heber City's internal control. Accordingly, no such opinion is expressed.

- Evaluate the appropriateness of accounting principles used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgement, there are conditions or events, considered in the aggregate that raise substantial doubt about Heber City's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and other required supplementary information, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise Heber City's basic financial statements. The combining and individual nonmajor fund financial statements, budgetary comparison schedules, and schedule of expenditures of federal awards, as required by Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance), are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The combining and individual nonmajor fund financial statements, budgetary comparison information, and the schedule of expenditures of federal awards are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the combining and individual nonmajor fund financial statements, the budgetary comparison information, and the schedule of expenditures of federal awards are fairly stated in all material respects in relation to the basic financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 20, 2023, on our consideration of Heber City's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Heber City's internal control over financial reporting and compliance.

LARSON & COMPANY, PC
Larson & Company, PC

Spanish Fork, Utah
December 20, 2023

HEBER CITY CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS
For The Year Ended June 30, 2023

As management of the Heber City Corporation (the "City"), we offer readers of the City's financial statements this narrative overview and analysis of the City's financial activities for the fiscal year ended June 30, 2023. The Management's Discussion and Analysis (MD&A) is designed to provide an overview of the City's financial activity. It is also intended to assist the reader in focusing on significant financial issues, including identifying changes in the City's financial position (its ability to address the next and subsequent years' challenges), identifying any material deviations from the approved budget identifying individual fund issues or concerns.

Heber City management encourages readers to consider the information presented herein in conjunction with the financial statements which follow this section. To help the reader with the navigation of this report, the City's activities are classified in the following manner: government activities refers to general administration, public safety, parks, streets, planning, cemetery, and airport, etc., while business-type activities refer to operations such as the water, sewer, utility, and pressurized irrigation.

Financial Highlights

- As of June 30, 2023, the City of Heber's total assets and deferred outflow of resources exceed liabilities and deferred inflows of resources by \$221,066,116. Of this amount, \$24,187,223 represents unrestricted net position, which may be used to meet the government's ongoing obligations to citizens and creditors. The decrease in unrestricted net position from the prior year was \$3,434,628.
- The Governmental Activities unrestricted net position increased from \$9,143,244 to \$12,693,033, a change of \$3,549,789. The change in balance was largely due to the current year revenues, and paydown of debt. The business type unrestricted net position decreased from \$18,478,607 to \$11,494,190 or by \$6,984,417. The change in balance was largely due to decreases in revenues, capital contributions, and increased spending on capital projects during the year. The unrestricted funds are those that have no restrictions or commitments.
- The total assets and deferred outflows of resources of Heber City increased by \$18,514,857 totaling \$285,203,406. The total governmental activities assets and deferred outflows of resources increased by \$8,667,794 totaling \$130,752,245 and the business-type assets and deferred outflows of resources increased by \$9,847,063 totaling \$154,451,161.
- There was an increase of \$1,676,039 in governmental capital assets, net of depreciation, bringing the total to \$79,375,835. The business-type capital assets net of depreciation increased \$15,920,207, bringing the total to \$81,460,183. The City's total net capital assets increased by \$17,596,246, to a total of \$160,836,018 of total capital assets citywide.
- Total non-current liabilities of the City increased by \$4,727,681. The majority of this increase is the result of the issuance of \$5,041,000 of 2023 Excise Tax Revenue bonds for road projects, as well as new leases for the three backhoes, and police tasers.
- As a result of changes in estimates, actual returns at Utah Retirement Systems, the City's pension-related net pension asset was reduced to \$0 and the City now reports a net pension liability of \$1,330,674, a swing of \$3,494,705.

HEBER CITY CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)
For The Year Ended June 30, 2023

Overview of the Financial Statements

This discussion and analysis are intended to serve as an introduction to Heber City's basic financial statements. Heber City's basic financial statements comprise three components: 1) government-wide financial statements, 2) fund financial statements, and 3) notes to the financial statements. This report also includes other supplementary information in addition to the basic financial statements.

The financial statements presented herein include the activities of the City and its component unit, the Community Redevelopment Agency.

Government-wide financial statements are designed to provide readers with a broad overview of Heber City's finances in a manner similar to a private-sector business.

- **The Statement of Net Position** presents information on all of Heber City's assets and liabilities, with the difference between the two reported as net position. Over time, increases or decreases in net assets may serve as a useful indicator of whether the financial position of Heber City is improving or deteriorating. However, you will also need to consider other non-financial factors.
- **The Statement of Activities** presents information showing how the City's net position changed during the fiscal year reported. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus all of the current year's revenues and expenses are taken into account regardless of when cash is received or paid.

Both government-wide financial statements distinguish the functions of Heber City that are principally supported by taxes and intergovernmental revenues (governmental activities) from other functions intended to recover all or a significant portion of their costs through user fees and charges (business-type activities). The government-wide financial statements can be found on pages 14-15 of this report. The governmental activities of the City include general government, public safety, community development, streets and highways, parks, cemetery, and airport. The business-type activities of the City include culinary water, sewer utility, storm drain, pressurized irrigation, and electric fund.

Reporting the City's Most Significant Funds

Fund financial statements. A fund is a grouping of related accounts used to maintain control over resources that have been segregated for specific activities or objectives. The City, like other state and local governments, uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. All of the City funds can be divided into two categories: governmental funds and proprietary funds.

- **Governmental funds** - These funds are used to account for the same functions reported as governmental activities in the government-wide financial statements. These fund financial statements focus on how money flows into and out of these funds, and the balances left at year-end that are available for spending. These funds are reported using an accounting method called modified accrual accounting, which measures cash and other financial assets that can be readily converted to cash. The governmental fund statements provide a detailed short-term view of the City's general government operations and the essential services it provides. Governmental fund information helps users determine whether more or fewer financial resources can be spent shortly to finance the City's programs. We describe the relationship (or differences) between governmental activities (reported in the Statement of Net Position and the Statement of Activities) and governmental funds in a reconciliation included with the fund financial statements.

HEBER CITY CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)
For The Year Ended June 30, 2023

The City's major governmental funds (as determined by generally accepted accounting principles) are the General Fund, Airport Special Revenue fund, COVID-19 Special Revenue fund, and Streets Capital Projects fund. The remaining governmental funds are determined to be non-major and are included in the combining statements within this report.

- **Proprietary Funds** - Heber City maintains two types of proprietary funds, the enterprise fund, and the internal service fund. Enterprise funds are used to report the same functions presented as business-type activities in the government-wide financial statements. Heber City uses enterprise funds to account for its Culinary Water Utility, Sewer Utility, Storm Drain Utility, Pressurized Utility, and Electric Investment funds. As determined by generally accepted accounting principles, the Culinary, Pressurized Water, Sewer, and Electric Investment* funds meet major fund classification criteria. The Internal Service Fund accounts for vehicle replacement services provided to general government activities that meet major fund classification requirements.

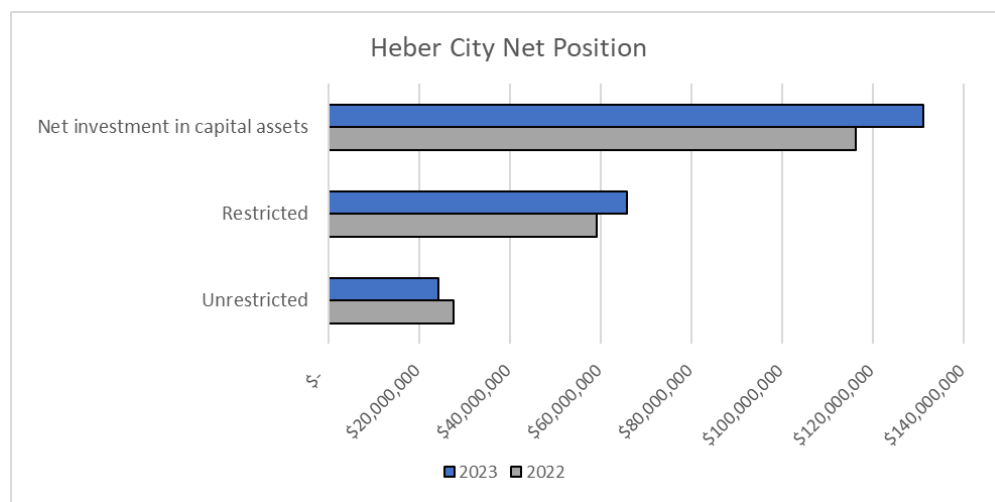
* *The Electric Utility Investment is simply the City's 75% ownership equity in Heber Light & Power.*

- **Notes to the Financial Statements.** The notes to the financial statements are necessary to fully understand the data provided in both the government-wide and fund financial statements. The notes to the financial statements can be found on pages 25-55.
- **Other Information.** In addition to the basic financial statements and accompanying notes, this report also present required supplementary information concerning Heber City's Budgetary Comparison Schedules, Budgeting and Budgetary Control, and Changes in Assumptions Related to Pensions.

Government-wide Financial Analysis

As noted earlier, net position may serve over time as a useful indicator of a government's financial position. In the case of Heber City, assets and deferred outflows of resources exceeded the liabilities and deferred inflows of resources by \$221,066,116. The chart below shows a comparison of the net position, as stated in the prior year and the current year. It has a comparison of what classification within equity it would be represented as. This includes net investment in capital assets, restricted net position, and unrestricted net position.

As you can see, our net position has grown significantly over the last year. This is the result of several capital projects as well as developer contributions and the results of operations.



HEBER CITY CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)
For The Year Ended June 30, 2023

In the current fiscal year, Heber City's overall net position increased by \$18,023,213. Governmental activities net position increased by \$6,740,454, which includes a prior period adjustment of \$115,402. The major causes of increase in the governmental activities net position is the result of increases in fees collected for building permits, inspections, impact fees, sales and other taxes, and earning of grant revenues over the prior year.

Continued development and building activity growth within the City continues to impact the revenues and associated expenditures within the various funds. The City has seen a 5.95% increase in sales and use tax revenues over last year. Property tax revenues increased by 4.9%, and Other taxes saw an increase of 22.5%.

Governmental activities revenues in total increased 32.2% or \$6,777,368. \$3,893,342 of that increase is related to the recognition of operating grants and contributions from grants and other sources. Governmental activities expenses increased by 25.3% as the City expended those grant funds, and continued other infrastructure projects during the year.

Business type activities net position increased by \$11,282,759 as continued investment by the City in infrastructure and continued development and associated developer contributions impact the balance sheet. The Net Investment in Capital Assets has increased by \$13,577,618, restricted net position increased by \$4,689,558, and unrestricted net position decreased by of \$6,984,417.

The current economic environment has had a significant impact on the amount of residential growth within the City. The City is also addressing the aging infrastructure and will evaluate the need to adjust rates to establish enough revenue to bond for projects.

By far, the most considerable portion of Heber City's net position (59.3%) reflects its investment in capital assets (e.g., land, buildings, infrastructure assets, machinery, and equipment), less any related debt used to acquire those assets that are still outstanding. The City uses these capital assets to provide citizens services; consequently, these assets are not available for future spending. Although the City's investment in its capital assets is reported net of related debt, it should be noted that the resources needed to repay this debt must be provided from other current sources.

Some of the significant capital spending for governmental activities for the fiscal year 2022-2023 included road improvements consisting of seal stripe, and other improvements.

The major business-type activities expenditures in the fiscal year 2022-2023 included continuing work on the water, sewer, and irrigation infrastructure replacement projects, as well as various other improvements.

HEBER CITY CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)
For The Year Ended June 30, 2023

Heber City Corporation
Condensed Statement of Net Position

	Governmental Activities		Business-type Activities		Total	
	2023	2022	2023	2022	2023	2022
Current and other assets	\$ 50,081,369	\$ 43,389,381	\$ 72,606,894	\$ 78,773,714	\$122,688,263	\$122,163,095
Capital assets	79,375,835	77,699,796	81,460,183	65,539,976	160,836,018	143,239,772
Total assets	\$129,457,204	\$121,089,177	\$154,067,077	\$144,313,690	\$283,524,281	\$265,402,867
Deferred outflows of resources	\$ 1,295,041	\$ 995,274	\$ 384,084	\$ 290,408	\$ 1,679,125	\$ 1,285,682
Long-term liabilities	\$ 12,363,865	\$ 7,045,342	\$ 29,531,767	\$ 30,122,609	\$ 41,895,632	\$ 37,167,951
Other liabilities	10,851,828	11,995,632	4,252,865	4,329,151	15,104,693	16,324,783
Total liabilities	\$ 23,215,693	\$ 19,040,974	\$ 33,784,632	\$ 34,451,760	\$ 57,000,325	\$ 53,492,734
Deferred inflows of resources	\$ 7,132,359	\$ 9,379,738	\$ 4,606	\$ 773,174	\$ 7,136,965	\$ 10,152,912
Net investment in capital assets	\$ 71,374,074	\$ 70,145,701	\$ 59,700,174	\$ 46,122,556	\$131,074,248	\$116,268,257
Restricted	16,337,086	14,374,794	49,467,559	44,778,001	65,804,645	59,152,795
Unrestricted	12,693,033	9,143,244	11,494,190	18,478,607	24,187,223	27,621,851
Total net position	\$100,404,193	\$ 93,663,739	\$120,661,923	\$109,379,164	\$221,066,116	\$203,042,903

The graphs on the following pages display the government-wide activities as reflected in the Statement of Activities on the next page. Program revenues included in the first graph are fees charged for specific services performed by the various governmental functions. General revenues, such as property taxes, sales and uses taxes, etc., are not included. In the second graph, we recognize the percentage of revenue for the governmental funds coming from different sources.

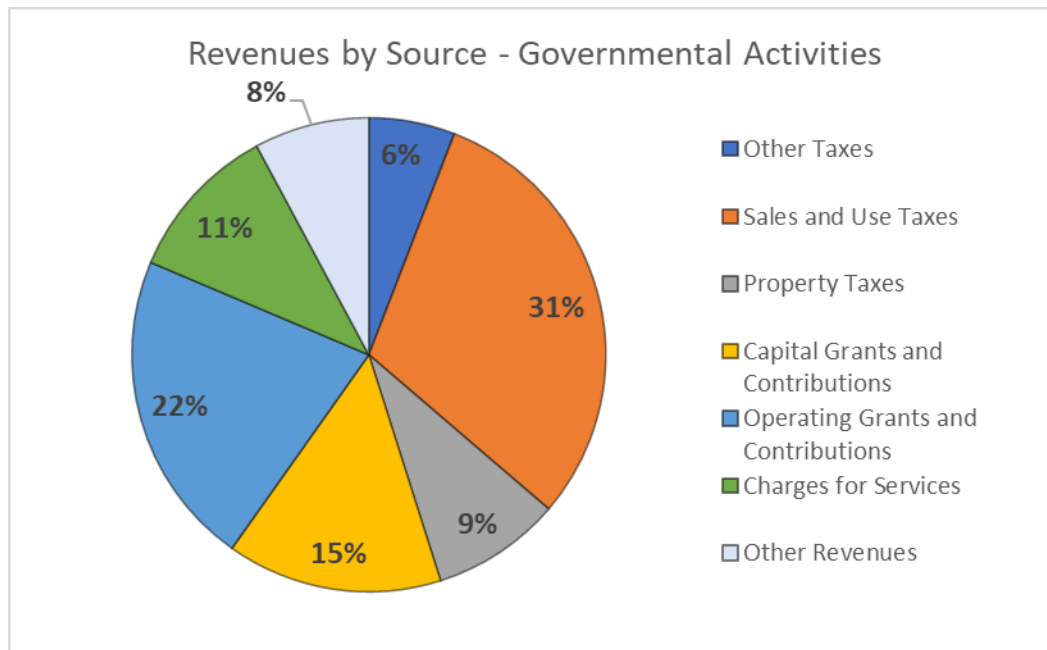
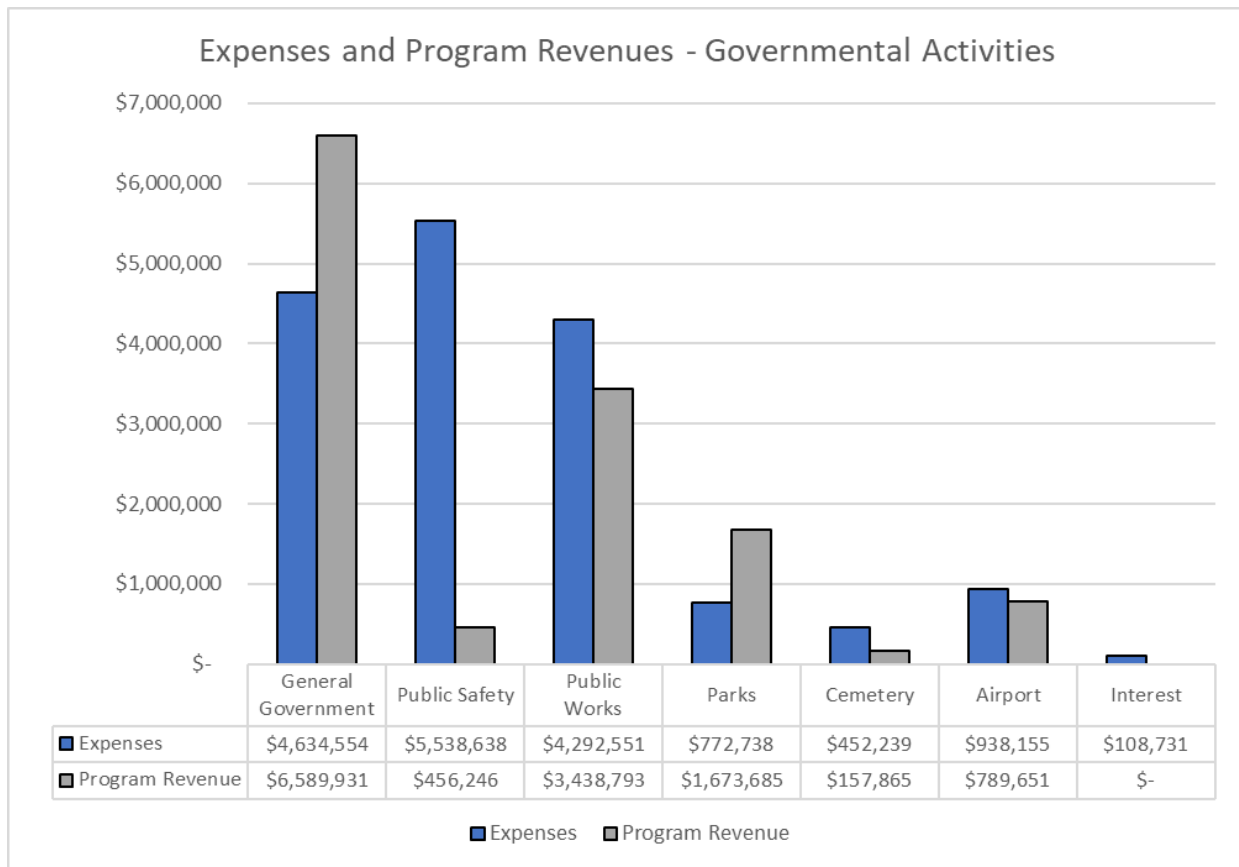
In the third and fourth graphs, we recognize similar information as in the first two graphs. However, it is reflective of the business type figures in the government-wide statement shown above.

HEBER CITY CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)
For The Year Ended June 30, 2023

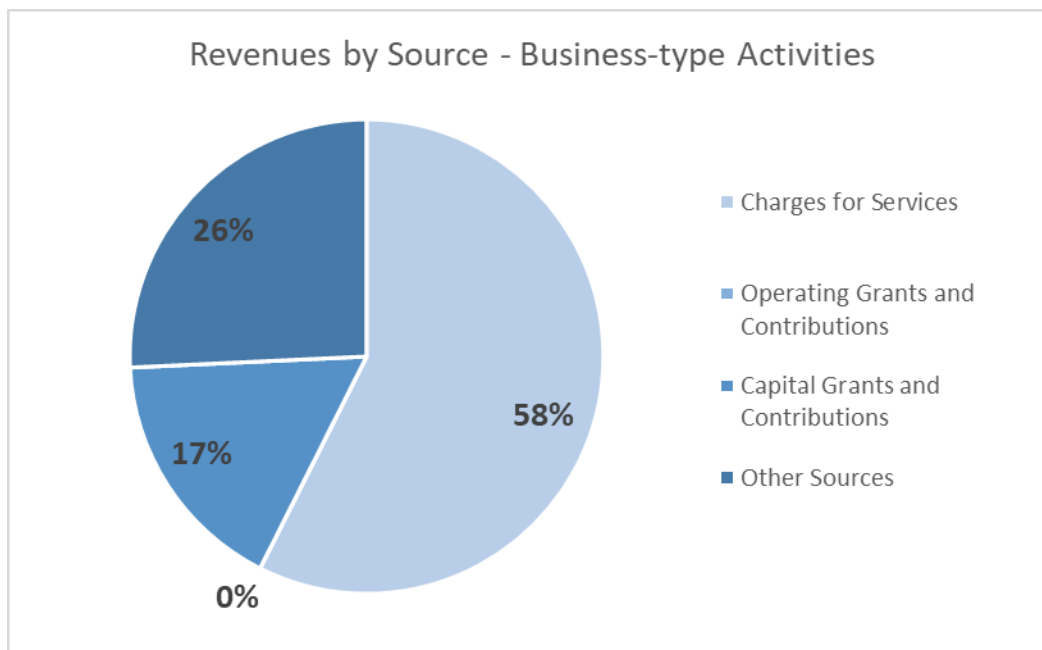
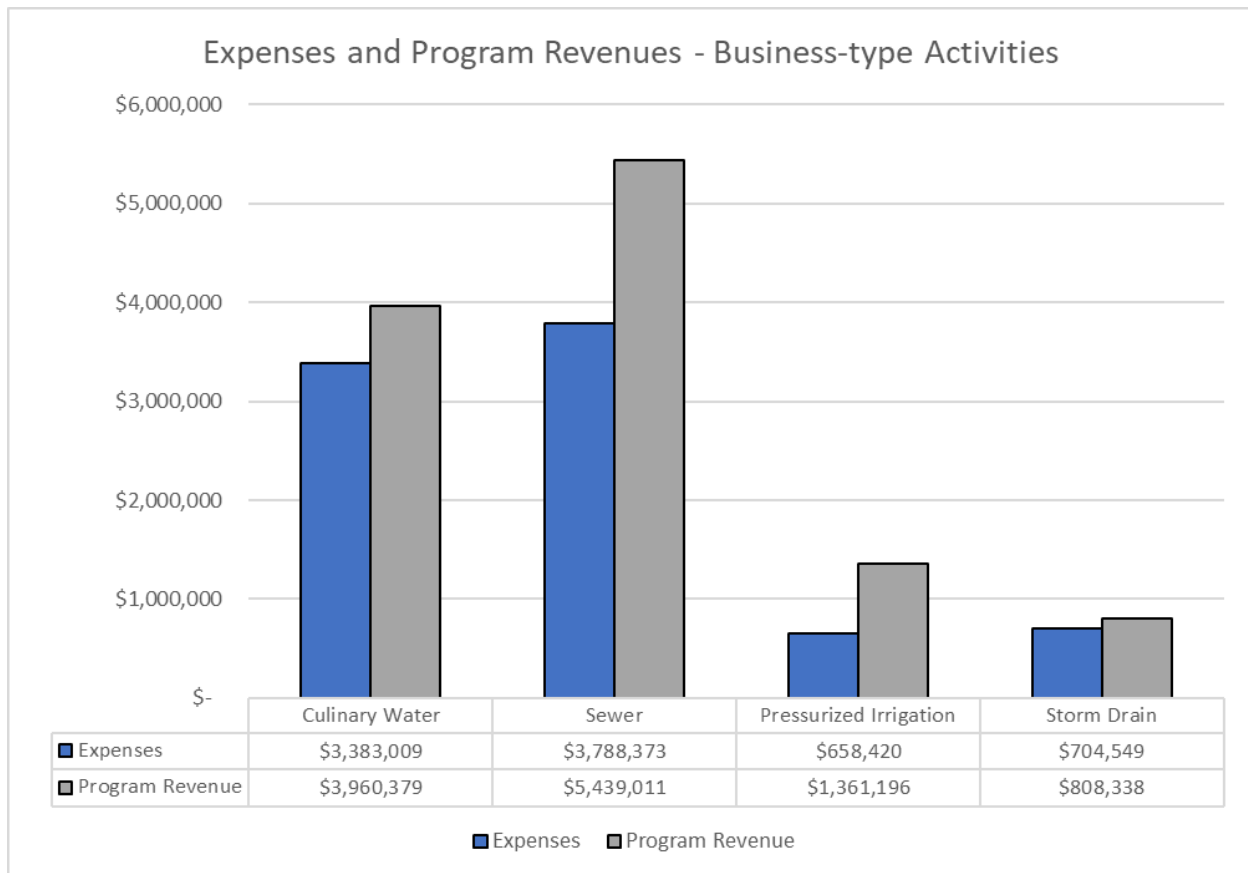
Heber City Corporation
Condensed Statement of Activities

	Governmental Activities		Business-type Activities		Total	
	2023	2022	2023	2022	2023	2022
Revenues:						
Program Revenues:						
Charges for services	\$ 3,022,213	\$ 3,121,931	\$ 8,934,394	\$ 6,281,663	\$ 11,956,607	\$ 9,403,594
Operating grants and contributions	5,881,898	1,988,556	-	-	5,881,898	1,988,556
Capital grants and contributions	4,202,060	3,640,867	2,634,530	3,161,675	6,836,590	6,802,542
General Revenues:						
Property taxes	2,395,300	2,282,987	-	-	2,395,300	2,282,987
Sales & use taxes	8,555,591	8,075,263	-	-	8,555,591	8,075,263
Other taxes	1,593,356	1,300,477	-	-	1,593,356	1,300,477
Other	2,171,368	634,337	4,019,862	6,926,446	6,191,230	7,560,783
Total revenues	27,821,786	21,044,418	15,588,786	16,369,784	43,410,572	37,414,202
Expenses:						
General government	4,634,554	3,709,211	-	-	4,634,554	3,709,211
Public safety	5,538,638	4,440,086	-	-	5,538,638	4,440,086
Public works	4,292,551	3,344,113	-	-	4,292,551	3,344,113
Parks and recreation	772,738	502,098	-	-	772,738	502,098
Cemetery	452,239	427,054	-	-	452,239	427,054
Airport	938,155	824,372	-	-	938,155	824,372
Interest on long-term debt	108,731	114,377	-	-	108,731	114,377
Water	-	-	3,383,009	2,716,364	3,383,009	2,716,364
Sewer	-	-	3,788,373	2,775,183	3,788,373	2,775,183
Pressurized irrigation	-	-	658,420	564,292	658,420	564,292
Storm drain	-	-	704,549	598,539	704,549	598,539
Total expenses	16,737,606	13,361,311	8,534,351	6,654,378	25,271,957	20,015,689
Increase (decrease) in net position before transfers	11,084,180	7,683,107	7,054,435	9,715,406	18,138,615	17,398,513
Transfers	(4,228,324)	-	4,228,324	-	-	-
Increase (decrease) in net position	6,855,856	7,683,107	11,282,759	9,715,406	18,138,615	17,398,513
Net position - beginning	93,663,739	85,980,632	109,379,164	99,663,758	203,042,903	185,644,390
Prior period adjustment	(115,402)	-	-	-	(115,402)	-
Net position - ending	<u>\$100,404,193</u>	<u>\$ 93,663,739</u>	<u>\$120,661,923</u>	<u>\$109,379,164</u>	<u>\$221,066,116</u>	<u>\$203,042,903</u>

HEBER CITY CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)
For The Year Ended June 30, 2023



HEBER CITY CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)
For The Year Ended June 30, 2023



HEBER CITY CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)
For The Year Ended June 30, 2023

Financial Analysis of Government's Fund Financial Statements

The focus of the City's balance sheet and statement of revenues for the separate governmental funds is to provide information on near-term inflows, outflows, and balances of spendable resources. Such information is useful in assessing the City's financing requirements as well as short term needs. As of June 30, 2023, the City's governmental funds reported combined fund balance of \$32,001,542. The General Fund is the chief operating fund of the City. All other activities which are not required to be accounted for in separate funds, either by State or local ordinance or by a desire to maintain a matching of revenues and expenses, are accounted for in this fund.

The City maintains five enterprise funds to account for the business-type activities of the City. The separate fund statements included in this report provide the same information for business-type activities as is provided in the government-wide financial statements. However, the difference is that the fund statements offer more detail. Having separate fund statements helps assess the short-term needs of the City and the financial stability and liquidity of the fund.

General Fund Budgetary Highlights

The City's general fund budgeted expenditures was increased from \$19,864,142 to \$21,067,997. This increase was primarily in the Administrative, Building, and Roads departments. Revenues were likewise increased, but only by \$100,000. The general fund was \$7,129,085 under budget as a result of conscientious spending, and timing of projects moved into next fiscal year.

Capital Asset and Debt Administration

Capital assets - Heber City's total capital assets for its governmental and business-type activities as of June 30, 2023, amount to \$160,836,018 (net of accumulated depreciation). This investment in capital assets includes land, buildings and systems, improvements, infrastructure (streets, sidewalks, curb and gutter, bridges, airport, etc.), and machinery and equipment. This is an increase of \$17,596,246.

Additional information on the City's capital assets can be found in Note 3-C in the footnotes to this financial report and the supplemental section.

Long-term debt & Liabilities - On June 30, 2023, the City had total debt & compensated absences balances outstanding of \$42,978,821.

The City has no general obligation bonded indebtedness. A general obligation bond is backed by the full faith and credit of the City. State statutes limit the amount of general obligation debt a governmental entity may issue to 4% of real estate within its boundaries total taxable value. Additional information on the outstanding debt obligations of the City can be found in Note 3-D in the footnotes to this report.

HEBER CITY CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)
For The Year Ended June 30, 2023

Heber City's Capital Assets

	Governmental Activities		Business-type Activities		Total	
	2023	2022	2023	2022	2023	2022
Capital assets not being depreciated						
Construction in process	\$ 2,214,684	\$ 943,182	\$ 20,569,631	\$ 3,361,060	\$ 22,784,315	\$ 4,304,242
Land	23,160,662	23,149,451	557,761	557,761	23,718,423	23,707,212
Water shares	-	-	17,985,118	17,985,118	17,985,118	17,985,118
Capital assets being depreciated						
Buildings and structures	13,436,743	13,436,743	5,292,294	5,292,294	18,729,037	18,729,037
Improvements and infrastructure	83,458,676	80,429,252	57,757,413	57,463,258	141,216,089	137,892,510
Machinery, equipment, and vehicles	5,156,214	5,156,048	5,231,837	4,951,414	10,388,051	10,107,462
Total	127,426,979	123,114,676	107,394,054	89,610,905	234,821,033	212,725,581
Less accumulated depreciation	(48,051,144)	(45,414,880)	(25,933,871)	(24,070,929)	(73,985,015)	(69,485,809)
Total capital assets	<u>\$ 79,375,835</u>	<u>\$ 77,699,796</u>	<u>\$ 81,460,183</u>	<u>\$ 65,539,976</u>	<u>\$160,836,018</u>	<u>\$143,239,772</u>

Heber City's Outstanding Debt

	Governmental Activities		Business-type Activities		Total	
	2023	2022	2023	2022	2023	2022
Revenue bonds	\$ 11,609,244	\$ 7,349,249	\$ 29,319,757	\$ 29,824,750	\$ 40,929,001	\$ 37,173,999
Note payable	-	-	381,851	441,571	381,851	441,571
Lease payable	246,008	153,380	450,912	306,759	696,920	460,139
Compensated absences	696,506	566,419	274,543	228,494	971,049	794,913
Total	<u>\$ 12,551,758</u>	<u>\$ 8,069,048</u>	<u>\$ 30,427,063</u>	<u>\$ 30,801,574</u>	<u>\$ 42,978,821</u>	<u>\$ 38,870,622</u>

Economic Factors and Next Year's Budget and Rates

The unemployment rate for Wasatch County (of which Heber City is a part) was 2.4% (June 2023) compared with a state unemployment rate of 2.6% and a national rate of 3.6%. Wasatch County's unemployment rate in June 2023 was 3.6%. (Source: Utah Department of Workforce Services). The employment picture continues to improve as the unemployment rate in the county remains at historic lows. Fortunately, for the City, our State economy continues to be strong in the post-pandemic period. The difficulty for the City continues to be employee retention as competition for employees remains high in a low unemployment rate environment. An average national inflation of 3% for the fiscal year continues to impact the City with higher operation, employment, and project costs.

Despite several indicators of a strong local economy such as low unemployment and ongoing development, the City expects sales tax revenue to flatten in the coming fiscal year which is in line with State expectations of sales tax revenue.

The major projects over \$500,000 budgeted for next fiscal year include:

- Coyote Springs Park (\$1,000,000)
- Main City Park Improvements – Phase 1 (\$1,400,000)
- Cemetery Administration Building (\$1,000,000)
- Central Heber Trail (\$750,000)
- Southfield Rd 100 S to 1200 S (\$924,000)
- Eastern Bypass – Sec. B (\$3,857,000)
- Eastern Bypass – Sec. A (\$2,338,000)
- Annual Road Maintenance (\$9,000,000)
- 150 E 1200 S Intersection & Road Stub (\$650,000)

HEBER CITY CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)
For The Year Ended June 30, 2023

- Valley Hills Tank 2 Repairs (\$682,000)
- Central Heber Water Replacement Phase 1 (\$4,394,000)
- Central Heber Sewer Replacement Phase 1 (\$8,672,000)
- Central Heber Irrigation Replacement Phase 1 (\$2,769,000)
- Citywide PI Meter Replacements (\$3,268,000)
- Runway/Taxiway Seal Coat (\$653,000)

There are several projects below this \$500,000 threshold budgeted to occur in the next year. The City has total projects budgeted for the next year at \$48,577,365. The City also has substantial additional fleet and equipment budgeted.

City Council imposed an 8.06 % tax increases for the fiscal year 2024.

Requests for Information

This financial report is designed to provide our citizens, creditors, investors, and others interested in the City's finances with a general overview of the City's financial condition and to show the City's accountability for the financial resources it receives. Our goal is to be fully transparent in the information that we provide the citizens, creditors, investors, and other interested parties. Questions concerning any information provided in this report or requests for additional financial information should be addressed to:

Sara Nagel, CPA
Heber City Corporation
Finance Manager
75 North Main
Heber City, UT 84032

BASIC FINANCIAL STATEMENTS

HEBER CITY CORPORATION
STATEMENT OF NET POSITION
June 30, 2023

	Governmental Activities	Business-Type Activities	Total
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES:			
Current assets:			
Cash and cash equivalents	\$ 18,644,982	\$ 13,586,216	\$ 32,231,198
Accounts receivable, net	5,263,267	906,745	6,170,012
Lease receivable	4,348,569	-	4,348,569
Prepaid expenses	31,027	-	31,027
Total current assets	28,287,845	14,492,961	42,780,806
Non-current assets:			
Restricted cash and cash equivalents	21,793,524	16,636,018	38,429,542
Prepaid items	-	228,849	228,849
Capital assets:			
Not being depreciated	25,375,346	39,112,510	64,487,856
Net of accumulated depreciation	54,000,489	42,347,673	96,348,162
Investment in joint venture	-	41,249,066	41,249,066
Total non-current assets	101,169,359	139,574,116	240,743,475
Total assets	129,457,204	154,067,077	283,524,281
Deferred outflows of resources - pensions	1,295,041	384,084	1,679,125
Total assets and deferred outflows of resources	\$ 130,752,245	\$ 154,451,161	\$ 285,203,406
LIABILITIES AND DEFERRED INFLOWS OF RESOURCES:			
Current liabilities:			
Accounts payable	\$ 8,288,512	\$ 2,946,386	\$ 11,234,898
Customer security deposits	9,850	87,275	97,125
Accrued interest payable	48,760	110,699	159,459
Unearned revenue	1,182,806	16,542	1,199,348
Compensated absences, current portion	271,573	112,026	383,599
Long-term debt, current portion	1,050,327	979,937	2,030,264
Total current liabilities	10,851,828	4,252,865	15,104,693
Non-current liabilities:			
Compensated absences, non-current portion	424,933	162,517	587,450
Long-term debt, non-current portion	10,804,925	29,172,583	39,977,508
Net pension liability	1,134,007	196,667	1,330,674
Total non-current liabilities	12,363,865	29,531,767	41,895,632
Total liabilities	23,215,693	33,784,632	57,000,325
Deferred inflows:			
Deferred inflows of resources - lease	4,296,809	-	4,296,809
Deferred inflows of resources - property taxes	2,759,536	-	2,759,536
Deferred inflows of resources - pensions	76,014	4,606	80,620
Total deferred inflows of resources	7,132,359	4,606	7,136,965
Total liabilities and deferred inflows of resources	30,348,052	33,789,238	64,137,290
NET POSITION:			
Net investment in capital assets	71,374,074	59,700,174	131,074,248
Restricted for:			
Investment in joint venture	-	41,249,066	41,249,066
Community improvements	14,823,451	8,061,842	22,885,293
Debt service	825,405	156,651	982,056
Perpetual care endowment	688,230	-	688,230
Unrestricted	12,693,033	11,494,190	24,187,223
Total net position	100,404,193	120,661,923	221,066,116
Total Liabilities, deferred inflows of resources, and net position	\$ 130,752,245	\$ 154,451,161	\$ 285,203,406

The accompanying notes are an integral part of the financial statements.

HEBER CITY CORPORATION
STATEMENT OF ACTIVITIES
For the Year Ended June 30, 2023

	Program Revenues				Net (Expense) Revenue & Changes in Net Position		
	Expenses	Charges for Services	Operating Grants and Contributions	Capital Grants and Contributions	Governmental Activities	Business-type Activities	Total
<u>FUNCTIONS/PROGRAMS:</u>							
Primary government:							
Governmental activities:							
General government	\$ 4,634,554	\$ 2,307,776	\$ 4,282,155	\$ -	\$ 1,955,377	\$ -	\$ 1,955,377
Public safety	5,538,638	2,975	391,081	62,190	(5,082,392)	-	(5,082,392)
Public works	4,292,551	9,695	962,913	2,466,185	(853,758)	-	(853,758)
Parks and recreation	772,738	-	-	1,673,685	900,947	-	900,947
Cemetery	452,239	157,865	-	-	(294,374)	-	(294,374)
Airport	938,155	543,902	245,749	-	(148,504)	-	(148,504)
Interest on long-term debt	108,731	-	-	-	(108,731)	-	(108,731)
Total governmental activities:	16,737,606	3,022,213	5,881,898	4,202,060	(3,631,435)	-	(3,631,435)
Business-type activities:							
Water	3,383,009	2,826,991	-	1,133,388	-	577,370	577,370
Sewer	3,788,373	4,248,529	-	1,190,482	-	1,650,638	1,650,638
Pressurized irrigation	658,420	1,050,536	-	310,660	-	702,776	702,776
Storm drain	704,549	808,338	-	-	-	103,789	103,789
Total business-type activities	8,534,351	8,934,394	-	2,634,530	-	3,034,573	3,034,573
Total primary government	<u>\$ 25,271,957</u>	<u>\$ 11,956,607</u>	<u>\$ 5,881,898</u>	<u>\$ 6,836,590</u>	<u>(3,631,435)</u>	<u>3,034,573</u>	<u>(596,862)</u>
General Revenues:							
Property taxes					2,395,300	-	2,395,300
Sales and use tax					8,555,591	-	8,555,591
Other taxes					1,593,356	-	1,593,356
Unrestricted investment earnings					1,734,132	610,680	2,344,812
Gain (loss) on sales of capital assets					170,737	58,953	229,690
Change in joint venture equity					-	3,350,229	3,350,229
Miscellaneous					266,499	-	266,499
Total general revenues					14,715,615	4,019,862	18,735,477
Transfers in (out)					(4,228,324)	4,228,324	-
Change in net position					6,855,856	11,282,759	18,138,615
Net position - beginning					93,663,739	109,379,164	203,042,903
Prior period adjustment					(115,402)	-	(115,402)
Net position - ending					\$ 100,404,193	\$ 120,661,923	\$ 221,066,116

The accompanying notes are an integral part of the financial statements.

HEBER CITY CORPORATION
BALANCE SHEET
GOVERNMENTAL FUNDS
June 30, 2023

	General Fund	Airport - Special Revenue	COVID-19 - Special Revenue	Streets - Capital Projects	Non-Major Governmental Funds	Total Governmental Funds
ASSETS:						
Cash and cash equivalents	\$ 10,191,271	\$ 179,176	\$ 1,183,341	\$ 655,384	\$ 4,998,748	\$ 17,207,920
Receivables:						
Property taxes	2,762,484	-	-	-	-	2,762,484
Due from other governments	1,557,041	1,708	-	-	298,249	1,856,998
Lease receivables	-	4,348,569	-	-	-	4,348,569
Other receivables	20,908	-	-	-	-	20,908
Interfund receivable (payable)	365,677	-	-	-	(365,677)	-
Prepaid expenses	31,027	-	-	-	-	31,027
Restricted assets:						
Cash and cash equivalents	12,061,920	-	-	4,395,560	5,336,044	21,793,524
Due from other governments	622,877	-	-	-	-	622,877
TOTAL ASSETS	\$ 27,613,205	\$ 4,529,453	\$ 1,183,341	\$ 5,050,944	\$ 10,267,364	\$ 48,644,307
LIABILITIES:						
Accounts payable	\$ 605,415	\$ 42,340	\$ -	\$ 768,863	384,512	\$ 1,801,130
Accrued liabilities	5,405,735	3,888	-	-	-	5,409,623
Customer deposits	9,850	-	-	-	-	9,850
Payables from restricted assets	906,762	-	-	-	-	906,762
Unearned revenue	-	-	1,182,806	-	-	1,182,806
TOTAL LIABILITIES	6,927,762	46,228	1,182,806	768,863	384,512	9,310,171
DEFERRED INFLOWS OF RESOURCES:						
Deferred inflows of resources - property tax	2,819,536	-	-	-	-	2,819,536
Deferred inflows of resources - leases	-	4,296,809	-	-	-	4,296,809
Deferred inflows of resources - unavailable grants	-	-	-	-	216,249	216,249
TOTAL DEFERRED INFLOWS OF RESOURCES	2,819,536	4,296,809	-	-	216,249	7,332,594
TOTAL LIABILITIES AND DEFERRED INFLOWS OF RESOURCES	9,747,298	4,343,037	1,182,806	768,863	600,761	16,642,765
FUND BALANCES:						
Nonspendable:						
Prepaid assets	31,027	-	-	-	-	31,027
Perpetual care	-	-	-	-	688,230	688,230
Restricted for:						
Class C roads	2,196,800	-	-	-	-	2,196,800
Transportation tax	4,136,119	-	-	-	-	4,136,119
Unspent bond proceeds	4,997,891	-	-	-	-	4,997,891
Debt service	445,035	-	-	-	380,370	825,405
Impact fees	2,190	-	-	4,282,081	4,206,261	8,490,532
Assigned for:						
Capital projects	-	186,416	535	-	4,705,026	4,891,977
Unassigned	6,056,845	-	-	-	(313,284)	5,743,561
TOTAL FUND BALANCES	17,865,907	186,416	535	4,282,081	9,666,603	32,001,542
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	\$ 27,613,205	\$ 4,529,453	\$ 1,183,341	\$ 5,050,944	\$ 10,267,364	\$ 48,644,307

The accompanying notes are an integral part of the financial statements.

HEBER CITY CORPORATION
RECONCILIATION OF THE BALANCE SHEET OF GOVERNMENTAL FUNDS
TO THE STATEMENT OF NET POSITION
June 30, 2023

Total Fund Balance for Governmental Funds	\$ 32,001,542
Total net assets reported for governmental activities in the statement is different because:	
Capital assets used in governmental funds are not financial resources and therefore are not reported in the funds:	
Capital assets, at cost	123,599,053
Less accumulated depreciation	<u>(45,827,258)</u>
Net capital assets	<u>77,771,795</u>
Deferred outflows of resources - pensions, a consumption of net position that applies to future periods, is not shown in the funds statements.	<u>1,295,041</u>
Property tax revenues not received within 60 days of fiscal year-end are not recognized as revenue in the governmental funds, but are recognized as revenue in the government-wide statements.	<u>60,000</u>
Grant revenue not received within 60 days of fiscal year-end are recognized as deferred inflows in the governmental funds, but are recognized as revenue in the government-wide statements.	<u>216,249</u>
Deferred inflows of resources - pensions, acquisition of net position that applies to future periods, is not reported in the fund statements.	<u>(76,014)</u>
Long-term liabilities, for funds other than enterprise funds, are recorded in the government-wide statements but not in the fund statements.	
General long-term debt	<u>(11,713,132)</u>
Interest accrued but not yet paid on long-term debt	<u>(48,384)</u>
Compensated absences	<u>(696,506)</u>
Net pension liability	<u>(1,134,007)</u>
One internal service fund is used by management to charge the cost of vehicle replacement to individual funds. The assets and liabilities of the internal service fund are included in the governmental activities of the statement of net position.	
Internal service fund	<u>2,727,609</u>
Total Net Position of Governmental Activities	<u><u>\$ 100,404,193</u></u>

The accompanying notes are an integral part of the financial statements.

HEBER CITY CORPORATION
STATEMENT OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCES OF GOVERNMENTAL FUNDS
For the Year Ended June 30, 2023

	General Fund	Airport - Special Revenue	COVID-19 - Special Revenue	Streets - Capital Projects	Non-Major Governmental Funds	Total Governmental Funds
REVENUES:						
Taxes:						
Property	\$ 2,393,092	\$ -	\$ -	\$ -	\$ -	\$ 2,393,092
Sales	8,555,591	-	-	-	-	8,555,591
Other taxes	1,593,356	-	-	-	-	1,593,356
Licenses and permits	1,796,227	-	-	-	-	1,796,227
Intergovernmental revenues	1,307,397	-	4,228,859	-	29,500	5,565,756
Charges for services	255,472	543,902	-	-	49,906	849,280
Fines and forfeitures	395,624	-	-	-	-	395,624
Impact fees	62,190	-	-	1,638,910	1,673,685	3,374,785
Heber Light and Power dividend	56,250	-	-	-	-	56,250
Interest	1,734,132	-	-	-	-	1,734,132
Miscellaneous revenue	289,185	2,039	-	-	-	291,224
Total revenues	18,438,516	545,941	4,228,859	1,638,910	1,753,091	26,605,317
EXPENDITURES:						
Current:						
General government	4,236,620	-	-	-	11,947	4,248,567
Public safety	5,463,452	-	-	-	-	5,463,452
Public works	1,528,795	-	-	58,144	-	1,586,939
Parks and recreation	524,288	-	-	-	-	524,288
Cemetery	485,331	-	-	-	-	485,331
Airport	-	657,074	-	-	21,318	678,392
Capital outlay:						
General government	2,538	-	-	-	1,731	4,269
Public safety	33,974	-	-	-	-	33,974
Public works	1,630,689	-	-	2,024,021	172,442	3,827,152
Parks and recreation	-	-	-	-	320,225	320,225
Cemetery	-	-	-	-	30,015	30,015
Airport	-	21,318	-	-	275,774	297,092
Debt service:						
Principal	29,400	-	-	-	781,005	810,405
Interest	3,825	-	-	4,165	96,281	104,271
Total expenditures	13,938,912	678,392	-	2,086,330	1,710,738	18,414,372
Excess (Deficiency) of Revenues Over (Under) Expenditures	4,499,604	(132,451)	4,228,859	(447,420)	42,353	8,190,945
Other Financing Sources and (Uses):						
Bond issuance	5,041,000	-	-	-	-	5,041,000
Lease proceeds	133,287	-	-	-	-	133,287
Transfers in	-	-	-	641,536	3,170,949	3,812,485
Transfers (out)	(3,812,485)	-	(4,228,324)	-	-	(8,040,809)
Total other financing sources and (uses)	1,361,802	-	(4,228,324)	641,536	3,170,949	945,963
Net Change in Fund Balances	5,861,406	(132,451)	535	194,116	3,213,302	9,136,908
Fund balance - beginning of year	12,004,501	318,867	-	4,087,965	6,568,703	22,980,036
Prior period adjustment	-	-	-	-	(115,402)	(115,402)
Fund balance - end of year	\$ 17,865,907	\$ 186,416	\$ 535	\$ 4,282,081	\$ 9,666,603	\$ 32,001,542

The accompanying notes are an integral part of the financial statements.

HEBER CITY CORPORATION
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCES OF GOVERNMENTAL FUNDS
TO THE STATEMENT OF ACTIVITIES
For the Year Ended June 30, 2023

Net Change in Fund Balances - Total Governmental Funds	\$ 9,136,908
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Amounts reported for governmental activities in the statement of activities are different because:

Governmental funds report capital outlays as expenditures. However, in the statement of activities, assets with a material cost are capitalized and the cost is allocated over their estimated useful and reported as depreciation expense.

Capital outlays	4,512,727
Developer contributions	827,275
Depreciation expense	(3,067,337)
Disposal of assets	<u>(991,941)</u>
Net	<u>1,280,724</u>

The Statement of Activities show pension benefits and pension expenses from the adoption of GASB 68 that are not shown in the fund statements.	<u>447,770</u>
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Property tax revenues not received within 60 days of fiscal year-end are not recognized as revenue in the governmental funds, but are recognized as revenue in the government-wide statements.	<u>2,208</u>
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Grant revenue not received within 60 days of fiscal year-end are not available resources for the governmental funds, but are recognized as revenue in the government-wide statements.	<u>216,249</u>
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Long-term debt proceeds are reported as financing sources in governmental funds. In the statement of net position, however, issuing debt increases long-term liabilities and does not affect the statement of activities.

Long-term debt proceeds	<u>(5,174,287)</u>
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Repayment of debt principal is an expenditure in the governmental funds, but reduces long-term liabilities in the statement of net position.

Long-term debt principal repayments	<u>810,405</u>
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Accrued interest for long-term debt is not reported as expenditure for the current period, while it is recorded in the statement of activities.

Change in accrued interest	<u>(977)</u>
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Compensated absences expenses reported in the statement of activities do not require the use of current financial resources and are not reported as expenditures in governmental funds.

Change in compensated absence liability	<u>(130,087)</u>
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An internal service fund is used by management to charge the cost of fleet management to individual funds. The net expense of the internal services is reported within the governmental activities.

Change in internal service fund	<u>266,943</u>
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Change in Net Position of Governmental Activities	<u><u>\$ 6,855,856</u></u>
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The accompanying notes are an integral part of the financial statements.

HEBER CITY CORPORATION
STATEMENT OF NET POSITION – PROPRIETARY FUNDS
June 30, 2023

	Water Fund	Sewer Fund	Electric Fund	Pressurized Irrigation Fund	Nonmajor Storm Drain Fund	Total Proprietary Funds	Governmental Internal Service Fund
ASSETS:							
Current assets:							
Cash and cash equivalents	\$ 632,428	\$ 9,556,912	\$ -	\$ 2,885,584	\$ 511,292	\$ 13,586,216	\$ 1,437,062
Accounts receivable, net	349,987	409,227	-	76,276	71,255	906,745	-
Total current assets	982,415	9,966,139	-	2,961,860	582,547	14,492,961	1,437,062
Non-current assets:							
Restricted cash and cash equivalents	13,007,605	2,406,478	-	1,221,935	-	16,636,018	-
Prepaid items	-	-	-	228,849	-	228,849	-
Capital assets:							
Not being depreciated	23,780,670	8,029,230	-	7,292,774	9,836	39,112,510	220,021
Net of accumulated depreciation	19,680,081	15,853,668	-	5,687,504	1,126,420	42,347,673	1,384,021
Other non-current assets	-	-	41,249,066	-	-	41,249,066	-
Total non-current assets	56,468,356	26,289,376	41,249,066	14,431,062	1,136,256	139,574,116	1,604,042
Total assets	57,450,771	36,255,515	41,249,066	17,392,922	1,718,803	154,067,077	3,041,104
DEFERRED OUTFLOWS OF RESOURCES:							
Deferred outflows of resources - pensions	165,075	143,388	-	30,498	45,123	384,084	-
Total assets and deferred outflows of resources	\$ 57,615,846	\$ 36,398,903	\$ 41,249,066	\$ 17,423,420	\$ 1,763,926	\$ 154,451,161	\$ 3,041,104

(Statement of Net Position continues on next page)

The accompanying notes are an integral part of the financial statements.

HEBER CITY CORPORATION
STATEMENT OF NET POSITION – PROPRIETARY FUNDS (Continued)
June 30, 2023

	Water Fund	Sewer Fund	Electric Fund	Pressurized Irrigation Fund	Nonmajor Storm Drain Fund	Total Proprietary Funds	Governmental Internal Service Fund
LIABILITIES:							
Current liabilities:							
Accounts payable	\$ 1,205,690	\$ 1,283,356	\$ -	\$ 424,550	\$ 32,790	\$ 2,946,386	\$ 170,997
Customer security deposits	87,275	-	-	-	-	87,275	-
Accrued interest	84,551	17,992	-	5,742	2,414	110,699	378
Unearned revenue	-	-	-	16,542	-	16,542	-
Compensated absences, current portion	47,387	41,052	-	9,811	13,776	112,026	-
Lease payable, current portion	24,806	9,467	-	-	3,597	37,870	11,741
Note payable, current portion	-	60,807	-	-	-	60,807	-
Revenue bonds, current portion	488,583	257,381	-	118,398	16,898	881,260	-
Total current liabilities	1,938,292	1,670,055	-	575,043	69,475	4,252,865	183,116
Non-current liabilities:							
Compensated absences, long-term	71,194	59,826	-	16,443	15,054	162,517	-
Lease payable, long-term	271,710	103,261	-	-	38,071	413,042	130,379
Note payable, long-term	-	321,044	-	-	-	321,044	-
Revenue bonds, long-term	14,485,561	9,147,631	-	4,308,619	496,686	28,438,497	-
Net pension liability	84,525	73,421	-	15,616	23,105	196,667	-
Total non-current liabilities	14,912,990	9,705,183	-	4,340,678	572,916	29,531,767	130,379
Total liabilities	16,851,282	11,375,238	-	4,915,721	642,391	33,784,632	313,495
DEFERRED INFLOWS OF RESOURCES:							
Deferred inflows of resources - pensions	1,980	1,720	-	365	541	4,606	-
Total liabilities and deferred inflows of resources	16,853,262	11,376,958	-	4,916,086	642,932	33,789,238	313,495
NET POSITION:							
Net investment in capital assets	36,603,215	13,971,120	-	8,544,923	580,916	59,700,174	1,290,925
Restricted for:							
Investment in joint venture	-	-	41,249,066	-	-	41,249,066	-
Debt service	156,651	-	-	-	-	156,651	-
Construction	4,433,429	2,406,478	-	1,221,935	-	8,061,842	-
Unrestricted	(430,711)	8,644,347	-	2,740,476	540,078	11,494,190	1,436,684
Total net position	40,762,584	25,021,945	41,249,066	12,507,334	1,120,994	120,661,923	2,727,609
Total liabilities, deferred inflows of resources, and net position	\$ 57,615,846	\$ 36,398,903	\$ 41,249,066	\$ 17,423,420	\$ 1,763,926	\$ 154,451,161	\$ 3,041,104

The accompanying notes are an integral part of the financial statements.

HEBER CITY CORPORATION
STATEMENT OF REVENUES, EXPENSES AND CHANGES
IN NET POSITION PROPRIETARY FUNDS
For The Year Ended June 30, 2023

	Water Fund	Sewer Fund	Electric Fund	Pressurized Irrigation Fund	Nonmajor Storm Drain Fund	Total Proprietary Funds	Governmental Internal Service Fund
Operating income:							
Charges for sales and service	\$ 2,695,290	\$ 4,202,297	\$ -	\$ 889,653	\$ 804,816	\$ 8,592,056	\$ -
Interfund services provided	8,452	10,565	-	2,113	3,522	24,652	423,448
Connection fees	123,249	35,667	-	158,770	-	317,686	-
Total operating income	2,826,991	4,248,529	-	1,050,536	808,338	8,934,394	423,448
Operating expenses:							
Personnel services	1,258,571	1,056,950	-	231,662	456,662	3,003,845	-
Utilities	158,088	53,191	-	9,356	15,676	236,311	-
Repair and maintenance	181,163	1,695,608	-	145,429	56,788	2,078,988	-
Other supplies and expenses	293,531	165,938	-	10,733	58,146	528,348	36,218
Insurance expense	39,513	42,855	-	-	8,516	90,884	-
Depreciation expense	1,042,247	740,207	-	255,443	99,534	2,137,431	285,623
Total operating expenses	2,973,113	3,754,749	-	652,623	695,322	8,075,807	321,841
Net operating income (loss)	(146,122)	493,780	-	397,913	113,016	858,587	101,607
Non-operating income (expense):							
Impact fees	1,133,388	1,190,482	-	310,660	-	2,634,530	-
Sale of fixed assets	11,975	54,331	-	-	(7,353)	58,953	170,737
Interest income	373,597	222,222	-	14,861	-	610,680	-
Interest on long-term debt	(409,896)	(33,624)	-	(5,797)	(9,227)	(458,544)	(5,401)
Change in joint venture equity	-	-	3,350,229	-	-	3,350,229	-
Total non-operating income (expense)	1,109,064	1,433,411	3,350,229	319,724	(16,580)	6,195,848	165,336
Income (loss) before contributions and transfers:	962,942	1,927,191	3,350,229	717,637	96,436	7,054,435	266,943
Capital contributions	-	-	-	-	-	-	-
Transfers in	-	3,710,313	-	526,471	-	4,236,784	-
Transfers out	-	(8,460)	-	-	-	(8,460)	-
Change in net position	962,942	5,629,044	3,350,229	1,244,108	96,436	11,282,759	266,943
Net position - beginning	39,799,642	19,392,901	37,898,837	11,263,226	1,024,558	109,379,164	2,460,666
Net position - ending	\$ 40,762,584	\$ 25,021,945	\$ 41,249,066	\$ 12,507,334	\$ 1,120,994	\$ 120,661,923	\$ 2,727,609

The accompanying notes are an integral part of the financial statements.

HEBER CITY CORPORATION
STATEMENT OF CASH FLOWS - PROPRIETARY FUNDS
For The Year Ended June 30, 2023

	Water Fund	Sewer Fund	Electric Fund	Pressurized Irrigation Fund	Nonmajor Storm Drain Fund	Total Proprietary Funds	Governmental Internal Service Fund
Cash flows from operating activities:							
Cash received from customers - service	\$ 2,841,572	\$ 4,263,071	\$ -	\$ 1,025,897	\$ 789,234	\$ 8,919,774	\$ -
Cash received from interfund services provided	8,452	10,565	-	2,113	3,522	24,652	423,448
Cash paid to suppliers	(1,070,762)	(1,824,366)	-	(356,814)	(130,933)	(3,382,875)	111,193
Cash paid to employees	(1,289,496)	(1,084,877)	-	(235,241)	(459,969)	(3,069,583)	-
Net cash provided (used) in operating activities	489,766	1,364,393	-	435,955	201,854	2,491,968	534,641
Cash flows from noncapital financing activities:							
Interfund balances	-	3,701,853	-	526,471	-	4,228,324	-
Net cash provided (used) in noncapital financing activities	-	3,701,853	-	526,471	-	4,228,324	-
Cash flows from capital and related financing activities:							
Cash from impact fees	1,133,388	1,190,482	-	310,660	-	2,634,530	-
Cash from sale of fixed assets	11,975	68,650	-	-	-	80,625	234,033
Cash payments for capital assets	(7,272,856)	(7,081,536)	-	(3,593,443)	(131,473)	(18,079,308)	(744,234)
Proceeds from issuance of lease payable	90,294	45,147	-	-	45,147	180,588	-
Cash payments for long-term debt principal	(479,949)	(97,746)	-	(3,344)	(20,110)	(601,149)	(11,260)
Cash payments for long-term debt interest	(420,442)	(15,632)	-	(55)	(6,813)	(442,942)	(5,023)
Cash flows provided (used) in capital and related financing activities	(6,937,590)	(5,890,635)	-	(3,286,182)	(113,249)	(16,227,656)	(526,484)
Cash flows from investing activities:							
Cash received from interest earned	373,597	222,222	-	14,861	-	610,680	-
Net cash provided (used) in investing activities	373,597	222,222	-	14,861	-	610,680	-
Net increase (decrease) in cash	(6,074,227)	(602,167)	-	(2,308,895)	88,605	(8,896,684)	8,157
Cash balance, beginning	19,714,260	12,565,557	-	6,416,414	422,687	39,118,918	1,428,905
Cash balance, ending	<u>\$ 13,640,033</u>	<u>\$ 11,963,390</u>	<u>\$ -</u>	<u>\$ 4,107,519</u>	<u>\$ 511,292</u>	<u>\$ 30,222,234</u>	<u>\$ 1,437,062</u>
Cash reported on the statement of net position:							
Cash and cash equivalents	\$ 632,428	\$ 9,556,912	\$ -	\$ 2,885,584	\$ 511,292	\$ 13,586,216	\$ 1,437,062
Non-current restricted cash	13,007,605	2,406,478	-	1,221,935	-	16,636,018	-
Total cash and cash equivalents	<u>\$ 13,640,033</u>	<u>\$ 11,963,390</u>	<u>\$ -</u>	<u>\$ 4,107,519</u>	<u>\$ 511,292</u>	<u>\$ 30,222,234</u>	<u>\$ 1,437,062</u>

The accompanying notes are an integral part of the financial statements.

HEBER CITY CORPORATION
STATEMENT OF CASH FLOWS - PROPRIETARY FUNDS (Continued)
For The Year Ended June 30, 2023

	Water Fund	Sewer Fund	Electric Fund	Pressurized Irrigation Fund	Nonmajor Storm Drain Fund	Total Proprietary Funds	Governmental Internal Service Fund
Reconciliation of Operating Income to Net Cash Provided (Used) in Operating Activities:							
Net operating income (expense)	\$ (146,122)	\$ 493,780	\$ -	\$ 397,913	\$ 113,016	\$ 858,587	\$ 101,607
Adjustments to reconcile operating income or (loss) to net cash provided (used) in operating activities:							
Depreciation and amortization	1,042,247	740,207	-	255,443	99,534	2,137,431	285,623
Pension expense adjustment	(50,701)	(41,192)	-	(8,907)	(10,987)	(111,787)	-
Changes in assets and liabilities:							
(Increase) decrease in receivables	(9,261)	25,107	-	(15,683)	(15,582)	(15,419)	-
(Increase) decrease in prepaid items	73,557	-	-	8,435	-	81,992	-
Increase (decrease) in accounts payables	(472,024)	133,226	-	(199,731)	8,193	(530,336)	147,411
Increase (decrease) in unearned revenues	-	-	-	(6,843)	-	(6,843)	-
Increase (decrease) in customer deposits	32,294	-	-	-	-	32,294	-
Increase (decrease) in compensated absences	19,776	13,265	-	5,328	7,680	46,049	-
Net cash provided (used) in operating activities	<u>\$ 489,766</u>	<u>\$ 1,364,393</u>	<u>\$ -</u>	<u>\$ 435,955</u>	<u>\$ 201,854</u>	<u>\$ 2,491,968</u>	<u>\$ 534,641</u>
Noncash financing and investing activities:							
Change in equity joint venture	\$ -	\$ -	\$ 3,350,229	\$ -	\$ -	\$ -	\$ -

The accompanying notes are an integral part of the financial statements.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2023

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

1-A. Reporting entity

Heber City Corporation (the City), a municipal corporation located in Wasatch County, Utah, operates under a Six Member-Council form of government. The accompanying financial statements present the City and its component units, entities for which the City is considered to be financially accountable.

The City has one component unit, the Community Reinvestment Agency (CRA). The CRA's board is the same as the City Council members and is reported as a blended component unit of the City. Separate financial statements of the Community Reinvestment Agency are not prepared or available.

The City is not a component unit of another entity.

1-B. Government-wide and fund financial statements

Government-wide Financial Statements

The government-wide financial statements, consisting of the statement of net position and the statement of activities report information on all of the non-fiduciary activities of the primary government and its component units. For the most part, the effect of inter-fund activity has been removed from these statements. Governmental activities, which normally are supported by taxes and intergovernmental revenues, are reported separately from business-type activities, which rely to a significant extent on fees and charges for support.

The *statement of net position* reports the financial position of the governmental and business-type activities of the City and its discretely presented component units (if any) at year-end.

The *statement of activities* reports the expenses of a given function offset by program revenues directly connected with the functional program. A function is an assembly of similar activities and may include portions of a fund or summarize more than one fund to capture the expenses and program revenues associated with a distinct functional activity. *Direct expenses* are those that are clearly identifiable with a specific function or segment. Indirect expenses are not allocated. All expenses are included in the applicable function. Program revenues include (1) charges to customers or applicants who purchase, use, or directly benefit from goods, services, or privilege provided by a given function or segment and (2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular function or segment. Taxes and other items not included among program revenues are reported instead as general revenues.

Fund Financial Statements

Separate financial statements are provided for governmental funds and proprietary funds. Major individual governmental funds and major individual enterprise funds are reported as separate columns in the fund financial statement.

The financial statements of the City are prepared in accordance with generally accepted accounting principles (GAAP).

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

1-C. Measurement focus, basis of accounting and financial statement presentation

The government-wide statements are reported using the economic resources measurement focus and the accrual basis of accounting, generally including the reclassification of internal activity (between or within funds). However, internal eliminations do not include utility services provided to City departments or payments to the general fund by other funds for providing administrative and billing services for such funds. Reimbursements are reported as reductions to expenses. Proprietary and any fiduciary fund financial statements are also reported using this same focus and basis of accounting although internal activity is not eliminated in these statements. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Property tax revenues are recognized in the year for which they are levied while grants are recognized when the grantor eligibility requirements are met.

Governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as soon as they are both measurable and available. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. The City considers revenues to be available if they are collected within 60 days of the end of the current fiscal period. Expenditures generally are recorded when a liability is incurred, as under accrual accounting. However, debt service expenditures, as well as expenditures related to compensated absences and claims and judgments, are recorded only when payment is due.

Property taxes, sales taxes, intergovernmental revenues, and interest associated with the current fiscal period are all considered to be susceptible to accrual and so have been recognized as revenues of the current fiscal period. Only the portion of special assessments, if any, receivable within the current fiscal period is considered to be susceptible to accrual as revenue of the current period. All other revenue items are considered to be measurable and available only when cash is received by the government.

Proprietary funds distinguish *operating* revenues and expenses from *non-operating* items. Operating income and expense reported in proprietary fund financial statements include those revenues and expenses related to the primary, continuing operations of the fund. Principal operating revenues for proprietary funds are charges to customers for sales or services. Principal operating expenses are the costs of providing goods or services, including administrative expenses and depreciation of capital assets. Other revenues and expenses are classified as non-operating in the financial statements.

Fund balance flow assumptions

Sometimes the City will fund outlays for a particular purpose from both restricted and unrestricted resources (the total of committed, assigned, and unassigned fund balance). In order to calculate the amounts to report as restricted, committed, assigned, and unassigned fund balance in the governmental fund financial statements a flow assumption must be made about the order in which the resources are considered to be applied. It is the City's policy to consider restricted fund balance to have been depleted before using any of the components of unrestricted fund balance. Further, when the components of unrestricted fund balance can be used for the same purpose, committed fund balance is depleted first, followed by assigned fund balance. Unassigned fund balance is applied last.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

1-D. Fund types and major funds

Governmental funds

The City reports the following major governmental funds:

The *general fund* is the government's primary operating fund. It accounts for all financial resources of the general government, except those required to be accounted for in another fund.

The *airport special revenue fund* accounts for financial resources used for the leasing hangars and other services provided at the municipal airport.

The *COVID-19 special revenue fund* accounts for the federal grant revenues and the use of those financial resources related to the Coronavirus Relief Funds.

The *streets – capital projects fund* accounts for the City's funds set aside for use on street and other related improvement projects.

Proprietary funds

The City reports the following major proprietary funds:

The *water fund* is used to account for the activities of the City's water production, treatment and distribution operations.

The *sewer fund* is used to account for the billing to citizens for the Heber Valley Special Service District's treatment operations and maintenance costs of the wastewater collection system.

The *electric fund* accounts for the activities of the City's joint venture with Heber Light & Power Company's electric generation and distribution operations.

The *pressurized irrigation fund* accounts for the activities of the City's irrigation production and distribution operations.

1-E. Assets, Liabilities, and Net Position or Equity

1-E-1. Deposit and Investments

All of the City's deposits are in demand deposit accounts with the Utah Public Treasurers Investments Fund or with marketable securities with maturities of three years or less managed by Zions Wealth Advisors and US Bank. Investments are recorded at fair value in accordance with GASB Statement No. 72, *Fair Value Measurement and Application*. Additional information is contained in Note 3.

1-E-2. Cash and Cash Equivalents

For purposes of the statement of cash flows, the City considers short-term, highly liquid investments with a maturity of three months or less from the purchase date to be cash equivalents.

1-E-3. Receivables and Payables

Accounts receivable other than property taxes and intergovernmental receivables are from customers primarily for utility services. Property tax and intergovernmental receivables are considered collectible. Customer accounts are reported net of an allowance for uncollectible accounts. The allowance amount is estimated using accounts receivable past due more than 90 days.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

Property taxes are assessed and collected for the City by Wasatch County and remitted to the City shortly after collection. Taxes are due and payable on November 1, and are delinquent after November 30. Property taxes become a lien on January 1 and are levied on the first Monday in August. All dates are in the year of levy.

1-E-4. Restricted Assets

In accordance with certain revenue bond covenants, resources may be required to be set aside for the repayment of such bonds, and, on occasion, for the repair and maintenance of the assets acquired with the bond proceeds. These resources are classified as restricted assets on the balance sheet because of their limited use. Most capital grant agreements mandate that grant proceeds be spent only on capital assets. Unspent resources of this nature are also classified as restricted. The limited use resources described above involve a reported restriction of both cash and net position. Unspent proceeds of bonds issued to finance capital assets are also reported as restricted cash.

1-E-5. Inventories and Prepaid items

Inventories in governmental funds are not reported. These consist of immaterial amounts of expendable supplies for consumption. Such supplies are acquired as needed. Proprietary fund inventories consist of immaterial amounts of expendable supplies for consumption. As such, no inventory balance is reported.

Prepaid items record payments to vendors that benefit future reporting and are reported on the consumption basis. Both inventories and prepayments are similarly reported in government-wide and fund financial statements.

1-E-6. Capital Assets

Capital assets includes property, plant, equipment, and infrastructure assets (e.g., roads, bridges, sidewalks, and similar items), and are reported in the applicable governmental or business-type activities columns in the government-wide financial statements. Capital assets are defined by the government as assets with an initial, individual cost of more than \$5,000 and an estimated useful life in excess of two years. Such assets are recorded at historical cost or at estimated historical cost if purchased or constructed. Donated capital assets are recorded at estimated acquisition value at the date of donation. Infrastructure is depreciated.

The cost of normal maintenance and repairs that does not add to the value of an asset or materially extend the assets' life is not capitalized. Major outlays for capital assets and improvements are capitalized as projects are constructed. Interest incurred during the construction phase of capital assets of business-type activities is included as part of the capitalized value of the assets constructed. Upon retirement or disposition of capital assets, the cost and related accumulated depreciation are removed from the respective accounts. Depreciation of capital assets is computed using the straight-line method over their estimated useful lives.

Property, plant, and equipment of the primary government, as well as the component units if any, is depreciated using the straight line method over the following estimated useful lives:

Asset Class	Years
Buildings	20-50
Improvements	7-50
Infrastructure	7-50
Machinery and equipment	3-15

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

1-E-7. Long-term Obligations

In the government-wide and proprietary fund financial statements, long-term debt and obligations are reported as liabilities in the applicable governmental activities, business-type activities, or proprietary fund statement of net position. Bond discounts or premiums, and the difference between the reacquisition price and the net carrying value of refunded debt are deferred and amortized over the terms of the respective bonds using the effective interest method. Bonds payable are reported net of the applicable bond premium or discount. Issuance costs are reported as expenses.

The governmental fund financial statements recognize the proceeds of debt and premiums as other financing sources of the current period. Issuance costs are reported as expenditures.

1-E-8. Compensated Absences

Accumulated unpaid vacation is accrued as incurred based on the years of service for each employee. Vacation is accumulated on a bi-weekly basis. Proprietary funds expense all accrued vacation amounts when incurred. Governmental funds report an expenditure as the vacation is paid. The accumulated sick leave is earned at a rate of one day per month. Sick pay amounts are charged to expenditures when incurred. Employees may accumulate unlimited sick leave. The City's policy is to permit employees to accumulate a limited amount of earned, but unused, vacation time which will be paid to employees upon termination. The City also allows payment for accumulated sick leave to some employees at retirement or termination. Employees who have worked for the City for at least 5 years are eligible to be paid for 25 percent and employees who have worked for the City for at least 10 years are eligible to be paid for 50 percent of their accumulated sick leave.

1-E-9. Pensions

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Utah Retirement Systems Pension Plan (URS) and additions to/deductions from URS's fiduciary net position have been determined on the same basis as they are reported by URS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

1-E-10. Fund Equity

Government-wide Financial Statements

Equity is classified in the government-wide financial statements as net position and is displayed in three components:

Net investment in capital assets - Restricted capital assets, net of accumulated depreciation, reduced by the outstanding balances of any bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets.

Restricted net position - Net position with constraints placed on the use either by (1) external groups such as creditors, grantors, contributors, or laws or regulations of other governments; or (2) law through constitutional provisions or enabling legislation.

Unrestricted net position - All other net position that does not meet the definition of "restricted" or "net investment in capital assets."

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

1-E-10. Fund Equity (Continued)

Fund Financial Statements

In the fund financial statements governmental fund equity is classified as fund balance. Fund balance is further classified as Nonspendable, Restricted, Committed, Assigned or Unassigned:

Nonspendable fund balance - Amounts that cannot be spent because they are either (a) not in spendable form, or (b) legally or contractually required to be maintained intact. Fund balance amounts related to inventories, prepaid expenditures, and endowments are classified as nonspendable.

Restricted fund balance - Net fund resources that are subject to external constraints that have been placed on the use of the resources either a) imposed by creditors (such as through a debt covenant), grantors, contributors, or laws or regulations of the government or b) imposed by law through constitutional provisions or enabling legislation. The City's remaining balance of Class C roads, transportation tax, impact fees, and debt service reserves is restricted.

Committed fund balance - Amounts that can only be used for specific purposes established by formal action of the City Council, which is the City's highest level of decision-making authority. Fund balance commitments can only be removed or changed by the same type of action (for example resolution) of the City Council. This classification also includes contractual obligations to the extent that existing resources have been specifically committed for use in satisfying those contractual requirements. The City has not committed any fund balance amounts.

Assigned fund balance - Amounts that the City intends to be used for a specific purpose but are neither restricted nor committed. These are established by the City Council. This category includes the remaining positive fund balances for governmental funds other than the General Fund.

Unassigned fund balance - This classification represents fund balance that has not been assigned to other funds and that has not been restricted, committed, or assigned to specific purposes within the General Fund. The General Fund is the only fund that reports a positive unassigned fund balance amount. However, in other governmental funds that may carry a negative fund balance at year-end, it may be necessary to report this as unassigned.

Proprietary fund equity is classified the same as in the government-wide statements.

1-E-11. Deferred Outflows/Inflows of Resources

In addition to assets, the statement of net position will sometimes include a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expense/expenditure) until then. The City reports deferred outflows of resources related to pensions as required by GASB 68.

In addition to liabilities, the statement of net position will sometimes include a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until then. Property taxes to be collected in November were unavailable in the current fiscal year. Accordingly, these property taxes are deferred and will be recognized as an inflow of resources in the period that the amounts become available. The City also reports deferred inflows of resources related to pensions as required by GASB 68, and lease receivables in accordance with GASB 87.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

1-E-12. Lease Receivables

The City has lease receivables for hangars at the municipal airport. Payments on leases are due to the City annually. As required by GASB Statement No. 87, *Leases*, a deferred inflow related to the lease receivables is also reported.

1-E-13. Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and the accompanying notes. Actual results may differ from those estimates.

NOTE 2 – STEWARDSHIP, COMPLIANCE AND ACCOUNTABILITY

2-A. Budgetary data

Annual budgets are prepared by the Budget Officer and adopted by ordinance by total for each department, in accordance with State law, by the Mayor and City Council on or before June 22 for the following fiscal year beginning July 1. Estimated revenues and appropriations may be increased or decreased by resolution of the City Council at any time during the year. A public hearing must be held prior to any proposed increase in a fund's appropriations. Budgets include activities in the General Fund. The level of the City's budgetary control (the level at which the City's expenditures cannot legally exceed appropriations) is established at the department level. Each department head is responsible for operating within the budget for their department. All annual budgets lapse at fiscal year-end.

Utah State law prohibits the appropriation of unreserved General Fund balance to an amount less than 5% of the General Fund revenues. The 5% reserve that cannot be budgeted is used to provide working capital until tax revenue is received, to meet emergency expenditures, and to cover unanticipated deficits. Any unreserved General Fund balance greater than 35% of the current year's actual revenues must be appropriated within the following two years.

Once adopted, budget amendments which increase total expenditures must be approved by the City Council following a public hearing. With the consent of the City Manager, department heads may reallocate unexpended appropriated balances from one expenditure account to another within that department during the budget year. Budgets for the General Fund are prepared on the modified accrual basis of accounting. Encumbrances are not used.

NOTE 3 - DETAILED NOTES

3-A. Deposits and investments

Cash and investments as of June 30, 2023 consist of the following:

	<u>Fair Value</u>
Cash on hand	\$ 200
Demand deposits - checking	1,202,940
Investment in marketable securities	14,283,643
Deposits - PTIF	<u>55,173,957</u>
Total cash	<u><u>\$ 70,660,740</u></u>

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

3-A. Deposits and investments (Continued)

Cash and investments listed above are classified in the accompanying government-wide statement of net assets as follows:

Cash and cash equivalents (current)	\$ 32,231,198
Restricted cash and cash equivalents (noncurrent)	<u>38,429,542</u>
Total cash and cash equivalents	<u>\$ 70,660,740</u>

The Utah Money Management Act (UMMA) establishes specific requirements regarding deposits of public funds by public treasurers. UMMA requires that city funds be deposited with a qualified depository which includes any depository institution which has been certified by the Utah State Commissioner of Financial Institutions as having met the requirements specified in UMMA Section 51, Chapter 7. UMMA provides the formula for determining the amount of public funds which a qualified depository may hold in order to minimize risk of loss and also defines capital requirements which an Institution must maintain to be eligible to accept public funds. UMMA lists the criteria for investments and specifies the assets which are eligible to be invested in, and for some investments, the amount of time to maturity.

UMMA enables the State Treasurer to operate the Public Treasurer's Investment Pool (PTIF). PTIF is managed by the Utah State Treasurer's investment staff and comes under the regulatory authority of the Utah Money Management Council. This council is comprised of a select group of financial professionals from units of local and state government and financial institutions doing business in the state. PTIF operations and portfolio composition is monitored at least semi-annually by the Utah Money Management Council. PTIF is unrated by any nationally recognized statistical rating organizations. Deposits in PTIF are not insured or otherwise guaranteed by the State of Utah. Participants share proportionally in any realized gains or losses on investments which are recorded on an amortized cost basis. The balance available for withdrawal is based on the accounting records maintained by PTIF. The fair value of the investment pool is approximately equal to the value of the pool shares. The City maintains monies not immediately needed for expenditure in PTIF accounts.

The City also invests with Zions Wealth Advisors who invests in money market funds and short and intermediate-term fixed income securities (including taxable, tax-exempt or tax advantaged). Zions Wealth Advisors meets the requirements of the Utah Money Management Act. The City's investment policy allows for the purchase of investments that have a maturity date of less than three years.

The City also holds unspent bond proceeds in US Bank. These amounts held at US Bank are invested in the Utah State PTIF.

Deposit and Investment Risk

The City maintains no investment policy containing any specific provisions intended to limit the City's exposure to interest rate risk, credit risk, and concentration of credit risk other than that imposed by UMMA. The City's compliance with the provisions of UMMA addresses each of these risks.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

3-A. Deposits and investments (Continued)

Fair Value of Investments

The City measures and records its investments using fair value measurement guidelines established by generally accepted accounting principles. These guidelines recognize a three-tiered fair value hierarchy, as follows:

- Level 1 – Quoted prices for identical investments in active markets
- Level 2 – Observable inputs other than quoted market prices
- Level 3 – Unobservable inputs

At June 30, 2023, the City had the following recurring fair value measurements:

Investments by fair value level	Fair Value	Level 1	Level 2	Level 3
Utah Public Treasurer's Investment Fund	\$ 55,173,957	\$ -	\$ 55,173,957	\$ -
US Bank - Investments				
Invested in PTIF	8,577,873		8,577,873	-
Zions Bank - Investments				
Invested in PTIF	175,593	-	175,593	-
Corporate	2,243,244	2,243,244	-	-
U.S. Obligations	3,286,933	3,286,933	-	-
Total Zions Bank - Investments	5,705,770	5,530,177	175,593	-
Total investments	<u>\$ 69,457,600</u>	<u>\$ 5,530,177</u>	<u>\$ 63,927,423</u>	<u>\$ -</u>

Interest rate risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. As of June 30, 2023, the City held the following investments by maturity:

Investment Type	Fair Value	Investment Maturities (in Years)		Weighted Avg. Maturity (days)
		Leass Than 1	1-5	
Utah Public Treasurer's Investment Fund	\$ 55,173,957	\$ 55,173,957	\$ -	120
US Bank - Investments				
Invested in PTIF	8,577,873	8,577,873	-	120
Zions Bank - Investments				
Invested in PTIF	175,593	175,593	-	120
Corporate	2,243,244	249,736	1,993,508	702
U.S. Obligations	3,286,933	984,512	2,302,421	1049
Total Zions Bank - Investments	5,705,770	1,409,841	4,295,929	
Total investments	<u>\$ 69,457,600</u>	<u>\$ 65,161,671</u>	<u>\$ 4,295,929</u>	

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

3-A. Deposits and investments (Continued)

Credit risk

Credit risk is the risk that an issuer of an investment will not fulfill its obligations. At June 30, 2022, the City had the following investments by rating:

Investment type	Rating (Moody's)	Fair Value	Percent of Total
Utah Public Treasurer's Investment Fund	Unrated	\$ 55,173,957	79%
US Bank - Investments			
Invested in PTIF	Unrated	8,577,873	12%
Zions Bank - Investments			
Invested in PTIF	Unrated	175,593	
<i>Corporate Bonds</i>			
Morgan Stanley	A1	249,736	< 1%
Royal Bank of Canada	A1	249,112	< 1%
Goldman Sachs Group Inc.	A2	250,009	< 1%
Athene Global Funding	A1	243,794	< 1%
Ubs Ag London Branch	AA3	248,654	< 1%
Commonwealth Bank of Australia	AA3	250,577	< 1%
Protective Life Global Fund	A1	250,951	< 1%
Pacific Life Global Fund	AA3	249,674	< 1%
Toronto Dominion Bank	A1	250,737	< 1%
<i>U.S. Obligations</i>			
Federal Home Loan Banks	AAA	244,286	< 1%
Federal Home Loan Banks	AAA	247,877	< 1%
Federal Home Loan Banks	AAA	243,448	< 1%
Federal Home Loan Banks	AAA	248,901	< 1%
Federal Home Loan Banks	AAA	239,729	< 1%
Federal Home Loan Mortgage Corp.	AAA	97,947	< 1%
Federal Home Loan Banks	AAA	241,226	< 1%
Federal Home Loan Banks	AAA	236,045	< 1%
Federal Home Loan Banks	AAA	237,380	< 1%
Federal Home Loan Mortgage Corp.	AAA	248,907	< 1%
Federal Home Loan Mortgage Corp.	AAA	248,255	< 1%
Federal Home Loan Mortgage Corp.	AAA	247,115	< 1%
Federal Home Loan Banks	AAA	257,530	< 1%
Federal Home Loan Banks	AAA	248,287	< 1%
Total Zions Bank - Investments		5,705,770	
Total investments		\$ 69,457,600	

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover its deposits. At June 30, 2023, of the City's total demand deposits of \$3,114,723, the amount uninsured and uncollateralized was \$2,864,723.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

3-A. Deposits and investments (Continued)

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, a government will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The City manages this risk by investing in only those that short to medium length investments and highly rated.

Concentration of credit risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. The City's policy for reducing this risk of loss is to comply with the Rules of the Money Management Council. Rule 17 of the Money Management Council limits investments in a single issuer of commercial paper and corporate obligations to 5-10% depending upon the total dollar amount held in the portfolio. At June 30, 2023, all of the City's investments were invested in the PTIF, US Bank, and Zions Wealth Advisor accounts.

3-B. Receivables

The allowance policy is described in Note 1-E-3. Receivables at year end for the City's funds are shown below.

	General Fund	Special Rev. Airport Fund	Capital Projects Airport Fund	Water Fund	Sewer Fund	Pressurized Irrigation Fund	Storm Drain Fund	Total
Customers	\$ -	\$ -	\$ -	\$ 354,787	\$ 412,227	\$ 77,476	\$ 72,255	\$ 916,745
Property taxes	2,762,484	-	-	-	-	-	-	2,762,484
Due from other governments	2,179,918	1,708	298,249	-	-	-	-	2,479,875
Other receivables	20,908	-	-	-	-	-	-	20,908
Total receivables, gross	4,963,310	1,708	298,249	354,787	412,227	77,476	72,255	6,180,012
Allowance for uncollectibles	-	-	-	(4,800)	(3,000)	(1,200)	(1,000)	(10,000)
Total receivables, net	\$ 4,963,310	\$ 1,708	\$ 298,249	\$ 349,987	\$ 409,227	\$ 76,276	\$ 71,255	\$ 6,170,012

3-C. Capital Assets

Capital asset activity for the governmental activities for the fiscal year ended June 30, 2023 was as follows:

	Beginning Balance	Additions	Retirements	Ending Balance
Governmental activities				
Capital assets, not being depreciated:				
Land	\$ 23,149,451	\$ 11,211	\$ -	\$ 23,160,662
Construction in progress	943,182	3,821,870	(2,550,368)	2,214,684
Total capital assets, not being depreciated	24,092,633	3,833,081	(2,550,368)	25,375,346
Capital assets, being depreciated:				
Buildings	13,436,743	-	-	13,436,743
Improvements other than buildings	80,429,252	3,029,424	-	83,458,676
Machinery and equipment	5,156,048	780,304	(780,138)	5,156,214
Total capital assets, being depreciated	99,022,043	3,809,728	(780,138)	102,051,633
Less accumulated depreciation for:				
Buildings	2,621,931	438,244	-	3,060,175
Improvements other than buildings	39,085,863	2,541,458	-	41,627,321
Machinery and equipment	3,707,086	373,258	(716,696)	3,363,648
Total accumulated depreciation	45,414,880	3,352,960	(716,696)	48,051,144
Total capital assets being depreciated, net	53,607,163	456,768	(63,442)	54,000,489
Governmental activities, capital assets, net	\$ 77,699,796	\$ 4,289,849	\$ (2,613,810)	\$ 79,375,835

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

3-C. Capital Assets (Continued)

Depreciation expense was charged to functions/programs of the primary government governmental activities as follows:

Governmental activities:	
General government	\$ 217,636
Public safety	341,110
Public works	2,003,463
Parks and recreation	70,704
Cemetery	24,553
Airport	465,813
Internal service	229,681
Total	\$ 3,352,960

Capital asset activity for the business-type activities for the fiscal year ended June 30, 2023 was as follows:

	Beginning Balance	Additions	Retirements	Ending Balance
Business-type activities				
Capital assets, not being depreciated:				
Land	\$ 557,761	\$ -	\$ -	\$ 557,761
Water share	17,985,118	-	-	17,985,118
Construction in progress	3,361,060	17,272,726	(64,155)	20,569,631
Total capital assets, not being depreciated	21,903,939	17,272,726	(64,155)	39,112,510
Capital assets, being depreciated:				
Buildings	5,292,294	-	-	5,292,294
Water system	29,207,806	294,155	-	29,501,961
Sewer system	20,596,278	-	-	20,596,278
Pressurized irrigation	7,624,460	-	-	7,624,460
Storm drain	34,714	-	-	34,714
Machinery and equipment	4,951,414	576,584	(296,161)	5,231,837
Total capital assets, being depreciated	67,706,966	870,739	(296,161)	68,281,544
Less accumulated depreciation for:				
Buildings	622,112	163,107	-	785,219
Water system	11,472,764	834,465	-	12,307,229
Sewer system	7,037,093	493,057	-	7,530,150
Pressurized irrigation	2,006,785	228,432	-	2,235,217
Storm drain	22,846	6,943	-	29,789
Machinery and equipment	2,909,329	411,427	(274,489)	3,046,267
Total accumulated depreciation	24,070,929	2,137,431	(274,489)	25,933,871
Total capital assets being depreciated, net	43,636,037	(1,266,692)	(21,672)	42,347,673
Business-type activities, capital assets, net	\$ 65,539,976	\$ 16,006,034	\$ (85,827)	\$ 81,460,183

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

3-C. Capital Assets (Continued)

Depreciation expense was charged to functions/programs of the primary government business-type activities as follows:

Business-type activities:	
Water system	\$ 1,042,247
Sewer system	740,207
Pressurized irrigation	255,443
Storm drain	99,534
Total	<u><u>\$ 2,137,431</u></u>

3-D. Long-term debt

Long-term debt activity for the governmental activities was as follows:

Governmental Activities	Original Principal	% Rate	Beginning Balance	Additions	Reductions	Ending Balance	Due Within One Year
<i>Direct Placements:</i>							
2017 Sales Tax Revenue Matures 7/15/2022	\$ 2,600,000	1.63	\$ 537,000	\$ -	\$ (537,000)	\$ -	\$ -
2014 Sales Tax Revenue Matures 3/1/2045	6,700,000	1.50	5,394,000	-	(198,000)	5,196,000	201,000
2018 Sales Tax Revenue Matures 10/1/2048	1,557,529	1.00	1,418,249	-	(46,005)	1,372,244	46,741
2023 Excise Tax Revenue Matures 10/1/2029	5,041,000	3.79	-	5,041,000	-	5,041,000	777,000
Wheel Loader lease Matures 6/8/2025	169,661	2.96	153,380	-	(11,259)	142,121	11,741
Taser Lease Matures 10/31/2025	33,287	2.96	-	33,287	(12,735)	20,552	6,652
Backhoe Lease Matures 12/11/2024	100,000	2.96	-	100,000	(16,665)	83,335	7,193
<i>Other Long-term liabilities:</i>							
Net pension liability			-	1,134,007	-	1,134,007	
Compensated absences			566,419	130,087	-	696,506	271,573
Total governmental activity long-term liabilities			<u><u>\$ 8,069,048</u></u>	<u><u>\$ 6,438,381</u></u>	<u><u>\$ (821,664)</u></u>	<u><u>\$ 13,685,765</u></u>	<u><u>\$ 1,321,900</u></u>

The 2014 Sales Tax Revenue Bonds were issued for the construction of the new public safety building. The City pledges income derived from sales tax to repay the revenue bonds. Annual principal and interest payments are expected to require approximately 4.32% of the sales and use tax revenues. The total of sales and use tax revenues pledged on these bonds is \$6,139,335, the remaining principal and interest to maturity. These bonds contain a provision that, in the event of default, penalty interest charges may be incurred.

The 2017 Sales Tax Revenue Bonds were issued for the maintenance of City roads. The City pledges income derived from sales tax to repay the revenue bonds. These bonds matured during the year. These bonds contain a provision that, in the event of default, penalty interest charges may be incurred.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

3-D. Long-term debt (Continued)

The 2018 Sales Tax Revenue Bonds were issued for the construction of the public works expansion. The outstanding bond balance of \$3,738,001 is allocated between governmental (\$1,372,244) and business-type activities (\$2,365,757). The City pledges income derived from sales tax to repay the revenue bonds. Annual principal and interest payments are expected to require approximately 2.54% of the sales and use tax revenues. The total of sales and use tax revenues pledged on these bonds is \$4,263,569, of which \$1,565,656 is attributable to governmental activities, the remaining principal and interest to maturity. These bonds contain a provision that, in the event of default, penalty interest charges may be incurred.

The 2023 Excise Tax Revenue Bonds were issued for the purpose of financing all or a portion of the costs of maintenance improvements to roads, and construction of new roads. The City pledges income derived from Class C Road Funds, and Local Option Sales and Use Taxes for Transportation (Road Funds). Annual principal and interest payments are expected to require approximately 32.4% of the Road Fund revenues. The total of Road Funds pledged on these bonds is \$5,727,940. These bonds contain a provision that, in the event of default, penalty interest charges may be incurred.

The City entered into leasing arrangements for the use of 3 wheel loaders, 3 backhoes, and police tasers. The lease payables are split between the Water Fund, Sewer Fund, Internal Service Fund, and other Governmental Activities. The related leases are right-to use intangible assets as follows:

<u>Description</u>	<u>Cost</u>
Wheel Loader #1 - Internal Service Fund	\$ 169,661
Wheel Loader #2 - Water/Sewer Funds	169,661
Wheel Loader #3 - Water Fund	169,661
Backhoe #1 - Governmental Activities	100,000
Backhoe #2 - Water Fund	100,000
Backhoe #3 - Water/Storm Drain Funds	100,000
Tasers - Governmental Activities	33,287
Less: Accumulated amortization	<u>(189,328)</u>
Net right-to-use intangible asset	\$ 652,942

The right-to-use assets are reported along with the other machinery and equipment in the City's capital asset schedules. Amortization of the right-to-use lease assets are reported with depreciation expense.

Generally, resources from the General Fund are used to liquidate compensated absences for governmental activities.

See Note 4-D for more information about the City's net pension liability.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

3-D. Long-term debt (Continued)

Bond debt service requirements to maturity for governmental activities are as follows:

Year	Principal	Interest	Total
2024	\$ 1,024,741	\$ 282,498	\$ 1,307,239
2025	1,042,109	249,605	1,291,714
2026	1,074,477	216,136	1,290,613
2027	1,109,845	181,519	1,291,364
2028	1,145,581	145,642	1,291,223
2029-2033	2,282,529	365,734	2,648,263
2034-2038	1,464,777	232,087	1,696,864
2039-2043	1,571,658	125,782	1,697,440
2044-2048	837,382	24,088	861,470
2049	56,145	596	56,741
Total	<u>\$ 11,609,244</u>	<u>\$ 1,823,687</u>	<u>\$ 13,432,931</u>

Lease payable debt service requirements to maturity for governmental activities are as follows:

Year	Principal	Interest	Total
2024	\$ 25,587	\$ 7,938	\$ 33,525
2025	213,370	6,389	219,759
2026	7,051	209	7,260
Total	<u>\$ 246,008</u>	<u>\$ 14,536</u>	<u>\$ 260,544</u>

Long-term debt activity for the business-type activities was as follows:

Business-type Activities	Original Principal	% Rate	Beginning Balance	Additions	Reductions	Ending Balance	Due Within One Year
<i>Direct Placements:</i>							
2018 Sales Tax Revenue Matures 10/1/2048	2,674,471	1.00	\$ 2,444,750	\$ -	\$ (78,993)	\$ 2,365,757	\$ 80,260
2022 Water Revenue Matures 5/1/2047	14,500,000	1.00	14,500,000	-	(426,000)	14,074,000	458,000
2022 Sewer Revenue Matures 5/1/2053	8,553,000	1.50	8,553,000	-	-	8,553,000	228,000
2022 Irrigation Revenue Matures 5/1/2053	4,327,000	1.50	4,327,000	-	-	4,327,000	115,000
Note payable (Sewer) Matures 1/1/2029	500,000	1.82	441,571	-	(59,720)	381,851	60,807
Wheel Loader leases Matures 6/8/2025	339,323	2.96	306,759	-	(22,516)	284,243	23,483
Backhoe leases Matures 12/11/2024	200,000	2.96	-	200,000	(33,331)	166,669	14,387
<i>Other Long-term liabilities:</i>							
Net pension liability			-	196,667	-	196,667	
Compensated absences			228,494	46,049		274,543	112,026
Total business-type activity long-term liabilities			<u>\$ 30,801,574</u>	<u>\$ 442,716</u>	<u>\$ (620,560)</u>	<u>\$ 30,623,730</u>	<u>\$ 1,091,963</u>

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

3-D. Long-term debt (Continued)

The 2018 Sales Tax Revenue Bonds were used to fund various improvements throughout the City. The outstanding bond balance of \$3,738,001 is allocated between governmental (\$1,372,244) and business-type activities including the Water Fund (\$900,142), the Irrigation Fund (\$100,019), the Sewer Fund (\$852,012), and Storm Drain Fund (\$513,584). The City pledges sales and use taxes to repay the revenue bonds. Annual principal and interest payments are expected to require approximately 2.54% sales and use tax revenues. The total of sales and use tax revenues pledged on these bonds is \$4,263,569, of which \$2,697,913 is attributable to business-type activities, the remaining principal and interest to maturity. These bonds contain a provision that, in the event of default, penalty interest charges may be incurred.

The 2022 Water Revenue bonds were issued to fund various improvements on the City's water infrastructure. The City pledges net revenues derived from metered water sales to repay the revenue bonds. Annual principal and interest payments are expected to require approximately 31.1% of the pledged revenues to repay the revenue bonds. The total pledged water revenues on these bonds is \$19,886,935, which is the remaining principal and interest to maturity. These bonds contain a provision that, in the event of default, penalty interest charges may be incurred.

The 2022 Sewer Revenue bonds were issued to fund various improvements on the City's sewer infrastructure. The City pledges net revenues derived from sewer revenues to repay the revenue bonds. Annual principal and interest payments required 0.0% of the pledged revenues as no debt service was required during the year. The total pledged water revenues on these bonds is \$10,684,530, which is the remaining principal and interest to maturity. These bonds contain a provision that, in the event of default, penalty interest charges may be incurred.

The 2022 Irrigation Revenue bonds were issued to fund various improvements on the City's irrigation infrastructure. The City pledges net revenues derived from sewer revenues to repay the revenue bonds. Annual principal and interest payments required 0.0% of the pledged revenues as no debt service was required during the year. The total pledged water revenues on these bonds is \$5,404,990, which is the remaining principal and interest to maturity. These bonds contain a provision that, in the event of default, penalty interest charges may be incurred.

In 2022, the City entered into a financed purchase arrangement for a Jet Truck. Original principal amount of the lease was \$500,000. The lease carries interest at 1.82% and is payable in annual installments of \$67,757 due on January 1 of each year with the first payment due January 1, 2022.

The respective business-type activities generally liquidate their respective liabilities in each fund as it relates to compensated absences.

See Note 4-D for more information about the City's net pension liability.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

3-D. Long-term debt (Continued)

Bond debt service requirements to maturity for business-type activities are as follows:

Year	Principal	Interest	Total
2024	\$ 881,260	\$ 587,691	\$ 1,468,951
2025	891,892	576,018	1,467,910
2026	905,524	563,508	1,469,032
2027	918,155	550,097	1,468,252
2028	932,420	536,021	1,468,441
2029-2033	4,900,471	2,443,970	7,344,441
2034-2038	5,363,222	1,978,583	7,341,805
2039-2043	5,952,341	1,388,229	7,340,570
2044-2048	5,902,619	612,875	6,515,494
2049-2053	2,671,853	117,619	2,789,472
Total	<u>\$ 29,319,757</u>	<u>\$ 9,354,611</u>	<u>\$ 38,674,368</u>

Note payable debt service requirements to maturity for business-type activities are as follows:

Year	Principal	Interest	Total
2024	\$ 60,807	\$ 6,450	\$ 67,257
2025	61,914	5,843	67,757
2026	63,041	4,716	67,757
2027	64,188	3,569	67,757
2028	65,356	2,401	67,757
2029	66,545	1,211	67,756
Total	<u>\$ 381,851</u>	<u>\$ 24,190</u>	<u>\$ 406,041</u>

Lease payable debt service requirements to maturity for business-type activities are as follows:

Year	Principal	Interest	Total
2024	\$ 37,869	\$ 14,660	\$ 52,529
2025	413,043	11,956	424,999
Total	<u>\$ 450,912</u>	<u>\$ 26,616</u>	<u>\$ 477,528</u>

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

3-E. Operating transfer reconciliation

The operating transfers among the funds were as follows:

	<u>Transfers In</u>	<u>Transfers Out</u>
<i>Governmental funds:</i>		
General Fund	\$ -	\$ 3,812,485
COVID-19 Special Revenue Fund	-	4,228,324
Nonmajor Governmental Funds	3,812,485	-
<i>Enterprise funds:</i>		
Sewer Fund	3,710,313	8,460
Pressurized Irrigation Fund	526,471	-
	<u>\$ 8,049,269</u>	<u>\$ 8,049,269</u>

Transfers were made primarily for debt service, and future capital projects, including transferring COVID-related federal funds to the Sewer fund for use on projects there.

NOTE 4 - OTHER INFORMATION

4-A. Risk management

Heber City is exposed to various risks of losses related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. The City is unable to obtain insurance to cover most of these risks at a cost it considers to be economically justifiable. The City joined together with other governments in the State of Utah to form the Utah Local Governments Trust (ULGT), a public entity risk pool currently operating as a common risk management and insurance program for Utah State governments. The City pays an annual premium to ULGT for its general insurance coverage. The City also carries comprehensive general liability insurance coverage through Utah Local Governments Trust. Settled claims from this risk type have not exceeded coverage in any of the past three fiscal years.

4-B. Investment in Joint Venture

Heber Light & Power Company

The City is party to a joint venture with Midway and Charleston, neighboring municipalities. The joint venture was created by the three municipalities to provide electric services to their communities. Additional information is as follows:

- a. Participants and their percentage shares were: Heber City, 75.0%; Charleston, 12.5%; and Midway, 12.5%.
- b. The utility is governed by the Power Board which is selected from the Mayor and City Council of the participating municipalities.
- c. The Power Board governs the operations of the utility through management employed by the Board. Since the utility is subject to the same laws as the creating entities, it must follow state law for cities in the areas of fiscal management, budgeting, and financing. As the governing board is made up of the participants' mayors and appointees from the city councils, each participant has indirect control over these matters.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-B. Investment in Joint Venture (Continued)

- d. Summary financial information, as of the joint venture's last year end of December 31, 2022, is as follows:

	Heber Light and Power	Heber City's Share
Total assets and deferred outflows	\$ 88,007,225	\$ 66,005,419
Total liabilities and deferred inflows	<u>33,008,471</u>	<u>24,756,353</u>
Net position	<u>\$ 54,998,754</u>	<u>\$ 41,249,066</u>
Total operating revenues	\$ 23,077,390	\$ 17,308,043
Total operating expenses	<u>25,223,257</u>	<u>18,917,443</u>
Net operating income (loss)	<u>(2,145,867)</u>	<u>(1,609,400)</u>
Non-operating income	3,471,382	2,603,537
Non-operating expense	<u>614,642</u>	<u>460,982</u>
Net non-operating income (loss)	<u>2,856,740</u>	<u>2,142,555</u>
Income (loss) before contributions	710,873	533,155
Capital contributed	4,056,099	3,042,074
Less withdrawals	<u>(300,000)</u>	<u>(225,000)</u>
Change in net position	<u>\$ 4,466,972</u>	<u>\$ 3,350,229</u>

- e. The joint venture has the following long-term debt:

Revenue bonds	\$ 18,070,000
Unamortized bond premiums	2,064,811
Notes payable	1,035,233
Compensated absences	1,241,433
Termination benefits	129,667
Contract payable	<u>1,178,478</u>
	23,719,622
Less current portion	<u>(1,237,711)</u>
Net long-term debt	<u>\$ 22,481,911</u>

- f. Audited financial statements for Heber Light and Power are available at Heber Light and Power's office: 31 South 100 West, Heber City, Utah 84032.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-D. Pension Plans

General Information about the Pension Plan

Plan description:

Eligible plan participants are provided with pensions through the Utah Retirement Systems. The Utah Retirement Systems are comprised of the following Pension Trust funds:

Defined Benefit Plans

Public Employees Noncontributory Retirement System (Noncontributory System) is a multiple-employer, cost sharing, public employee retirement system;

Public Safety Retirement System (Public Safety System) is a cost-sharing, multiple-employer public retirement system;

Tier 2 Public Employees Contributory Retirement System (Tier 2 Public Employees System) is a multiple-employer cost sharing public employee retirement system;

Tier 2 Public Safety and Firefighter Contributory Retirement System (Tier 2 Public Safety and Firefighters System) is a multiple employer, cost sharing, public employee retirement system.

The Tier 2 Public Employees System became effective July 1, 2011. All eligible employees beginning on or after July 1, 2011, who have no previous service credit with any of the Utah Retirement Systems, are members of the Tier 2 Retirement System.

The Utah Retirement Systems (Systems) are established and governed by the respective sections of Title 49 of the Utah Code Annotated 1953, as amended. The Systems' defined benefit plans are amended statutorily by the State Legislature. The Utah State Retirement Office Act in Title 49 provides for the administration of the Systems under the direction of the Board, whose members are appointed by the Governor. The Systems are fiduciary funds defined as pension (and other employee benefit) trust funds. URS is a component unit of the State of Utah. Title 49 of the Utah Code grants the authority to establish and amend the benefit terms.

URS issues a publicly available financial report that can be obtained by writing Utah Retirement Systems, 560 E. 200 S, Salt Lake City, Utah 84102 or visiting the website: www.urs.org/general/publications.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-D. Pension Plans (Continued)

Benefits provided:

URS provides retirement, disability, and death benefits. Retirement benefits are as follows:

System	Final Average Salary	Years of Service Required and/or Age Eligible for Benefit	Benefit Percentage per Year of Service	COLA**
Noncontributory System	Highest 3 Years	30 years any age 25 years any age* 20 years age 60* 10 years age 62* 4 years age 65	2.0% per year all years	Up to 4%
Public Safety System	Highest 3 Years	20 years any age 10 years, age 60 4 years age 65	2.5% per year up to 20 years; 2.0% per year over 20 years	Up to 2.5% or 4 % depending upon employer
Tier 2 Public Employees System	Highest 5 Years	35 years any age 20 years, age 60* 10 years age 62* 4 years age 65	1.5% per year all years	Up to 2.5%
Tier 2 Public Safety and Firefighter System	Highest 5 Years	25 years, any age 20 years, age 60* 10 years age 62* 4 years age 65	1.5% per year all years 2.0% per year July 1, 2020 to present	Up to 2.5%

* Actuarial reductions are applied.

**All post-retirement cost-of-living adjustments are non-compounding and are based on the original benefit except for Judges, which is a compounding benefit. The cost-of-living adjustments are also limited to the actual Consumer Price Index (CPI) increase for the year, although unused CPI increases not met may be carried forward to subsequent years.

Contribution Rate Summary:

As a condition of participation in the Systems, employers and/or employees are required to contribute certain percentages of salary and wages as authorized by statute and specified by the URS Board. Contributions are actuarially determined as an amount that, when combined with employee contributions (where applicable) is expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded actuarial accrued liability. Contribution rates as of June 30, 2023 are as follows:

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-D. Pension Plans (Continued)

	Employee	Employer	Employer 401(k)
Contributory System			
111 Local Government Div - Tier 2	N/A	16.01%	0.18%
Noncontributory System			
15 Local Government Div - Tier 1	N/A	17.97%	N/A
Public Safety System Contributory			
122 Tier 2 DB Hybrid Public Safety	2.59%	25.83%	N/A
Public Safety System Noncontributory			
43 Other Div A with 2.5% COLA	N/A	34.04%	N/A
Tier 2 DC Only			
211 Local Government	N/A	6.19%	10.00%
222 Public Safety	N/A	11.83%	14.00%

Tier 2 rates include a statutory required contribution to finance the unfunded actuarial accrued liability of the Tier 1 plans.

For fiscal year ended June 30, 2023, the employer and employee contributions to the Systems were as follows:

System	Employer Contributions	Employee Contributions
Noncontributory System	\$ 417,449	N/A
Public Safety System	245,671	-
Tier 2 Public Employees System	395,374	-
Tier 2 Public Safety and Firefighter	285,643	28,642
Tier 2 DC Only System	25,296	N/A
Tier 2 DC Public Safety and Firefighter	7,295	N/A
Total Contributions	<u>\$ 1,376,728</u>	<u>\$ 28,642</u>

Contributions reported are the URS Board approved required contributions by System. Contributions in the Tier 2 Systems are used to finance the unfunded liabilities in the Tier 1 Systems.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-D. Pension Plans (Continued)

Combined Pension Assets, Liabilities, Expense, and Deferred Outflows and Inflows of Resources Relating to Pensions

At June 30, 2023, we reported a net pension asset of \$0 and a net pension liability of \$1,330,674.

	(Measurement Date): December 31, 2022				
	Net Pension Asset	Net Pension Liability	Proportionate Share	Proportionate Share December 31, 2021	Change (Decrease)
Noncontributory System	\$ -	\$ 476,081	0.2779631%	0.2779569%	0.0000062%
Public Safety System	-	715,894	0.5536366%	0.6369301%	(0.0832935%)
Tier 2 Public Employees System	-	113,271	0.1040239%	0.1011490%	0.0028749%
Tier 2 Public Safety and Firefighter	-	25,428	0.3048087%	0.2384933%	0.0663154%
Total	<u>\$ -</u>	<u>\$ 1,330,674</u>			

The net pension asset and liability was measured as of December 31, 2022, and the total pension liability used to calculate the net pension asset and liability was determined by an actuarial valuation as of January 1, 2022, and rolled-forward using generally accepted actuarial procedures. The proportion of the net pension asset and liability is equal to the ratio of the employer's actual contributions to the Systems during the plan year over the total of all employer contributions to the System during the plan year.

For the year ended June 30, 2023, we recognized pension expense of 816,969.

At June 30, 2023, we reported deferred outflows of resources and deferred inflows of resources relating to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 215,175	\$ 12,926
Changes in assumptions	150,079	4,736
Net difference between projected and actual earnings on pension plan investments	552,011	-
Changes in proportion and differences between contri- butions and proportionate share of contributions	54,977	62,958
Contributions subsequent to the measurement date	706,883	-
	<u>\$ 1,679,125</u>	<u>\$ 80,620</u>

\$706,883 was reported as deferred outflows of resources related to pensions results from contributions made by us prior to our fiscal year end, but subsequent to the measurement date of December 31, 2022.

These contributions will be recognized as a reduction of the net pension liability in the upcoming fiscal year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-D. Pension Plans (Continued)

Year ended December 31,	Net Deferred Outflows (Inflows) of Resources
2023	\$ (211,657)
2024	3,333
2025	225,500
2026	811,200
2027	11,580
Thereafter	51,666

Noncontributory System Pension Expense, and Deferred Outflows and Inflows of Resources

For the year ended June 30, 2023, we recognize pension expense of \$282,483.

At June 30, 2023, we reported deferred outflows of resources and deferred inflows of resources relating to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 161,480	\$ -
Changes in assumptions	78,023	1,901
Net difference between projected and actual earnings on pension plan investments	314,028	-
Changes in proportion and differences between contri- butions and proportionate share of contributions	22,542	-
Contributions subsequent to the measurement date	213,697	-
	<u>\$ 789,770</u>	<u>\$ 1,901</u>

\$213,697 was reported as deferred outflows of resources related to pensions results from contributions made by us prior to our fiscal year end, but subsequent to the measurement date of December 31, 2022.

These contributions will be recognized as a reduction of the net pension liability in the upcoming fiscal year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended December 31,	Net Deferred Outflows (Inflows) of Resources
2023	\$ (49,155)
2024	14,942
2025	126,133
2026	482,252
2027	-
Thereafter	-

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-D. Pension Plans (Continued)

Public Safety System Pension Expense, and Deferred Outflows and Inflows of Resources

For the year ended June 30, 2023, we recognize pension expense of \$206,774.

At June 30, 2023, we reported deferred outflows of resources and deferred inflows of resources relating to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 3,170	\$ -
Changes in assumptions	19,201	-
Net difference between projected and actual earnings on pension plan investments	165,933	-
Changes in proportion and differences between contri- butions and proportionate share of contributions	-	50,722
Contributions subsequent to the measurement date	127,439	-
	<u>\$ 315,743</u>	<u>\$ 50,722</u>

\$127,439 was reported as deferred outflows of resources related to pensions results from contributions made by us prior to our fiscal year end, but subsequent to the measurement date of December 31, 2022.

These contributions will be recognized as a reduction of the net pension liability in the upcoming fiscal year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended December 31,	Net Deferred Outflows (Inflows) of Resources
2023	\$ (171,588)
2024	(30,667)
2025	69,172
2026	270,665
2027	-
Thereafter	-

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-D. Pension Plans (Continued)

Tier 2 Public Employees System Pension Expense, and Deferred Outflows and Inflows of Resources

For the year ended June 30, 2023, we recognize pension expense of \$217,153.

At June 30, 2023, we reported deferred outflows of resources and deferred inflows of resources relating to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 38,259	\$ 4,494
Changes in assumptions	36,773	288
Net difference between projected and actual earnings on pension plan investments	45,667	-
Changes in proportion and differences between contri- butions and proportionate share of contributions	22,734	7,122
Contributions subsequent to the measurement date	217,777	-
	<u>\$ 361,210</u>	<u>\$ 11,904</u>

\$217,777 was reported as deferred outflows of resources related to pensions results from contributions made by us prior to our fiscal year end, but subsequent to the measurement date of December 31, 2022.

These contributions will be recognized as a reduction of the net pension liability in the upcoming fiscal year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended December 31,	Net Deferred Outflows (Inflows) of Resources
2023	\$ 6,500
2024	13,696
2025	21,760
2026	41,240
2027	9,819
Thereafter	38,514

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-D. Pension Plans (Continued)

Tier 2 Public Safety and Firefighter System Pension Expense, and Deferred Outflows and Inflows of Resources

For the year ended June 30, 2023, we recognize pension expense of \$110,559.

At June 30, 2023, we reported deferred outflows of resources and deferred inflows of resources relating to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 12,266	\$ 8,432
Changes in assumptions	16,082	2,547
Net difference between projected and actual earnings on pension plan investments	26,383	-
Changes in proportion and differences between contri- butions and proportionate share of contributions	9,701	5,114
Contributions subsequent to the measurement date	147,970	-
	<u>\$ 212,402</u>	<u>\$ 16,093</u>

\$147,970 was reported as deferred outflows of resources related to pensions results from contributions made by us prior to our fiscal year end, but subsequent to the measurement date of December 31, 2022.

These contributions will be recognized as a reduction of the net pension liability in the upcoming fiscal year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended December 31,	Net Deferred Outflows (Inflows) of Resources
2023	\$ 2,586
2024	5,362
2025	8,435
2026	17,043
2027	1,761
Thereafter	13,152

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-D. Pension Plans (Continued)

Actuarial assumptions:

The total pension liability in the December 31, 2022, actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.50 Percent
Salary increases	3.25 – 9.25 percent, average, including inflation
Investment rate of return	6.85 percent, net of pension plan investment expense, including inflation

Mortality rates were adopted from an actuarial experience study dated January 1, 2020. The retired mortality tables are developed using URS retiree experience and are based upon gender, occupation, and age as appropriate with projected improvement using 80% of the ultimate rates from the MP-2019 improvement assumption using a base year of 2020. The mortality assumption for active members is the PUB-2010 Employees Mortality Table for public employees, teachers, and public safety members, respectively.

The actuarial assumptions used in the January 1, 2022, valuation were based on an experience study of the demographic assumptions as of January 1, 2020, and a review of economic assumptions as of January 1, 2021.

The long-term expected rate of return on pension plan investments was determined using a building-block method, in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class and is applied consistently to each defined benefit pension plan. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Expected Return Arithmetic Basis		
	Target Asset Allocation	Real Return Arithmetic Basis	Long Term Expected Portfolio Real Rate of Return
Equity securities	35.00%	6.58%	2.30%
Debt securities	20.00%	1.08%	0.22%
Real assets	18.00%	5.72%	1.03%
Private equity	12.00%	9.80%	1.18%
Absolute return	15.00%	2.91%	0.44%
Cash and cash equivalents	0.00%	-0.11%	0.00%
Totals	100.00%		5.17%
Inflation			2.50%
Expected arithmetic nominal return			7.67%

The 6.85% assumed investment rate of return is comprised of an inflation rate of 2.50%, a real return of 4.35% that is net of investment expense.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-D. Pension Plans (Continued)

Discount rate:

The discount rate used to measure the total pension liability was 6.85 percent. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate, and that contributions from all participating employers will be made at contractually required rates that are actuarially determined and certified by the URS Board. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current, active, and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments, to determine the total pension liability. The discount rate does not use the Municipal Bond Index Rate.

Sensitivity of the proportionate share of the net pension asset and liability to changes in the discount rate:

The following presents the proportionate share of the net pension liability calculated using the discount rate of 6.85 percent, as well as what the proportionate share of the net pension liability (asset) would be if it were calculated using a discount rate that is 1 percentage point lower (5.85 percent) or 1 percentage point higher (7.85 percent) than the current rate:

System	1% Decrease (5.85%)	Discount Rate (6.85%)	1% Increase (7.85%)
Noncontributory System	\$ 3,000,422	\$ 476,081	\$ (1,633,139)
Public Safety System	2,305,539	715,894	(576,863)
Tier 2 Public Employees System	494,932	113,271	(180,751)
Tier 2 Public Safety and Firefighter	203,548	25,428	(116,134)
Total	\$ 6,004,441	\$ 1,330,674	\$ (2,506,887)

Pension plan fiduciary net position:

Detailed information about the pension plan's fiduciary net position is available in the separately issued URS financial report.

Defined Contribution Savings Plan:

The Defined Contribution Savings Plans are administered by the Utah Retirement Systems Board and are generally supplemental plans to the basic retirement benefits of the Retirement Systems, but may also be used as a primary retirement plan. These plans are voluntary tax-advantaged retirement savings programs authorized under sections 401(k), 457(b) and 408 of the Internal Revenue code. Detailed information regarding plan provisions is available in the separately issued URS financial report.

Heber City participates in the following Defined Contribution Savings Plans with the Utah Retirement Systems:

- 401(k) Plan
- 457(b) Plan
- Roth IRA Plan

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-D. Pension Plans (Continued)

Employee and employer contributions to the Utah Retirement Contribution Savings Plans for fiscal year ended June 30, were as follows:

	2023	2022	2021
401(k) Plan			
Employer Contributions	\$ 122,333	\$ 107,375	\$ 84,461
Employee Contributions	127,761	136,625	134,133
457 Plan			
Employer Contributions	\$ -	\$ -	\$ -
Employee Contributions	26,914	25,373	25,306
Roth IRA Plan			
Employer Contributions	N/A	N/A	N/A
Employee Contributions	\$ 43,542	\$ 36,857	\$ 32,567

4-F. Leases Receivable

The City's leasing operations consist of the leasing of hangar space at the City's airport to tenants. The majority of the 79 leases have a consumer price index-based inflation factor, while some older leasing agreements are a flat fee for the duration of the term. Lease terms remaining on the leases range from 3 to 26 years. Interest costs are not charged on the leasing agreements.

Lease revenues recognized during the year totaled \$242,996.

Expected future lease payments to be received are as follows:

Year	Payments
2024	\$ 291,032
2025	234,636
2026	201,572
2027	200,561
2028	193,664
2029-2033	1,006,651
2034-2038	1,075,019
2039-2043	685,099
2044-2048	438,140
2049	22,195
Total	<u>\$ 4,348,569</u>

4-G. Subsequent Events

In preparing these financial statements, the City has evaluated events and transactions for potential recognition or disclosure through the date of the auditor's report, which is, the date the financial statements were available to be issued.

Subsequent to year-end, the City issued \$7,629,000 of Sewer Revenue Bonds, Series 2023. These bonds carry an interest rate of 1.5%, with payments due beginning in May 2024.

HEBER CITY CORPORATION
NOTES TO FINANCIAL STATEMENTS (Continued)
JUNE 30, 2023

4-H. Prior Period Adjustment

During the City's financial close and reporting process, it was determined that qualifying airport federal grant expenditures were made in the prior year but not previously recognized. As a result, the City is reporting an adjustment to its beginning fund balance in the Airport Capital Projects fund, and Governmental Activities, as follows:

<u>Statement of Revenues Expenses, and Changes in Fund Balance - Governmental Funds</u>	<u>Airport - Capital Projects Fund</u>
Fund Balance, beginning of year	\$ 69,710
Adjustments related to:	
Grant revenues	<u>(115,402)</u>
Fund Balance, beginning of year, restated	<u>\$ (45,692)</u>
<u>Statement of Activities</u>	<u>Governmental Activities</u>
Net position, beginning of year	\$ 93,663,739
Adjustments related to:	
Grant revenues	<u>(115,402)</u>
Fund Balance, beginning of year, restated	<u>\$ 93,548,337</u>

REQUIRED SUPPLEMENTARY INFORMATION

HEBER CITY CORPORATION
NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
June 30, 2022

Budgetary Comparison Schedules

The Budgetary Comparison Schedules presented in this section of the report are:

- General Fund.
- Airport Special Revenue Fund
- COVID-19 Special Revenue Fund

The basis of budgeting for these funds is the same as GAAP as applicable to governmental entities.

Budgeting and Budgetary Control

Original budgets represent the revenue estimates and spending authority authorized by the City Council prior to the beginning of the year. Final budgets represent the original budget amounts plus any amendments made to the budget during the year by the Council through formal resolution. Final budgets do not include unexpended balances from the prior year because such balances automatically lapse to unreserved fund balance at the end of each year.

Changes in Assumptions Related to Pensions

No changes were made in actuarial assumptions from the prior year's valuation.

HEBER CITY CORPORATION
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN FUND
BALANCES – BUDGET AND ACTUAL
GENERAL FUND
For the Year Ended June 30, 2023

	Budgeted Original	Budgeted Final	Actual	Variance with Final Budget
REVENUES:				
Taxes	\$ 10,988,877	\$ 10,988,877	\$ 12,542,039	\$ 1,553,162
Licenses and permits	1,283,274	1,383,274	1,774,334	391,060
Intergovernmental revenues	1,107,750	1,107,750	1,307,397	199,647
Charges for services	342,500	342,500	255,472	(87,028)
Fines and forfeitures	331,054	331,054	395,624	64,570
Impact fees	185,000	185,000	62,190	(122,810)
Heber Light and Power dividend	225,000	225,000	56,250	(168,750)
Interest	58,600	58,600	1,734,132	1,675,532
Miscellaneous revenue	139,744	139,744	311,078	171,334
Total revenues	14,661,799	14,761,799	18,438,516	3,676,717
EXPENDITURES:				
General government:				
Legislative	320,697	385,697	342,385	43,312
Judicial	307,367	346,367	322,024	24,343
Administrative	506,392	836,001	627,020	208,981
General government buildings	208,419	208,419	197,363	11,056
Building department	952,915	1,227,915	1,015,285	212,630
Planning department	689,537	866,697	743,591	123,106
Attorney	331,847	273,071	251,895	21,176
Engineering	729,571	813,571	739,595	73,976
Public Safety:				
Police department	5,320,505	5,328,667	5,126,088	202,579
Animal control	376,420	376,420	371,338	5,082
Roads	8,892,823	9,079,323	3,159,484	5,919,839
Parks and recreation	641,887	706,862	524,288	182,574
Cemetery	585,762	585,762	485,331	100,431
Debt Service:				
Principal	-	29,400	29,400	-
Interest	-	3,825	3,825	-
Total expenditures	19,864,142	21,067,997	13,938,912	7,129,085
Excess (Deficiency) of Revenues Over (Under) Expenditures	(5,202,343)	(6,306,198)	4,499,604	(3,452,368)
Other financing sources and (uses):				
Bond issuance	3,600,000	3,600,000	5,041,000	1,441,000
Lease proceeds	-	-	133,287	133,287
Transfers in	10,000	10,000	-	(10,000)
Transfers out	(3,140,000)	(3,248,630)	(3,812,485)	(563,855)
Total other financing sources and (uses)	470,000	361,370	1,361,802	1,000,432
Net change in fund balances	(4,732,343)	(5,944,828)	5,861,406	(2,451,936)
Fund balances - beginning of year	12,004,501	12,004,501	12,004,501	-
Fund balances - end of year	\$ 7,272,158	\$ 6,059,673	\$ 17,865,907	\$ (2,451,936)

HEBER CITY CORPORATION
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN FUND
BALANCES – BUDGET AND ACTUAL
AIRPORT SPECIAL REVENUE FUND
For the Year Ended June 30, 2023

	Budgeted Original	Budgeted Final	Actual	Variance with Final Budget
REVENUES:				
Charges for services	\$ 588,650	\$ 628,650	\$ 543,902	\$ (84,748)
Miscellaneous revenue	100	100	2,039	1,939
Total revenues	588,750	628,750	545,941	(82,809)
EXPENDITURES:				
Airport	541,885	703,049	678,392	24,657
Total expenditures	541,885	703,049	678,392	24,657
Excess (Deficiency) of Revenues Over (Under) Expenditures	46,865	(74,299)	(132,451)	(107,466)
Net change in fund balances	(3,135)	(124,299)	(132,451)	(57,466)
Fund balances - beginning of year	318,867	318,867	318,867	-
Fund balances - end of year	<u>\$ 315,732</u>	<u>\$ 194,568</u>	<u>\$ 186,416</u>	<u>\$ (57,466)</u>

HEBER CITY CORPORATION
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN FUND
BALANCES – BUDGET AND ACTUAL
COVID-19 SPECIAL REVENUE FUND
For the Year Ended June 30, 2023

	Budgeted Original	Budgeted Final	Actual	Variance with Final Budget
REVENUES:				
Intergovernmental revenues	\$ -	\$ -	\$ 4,228,859	\$ 4,228,859
Interest	1,602	1,602	-	(1,602)
Total revenues	1,602	1,602	4,228,859	4,227,257
EXPENDITURES:				
General government:				
Administrative	-	-	-	-
Total expenditures	-	-	-	-
Excess (Deficiency) of Revenues Over (Under) Expenditures	1,602	1,602	4,228,859	4,227,257
Other financing sources and (uses):				
Transfers out	(5,026,471)	(5,026,471)	(4,228,324)	798,147
Total other financing sources and (uses)	(5,026,471)	(5,026,471)	(4,228,324)	798,147
Net change in fund balances	(5,024,869)	(5,024,869)	535	5,025,404
Fund balance - beginning of year	-	-	-	-
Fund balance - end of year	<u>\$ (5,024,869)</u>	<u>\$ (5,024,869)</u>	<u>\$ 535</u>	<u>\$ 5,025,404</u>

HEBER CITY CORPORATION
SCHEDULE OF THE PROPORTIONATE SHARE OF THE NET PENSION LIABILITY
Utah Retirement Systems
June 30, 2023
Measurement Date of December 31
Last 10 Fiscal Years*

Measurement Date December 31,	Proportion of the net pension liability (asset)	Proportionate share of the net pension liability (asset)	Covered payroll	Proportionate share of the net pension liability (asset) as a percentage of its covered- employee payroll	Plan fiduciary net position as a percentage of the total pension liability (asset)
Noncontributory System					
2022	0.2779631%	\$ 476,081	\$ 2,106,570	22.60%	97.5%
2021	0.2779569%	(1,591,890)	2,091,442	(76.11%)	108.7%
2020	0.2737815%	140,434	2,124,512	6.61%	99.2%
2019	0.2292198%	863,900	1,845,122	46.82%	93.7%
2018	0.2526255%	1,860,264	1,971,435	94.36%	87.0%
2017	0.2372588%	1,039,502	1,821,196	57.08%	91.9%
2016	0.1993893%	1,280,323	1,545,111	82.86%	87.3%
2015	0.1945194%	1,100,685	1,545,329	71.23%	87.8%
2014	0.1908641%	828,777	1,547,653	53.55%	90.2%
Public Safety System					
2022	0.5536366%	\$ 715,894	\$ 644,042	111.16%	93.6%
2021	0.6369301%	(517,278)	828,553	(62.43%)	104.2%
2020	0.6475021%	537,583	832,551	64.57%	95.5%
2019	0.5387236%	864,984	707,026	122.34%	90.9%
2018	0.6456268%	1,660,930	872,536	190.36%	84.7%
2017	0.6348638%	995,884	873,748	113.98%	90.2%
2016	0.5564376%	1,129,166	741,131	152.36%	86.5%
2015	0.5237153%	938,106	705,002	133.06%	87.1%
2014	0.4886821%	614,558	670,715	91.63%	90.5%
Tier 2 Public Employees Retirement Systems					
2022	0.1040239%	\$ 113,271	\$ 2,269,303	4.99%	92.3%
2021	0.1011490%	(42,810)	1,876,541	(2.28%)	103.8%
2020	0.0940144%	13,522	1,502,880	0.90%	98.3%
2019	0.0783959%	17,632	1,090,988	1.62%	96.5%
2018	0.1031187%	44,164	1,201,755	3.67%	90.8%
2017	0.1121103%	9,884	1,097,416	0.90%	97.4%
2016	0.0994969%	11,099	815,958	1.36%	95.1%
2015	0.0814209%	(178)	526,066	(0.03%)	100.2%
2014	0.0765151%	(2,319)	375,680	(0.62%)	103.5%
Tier 2 Public Safety and Firefighter Retirement System					
2022	0.3048087%	\$ 25,428	\$ 937,830	2.71%	96.4%
2021	0.2384933%	(12,054)	570,328	(2.11%)	102.8%
2020	0.2931178%	26,291	587,756	4.47%	93.1%
2019	0.2551496%	24,000	420,651	5.71%	89.6%
2018	0.2696340%	6,756	359,867	1.88%	95.6%
2017	0.2848050%	(3,295)	300,639	(1.10%)	103.0%
2016	0.3813388%	(3,310)	315,072	(1.05%)	103.6%
2015	0.4220258%	(6,166)	251,149	(2.46%)	110.7%
2014	0.4130641%	(6,111)	171,002	(3.57%)	120.5%

* GASB Statement No. 68 requires ten years of information to be presented in this table. However, until a full 10-year trend is compiled, the City will present information for those years for which information is available.

HEBER CITY CORPORATION
SCHEDULE OF CONTRIBUTIONS
Utah Retirement Systems

As of fiscal year ended June 30,	Actuarial Determined Contributions	Contributions in relation to the contractually required contribution	Contribution deficiency (excess)	Covered payroll	Contributions as a percentage of covered payroll
Noncontributory System					
2023	\$ 417,449	\$ 417,449	\$ -	\$ 2,330,873	17.91%
2022	366,622	366,622	-	1,994,389	18.38%
2021	387,996	387,996	-	2,110,087	18.39%
2020	404,497	404,497	-	2,217,554	18.24%
2019	392,023	392,023	-	2,171,149	18.06%
2018	339,609	339,609	-	1,879,659	18.07%
2017	290,865	290,865	-	1,585,919	18.34%
2016	286,000	286,000	-	1,533,288	18.65%
2015	281,497	281,497	-	1,533,570	18.36%
2014	267,426	267,426	-	1,557,777	17.17%
Public Safety System					
2023	\$ 245,671	\$ 245,671	\$ -	\$ 721,712	34.04%
2022	237,659	237,659	-	698,178	34.04%
2021	287,301	287,301	-	844,008	34.04%
2020	281,973	281,973	-	828,360	34.04%
2019	297,419	297,419	-	873,733	34.04%
2018	299,185	299,185	-	879,181	34.03%
2017	268,574	268,574	-	790,512	33.97%
2016	243,908	243,908	-	716,534	34.04%
2015	231,833	231,833	-	681,061	34.04%
2014	211,960	211,960	-	659,912	32.12%
Tier 2 Public Employees System**					
2023	\$ 395,374	\$ 395,374	\$ -	\$ 2,472,225	15.99%
2022	336,659	336,659	-	2,095,034	16.07%
2021	259,884	259,884	-	1,644,837	15.80%
2020	223,427	223,427	-	1,409,366	15.85%
2019	203,249	203,249	-	1,309,128	15.53%
2018	166,326	166,326	-	1,101,253	15.10%
2017	145,599	145,599	-	976,518	14.91%
2016	97,358	97,358	-	654,337	14.88%
2015	67,244	67,244	-	450,091	14.94%
2014	39,234	39,234	-	280,442	13.99%
Tier 2 Public Safety and Firefighter System					
2023	\$ 285,643	\$ 285,643	\$ -	\$ 1,105,859	25.83%
2022	173,924	173,924	-	671,504	25.90%
2021	147,972	147,972	-	572,868	25.83%
2020	139,604	139,604	-	603,562	23.13%
2019	100,922	100,922	-	437,348	23.08%
2018	69,706	69,706	-	308,879	22.57%
2017	68,246	68,246	-	303,317	22.50%
2016	66,923	66,923	-	297,438	22.50%
2015	48,840	48,840	-	214,951	22.72%
2014	27,135	27,135	-	130,144	20.85%

The Schedule of Contributions is continued on the next page.

HEBER CITY CORPORATION
SCHEDULE OF CONTRIBUTIONS (Continued)**
Utah Retirement Systems

As of fiscal year ended June 30,	Actuarial Determined Contributions	Contributions in relation to the contractually required contribution	Contribution deficiency (excess)	Covered payroll	Contributions as a percentage of covered payroll
Tier 2 Public Employees DC Only**					
2023	\$ 25,296	\$ 25,296	\$ -	\$ 408,665	6.19%
2022	19,129	19,129	-	285,939	6.69%
2021	12,398	12,398	-	185,325	6.69%
2020	12,661	12,661	-	189,253	6.69%
2019	7,444	7,444	-	111,278	6.69%
2018	6,036	6,036	-	90,221	6.69%
2017	1,279	1,279	-	19,112	6.69%
2016	1,271	1,271	-	19,005	6.69%
2015	1,794	1,794	-	26,703	6.72%
2014	2,000	2,000	-	35,851	5.58%
Tier 2 Public Safety and Firefighter DC Only System**					
2023	\$ 7,295	\$ 7,295	\$ -	\$ 61,663	11.83%
2022	14,620	14,620	-	123,587	11.83%
2021	12,798	12,798	-	108,182	11.83%
2020	8,823	8,823	-	74,574	11.83%
2019	5,982	5,982	-	50,568	11.83%
2018	5,363	5,363	-	45,331	11.83%
2017	3,740	3,740	-	31,613	11.83%
2016	-	-	-	-	0.00%
2015	-	-	-	-	0.00%
2014	-	-	-	-	0.00%

** Contributions in Tier 2 include an amortization rate to help fund the unfunded liabilities in the Tier 1 systems. Tier 2 systems were created July 1, 2011.

SUPPLEMENTARY INFORMATION
NONMAJOR GOVERNMENTAL FUNDS
COMBINING STATEMENTS

DEBT SERVICE FUND

Debt service funds are used to account for the proceeds of debt issued for governmental activities and the subsequent repayment of long-term debt. The City's Debt Service Fund is used for this purpose.

CAPITAL PROJECT FUNDS

Capital projects funds are used to account for the acquisition and construction of major capital facilities and equipment other than those financed by proprietary funds and trust funds. The City's Airport Capital Projects Fund, Community Reinvestment Agency Capital Projects fund, General Capital Projects fund, and Parks Capital Projects Fund are used to account for capital improvements and purchases for governmental activities.

PERMANENT FUNDS

Permanent funds are used to report resources that are legally restricted to the extent that only earnings, not principal, may be used for the purposes that support the government's programs. The City's Cemetery Perpetual Care Permanent Fund accounts for assets held by the City to provide for the perpetual care of the cemetery. The principal portion of the fund must be maintained, whereas the interest earned in the fund is available to be used as needed to maintain and improve the community cemetery unless otherwise approved by the council to use for other cemetery related purposes.

BUDGETARY COMPARISON SCHEDULES

The Budgetary Comparison Schedules presented in this section of the report are:

- Streets Capital Projects Fund (Major).
- Debt Service Fund
- General Capital Projects Fund
- Airport Capital Projects Fund
- Community Reinvestment Agency Capital Projects Fund
- Parks – Capital Projects Fund
- Perpetual Care – Permanent Fund

The basis of budgeting for these funds is the same as GAAP as applicable to governmental entities.

HEBER CITY CORPORATION
COMBINING BALANCE SHEET – NONMAJOR GOVERNMENTAL FUNDS
June 30, 2023

	Debt Service	Capital Projects Funds			Permanent	Total
	Debt Service	General		Community	Perpetual Care	Nonmajor
	Fund	Capital	Airport Fund	Reinvestment	Fund	Governmental
		Projects		Agency		Funds
ASSETS:						
Cash and cash equivalents	\$ -	\$ 4,830,395	\$ -	\$ -	\$ 168,353	\$ 4,998,748
Receivables:						
Due from other governments	-	-	298,249	-	-	298,249
Restricted cash and cash equivalents	380,370	-	-	61,183	4,206,261	5,336,044
TOTAL ASSETS	\$ 380,370	\$ 4,830,395	\$ 298,249	\$ 61,183	\$ 4,374,614	\$ 10,633,041
LIABILITIES:						
Accounts payable	\$ -	\$ 177,577	\$ 29,607	\$ 8,975	\$ 168,353	\$ 384,512
Due to other funds	-	-	365,677	-	-	365,677
TOTAL LIABILITIES	-	177,577	395,284	8,975	168,353	750,189
DEFERRED INFLOWS OF RESOURCES:						
Deferred inflows of resources - unavailable grants	-	-	216,249	-	-	216,249
TOTAL DEFERRED INFLOWS OF RESOURCES	-	-	216,249	-	-	216,249
TOTAL LIABILITIES AND DEFERRED						
INFLOWS OF RESOURCES	-	177,577	611,533	8,975	168,353	966,438
FUND BALANCES:						
Nonspendable:						
Perpetual care	-	-	-	-	688,230	688,230
Restricted for:						
Debt service	380,370	-	-	-	-	380,370
Impact fees	-	-	-	-	4,206,261	4,206,261
Assigned for:						
Capital projects	-	4,652,818	-	52,208	-	4,705,026
Unassigned	-	-	(313,284)	-	-	(313,284)
TOTAL FUND BALANCES	380,370	4,652,818	(313,284)	52,208	688,230	9,666,603
TOTAL LIABILITIES, DEFERRED INFLOWS						
OF RESOURCES, AND FUND BALANCES	\$ 380,370	\$ 4,830,395	\$ 298,249	\$ 61,183	\$ 4,374,614	\$ 10,633,041

HEBER CITY CORPORATION
COMBINING STATEMENT OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCES – NONMAJOR GOVERNMENTAL FUNDS
For the Year Ended June 30, 2023

	Debt Service	Capital Projects Funds			Permanent	Total
	Debt Service	General	Community		Perpetual Care	Nonmajor
	Fund	Capital	Reinvestment		Fund	Governmental
		Projects	Agency	Parks Fund		Funds
		Airport Fund				
REVENUES:						
Intergovernmental revenues	\$ -	\$ -	\$ 29,500	\$ -	\$ -	\$ 29,500
Charges for services	-	-	-	-	49,906	49,906
Impact fees	-	-	-	-	-	1,673,685
Total revenues	-	-	29,500	-	49,906	1,753,091
EXPENDITURES:						
Current:						
General government	-	-	-	11,947	-	11,947
Airport	-	-	21,318	-	-	21,318
Capital outlay:						
General government	-	1,731	-	-	-	1,731
Public works	-	172,442	-	-	-	172,442
Parks and recreation	-	54,803	-	-	-	320,225
Cemetery	-	30,015	-	-	-	30,015
Airport	-	-	275,774	-	-	275,774
Debt service:						
Principal	781,005	-	-	-	-	781,005
Interest	96,281	-	-	-	-	96,281
Total expenditures	877,286	258,991	297,092	11,947	-	1,710,738
Excess (Deficiency) of Revenues Over (Under) Expenditures	(877,286)	(258,991)	(267,592)	(11,947)	49,906	42,353
Other Financing Sources and (Uses):						
Transfers in	870,949	2,300,000	-	-	-	3,170,949
Total other financing sources and (uses)	870,949	2,300,000	-	-	-	3,170,949
Net Change in Fund Balances	(6,337)	2,041,009	(267,592)	(11,947)	49,906	3,213,302
Fund balances - beginning of year	386,707	2,611,809	69,710	64,155	638,324	6,568,703
Prior period adjustment	-	-	(115,402)	-	-	(115,402)
Fund balances - end of year	\$ 380,370	\$ 4,652,818	\$ (313,284)	\$ 52,208	\$ 688,230	\$ 9,666,603

HEBER CITY CORPORATION
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN
FUND BALANCE – BUDGET AND ACTUAL
CAPITAL PROJECTS – STREETS FUND (Major)
For the Year Ended June 30, 2022

	Budgeted Original	Budgeted Final	Actual	Variance with Final Budget
REVENUES:				
Impact fees	\$ 700,000	\$ 700,000	\$ 1,638,910	\$ 938,910
Interest	15,000	15,000	-	(15,000)
Total revenues	715,000	715,000	1,638,910	923,910
EXPENDITURES:				
Roads	3,948,000	3,948,000	2,082,165	1,865,835
Debt Service - Interest	5,000	5,000	4,165	835
Total expenditures	3,953,000	3,953,000	2,086,330	1,866,670
Excess (Deficiency) of Revenues Over (Under) Expenditures	(3,238,000)	(3,238,000)	(447,420)	(942,760)
Other financing sources and (uses):				
Transfers in	300,000	300,000	641,536	341,536
Total other financing sources and (uses)	300,000	300,000	641,536	341,536
Net change in fund balances	(2,938,000)	(2,938,000)	194,116	(601,224)
Fund balances - beginning of year	4,087,965	4,087,965	4,087,965	-
Fund balances - end of year	<u>\$ 1,149,965</u>	<u>\$ 1,149,965</u>	<u>\$ 4,282,081</u>	<u>\$ (601,224)</u>

HEBER CITY CORPORATION
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN
FUND BALANCE – BUDGET AND ACTUAL
DEBT SERVICE FUND
For the Year Ended June 30, 2023

	Budgeted Original	Budgeted Final	Actual	Variance with Final Budget
REVENUES:				
Interest	\$ 2,000	\$ 2,000	\$ -	\$ (2,000)
Total revenues	2,000	2,000	-	(2,000)
EXPENDITURES:				
Debt service:				
Principal	773,500	781,000	781,005	(5)
Interest	100,000	100,000	96,281	3,719
Total expenditures	873,500	881,000	877,286	3,714
Excess (Deficiency) of Revenues Over (Under) Expenditures	(871,500)	(879,000)	(877,286)	(5,714)
Other financing sources and (uses):				
Transfers in	885,000	892,500	870,949	(21,551)
Total other financing sources and (uses)	885,000	892,500	870,949	(21,551)
Net change in fund balances	13,500	13,500	(6,337)	(27,265)
Fund balances - beginning of year	386,707	386,707	386,707	-
Fund balances - end of year	\$ 400,207	\$ 400,207	\$ 380,370	\$ (27,265)

HEBER CITY CORPORATION
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN
FUND BALANCE – BUDGET AND ACTUAL
GENERAL CAPITAL PROJECTS FUND
For the Year Ended June 30, 2023

	Budgeted Original	Budgeted Final	Actual	Variance with Final Budget
REVENUES:				
Interest	\$ 5,000	\$ 5,000	\$ -	\$ (5,000)
Total revenues	5,000	5,000	-	(5,000)
EXPENDITURES:				
Parks and recreation	2,607,707	2,607,707	258,991	2,348,716
Total expenditures	2,607,707	2,607,707	258,991	2,348,716
Excess (Deficiency) of Revenues Over (Under) Expenditures	(2,602,707)	(2,602,707)	(258,991)	(2,353,716)
Other financing sources and (uses):				
Transfers in	1,400,000	1,516,717	2,300,000	783,283
Transfers (out)	(550,000)	(550,000)	-	550,000
Total other financing sources and (uses)	850,000	966,717	2,300,000	1,333,283
Net change in fund balances	(1,752,707)	(1,635,990)	2,041,009	(1,020,433)
Fund balances - beginning of year	2,611,809	2,611,809	2,611,809	-
Fund balances - end of year	<u>\$ 859,102</u>	<u>\$ 975,819</u>	<u>\$ 4,652,818</u>	<u>\$ (1,020,433)</u>

HEBER CITY CORPORATION
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN
FUND BALANCE – BUDGET AND ACTUAL
CAPITAL PROJECTS – AIRPORT FUND
For the Year Ended June 30, 2022

	Budgeted Original	Budgeted Final	Actual	Variance with Final Budget
REVENUES:				
Intergovernmental revenues	\$ 310,542	\$ 310,542	\$ 29,500	\$ (281,042)
Total revenues	310,542	310,542	29,500	(281,042)
EXPENDITURES:				
Airport	373,078	441,078	297,092	143,986
Total expenditures	373,078	441,078	297,092	143,986
Excess (Deficiency) of Revenues Over (Under) Expenditures	(62,536)	(130,536)	(267,592)	(425,028)
Net change in fund balances	(12,536)	(80,536)	(267,592)	(475,028)
Fund balances - beginning of year	69,710	69,710	69,710	-
Prior period adjustment	-	-	(115,402)	115,402
Fund balances - end of year	<u>\$ 57,174</u>	<u>\$ (10,826)</u>	<u>\$ (313,284)</u>	<u>\$ (359,626)</u>

HEBER CITY CORPORATION
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN
FUND BALANCE – BUDGET AND ACTUAL
CAPITAL PROJECTS – COMMUNITY REINVESTMENT AGENCY
For the Year Ended June 30, 2023

	Budgeted Original	Budgeted Final	Actual	Variance with Final Budget
REVENUES:				
Interest	\$ 100	\$ 100	\$ -	\$ (100)
Total revenues	100	100	-	(100)
EXPENDITURES:				
General government:				
Administrative	\$ 35,000	\$ 35,000	\$ 11,947	\$ 23,053
Total expenditures	35,000	35,000	11,947	23,053
Excess (Deficiency) of Revenues Over (Under) Expenditures	(34,900)	(34,900)	(11,947)	(23,153)
Other financing sources and (uses):				
Transfers (out)	(10,000)	(10,000)	-	10,000
Total other financing sources and (uses)	(10,000)	(10,000)	-	10,000
Net change in fund balances	(44,900)	(44,900)	(11,947)	(13,153)
Fund balances - beginning of year	64,155	64,155	64,155	-
Fund balances - end of year	<u>\$ 19,255</u>	<u>\$ 19,255</u>	<u>\$ 52,208</u>	<u>\$ (13,153)</u>

HEBER CITY CORPORATION
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN
FUND BALANCE – BUDGET AND ACTUAL
CAPITAL PROJECTS – PARKS FUND
For the Year Ended June 30, 2023

	Budgeted Original	Budgeted Final	Actual	Variance with Final Budget
REVENUES:				
Impact fees	\$ 900,000	\$ 900,000	\$ 1,673,685	\$ 773,685
Interest	8,000	8,000	-	(8,000)
Total revenues	908,000	908,000	1,673,685	765,685
EXPENDITURES:				
Parks and recreation	587,000	790,000	265,422	524,578
Total expenditures	587,000	790,000	265,422	524,578
Excess (Deficiency) of Revenues Over (Under) Expenditures	321,000	118,000	1,408,263	241,107
Net change in fund balances	321,000	118,000	1,408,263	241,107
Fund balances - beginning of year	2,797,998	2,797,998	2,797,998	-
Fund balances - end of year	<u>\$ 3,118,998</u>	<u>\$ 2,915,998</u>	<u>\$ 4,206,261</u>	<u>\$ 241,107</u>

HEBER CITY CORPORATION
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN
FUND BALANCE – BUDGET AND ACTUAL
PERPETUAL CARE FUND
For the Year Ended June 30, 2023

	Budgeted Original	Budgeted Final	Actual	Variance with Final Budget
REVENUES:				
Charges for services	\$ 60,000	\$ 60,000	\$ 49,906	\$ (10,094)
Interest	2,200	2,200	-	(2,200)
Total revenues	62,200	62,200	49,906	(12,294)
Net change in fund balances	62,200	62,200	49,906	(12,294)
Fund balances - beginning of year	638,324	638,324	638,324	-
Fund balances - end of year	<u>\$ 700,524</u>	<u>\$ 700,524</u>	<u>\$ 688,230</u>	<u>\$ (12,294)</u>

**INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL
REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF
FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING
STANDARDS**

The Honorable Mayor, and
Members of the City Council
Heber City, Utah

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of Heber City as of and for the year ended June 30, 2023, and the related notes to the financial statements, which collectively comprise Heber City's basic financial statements, and have issued our report thereon dated December 20, 2023.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered Heber City's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Heber City's internal control. Accordingly, we do not express an opinion on the effectiveness of Heber City's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the City's financial statements will not be prevented or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether Heber City's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

LARSON & COMPANY, PC

Larson & Company, PC

Spanish Fork, Utah
December 20, 2023



INDEPENDENT AUDITOR'S REPORT ON COMPLIANCE FOR EACH MAJOR PROGRAM AND ON INTERNAL CONTROL OVER COMPLIANCE REQUIRED BY THE *UNIFORM GUIDANCE*

The Honorable Mayor, and
Members of the City Council
Heber City, Utah

Report on Compliance for Each Major Federal Program

Opinion on Compliance for Each Major Federal Program

We have audited Heber City's compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of Heber City's major federal programs for the year ended June 30, 2023. Heber City's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

In our opinion, Heber City complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2023.

Basis for Opinion on Each Major Federal Program

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Our responsibilities under those standards and the Uniform Guidance are further described in the Auditor's Responsibilities for the Audit of Compliance section of our report.

We are required to be independent of Heber City and to meet our other ethical responsibilities, in accordance with relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on compliance for each major federal program. Our audit does not provide a legal determination of Heber City's compliance with the compliance requirements referred to above.

Responsibilities of Management for Compliance

Management is responsible for compliance with the requirements referred to above and for the design, implementation, and maintenance of effective internal control over compliance with the requirements of laws, statutes, regulations, rules and provisions of contracts or grant agreements applicable to Heber City's federal programs.

Auditor's Responsibilities for the Audit Compliance

Our objectives are to obtain reasonable assurance about whether material noncompliance with the compliance requirements referred to above occurred, whether due to fraud or error, and express an opinion on Heber City's compliance based on our audit. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS, *Government Auditing Standards*, and the Uniform Guidance will always detect material noncompliance when it exists. The risk of not detecting a material noncompliance resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Noncompliance with the compliance requirements referred to above is considered material, if there is a substantial likelihood that individually or in the aggregate, it would influence the judgment made by a reasonable user of the report on compliance about Heber City's compliance with the requirements of each major federal program as a whole.

In performing an audit in accordance with GAAS, *Government Auditing Standards*, and the Uniform Guidance, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material noncompliance, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding Heber City's compliance with the compliance requirements referred to above and performing such other procedures as we considered necessary in the circumstances.
- Obtain an understanding of Heber City's internal control over compliance relevant to the audit in order to design audit procedures that are appropriate in the circumstances and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of Heber City's internal control over compliance. Accordingly, no such opinion is expressed.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and any significant deficiencies in material weaknesses in internal control over compliance that we identified during the audit.

Report on Internal Control Over Compliance

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the Auditor's Responsibilities for the Audit of Compliance section above and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies in internal control over compliance. Given these limitations, during our audit we did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses, as defined above. However, material weaknesses or significant deficiencies in internal control over compliance may exist that were not identified.

Our audit was not designed for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, no such opinion is expressed.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

LARSON & COMPANY, PC

Larson & Company, PC

Spanish Fork, Utah
December 20, 2023

Heber City Corporation

Schedule of Expenditures of Federal Awards

For the Year Ended June 30, 2023

	<u>Federal CFDA Number</u>	<u>Amount of Expenditures</u>
Direct Assistance		
U.S Department of the Treasury		
* Coronavirus State and Local Fiscal Recovery Funds	21.027	\$ 2,021,665
<i>Total U.S Department of the Treasury</i>		<u>2,021,665</u>
Total Direct Assistance		<u>2,021,665</u>
Indirect Assistance		
U.S Department of Treasury		
Passed through the State of Utah		
* Coronavirus State and Local Fiscal Recovery Funds (COVID-19 Local Assistance)	21.027	2,206,659
<i>Total U.S Department of Treasury</i>		<u>2,206,659</u>
U.S Department of Transportation		
Passed through the State of Utah		
Airport Improvement Program / 2019	20.106	130,980
Airport Improvement Program / 2022	20.106	29,500
<i>Total U.S Department of Transportation</i>		<u>160,480</u>
U.S Department of Justice		
Passed through the Office of Justice Programs		
Bulletproof Vest Partnership Grant	16.607	4,671
<i>Total U.S Department of Justice</i>		<u>4,671</u>
Total Indirect Assistance		<u>2,371,810</u>
TOTAL EXPENDITURES OF FEDERAL AWARDS		<u><u>\$ 4,393,475</u></u>

* Major Program

Heber City Corporation
Notes to the Schedule Expenditures of Federal Awards
For the Year Ended June 30, 2023

NOTE 1. PURPOSE OF THE SCHEDULE

The accompanying Schedule of Expenditures of Federal Awards is a supplementary schedule to Heber City's basic financial statements and is presented for the purpose of additional analysis. Because the schedule presents only a selected portion of the activities of Heber City, it is not intended to, and does not present the financial position, changes in net position, or cash flows of Heber City.

NOTE 2. SIGNIFICANT ACCOUNTING POLICIES

General

The accompanying schedule of expenditures of federal awards (the schedule) includes the grant activity of Heber City under programs of the federal government for the year ended June 30, 2023. The information in this schedule is presented in accordance with the requirements of *Title 2 U.S. Code of Federal Regulations, Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance)*. The reporting entity is defined in Note 1 to the basic financial statements. All federal awards received directly from federal agencies as well as federal awards passed through other government agencies are included on the schedule of expenditures of federal awards.

Basis of Accounting

The accompanying schedule of expenditures of federal awards is presented using the modified accrual basis of accounting for expenditures in governmental fund types and on the accrual basis for expenses in proprietary fund types, which is described in Note 1 to the basic financial statements.

Non-cash Assistance

Heber City did not receive any non-cash assistance for the year-ended June 30, 2023.

10% De Minimis Indirect Cost Rate

The entity did not choose to use the 10% minimis cost rate.

Sub-recipients

Heber City did not pass through to any sub-recipients.

Loans Outstanding

Heber City does not have federally insured loans outstanding at year-end.

Heber City Corporation
Schedule of Federal Findings and Questioned Costs
For the Year Ended June 30, 2023

I. Summary of Auditor's Results

Financial Statements

The independent auditor's report expressed an unmodified opinion on the basic financial statements of Heber City.

Internal Control over financial reporting:

- Material weaknesses identified ☐ Yes ☒ No
 - Significant deficiencies identified ☐ Yes ☒ No
- Noncompliance material to the financial statements noted? ☐ Yes ☒ No

Federal Awards

Internal control over federal programs

- Material weaknesses identified ☐ Yes ☒ No
- Significant deficiencies identified ☐ Yes ☒ No

Type of auditor's report issued on compliance for major federal programs:

Unmodified

Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)?

☐ Yes ☒ No

Identification of Federal Major Programs and Type of Auditor's Report Issued on Compliance for Major Federal Programs

21.027 Coronavirus State and Local Fiscal Recovery Funds Unmodified

Dollar threshold used to distinguish between type A and type B Programs:

\$750,000

Auditee qualified as a low-risk auditee?

☐ Yes ☒ No

Heber City Corporation
Schedule of Federal Findings and Questioned Costs
For the Year Ended June 30, 2023

II. Governmental Auditing Standards Findings

None noted

III. Federal Award Findings

None noted

Prior Audit Findings Related to Financial Statements

2022-001 Financial close and reporting (material weakness)

Criteria: Utah Code Annotated (UCA) 10-6-107 states: "The accounting records of cities shall be established and maintained, and financial statements prepared from those records in conformance with generally accepted accounting principles..."

Condition and context: During our audit, material adjustments were required to bring the City's financial statements into compliance with generally accepted accounting principles (GAAP) as it relates to government entities.

Status of finding: Finding appears to have been addressed and corrected. The City retained the services of an outside firm to assist in closing the books and preparing financial statements.

Prior Audit Findings Related to Federal Awards

None

**INDEPENDENT AUDITOR'S REPORT ON COMPLIANCE AND ON
INTERNAL CONTROL OVER COMPLIANCE AS REQUIRED BY THE
STATE COMPLIANCE AUDIT GUIDE**

The Honorable Mayor, and
Members of the City Council
Heber City, Utah

Report on Compliance

We have audited Heber City's compliance with the applicable state compliance requirements described in the *State Compliance Audit Guide*, issued by the Office of the Utah State Auditor, for the year ended June 30, 2023.

State compliance requirements were tested for the year ended June 30, 2023 in the following areas:

Budgetary Compliance	Fund Balance
Justice Court	Restricted Taxes and Related Revenues
Fraud Risk Assessment	Government Fees
Cash Management	Enterprise Fund Transfers, Reimbursements, Loans, and Service
Impact Fees	Utah Retirement Systems
Public Treasurer's Bond	Open and Public Meetings Act

Opinion on Compliance

In our opinion, Heber City complied, in all material respects, with the state compliance requirements referred to above for the year ended June 30, 2023.

Basis for Opinion

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America (GAAS); the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (Government Auditing Standards); and the *State Compliance Audit Guide* (Guide). Our responsibilities under those standards and the *State Compliance Audit Guide* are further described in the Auditor's Responsibilities for the Audit of Compliance section of our report.

We are required to be independent of Heber City and to meet our other ethical responsibilities, in accordance with relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion. Our audit does not provide a legal determination of Heber City's compliance with the compliance requirements referred to above.

Responsibilities of Management for Compliance

Management is responsible for compliance with the requirements referred to above and for the design, implementation, and maintenance of effective internal control over compliance with the requirements of laws, statutes, regulations, rules, and provisions of contracts or grant agreements applicable to Heber City's government programs.

Auditor's Responsibilities for the Audit of Compliance

Our objectives are to obtain reasonable assurance about whether material noncompliance with the compliance requirements referred to above occurred, whether due to fraud or error, and express an opinion on Heber City's compliance based on our audit. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS, Government Auditing Standards, and the Guide will always detect material noncompliance when it exists. The risk of not detecting material noncompliance resulting from fraud is higher than for that resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Noncompliance with the compliance requirements referred to above is considered material if there is a substantial likelihood that, individually or in the aggregate, it would influence the judgment made by a reasonable user of the report on compliance about Heber City's compliance with the requirements of the government program as a whole.

In performing an audit in accordance with GAAS, Government Auditing Standards, and the Guide, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material noncompliance, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding Heber City's compliance with the compliance requirements referred to above and performing such other procedures as we considered necessary in the circumstances.
- Obtain an understanding of Heber City's internal control over compliance relevant to the audit in order to design audit procedures that are appropriate in the circumstances and to test and report on internal control over compliance in accordance with the State Compliance Audit Guide but not for the purpose of expressing an opinion on the effectiveness of Heber City's internal control over compliance. Accordingly, no such opinion is expressed.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and any significant deficiencies and material weaknesses in internal control over compliance that we identified during the audit.

Other Matters

The results of our auditing procedures disclosed instances of noncompliance, which are required to be reported in accordance with the Guide and which are described in the accompanying schedule of state compliance findings and recommendations. Our opinion on compliance is not modified with respect to these matters.

Government Auditing Standards require the auditor to perform limited procedures on Heber City's response to the noncompliance finding identified in our audit described in the accompanying state compliance schedule of findings and recommendations. Heber City's response was not subjected to the other auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response.

Report On Internal Control over Compliance

Our consideration of internal control over compliance was for the limited purpose described in the Auditor's Responsibilities for the Audit of Compliance section above and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies in internal control over compliance. Given these limitations, during our audit we did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses or significant deficiencies, as defined above. However, material weaknesses or significant deficiencies in internal control over compliance may exist that were not identified.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent or to detect and correct noncompliance with a state compliance requirement on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a state compliance requirement will not be prevented or detected and corrected on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a state compliance requirement that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our audit was not designed for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, no such opinion is expressed.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control and compliance and the results of that testing based on the requirements of the Guide. Accordingly, this report is not suitable for any other purpose.

Larson & Company, PC

Larson & Company, PC

Spanish Fork, Utah
December 20, 2023

Heber City
Schedule of State Compliance Findings and Recommendations
For the Year Ended June 30, 2023

Current year compliance findings

2023-001 Deficit fund balance

Criteria: In accordance with *Utah Code 10-6-117* a governing body of any city may not make any appropriation in the final budget of any fund in excess of the estimated expendable revenue for the budget period of the fund. If there is a deficit fund balance in a fund at the close of the last completed fiscal year, the governing body of a city shall include an item of appropriation for the deficit in the current budget of the fund equal to (a) at least 5% of the total revenue of the fund in the last completed fiscal year, or (b) if the deficit is equal to less than 5% of the total revenue of the fund in the last completed fiscal year, the entire amount of the deficit.

Condition and context: The nonmajor Airport Capital Projects Fund was in a deficit fund balance position at year end. With the prior period adjustment, the fund would also have been in a deficit position at the end of the prior year as well. It was noted in the review of the adopted budgets for both FY2023 and FY2024, there is no allowance for deficit reduction of at least the required 5% reduction.

Cause and effect: This appears to be an oversight of management and governance when preparing and adopting FY budgets. The cause of which is noncompliance with *Utah State Code*.

Recommendation: We recommend that a review control be implemented to review the fund balance of each fund including the current year activity. If funds are found to be in a deficit position, a line item should be included in the ensuing FY budget to reduce the deficit, at a minimum, 5% of the total revenue of that fund for the last completed fiscal year.

View of responsible officials: Management will implement a review control to review the fund balance of each fund including the current year activity. If funds are found to be in a deficit position, a line item will be included in the FY budget to reduce the deficit by the required amount at a minimum. Additionally, in FY2024, management implemented a new budgeting software that will make it easier for management and governance to review fund balances during the budget process.

Heber City

Status of State Compliance Findings and Recommendations – prior year

For the Year Ended June 30, 2023

Prior year compliance findings

2022-002 Cash management – deposits not made within 3 days (significant deficiency)

Criteria: UCA 51-4-2 (a) states: “Each officer shall deposit all public funds daily, if practicable, but no later than once every three banking days.”

Condition: During our audit procedures, we sampled 5 cash receipts at year-end. It was noted that the 6/14/2022 deposit sampled contained cash receipts that were received a week prior on 6/7/22, and not within the 3 days required by the Utah Money Management Act.

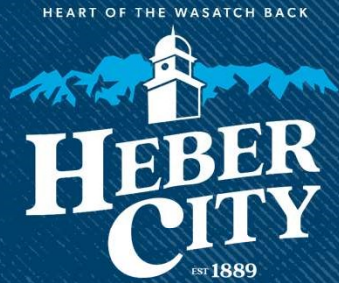
Status of finding: Finding appears to be addressed and corrected.

2022-003 Cash management – accounts missing from D&I report (significant deficiency)

Criteria: Utah Code 51-7-15(3) states: “A public treasurer shall file a written report with the council on or before January 31 and July 31 of each year. The report shall contain the information about the deposits and investments of that public treasurer during the preceding six months ending December 31 and June 30, respectively, that the council requires by rule.”

Condition: During our audit procedures, we noted that the City’s Deposit and Investment (D&I) report excluded 2 accounts.

Status of finding: Finding appears to be addressed and corrected.



TAP Arts Advisory Committee Report

February 6, 2024

Summary



- New Committee Formed
- Process & 2024 Annual Timeline Review w/
Staff
- Eligibility Criteria Review w/ Staff

*upporting and promoting recreational, cultural, arts and parks
facilities and programs to benefit the eber alley ommunity.*



TAP Arts Advisory Committee



Crista Bazoian
2024-27 Secretary

Jessica Christensen
2024-26 Member

Phil Jordan
2024-26 Co-chair

Missy Maughan
2024-27 Member

Farah Sanders
2024-27 Co-chair





Process Review w/ Staff

Reviewed and Confirmed

- Proposer & Project Eligibility
- Application & Required Documents
- Process & Timeline
- Deliverable to City Council



Eligibility Review w/ Staff



- Applicants are required to have a 501(c)(3) non-profit Federal and/or Utah State tax-exempt status to qualify for a grant. If an applicant (such as an individual artist) does not have such status, they are then recommended to partner with an organization that does.
- The location of the project takes place within Heber City limits
- Projects must be completed within a period of up to 2 years of the date of funding.
- Capital projects must be completed within 3 years of the date of funding.



Eligibility Review w/ Staff



- Projects must be matched by at least 25% funding.
- Grant awards will be distributed in two payments, 50% at the time of award and 50% at project completion and final reporting.
- All granted funds distributed to Tap Tax grantees shall be in the form of reimbursement of their qualified costs and expenditures associated with their project.
- Projects are required to announce and display that funding was provided by the Heber City TAP Tax Program.





2024 Process Timeline

January 11	Online Application OPEN
February 1	Public Workshop for this application process
March 11	Online Application CLOSE
March 12	TAP Arts Advisory Committee / City Staff Review START
April 24	Review ENDS / Committee Funding Recommendation SUBMISSION to City Council
May	City Council Review / Year 1 Award from 2023 TAP Funds / All applications notified of funding decisions
June	City Council Adoption of 2025 City Budget including allocation for Year 2 TAP Funds awarded in May, 2025

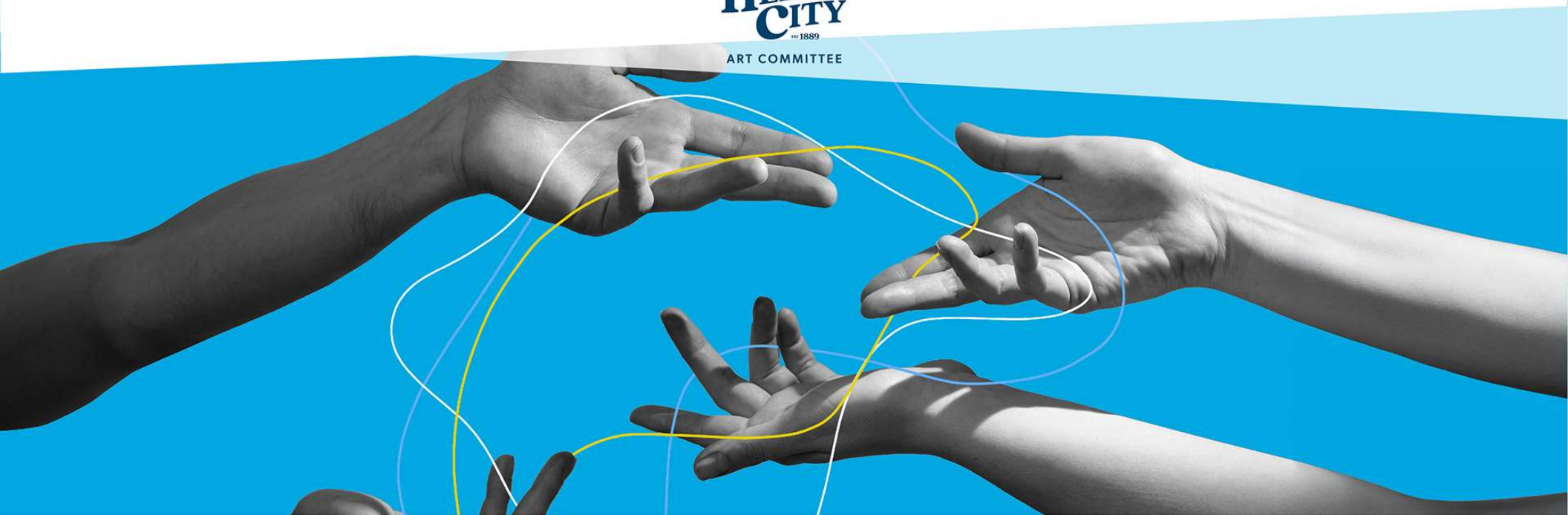


Criteria & Proposed Scoring



Evaluation Criteria	Weight	Score 0-5	Total
Quality of Proposed Project: Budget	X %	Y	= X x Y
Quality of Proposed Project: Timeline	X %	Y	= X x Y
Demonstrated Community Need	X %	Y	= X x Y
Benefits to the Community	X %	Y	= X x Y
History, Ability to Implement Project and Financial Considerations	X %	Y	= X x Y
Total	100 %		(sum) Max = 500





Learn How to Apply for TAP TAX Art Grant Money

Thursday February 1, 4:30-5:30 pm



COMMUNITY DEVELOPMENT

General Fund Tap Tax

TAP Tax Distribution

Heber City % 48.45%

Due to the delay in payments from the County, Heber City receives the June distribution in September and payment is recorded as A/R/deferred inflow.

FY Revenue Month	Distribution Month	County Distribution Amount	Heber City Allocation
January 2023			
February 2023	April 2023	3.77	1.83
March 2023	May 2023	11,454.01	5,549.47
April 2023	June 2023	80,355.10	38,932.05
May 2023	July 2023	95,039.10	46,046.44
June 2023	August 2023	117,754.06	57,051.84
July 2023	September 2023	99,895.62	48,399.43
August 2023	October 2023	98,873.37	47,904.15
September 2023	November 2023	105,753.55	51,237.59
October 2023	December 2023	84,357.81	40,871.36
November 2023	January 2024	-	-
December 2023	February 2024	-	-
Total:		693,488.86	335,995.35

VI. DISTRIBUTION METHODOLOGY

- A. The parties agree to the following distribution of TAP Tax Funds within 30 days of receipt by the Wasatch County Treasurer: Heber City 48.45%, Wasatch County 34.29%, and Midway City 17.26%.

Funded Projects:

- 1) Water Feature: \$100,000
- 2) Wasatch Vista Park (children's playground): \$70,000
- 3) Arts Grant Program: 10% of collections in FY '23
- 4) Band shell

Projected Remaining Amount ETD: \$130,000



Discussion



SWOT Analysis

Council Retreat 2024

SWOT ANALYSIS

STRENGTHS:

Court staff – I can't say it enough. They are great!

As a court we have been quick to incorporate improvements such as paperless filings, Online Dispute Resolution (ODR) and Deferred Traffic Prosecution (DTP). Our Court implemented a similar program earlier and it is more inclusive – it does not have the limitations imposed by the DTP.

The staff has great working relationships and works well as a team. Ours is the only court where the clerks have finished over 110 educational podcasts made available by the State.

The court did a good job transitioning to video court and has always worked well with "in person" court.

We have 3 different attorneys that are willing to assist as counsel for indigent parties, including one that speaks Spanish.

Wasatch County has, according to relatively current census data, 14% of the population is Hispanic or Latino. We are very fortunate to have a prosecutor, a judge, a defense counsel, and a bailiff that speak Spanish, and a local interpreter (State requires an interpreter other than a party) who is flexible and will to step in as needed, even on days when he is not scheduled.

OPPORTUNITIES:

We could use and are continuously on the lookout for newer technology to streamline our processes – from explaining to people that they need to review and fill out the Explanation of Rights form to paying their fines and completing treatment.

The Court considers itself responsible for customer service, and treats everyone who comes to the Court or clerks window with respect and patience (even if they don't seem to deserve it).	
<i>WEAKNESSES:</i> These seem to be similar to our threats. While our Spanish abilities are one of our court's strengths, the number of Spanish speakers in our community continues to grow, and the caseload generally has increased over 36% over the past 3 years. We are handling that increased caseload with the same staff we had 3 years ago. The past couple of months we have average 60-70 hearings per day, which makes for long days and tired staff. As mentioned by many others, it is a challenge to provide competitive wages when compared to cost of living in Wasatch County.	<i>THREATS:</i> Over the past 3 years, the number of cases we process has gone up by over 36%! We are handling that increased caseload with the same staff we had 3 years ago. The past couple of months we have average 60-70 hearings per day. We are contemplating an extra day per month on Fridays to handle appearances that do not require a prosecutor. We set aside one day per month for handling cases for Spanish speakers. Those days are getting longer and more challenging as we work to get them to understand their obligations under the law and per the judge's orders. Staff burnout. State intervention - We regularly get mandates from the State directing the Court regarding new things that need to be done and which distract us from handling our citizenry. Whether it be an audit of one kind or another, or directing that online training is required. Since this judge has been on the bench, the justice court has been required to provide defense lawyers to indigent parties, and then they added interpreters for non-native English speakers in criminal cases, and then expanded it to apply to small claims cases too. All the while the State takes their share of the revenue without contributing to the increasing costs. Non court related yet mandated meetings.



Heber City Council Staff Report

MEETING DATE: 2/6/2024
SUBJECT: Code of Conduct and Ethics Form and Training
RESPONSIBLE: Jeremy Cook
DEPARTMENT: Administrative
STRATEGIC RELEVANCE:

SUMMARY

Resolution 2012-07 adopted a code of conduct and ethics. The code of ethics indicates that it will be reviewed and signed in the first meeting in February of each year.

RECOMMENDATION

BACKGROUND

DISCUSSION

FISCAL IMPACT

CONCLUSION

ALTERNATIVES

1. Approve as proposed
 2. Approve as amended
 3. Continue
 4. Deny
-

POTENTIAL MOTIONS

Alternative 1 - Approval - Staff Recommended Option

I move to **approve** the item as presented, with the findings and conditions as presented in the conclusion above.

Alternative 2 - Approve as Amended

I move to **approve** the item as amended, as follows.

Alternative 3 - Continue

I move to **continue** the item to another meeting on , with direction to the applicant and/or Staff on information and / or changes needed to render a decision, as follows:

Alternative 4 - Denial

I move to **deny** the item with the following findings.

ACCOUNTABILITY

Department: Administrative
Staff member: Jeremy Cook, City Attorney

EXHIBITS

1. Resolution 2012-07 and Heber City Code of Conduct and Ethics

RESOLUTION NO. 2012-07

A RESOLUTION **ADOPTING** A CODE OF CONDUCT AND ETHICS FOR PUBLIC OFFICIALS OF HEBER CITY.

BE IT RESOLVED by the City Council of Heber City, Utah that the *Code of Conduct and Ethics for Public Officials*, as a matter of policy, is adopted as set forth in Exhibit "A":

This Resolution shall take effect and be in force from and after its adoption and publication.

ADOPTED and PASSED by the City Council of Heber City, Utah this 17th day of May, 2012, by the following vote:

	AYE	NAY
Council Member Robert L. Patterson	<u>X</u>	<u> </u>
Council Member Alan W. McDonald	<u>X</u>	<u> </u>
Council Member Benny Mergist	<u>X</u>	<u> </u>
Council Member Jeffery M. Bradshaw	<u>X</u>	<u> </u>
Council Member Erik Rowland	<u>X</u>	<u> </u>

APPROVED:


Mayor David R. Phillips

ATTEST:


RECORDER

CODE OF CONDUCT AND ETHICS FOR PUBLIC OFFICIALS (Mayor, City Council members, Commissions, Committees, Boards)

A. DECLARATION OF POLICY

It is the policy of the City of Heber to uphold, promote, and demand ethical conduct from its elected and appointed public officials. The citizens and businesses of Heber City are entitled to have fair, ethical, and accountable local government.

As members of the City Council, we recognize the importance of codifying and making known to the general public the ethical principles and laws that guide the work of elected officials and members of appointed boards, commissions, and committees (public officials). Public officials are to maintain the highest standards of personal integrity, truthfulness, and fairness in carrying out their public duties.

In order to fulfill this mission, the City of Heber hereby adopts a Code of Conduct and Ethics for public officials to assure public confidence in the integrity of local government and its effective and fair operation. This code describes the standards of behavior to which its leaders aspire. The constant and consistent theme through the conduct guidelines is “respect.” Public officials experience huge workloads and tremendous stress in making decisions that could impact thousands of lives. Despite these pressures, public officials are called upon to exhibit appropriate behavior at all times. These guidelines help public officials to do the right thing in even the most difficult situations. Public officials have the duty to conduct City affairs in a businesslike manner, assuring timely consideration of matters before them and thoughtful expeditious decision-making. These guidelines incorporating best practices among city governments can help guide public officials to contribute to this end.

Furthermore, the effective functioning of democratic government requires that public officials comply with both the letter and spirit of the laws and policies affecting the operations of government; that public officials be independent, impartial and fair in their judgment and actions; that public office be used for the public good, not for personal gain; and that public deliberations and processes be conducted openly, unless legally confidential, in an atmosphere of respect and civility.

B. GENERAL PRINCIPLES UNDERLYING THE CODE OF CONDUCT AND ETHICS

The stability and proper operation of a democratic representative government depends upon public confidence in the integrity of the government, and upon responsible exercise of the trust conferred by the people upon their public officials.

Governmental decisions and policy must be made and implemented through proper channels and processes of the government structure.

Public local government officials must be able to act in a manner that maintains their integrity and independence, yet is responsive to the interests and needs of those they represent.

Public local government officials must always remain aware that at various times they play different roles:

1. **As advocates**, who strive to advance the legitimate needs of their citizens,

2. **As legislators**, who balance the public interest and private rights in considering and enacting ordinances, orders, and resolutions, and

3. **As fair and impartial decision-makers**, when making quasi-judicial and administrative determinations.

Public local government officials must know how to distinguish among these roles, to determine when each role is appropriated, and to act accordingly.

Public local government officials must be aware of their obligations to conform their behavior to standards of ethical conduct that warrant the trust of their constituents. Each official must find within his/her own conscience the touchstone by which to determine what conduct is appropriate.

C. APPLICABLE LAWS AND POLICIES

1. Compliance with Law

a. Public officials should take care to obey all laws that apply to their official actions as public officials. Public officials should be guided by the spirit as well as the letter of the law in whatever they do to give their best judgment.

b. At the same time, public officials should feel free to assert policy positions and opinions without fear of reprisal from fellow official members or citizens. To assert that a public official is behaving unethically based upon a disagreement with other officials on a question of policy (and not on the public officials ethical behavior) is unfair, dishonest, irresponsible, and itself unethical.

c. The commissions, committees, boards, and city's governing body shall endeavor to keep itself up-to-date, through its attorney or other sources, of new or on-going legal or ethical quandaries or difficulties that they may face in their official positions.

d. Public officials shall comply with the laws of the nation, the State of Utah, and the City of Heber in the performance of their public duties to foster respect for all government. These laws include, but are not limited to: the United States and Utah Constitutions and any City Codes, resolutions, ordinances and policies; laws pertaining to conflicts of interest, contracts with public entities, election campaigns, financial disclosures, and employer responsibilities and open processes of government.

2. Responsibility of Public Office

a. Recognizing that stewardship of the public interest must be their primary concern, public officials shall work for the common good of the people of Heber City, avoiding actions that are inconsistent with the best interests of the city, and not for any private or personal interest; and they will endeavor to treat all persons, claims, and transactions in a fair and equitable manner.

b. Public officials should act with integrity and with independence from improper influence as they exercise the functions of their offices.

c. Public officials should not place themselves in situations where their honesty and integrity may be questioned, should not behave improperly and should, on all occasions, avoid the appearance of such behavior.

d. City Council members and the Mayor - Because of the value of the independent advice of boards, committees or commissions to the public decision-making process, members of the City Council and Mayor shall, except when the City Council or Mayor is a member of the that public body, limit their participation in the proceedings of such subordinate public bodies to the communication of requested information and providing factual information relevant to the discussion at hand, and shall not otherwise attempt to unduly use their position to influence the deliberations or outcomes of the proceedings.

e. Public Officials should use their best independent judgment to pursue the common good as they see it, presenting their opinions to all in a reasonable, forthright, consistent manner. They should be self-governing and not subject to improper influence, while at the same time being able to consider the opinions and ideas of others. At the same time, public officials should recognize that they are part of a larger group and should act accordingly. They should respect their office and not behave in ways that reflect badly on it. They should treat other public officials and the public with respect, and should honor the opinions of others even when they disagree. They should recognize that they are not generally authorized to act on behalf of the board, commission, committee, or council, since the board, commission, committee or council must take official action as a body.

3. Impropriety

a. Public officials should avoid impropriety in the exercise of their official duties. Their official actions should be above reproach.

b. A public official is considered to be acting with impropriety if a reasonable person who was made aware of the totality of the circumstance surrounding the public official's action would conclude that it was more likely than not that the behavior did not benefit someone in the public official's position.

c. If a public official concludes that his/her actions, while legal and ethical, may be misunderstood, he/she may seek the advice of the City Attorney. He/she may also state on the record the facts of the situation and the steps taken to resolve it.

4. Performance of Duties

a. Public officials shall perform their duties in accordance with the processes and rules of order established by the State, City Council, boards, commissions, and committees, governing the deliberation of public policy issues, meaningful involvement of the public, and implementation of policy decisions of the City Council by City staff.

b. Public officials shall be loyal to the political objectives expressed by the electorate and the programs developed to attain those objectives.

c. Public Officials of local governing boards should be faithful in the performance of the duties of their offices. They should act as the especially responsible citizens whom others can trust and respect. Public officials should be faithful in their attendance at meetings and in their preparation for those meetings. They should carefully analyze all credible information that is provided to them or which they obtained from outside sources.

d. Public officials shall publicly share with the body substantive information that is relevant to a matter under consideration by the council, boards, commissions, and committees, which they may have received from sources outside the public decision-making process.

e. Public officials should be accountable to the public for their actions and the manner in which they carry out their responsibilities, and should cooperate fully and honestly with the scrutiny appropriate to their particular office.

f. As a group of citizens to whom much has been entrusted, the board should demand full accountability from those over whom it has authority. The board should set a good example for others in the community, keeping in mind that trust and respect must continually be earned.

g. All public officials should be willing to bear their fair share of the governing board's workload. To the extent appropriate, they should be willing to put the City's interests ahead of their own.

5. Conduct of Public Meetings

a. Public officials of local governing boards should conduct the affairs of their meetings in an open and public manner. They should comply with all applicable laws of governing open meetings and public records, recognizing that doing so is an important way to be worthy of the public's trust. This includes being sensitive to those matters recognized by law.

b. The public officials should remember when meeting that they are conducting the public's business. They should also remember that the records of their local government belong to the public and not to them or their employees or staff. They should make clear that a climate of openness is to be maintained at all times in their government units.

c. In order to ensure strict compliance with the laws governing openness, governing public officials should strive to be open.

d. They should prohibit unjustified delay in fulfilling public records requests.

e. They should take deliberate steps before they go into closed session for any reason, to ensure that the closed session will be lawful.

f. Public officials shall inform themselves of public issues, listen courteously and attentively to public discussions before the body and focus on the business at hand.

g. Officials shall refrain from interrupting other speakers, making personal comments not relevant to the business of the body, or otherwise interfere with the orderly conduct of meetings.

h. Appropriate City staff should be involved when public officials meet in their regular meetings and with officials from other agencies and jurisdictions to ensure proper staff support and to keep staff informed.

6. Procedures of Public Meetings

a. During public meetings, public officials shall assist in preserving order and decorum and shall neither by conversation or otherwise delay or interrupt the proceedings nor refuse to obey the orders of the presiding officer or the rules of the city council.

b. A public official desiring to speak shall address the chair and, upon recognition by the presiding officer, shall confine discussion to the question under debate, avoid discussion of personalities and indecorous language, and refrain from personal attacks and verbal abuse.

c. A public official, once recognized, shall not be interrupted while speaking unless called to order by the presiding officer, unless a point of order is raised by another council member, or unless the speaker chooses to yield to questions from another member. If a public official member is called to order while speaking, that member shall cease speaking immediately until the question of order is determined. If ruled to be in order, the member shall be permitted to proceed. If ruled to be not in order, the member shall remain silent or make additional remarks so as to comply with rules of the city council.

d. Public officials shall confine their questions to the particular matters before the assembly and in debate shall confine their remarks to the issues before the body.

e. When there is more than one speaker on the same subject, the public official will delay their comments until after all speakers on the subject have been heard.

f. The City Manager and any other appointed, administrative level official shall be entitled at all times to any privilege of the floor for the purpose of speaking upon any question that pertains to their duties, responsibilities and authority.

7. Public Participation in Public Meetings

a. Any resident or interested party desiring to address the body shall be first recognized by the chair. She/he shall then step to the floor microphone and state her/his name and address in an audible tone for the City's record. Remarks shall be limited to the question under discussion.

b. The purpose of addressing the public officials body is to communicate formally with the regarding matters that relate to the public officials business or citizens' concerns within the subject matter jurisdiction of the public officials. Persons addressing the public officials' body on an agenda item shall confine their remarks to the matter under consideration by the public officials' body.

c. Members of the public may address the public officials' body during public comments and/or before consideration of any agenda item; however, no person shall address the public officials' body without first being recognized by the Mayor or chair. Any

person wishing to speak, during an agenda item, must wait until the chair calls for the particular agenda item.

d. Each person addressing the public officials' body shall do so in an orderly manner and shall not engage in conduct that disrupts, disturbs, or otherwise impedes the orderly conduct of the meeting. Any person, who so disrupts the meeting shall, at the discretion of the Mayor or a majority of the public body members, be subject to removal from that meeting.

e. Members of the audience shall not engage in disorderly or boisterous conduct, including the utterance of loud, threatening, or abusive language; clapping; whistling; stamping; or other acts that disturb, disrupt, impede, or otherwise render the orderly conduct of the public meeting unfeasible.

f. A member of the audience engaging in such conduct shall, at the discretion of the Mayor or a majority of the public officials' body, be subject to removal from that meeting.

8. Conduct of Public Officials in Open Public or Private Meetings and Using the Social Media Network

a. The professional and personal conduct of public officials must be above reproach and avoid even the appearance of impropriety.

b. Public officials shall refrain from abusive conduct, unsubstantiated personal charges or verbal attacks upon the character or motives of other members of the City Council, boards, commissions, committees, the staff or the public.

c. Public officials shall refrain from interrupting other speakers, making personal comments not relevant to the business of the body; or otherwise interfering with the orderly conduct of the meetings.

d. Public officials shall commit to practice civility and decorum in discussions and debates.

e. Public officials shall commit to honoring the role of the chair in maintaining order, keeping discussion on track, and focusing discussion on agenda items at hand.

f. Public officials shall avoid arguments with the public.

g. Public officials shall not engage in personal attacks of any kind under any circumstance.

h. Public officials should treat each other and the public with respect, regardless of their race, age, religion, gender, sexual orientation, or disability, and should not unlawfully discriminate against any person or group of persons.

D. PUBLIC OFFICIALS ACKNOWLEDGMENT AND COMMITMENT TO THE CODE OF CONDUCT AND ETHICS

1. We respect the individual
2. I treat my fellow public officials, staff and the public with patience, courtesy and civility, even when we disagree on what is best for the community.
3. I promote consistency, equity and non-discrimination in public agency decision-making.
4. I respect the dignity and privacy of individuals and organizations.
5. I recognize the worth of individual members and appreciate their individual talents, perspectives and contributions.
6. I will conduct my public affairs with honesty, integrity, fairness, respect for others and will not slander or defame others.
7. I will avoid and discourage conduct that is divisive, harmful or not in the best interest of other individuals.
 - a. We Honor the Public Trust as Stewards of the Community
 1. I am a steward of the public trust.
 2. I understand that the community expects me to serve with dignity and respect for my office, as well as to be an agent of the democratic process in the public interest.
 3. I avoid actions that might cause the public to question my independent judgment.
 4. I do not use my office or the resources of the City for personal or political gain.
 5. I am a prudent steward of public resources and actively consider the impact of my decisions on the financial and social stability of the City, its citizens and businesses.
 6. I am prepared to make decisions in the public's best interest based on the merits and substance of the matter at hand, and to take responsibility for my actions, whether those decisions are popular or not.
 - b. We Maintain Open and Honest Communication
 1. I am honest and forthright with my fellow officials, the public and others, even when it is uncomfortable to do so.
 2. I encourage diverse public engagement in our decision-making processes and support the public's right to know.

We, the public officials of Heber City, hold ourselves as individuals and the City of Heber organization as a whole, accountable for acting consistently with the Code of Conduct and Ethics.

I affirm that I have read and understand the city of Heber Code of Conduct and Ethics and agree to uphold it.

Signature: _____ Date: _____

1. Implementation

a. The Code of Conduct and Ethics for the public officials of the City of Heber is intended to be self-enforcing. It therefore becomes most effective when officials are thoroughly familiar with it and embraces its provisions. For this reason ethical standards shall be included in the regular orientation for candidates for the City Council, applicants to boards, committees, and commissions, newly elected officials, and appointed members of boards, commissions and committees.

b. Public Officials entering office or appointment will receive a statement certifying they have read and understand the City of Heber Code of Conduct and Ethics. Signing the statement is optional. All public officials are subject to the provisions of the Code of Conduct and Ethics whether or not the statement is signed.

c. All Public officials (Mayor, City Council, boards, commissions, and committees) shall review and sign this personal code of conduct and ethics at the first meeting in February of each year when the Public Officials meet, as a symbol of each Public Official's continuing commitment to abide by the principles of this code. This code shall be evaluated by the city council in the first meeting of January of every even year.

2. Compliance and Enforcement

a. The City of Heber Code of Conduct and Ethics expresses standards of ethical conduct expected for the public officials of the Mayor, City Council, boards, commissions, and committed. Officials themselves have the primary responsibility to assure that ethical standards are understood and met, and that the public can continue to have full confidence in the integrity of government.

b. The Chairs of commissions, boards, committees and the Mayor have the additional responsibility to intervene when actions of members that appear to be in violation of the Code of Conduct and Ethics are brought to their attention.

c. All City Council members shall have a responsibility to intervene when actions of another City Council member appear to be in violation of the Code of Conduct and Ethics are brought to their attention.

d. A person making a complaint against a public official of violation of this policy shall submit the complaint in writing, to the City Manager or Mayor who will determine legal sufficiency. The written complaint must be based substantially upon the personal knowledge of the complaint and signed under oath or affirmation by the person filing the complaint. The City Manager or Mayor when receiving a complaint shall report all complaints to the City Council regardless of determination.

e. The Mayor or City Manager shall investigate the complaint and shall give the person the opportunity to be heard. A written report of the findings and the recommendations of the Mayor or City Manager shall be filed with the governing body.

f. The governing body shall make a final determination upon a majority vote of all members, except or any member which is the subject of a complaint. No hearing shall be bound by the strict rule of evidence, and the standard of proof required for a final determination of violation of this policy shall be a preponderance of evidence. At the discretion of the City Council, sanction may include requesting a formal public apology reprimands or censure, or removal or exclusion from leadership positions, governing board, and other official positions or duties that do not conflict with Utah Statutes.

g. A violation of this code of conduct and ethics shall not be considered a basis for challenging the validity of a City Council, board, committee, or commission decision.



Monthly Development Report

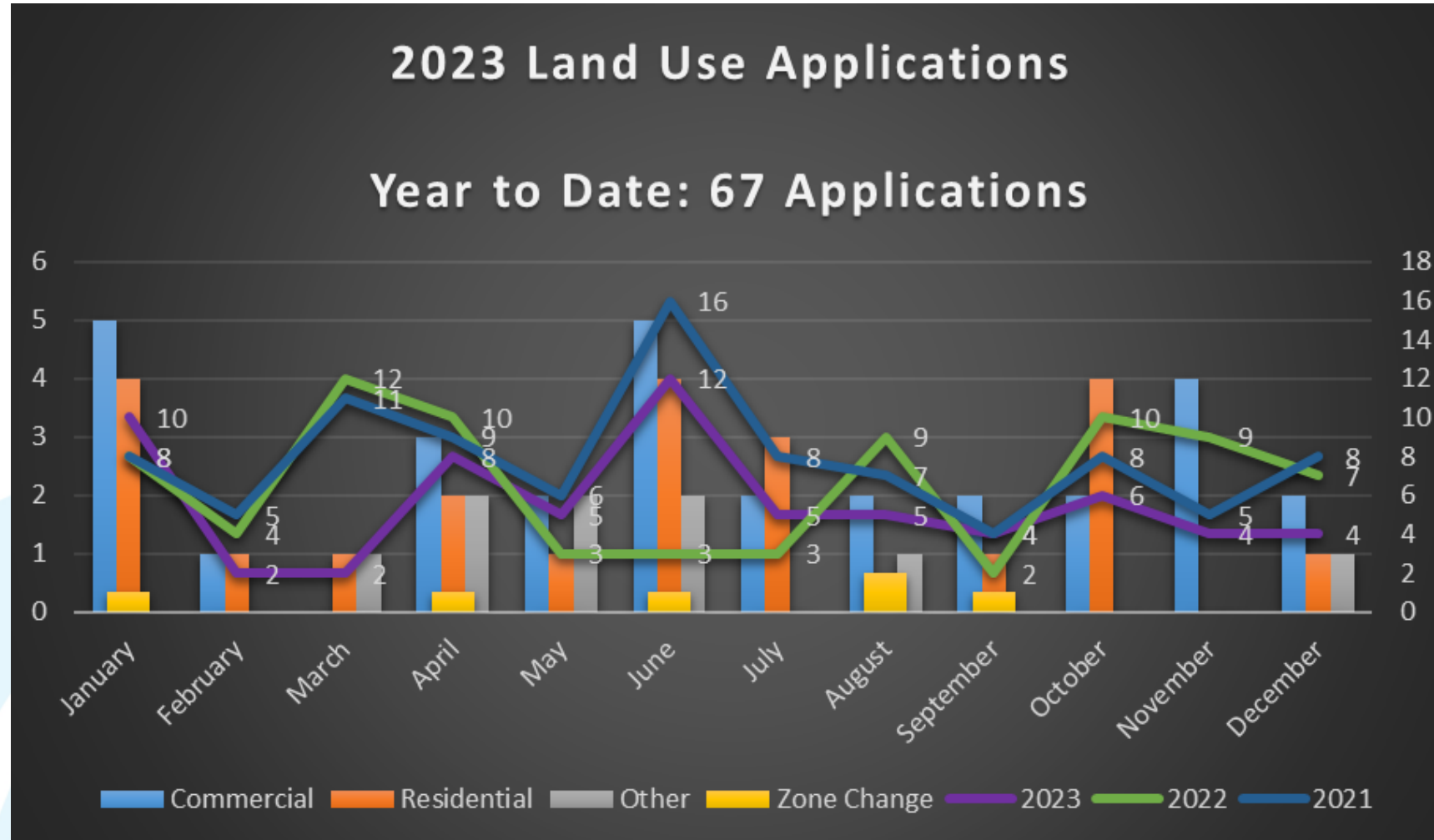
February 2024

Date: 2/6/24



2023 In Review

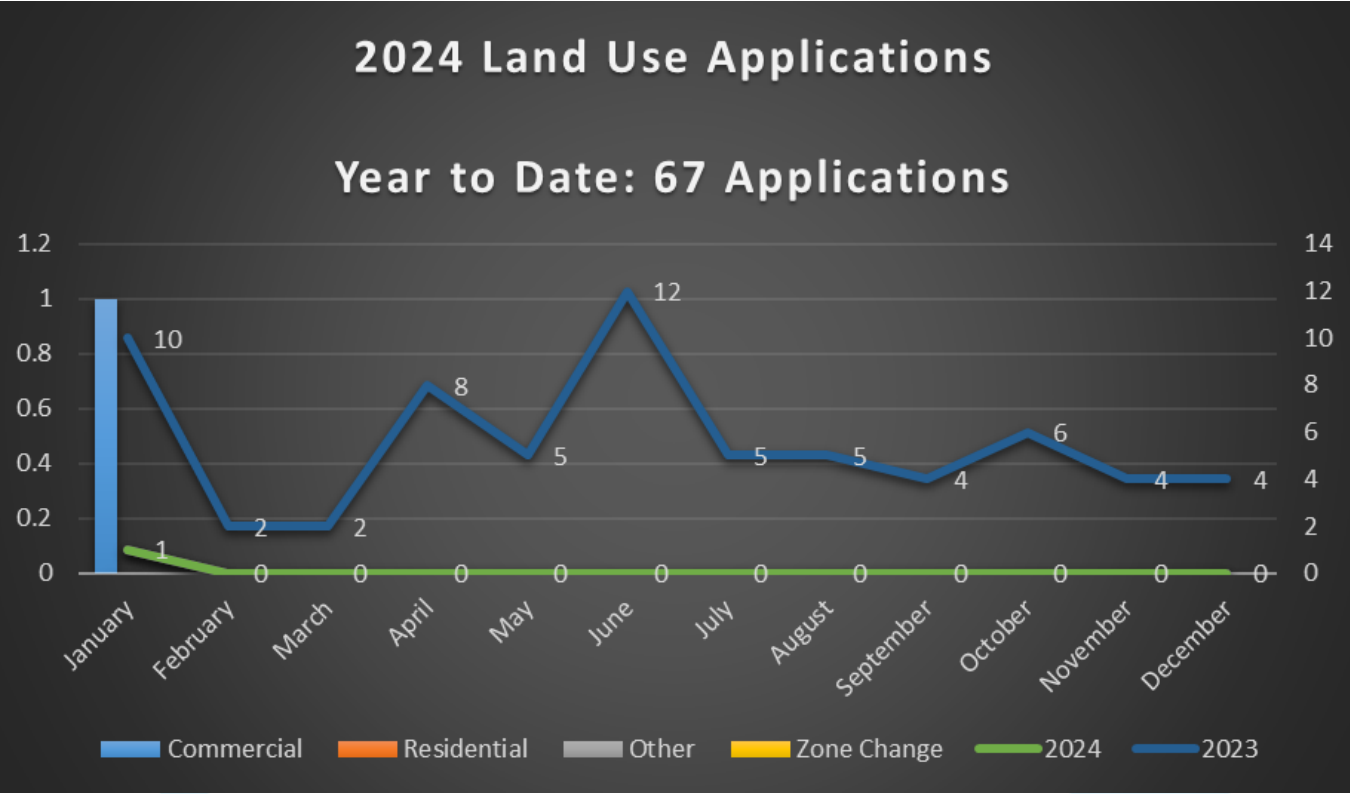
Applications by Year		
2023	2022	2021
67	80	95



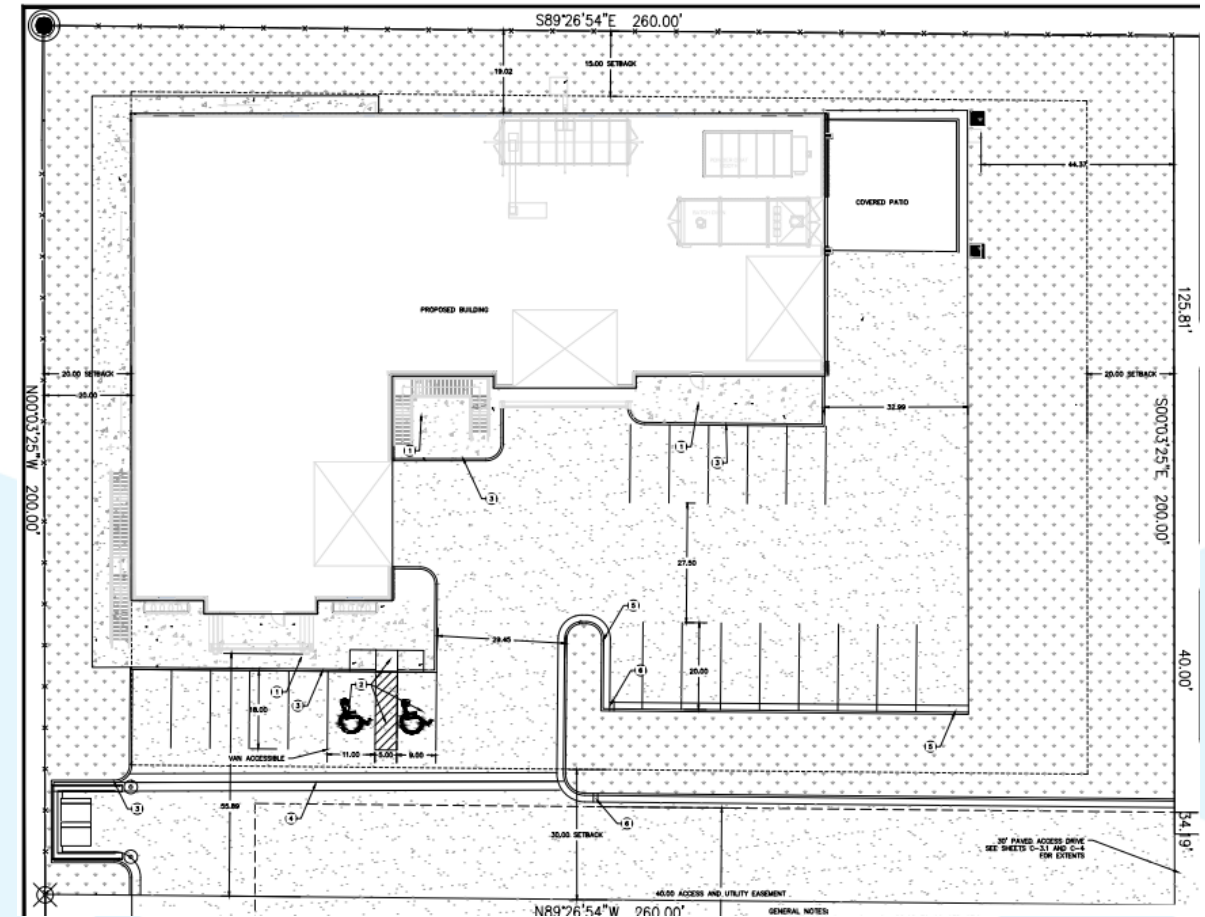
New Applications

- Concept – 0
- Site Plan/Amendments – 1
- Subdivision Concept – 0
- Preliminary Plat – 0
- Final Plat – 0
- Zone Change/MDA – 0
- Other (Plat Amendments, Lot Line Adjustments, etc.) – 0

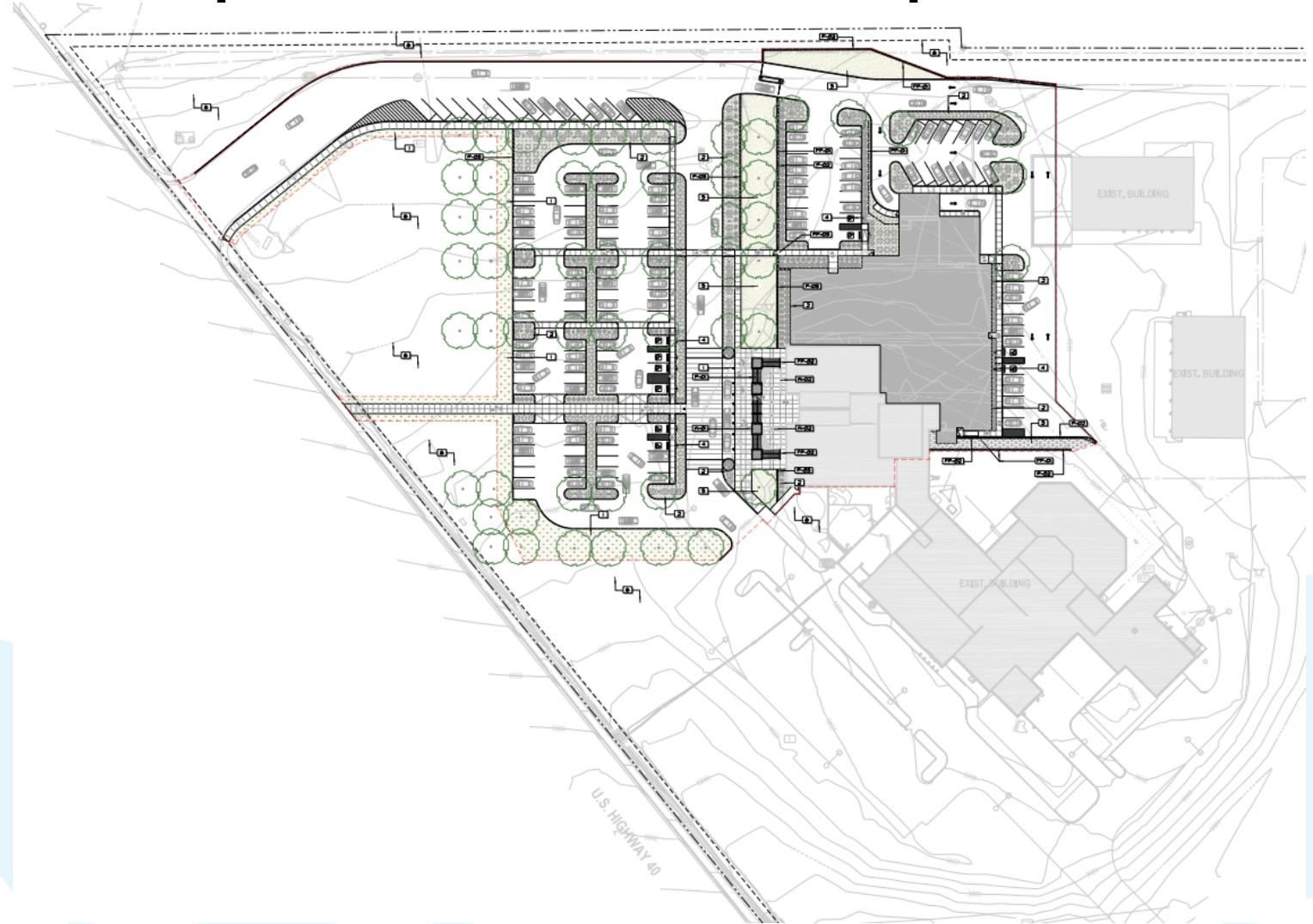
Applications Year to Date			
2024	2023	2022	2021
1	10	8	8



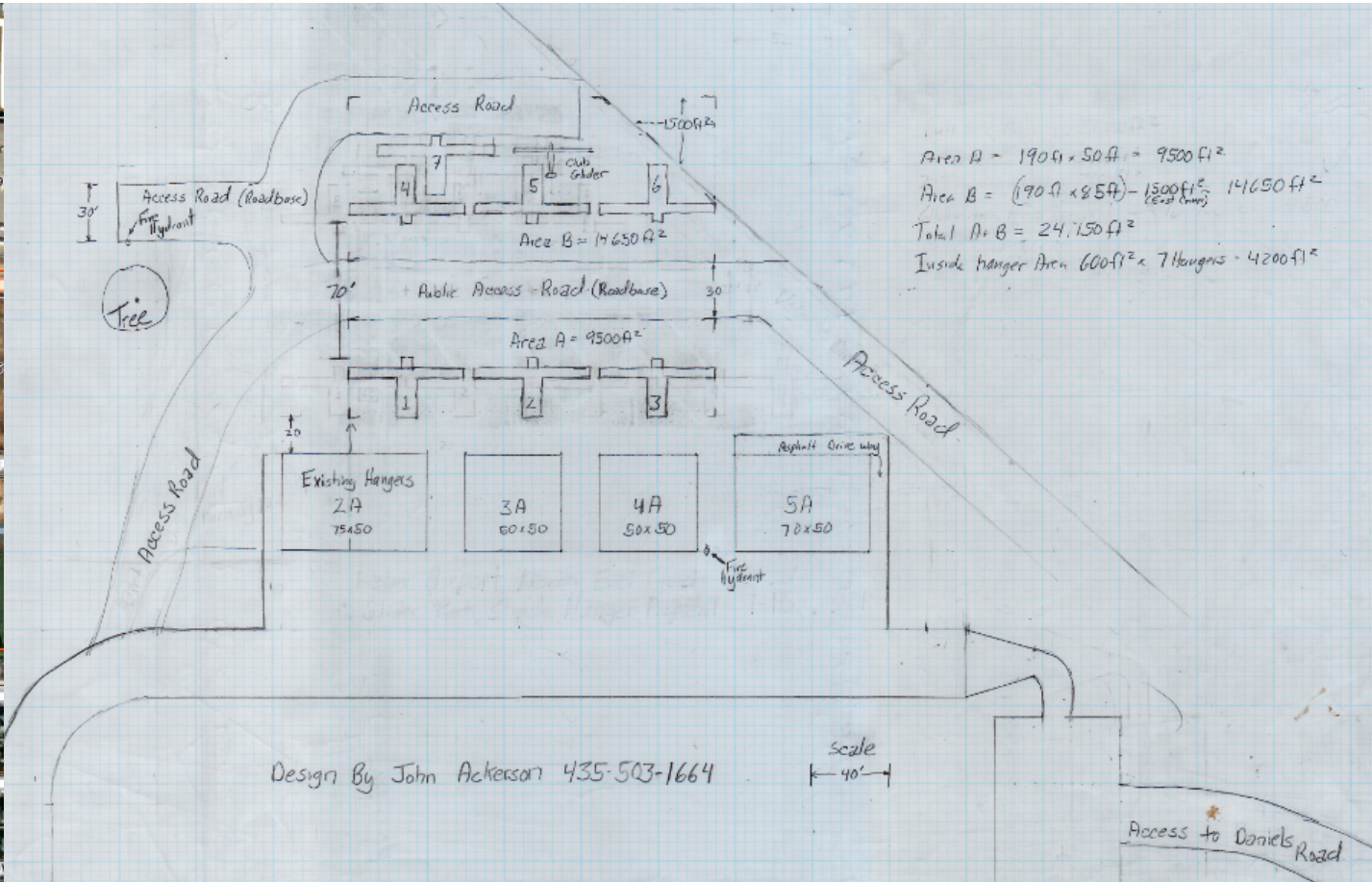
Site Plan Amendment – RC Ornamental



Commercial Concept – WC Court Expansion



Commercial Concept – Airport Glider Park



Honorable Mentions

- Cottage on Industrial
- Sawmill 2B Plat Amendment

PC Agendas

12/12/24

- Site Plan and CUP – American Eagle Ready Mix
- Site Plan Amd – Karl Malone Honda

12/26/24

- Canceled

1/9/24

- Discuss BMP Zone Uses

1/23/24

- BMP Zone Public Hearing
- Fitzgerald Preliminary Plat



Heber City Council Staff Report

MEETING DATE: 2/6/2024

SUBJECT: Public Hearing: Ordinance 2024-03 Adopting the Heber City Facilities Master Plan including the Heber City Capital Facilities Plans, Impact Fee Facility Plans, and Impact Fee Analyses and Council Consideration to Adopt

RESPONSIBLE: Russ Funk, Bart Mumford

DEPARTMENT: Engineering

STRATEGIC RELEVANCE: Community and Economic Development
Infrastructure Sustainability

SUMMARY

The purpose of this item is to present the proposed 2023 updates to the Heber City Culinary Water, Sanitary Sewer, Streets, Storm Drain, and Pressurized Irrigation Master Plans, including updated Impact Fee Facility Plans, and Impact Fee Analyses (Master Plan). Also to receive input from the Council, hold a Public Hearing, and seek adoption of the plan, including the proposed impact fee enactment language, by Ordinance.

RECOMMENDATION

1. Hold a Public Hearing
 2. Provide input to staff as necessary
 2. Approve Ordinance 2024-03 adopting the Plans and Fees as proposed.
-

BACKGROUND

The last version of the Master Plan was completed and adopted in 2018 and updates are generally completed every 5 years. The City contracted with Horrocks Engineers in 2022 to provide an update to the plan, and staff has been working with Horrocks for over a year on the update.

The intent of the Master Plan is to help ensure that infrastructure is planned and built to meet the overall needs of the community and not limited to the needs of individual developments. Improvements that are over-sized to meet a larger community or system need are called "System Improvements". If the need for a System Improvement is generated by future growth in order to maintain the City's established Level of Service (LOS), then the project should be paid for (at least in

part) by future growth and development. The mechanism to charge future growth for their proportionate cost of the improvements is by assessing Impact Fees. Impact Fees cannot be used to cure an existing deficiency or for projects that are not identified in the Master Plan.

A presentation summarizing the plan highlights is attached to this staff report. A table summarizing the existing and proposed impact fees is included below:

		Jan 2024	Recommended	
Facility		Impact Fee	Impact Fee	Units
Culinary Water	Residential	\$2,826	\$2,778	ERU*
	Non-Residential	\$2,826	\$2,778	0.75 -inch
		\$5,024	\$4,939	1.0 - inch
		\$11,304	\$11,113	1.5 - inch
		\$20,095	\$19,757	2.0 - inch
		\$45,215	\$44,453	3.0 - inch
		\$80,383	\$79,028	4.0 - inch
Sewer		\$2,207	\$1,417	ERU*
Streets	Single Family	\$2,153	\$4,070	Dwelling Unit
	Multi Family	\$1,252	\$2,304	Dwelling Unit
	Non-Residential**	\$126	\$269	Trip
Pressurized Irrigation	Residential	\$1,131	\$844	ERU*
	Non-Residential	\$0.16	\$0.12	Irrigated SF
Total per ERU (typical)		\$8,317	\$9,110	ERU*

DISCUSSION

During the 2024 Council Retreat there was a discussion about the new Envision Central Heber Plan and how street improvements along 100 East and 100 West are critical to that plan. The proposed Master Plan for streets follows the historical plan of Collector Roads on 100 East and 100 West. This use is not compatible with the new vision for the downtown area. As mentioned during the retreat, we will need to revisit the 100 East and 100 West Collector road recommendation and look at alternate ways to provide the needed capacity. However, since we have the draft plan completed and want to get the new proposed impact fees in place as soon as possible, our recommendation is to move forward with adoption of the plan for now, and pursue an update to the street portion of the plan.

In addition, the scope of the existing plan did not specifically look at Main Street or the intersections of city roads with Main Street. Staff recommends including this analysis into the proposed update.

Another item to consider is whether or not the City Council wants to continue the 45% subsidy of non-residential Street Impact Fees. In the past, the City has elected to subsidize street impact fees to make it easier for commercial businesses to develop. This was done as an incentive since these businesses generate tax revenue for the City. If the decision is made to continue the non-residential subsidy, it should be understood that the City will actually need to fund the subsidy from another account and place it in a fund to ensure we have enough money to complete the projects in the plan.

FISCAL IMPACT

The total cost of all projects identified in the plan to be constructed within the 20-year planning period is roughly \$136 Million. The portion of these improvements that are impact fee eligible is just over \$61 Million. The remaining funds for the projects will be made up of developer contributions, City operating funds, and grants where applicable. The operating portion will be roughly \$13.5 Million.

CONCLUSION

Although an amendment to the streets portion of the Master Plan is proposed, it is recommended to approve the current version of the entire Master Plan as presented including the Impact Fee Enactment Ordinance. Staff will then move forward with an amendment as directed by Council.

Per the requirements of Section 11-36a-401 (2) of Utah State Code, the new impact fees will become effective 90 days after the impact fee enactment is approved. If approved during the February 6th meeting, the new impact fees will go into effect on May 6, 2024.

ALTERNATIVES

1. Approve as proposed
2. Approve as amended
3. Continue
4. Deny

POTENTIAL MOTIONS

Alternative 1 - Approval - Staff Recommended Option

I move to **approve** the item as presented, with the findings and conditions as presented in the conclusion above.

Alternative 2 - Approve as Amended

I move to **approve** the item as amended, as follows.

Alternative 3 - Continue

I move to **continue** the item to another meeting on , with direction to the applicant and/or Staff on information and / or changes needed to render a decision, as follows:

Alternative 4 - Denial

I move to **deny** the item with the following findings.

ACCOUNTABILITY

Department: Engineering
Staff member: Russ Funk, City Engineer

EXHIBITS

1. Master Plan Overview Presentation
2. Master Plan IFFP IFA Document
3. Master Plan Appendices
4. Ordinance 2024-03 IF Enactment

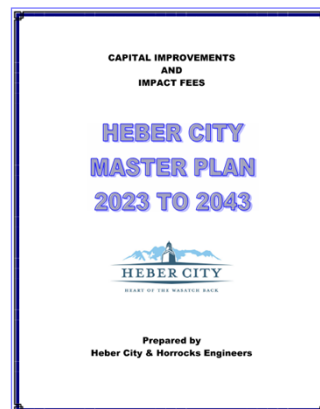
Heber City Facilities Master Plan Update 2023 - 2043

- GENERAL UPDATE FOR CULINARY WATER, SEWER, STREETS, STORM DRAIN, AND PRESSURIZED IRRIGATION
- CITY COUNCIL WORK MEETING - FEBRUARY 6, 2024



- Plan for future needs
- Maintain quality level of service
- Provide equitable funding mechanisms

Master Plan – Capital Facilities Plan – Impact Fee Analysis

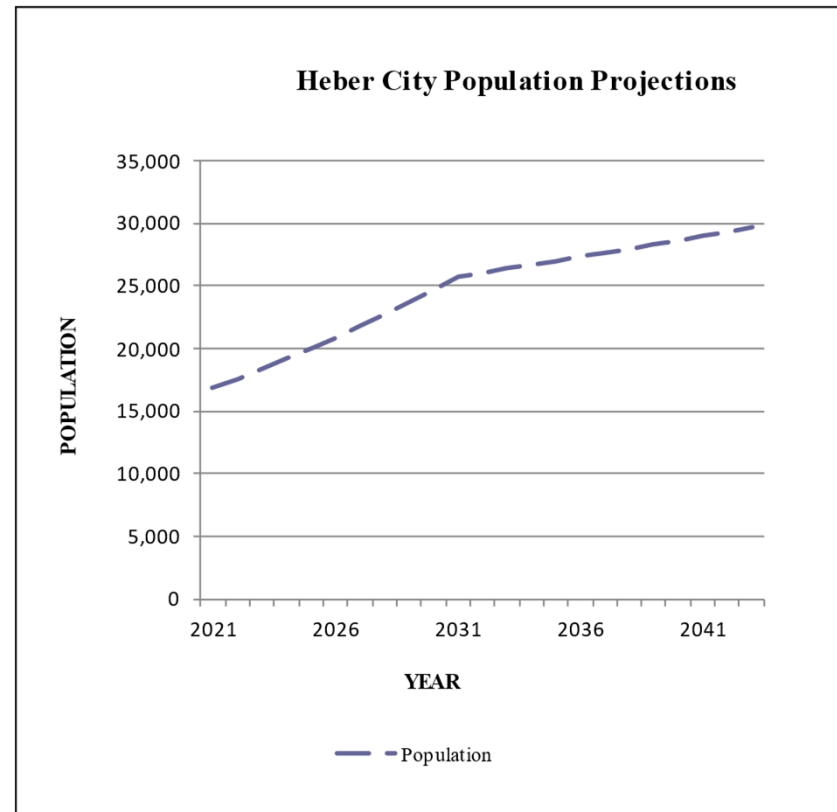


Presentation

- Changes between 2018 and 2023 Facility Master Plans
 - Population / Land Use
 - Water System
 - Sewer System
 - Street System
 - Storm Drain System
 - Pressurized Irrigation System
 - Improvement Costs
 - Impact Fee Summary
 - Questions?

Population Projection

- Heber City continues to experience high growth
- Used higher than State growth projections
- Growth rate 4.33% to 2031, reducing to 1.19% to 2043
- 2023 Pop 18,347
- 2043 Pop 29,682
- Excludes North Village areas



Land Use Projection

- Ultimate population based on land use is 36,353
- 2043 population of 29,682 is 82% of ultimate
- Multi family units estimated to make up 46% of new growth
- Study area excludes north of Coyote Ln (N. Village/Sorensen)
- Study area includes potential annexations (HVSSD South)

6



Culinary Water

2017 - 2040 Prior Master Plan

- 5,800 to 9,666 ERUs w/o RedL
- Indoor Use: 400 gpd/ERU
- Outdoor Use: 437 gpd/ERU
- Avg Use: 3.16 to 4.71 mgd
- Peak Day Use w/PI: 6.32 to 9.42 mgd
- Sources Good to 2040 w/PI
- Storage Good to 2040 w/PI
- Indoor Wtr Rights: 0.43 af
- Outdoor Wtr Rights: 3.0 af
- Impact Fee + Infl: \$2,826/ERU

2023 - 2043 Proposed Master Plan

- 7,090 to 11,188 ERUs w/o RedL
- Indoor Use: No Change (State Reduction)
- Outdoor Use: No Change
- Avg Use: 3.57 to 5.21 mgd
- Peak Day Use w/PI: 6.80 to 10.08 mgd
- Source Good to 2028 w/PI (State Reduction)
- Storage Good to 2033 w/PI (State Reduction)
- Indoor Wtr Rights: No Change
- Outdoor Wtr Rights: No Change
- Impact Fee: \$2,778/ERU

Future Water System

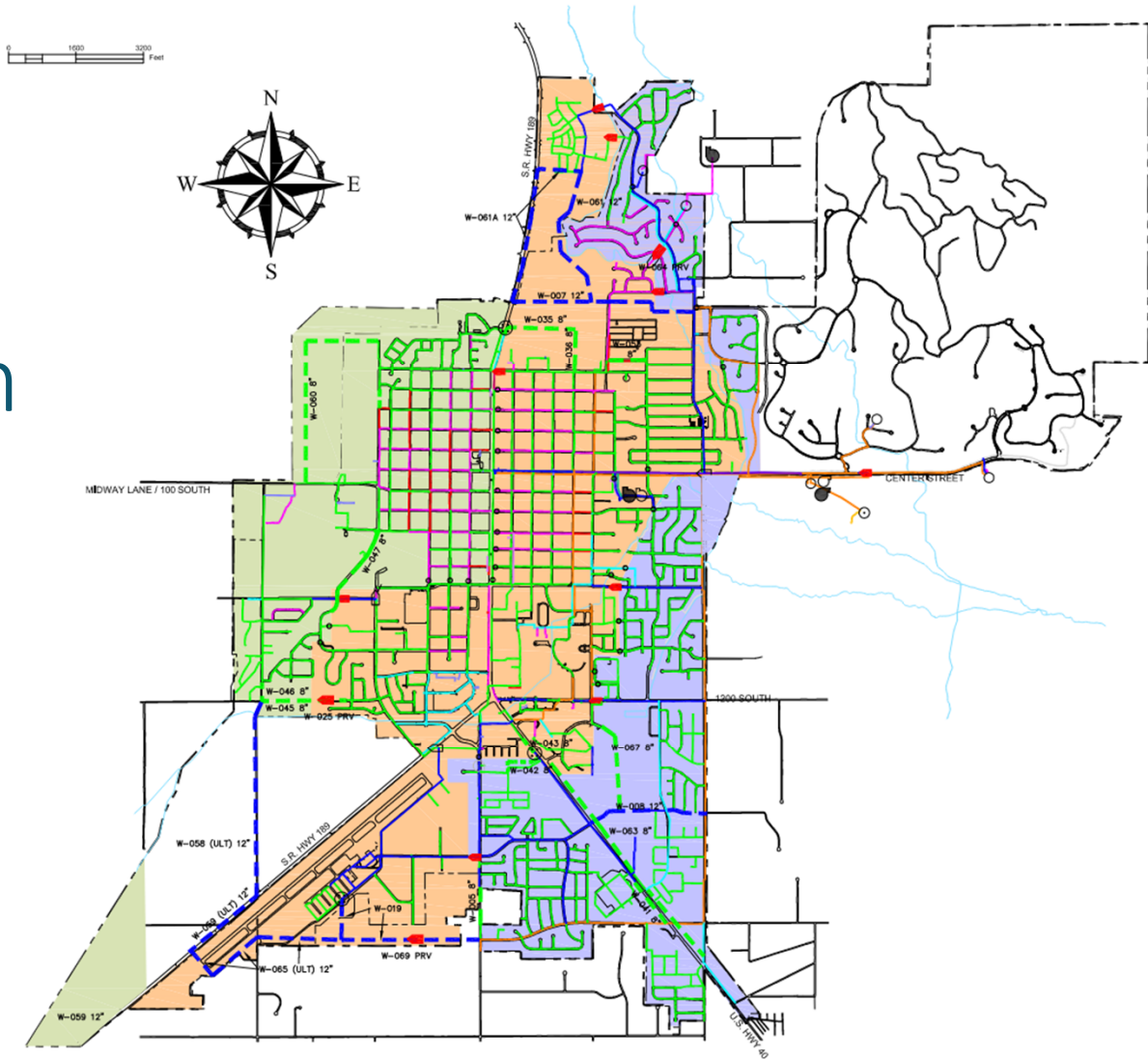


FIGURE 4-1
HEBER CITY
FUTURE CULINARY
WATER SYSTEM

- ULTIMATE BUILDOUT BOUNDARY
- HEBER CITY BOUNDARY
- EXISTING ROADS
- ACTIVE PRV
- INACTIVE PRV
- WELL PUMP
- ACTIVE BOOSTER PUMP
- INACTIVE BOOSTER PUMP
- SPRING
- TANK
- CLOSED VALVES

EXISTING WATER LINES

PIPE SIZE (inches)	PIPE COLOR
4	Green
6	Blue
8	Orange
10	Yellow
12	Red
16	Light Green
18	Light Blue
20	Light Orange

FUTURE WATER LINES

PIPE SIZE (inches)	PIPE COLOR
8	Green
10	Blue
12	Orange
●	FUTURE PRV
○	FUTURE CLOSED VALVES

FUTURE TANK AND SOURCE LOCATION TO BE DETERMINED

WATER ZONES

ZONE NAME	ZONE COLOR
-----------	------------

EAST ZONE (LINDSAY HGL 5960)
MCNAUGHTON (HGL 5890)
WEST ZONE (BROADHEAD HGL 5735)

FOR EXISTING REVISIONS, SEE
OTHER MAP (42)

Water Project Costs

ULT	CIP #	Recommended Improvements	Size (in)	Total Cost	Funding Proportionate Share Analysis							
					Operating		Developer		Other ¹		Impact Fee	
					%	\$	%	\$	%	\$	%	\$
	W-005	Daniel Road - 2200 S to 2400 S (8")	8	\$222,712	0%	\$0	0%	\$0	0%	\$0	100%	\$222,712
	W-007	East Bypass - US 40 to Mill Rd (12")	12	\$1,560,004	0%	\$0	59%	\$917,283	0%	\$0	41%	\$642,722
	W-008	1900 South - US 40 to Mill Rd (12")	12	\$725,292	0%	\$0	59%	\$426,472	0%	\$0	41%	\$298,821
	W-019	2400 South - Daniel Rd to Airport Rd (12")	12	\$1,606,502	0%	\$0	59%	\$944,623	0%	\$0	41%	\$661,879
	W-025	1250 South PRV		\$321,119	0%	\$0	0%	\$0	0%	\$0	100%	\$321,119
	W-027	New Source Development (2400 gpm)		\$4,491,059	0%	\$0	0%	\$0	100%	\$4,491,059	0%	\$0
	W-028	Master Plan Updates every 5 years (4 times)		\$240,000	0%	\$0	0%	\$0	0%	\$0	100%	\$240,000
	W-029	Aerial Digital Map Updates (4 times)		\$19,200	0%	\$0	0%	\$0	0%	\$0	100%	\$19,200
	W-035	700 North - 400 E to Main St. (8")	8	\$383,177	0%	\$0	100%	\$383,177	0%	\$0	0%	\$0
	W-036	400 East - 700 N to 500 North (8")	8	\$456,066	0%	\$0	100%	\$456,066	0%	\$0	0%	\$0
	W-041	US 40 - 2200 S to 2400 S (West) (8") *	8	\$311,390	0%	\$0	0%	\$0	0%	\$0	100%	\$311,390
	W-042	1500 South - Dusty Baker Ln (150 E) to US 40 (8")	8	\$239,627	0%	\$0	100%	\$239,627	0%	\$0	0%	\$0
	W-043	US 40 - 1300 S to 1700 S (West) (8")	8	\$224,432	0%	\$0	100%	\$224,432	0%	\$0	0%	\$0
	W-045	1200 South - 850 W to 1200 W (8")	8	\$373,208	0%	\$0	100%	\$373,208	0%	\$0	0%	\$0
	W-046	1200 West - 1200 S to 1100 S (8")	8	\$351,206	0%	\$0	100%	\$351,206	0%	\$0	0%	\$0
	W-047	600 West - 450 S to 650 S (8")*	8	\$541,367	0%	\$0	0%	\$0	0%	\$0	100%	\$541,367
	W-053	550 North - 550 E to 750 E (8")	8	\$435,722	80%	\$348,578	0%	\$0	0%	\$0	20%	\$87,144
	W-054	Future Tank Storage (1.4 MG)		\$4,693,525	0%	\$0	0%	\$0	0%	\$0	100%	\$4,693,525
ULT	W-058	Southfield Rd- SR 189 to 1100 S	12	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
ULT	W-059	SR 189 - 2500 S to South Field Road (12")	12	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	W-060	500 North to Midway Lane (8")	8	\$887,627	0%	\$0	100%	\$887,627	0%	\$0	0%	\$0
	W-061	Hwy 40 or Ostler Pk Rd- 1600 N to 900 N (12")	12	\$1,010,537	0%	\$0	59%	\$594,196	0%	\$0	41%	\$416,341
	W-063	US 40 - 1500 S to 1200 E (East) (8")	8	\$958,973	0%	\$0	100%	\$958,973	0%	\$0	0%	\$0
	W-064	Valley Dr PRV		\$393,120	100%	\$393,120	0%	\$0	0%	\$0	0%	\$0
ULT	W-065	2400 South - 850 West to US 189 (12")	12	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	W-066	Heber City Public Works Facility Exp Ph 1		\$318,438	0%	\$0	0%	\$0	0%	\$0	100%	\$318,438
	W-067	600 East - 1300 S to Hidden Cr Ln (8")	8	\$443,923	0%	\$0	100%	\$443,923	0%	\$0	0%	\$0
	W-068	Heber City Public Works Facility Exp Ph 2		\$1,346,177	0%	\$0	0%	\$0	0%	\$0	100%	\$1,346,177
	W-069	2400 South PRV		\$321,119	0%	\$0	0%	\$0	0%	\$0	100%	\$321,119
TOTAL EXPENDITURES				\$22,875,524		\$741,698		\$7,200,813		\$4,491,059		\$10,441,954



Water Rights & Use

- Municipal (Converted into wells) = 7025 af > Current Avg

Water Right	Flow (cfs)	Depletion Limit (ac-ft/yr)	Volume / Flow Right	Notes
Water Rights presently Used by City's Culinary System				
55-7052		1,071.34	Flow	Upper Broadhead Spring (1941 change app 0.05 to 2.5 cfs)
55-1392	2.36	1,708.56	Flow	Upper Broadhead Spring
55-947	2.00	1,447.93	Flow	Well #1
55-5780	0.25	105.00	Both	Valley Hills Well
55-8534	0.1036	75.00	Volume	Valley Hills Well (Mohr Spring Exchange; E1053)
55-8420	0.0889	64.4	Volume	Valley Hills Well; diversion limited to 50% or 64.4 ac-ft
55-1351	0.0990	71.64	Volume	Hospital Well; total diversion 95.53 ac-ft; depletion per OSE 71.64 ac-ft
55-4360			Volume	Hospital Well (see 55-1351)
55-3346	1.00	723.97	Flow	Source: Hospital Well, Supplemental Supply ¹
55-12327	0.0118	8.53	Volume	3 Existing underground water wells; depletion factor
55-894	0.0017	1.25	Volume	3 Existing underground water wells; depletion factor
55-12708	0.0057	4.14	Volume	3 Existing underground water wells; depletion factor
55-13325	1.7376	1,257.98	Volume	VH Well, HW, No. 1, Upper BS; Depletion value in OSE (Used by PI)
55-13016	0.6707	485.59	Volume	VH Well, HW, No. 1, Upper BS; Depletion value in OSE (Used by PI)
Subtotal	8.33	7,025.31		



Sanitary Sewer

2017 - 2040 Prior Master Plan

- 7,090 ERUs (w/o RedL)
- Avg User Flow: 335 gpd/ERU
- Avg Plant flow: 2.21 mgd
- Ann Flow: 807 mg/yr
- Infiltration: 3 yr avg 16.2%
- Impact Fee: \$2,207/ERU

2023 - 2043 Proposed Master Plan

- 11,188 ERUs (w/o RedL)
- Avg User Flow: 312 gpd/ERU
- Avg Plant Flow: 3.49 mgd
- Ann Flow: 1,274 mg/yr
- Infiltration: 3 yr avg 15.0 %
- Impact Fee: \$1,417/ERU

Future Sewer System

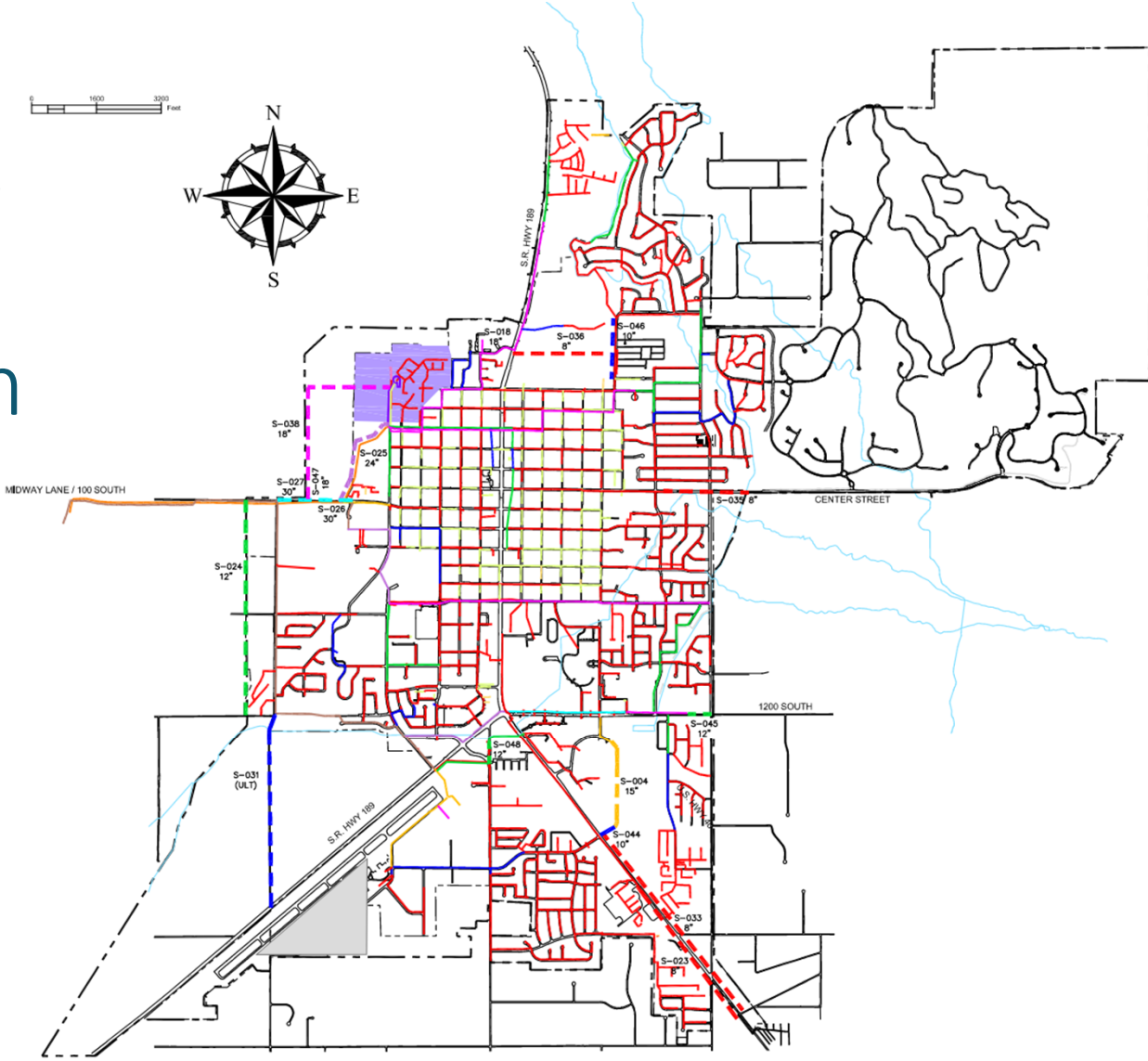


FIGURE 5-1
HEBER CITY
FUTURE
SEWER SYSTEM

--- ULTIMATED BUILDOUT BOUNDARY
--- HEBER CITY BOUNDARY
--- EXISTING ROADS

EXISTING SEWER LINES

PIPE SIZE (Inches)	PIPE COLOR
6	Blue
8	Green
10	Yellow
12	Orange
15	Red
18	Purple
21	Light Blue
24	Light Green
30	Light Yellow
36	Light Purple

EXISTING PRIVATE 6" FORCED MAIN
EXISTING PRIVATE LIFT STATION
EXISTING PRIVATE LIFT STATION AREA
TO BE ELIMINATED WITH S-038

FUTURE SEWER LINES

PIPE SIZE	PIPE COLOR
8	Blue
10	Green
12	Yellow
15	Orange
18	Red
21	Purple
24	Light Blue
30	Light Green

FUTURE PRIVATE LIFT STATION
AIRPORT AREA THAT MAY NEED TO BE
SERVED BY PRIVATE LIFT STATION(S)
EXISTING SEPTIC SYSTEMS

Sewer Project Costs

ULT	CIP #	Recommended Improvements	Size (in)	Total Cost	Funding Proportionate Share Analysis							
					Operating		Developer		Other ^{1,2}		Impact Fees	
					%	\$	%	\$	%	\$	%	\$
ULT	S-004	600 East - 1300 S to Hidden Cr Ln (15")	15	\$706,421	0%	\$0	53%	\$374,403	0%	\$0	47%	\$332,018
	S-020	Aerial Digital Map Updates (4 times)		\$19,200	0%	\$0	0%	\$0	0%	\$0	100%	\$19,200
	S-021	Master Plan Update (4 times)		\$336,000	0%	\$0	0%	\$0	0%	\$0	100%	\$336,000
	S-023	US 40 - Center Creek Dr to 2200 S (West) (8")	8	\$1,378,041	0%	\$0	100%	\$1,378,041	0%	\$0	0%	\$0
	S-024	1500 West - 100 S to 1200 S (12")	12	\$1,069,267	0%	\$0	100%	\$1,069,267	0%	\$0	0%	\$0
	S-025	Sage Brush/Spring Cr Canal - 300 N to 100 S (24")	24	\$1,523,623	0%	\$0	0%	\$0	100%	\$1,523,623	0%	\$0
	S-026	SR 113 - 800 W to 930 W (30")	30	\$1,032,613	0%	\$0	0%	\$0	0%	\$0	100%	\$1,032,613
	S-027	SR 113 - 930 W to South Field Rd (30")	30	\$1,062,120	0%	\$0	0%	\$0	0%	\$0	100%	\$1,062,120
	S-031	South Field Rd - US 40 to 1200 S (10")	10	\$0	0%	\$0	0%	\$0.00	0%	\$0	0%	\$0
	S-033	US 40 - Center Creek Dr to E Airport Rd (East) (8")	8	\$854,153	0%	\$0	100%	\$854,153.02	0%	\$0	0%	\$0
	S-035	Center Street - 800 E to 1300 E (8")	8	\$772,234	0%	\$0	100%	\$772,234.35	0%	\$0	0%	\$0
	S-036	900 North - Main St to 500 E (8"/10")	8	\$710,991	0%	\$0	100%	\$710,990.58	0%	\$0	0%	\$0
	S-037	Heber City Public Works Facility Exp Ph.1		\$305,225	0%	\$0	0%	\$0.00	0%	\$0	100%	\$305,225
	S-038	500 N and 600 W to 50 N and 1000 W (18")	18	\$1,695,018	0%	\$0	47%	\$796,658.48	28%	\$475,792	25%	\$422,568
	S-041	Heber City Public Works Facility Exp Ph.2	0	\$1,421,174	0%	\$0	0%	\$0	0%	\$0	100%	\$1,421,174
	S-044	E Airport Rd - US 40 to 600 E (10")	10	\$121,449	0%	\$0	73%	\$88,294	0%	\$0	27%	\$33,156
	S-045	1200 South - 1000 E to 1200 E (12")	12	\$575,763	0%	\$0	62%	\$354,094	20%	\$115,153	19%	\$106,516
	S-046	550 East - Valley Hills Dr to 600 N (10")	10	\$956,064	0%	\$0	73%	\$695,059	0%	\$0	27%	\$261,006
	S-047	1000 West - 50 North to 100 South (18")	18	\$584,944	0%	\$0	100%	\$584,944	0%	\$0	0%	\$0
	S-048	Daniels Road - 1320 South to 1475 South (12")	12	\$341,857	0%	\$0	0%	\$0	0%	\$0	100%	\$341,857
	TOTAL EXPENDITURES			\$15,466,157		\$0		\$7,678,138		\$2,114,567		\$5,673,452



Streets

2017 - 2040 Prior Master Plan

- Minor Local: 60' ROW / 32' Pave(Old MP)
- Major Local: 64' ROW/ 36' Pave
- Minor Collector: 66' ROW / 44' Pave
- Major Collector: 72' ROW / 50' Pave
- Minor Arterial: >72' ROW / >50' Pave
- Bypass: Local Project?
- Impact Fee: Non-Res \$126/Trip
(Includes \$103, 45% sub)
- Impact fee: Res \$2,153/Unit
- Impact fee: Multi \$1,252/Unit

2023 - 2043 Proposed Master Plan

- Minor Local: 56' ROW / 26' Pave
- Major Local: 62' ROW/ 32' Pave
- Minor Collector: 68' ROW / 38' Pave
- Major Collector: 80' ROW / 48' Pave
- Minor Arterial: >90' ROW / >60' Pave
- Bypass: UDOT Study / Sponsor
- Impact Fee: Non-Res \$269/Trip
(Includes \$221, 45% sub)
- Impact fee: Res \$4,070/Unit
- Impact fee: Multi \$2,304/Unit



Future Streets

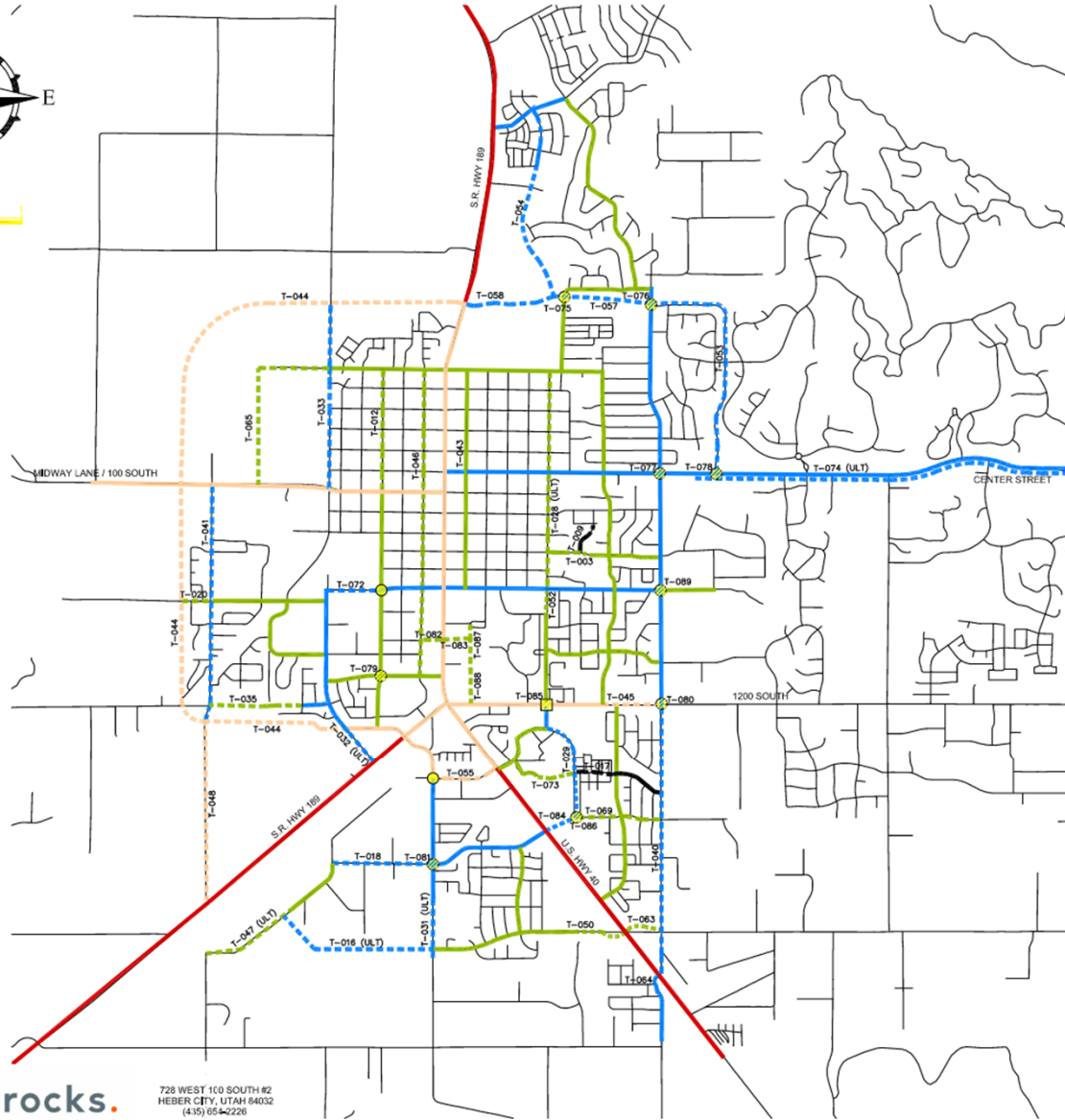
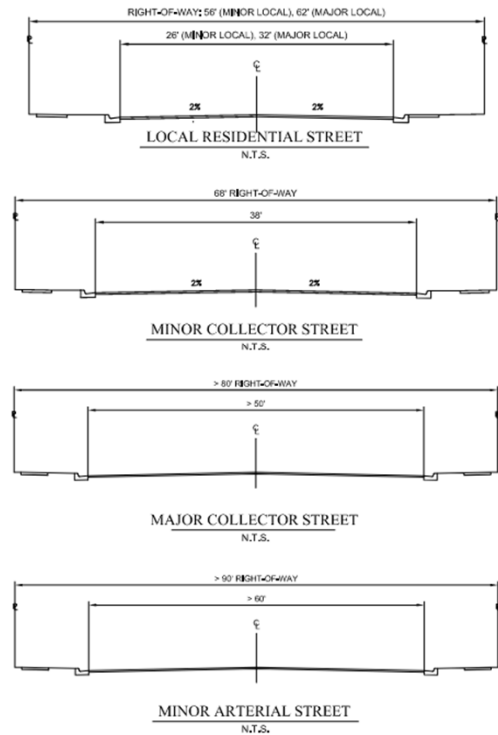


FIGURE 6-1
HEBER CITY
STREET SYSTEM
MASTER PLAN

- EXISTING LOCAL STREET
- EXISTING MINOR COLLECTOR
- EXISTING MAJOR COLLECTOR
- EXISTING MINOR ARTERIAL
- EXISTING PRINCIPAL ARTERIAL
- - - NEW OR UPGRADED LOCAL STREET
- - - NEW OR UPGRADED MINOR COLLECTOR
- - - NEW OR UPGRADED MAJOR COLLECTOR
- - - NEW OR UPGRADED MINOR ARTERIAL
- - - NEW OR UPGRADED PRINCIPAL ARTERIAL
- EXISTING ROUNDABOUT
- FUTURE ROUNDABOUT
- FUTURE SIGNAL



Streets Project Costs

ULT CIP #			Recommended	Total Cost			Funding Proportionate Share Analysis					
			Improvements		Operating	Developer	Other ¹		Impact Fee			
			ROW	%	\$	%	\$	%	\$	%	\$	
ULT	T-003	400 South - 600 East to 700 East & Bridge	68	\$722,290	0%	\$0	0%	\$0	0%	\$0	100%	\$722,290
	T-009	600 East - 200 South to 400 South	62	\$548,976	0%	\$0	100%	\$548,976	0%	\$0	0%	\$0
	T-012	300 West - 500 North to 100 South	68	\$478,440	44%	\$210,240	0%	\$0	0%	\$0	56%	\$268,200
	T-016	2400 South - Daniel Rd to South Airport Rd	68	\$0	0%	\$0	91%	\$0	0%	\$0	0%	\$0
	T-017	1600 South - 600 East to Sawmill Blvd	62	\$609,973	0%	\$0	100%	\$609,973	0%	\$0	0%	\$0
	T-018	Airport Road - Daniel Rd to Hangers	68	\$1,243,693	8%	\$99,495	38%	\$472,603	0%	\$0	54%	\$671,594
ULT	T-020	650 South - 1200 West to West Bypass	68	\$725,231	5%	\$36,262	0%	\$0	0%	\$0	95%	\$688,970
	T-028	500 East - 500 North to 600 South	68	\$0	13%	\$0	0%	\$0	0%	\$0	0%	\$0
ULT	T-029	600 East - 1300 South to Hidden Cr Ln	80	\$3,523,529	0%	\$0	78%	\$2,748,353	0%	\$0	22%	\$775,176
	T-031	Daniels Rd - 2100 South to 2500 South	80	\$0	11%	\$0	35%	\$0	0%	\$0	0%	\$0
ULT	T-032	Industrial Pkwy - West Bypass to SR189	68	\$0	12%	\$0	31%	\$0	0%	\$0	0%	\$0
ULT	T-033	600 West - West Bypass to 100 South	80	\$2,614,531	10%	\$261,453	0%	\$0	0%	\$0	90%	\$2,353,078
	T-035	1200 South - 700 West to Southfield Rd	68	\$2,648,397	0%	\$0	78%	\$2,065,750	0%	\$0	22%	\$582,647
	T-040	1200 East - 1200 South to US40 *	80	\$3,952,199	9%	\$355,698	31%	\$1,225,182	0%	\$0	60%	\$2,371,319
	T-041	Southfield Rd - 100 South to 1200 South & RR	80	\$3,926,577	29%	\$1,138,707	31%	\$1,217,239	0%	\$0	40%	\$1,570,631
	T-042	Master plan Update (4 times)		\$240,000	0%	\$0	0%	\$0	0%	\$0	100%	\$240,000
	T-043	100 East - 500 North to 600 South Historic	82	\$2,730,601	100%	\$2,730,601	0%	\$0	0%	\$0	0%	\$0
	T-044	West Bypass - 900 North to 1300 South UDOT	104	\$0	0%	\$0	0%	\$0	0%	\$0	100%	\$0
	T-045	1200 South - 820 East to 1200 East	90	\$980,222	9%	\$88,220	53%	\$519,517	0%	\$0	38%	\$372,484
	T-046	100 West - 500 North to 1000 South Historic	82	\$3,780,832	11%	\$415,892	31%	\$1,172,058	0%	\$0	58%	\$2,192,883
	T-047	South Airport Rd - 670 West to 1200 West	68	\$0	12%	\$0	38%	\$0	0%	\$0	0%	\$0
	T-048	Southfield Rd - 1200 South to SR189 UDOT	104	\$0	0%	\$0	0%	\$0	0%	\$0	100%	\$0
	T-050	2400 South - 700 East to US40	68	\$1,444,580	0%	\$0	36%	\$520,049	0%	\$0	64%	\$924,531
	T-052	500 East - 600 South to 720 South	68	\$601,908	0%	\$0	0%	\$0	0%	\$0	100%	\$601,908
	T-053	East Bypass - Center St to 1050 East	80	\$4,383,286	0%	\$0	100%	\$4,383,286	0%	\$0	0%	\$0
	T-054	Ostler Peak Rd - 1800 North to 900 North	80	\$6,088,658	0%	\$0	78%	\$4,749,153	0%	\$0	22%	\$1,339,505
T-055	South Bypass - Daniel Rd to US40	80	\$2,225,578	0%	\$0	0%	\$0	67%	\$1,500,039	33%	\$725,538	
T-057	East Bypass - 1050 East to 550 East Cemetery	80	\$1,551,606	0%	\$0	0%	\$0	97%	\$1,500,403	3%	\$51,203	



Streets Project Costs (Cont.)

ULT CIP #			Recommended	Total Cost		Funding Proportionate Share Analysis						
			Improvements		Operating	Developer	Other ¹	Impact Fee				
			ROW	%	\$	%	\$	%	\$	%	\$	
ULT	T-058	East Bypass - 550 East to Main St	80	\$3,241,647	0%	\$0	78%	\$2,528,484	0%	\$0	22%	\$713,162
	T-059	Downtown Angle Parking - 400 North to 500 South	84	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	T-063	Intersection Alignment US40 & 2400 South	80	\$1,117,475	4%	\$44,699	31%	\$346,417	0%	\$0	65%	\$726,359
	T-064	Intersection Alignment US40 & Mill Rd	80	\$869,148	4%	\$34,766	31%	\$269,436	0%	\$0	65%	\$564,946
	T-065	500 North to Midway Ln	68	\$4,710,588	0%	\$0	91%	\$4,286,635	0%	\$0	9%	\$423,953
	T-067	Heber City Public Works Facility Exp Ph1		\$486,246	0%	\$0	0%	\$0	0%	\$0	100%	\$486,246
	T-068	Heber City Public Works Facility Exp Ph2		\$1,696,673	0%	\$0	0%	\$0	100%	\$1,696,673	0%	\$0
	T-069	1900 South - Mill Rd to 600 East	68	\$2,093,595	0%	\$0	91%	\$1,905,171	0%	\$0	9%	\$188,424
	T-070	Downtown Angle Parking - 400 North to 500 South	84	\$554,696	0%	\$0	0%	\$0	0%	\$0	100%	\$554,696
	T-072	600 South - 300 West to 650 South Restripe		\$27,600	0%	\$0	0%	\$0	0%	\$0	100%	\$27,600
ULT	T-073	Providence Dr - 1500 South to 600 East	68	\$1,564,962	0%	\$0	91%	\$1,424,115	0%	\$0	9%	\$140,847
	T-074	Center St Widening - 1400 East to the East	80	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	T-075	Roundabout at 900 North & 550 East		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-076	Roundabout at 900 North & Mill Rd		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-077	Roundabout at Mill Rd & Center St		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-078	Roundabout at 1400 East & Center St		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-079	Roundabout at 300 West & 1000 South		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-080	Roundabout at Mill Rd & 1200 South		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-081	Roundabout at Airport Rd & Daniel Rd		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-082	850 South - 100 West to Main St	66	\$1,403,461	3%	\$42,104	0%	\$0	41%	\$581,033	56%	\$780,325
	T-083	850 South - Main St to 120 East	66	\$2,222,147	3%	\$66,664	0%	\$0	97%	\$2,155,483	0%	\$0
	T-084	Airport Rd - US40 to 600 East	80	\$1,127,529	8%	\$90,202	0%	\$0	0%	\$0	92%	\$1,037,327
	T-085	Traffic Signal at 1200 South & 500 East		\$345,000	0%	\$0	0%	\$0	0%	\$0	100%	\$345,000
	T-086	Roundabout at Airport Rd & 600 East		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-087	120 East - 790 South to 1000 South	66	\$1,403,461	3%	\$42,104	46%	\$645,592	0%	\$0	51%	\$715,765
	T-088	120 East - 1000 South to 1200 South	66	\$1,052,596	3%	\$31,578	0%	\$0	0%	\$0	97%	\$1,021,018
	T-089	Roundabout at Mill Rd & 600 South	0	\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
TOTAL EXPENDITURES				\$73,905,932		\$5,688,685		\$31,637,989		\$7,433,631		\$29,145,627



Storm Drain

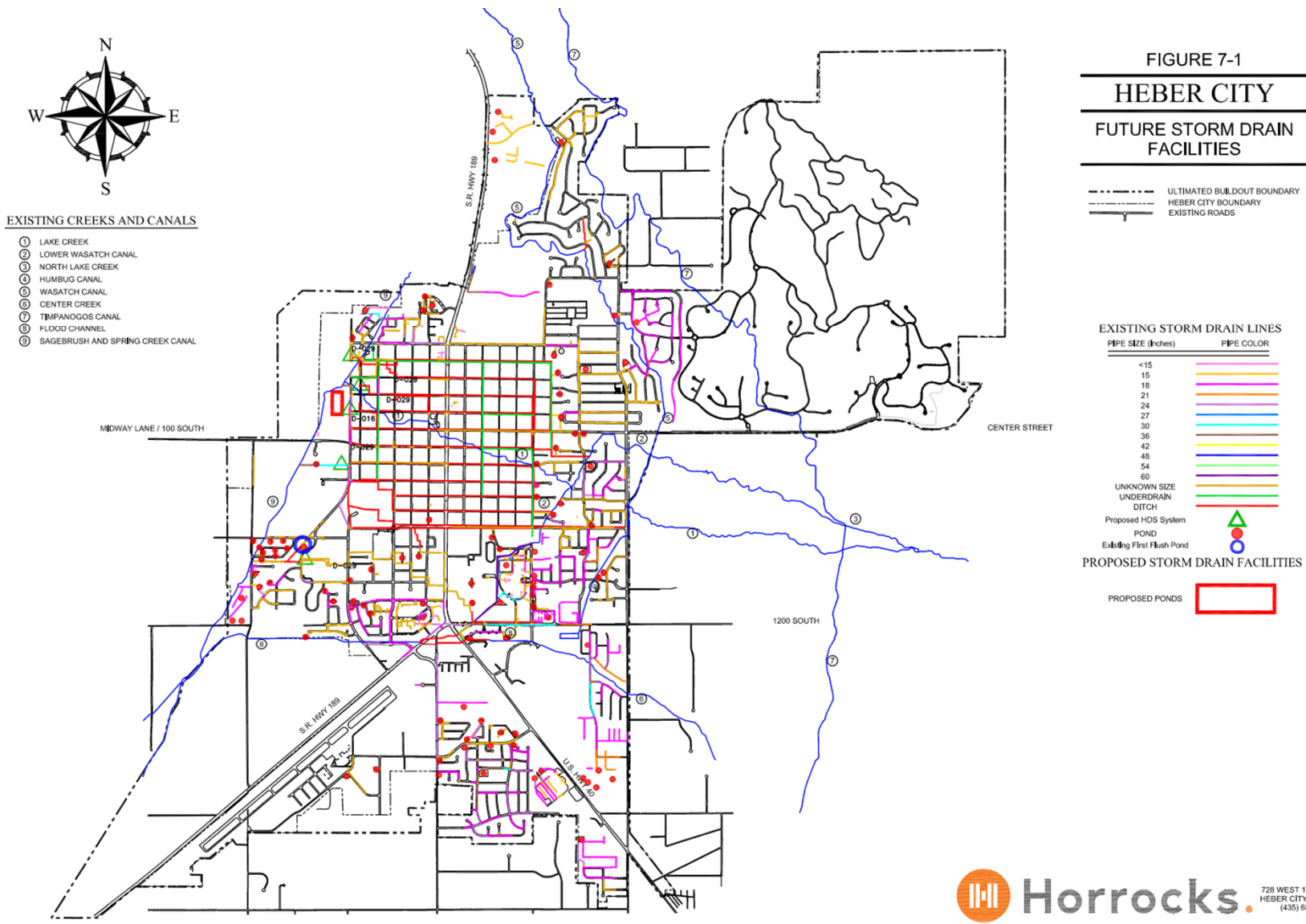
2017 - 2040 Prior Master Plan

- Central Heber First Flush Improvements: Started
- MS4: Designation Anticipated
- Design Manual: Recommend
- Storm Wtr Mgmt Plan: Recommend
- Impact fee: \$0
- Utility fee: \$5.55/mo

2023 - 2043 Proposed Master Plan

- Central Heber First Flush Improvements: Continue
- MS4: No Change
- Design Manual: Adopted
- Storm Wtr Mgmt Plan: No Change
- Impact fee: No Change
- Utility fee: \$15.20/mo

Future Storm Drain System



Storm Drain Project Costs

ULT	CIP #	Recommended Improvements	Total Cost	Funding Proportionate Share Analysis							
				Operating		Developer		Other		Impact Fee Eligible	
				%	\$	%	\$	%	\$	%	\$
	D-015	Ditch Storm Drain System Improvements	\$1,621,474	100%	\$1,621,474	0%	\$0	0%	\$0	0%	\$0
	D-016	First Flush Detention Pond(s) - Central Heber	\$1,380,083	100%	\$1,380,083	0%	\$0	0%	\$0	0%	\$0
	D-022	Maintain Existing SD/Ditch System (20 times)	\$2,400,000	100%	\$2,400,000	0%	\$0	0%	\$0	0%	\$0
	D-023	Master Plan Updates every 5 years (4 times)	\$48,000	100%	\$48,000	0%	\$0	0%	\$0	0%	\$0
	D-025	Storm Water Management Program	\$336,000	100%	\$336,000	0%	\$0	0%	\$0	0%	\$0
ULT	D-026	Install SD System in Old Town Heber	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	D-028	Heber City Public Works Facility Exp Ph 2*	\$830,603	0%	\$0	0%	\$0	0%	\$0	100%	\$830,603
	D-029	HDS Before First Flush Pond	\$1,200,000	100%	\$1,200,000	0%	\$0	0%	\$0	0%	\$0
TOTAL EXPENDITURES			\$7,816,160		\$6,985,557		\$0		\$0		\$830,603

Pressurized Irrigation (PI)

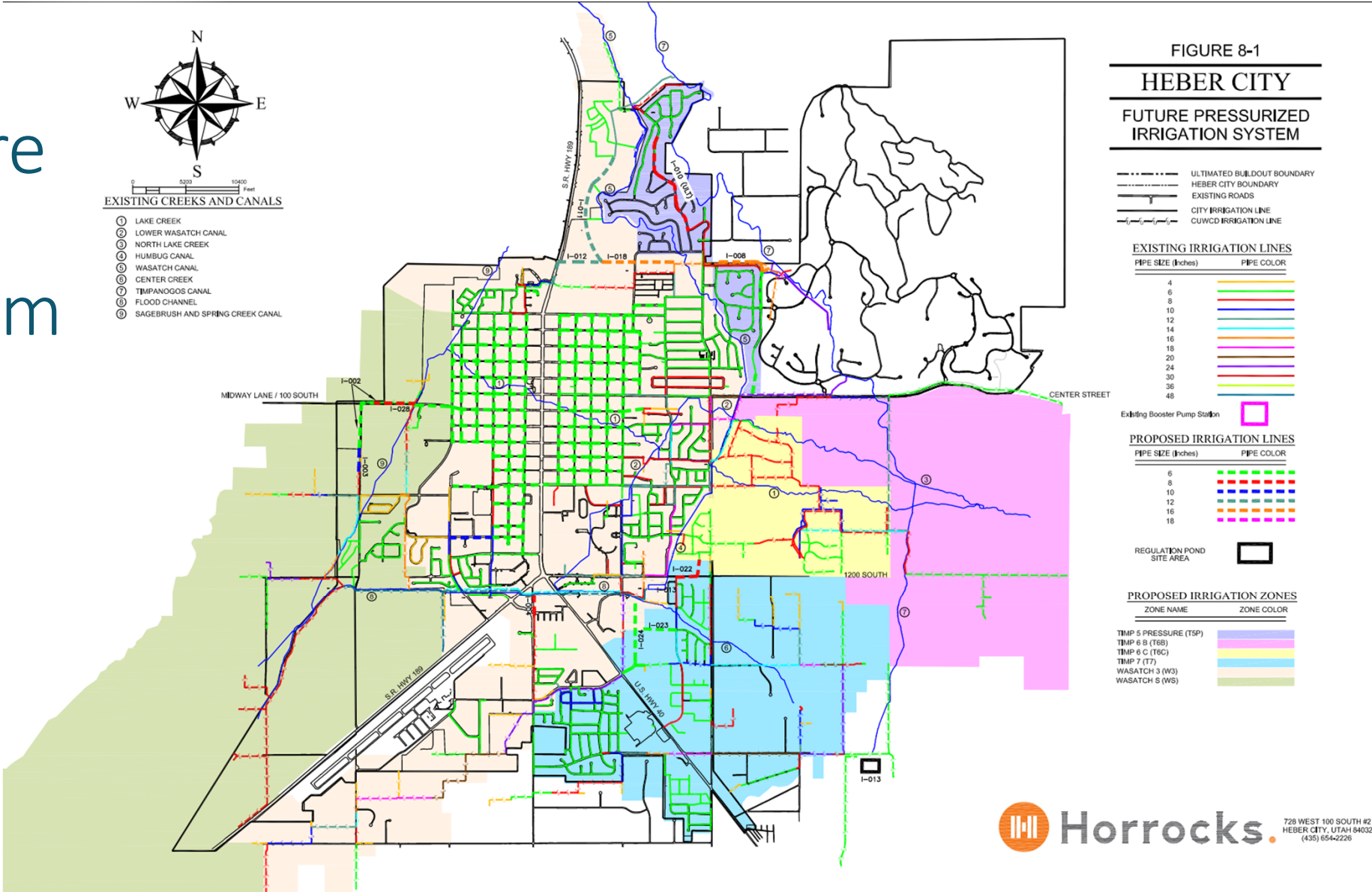
2017 - 2040 Prior Master Plan

- 3,882 - 9,289 ERUs w/o RedL & NonPI
- Outdoor Use: 437 gpd/ERU
- Avg Use: 1.70 to 4.06 mgd
- Peak Day Use: 5.78 to 13.08 mgd
- Start Central Heber PI Conv
- Impact Fee: Res \$1,131/ERU
- Impact Fee: Non Res \$0.16/sf

2023 - 2043 Proposed Master Plan

- 5,405 - 10,427 ERUs w/o RedL & NonPI
- Outdoor Use: No Change
- Avg Use: 2.36 to 4.56 mgd
- Peak Day Use: 8.03 to 15.49 mgd
- Complete Central Heber PI Conv
- Impact Fee: Res \$844/ERU
- Impact Fee: Non Res \$0.12/sf

Future PI System



PI Project Costs

ULT		CIP #	Recommended Improvements	Total Cost			Funding Proportionate Share Analysis						
					Operating		Developer		Other ¹		Impact Fee		
			Size (in)		%	\$	%	\$	%	\$	%	\$	
ULT	I-001	Central Heber Pressurized Irrigation Project		\$9,086,772	0%	\$0	0%	\$0	100%	\$9,086,772	0%	\$0	
	I-002	1200 W 430 S to 1100 W 100 S (6")	6	\$266,875	0%	\$0	54%	\$144,113	0%	\$0	46%	\$122,763	
	I-003	1200 West - 430 S to 500 S (10")	10	\$409,018	0%	\$0	45%	\$184,058	0%	\$0	55%	\$224,960	
	I-004	Daniel Rd - 1450 S to 1300 S (8")	8	\$246,758	0%	\$0	65%	\$160,393	35%	\$86,365	0%	\$0	
	I-008	East By-pass - 1500 E to 1240 E	16	\$558,029	0%	\$0	100%	\$558,029	0%	\$0	0%	\$0	
	I-010	Valley Hills Blvd - Mill Rd to Callaway Dr (8")*	8	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0	
	I-011	300 East - East Bypass to 1600 N (10")	10	\$593,309	0%	\$0	30%	\$177,993	0%	\$0	70%	\$415,316	
	I-012	East Bypass - US 40 to 300 E (12")	12	\$290,736	0%	\$0	55%	\$159,905	45%	\$130,831	0%	(\$0)	
	I-013	Regulation Pond(s) (6 ac-ft)		\$1,834,457	0%	\$0	0%	\$0	0%	\$0	100%	\$1,834,457	
	I-014	Aerial Digital Map Updates (4 times)		\$23,040	0%	\$0	0%	\$0	0%	\$0	100%	\$23,040	
ULT	I-015	Master Plan Updates every 5 years (4 times)		\$288,000	0%	\$0	0%	\$0	0%	\$0	100%	\$288,000	
	I-016	Regulation Pond(s)		\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0	
	I-018	East Bypass - 800 E to 300 E (16")	16	\$845,222	0%	\$0	23%	\$194,401	77%	\$650,821	0%	\$0	
	I-022	1200 S Sawmill Blvd to 1050 S 1100 E (8")	8	\$161,482	0%	\$0	60%	\$96,889	0%	\$0	40%	\$64,593	
	I-023	Becca Rd - 600 E to Sawmill Blvd (6")	6	\$339,840	0%	\$0	65%	\$220,896	35%	\$118,944	0%	\$0	
	I-024	600 East - 1300 S to US 40 (6")	6	\$469,555	0%	\$0	50%	\$234,778	50%	\$234,778	0%	\$0	
	I-026	Heber City Public Works Facility Exp Ph 1		\$35,676	0%	\$0	0%	\$0	0%	\$0	100%	\$35,676	
	I-027	Heber City Public Works Facility Exp Ph 2		\$149,501	0%	\$0	0%	\$0	0%	\$0	100%	\$149,501	
I-028	100 South - 1100 W to 900 W (8")	8	\$252,282	0%	\$0	100%	\$252,282	0%	\$0	0%	\$0		
TOTAL EXPENDITURES				\$15,850,552		\$0	\$2,383,736		\$10,308,511		\$3,158,305		



PI Water Rights / Shares

- Irrigation Shares (Unconverted for outdoor and future) = 2,266 AF
- Existing Shares - Approved Development - Central Heber = 118 AF Balance

Irrigation Company	Irrigation		
	Shares	diversion ac-ft /share	ac-ft
Daniels Irrigation	137	0.75	103
Extension Irrigation	371	0.30	111
Sage Brush Irrigation	6	0.30	2
Spring Creek Irrigation	74	0.60	44
Timpanogos Irrigation	20	1.85	38
Timpanogos Class D	136	3.00	409
Wasatch Irrigation	452	3.40	1,535
Other	-	-	24

Total 2,266

Irrigation Share Use	Purpose ERU	Average Use				Diversión Shares Used ² ac-ft
		gpd/ERU	gpd	gpm	ac-ft	
City Banked Irrigation Shares						2,266
Vacant Lots Use (indoor use)	1,074	264	283,536	197	318	(460)
Vacant Lots Use (outdoor use)	1,074	437	469,338	326	526	(526)
Future Central Heber PI System ¹	1,550	669	1,036,950	720	1,162	(1,162)
Irrigation Share Balance						118



Cost of Improvements

Facility	Estimated Cost of Recommended Improvements (2023 dollars)
Culinary Water	\$22,875,524
Sanitary Sewer	\$15,466,157
Streets	\$73,905,932
Storm Drain	\$7,816,160
Pressurized Irrigation	\$15,850,552
TOTAL	\$135,914,324

Impact Fee Eligible Portion: \$61,372,603 or 45% of Total



Cost of Improvements

Facility		Jan 2024 Impact Fee	Recommended Impact Fee	Units
Culinary Water	Residential	\$2,826	\$2,778	ERU*
	Non-Residential	\$2,826	\$2,778	0.75 - inch
		\$5,024	\$4,939	1.0 - inch
		\$11,304	\$11,113	1.5 - inch
		\$20,095	\$19,757	2.0 - inch
		\$45,215	\$44,453	3.0 - inch
		\$80,383	\$79,028	4.0 - inch
Sewer		\$2,207	\$1,417	ERU*
Streets	Single Family	\$2,153	\$4,070	Dwelling Unit
	Multi Family	\$1,252	\$2,304	Dwelling Unit
	Non-Residential**	\$126	\$269	Trip
Pressurized Irrigation	Residential	\$1,131	\$844	ERU*
	Non-Residential	\$0.16	\$0.12	Irrigated SF
Total per ERU (typical)		\$8,317	\$9,110	ERU*

* Equivalent Residential Unit. ** Fee reduced and subsidized by City from other funding.

Note: Heber City has a Parks and Trails impact fee covered in a separate master plan, and no Storm Water impact fee.



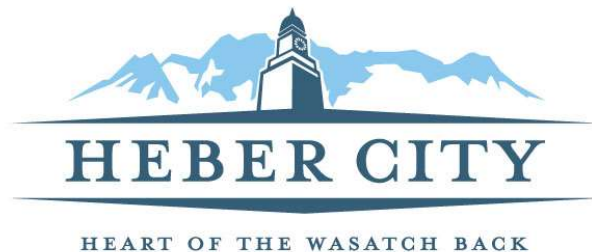
Conclusion & Recommendations

- Recommend collecting data and applying for state water use reduction.
- Confirm continuation of Non-Residential 45% Streets Impact Fee Subsidy Policy.
- Other Council Priorities and Master Plan Changes?
- Next Steps:
 - Hold Public Hearing
 - Adopt Master Plan and New Impact Fees

DRAFT

CAPITAL IMPROVEMENTS AND IMPACT FEES

HEBER CITY MASTER PLAN 2023 TO 2043



January 16, 2024

**Prepared by
Heber City & Horrocks Engineers**

Heber City Master Plan 2023 to 2043

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Chapter 1

Executive Summary

1.1 Document Purpose and Organization

Heber City is responsible for providing public services to customers within a current area of approximately 5,848 acres (9.1 square miles) in Wasatch County per the City's latest General Plan. This area excludes the North Village and Jordanelle Ridge areas which are served by others and addressed in other studies. It is estimated that over 21% of the City's service area is currently being developed, has the potential to develop, or will redevelop at some point in the future.

Accelerated population growth in Heber City has increased the demand on the existing public facilities throughout the City. To continue to adequately service the City's increasing population, the public facilities which consist of culinary water, sanitary sewer, streets, storm drainage, and pressurized irrigation were analyzed and are reported in this document. This document recommends capital improvements necessary to increase the capacity of these facilities to meet the demands of the projected population through the year 2043 and to maintain the current City Level of Service (LOS) for those facilities. This document also reports the associated improvement costs and impact fees that were calculated.

This document is a compilation of the Heber City master plan, long term public facilities plan, impact fee facilities plan, and impact fee analysis, hereafter collectively called the "Master Plan". This Master Plan document combines these elements into one comprehensive study.

In developing the various impact fees documented in this report, Heber City has complied with the requirements set forth by the Utah Impact Fees Act – As Amended, 2023. The impact fees have been calculated using methods that insure they are proportionate and reasonably related to the service demands of the future development.

Organization of the Master Plan Document

The first three chapters of this document summarize the purpose of this Master Plan, provide a basis for impact fees, and projected population growth for Heber City. These chapters yield the general foundation for this report which is necessary to analyze each facility through a 20-year planning period.

Heber City's culinary water, sanitary sewer, streets, storm drain, and pressurized irrigation systems were analyzed through the 20-year planning period. Chapters 4 through 8 document the findings of the analysis for each facility type, respectively. A separate appendix contains the additional data and material supporting this document.

1.2 Summary of Capital Improvement Costs

Recommended capital improvements to existing facilities were analyzed and reported in their respective chapters. These improvements are necessary to maintain the current Level of Service (LOS) to Heber City residents during future growth. Impact fees are not used to improve LOS to Heber City residents for any public facilities in this study. Projects which may improve existing LOS are paid for by operating funds.

Estimated costs of the recommended improvements are summarized in Table 1-1 by facility type. The improvement costs are in 2023 dollars and are the costs for all public facilities during the 20-year planning period. Contingencies, engineering, legal and administrative fees are also included. These improvements will be funded through a combination of impact fees, developer contributions, City operating funds, and other funds such as grants or other public entity funds.

Table 1-1 Estimated Cost of Recommended Improvements

Facility	Estimated Cost of Recommended Improvements (2023 dollars)
Culinary Water	\$22,875,524
Sanitary Sewer	\$15,466,157
Streets	\$73,905,932
Storm Drain	\$7,816,160
Pressurized Irrigation	\$15,850,552
TOTAL	\$135,914,324

All public facilities projected through the 20-year planning period were determined based on the need created by both future residential and non-residential growth. The cost of each facility was determined from sound estimating procedures using historic construction cost records for each facility, current land acquisition costs, typical engineering costs, and normal construction contingencies. Each individual project was analyzed to determine if the costs should be funded by impact fees, and if so, what percentage would be paid for by the impact fees. The costs to be funded by impact fees for all projects within a facility type were totaled. The remaining costs (not impact fee eligible) were distributed to one or more of the other funding sources and totaled. These cost distributions and totals can be seen in each chapter in the table listing the estimated cost of each improvement. Costs for any excess capacity in existing facilities have not been included in the cost totals of this study unless noted otherwise. Most of any excess capacity has previously been paid for by impact fees, and the benefit should go to new development.

1.3 Summary of Fees

Impact Fees

Although the total build-out for Heber City will probably not come for several decades, proper planning of the City's public facilities should occur now. The collection of impact fees from new development is one way to offset the costs of adding capacity to the existing infrastructure. This section recommends the impact fees for the 20-year planning period based on the Heber City's most recent zoning and planning area map, projected population growth, and respective facilities that are required because of the growth during this period. All necessary public facilities projected through the 20-year planning period have been determined and are shown in each respective chapter. The impact fees for each capital facility sector (culinary water, sanitary sewer, streets, storm drain, and pressurized irrigation) were calculated by comparing total costs of improvements to be paid for by impact fees and the number of new residential and non-residential units that will need the improvements.

It is essential that any impact fees collected are expended within six years. To ensure Heber City properly expends impact fee funds, an expenditure plan has been created for each impact fee fund. All the improvements within the 20-year window have been grouped into five-year incremental improvement periods. Projects that were expected to occur first were planned for the 2024 to 2028 period. The remaining projects were planned into the most feasible five-year window up to the year 2043.

The impact fee amount was calculated by taking the total cost of improvements associated with impact fees, plus the necessary bond interest payments, divided by the projected new growth number for 20-years. The growth number is presented as: equivalent residential units (ERU's) for culinary water, pressurized irrigation, and sewer, and as trips generated by traffic for streets. The impact fees for all years are shown in 2023 equivalent dollars. Bonding is anticipated in some instances when impact fees collected prior to the improvement projects is not expected to be sufficient to cover projected costs. By considering the full 20-year window to determine the projected impact fees, and then grouping the projects into the five-year increments, the impact fees are distributed evenly to all development within the 20-year plan. If the impact fee revenue for the first five years does not cover all the improvements planned for that period, bonds will be required to cover the remaining costs. Development within the 20-year planning window will all pay equally for future projects so that earlier developments only pay their fair share of facilities that will also benefit later developments.

Table 1-2 summarizes the proposed impact fees for the facilities including culinary water, sanitary sewer, streets, and pressurized irrigation. There is not an impact fee proposed for storm water with this analysis since these improvements are incorporated in with streets. The table shows the projected impact fees collected every five years for all the facilities and the incremental improvement costs scheduled to expend the collected impact fees within that period. It also shows the impact fee running balance, after adjusting for bond payments, for each five-year increment. The tables in each facility chapter show the bond account balance. For information on the projected ERU's, trips, or newly developed area associated with each impact fee, please see each respective section.

Table 1-2 Expenditure Plan Summaries

Facility	2024-2028 5-year			2029-2033 5-year		
	Collected Impact Fees	Improvement Costs	Impact Fee Balance ¹	Collected Impact Fees	Improvement Costs	Impact Fee Balance ¹
Culinary Water	\$4,489,802	\$6,525,508	\$4,294	\$3,789,660	\$2,743,036	\$68,226
Sanitary Sewer	\$2,290,083	\$2,400,678	\$9,406	\$1,932,966	\$1,880,441	\$4,126
Streets	\$12,282,925	\$16,360,165	\$11,248	\$10,573,047	\$8,208,806	\$22,968
Pressurized Irrigation	\$1,364,683	\$1,921,136	\$3,547	\$1,151,874	\$1,063,811	\$1,852
Facility	2034-2038 5-year			2039-2043 5-year		
	Collected Impact Fees	Improvement Costs	Impact Fee Balance ¹	Collected Impact Fees	Improvement Costs	Impact Fee Balance ¹
Culinary Water	\$1,497,527	\$806,288	\$6,773	\$1,608,661	\$367,122	(\$0)
Sanitary Sewer	\$763,834	\$1,227,227	\$2,927	\$820,519	\$165,106	\$0
Streets	\$4,543,684	\$3,614,769	(\$639)	\$4,931,870	\$961,886	\$0
Pressurized Irrigation	\$455,176	\$86,679	(\$15,964)	\$488,955	\$86,679	\$0

¹ Balance includes estimated bond costs. Actual will vary based improvement costs and bond amounts. Goal is to end with balance close to zero.

The Heber City service area for culinary water, sanitary sewer, and pressurized irrigation in this report includes everything within the City boundary, excluding the Red Ledges private development, the North Village area, and the Jordanelle Ridge area. Water, sewer, and irrigation services in Red Ledges are provided by the Twin Creeks Special Service District (TCSSD). Water, sewer, and irrigation in the North Village and Jordanelle Ridge areas are provided by the North Village Special Service District (NVSSD). Impact fee calculations for facilities and revenue in the excluded areas have not been included in this master plan. The plan proposes that all Heber City developments, except for the areas mentioned, pay the impact fees recommended for culinary water, sanitary sewer, and pressurized irrigation.

The Heber City service area for public streets and the associated storm drainage include everything within the City boundary and Red Ledges, excluding the North Village and Jordanelle Ridge areas. Impact fee calculations for facilities and revenue in the excluded areas have not been included in this report. The plan proposes that all Heber City developments, except for the areas mentioned, pay the impact fees recommended for streets.

Table 1-3 shows a comparison of the previous and the recommended impact fees. The recommended impact fees will help fund the improvements necessary to enable the City to provide utility services according to City and State standards.

Table 1-3 Summary of previous and recommended impact fees. (SEC. 15.16.090)

Facility		Jan 2024 Impact Fee	Recommended Impact Fee	Units
Culinary Water	Residential	\$2,826	\$2,778	ERU*
	Non-Residential	\$2,826	\$2,778	0.75 - inch
		\$5,024	\$4,939	1.0 - inch
		\$11,304	\$11,113	1.5 - inch
		\$20,095	\$19,757	2.0 - inch
		\$45,215	\$44,453	3.0 - inch
		\$80,383	\$79,028	4.0 - inch
Sewer		\$2,207	\$1,417	ERU*
Streets	Single Family	\$2,153	\$4,070	Dwelling Unit
	Multi Family	\$1,252	\$2,304	Dwelling Unit
	Non-Residential**	\$126	\$269	Trip
Pressurized Irrigation	Residential	\$1,131	\$844	ERU*
	Non-Residential	\$0.16	\$0.12	Irrigated SF
Total per ERU (typical)		\$8,317	\$9,110	ERU*

* Equivalent Residential Unit. ** Fee reduced and subsidized by City from other funding.

Note: Heber City has a Parks and Trails impact fee covered in a separate master plan, and no Storm Water impact fee.

Annual Adjustment Of Impact Fees

Since growth rates, property values, inflation, zoning, and other variables which affect public facilities change from year to year, it is in the best interest of Heber City to ensure that the impact fees are adjusted periodically.

The City has adopted a policy that adjusts the cost of improvements and impact fees on an annual basis to account for inflation. The adjustment is based on an industry accepted construction cost index. The index that will be used is the Engineering News Record (ENR) 20 City Construction Cost Index. The ENR December 2023 index of 13,514.76 will be deemed the base index. An annual adjustment to fees will be made each January 1st based on the percentage change between the most recent December index and the December index of the prior year.

Impact Fee Exemptions

The impact fees recommended in this study must be assessed as recommended to generate sufficient revenue to cover the improvement costs that have been identified. From time to time the City receives requests to exempt all or a portion of impact fees on a given project. If the City desires to exempt any of the fees identified, they must at the same time identify an alternate source of funding that will replace the amount waived.

Utility Fees

Utility fees were not analyzed in this study.

Chapter 2

Impact and Utility Fee Summary

2.1 Administration of Impact Fees

An impact fee is a one-time charge with the purpose of raising revenue for new or expanded public facilities necessitated by development. Impact fees are imposed as a condition of receiving development approval. Under the Impact Fee Act, such facilities must have a useful life of ten years or more. They must also be owned or operated by or on behalf of a local government, special service district, or qualifying private entity. An impact fee is expressly distinguished from a tax, a special assessment under the special improvement or special district act, a building permit fee, a hook-up fee, a fee for project improvements, or other reasonable permit or application fees such as conditional use or subdivision application fees (The Utah Land Use Institute, April 2014, *Utah Impact Fee Handbook and Checklists*).

Impact fees cannot be used to correct existing public facility deficiencies or for routine maintenance activities. The premise behind impact fees is based on the critical assumption that if no development were allowed, the existing facilities would adequately serve the existing level of development within the City. Therefore, the recommended improvements, outlined in Chapters 4 through 8 for each facility, represent improvements needed to accommodate new growth and to maintain the existing Level of Service (LOS) for these facilities within Heber City.

Refer to Table 1-3 in the Executive Summary for a summary of current and recommended impact fees. The proposed impact fees will fund the necessary improvements outlined above and described in Chapters 4 through 8.

2.2 Proportionate Share Analysis

Impact fees are a form of development exaction. An exaction is generally a fee, in-kind requirement, or dedication of land imposed on development to offset the burdens created by that development on municipal services. Exactions provide only a secondary benefit to existing residents. Much has been written about U.S. Supreme Court decisions, such as *Dolan v. Tigard* (1994) 114 S.ct.2309, and Utah Supreme Court decisions, such as *B.A.M Development v. Salt Lake County*, 2008 UT 74, 196 P.3d 601 (Utah 2008), and how they mandate the balancing of burdens created by and imposed upon development. The impact fee seeks to do this. (The Utah Land Use Institute, 2014, *Utah Impact Fee Handbook and Checklists*).

Impact fees for Heber City are proportionate and related to the capital facility service demands of development. The impact fees presented in this document are based on the Impact Fees Act which includes seven evaluation factors set forth by the Utah Supreme Court decision known as *Banberry Development Corp. vs. South Jordan City*. These seven factors are incorporated into

the following objectives used for the Heber City impact fee analysis, and ensure newly developed properties bear only their equitable share of the capital costs in relation to the benefits conferred:

1. Impact fees for culinary water, pressurized irrigation, sewer, and streets are based on the anticipated cost of system improvements for each facility needed to serve existing and future development. The costs are generated using local cost factors and construction practices typical to the area. No existing facility costs or excess capacity costs are included in the impact fee calculations for Heber City, with the exception of the Heber City Public Works Facility Exp Ph 1 (W-066, S-037, T-067, and I-026). This project has been included in the impact fee analysis to pay off that portion of debt attributed to growth. All other existing excess capacity has been previously paid for by impact fees and/or operating funds. New development will benefit from excess capacity in existing facilities.
2. Public facilities will be financed by a combination of operating and non-operating funds. Revenue sources may include: user fees, special assessments, bonds, general taxes, grants, impact fees, and intergovernmental transfers. Impact fees fund non-operating projects.
3. The extent to which developed properties in Heber City have already contributed to the cost of existing capital facilities (by such means as user charges, special assessment, or payment from the proceeds of general taxes), have been take into account in the impact fee analysis.
4. The extent to which developed properties in Heber City contribute to the cost of both new and existing capital facilities in the future has been identified in the impact fee analysis.
5. Newly developed properties should be evaluated regarding the facilities that have been provided by the owners or developers as compared to common facilities provided by Heber City in other parts of the City. Credits may be available for system improvements identified in the City Master Plan. Administrative procedures for credits are outlined in an impact fee ordinance.
6. Extraordinary costs, if any, required to service newly developed properties are addressed through administrative procedures that allow independent studies to be submitted to Heber City.
7. The time-price differential inherent in fair comparisons of the amount paid at different times is addressed in the evaluation of any debt service credits for each type of impact fee. All costs in the impact fee calculations are given in current dollars with no assumed inflation rate over time. Necessary cost adjustments can be made as part of the annual evaluation and update of impact fees.

The following provisions need to be considered during collection of impact fees:

1. The service area for the streets capital facilities is City-wide, excluding the North Village and Jordanelle Ridge areas. The service area for the remaining public facilities (culinary water, pressurized irrigation, and sanitary sewer facilities) includes the entire City, excluding the Red Ledges, North Village, and Jordanelle Ridge areas. Separate geographic zones for the collection and expenditure of impact fees may be considered when a disproportionate share of the public facility cost is attributable to specific locations.
2. Heber City may adjust the standard impact fee at the time the fee is charged to:
 - Respond to unusual circumstances in specific cases.
 - Respond to a request for a prompt and individualized impact fee review for a development activity of the state, school district, or charter school.
 - Ensure that the impact fees are imposed fairly.
 - Take into account studies and data submitted by the developer.
 - Allow a credit for developer contributions toward projects identified in the master plan that offset the need to collect impact fees, such as dedicating land for a planned improvement; building and dedicating improvements beyond what is needed to serve a development; or dedicating a public facility that the City and developer agree will reduce the need for a master planned improvement.

2.3 Administration of Utility Fees

Utility fees are monthly fees Heber City uses to generate sufficient revenue to fund respective operating expenses for various facilities. Operating expenses include the monies used for personnel and contractual services, materials, supplies, depreciation, maintenance, and other miscellaneous expenses. The existing population should fund operating expenses.

The scope of this study does not include the review, analysis, or revisions to any existing utility fees for culinary water, sewer, streets, or irrigation systems. All other City fees such as taxes, hookup fees, or other fees other than impact fees are also not covered in this study.

Chapter 3

Projected Population Growth

3.1 Introduction

A pleasant living environment and a high growth rate along the Wasatch Front have caused Heber City to experience a large increase in population over the past ten years. This growing population places additional burdens on the City's public facilities. To continue providing adequate service to Heber City and maintain the current level of service to the residents of Heber City, the user capacity of the facilities must be analyzed and improved to match population growth.

The projected conditions relating to Heber City's infrastructure and facilities are based upon several assumptions such as present growth rates, economic stimuli, environmental and recreational development, and residential development. As these factors change, the projected conditions made in this Master Plan also change. To help minimize the effect of changing conditions, the recommendations made in this master plan are based upon the methodology described in this chapter within the planning period.

This master plan excludes the North Village and Jordanelle Ridge areas of the City. These areas are covered under separate master plans.

3.2 Methodology for Determining Projected Population

The method for projecting population through the year 2043 for Heber City is based on the State of Utah 2020 Census Estimates and the projected City growth rate. This rate was determined by estimating the number of vacant lots in subdivisions that are recorded or accepted, the number of lots in subdivisions that are approved but un-recorded, and number of potential lots in future subdivisions as shown in Table 3.2 below. It was assumed that by the year 2027 all the vacant lots will be built and by the year 2031 all the approved un-recorded lots would be built. By the year 2043 it was assumed that half of the potential lots in future subdivisions would be built. The grow rates were then determined based on these assumptions. The population projection to year 2043 is also compared to the projected ultimate population which is based on the current population plus generated population from projected future land development within Heber City limits and known annexations. Population projected from future development is based on the current Heber City General Plan Land Use Map. The 2043 projected population based on growth rate is currently less than then the projected Heber City ultimate population based on land use.

3.3 Results of Calculation

Figure 3-1 shows graphically the population projection to year 2043. This method assumes an average growth rate of 4.33% per year through 2031 and then it drops to 1.19% per year through 2043. The 2021 population of 16,856 was used from 2020 Census Data, and then the 2023 and future populations were estimated based on the projected growth rates described above. The estimated population is expected to increase by approximately 61.8%, from 18,347 to 29,682 people by the year 2043.

For this study where the Red Ledges area population is included, it is assumed they will have 1,682 full time residents by 2043, and assumes that 45% of the projected homes in Red Ledges will be occupied by full time residents. The remaining homes are assumed to be secondary, non-full time residents which are excluded.

Figure 3-1

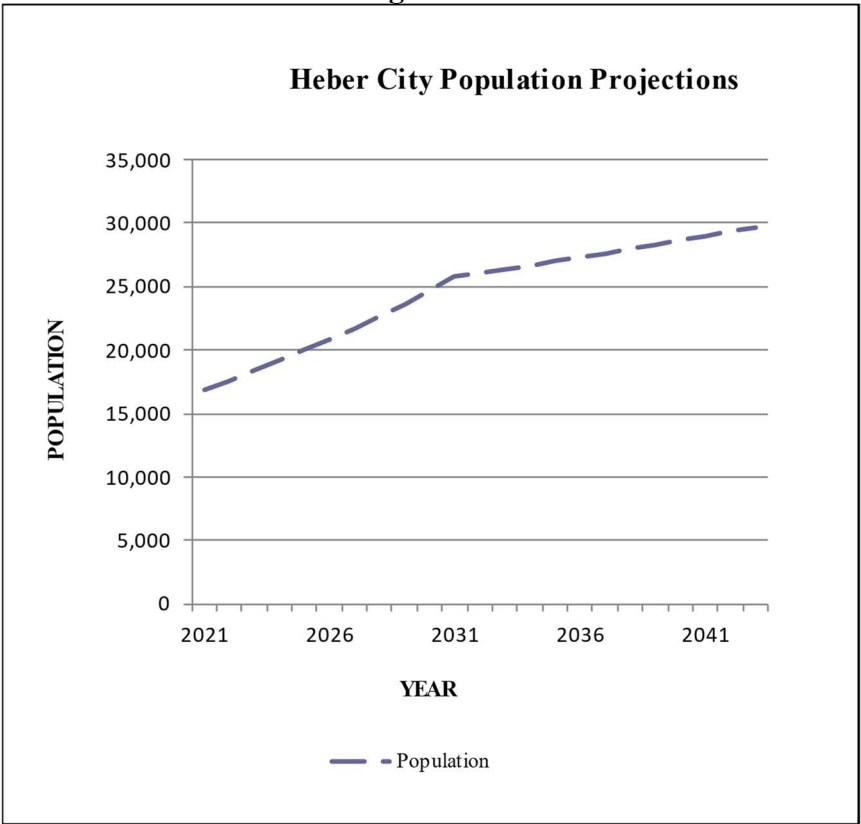


Table 3-1 lists the population growth rates projected through the year 2043. If the population increases faster than projected, the revenue generated from impact fees will need to be monitored to ensure funds are spent within the time prescribed by law. If the population increases slower than projected, the revenue generated may be insufficient and financing alternatives may need to be considered to complete projects. It is recommended that the Master Plan be updated periodically to minimize these types of revenue changes.

Table 3-1 Heber City Population Projections In Annual Increments

Year	% Chg	Total Pop	Chg Pop	Calc Growth Rates
2021		16,856		Avg Chg/Yr (2021-2031)
2022	4.33%	17,586	730	
2023	4.33%	18,347	761	
2024	4.33%	19,142	794	Avg Chg/Yr (2032-2043)
2025	4.33%	19,971	829	
2026	4.33%	20,835	865	
2027	4.33%	21,738	902	
2028	4.33%	22,679	941	
2029	4.33%	23,661	982	
2030	4.33%	24,685	1,025	
2031	4.33%	25,754	1,069	
2032	1.19%	26,061	306	
2033	1.19%	26,371	310	
2034	1.19%	26,685	314	
2035	1.19%	27,002	318	
2036	1.19%	27,323	321	
2037	1.19%	27,649	325	
2038	1.19%	27,978	329	
2039	1.19%	28,310	333	
2040	1.19%	28,647	337	
2041	1.19%	28,988	341	
2042	1.19%	29,333	345	
2043	1.19%	29,682	349	
Total Change (2023-2043)			11,335	
Estimate 2023			18,347	
Estimate 2043			29,682	

Table 3-2 lists the future residential developments in Heber City using the planned land uses in the City's General Plan. The table calculates the new residential units and ultimate population assuming the currently undeveloped land will develop at the allowed densities. Vacant lots in the existing subdivisions are also included to accurately project the ultimate population. The known number of units per development are used in some instances. The ultimate population is estimated by multiplying the total new projected number of units by the average number of persons per household, and then adding this number to the existing population. The 2020 U.S. Census reported Heber City as having an average of 3.12 persons per home.

Table 3-2 Heber City's Developments and Ultimate Population

Residential		
Development #	Subdivisions (Recorded and Accepted w/ Vacant Lots)	Vacant Lots
3	Cove at Valley Hills	7
4	Cove Estates Phase 1 & 2	4
13	Red Ledges	562
16	Valley Hills Early Phases	4
35	Stone Creek Phase 4	6
36	Wasatch Vista Plat C	42
42	The Orchard	15
61	Klein Huis	100
71	Old Mill	164
79	Sequoia	142
32a	Sawmill 2B	49
32b	Sawmill 1B	66
33a	Sawmill 4	21
33b	Sawmill 5	61
39c	Brookside Phase 3	26
39d	Brookside Phase 4	10
40a	Coyote Ridge Phase 1-5	136
40b	Springs at Coyote Ridge	108
44b	Parkview Place	43
97	Sawmill Ph 1A	70
	Subtotal	1,636
	Subdivisions (Recorded Not Accepted)	Units
	Subtotal	0
	Subdivisions (Plans Approved Not Recorded)	Units
34	Kimball Villas	64
	Subtotal	64
	Approved But Not Recorded and Subdivisions in Process	Units
26	Cove at Valley Hills Plat Amendment (Final)	3
28	Heber City Park	2
29	Meadows at Southfield Plat A and B (Final)	46
31	Red Ledges 4A and 4B	54
31	Red Ledges (Preliminary)	128
33	Sawmill Phase 6	326
40d	Coyote Ridge Phase 6	44

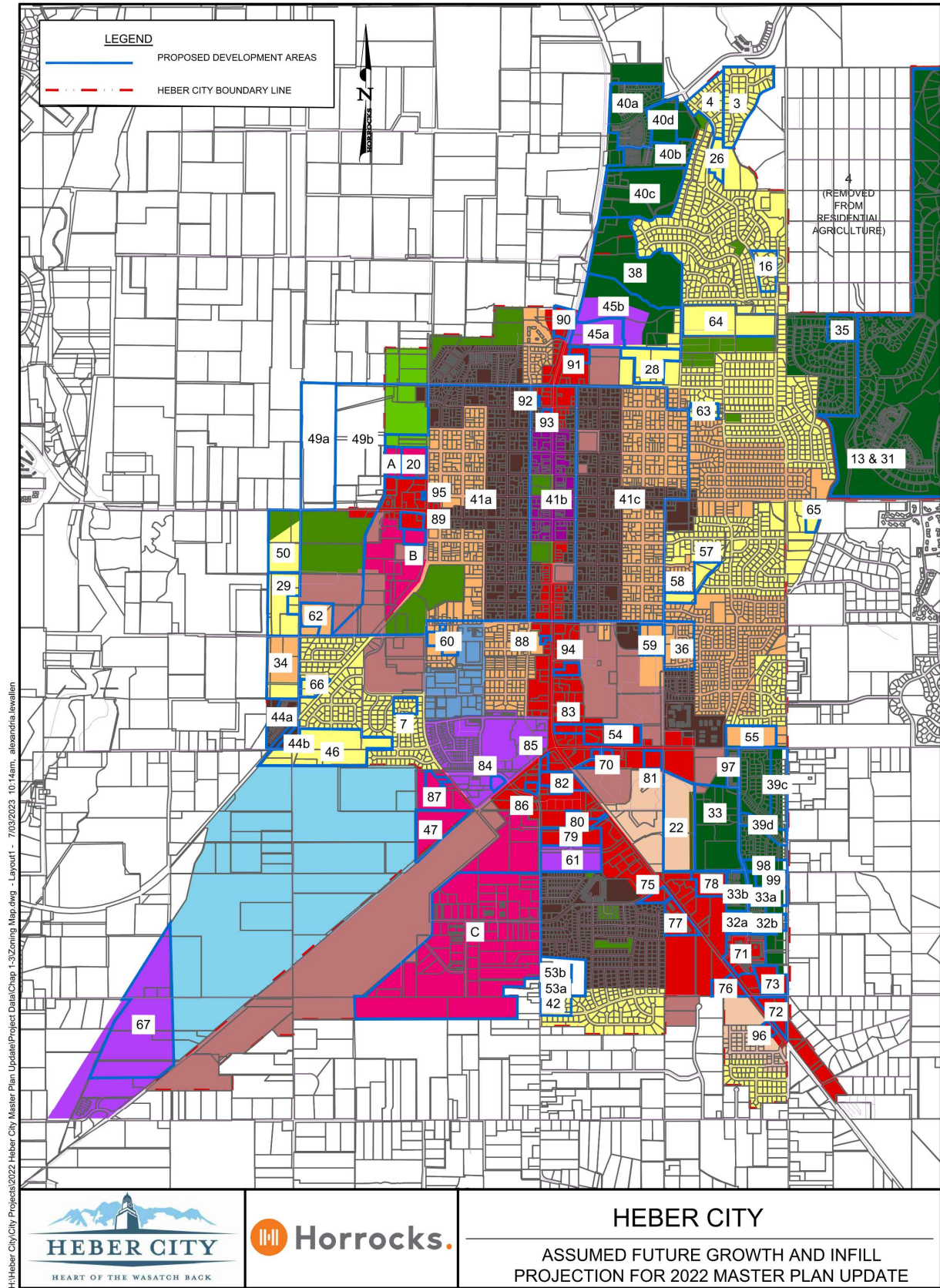
44a	Madison Meadows	11
45a	Smith's	10
45b	New London	655
	Subtotal	1,279

Development #	Potential Future Developments and Annexations	Estimated Units
38	Bassett	150
40e	Coyote Ridge Phase 7	17
41a	600 W to 100 W	180
41b	100 W to 100 E	720
41c	100 E to 500 E	180
46	Stewart and Witt (check with 3.5 units per acres)	40
50	Wasatch County (campground)	63
55	1200 South 1200 East (3.5 units per acre) (13.8 acres)	37
57	300 South 500 East (3.5 units per acre) (4.4 acres)	12
58	500 South 500 East (3.5 units per acre) (3 acres)	11
59	400 East 600 South (3.5 units per acre) (7.6 acres)	27
60	600 West 550 South (3.5 units per acre) (5.9 acres)	11
62	600 South 1200 West (4 units per acre) (10.7 acres)	43
63	400 North 600 East (R-1, 2.5 Units per acre) (4.6 acres)	12
64	Cemetery Plots	0
66	900 South Field Road Zone Change (3.5 units per acre) (4 acres)	14
67	Southwest Annexation (4 units per acre) (66 acres)	264
40c	Future Coyote	356
49a	Spring Creek	332
49b	Wasatch Highschool and MTECH	232
53a	2000 S Daniel Rd (2.5-3.5 units per acre) (13.7 Acres)	41
53b	Church	0
98	Sawmill 7	22
99	Forest Service	30
	Subtotal	2,792
	Residential Total	5,771

Potential Additional Population (3.12 per Unit)	18,006
Potential Total Population (Current Population 18,347)	36,353

Since the City will not develop to its maximum density and boundary in this study's 20-year planning window, interim 2043 residential units and population have been projected. The development units listed in Table 3-2 are distributed among the 20-year boundary and zones shown in Figure 3-2. All zones shown in Figure 3-2 are assumed for this study and require approval from the City before the land is developed. The ultimate population based on the land use projections are higher than the 2045 population projections, however, the units match up well and support the population projection approach used in this study.

Figure 3-2 Heber City Estimated Future Land Use



Chapter 4

Culinary Water System

4.1 Summary & Recommendations

Introduction

This chapter identifies the existing condition of the culinary water system as well as recommended improvements to meet the projected 20-year population demands. Impact fees are based on implementing the recommended improvements.

Future conditions in Heber City were analyzed by projecting the population through the year 2043 and calculating the number of connections or equivalent residential units (ERU's). Based upon the historical culinary water demand and the projected average yearly, peak daily, and peak instantaneous demand categories, the culinary flows are projected through the planning period. These flows are used to determine the required capacities of the culinary water source, storage, and distribution systems. Recommendations are made to maintain the current Level of Service (LOS) and provide the needed capacity for the projected population in the three categories. Water rates and connection fees are studied separately and not a part the recommendations.

The Heber City Design Criteria used in this study are summarized below:

- Demand:
 - Average Yearly - Indoor 400 gpd/ERU
 - Average Yearly - Outdoor w/o PI 437 gpd/ERU (based on 3.0 af/ac)
 - Peak Day - Indoor Average Yearly x 2.0
 - Peak Day - Outdoor Average Yearly x 3.4
 - Peak Instantaneous - Indoor Peak Day Indoor x 2.0
 - Peak Instantaneous - Outdoor Average Yearly Outdoor x 4
 - Residential Fire 1,500 gpm @ 2hrs
 - Commercial Fire 2,500 gpm @ 2hrs
- Storage:
 - Indoor Operational 400 gal/ERU
 - Outdoor Operational w/o PI 874 gal/ERU
 - Fire 300,000 gal
- Pressure:
 - Minimum Static 60 psi
 - Maximum Static 130 psi
 - Minimum Peak Day 40 psi
 - Minimum Peak Instantaneous 30 psi
 - Minimum Peak Day + Fire 20 psi
- Pipe Sizes:
 - Minimum 8-inches
- Velocities:
 - Maximum Peak Day 5 fps
 - Maximum Peak Day + Fire 10 fps

Projected Population

Heber City's population is expected to increase by approximately 61.8%, from 18,347 to 29,682 by the year 2043, excluding the North Village and Jordanelle Ridge areas. This is based on an analysis of recorded lots, unrecorded lots that have received approval, and potential future developments. At this growth rate, it is projected that an additional 4,478 ERU's (11,727-7,249 ERUs) from Residential and Non-Residential development will be added. Of these, 380 ERU's (538 - 158 ERUs) have been deducted for the Red Ledges area which is served by Twin Creeks Special Service District (TCSSD). Heber City's culinary water system is therefore estimated to have a total of 11,188 ERU's, or an additional 4,098 ERU's, by 2043. Growth beyond 2043 to Ultimate build out will be addressed in future Master Plan updates.

Projected Culinary Water Use

Using 11,188 ERU's in 2043, it is projected that the City's average culinary water use will be 5.21 million gallons per day (mgd) (11,188 ERU @ 400 gpd/ERU + 7,090 ERU @ 104 gpd/ERU) for indoor and outdoor use. Peak Day flows will be 7,956 gallons per minute (gpm) (11,188 ERU @ 400 gpd/ERU x 2.0 PF + 7,090 ERU @ 104 gpd/ERU x 3.4 PF). This use would be much higher if pressurized irrigation systems were not installed with new developments. It is estimated that 1,550 customers in the central part of Heber City do not have a secondary source of water. Installation of pressurized irrigation to 626 of these customers is currently underway. If the entire pressurized irrigation were installed in Central Heber, the projected 2043 peak flow of 7,956 gpm could be reduced by an additional 954 gpm during summer peak use (1,550 - 626 ERUs @ 437 gpd/ERU x 3.4 PF).

A draft report by Zions Public Finance which is an analysis of downtown absorption suggests that the downtown population will increase by 535 residents. The study suggests that to accommodate growth in the downtown area, there needs to be redevelopment, and highlights the use of 4-story apartment buildings. For the purposes of this report, the assumption is made that the apartment buildings will use xeriscape, and therefore the increase in culinary outdoor demand in the downtown area will be negligible. There will however be approximately 171 ERU's added to the culinary system in the future ERU estimate for indoor use.

Recommended Culinary Water System Improvements

Capital improvements recommended to meet the projected population demands are shown in Figure 4-1. These recommendations were determined using a computer model of Heber City's culinary water system, projected culinary water flows, and input from City officials. A detailed listing of the recommended improvements is given below. Completed or deleted projects from previous master plans have been removed from the listing.

Projects labeled as "Ultimate" are beyond the 20-year planning window and therefore the improvement cost and associated populations served have been excluded from impact fee calculations.

W-005 Daniel Road – 2200 S to 2400 S (8-inch): An 8-inch pipeline should be constructed from where the 12-inch water line currently ends in Daniels Road at approximately 2200 South to the 8-inch water line at approximately 2400 South. This line is needed to provide flow and pressure to the south end of City, and loop the dead-end lines in Daniels Road for future development. This line runs through a portion of Daniel Road in Daniel City without developers to pay for it, therefore impact fees will be used.

W-007 East Bypass - US 40 to Mill Road (12-inch): A 12-inch line should be constructed along the East Bypass and Valley Hills Drive from US 40 to Mill Road. This line is needed for the future development in this area. Development will install the line within the future roads as the area develops, with impact fees paying for over-sizing above 8-inch.

W-008 1900 South - US 40 to Mill Rd (12-inch): A 12-inch line should be constructed along 1900 South from US 40 to Mill Road to provide flow to the area east of US 40 between 1200 South and 2400 South. Development will install the line within the future roads as the area develops, with impact fees paying for over-sizing above 8-inch. Approximately 425 was installed by the Sawmill Community Phase 5 between Sawmill Blvd and Alley 4.

W-019 2400 South- Daniel Rd to Airport Rd (12-inch): A 12-inch line should be constructed in 2400 South from Daniels Road to 850 West, then north along 850 West to Airport Road to serve the area South of the airport. Development will install the line within the future roads as the area develops, with impact fees paying for over-sizing above 8-inch.

W-025 1250 South PRV: A PRV should be installed on 1250 South and approximately 900 West between the high and low pressure zones, to loop the system and provide adequate fire flow in the lower zone. This PRV will help provide adequate capacity for the new development area in the lower zone. Impact fees pay for this PRV.

W-027 New Source Development (2400 gpm): A new source, independent of existing water sources, should be identified. Timing for when this source will be needed and fully developed will depend on yields from existing sources and whether they can be expanded. It will also depend on demands from future growth, system loss improvements, and pressurized irrigation continuance. If pressurized irrigation continues to be installed in new development and Central Heber, the quantity of culinary water used will be reduced and eliminate the need for a new source in the next 7 years.

W-028 Master Plan Update: The Master Plan should continue to be reviewed annually with major updates every five years.

W-029 Aerial Photography Update: The Aerial Photography should be updated every five years.

W-035 700 North - 400 E to Main St (8-inch): An 8-inch pipeline should be constructed in 700 North from 400 East to the west side of Main Street. This line is necessary to supply adequate pressures to this area and to supply adequate fire flow and capacity from increased demands due to the infill of new homes and business in this area. Developers in this area should install this line.

W-036 400 East - 700 N to 500 N (8-inch): An 8-inch pipeline should be constructed in 400 East from 700 North to 500 North. This line is necessary to supply adequate pressures to this area and to supply adequate fire flow and capacity from increased

demands due to the infill of new homes and business in this area. Developers in this area should install this line.

W-041 US 40 – 2200 S to 2400 S (Center Creek Road) (West) (8-inch): An 8-inch pipeline should be constructed along US 40 from 2200 South to 2400 South on the west side of US 40. This line is needed to loop the water line on US 40 and for future demands. There is not a developer here that will likely put this water line in, therefore, impact fees will pay for 100% of this line.

W-042 1500 South – Dusty Baker Lane (1500 E) to US 40 (8-inch): An 8-inch pipeline should be constructed at approximately 1500 South from 150 E to US 40. This line is needed to loop the water line on US 40 and supply adequate fire flow and capacity to new development in this area. Developers in this area should install this line.

W-043 US 40 – 1350 S to 1450 S (West) (8-inch): An 8-inch pipeline should be constructed along US 40 from approximately 1350 South to approximately 1450 South as shown on Figure 4-1 on the west side of US 40. This line is needed to loop the water line on US 40 and supply adequate fire flow and capacity to new development in this area and outside this area. Developers in this area should install this line.

W-045 1200 South – 850 W to 1200 W (8-inch): An 8-inch pipeline should be constructed in 1200 South from 850 West to 1200 West. This line is needed to loop the water line and to supply adequate fire flow and capacity to new development in this area and outside this area. Developers will likely install this line.

W-046 1200 West – 1200 S to 1100 S (8-inch): An 8-inch pipeline should be constructed in 1200 West from 1200 South to 1100 South. This line is needed to loop the water line and to supply adequate fire flow and capacity to new development in this area and outside this area. Developers will likely install this line.

W-047 600 West – 450 S to 650 S (8-inch): An 8-inch pipeline should be constructed in 600 West from approximately 450 South to 650 South. This line is needed to loop the water line and to supply adequate fire flow and capacity to new development on the west side of town. There is not a developer here that will put this water line in, therefore, impact fees will pay for 100% of this line.

W-053 550 North – 550 E 750 E (8-inch): An 8-inch Pipeline should be constructed from 550 East to 750 East. This line is needed to replace the existing 4-inch pipe that currently does not supply adequate fire flow for this road. It is assumed future growth contributes 20% towards the need for this project, therefore, impact fees will pay for 20% of this project.

W-054 Future Tank Storage (1.4 mg): Additional storage will be necessary. A new location will need to be found or one of the existing tanks will need to be expanded to meet the future storage demands. However, if pressurized irrigation continues to be installed in Central Heber and new development, the quantity of culinary water used will be reduced and eliminate the need for new tank storage in the next 7 years. The cost for this project will remain in the impact fee analysis since the funds generated will be

needed for either new storage or to help fund the pressurized irrigation system. W-054 is in the 2023 to 2043 planning window and assumes the funds will be used to complete the pressurized system.

(Ultimate) W-058 South Field Rd - US 189 to 1200 S (12-inch): A 12-inch Pipeline should ultimately be constructed from along South Field Road from US 189 to 1200 South. The 12-inch diameter is specifically for the requirements of this area, therefore, if annexed, the developers will install this line if constructed.

(Ultimate) W-059 US 189 - 2500 S to South Field Rd (12-inch): A 12-inch Pipeline ultimately should be constructed from along US 189 from the 2500 South to South Field road. The 12-inch diameter is specifically for the requirements of this area, therefore, if annexed, the developers will install this line if constructed.

W-060 500 North to Midway Ln (8-inch): An 8-inch Pipeline should be installed from 500 North through the future development to Midway Lane (100 South). This line is needed to supply water service to the new High School and development in this area. The annexation and developers will install this line.

W-061 US 40 or W-061A Ostler Peak Rd – 1600 North to 900 North (12-inch): A 12-inch Pipeline should be installed along the east side of US 40 or along Ostler Peak Lane from 1600 North to 900 North to tie into project W-007. This line is needed for the future development in this area. Development will install the line within the future roads as the area develops, with impact fees paying for over-sizing above 8-inch. A portion of this line near 1700 North has been constructed with Coyote Springs development.

W-063 US 40 – 1500 S to 1200 E (East) (8-inch): An 8-inch pipeline should be constructed along US 40 from 1500 South to 1200 East on the east side of US 40. This line is needed to supply water service to new development along US 40. Developers in this area should install this line. Approximately 700 LF of this line has been completed with Strawberry Storage.

W-064 Valley Drive PRV: An existing PRV near Valley Drive is currently not functioning and should be re-built as a working PRV. This is a maintenance project to be funded by operating funds.

(Ultimate) W-065 2400 South – 850 W to US 189 (12-inch): A 12-inch pipeline should ultimately be constructed in 2400 South between South Airport Road and US 189. This line is needed to loop the water line and to supply adequate fire flow and capacity to new development in this area. There is no one developer here that will put this water line in, therefore, impact fees will pay for 100% of this line if constructed.

W-066 Heber City Public Works Facility Expansion Ph.1: The Heber City Public Works Department Building was expanded in 2018 to accommodate growth and maintain the same level of service on the City's street system. Impact fees were used to pay for the Water portion of this expansion which was debt funded with payments continuing through the master plan 20-year window. See Appendix A for construction cost allocation.

W-067 600 East – 1300 S to Hidden Creek Ln (8-inch): An 8-inch Pipeline should be installed along 600 East from 1300 South to Hidden Creek Lane (1900 South). This line is needed to supply water service to the development in this area. The developers will need to install this line.

W-068 Heber City Public Works Facility Expansion Phase 2: The Heber City Public Works Department Building and Maintenance Site will be expanding to maintain the current level of service that the Public Works department currently provides in maintaining the culinary water system. Phase 2 will likely commence around 2028. Impact fees will pay for all of this phase since it is only needed for future growth.

W-069 2400 South PRV: A PRV should be installed on 2400 South between the high and low pressure zones to loop the system and provide adequate fire flow in the lower zone. The PRV will help provide capacity for the new development area in the lower zone. Impact fees should pay for this PRV.

Source Protection

Heber City has submitted the Drinking Water Source Protection plans for each of its wells and spring as required by section R309-600 and R309-605 of the Utah Administrative Code. Heber City must also submit an Annual Consumer Confidence Report on water quality.

Water Rights

Water usage compared to water rights should be reviewed on a yearly basis to determine if changes need to be made. It is recommended in this study that the City continue expanding its pressurized irrigation system into Central Heber to help reserve culinary water for indoor purposes and extend its water rights and culinary supplies.

Heber City currently has municipal water rights with an allowable depletion of 7,025 ac-ft. Approximately 1,744 ac-ft of these rights come from Change applications filed in 2019 and 2020 for Timpanogos and Wasatch Irrigation Company shares. The Change applications converted 379 Timpanogos shares (486 ac-ft) and 535 Wasatch shares (1,258 ac-ft) to municipal use with the flexibility to use them for either culinary (Depletion) or irrigation (Diversion) purposes. They are currently being used for the existing pressurized irrigation system.

Approximately 5,282 ac-ft of depletion water rights, which excludes the previously mentioned Wasatch and Timp converted shares, are available for use in the culinary water system. These municipal rights are sufficient to meet the 2023 culinary system average demands.

It is estimated that an additional 4,098 (11,188 - 7,090) ERU's will connect to the system by 2043. Approximately 1,229 ac-ft (4,098 ERU's x 0.30 ac-ft/ERU) of municipal depletion water rights will be needed for indoor use from these connections. This will require the City, over the next 20-years as growth occurs, to continue to do additional conversions of the irrigation shares transferred to the City by development to meet the needs of the culinary system.

Heber City currently has approximately 2,266 ac-ft of diversion water rights in irrigation shares that have not been converted to municipal use. Since the City does not meter all pressurized irrigation connections, culinary water use data has been used to estimate outdoor use and the

water rights needed for the pressurized irrigation system and is discussed further in Section 4.3 and in Chapter 8 Pressurize Irrigation. The City is currently in the process of retrofitting secondary water services with meters and should be completed by 2028. At that point metered data can be used in future master plan updates.

All water has been adjudicated in Heber Valley. Therefore, additional water rights cannot be obtained for new wells unless it is purchased from agriculture or obtained through land annexations and/or developments. Because of this, it is recommended that the City continue requiring annexed land to provide the required water for indoor and outdoor use for each new development. Water right acquisition is not part of the impact fee analysis in this study.

I:\Heber City\City Projects\2022 Heber City Master Plan Update\Project Data\2022 Master Plan Maps\Fig 4.1 Water Future 2022.dwg - Layout11 - 12/20/2023 03:37pm, ChuckR

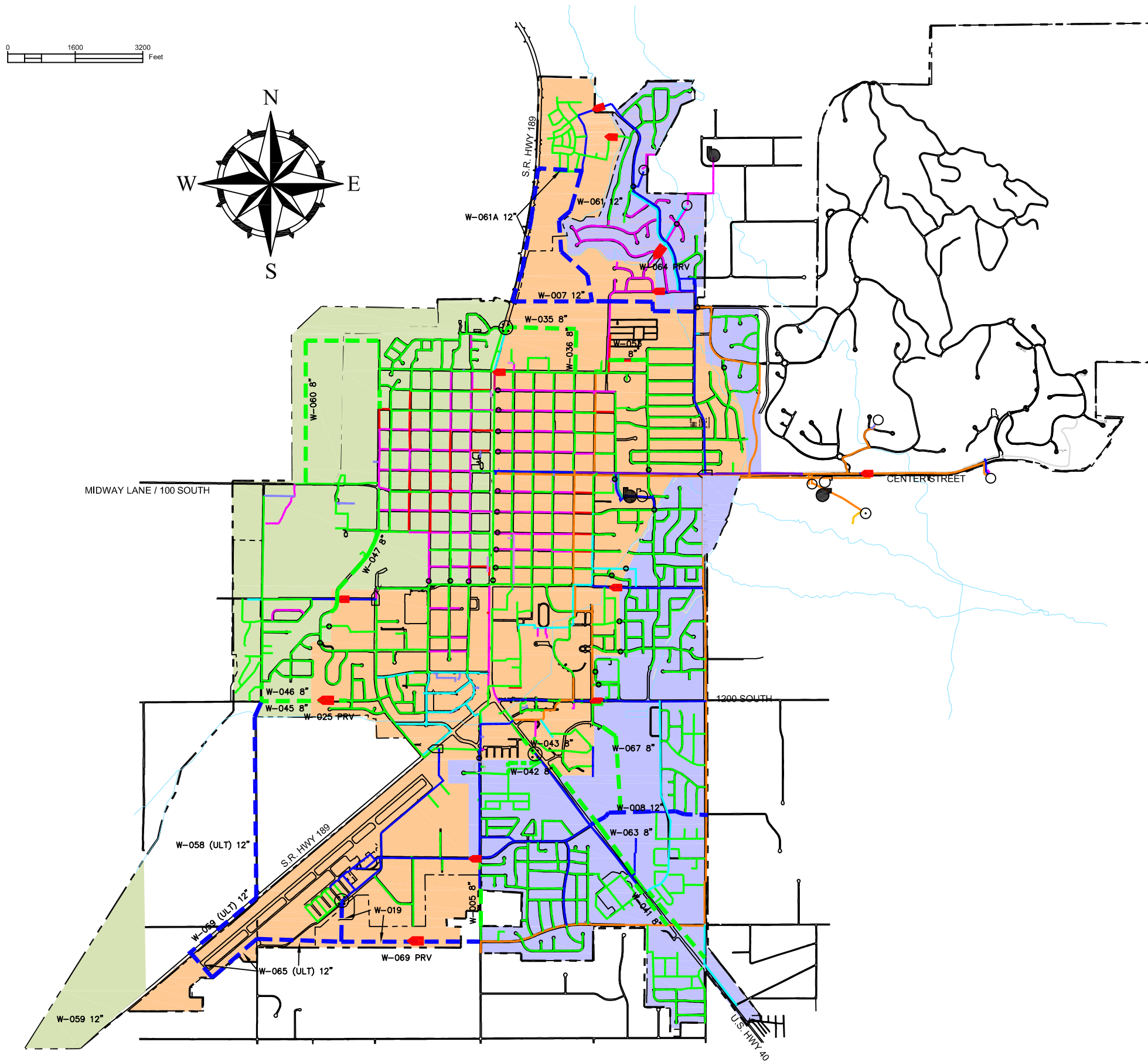


FIGURE 4-1

HEBER CITY

FUTURE CULINARY WATER SYSTEM

- ULTIMATED BUILDOUT BOUNDARY
- - - HEBER CITY BOUNDARY
- EXISTING ROADS
- ACTIVE PRV
- INACTIVE PRV
- WELL PUMP
- ACTIVE BOOSTER PUMP
- INACTIVE BOOSTER PUMP
- SPRING
- TANK
- ⊙ CLOSED VALVES

EXISTING WATER LINES

PIPE SIZE (inches)	PIPE COLOR
4	Red
6	Pink
8	Green
10	Cyan
12	Blue
16	Orange
18	Yellow
20	Purple

FUTURE WATER LINES

PIPE SIZE (inches)	PIPE COLOR
8	Green
10	Cyan
12	Blue

- FUTURE PRV
- ⊙ FUTURE CLOSED VALVES

FUTURE TANK AND SOURCE
LOCATION TO BE DETERMINED

WATER ZONES

ZONE NAME	ZONE COLOR
-----------	------------

EAST ZONE (LINDSAY HGL 5960)	Blue
MCNAUGHTON (HGL 5890)	Orange
WEST ZONE (BROADHEAD HGL 5735)	Green

FOR EXISTING REVISIONS, SEE
OTHER MAP (4.2)



728 WEST 100 SOUTH #2
HEBER CITY, UTAH 84032
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Operation

Heber City has converted its water meters to be read remotely. This conversion has decreased operating costs and enhanced the water billing process by allowing monthly water billings to be based on actual flows instead of estimated flows. Meters are currently read year-round. Heber City has also adopted a Water Conservation Plan which provides guidelines for water conservation and will help reduce water consumption as it is followed.

System losses have been normal over the last several years according to City production records. Typical municipal systems lose between 15-25% of the water flowing through the system. Heber City has historically averaged yearly losses between 3 and 17%, however, the City does not have current loss data due to errors in the production data. It is recommended that the City continue to leak test major water lines to find and correct the losses through the pipes. It is also recommended that the SCADA system, control valves, and metering for the water system be checked for accuracy and continue to be monitored and maintained.

Although recent system losses are unknown, water use per ERU measured at the meter has not significantly decreased in recent years. Therefore, water losses are not creating an increase or decrease in metered water use per ERU for this study. Any improvement projects completed by the City to correct water loss deficiencies are not funded by impact fees.

Impact Fee Recommendations

It is recommended that Heber City revise the current minimum culinary water system impact fee from \$2,826 to a rate of \$2,778 per ERU (0.75-inch diameter). All residential connections, including but not limited to apartments, trailers, condos, and houses, will be charged the minimum impact fee of 1 ERU or greater.

Historic reviews of water use data in Heber City in the past have shown no consistent measurable difference in indoor water use between individual homes, apartments, or trailer connections. No reduction has therefore been made for different residential uses. Outdoor water on new residential homes is generally provided through the secondary irrigation system instead of the culinary system, and therefore is not included in the indoor use portion for new construction.

4.2 Culinary Water Use

From the projected population, the additional future number of culinary connections is determined along with the number of future ERU's. Using State design regulations and historical culinary demands, the future water demands, including average yearly, peak daily, and peak instantaneous demands, are projected through the planning period.

Projected Population

The projected population for Heber City from 2023 to 2043 is discussed in Chapter 3 - Projected Population Growth. The 2023 population was estimated to be 18,347. The 2043 Heber City population was projected to be 29,682.

Historical Culinary Water Use

From 1999 through 2005 the amount of water Heber City billed all connections through their meters averaged 472 gallons per day (gpd) per ERU for both indoor and outdoor usage. For the

years 2006 through 2010 the average was approximately 395 gpd. For the years 2011 through 2015 the average was approximately 360 gpd. For the years 2016 through 2021, the average was approximately 299 gpd. This does not include losses from the sources to the meter. This shows that through conservation programs and pressurized irrigation water, the City has reduced the billed culinary water usage per residential connection. Heber City’s historical water usage data is contained in Appendix B.

Equivalent Residential Unit’s (ERU's)

Water usage from typical residential connections differs from the usage of commercial, church, government, and other non-residential connections. To evaluate residential and non-residential connections on an equal basis, Equivalent Residential Unit’s (ERU’s) are used to equate the different types of connections. For this study, ERU’s per non-residential connection were approximated by dividing the historical metered winter water use of commercial, church, and government use by the average residential gpd per ERU and by the total number of non-residential connections. Between 2019 and 2021, the average ERU’s calculated per non-residential connection was approximately 4.1.

In terms of ERU’s, 2023 had 5,143 residential units (5,302 - 159 Red Ledges ERU's) and 1,948 non-residential ERU’s (475 non-residential conn @ 4.1 ERU/conn), connected to the system.

The total number of projected residential, church, government, and commercial ERU’s, are shown in Table 4-1. Red Ledges ERU’s are subtracted from the Residential ERU’s to get the total.

Table 4-1 Projected New ERU’s in Five Year Intervals

Year	Residential Units	Non-Residential ERU's	New ERU's	Red Ledges ERU's	Total ERU's*
2023 (est)	5,302	1,946		(159)	7,090
2024-2028	1,252	459	1,711	(36)	8,765
2029-2033	1,067	392	1,459	(79)	10,146
2034-2038	464	170	635	(92)	10,688
2039-2043	493	181	674	(174)	11,188
Total	8,578	3,149		(539)	11,188

* Residential Units have been adjusted for Red Ledges

Indoor and Outdoor Water Use

Culinary water used by a connection can be divided into indoor and outdoor water use categories. These categories vary widely based on several factors, i.e., residential or non-residential, availability of pressurized irrigation, amount of landscaping, etc. Therefore, the methodologies used in planning and developing fees also take these variables into account. For example, a commercial restaurant with no landscaping may use the same amount of water in the summer as in the winter. However, an office building in a location where pressurized irrigation is not available may use up to three times more water in the summer than in the winter if it has a large amount of vegetative landscaping. Impact Fees are collected based on projected use.

Indoor Water Use

The State of Utah Public Drinking Water Rules (R309-510) require that sources provide sufficient supply to meet Peak Day indoor water demands. The rules recommend using 800

gpd/ERU for Peak Day demands (2 x 400 gpd/ERU). Heber City's current indoor average winter use metered at the home was 180 gpd/ERU, between October and May of 2019 to 2021. The 2018 master plan showed the average indoor use metered at the home to be 219 gpd/ERU, between October and May of 2014 to 2016. This suggests the City's overall use is continuing to decline.

Water production records measured at the source from 2019 to 2023 are not available. However, production records from the previous master plan showed the average winter production amount to be 264 gpd/ERU. Comparing connection metered use with source production use shows that there are some losses in the system. Until more accurate records are available, this report will continue using 264 gpd/ERU as the indoor average residential amount produced at the source.

Minimum sizing requirements for water sources, storage tanks, and water lines are specified in R309-510. Utah Code 19-4-14 supersedes some of the statewide requirements by directing the Division of Drinking Water (DDW) to establish system-specific requirements for public water systems where data is available. Until DDW sets these system-specific sizing requirements for a water system, the statewide standards of R309-510 apply. The system-specific requirements are based on the three most recent years of water use data collected and reported to the Division of Water Rights. This data is used to determine the system-specific Peak Day and Average Yearly demands per ERU. Once approved by DDW these new system-specific demands can then be used in lieu of the general statewide planning criteria.

Since the City does not have water source production data for the current year to estimate Peak Day and Average Yearly demands over the last three years, the City will continue using the State requirement of 400 gpd/ERU for Average Yearly, and 800 gpd/ERU for Peak Day indoor water use demand calculations. These numbers are in terms of a depleted municipal water use.

Outdoor Water Use

State Drinking Water Rules require that sources provide sufficient supply to meet Peak Day and Average Yearly outdoor water demands in addition to the indoor requirements. Compliance with this rule was evaluated three different ways. 1) Using the State Drinking Water Rule procedure, 2) Estimating actual usage from City records, and 3) Using State Division of Water Rights Rules.

Outdoor Use per State Drinking Water Rule Procedure:

- Determine consumptive water use zone in which Heber City resides (Zone 2).
- Determine the Peak Day and Average Yearly demands using Table 510-3 found in State Rule R309-510.

Using this procedure results in an estimated Peak Daily demand for Heber City sources of 4,032 gpd/ac (2.8 gpm/ac), or an Average Yearly demand of 1,098 gpd/ac (1.23 af/ac).

To convert outdoor usage from a per acre basis to a per ERU basis, several subdivisions in Heber City were surveyed. The observations indicated that on 0.25 to 0.5 acre lots, 70% of the lot is available for irrigation, and of that amount, 70% on average is irrigated. This study therefore assumes that, on average, 49% of a typical lot is irrigated (70% x 70%). It also assumes that there are three (3) connections per gross acre for residential land use. Using these assumptions, and the State Drinking Water criteria, results in a Peak Day demand of 659 gpd/ERU, and an Average Yearly demand of 179 gpd/ERU as shown below.

$$\frac{4,032 \text{ gal}}{\text{irr ac} - \text{day}} \times \frac{0.49 \text{ irr ac}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{3 \text{ ERU}} = 659 \text{ gpd/ERU}$$

$$\frac{1.23 \text{ ac-ft}}{\text{irr ac} - \text{yr}} \times \frac{0.49 \text{ irr ac}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{3 \text{ ERU}} \times \frac{325,851 \text{ gal}}{1 \text{ ac-ft}} \times \frac{1 \text{ year}}{365 \text{ day}} = 179 \text{ gpd/ERU}$$

Outdoor Use per City Records:

Outdoor water use by City residents is estimated by dividing the Average Yearly outdoor water demand on the culinary system by the number of residents that do not have access to pressurized irrigation. It is estimated that 1,685 ERU's (924 Central Heber + 241 Valley Hills + 520 Other) use the culinary system for all their outdoor use. The "Other" ERU's were calculated to be 434 ERU's by subtracting Central Heber and Valley Hills ERU's from the total customers on City records that have culinary, but no pressurized irrigation connection, then increasing this number by 20% to assure all customers without pressurized irrigation are captured.

The 2018 master plan estimated Heber City's Average Yearly outdoor use at its sources (2014 to 2016) on the culinary system to be 770,559 gpd. Dividing this by 1,918 ERU's resulted in 402 gpd/ERU or 2.76 ac-ft per irrigated acre as shown below.

$$\frac{402 \text{ gal}}{\text{ERU} - \text{day}} \times \frac{3 \text{ ERU}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{0.49 \text{ irr ac}} \times \frac{1 \text{ ac-ft}}{325,851 \text{ gal}} \times \frac{365 \text{ day}}{1 \text{ yr}} = \frac{2.76 \text{ ac-ft}}{\text{irr ac} - \text{yr}}$$

For this master plan current production data was unavailable, therefore outdoor demand at the sources was approximated by adding system losses back to metered use data. A 17% loss in demand at the source is equivalent to a 20.5% increase in the demand at metered connections. Example calculations are shown below:

$$\frac{\text{Percent Loss in Production Water}}{} = \frac{(264 \text{ gpd/ERU} - 219 \text{ gpd/ERU})}{264 \text{ gpd/ERU}} = 17\%$$

$$\frac{\text{Percent Increase from Conn. Use}}{} = \frac{(264 \text{ gpd/ERU} - 219 \text{ gpd/ERU})}{219 \text{ gpd/ERU}} = 20.5\%$$

The current three year average outdoor metered connection use is 667,714 gpd. Increasing this number by 20.5% results in an average outdoor source use of 804,595 gpd. This approximated production demand results in an Average Yearly demand of 348 gpd/ERU (804,595 gpd / 2,311 ERU's) solely using culinary for outdoor use or 2.4 ac-ft per irrigated acre. This suggests that outdoor use may be trending downward, but it cannot be verified until additional production data is available.

Outdoor Use per Division of Water Rights Duty:

One other method for calculating outdoor use is using the Utah Division of Water Rights duty value. The duty value is an allowable Average Yearly diversion amount of 3.0 ac-ft/ac which converts to 437 gpd/ERU for outdoor watering, assuming three connections per acre and 49% of a lot is irrigated.

$$\frac{3 \text{ ac-ft}}{\text{irr ac} - \text{yr}} \times \frac{0.49 \text{ irr ac}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{3 \text{ ERU}} \times \frac{325,851 \text{ gal}}{1 \text{ ac-ft}} \times \frac{1 \text{ year}}{365 \text{ day}} = 437 \text{ gpd/ERU}$$

Of the three methods analyzed, the Division of Water Rights Duty of 437 gpd/ERU appears to best represent the average outdoor demand experienced in Heber City. This usage was used in the 2018 master plan and is slightly higher than the 402 gpd/ERU estimated at that time when City source production records were available. To be conservative, and until accurate production data is again available, 437 gpd/ERU will continue to be used in this study.

All significant future development is assumed to have pressurized irrigation available, therefore the total amount of culinary water used outdoors should not increase and has been held constant for this report. If, however, pressurized irrigation continues to be installed in Central Heber, future tank and source needs projected within the 20-year planning period may be postponed, or possibly eliminated. It is estimated that the average outdoor demand on the culinary system would be reduced to 47 gpd/ERU (2,311 - 1,550 ERU's @ 437 gpd/ERU and 7,090 Total ERUs) if pressurized irrigation is installed in Central Heber. Historic meter connection and water production data are shown in Appendix B.

The outdoor Peak Day demand used in this study is 1,486 gpd/ERU using a peaking factor of 3.4. The Peak Day peaking factor comes from multiplying a factor of 2.0 for the irrigation occurring over a 6-month use period, by a factor of 1.7 for the hottest days during that period.

The outdoor use numbers in this section are in terms of a diversion water use. Additional information on diversion, depletion, and outdoor use from the pressurized irrigation system are covered in Chapter 8 Pressurized Irrigation.

Projected Number of Water Connections

The projected number of new residential water connections is determined using the growth numbers in Chapter 3. The residential connections are assumed to increase at the same rate as population growth. In 2023 there were estimated 5,143 (5,302 - 159) residential connections, not including Red Ledges.

Commercial, church/government, and other non-residential connections are also assumed to increase at a rate equal to the City's projected population growth rate. In 2023 there were 475 commercial, church, and government connections.

In Heber City, there were no agricultural connections in 2023, therefore, agricultural connections will not be counted in the future non-residential connections.

Projected Areas of Development.

To relate the projected population to the improvements needed to serve them, the areas expected to be developed also need to be determined. The areas projected to be developed by the increased population are determined based upon the existing zoning regulations, available land within City limits, and land presently planned to be annexed.

City officials have anticipated where and how future development will occur. This study uses the General Plan Land Use map from Heber City's Planning department for the planning area which is shown in Figure 3-2. More detailed information concerning the future development areas and

locations is shown in Chapter 3 Population.

Projected Culinary Water Use

Utah State regulations require sources to be capable of meeting peak daily flows, storage to meet average daily flows, and the distribution system to meet peak instantaneous or peak day plus fire flows whichever is greater. In Heber City peak day plus fire flow is the governing condition.

A definition of the flows required by the City's culinary water system will be given in the following paragraphs. These flows will be used to determine culinary water improvements needed to meet the projected demands of the population.

Average Yearly Flow

The Average Yearly flow is the total annual flow divided by 365 days.

Peak Daily Flow

Peak Daily flow is the maximum day flow during the year. For Heber City, historical production records for the last three years are unavailable, therefore the State requirement and prior master plan Peak Day flow of 2.0 times the indoor Average Yearly flow will continue to be used.

The outdoor Peak Day demand is based on a 6-month use period with the peak months being July and August. This equates to a factor of 2.0 for the 6-month period and an additional 1.7 peaking factor for the hottest days, for a total peaking factor of 3.4.

Peak Instantaneous Flow

Peak instantaneous flow is the maximum flow for any given hour during the year. The water system will reach Peak Instantaneous demand conditions during the summer when both indoor and outdoor water use is high. This large demand can increase velocity which reduces pressure.

Rule R309-510-9 states that the hydraulic model must either apply an instantaneous peaking factor or use actual Peak Instantaneous flow data to account for indoor Peak Instantaneous demand.

Alternatively, rule R309-510-9 also states that the Peak Instantaneous demand for a single pipeline can be calculated for indoor use using Equation (1). The variable N in the equation is the total number of ERU's on the pipeline; Q is in gallons per minute (gpm).

$$\text{Equation (1)} \qquad Q=10.8N^{.64}$$

According to Rule R309-510-9, Equation (1) should only be used to estimate the flow required for N connections from a single pipeline and should not be used to estimate node or junction demands utilized in hydraulic analysis.

State of Utah Code allows the hydraulic model to apply an instantaneous peaking factor to account for Peak Instantaneous indoor demand, that criteria of 2.0 times the Peak Day demand is being used for this report.

Outdoor Peak Instantaneous demand using this method is calculated by multiplying the Average Yearly outdoor culinary demand by four which equates to approximately 7.43 gpm per irrigated

acre or 1,748 gpd/ERU (437 gpd/ERU or 1.86 gpm/ac x 4). The factor of 4.0 is derived from the total water being used over 6-months of the year, with a peak instantaneous factor of 2.0 applied. This is more than the amount that would be determined using Table 510-7 in the State Rule R309-510-9 for the Heber City area, which would be 5.60 gpm per irrigated acre. See Chapter 8 Pressurized Irrigation Use.

$$\frac{437 \text{ gal}}{\text{ERU} - \text{day}} \times \frac{1 \text{ day}}{24 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{3 \text{ ERU}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{0.49 \text{ irr ac}} = \frac{1.89 \text{ gpm}}{\text{irr ac}}$$

To facilitate the methodology used calculate future needs, the Outdoor Peak Instantaneous demand of 1,748 gpd/ERU is spread across the City's total culinary 7,090 ERU's for 2023, resulting in a prorated outdoor use number of 415 gpd/ERU (1,748 gpd/ERU x 1,685 ERU / 7,090 ERU).

Heber City does not have a historical record of the combined Peak Instantaneous flow; therefore, the State criteria is used in this study.

System Losses

Distribution systems have inherent losses that are a function of the size of pipe, joint construction, temperature, and age of the system. Typical municipal systems lose as much as 10 to 25% of the water flowing through the system. Losses are based on comparing the total yearly metered flow from the sources with the total yearly flow metered at connections. Heber City's highest yearly loss for the past three years is unavailable due to inaccurate production data, so for the purposes of this report, the previous master plan loss of 17% will continue to be used. This is a conservative assumption because several water replacement projects have been completed since the last master plan update, further reducing leakage. It recommended that the City continue to leak test major water lines in an ongoing effort to reduce pipeline losses. It is also recommended that the SCADA system, control valves, and metering for the water system continue to be checked and monitored for accuracy and proper functioning to further minimize system losses.

Fire Flow

Heber City has adopted the Uniform Fire Code to determine the fire flows required for buildings within the City. The fire code determines the size and duration of flow that will be required. The amount of fire flow required for a building is based on the type of construction, square footage, and distance from other buildings.

For this study fire flows will be calculated using a minimum of 1,500 gpm for 2 hours for residential and 2,500 gpm for 2 hours for commercial uses. This criterion was implemented based on recommendations from the Wasatch County Fire Chief. In cases where fire flow requirements for buildings exceed these criteria, fire sprinkling will be required.

Summary of Projected Water Flows

Total projected water use through the year 2043 includes indoor and outdoor culinary usage and fire flows. Water losses inherent in the system are included in the numbers used. Average Yearly indoor and outdoor usage is calculated using 400 gpd per ERU for indoor use plus 437 gpd per ERU for those units which only use culinary water for outdoor use.

As previously mentioned, it is estimated that approximately 1,685 ERU's (924 Cent Heber + 241 Vly Hills + 520 Other) solely use the culinary system for outdoor use and/or do not have pressurized irrigation available. To facilitate the methodology used to take these users into account, and calculate future needs, the design outdoor usage of 437 gpd/ERU was spread across the City's total 2023 ERU's of 7,090, resulting in a new outdoor use number of 104 gpd/ERU. It is assumed that the total outdoor use number will either stay constant or be further reduced as pressurized irrigation continues to be installed in all new developments. If the City's policy on pressurized irrigation changes in the future, then these assumptions will need to be revisited. Table 4-2 shows the projected demands throughout the planning period.

Table 4-2 Required Minimum Capacities for Indoor and Outdoor Water Use

Year	Number of ERU's*	Average Yearly Demand (mgd)	(ac-ft)	Peak Day Demand (mgd)	(gpm)	Peak Day Demand w Cent Heber PI (mgd)	(gpm)	Peak Day + Fire (gpm)	Peak Instantaneous (gpm)
2023	7,090	3.57	4,003	8.18	5,680	6.80	4,726	8,180	9,921
2028	8,765	4.24	4,753	9.52	6,611	8.15	5,656	9,111	11,783
2033	10,146	4.80	5,372	10.62	7,377	9.25	6,423	9,877	13,316
2038	10,688	5.01	5,615	11.06	7,679	9.68	6,725	10,179	13,919
2043	11,188	5.21	5,839	11.46	7,956	10.08	7,002	10,456	14,474

* Residential Units have been adjusted for Red Ledges

Years 2023-2043 assume no additional outdoor demand will be added to the system.

4.3 Culinary Water System Analysis and Level of Service

Heber City's present culinary water system's capacity and Level of Service (LOS) were checked by analyzing the source, storage, and distribution systems. Heber City uses the State's minimum sizing requirements for water facility design and operation per Rule R309-510 to determine their minimum LOS. The statewide standards described in R309-510 are used in this master plan until DDW sets system-specific sizing requirements which are based on three years of reporting data of Peak Day Demand and Average Yearly Demand; Peak Day Demand is the total source flow into the water system to meet the demand on the day of the highest consumption in a year, and Average Yearly Demand is the total quantity of water produced for the system in a year. Future master plan updates will use design criteria based on the most recent three years of the system's actual water source data if DDW has set the system-specific sizing requirements as a requirement, and provided the data is available. Future improvements needed to maintain the existing LOS were determined and recommended to maintain the capacity to meet the projected population's demands. This section describes the present system, design parameters, and recommendations for needed improvements.

SOURCES

Heber City's culinary water system is presently served by three wells and one spring. The status of these source capacities was evaluated by analyzing water rights, amount of water physically provided, and peak daily flow requirements. Improvements needed by Heber City's sources will be discussed along with the Division of Drinking Water's Drinking Water Source Protection Rule.

Water Rights

Water used by Heber City is obtained from springs and wells that have municipal water rights. The City owns both culinary and irrigation water rights. Some of the irrigation water rights are from land that was annexed into the City. In this chapter, both the municipal and irrigation water rights will be discussed.

Water rights state the legal amount of water the City has the right to access. State regulations require that the City's water sources be legally and physically capable of meeting peak daily flows. Heber City has both culinary water rights, and shares in irrigation companies. Heber City presently has thirteen water rights converted for culinary use, one which is an exchange right (55-8534), and one which is a supplemental supply (55-3346). Heber City's water rights and the available flow are summarized in Table 4-3.

Table 4-3 Heber City's Water Rights

Water Right	Flow Depletion Limit (cfs) (ac-ft/yr)	Volume / Flow Right	Notes
Water Rights presently Used by City's Culinary System			
55-7052		1,071.34	Flow
55-1392	2.36	1,708.56	Flow
55-947	2.00	1,447.93	Flow
55-5780	0.25	105.00	Both
55-8534	0.1036	75.00	Volume
55-8420	0.0889	64.4	Volume
55-1351	0.0990	71.64	Volume
55-4360			Volume
55-3346	1.00	723.97	Flow
55-12327	0.0118	8.53	Volume
55-894	0.0017	1.25	Volume
55-12708	0.0057	4.14	Volume
55-13325	1.7376	1,257.98	Volume
55-13016	0.6707	485.59	Volume
Subtotal	8.33	7,025.31	

1. See water right summaries for use restrictions.

2. See Appendix B for additional water right information and other water rights unavailable for use.

The following are short summaries for each of the water rights presently being used by the City's culinary water system.

55-7052 Water right 7052 was filed in 1941. The source of the water is from Upper Broadhead Springs, located approximately 1.7 miles east of Heber City. Per the change application a 1577 filed on February 13, 1941 the water right claims 2.5 cfs (1,122 gpm) for a 213 day period from April 1 to November 1, and 0.05 cfs (22.4 gpm) for a 152 day period from November 1 to March 1. This water right is subject to the state change number a1577. The change is not supplemental.

55-1392 Water right 1392 was filed in 1960. Water right 1392 provides a flow of 2.36 cfs (1,059 gpm) from the Upper Broadhead Spring. In the proof of appropriation on June 20, 1950, the Upper Broadhead Spring was tested to produce a total of 4.86 cfs (2,181 gpm). This is the accumulated flow between water rights 7052 and 1392. Although the water right shows that 2,181 gpm can be taken from the

spring, the minimum amount produced by the spring was approximately 800 gpm in 1992. Aggregating the water rights could allow all of 2,181 gpm to be taken from one point of diversion, depending on how the aggregation of the spring water would affect other water-right holders of the spring. This water right is subject to the state change number a3011.

55-947 Water right 947 was filed in 1959. The source of the water right is a well at 1800 East Lake Creek Road, which is the location of the City's Well#1. The water right is for 2.0 cfs (898 gpm) year around. The well was test-pumped at 1,190 gpm when it was drilled in 1959. When the well was proofed on June 12, 1962, the maximum flow was 1,180 gpm, and the average was 1,160 gpm.

55-5780 Water right 5780 was filed in 1976. The source of the water right 5780 is an underground well drilled in 1973 that provides water for Valley Hills Estates. The water right allows 0.25 cfs (112 gpm) or 105 acre-feet to be taken. The well was tested to pump 780 gpm with an 86 foot drawdown after 20 hours. When the proof was filed in 1983, the well averaged 750 gpm, 563 gpm above the available water right. This water right is subject to state change number a9298.

55-8534 Water right 8534, exchange 1053 was filed in 1976. The water right allows 75 acre-ft to be exchanged from Mohr Spring to the Valley Hills well.

55-8420 Water right 8420, filed in 1993, is a water right for the use of 128.75 acre-feet of water represented by 25.75 shares of stock in the Wasatch Irrigation Company. With change application number a17355, the point of diversion was changed from the Provo River to the Valley Hills well, and the use changed from irrigation to municipal. The total annual diversion was limited to 50% of the amount allocated to 25.75 shares of stock, or 64.4 acre-feet whichever is the lesser quantity. This water right is also owned by Wasatch Irrigation Company.

**55-1351
& 55-4360** Water right 1351 was filed in 1957 and water right 4360 was filed in 1970 for a combined use of 102.546 acre-feet of water represented by 33.23 shares of irrigation and stock water. The water was diverted from two springs and a drain. With change application a22574 filed in 1998, the point of diversion for both water rights was changed to the city's Hospital Well with the total amount of water allowed for diversion limited to 95.53 acre-feet to ensure that the historic consumption or depletion of 71.64 acre-feet annually is not exceeded. The change is not supplemental.

55-3346 Water right 3346 was filed in 1977, but the original well was constructed in 1934. The flow of the water right is 1 cfs (448.8 gpm). This well has been renovated and is in use by the City. If the water right use is not municipal there are restrictions on the period of use. If the water right use is municipal, the period of use has no restrictions. This water right is strictly supplemental to the following rights: 55-947, 55-1351, 55-1392, 55-3346, 55-4360, 55-5780, 55-7052, 55-8420, and E1053.

- 55-12327** Water right 12327 was filed in 1954 for the use of 12.36 acre-feet of water with the City's under drain system named as the source. With change application a33961 filed in 2008, the source was changed to all three existing Heber City wells. This right has a depletion limit of 8.53 acre-feet.
- 55-894** Water right 894 was filed in 1958 for the use of 0.015 cfs of water from a private well. With change application a33606 filed in 2007, the source was changed to all three existing Heber City wells. This right has a depletion limit of 1.25 acre-feet.
- 55-12708** Water right 12708 was filed in 1954 for the use of 0.155 cfs or 6 acre-feet of water from an underground drain which is the City's underdrain system. With change application a41022 filed in 2015, the source was changed to all three existing Heber City wells for the use of 6 acre-feet. This right has a depletion limit of 4.14 acre-feet.
- 55-13325** Water right 13325 filed on 04/14/2021 for the use of 1830.7585 acre-feet of water represented by 535.31 shares of stock in the Wasatch Irrigation Company. With change application number a47110, the point of diversion remained at the Provo River with additional points of diversion added; i.e. the Valley Hills Well, Hospital Well, Well No. 1, and Upper Broadhead Springs; and the use changed from irrigation to municipal. The maximum diversion is 1,830.75489 acre-feet with a limited amount of water reasonably necessary to deplete 1,257.977 acre-feet per the State Engineer Opinion letter. This water right is also owned by Wasatch Irrigation Company and are currently being used for the existing pressurized irrigation system.
- 55-13016** Water right 13016 filed on 05/15/2019 for the use of 1198.71 acre-feet of water represented by 379.37 shares of stock in the Timpanogos Irrigation Company. With change application number a45202, the point of diversion remained at the Provo River with additional points of diversion added; i.e. the Valley Hills Well, Hospital Well, Well No. 1, and Upper Broadhead Springs; and the use changed from irrigation to municipal. The maximum diversion is 703.73 acre-feet with a limited amount of water reasonably necessary to deplete 485.5936 acre-feet per the State Engineer Opinion letter. This water right is also owned by Timpanogos Irrigation Company and are currently being used for the existing pressurized irrigation system.

Heber City water rights are a combination of flow and volume rights. Flow rights for municipal use allow the City to use that amount of flow year-round, if the maximum volume right is not exceeded. Volume rights may or may not have a maximum flow rate associated with them but the total volume the City can utilize is set by the maximum ac-ft value of the water right over the usage period. After comparing the water rights with the water use data from the wells, Heber City will need to convert additional irrigation shares to municipal water rights to keep from over utilizing the current water rights during certain times of use as growth continues.

Irrigation Shares

Heber City currently owns 452 Wasatch irrigation shares, 136 shares of Timpanogos Class D shares, and 20 Timpanogos irrigation shares, along with a variety of other company shares which are summarized in Table 4-4. The acre feet for these shares are listed in the share's terms. They are currently used for pressurized irrigation or leased out for other irrigation purposes and have not been converted to a municipal water use. As demand on the culinary system increases a portion of these shares will be converted. Table 4-4 shows the shares with their respective diversion and converted municipal water equivalents.

Table 4-4 Heber City's Irrigation Water Rights and Municipal Conversion

n Company	Irrigation			Municipal Conversion			
	Shares	Diversion (ac-ft /share)	(ac-ft)	Depletion per 1 acre (ac-ft)	Depletion Allowed (ac-ft)	(cfs)	(gpm)
Daniels Irrigation	137	0.75	103	2.07	71	0.098	44.0
Extension Irrigation	371	0.30	111	2.07	77	0.106	47.6
Sage Brush Irrigation	6	0.30	2	2.07	1	0.002	0.8
Spring Creek Irrigation	74	0.60	44	2.07	30	0.042	18.9
Timpanogos Irrigation	20	1.85	38	2.07	26	0.036	16.2
Timpanogos Class D	136	3.00	409	2.07	282	0.389	174.8
Wasatch Irrigation	452	3.40	1,535	2.07	1,059	1.463	656.7
Other	-	-	24	-	-	-	-
Total			2,266		1,547	2.14	959

Irrigation Shares are based on water rights with irrigation of crops specified as the beneficial use of the water and as such have both a diversion amount and a consumption/depletion amount specified for that water use. To understand the water "use" it is necessary to distinguish between diverted water and consumed or depleted water. Diverted water is water withdrawn from a natural water system and put to a beneficial use as defined by the Utah Division of Water Rights. Consumed or depleted water is the portion of the diverted water that is consumed by plants, humans, or livestock and is not returned to the water system. The difference between the diverted water amount and depleted water amount is called return flow. Return flow is the portion of diverted water that is not consumed or depleted and that returns to the natural water system (i.e. water absorbed into the soil and returned to the aquifer or excess run off at the end of a field).

The Heber Valley Special Service District Treatment Plant is treated as 100% consumptive per the State's Municipal Conversion requirements. This means that any share of irrigation water converted to indoor municipal use is considered fully consumed or depleted since the water will flow through the City's municipal sewer system to the treatment plant. When the Division of Water Rights evaluates irrigation water shares that are to be changed from irrigation use to indoor municipal use, only the depletion rate of the uses are considered. Therefore, a higher diversion rate of water must be submitted to account for the return flow (i.e., the portion of water that would have gone back into the hydrologic system and not been consumed had it remained as irrigation water). The volume of water that makes up the return flows, had it been used for irrigation, cannot be counted towards indoor use since it is pass-through water due to the nature

of the use.

The amount of irrigation water or irrigation shares required to be submitted for indoor use in Heber City is calculated using a ratio of the States outdoor watering duty verses how much water would be consumed by the crops being irrigated and not returned to the hydrologic system. Heber City is in Water Right Area 55 of the Utah Division of Water Rights Area Maps. This area has an irrigation diversion duty in the amount of 3.0 ac-ft/acre and a depletion rate of 2.07 ac-ft/acre of irrigated land. Collection of water rights/shares for indoor use must be based on the total amount of water that would have been depleted by the historic uses and not by how much was diverted.

The City's indoor usage requirement is 400 gpd/ERU (0.45 ac-ft/ERU), which is the amount of water that is depleted/consumed per ERU per day. This amount is multiplied by the ratio of the amount of irrigation water that would have been diverted from the canal/stream for irrigation purposes by the amount that water that would have been depleted by the plants and/or evaporated. The result is the amount of irrigation water shares that needs to be submitted per ERU to allow the portion of irrigation water that would not have been depleted to remain unused. During the change application process from irrigation to municipal use the Utah Division of Water Rights evaluates the depletion amount of the historic uses and proposed uses of this water and reconciles the diversion amount allowed for each use.

$$0.45 \text{ ac-ft depletion} \quad x \quad \frac{3.0 \text{ ac-ft diversion}}{2.07 \text{ ac-ft depletion}} = 0.65 \text{ ac-ft diversion}$$

The State of Utah Administrative Code Rule R309-510 suggests an Average Yearly demand of 146,000 gal/ERU (400 gpd/ERU); however, actual water production data is used to estimate water right needs. Production meter data shows that the average indoor use has been closer to 264 gpd/ERU, therefore, Heber City collects water rights per ERU according to the following calculation:

$$\frac{0.296 \text{ ac-ft (264 gpd)}}{\text{depletion}} \quad x \quad \frac{3.0 \text{ ac-ft diversion}}{2.07 \text{ ac-ft depletion}} = 0.429 \text{ ac-ft (383 gpd)} \text{ diversion}$$

SOURCE

Source Capacity Requirements

Utah State Public Drinking Water rules (R309-510) require that sources provide sufficient supply to meet Peak Day and Average Yearly demands.

Source Capacity

Heber City has four sources of water to meet its culinary water demands. Table 4-5 lists the current pump capacity, source capacity, and water right associated with each source. Section R309-510-7 of the State Code requires these sources to be capable of meeting the Peak Day and Average Yearly demand conditions. Heber City's maximum recorded Peak Day demand in the past 15 years occurred in 2010 at a rate of 4,590 gpm. The maximum annual recorded use in the past 15 years occurred in 2012 at 2,457 ac-ft. This compares with a current capacity of 5,620 gpm or approximately 9,114 ac-ft. While the current capacity is more than adequate to satisfy the Average Yearly demand, additional capacity is needed to meet future Peak Day demands. With

the installation of a pressurize irrigation system in Central Heber, additional source capacity wouldn't be needed until 2030.

It should be noted that the outdoor demands on the culinary system have reduced in the past several years on account of the installation and activation of a pressurized irrigation system in portions of Heber City, shifting demand to the pressurized irrigation system. As system losses are reduced, water conservation efforts are active, and future developments connect to the pressurized irrigation system, the need for additional source capacity may be postponed till 2028 or longer.

Table 4-5 Individual Source Capacity Data

Description	No. Pumps	Column Depth (ft)	Est.Source Capacity ³ (gpm)	Current Continuous Pumping Capacity ² (gpm)	(ac-ft)	Existing Depletion Water Rights ⁴ (ac-ft)
Valley Hills Well	1	300	720	750	1,210	244
Hospital Well	1	120	3,000	3,000	4,839	796
Well No. 1	1	213	1,400	1,400	2,258	1,448
Upper Broadhead Spring ¹	NA	NA	500	500	807	2,780
Water Rights Converted to Combined Wells						14
Water Rights Converted to Combined Wells/Spring (2021 Timp transfer)						486
Water Rights Converted to Combined Wells/Spring (2021 Wasatch transfer)						1,258
Total			5,620	5,650	9,114	7,025

¹ Minimum flow for this spring is 500 gpm. The maximum is 2,500 gpm.

² Current Capacity is the current pump rated capacity and minimum spring capacity.

³ Estimated Source Capacity is from DDW or City records.

⁴ Data Obtained from Water Right Analysis Prepared by Horrocks Engineers December 1, 2022.

Current Broadhead Booster Pump rated capacity is 1400 gpm each pump.

Source Recommendations

Table 4-6 shows a summary of the additional capacity required from City sources in the future. As can be seen in the table, the City will need to increase its capacity to meet demand. If water conservation efforts continue to reduce water consumption, and pressurized irrigation water use increases, the City may be able to delay increasing its source capacity. If pressurized irrigation continues to be installed in Central Heber, the reduced quantity of culinary water, approximately 954 gpm (1,550 - 626 ERUs @ 437 gpd/ERU x 3.4 PF) will postpone the need for a new source until 2030. However, funds for the pressurized irrigation system installation costs would need to be allocated.

Table 4-6 Source Capacity Needs Summary

Year	Peak Day (gpm)	PD (w/PI) (gpm)	Current Capacity (gpm)	Remaining Capacity (gpm)	Rem Cap (w/PI) (gpm)
2023	5,680	4,726	5,620	(60)	894
2028	6,611	5,656	5,620	(991)	(36)
2033	7,377	6,423	5,620	(1,757)	(803)
2038	7,679	6,725	5,620	(2,059)	(1,105)
2043	7,956	7,002	5,620	(2,336)	(1,382)

Note: Table shows remaining capacity if a pressurized irrigation is installed in Central Heber.

In 2002 a consultant, Kleinfelder, was retained to review the capacity of existing City sources and make recommendations on the development of additional supplies. The top alternatives identified in the study are listed below:

- Replace Well No. 1 or drill a second well at the same location. Potential additional yield is 500 gpm to 1,500 gpm.
- Install a larger pump in the Hospital Well. Potential additional yield is 1,700 gpm. This recommendation was completed, and the Hospital Well capacity was increased in 2010 to a total of 3,000 gpm.
- Identify and develop new well East of the City's Lindsey tank site. Potential yield is greater than 500 gpm.

It is recommended that the City continue to investigate the development of additional source capacity at its existing locations and consider pursuing an exploratory well at a new location that could be acquired by the City. The new location could be held in reserve for future development in case one of the existing sources fails or additional capacity is needed.

It is also recommended that the City continue expanding its pressurized irrigation system to areas where it is not currently provided. As demonstrated in Table 4-6, the source capacity may not meet current peak day demands. However, if pressurized irrigation continues to be installed, in combination with conservation and leak detection programs, an adequate culinary water supply will be available to meet the peak day demands for another 4+ years. In the meantime, priority should be given to correcting system metering deficiencies so that the collection of accurate source production data can resume and the conclusions and recommendations in this study can be confirmed.

Drinking Water Source Protection Program

The State Division of Drinking water requires all culinary water sources to have Drinking Water Source Protection Plans in place. The City has source protection plans in place for each of its existing sources. The original delineation reports were prepared by Hansen, Allen and Luce Engineers in 1996, and Horrocks Engineers prepared the source protection plans in 1998. Horrocks Engineers updated the plans in 2004 and they were approved. Updates for the wells were completed by Horrocks Engineers at the end of 2020. Updates for the spring was completed by Horrocks Engineers at the end of 2017, and another one will be completed at the end of 2023. One ongoing concern of these plans is the Broadhead Spring. The spring is located approximately 1000 feet west of a dairy and stock pond and the City must take precautions that contaminants do not infiltrate the spring, especially during spring high water run-off. Currently the City chlorinates this spring to avoid problems if any contamination occurs.

The City now has an agreement with the County, which requires development encroaching on the source protection zones to be reviewed by the City. This provides an opportunity to identify any additional measures that need to be taken to protect City's water sources prior to developments being approved.

STORAGE

Storage Requirements

State Drinking Water Rules recommend providing storage consisting of three components: 1) operational or equalization storage, 2) fire suppression storage, and 3) emergency storage.

Operational storage is sized for the Average Yearly demand to meet the combined indoor and outdoor demands for one day. The indoor portion is calculated using the State storage criteria for indoor use based on 400 gpd/ERU. The outdoor portion is calculated using the City's Average Yearly outdoor use of 437 gpd/ERU, for those without pressurize irrigation, and then doubled to 874 gpd/ERU because the total outdoor use only occurs during the six-month summer irrigation season. Approximately 24% of Heber City's current ERU's use culinary water for outdoor irrigation while the remaining ERU's have pressurized irrigation available. For convenience in calculating the Operational storage volume, the Average Yearly outdoor use of 437 gpd/ERU is spread over all City ERU's, resulting in an equivalent use of 104 gpd/ERU. The total use of 608 gal/ERU (400 gpd/ERU indoor + 104 gpd/ERU outdoor x 2) was used to calculate the Operational storage volume.

Fire suppression storage is based on the flow rate and duration required by the local fire department. Currently the fire department has indicated that for planning purposes, 180,000 gallons (1,500 gpm for 2 hours) is acceptable for residential areas, and 300,000 gallons (2,500 gpm for 2 hours) is acceptable for commercial areas. Since the City's water system is mostly interconnected and storage in the highest tank benefits the majority of the system, fire suppression storage of 300,000 gallons will be located in the highest tank.

Emergency storage is not provided in storage calculations. This is due to the availability of multiple sources of supply. If it is determined that a higher level of reliability in the City's water system is needed, emergency storage may be added to the criteria.

Available Storage

Heber City presently has five storage reservoirs in the culinary system as listed in Table 4-7 with a total capacity of 4.85 mg.

Table 4-7 Heber City Reservoirs

Name	Capacity (mg)	High Water Elev	Low Water Elev	HGL Elev	Type
Valley Hills No. 1	0.25	5892	5870	5890	Concrete Rectangular
Valley Hills No. 2	0.5	5892	5870	5890	Concrete Circular
Broadhead	1	5745	5725	5735	Concrete Rectangular
McNaughton	1.1	5892	5870	5890	Concrete Circular
Lindsay Hill	2	5972	5950	5960	Concrete Circular
TOTAL	4.85				

Storage Recommendations

Table 4-8 shows the summary of the storage capacities needed for Heber City through the year 2040, including indoor, outdoor, and fire storage.

Table 4-8 Storage Capacity Projections

Year	Indoor Use Storage (mg)	Outdoor Use Storage (mg)	Outdoor Use Storage (w/PI) (mg)	Fire Storage (mg)	Storage Required (mg)	Storage Required (w/PI) (mg)	Storage Available (mg)	Storage Remaining (mg)	Storage Remaining (w/PI) (mg)
2028	3.51	1.47	0.67	0.30	5.28	4.47	4.85	(0.43)	0.38
2033	4.06	1.47	0.67	0.30	5.83	5.02	4.85	(0.98)	(0.17)
2038	4.28	1.47	0.67	0.30	6.05	5.24	4.85	(1.20)	(0.39)
2043	4.48	1.47	0.67	0.30	6.25	5.44	4.85	(1.40)	(0.59)

Note: Table shows remaining storage if a pressurized irrigation is installed in Central Heber.

Table 4-8 shows that available storage does not meet required storage, but if a pressurized irrigation system continues to be installed in Central Heber, the outdoor storage demand will decrease by 0.81 mg (1,550 ERUs - 626 ERU's currently being installed @ 437 gpd/ERU x 2), and the existing available storage of 4.85 mg will meet the future needs of Heber City until 2030 or beyond. It is anticipated that outdoor use and storage requirements will not increase, or may even be reduced, as future development connects to the pressurized irrigation system and water conservation efforts are met.

It is recommended that the City continue installing a secondary irrigation system in the Central part of Heber to reduce system storage demand. It is also recommended that additional storage be planned for. The additional storage will be needed in the event growth estimates or storage criteria change, higher pressure zones are added to the system, or the pressurized irrigation system is not installed in new development areas. A new storage facility is included in the impact fee analysis, however, if pressurized irrigation is installed in Central Heber, the additional storage can be postponed for at least 9+ years.

DISTRIBUTION SYSTEM

The capacity of Heber City's existing distribution system will be discussed in this section. Improvements will then be recommended to meet the projected water demand in areas of future development. Figure 4-2 shows the existing distribution system. Heber City has approximately 180 miles of culinary water lines that convey and distribute water.

Distribution System Requirements

State Drinking Water Administrative Rule R309-510-9 and R309-105-9 require the distribution system to be able to meet the peak instantaneous demand or the Peak Day demands plus Fire flow, and still maintain a minimum of 20 psi at all connections within the system. For Heber City Peak Day plus Fire is the governing condition.

Computer Model of Culinary Water System

The Bentley WaterGEMS computer program was used to model Heber City's water system. The program requires that all pipes, elevations at intersections, wells, tanks, sources, well pumps, booster pumps, and pressure reducing valves (PRV) be entered into the model as they are constructed. System demands are then entered in. The program calculates static pressure throughout the system based on the given elevations. Available fire flows can also be determined. The program determines the available fire flows at various locations based on the user defined parameters, such as required flow and residual pressure. An extended period simulation was also run to monitor the entire system through a given time period. Tanks, pumps, pipes, demand nodes, and other system elements are modeled and can be graphed through the time period.

After the model is run and problem areas are defined, improvements can be modeled to bring the system up to the minimum level of service (LOS). Determining which improvements in the system will bring the system up to the minimum LOS in the most economical manner is an iterative process.

The following scenarios were modeled for Heber City's culinary water system with the model results contained in Appendix B:

- 1. Fire flow and 24 hour extended period simulation for existing conditions*
- 2. Fire flow and 24 hour extended period simulation for ultimate build-out conditions*

The existing water system was modeled and calibrated. The areas that are nearing minimum LOS were identified. Improvements were determined that would allow minimum fire flows and pressures to be preserved throughout the existing system. These improvements are recommended in this section and were shown previously in Section 4.1, Figure 4-1.

Heber City's General Plan map was used to determine future development densities, and the projected number of ERU's in undeveloped areas were determined. The additional demand projected for undeveloped areas was added to the present demand. From this information, the ultimate build-out water system was modeled, and the future improvements were identified to provide the fire flows and pressures to maintain the culinary water LOS in Heber City.

I:\Heber City\City Projects\2022 Heber City Master Plan Update\Project Data\2022 Master Plan Maps\Fig 4.2 Water Exist 2022.dwg - Layout1 - 12/20/2023 03:35pm, ChuckR

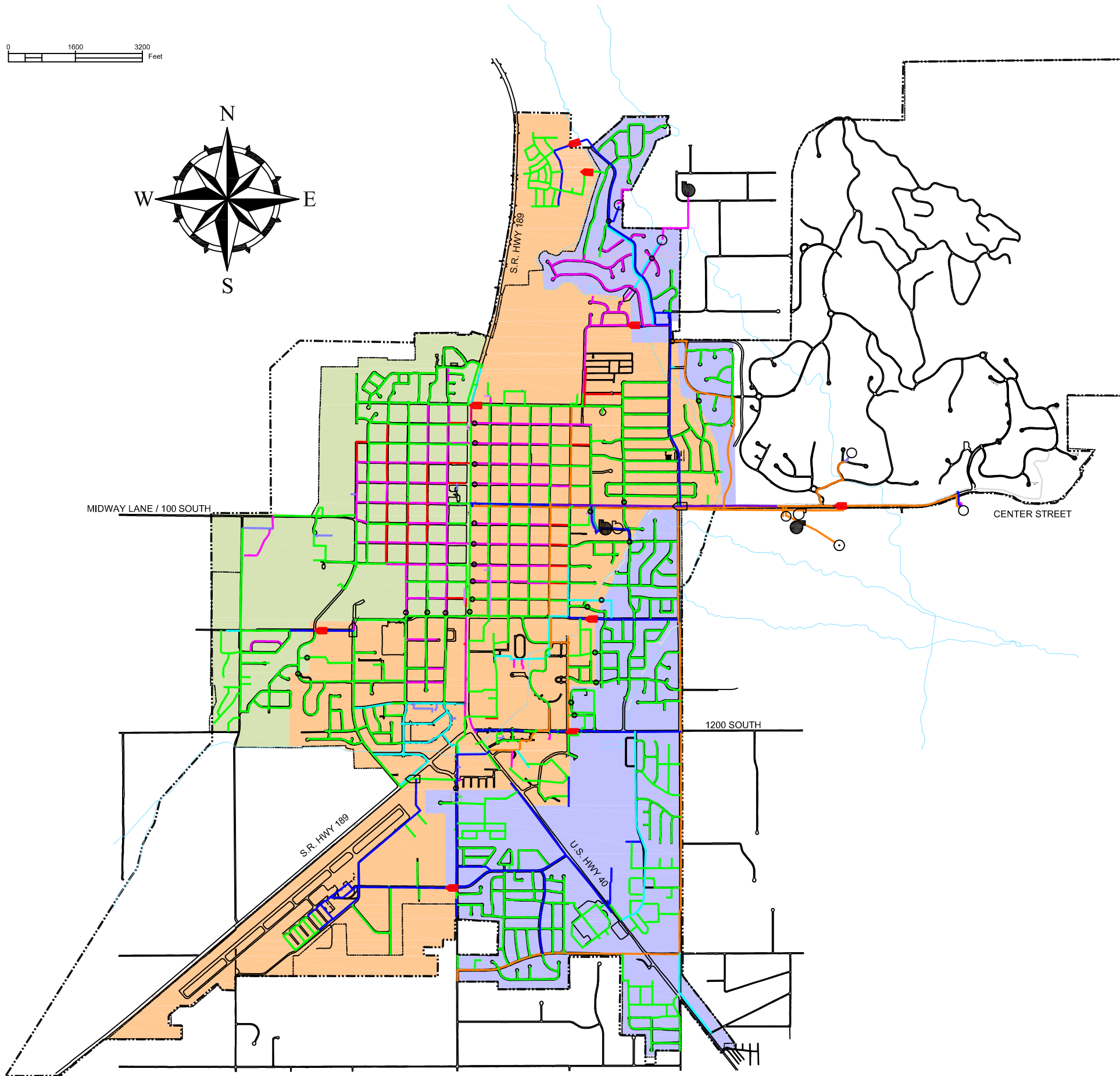
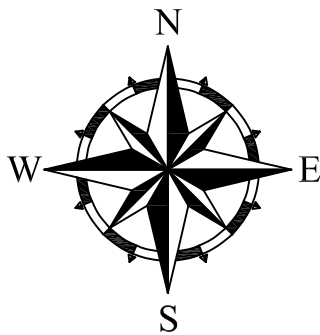
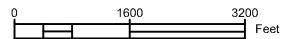
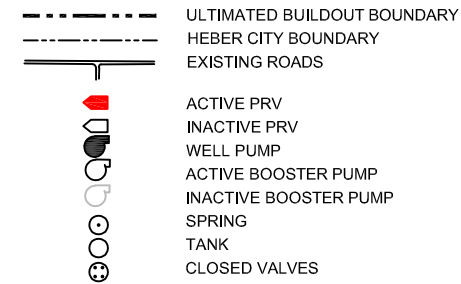


FIGURE 4-2

HEBER CITY

EXISTING CULINARY WATER SYSTEM



EXISTING WATER LINES

PIPE SIZE (inches)	PIPE COLOR
<4	Light Blue
4	Red
6	Magenta
8	Green
10	Blue
12	Dark Blue
14	Teal
16	Orange
18	Yellow
20	Purple
UNKNOWN	Light Purple

WATER ZONES

ZONE NAME	ZONE COLOR
-----------	------------

EAST ZONE (LINDSAY HGL 5960)	Light Blue
MCNAUGHTON (HGL 5890)	Orange
WEST ZONE (BROADHEAD HGL 5735)	Light Green

Distribution System Recommendations

The entire culinary water system was modeled for both present and projected populations for instantaneous conditions with fire flow demand, and a 24-hour extended period simulation. Heber City's existing storage capacity is presently adequate for average daily flows and fire flows.

Recommended improvements and estimated costs are shown in Table 4-9. The costs of the improvements include construction costs, engineering costs, legal and administrative fees and contingencies. The total estimated cost for the recommended improvements is \$22,875,524. These estimated costs will assist in determining the impact fees. A breakdown of the project costs and assumptions are shown in Appendix B.

It should again be noted, that if pressurized irrigation water continues to be installed in the central part of Heber projects W-027 and W-054 (new source and storage facilities) may be postponed, reduced in size, and a portion of the funds for these projects shifted to the pressurized irrigation system improvement project I-001.

Table 4-9 Heber City's Estimated Cost of Water Improvements

ULT	CIP #	Recommended Improvements	Size (in)	Total Cost	Funding Proportionate Share Analysis							
					Operating		Developer		Other ¹		Impact Fee	
					%	\$	%	\$	%	\$	%	\$
	W-005	Daniel Road - 2200 S to 2400 S (8")	8	\$222,712	0%	\$0	0%	\$0	0%	\$0	100%	\$222,712
	W-007	East Bypass - US 40 to Mill Rd (12")	12	\$1,560,004	0%	\$0	59%	\$917,283	0%	\$0	41%	\$642,722
	W-008	1900 South - US 40 to Mill Rd (12")	12	\$725,292	0%	\$0	59%	\$426,472	0%	\$0	41%	\$298,821
	W-019	2400 South - Daniel Rd to Airport Rd (12")	12	\$1,606,502	0%	\$0	59%	\$944,623	0%	\$0	41%	\$661,879
	W-025	1250 South PRV		\$321,119	0%	\$0	0%	\$0	0%	\$0	100%	\$321,119
	W-027	New Source Development (2400 gpm)		\$4,491,059	0%	\$0	0%	\$0	100%	\$4,491,059	0%	\$0
	W-028	Master Plan Updates every 5 years (4 times)		\$240,000	0%	\$0	0%	\$0	0%	\$0	100%	\$240,000
	W-029	Aerial Digital Map Updates (4 times)		\$19,200	0%	\$0	0%	\$0	0%	\$0	100%	\$19,200
	W-035	700 North - 400 E to Main St. (8")	8	\$383,177	0%	\$0	100%	\$383,177	0%	\$0	0%	\$0
	W-036	400 East - 700 N to 500 North (8")	8	\$456,066	0%	\$0	100%	\$456,066	0%	\$0	0%	\$0
	W-041	US 40 - 2200 S to 2400 S (West) (8") *	8	\$311,390	0%	\$0	0%	\$0	0%	\$0	100%	\$311,390
	W-042	1500 South - Dusty Baker Ln (150 E) to US 40 (8")	8	\$239,627	0%	\$0	100%	\$239,627	0%	\$0	0%	\$0
	W-043	US 40 - 1300 S to 1700 S (West) (8")	8	\$224,432	0%	\$0	100%	\$224,432	0%	\$0	0%	\$0
	W-045	1200 South - 850 W to 1200 W (8")	8	\$373,208	0%	\$0	100%	\$373,208	0%	\$0	0%	\$0
	W-046	1200 West - 1200 S to 1100 S (8")	8	\$351,206	0%	\$0	100%	\$351,206	0%	\$0	0%	\$0
	W-047	600 West - 450 S to 650 S (8")*	8	\$541,367	0%	\$0	0%	\$0	0%	\$0	100%	\$541,367
	W-053	550 North - 550 E to 750 E (8")	8	\$435,722	80%	\$348,578	0%	\$0	0%	\$0	20%	\$87,144
	W-054	Future Tank Storage (1.4 MG)		\$4,693,525	0%	\$0	0%	\$0	0%	\$0	100%	\$4,693,525
ULT	W-058	Southfield Rd- SR 189 to 1100 S	12	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
ULT	W-059	SR 189 - 2500 S to South Field Road (12")	12	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	W-060	500 North to Midway Lane (8")	8	\$887,627	0%	\$0	100%	\$887,627	0%	\$0	0%	\$0
	W-061	Hwy 40 or Ostler Pk Rd- 1600 N to 900 N (12")	12	\$1,010,537	0%	\$0	59%	\$594,196	0%	\$0	41%	\$416,341
	W-063	US 40 - 1500 S to 1200 E (East) (8")	8	\$958,973	0%	\$0	100%	\$958,973	0%	\$0	0%	\$0
	W-064	Valley Dr PRV		\$393,120	100%	\$393,120	0%	\$0	0%	\$0	0%	\$0
ULT	W-065	2400 South - 850 West to US 189 (12")	12	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	W-066	Heber City Public Works Facility Exp Ph 1		\$318,438	0%	\$0	0%	\$0	0%	\$0	100%	\$318,438
	W-067	600 East - 1300 S to Hidden Cr Ln (8")	8	\$443,923	0%	\$0	100%	\$443,923	0%	\$0	0%	\$0
	W-068	Heber City Public Works Facility Exp Ph 2		\$1,346,177	0%	\$0	0%	\$0	0%	\$0	100%	\$1,346,177
	W-069	2400 South PRV		\$321,119	0%	\$0	0%	\$0	0%	\$0	100%	\$321,119
TOTAL EXPENDITURES				\$22,875,524		\$741,698		\$7,200,813		\$4,491,059		\$10,441,954

NOTES:

- "Other" includes grants, special assessments, and previously collected impact fees.
- A total of ±\$4,500,000 listed in the "Other" column is funded by the existing impact fee account as of April 17, 2023. Applied to W-027
- Assumed 5.0% interest rate on bonds. All bonds assumed to be paid off by 2043.
- Projects W-027 and W-054 will be reduced in size if the PI system continues to be installed in Central Heber. Assume 1/2 of the funding for projects W-027 and W-054 will go toward the PI system in Central Heber that replaces part of the need for these projects.
- The aerial digital map and Master Plan update needs to be done four times in the next 20 years. The total cost is divided by four in the Impact Fee Expenditure Plan Improvement Costs.
- ERUs based on 2042 ERU projection minus Red Ledges full time units because they are served by Twin Creeks and do not pay sewer impact fees. Red Ledges added 380 ERUs (1,186 / 3.12) in 2021.
- Projects with * have been partially completed with previous CIP projects.
- Valley Hills Plats A-H have water impact fees reduced by \$325 per agreement with developer for constructing a portion of the Valley Hills #2 Tank

4.4 Economic Feasibility Analysis

The two types of funding for Heber City's water system are operating and non-operating. Independently, these two funds should generate sufficient revenue to fund the respective needs of the water system. Operating expenses include the monies used for personnel and contractual services, betterment and replacement type capital improvement projects, materials, supplies, depreciation, and other operating expenses. Revenue to fund these operating expenses is generated from waster user fees.

Non-operating expenses comprise expansion type capital improvement projects, developer reimbursements, master planning, aerial mapping, and bond repayment. The revenue for non-operating expenses is generated from impact fees. Generally, operating expenses should be funded by the existing connected population, and non-operating expenses necessary for future development should be paid by the future population by way of impact fees.

In this section, only the non-operating expenses are discussed. Projected revenue and expenditures have been analyzed to determine if present fees are sufficient to fund the recommended improvements and other related expenditures.

Impact Fee Fund

The Impact Fee Fund or capital project fund is used to fund improvements needed to meet the increased demands due to growth. Revenue is currently generated from the “impact fee” charged to new development. This revenue is used for capital improvement projects and debt service.

The impact fee can be used to fund capital improvements, including construction costs, land acquisition, material costs, planning, surveying, and engineering fees provided for and related directly to the construction of the system improvements; and debt service charges to the principal and interest on bonds, notes or other obligations issued to pay the cost of the system improvements. This revenue can also be used to fund annual Master Plan reviews and Master Plan updates approximately every five years.

Developer Contributions

The City has a policy that developers are responsible for 100% of the cost of on-site improvements needed to serve their development. Developers are also responsible for extending any off-site services needed to serve their development. However, reimbursement for a portion of these costs may be available through reimbursement agreements or impact fees if the facilities have previously been identified in this Master Plan. The City's policy for culinary water lines is to reimburse the incremental over-sizing cost for lines above 8-inches, unless the oversized line is needed specifically to meet the demands of the development.

Currently, the water impact fee charged to residential units in new development is \$2,826 per 0.75-inch connection and \$5,024 per 1-inch connection. Table 4-10 shows the new impact fee recommendations for residential and non-residential connections.

Table 4-10 Recommended Impact Fees

Residential Connections		
Size (in)		Impact Fee per ERU
75		\$2,778
> 0.75		\$2,778
Non-Residential Connections		
Size (in)	Area of Pipe (in ²)	Impact Fee
75	0.442	\$2,778
1	0.785	\$4,939
.5	1.767	\$11,113
2	3.142	\$19,757
3	7.069	\$44,453
4	12.566	\$79,028

The impact fees are based on the estimated total cost for improvements, with bond interest added, of \$11,385,649 (\$10,441,954 + \$943,695) over the next 20 years; and the projected number of new residential and non-residential ERU's of 4,098 shown in Table 4-11.

The money generated from the recommended impact fees should generate sufficient revenue to fund the recommended capital improvements and bond re-payments and excludes the operating portion of the improvements identified in Table 4-9.

Table 4-11 Projected Impact Fee Revenue and Projected New Connections.

Impact Fee Expenditure Plan							Collected vs Cost	Bond Loan Plus Payments	Fund Running Balance
Year	ERUs ²	Impact Fee Collected (\$)	Available Funds (\$)	Improvement Projects ^{1,3}			Improvement Costs (\$)		
2024	295	\$819,611		W-028	W-042	W-060			\$0
2025	308	\$855,730		W-029	W-043	W-061			\$0
2026	323	\$897,405		W-066	W-047	W-067			\$0
2027	337	\$936,302		W-007	W-053				\$0
2028	353	\$980,755	\$4,489,802	W-027	W-054		\$6,525,508	(\$2,035,706)	\$2,040,000
2029	369	\$1,025,209		W-028	W-035	W-063			(\$196,538)
2030	386	\$1,072,440		W-029	W-036	W-064			(\$196,538)
2031	403	\$1,119,672		W-066	W-041	W-068			(\$196,538)
2032	102	\$283,391		W-008	W-045	W-069			(\$196,538)
2033	104	\$288,948	\$3,789,660	W-025	W-046		\$2,743,036	\$1,046,624	(\$196,538)
2034	105	\$291,726		W-028					(\$196,538)
2035	106	\$294,504		W-029					(\$196,538)
2036	108	\$300,061		W-066					(\$196,538)
2037	109	\$302,839		W-019					(\$196,538)
2038	111	\$308,396	\$1,497,527				\$806,288	\$691,238	\$33,462
2039	113	\$313,953		W-028					(\$249,662)
2040	114	\$316,731		W-029					(\$249,662)
2041	116	\$322,288		W-066					(\$249,662)
2042	117	\$325,066		W-005					(\$249,662)
2043	119	\$330,623	\$1,608,661				\$367,122	\$1,241,539	(\$249,662)
4,098		\$11,385,649					\$10,441,954	\$943,695	(\$943,695)

Estimated New ERU's = 4,098

Impact Fee per ERU (no bonding) = \$2,548
Impact Fee per ERU with Bond Interest = \$2,778

NOTES:

1. Project order in which development will occur in City is approximated and will change as development dictates.
2. 2043 projected Residential and Non-Residential ERU's minus Red Ledges because Red Ledges does not pay water impact fees.
3. W-028, W-029, and W-066 are divided by 4 to spread over 20 year window.
4. Must borrow sufficient funds to cover shortfall in fees collected. Must keep Fund Running Balance low to insure fees are spent in 6 years.

To keep abreast of inflation and increasing construction costs, the impact fees should be reviewed annually to ensure that the required funding will be available.

In addition to the impact fees, a fee is also charged to cover the cost of the meter installation and inspection when a developer connects to the system. For a 0.75-inch meter which includes a Transmitter, the cost is approximately \$600. A 1-inch meter with Transmitter is \$700, and a 1.5-inch meter with Transmitter is \$1,662.

Chapter 5

Sanitary Sewer System

5.1 Summary and Recommendations

Introduction

This chapter identifies the existing condition of the sanitary sewer system as well as recommended improvements to meet the projected 20-year population demands. Impact fees are based on implementing the recommended improvements.

Heber City's sewer system was evaluated for the projected population, number of connections or equivalent residential units (ERU's), and sewer flows. Using State design requirements, population per household, and historical sewer flows, the flows were projected and analyzed through the planning period to determine the respective capacities in collector and interceptor lines. Then, using the potential areas of development and the projected sewer flow, improvements were recommended.

Heber City provides sewer capacity to entities outside the City boundary. Twin Creeks Special Service District (TCSSD) has a connection at 600 South 1200 East. Projected demands for TCSSD and its impact on the City's system have been included in this study, along with a future second connection at 1200 South 1200 East. The City has also agreed to provide capacity to Charleston at a future connection at 1200 South 1200 East and planned for in this study. TCSSD and Charleston's existing and future flows will use excess capacity in several existing Heber City sewer lines and impact several new projects, i.e., S-026, S-027, S-045.

The Heber City Design Criteria used in this study are summarized below:

- | | | |
|------------------|-------------------------------|----------------------|
| • Flow: | - Average Yearly | 312 gpd/ERU |
| | - Peak Hour Collector Lines | Average Yearly x 4.0 |
| | - Peak Hour Interceptor Lines | Average Yearly x 2.5 |
| • Pipe Capacity: | - Maximum | 75% of Full Capacity |
| Pipe Sizes: | - Minimum | 8-inches |
| • Velocities: | - Minimum | 2 fps |
| | - Maximum | 15 fps |

Projected Population

Heber City's estimated population is expected to increase by approximately 61.8%, from 18,347 to 29,682 people by the year 2043, excluding the North Village and Jordanelle Ridge areas. This is based on an analysis of recorded lots, unrecorded lots that have received approval, and potential future developments. At this growth rate, an additional 4,478 (11,727-7,249) sewer ERU's will be added. Of these, 380 ERU's have been deducted for the Red Ledges area which is served by Twin Creeks Special Service District (TCSSD). Heber City's sewer system is therefore estimated to have a total of 11,188 ERU's, or an additional 4,098 ERU's, by 2043. Growth beyond 2043 to Ultimate build out will be addressed in future Master Plan updates.

Projected Sewer Flow

Using 11,727 projected equivalent residential units in 2043, the average yearly flow will increase by 510 mg, from 825 mg to 1,335 mg, over the next 20 years.

City sewer records show an increase of 19.4% in flow during the summer months as compared to the winter months between the years 2006 and 2022. This increase has slightly dropped in recent years to 17.1% for the last 10-year average and 15% for the last 3-year average. Most of the summer increase is assumed to be from infiltration and inflow, and the City's actions over the years to reduce this inflow appear to be working. The City should continue to take steps to further reduce infiltration and inflow as it costs tens of thousands of dollars annually to treat this additional flow.

Recommended Sewer System Improvements

Capital improvements recommended to meet the projected population's sewer flows are shown in Figure 5-1. These recommendations were determined by using a computer model of Heber City's sewer system and input from City staff. A detailed listing of the recommended improvements is given in the following paragraphs.

Projects labeled as "Ultimate" are beyond the 20-year planning window and therefore the improvement cost and associated populations served have been excluded from impact fee calculations.

S-004 600 East - 1300 to Hidden Cr Ln (15"): A 15-inch line should be constructed along 600 East from 1300 South to Hidden Creek Lane. Once this development is designed, the slope of the line is known, and the exact location of the loadings is determined, the size of this line should be verified.

S-020 Aerial Photography Update: The aerial photography of the city system should be updated every 5 years. This aids in modeling and mapping the sanitary sewer system, planning, and preliminary project design.

S-021 Master Plan Update: The facilities master plan should have major updates every five years. As part of the annual update flows should be analyzed, maps revised, sanitary sewer system modeled, and impact fees evaluated.

S-023 US 40 - Center Creek Dr to 2200 S (West) (8"): An 8-inch line should be constructed on the west side of US 40 from approximately Center Creek Dr, tying into the existing sewer at 2200 South. This will serve the Highway Commercial Zone in this

area. Development should pay for this line.

S-024 1500 W- 100 S to 1200 S (12"): A 12-inch line should be constructed on the west side of Heber City from 100 South to 1200 South. This will serve the future developments in this area. The 12-inch diameter assumes minimum slope and is not needed for additional capacity; therefore, this is 100% developer responsibility.

S-025 Sage Brush & Spring Creek Canal - 300 N to 100 S (24"): A 24-inch line should be constructed along the Sage Brush and Spring Creek Canal from the intersection of 600 West 300 North to 100 South. This will ultimately be needed to accommodate future growth on the north side of Heber.

S-026 SR 113 - 800 W to 930 W (30"): A 30-inch line should be constructed along SR-113 from approximately 800 West to 930 West. This will replace the existing 15-inch line at this location. Completion of this project is partially dependent on TCSSD continuing to pass flow through Heber City's system. This project may possibly be postponed if TCSSD discontinues use of the system. It is recommended that this project be paid for by impact fees.

S-027 SR 113 - 930 W to South Field Rd (30"): A 30-inch line should be constructed along SR 113 from 930 West to South Field Road. The line is needed for future Heber City growth as well as to accommodate the TCSSD flow. This project may possibly be postponed if TCSSD discontinues use of the system. It is recommended that this project be paid for by impact fees.

(Ultimate) S-031 South Field Rd – US 40 to 1200 S (10"): A 10-inch line should ultimately be constructed on South Field Road from US 40 to 1200 South. Once this development is designed, the slope of the line is known, and the exact location of the loadings is determined, the size of this line needs to be verified. (Sewer from the Airport has not been included in this line). This line is needed for a future planned annexation south of 300 South. The annexation and developers will install and pay for all of this line.

S-033 US 40 - Center Cr Dr to E Airport Rd (East) (8"): An 8-inch line should be constructed on the east side of US 40 from Center Creek Dr to East Airport Road. This line should connect to S-004. Development should pay for this line.

S-035 Center Street - 800 E to 1300 E (8"): An 8-inch line should be constructed along Center Street from 800 East to 1300 East. The line is needed for the annexation east of 1200 East, just south of Center Street. Development should pay for this line.

S-036 900 North - Main St to 500 E (8/10"): An 8-inch to 10-inch line should be constructed along 700 North from Main Street to 500 East. The line is needed for the development in this area. The line connects to S-018 and is 100% Developer funded.

S-037 Heber City Public Works Facility Expansion Ph.1: The Heber City Public Works Department Building was expanded in 2018 to accommodate growth and maintain the same level of service on the City's street system. Impact fees were used to pay for the sewer portion of this expansion which was debt funded with payments continuing

through the master plan 20-year window. See Appendix A for the construction cost allocation.

S-038 500 North and 600 West to 50 North and 1000 West (18"): An 18-inch line should be constructed from 500 North and 600 West to 50 North and 1000 West through the future development on the northwest side of Heber City. The line is needed for the new High School and development in this area, and the size has been estimated based on the slope needed to service this entire low-lying area, rather than capacity. The 18-inch diameter assumes minimum slope with no additional drop through manholes while utilizing shallow T-manholes. The City should consider seeking a variance per State Code R317-3-2 to reduce minimum allowed slope on sewer line and potentially install smaller diameter pipe. Development should install and pay for a portion with help from impact fees and other contributions.

S-041 Heber City Public Works Facility Expansion Ph.2: The Heber City Public Works Department Building and Maintenance Site will be expanding to maintain the current level of service that the Public Works department currently provides in maintaining the sanitary sewer system. Phase 2 will likely commence around 2028. Impact fees will pay for all of this phase since it is only needed for future growth.

S-044 East Airport Road - US 40 to 600 E (10"): A 10-inch line should be constructed along East Airport Road from US 40 to approximately 600 East. Once this development is designed, the slope of the line is known, and the exact location of the loadings is determined, the size of this line should be verified. Development should install and pay for a portion with help from impact fees.

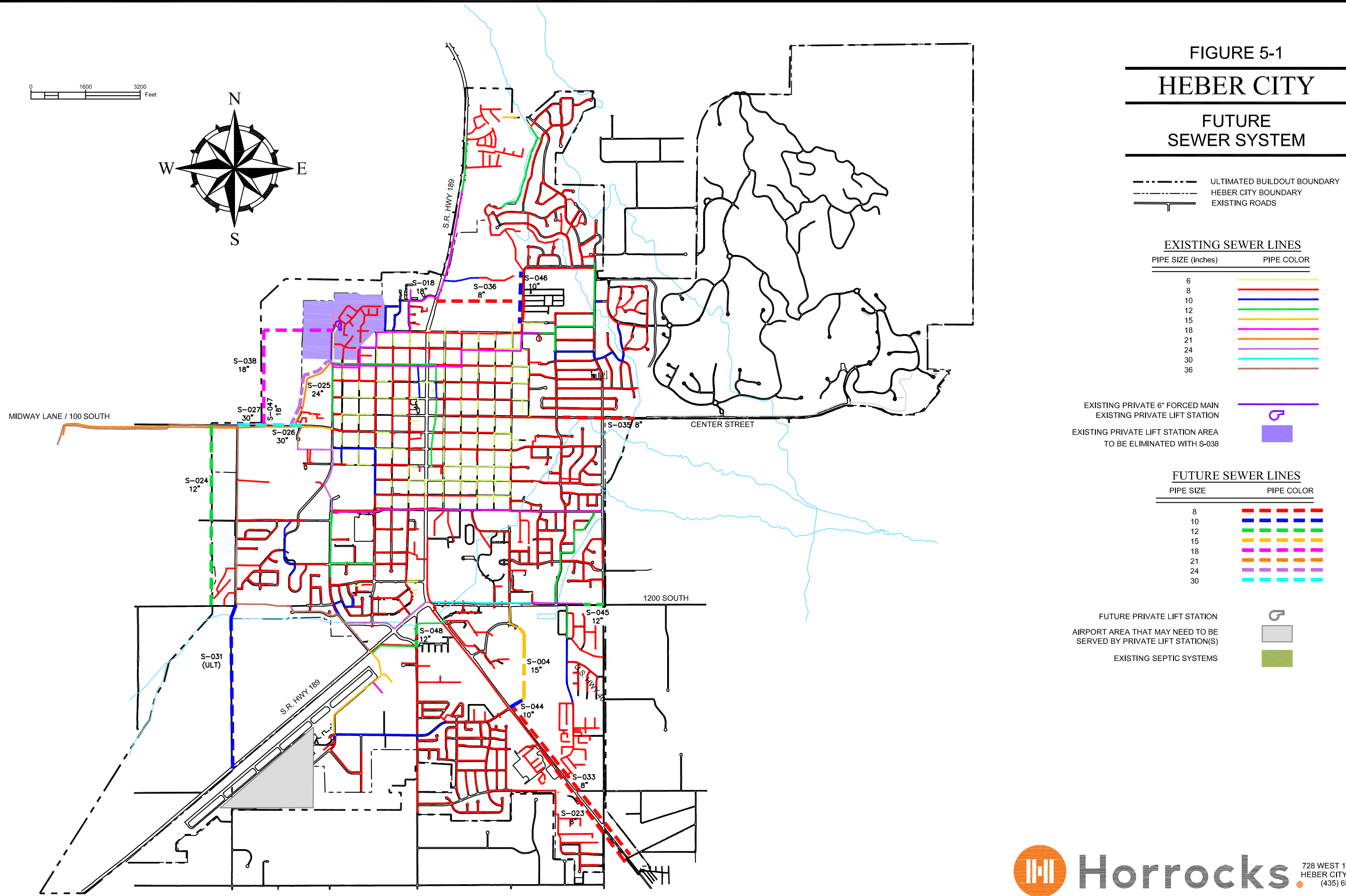
S-045 1200 South - 1000 E to 1200 E (12"): A 12-inch line should be constructed along 1200 South from approximately 1000 East to 1200 East. This line is needed for future Twin Creek flow at 1200 East, however, the developer to the north may also need to connect to this line. Either TCSSD or the development to the north will install this line and pay their portion respectively. Development should install and pay for a portion with help from impact fees and other contributions.

S-046 550 East - Valley Hills Dr to 600 N (10"): A 10-inch line should be constructed in 550 East from Valley Hills Drive to 600 North. This line should replace the existing 8-inch line at this location. This line is needed for future projected flow from the development directly north of the Cemetery. The Developer should install the 8-inch portion, with impact fees pay for the oversizing. Development should install and pay for a portion with help from impact fees.

S-047 1000 West - 50 North to 100 South (18"): An 18-inch line should be constructed along 1000 West from 50 North to 100 South. The line is needed for the new High School and is 100% Developer funded.

S-048 Daniels Road – 1320 South to 1475 South (12"): A 12-inch line should be constructed along Daniels Road from 1320 South to 1475 South. The line is needed for future Heber City growth and shall be paid for with impact fees.

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Infiltration and Inflow

Sewer flows typically increase during the summer months when compared to the winter months. A majority of the summer increase is likely from infiltration and inflow. High water table occurs during the spring and summer months, typically due to irrigation, but can also be due to above average Winter and Spring precipitation. As mentioned previously, infiltration and inflow appear to be following a decreasing trend based on recent water and sewer flow records. The reduced infiltration in recent years could be due to the continued expansion of the pressurized irrigation system, which has lowered the groundwater table. In addition to changes in the ground water, it could also be due to maintenance and repairs to the existing sewer infrastructure. If the reduction is mainly due to reduced levels of ground water unrelated to the pressurized irrigation, the City will see increased infiltration during times of normal or above normal ground water. The City should continue to monitor sewer lines for opportunities to reduce infiltration to lower treatment costs from the Heber Valley Special Service District (HVSSD).

System Capacity Improvements

The existing sewer system will need various upgrades to have sufficient capacity to meet the needs of the projected growth and maintain the current Level of Service (LOS). Figure 5-1 shows the additional lines needed to handle the flow generated from the growth projected through the planning period.

Currently HVSSD has a treatment capacity of 4.0 mgd. Heber City is using approximately 29% and Midway City is using another 26% of the total capacity of the plant. However, TCSSD flow makes up approximately 13% of the Heber City's flow or approximately 4% of the total capacity of the treatment plant. Jordanelle Special Service District makes up 7% of Midway City's flow and 2% of the total capacity of the treatment plant. HVSSD recently expanded their treatment plant and installed a mechanical component to ensure discharge limitations do not affect their ability to service the Heber Valley in the future. As of 2022, the plant is at 55% capacity. The plant is still considered 100% consumptive.

HVSSD also collects a separate impact fee from all new connections to the sewer systems that flow to the HVSSD sewer treatment plan, including Heber City's sewer system. Costs for any excess sewer capacity in existing Heber City facilities have not been included in the cost totals of this study except for the debt service specifically noted on project S-018. Most of any excess sewer capacity has been previously paid for by impact fees, and the benefit should go to new development.

Impact Fee Recommendations

Due to the reduction of new capital improvements needed, the Sewer Impact Fee should be lowered from the current \$2,151 to a new fee of \$1,417 per Equivalent Residential Unit (ERU) to generate sufficient revenue to fund the recommended improvements. However, to keep abreast of inflation and construction costs, the sewer rates and impact fees should be updated every year according to the change in the construction cost index.

5.2 Sewer Flow Data

Future conditions in Heber City will affect the sewer flow and the improvements needed to meet increased flow. Information used to determine the future conditions are:

- Present growth rates and future projected population growth rates
- Existing sewer flow
- Existing ERUs
- Projected residential and non-residential development areas

As this information changes, so will the timing of when recommended improvements are needed. This study will limit recommendations to all improvements needed by the end of the 20-year planning period. Interim phasing or timing of improvements will be determined and periodically adjusted by the City as information is accumulated.

Heber City's population has been projected through the planning period. The projected number of sewer connections was determined based upon the projected population and the percent of the population connected to the system. To determine where the projected sewer flows will occur, the potential areas of development were analyzed. Using historical sewer flows and State design requirements, the sewer flows have been projected through the planning period.

Projected Population

The projected population for Heber City during the planning period to 2043 is discussed in Chapter 3 - Projected Population. The 2023 population is estimated to be 18,347. The 2043 Heber City population is projected to be 29,682.

Equivalent Residential Connections

Sewer flow from residential connections differs from commercial, church, government, and other non-residential connections. To evaluate residential and non-residential connections on an equal basis, Equivalent Residential Unit's (ERU's) are used to equate the different types of connections. For this study, it is assumed that most water used during the winter is discharged into the sewer system. ERU's per non-residential connection were approximated by dividing the historical metered winter water use of commercial, church, and government use by the average residential gpd per ERU, and by the total number of non-residential connections. Between 2019 and 2021, the average ERU's calculated per non-residential connection was approximately 4.1.

In terms of ERU's, 2023 had 5,143 residential units (5,302-159 Red Ledges ERU's) and 1,948 non-residential ERU's (475 non-residential conn @ 4.1 ERU/conn), connected to the system.

The total number of projected residential, church, government, and commercial ERU's, are shown in Table 5-1. Red Ledges ERU's are subtracted from the Residential ERU's to get the total.

Table 5.1 Projected New ERU's in Five Year Intervals

Year	Residential Units	Non-Residential ERU's	New ERU's	Red Ledges ERU's	Total ERU's*
2023 (est)	5,302	1,946		(159)	7,090
2024-2028	1252	459	1711	(36)	8,765
2029-2033	1067	392	1459	(79)	10,146
2034-2038	464	170	635	(92)	10,688
2039-2043	493	181	674	(174)	11,188
Total	8,578	3,149		(539)	11,188

* Residential Units have been adjusted for Red Ledges

Historical Sewer Flow

Heber City's total yearly sewer flow, excluding TCSSD, steadily increased between 2000 and 2008 from 299 mg to 362 mg. Then after 2008 the flow began fluctuating as shown in Figure 5-2. The average yearly sewer flow between 2008 and 2022 has ranged from a low of 320 mg to a high of 392 mg. The City also experiences seasonal flow fluctuations between the summer and winter months as shown in Figure 5-3. Over the past three years, winter flows have averaged 140 gpd/ERU and the summer flows have averaged 164 gpd/ERU. This increase is thought to be related to seasonal infiltration from ground water and other inflow occurring during the summer. Heber City historical sewer flow data is contained in Appendix C.

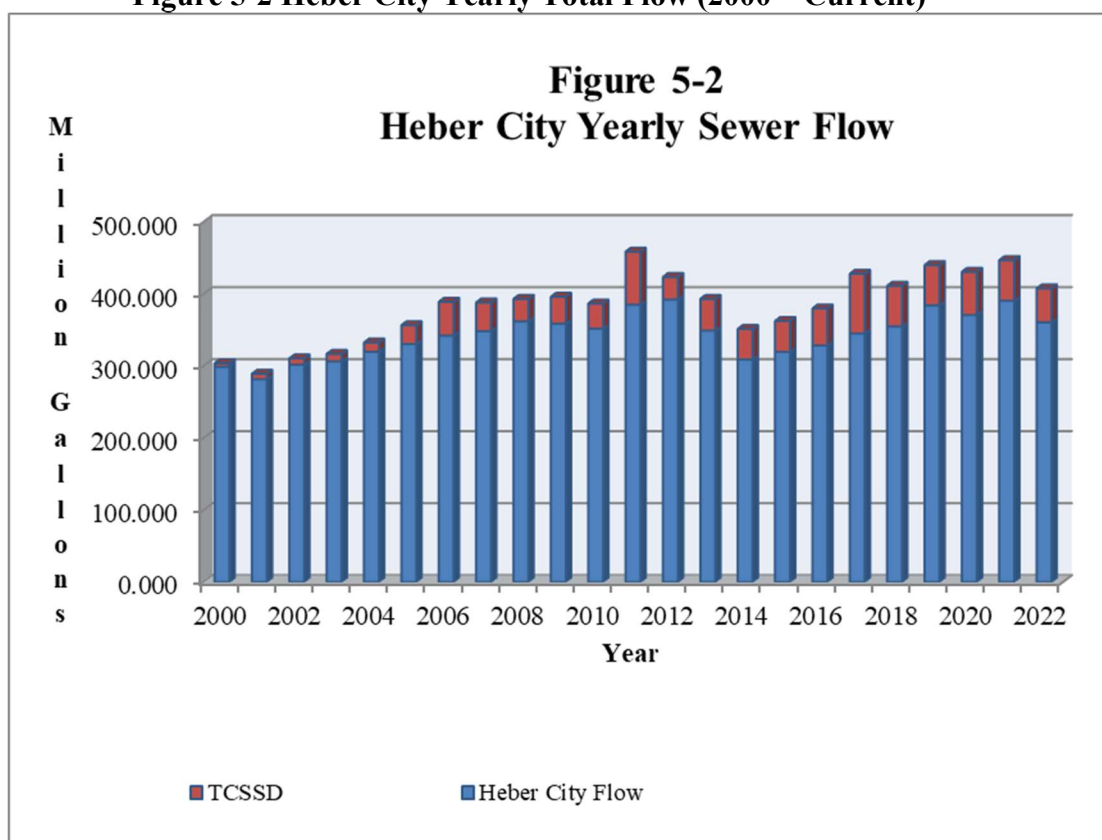
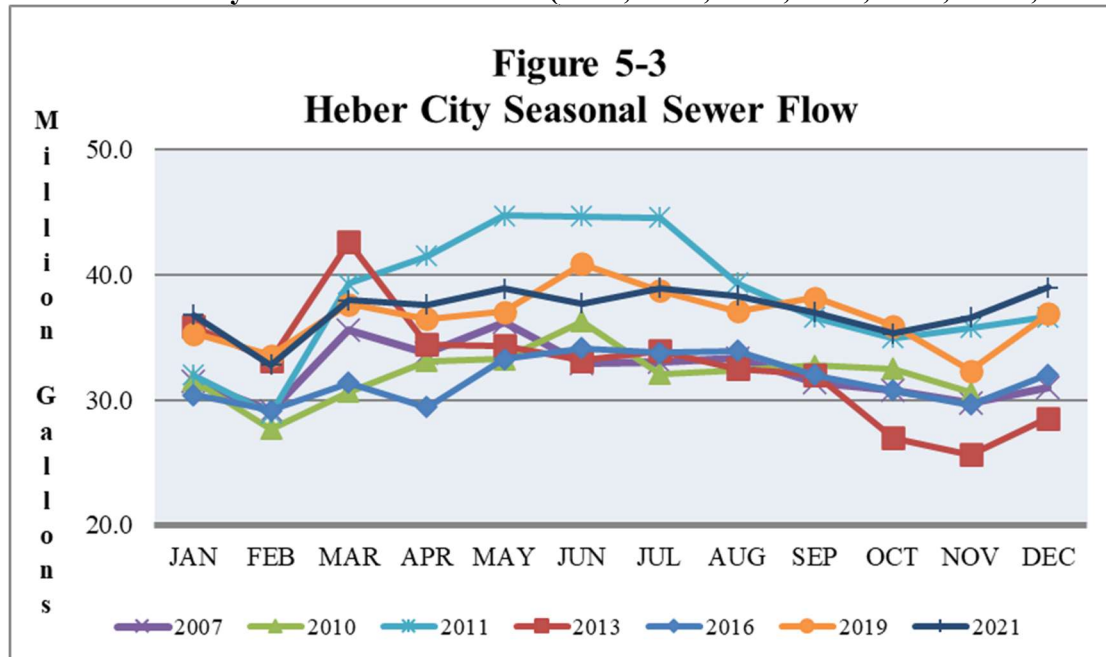
Figure 5-2 Heber City Yearly Total Flow (2000 – Current)

Figure 5-3 Heber City Seasonal Sewer Flow (2007, 2010, 2011, 2013, 2016, 2019, and 2021)



Calculation of Sewer Flow

The State of Utah Administrative Rule R317-3-2 included in Appendix C contains the requirements for sewer system design. New sewer systems are designed based on an annual average rate of flow of 100 gallons per capita per day. This includes an allowance for infiltration, and the rate may be higher if there is probability of large amounts of infiltration entering the system. Design flow is calculated from this base flow plus a peaking factor. A peaking factor of 2.5 is used for interceptor and outfall sewers, and 4.0 is used for laterals and collector sewers. Using the City's average population estimate of 3.12 people per household, as discussed in Chapter 3, the average yearly flow is approximately 312 gpd per residential connection. This is lower than some of the average historical flows in the City, but higher than the average flow in recent years. Possible reasons for a downward trend could include expanded use of the secondary irrigation system and/or a reduced ground water table. To be prudent the study will follow the State requirements of 312 gpd per ERU and evaluate it again during the next master plan update if the trend continues.

Projected Number of Sewer Connections

The projected number of new residential sewer connections are determined using the growth numbers in Chapter 3. The residential connections are assumed to increase at the same rate as population growth. In 2023 there were approximately 5,148 residential sewer connections, not including Red Ledges which is served by Twin Creek Special Service District.

Commercial, church/government, and other non-residential connections are assumed to increase at a rate equal to the population growth. In 2023 there were approximately 475 commercial, church, and government sewer connections.

Infiltration and Inflow

Infiltration and inflow increase flow in the sewer lines and can cause higher sewer treatment costs. If these additional flows are large, they may cause the flow to exceed the capacity of the lines. In 1939, Heber City constructed a large portion of the existing sewer system. The sewer lines were constructed using caulked mortar joints, which have since developed leaks. These leaking joints have acted as subsurface drains allowing groundwater to infiltrate into the sewer line during the summer months.

A study conducted in 1972 showed that Heber City had an average increase of more than eight times the amount of winter flow during the summer months when irrigation water was delivered to the City. From 1972 to 1976, subsurface drains were installed in Heber City to reduce the infiltration into the system. Additional lines were installed in 1983 to further reduce the infiltration by draining groundwater away from sewer lines. These additional drains reduced the amount of flow to the HVSSD by approximately 91 mg a year.

Further reductions in infiltration occurred when the Wasatch County Water Efficiency Project was constructed by the Central Utah Conservancy District. In 2001 this project was completed and began operation in Heber City and Wasatch County. It replaced much of the flood irrigation with a pressurized irrigation system that lowered the groundwater table in the area. The current ditch system in Heber City continues to convey irrigation water to the central portions of town without pressurized irrigation. Prior to 2006, there was not flow control on the ditches. As of 2006, the ditches are controlled and turned off during non-use times. Figure 5-3 shows the effects of the seasonal irrigation on sewer infiltration.

While major strides have been made to reduce infiltration and inflow in Heber City's sewer system, it continues to make up an estimated 15% of the flow during the summer and should be monitored for opportunities for further reductions. Observing high flow lines in late evening or early morning, when low flow is present, could indicate excessive infiltration. Observing seasonal surcharging may indicate infiltration or other inflow problems. Based on the problems found, decisions can be made on the type of improvements needed. Improvement options may include the following:

- Fix existing leaking manholes
- Slip-line leaking pipes
- Replace leaking pipes
- Construct new drainage lines

These improvements can reduce sewer flow and lower treatment costs from the HVSSD. As the population grows, Heber City should explore additional opportunities to reduce infiltration and inflow.

Summary of Projected Sewer Flow

The projected population, historical sewer flow, and design criteria were used to project the sewer flow through the year 2043. The State design requirements for new sewer systems are 100 gallons per capita per day which includes infiltration and inflow. Heber has on average 3.12 persons per household. This equates to an average yearly flow of 312 gpd per ERU. This is lower than some Heber City historical flows which include infiltration, but higher than recent average yearly flows.

Sewer lines are designed to provide capacity for the Peak Hourly flow with the lines at no more than 75% of full capacity. The ratio of the Peak Hourly flow to the Average Yearly flow is referred to as the peaking factor. Peaking factors are higher for collector lines than for outfall or interceptor lines because the peak is reduced as the distance from the source increases. Peaking factors for Heber City are based on the State Department of Environmental Quality (DEQ) recommendations of 2.5 for interceptor and outfall sewers and 4.0 for laterals and collector sewers. Table 5-2 shows the projected Average Yearly flow through the planning period with additional contributions agreed to from TCSSD and Charleston at the HVSSD outfall line. The TCSSD ultimate peak build out flow will be 3,310 gpm per agreement, divided among two connections (1200 East 600 South, and 1200 East 1200 South). There is a potential Charleston peak build out flow of 698 gpm at the 1200 West and 1200 South connection, although it is not part of this study, and is shown in Table 5-2 for information only. The sewer model was analyzed using Heber City's system capacity and both TCSSD and Charleston's peak flows added at a 6% growth rate. The impact of these connections on the City's system was previously analyzed in a Sewer Capacity and Fee Analysis for Twin Creeks report by Horrocks Engineers dated 8/27/21. The agreement and study are included in the Appendix C.

Table 5-2 Projected Sewer Flow in Five-Year Increments

Year	Projected ERU's*	Average Yearly (gpd / ERU)	Heber Flow (mgd)	Heber Flow (mg)	TCSSD Flow (mg)	Charleston Flow (mg)
2023	7,090	312	2.21	807	47	0
2028	8,765	312	2.73	998	84	0
2033	10,146	312	3.17	1,155	112	149
2038	10,688	312	3.33	1,217	150	199
2043	11,188	312	3.49	1,274	225	300

* ERU's have been adjusted for Red Ledges

5.3 Sewer System Analysis and Level of Service

Heber City's sewer system was analyzed to find the existing capacity and Level of Service (LOS). Future improvements needed to maintain the existing LOS were determined. This section describes the existing sewer system, along with a discussion of the concerns and improvements necessary to maintain the current LOS with future population growth. State and Heber City standard requirements will be used as criteria to analyze the sewer system. Information obtained from a computer sewer model of Heber's system will be presented with the recommended improvements needed to meet the projected population's sewer flow. Figure 5-4 shows the existing sewer system.

Level of Service

The existing sewer system of Heber City serves its residents with no interruption. Each pipe in the system is checked to ensure it is in good condition and large enough for its designated flow. Heber City has approximately 83 miles of sewer lines that collect the sewer and convey it to the HVSSD with 36-inch and 21-inch outfall lines. Collection lines in the city range from 6-inch to

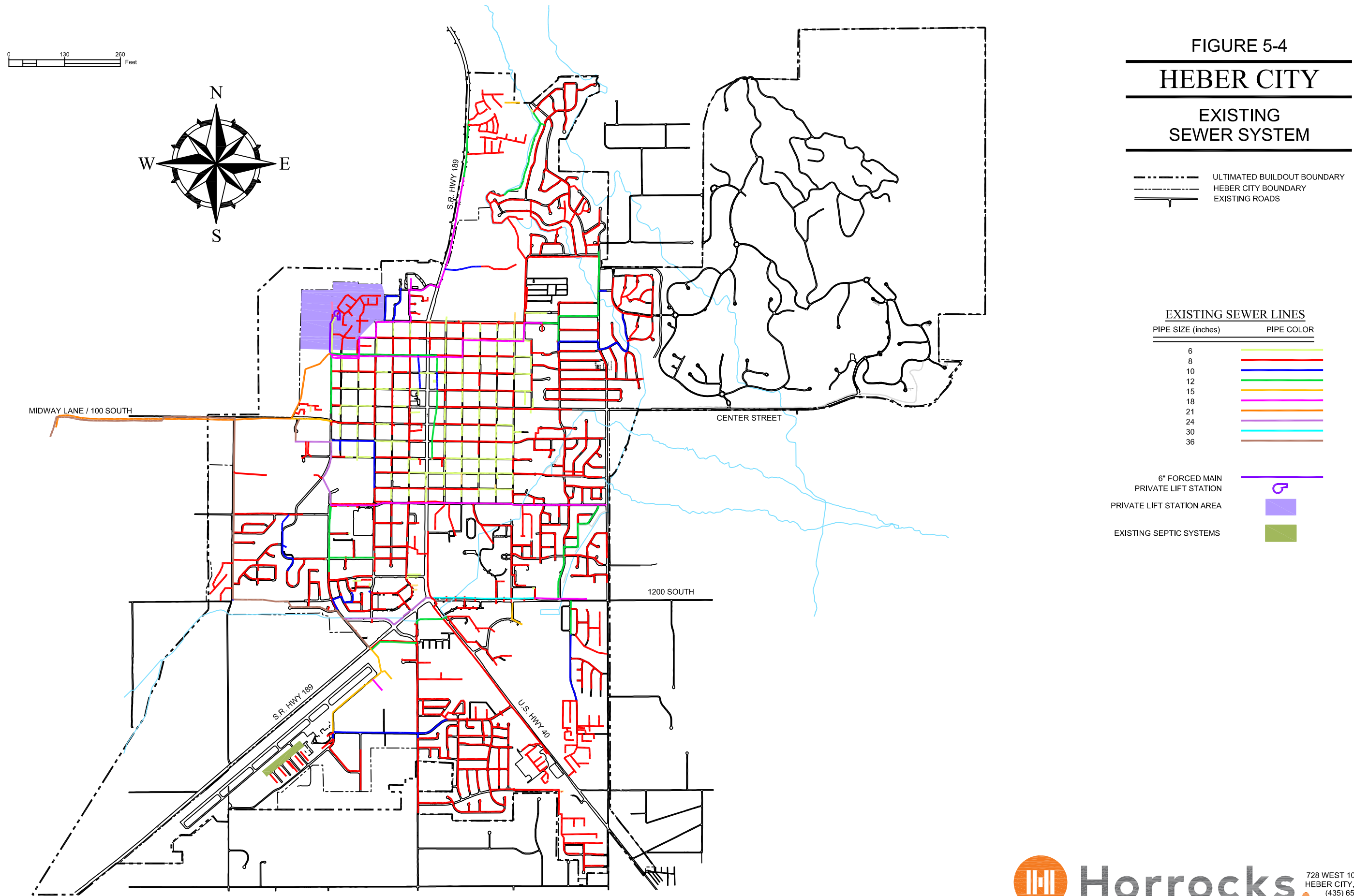
18-inch mains and carry over 400 mg per year. Originally, Heber City's sewer system was setup with two main trunk lines located along 600 West and 300 North, which carried all of the flow from the City to an outfall line located at 600 West 300 North. Flows from 600 West were diverted at 100 South and carried to the outfall line along Midway Lane. Two new 18-inch main trunk lines were later constructed. One line was constructed along 300 North and 400 North, which conveys all of the flow from the Valley Hills area and new development on the east side of Heber. The other 18-inch line was constructed along 600 South to service TCSSD and development in the south and east portions of Heber.

The ERU capacity of incremental sewer line sizes is shown in Table 5-3. The capacity is calculated at 75% of full capacity, using minimum slopes, a PVC roughness coefficient, and an appropriate peaking factor. As discussed in the previous section, outfall and interceptor lines experience smaller peaks than collector lines do, therefore a smaller peaking factor is used. Table 5-3 shows the sewer line capacities and the current sewer LOS that existing residents in Heber City experience.

Table 5-3. Sewer Line Capacity by Pipe Size

Size	Percent of Full Capacity	Min. Slope @ 2 fps	Capacity @ Min. Slope	PF	Capacity @ 312gpd * PF
(in)		(ft/ft)	(mgd)		ERU
8	75	0.00334	0.44	4	353
10	75	0.00248	0.69	4	553
12	75	0.00194	0.99	4	793
15	75	0.00144	1.54	2.5	1,974
18	75	0.00113	2.22	2.5	2,846
21	75	0.00092	3.03	2.5	3,885
24	75	0.00077	3.95	2.5	5,064
30	75	0.000571	6.17	2.5	7,910
36	75	0.000449	8.9	2.5	11,410

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Computer Model of Sewer System

A computer program called *SewerGEMS CONNECT* was used to model Heber City's sewer system. The program uses the flows generated by each sewer connection to calculate the full flow, maximum flow, and flow velocity for each pipe. From the output of the model, the amount of sewer flowing in each line can be approximated. Information for the existing sewer system, including the pipe diameters, lengths, manhole locations, and invert elevations, were obtained from a survey completed in 2002 by Horrocks Engineers for Heber City, and from mapping produced by Heber City in 2017.

Using the ultimate buildout conditions and the anticipated zoning in undeveloped areas, the projected number of future ERU's were calculated. However, not all of the future commercial zone ERU's are known and some of this information was estimated or not modeled. Flows metered at HVSSD and a few other chosen locations in Heber City were used to calibrate the existing sewer system model. The additional flows generated by the future ERU's were entered into the sewer model, producing projected sewer flows into the existing and newly proposed interceptor lines. The model was run to determine upgrades needed for demands on the existing sewer system and the additional demands placed on the system in the future.

The existing sewer system was modeled using peaking factors to determine the peak hour flow. Any mains approaching a service level of 75% of full capacity were identified as in need of expansion. Detail for the models runs are shown in Appendix C.

The following lines are nearing capacity and will need to be upsized to accommodate additional flow: 1) The 15-inch main in 100 South running from 800 West to 930 West. This main will need to be up-sized soon from 15-inches to 30-inches. 2) The 8-inch main in 550 East from Valley Hills Drive to 600 North. This main will need to be upsized soon from 8-inches to 10 inches. 3) The 8-inch line in Daniels Road from 1320 South to 1475 South will need to be upsized soon from 8 inches to 12 inches.

The other mains in the existing sewer system have sufficient remaining capacity to handle the additional future flows except for the following: 1) The 21-inch line from 930 West and South Field Road along 100 South will ultimately need to be replaced with a 30-inch line. 1) The 21-inch line that runs along the Sagebrush and Spring Creek Canal between 300 North and 100 South will ultimately needed to be replaced with a 24-inch line.

Additional sewer facilities that will need to be constructed to maintain the current sewer LOS as the City develops to the North, South, and East are shown in Figure 5-1. These make up the backbone sewer system and generally consist of mains 10-inches and larger.

A summary of the recommended future improvements and estimated costs are shown in Table 5-4. Improvements generated by future growth are shown. With contingencies, engineering, construction management and inspection, the total estimated cost is \$15,466,157. A breakdown of the project costs and assumptions are shown in Appendix C.

Table 5-4 Heber City's Estimated Cost of Future Sewer Improvements

ULT	CIP #	Recommended Improvements	Total Cost	Funding Proportionate Share Analysis								
				Operating		Developer		Other ^{1,2}		Impact Fees		
				%	\$	%	\$	%	\$	%	\$	
ULT	S-004	600 East - 1300 S to Hidden Cr Ln (15")	15	\$706,421	0%	\$0	53%	\$374,403	0%	\$0	47%	\$332,018
	S-020	Aerial Digital Map Updates (4 times)		\$19,200	0%	\$0	0%	\$0	0%	\$0	100%	\$19,200
	S-021	Master Plan Update (4 times)		\$336,000	0%	\$0	0%	\$0	0%	\$0	100%	\$336,000
	S-023	US 40 - Center Creek Dr to 2200 S (West) (8")	8	\$1,378,041	0%	\$0	100%	\$1,378,041	0%	\$0	0%	\$0
	S-024	1500 West - 100 S to 1200 S (12")	12	\$1,069,267	0%	\$0	100%	\$1,069,267	0%	\$0	0%	\$0
	S-025	Sage Brush/Spring Cr Canal - 300 N to 100 S (24")	24	\$1,523,623	0%	\$0	0%	\$0	100%	\$1,523,623	0%	\$0
	S-026	SR 113 - 800 W to 930 W (30")	30	\$1,032,613	0%	\$0	0%	\$0	0%	\$0	100%	\$1,032,613
	S-027	SR 113 - 930 W to South Field Rd (30")	30	\$1,062,120	0%	\$0	0%	\$0	0%	\$0	100%	\$1,062,120
	S-031	South Field Rd - US 40 to 1200 S (10")	10	\$0	0%	\$0	0%	\$0.00	0%	\$0	0%	\$0
	S-033	US 40 - Center Creek Dr to E Airport Rd (East) (8")	8	\$854,153	0%	\$0	100%	\$854,153.02	0%	\$0	0%	\$0
	S-035	Center Street - 800 E to 1300 E (8")	8	\$772,234	0%	\$0	100%	\$772,234.35	0%	\$0	0%	\$0
	S-036	900 North - Main St to 500 E (8"/10")	8	\$710,991	0%	\$0	100%	\$710,990.58	0%	\$0	0%	\$0
	S-037	Heber City Public Works Facility Exp Ph.1		\$305,225	0%	\$0	0%	\$0.00	0%	\$0	100%	\$305,225
	S-038	500 N and 600 W to 50 N and 1000 W (18")	18	\$1,695,018	0%	\$0	47%	\$796,658.48	28%	\$475,792	25%	\$422,568
	S-041	Heber City Public Works Facility Exp Ph.2	0	\$1,421,174	0%	\$0	0%	\$0	0%	\$0	100%	\$1,421,174
	S-044	E Airport Rd - US 40 to 600 E (10")	10	\$121,449	0%	\$0	73%	\$88,294	0%	\$0	27%	\$33,156
	S-045	1200 South - 1000 E to 1200 E (12")	12	\$575,763	0%	\$0	62%	\$354,094	20%	\$115,153	19%	\$106,516
	S-046	550 East - Valley Hills Dr to 600 N (10")	10	\$956,064	0%	\$0	73%	\$695,059	0%	\$0	27%	\$261,006
	S-047	1000 West - 50 North to 100 South (18")	18	\$584,944	0%	\$0	100%	\$584,944	0%	\$0	0%	\$0
	S-048	Daniels Road - 1320 South to 1475 South (12")	12	\$341,857	0%	\$0	0%	\$0	0%	\$0	100%	\$341,857
	TOTAL EXPENDITURES			\$15,466,157		\$0	\$7,678,138		\$2,114,567		\$5,673,452	

NOTES:

1. "Other" includes grants, special assessments, previously collected impact fees, and fund from Twin Creeks Special Service District.
2. A total of \$1,974,000 listed in the "Other" column is funded by the existing impact fee account as of April 17, 2023. Applied to S-025, S-038.
3. Assumed 5.0 % interest rate on bonds. All bonds assumed to be paid off by 2043.
4. The Aerial Digital Map (S-020) and Master Plan Updates (S-021) need to be done four times in the next 20 years. The total cost is divided by four in the Impact Fee Expenditure Plan Improvement Costs.
5. ERU's based on 2042 ERU projection minus Red Ledges full time units because they are served by Twin Creeks and do not pay sewer impact fees. Red Ledges 2042 added units =380 (1,186/3.12)

5.4 Economic Feasibility Analysis

The two types of funding for Heber City's sewer system are operating and non-operating funds. Independently, these two funds should generate sufficient revenue to fund the respective needs of the sewer system. Operating expenses include the monies used for personnel and contractual services, betterment and replacement type capital improvement projects, materials, supplies, depreciation, and other operating expenses. Revenue to fund these operating expenses is generated from sewer user fees.

Non-operating expenses comprise expansion type capital improvement projects, developer reimbursements, master planning, aerial mapping, and bond repayment. The revenue for non-operating expenses is generated from impact fees. Generally, operating expenses should be funded by the existing users, and non-operating expenses necessary for future development should be paid by the future development through impact fees.

In this section, only the non-operating expenses are discussed in detail. Projected revenue and expenditures have been analyzed to determine if present fees are sufficient to fund the recommended improvements and other related expenditures.

Impact Fee Fund

The Impact Fee fund or capital project fund is used to fund improvements needed to maintain the current LOS and meet the increased flows due to the growth. Revenue is generated from the “impact fee” charged to new development. This revenue is used to fund the capital improvement projects and debt service.

The impact fee amount is calculated by taking the total cost of improvements associated with impact fees, plus the necessary bond interest payments, divided by the projected new ERU’s for 20 years. The impact fees for all 20 years are shown in 2023 equivalent dollars. Bonding is necessary when projects were grouped into five-year windows and insufficient impact fees are collected to cover the projected improvement costs.

Development occurring within the 20-year planning window will pay equally for recommended projects. Earlier developments only pay their fair share of facilities that also benefit later developments.

Since the order in which development will occur throughout the City is not known exactly, the project order may change as development dictates project needs. Table 5-5 also illustrates how the collected impact fee money will be expended within the required six years from the time of collection. The five-year windows allow for a one-year buffer to ensure compliance with the law’s six-year expenditure requirement. The fees should be analyzed at each five-year Master Plan Update to keep abreast of inflation and rising construction costs.

Other funding Sources

Table 5-5 lists other funding sources that could be potential resources of money. Bonds are listed, and the anticipated bond debt service payments are figured into the impact fee calculation. Potential grants have not been included as a funding source. Any grants that may be awarded in the future would reduce funding requirements. Heber City does not currently charge any special assessment fees.

Developer Contributions

The City has a policy that developers are responsible for 100% of the cost of on-site improvements needed to serve their development. Developers are also responsible for extending any off-site services needed to serve their development. Reimbursement for a portion of these costs may be available through reimbursement agreements or from impact fees to oversize facilities identified in this Master Plan. The City will reimburse developers for over-sizing of mains above 8-inches (or above the minimum size required for the development) as impact fee funds are available.

Currently, the sewer impact fee charged to new development is \$2,207 per ERU and assumed 163 gpd/ERU average yearly flow at the connection. Table 5-5 shows the new calculated impact fee based on the estimated cost of the required improvements every five years. With bond interest added, the estimated total cost for improvements over the next 20 years is \$5,807,402 (\$5,673,452 + \$133,951). The projected number of new residential and non-residential ERU’s is 4,098. The recommended new impact fee is \$1,417 per ERU with 140 gpd/ERU used to estimate ERU’s from average yearly flow at the connection.

The money generated from the recommended impact fee and the projected number of

connections should generate sufficient revenue to fund the recommended capital improvements and bond re-payments, and excludes the operating portion of the improvements identified in Table 5-4.

Table 5-5 Projected Impact Fee Revenue and Expenditure Plan

Impact Fee Expenditure Plan								Collected vs Cost	Bond Loan Plus Payments	Fund Running Balance
Year	ERUs ²	Impact Fee Collected (\$)	Available Funds (\$)	Improvement Projects ^{1,3}			5-year Improvement Costs (\$)			
2024	295	\$418,054		S-020	S-025	S-045		(\$110,594)	\$0	
2025	308	\$436,476		S-021	S-026	S-048				
2026	323	\$457,733		S-037	S-035					
2027	337	\$477,573		S-004	S-036					
2028	353	\$500,247	\$2,290,083	S-024	S-038		\$2,400,678		\$120,000	\$9,406
2029	369	\$522,921		S-020	S-041			\$52,526	(\$11,561)	
2030	386	\$547,013		S-021	S-044					
2031	403	\$571,104		S-037	S-046					
2032	102	\$144,547		S-023						
2033	104	\$147,382	\$1,932,966	S-033			\$1,880,441		(\$11,561)	\$4,126
2034	105	\$148,799		S-020				(\$463,393)	(\$11,561)	
2035	106	\$150,216		S-021						
2036	108	\$153,050		S-037						
2037	109	\$154,467		S-027						
2038	111	\$157,302	\$763,834				\$1,227,227		\$508,439	\$2,927
2039	113	\$160,136		S-020					(\$131,668)	
2040	114	\$161,553		S-021						
2041	116	\$164,387		S-037						
2042	117	\$165,804								
2043	119	\$168,639								
	4,098	\$5,807,402	\$820,519				\$165,106	\$655,413	(\$131,668)	\$0
	4,098	\$5,807,402					\$5,673,452	\$133,951	(\$133,951)	

Estimated New ERU's⁵ =

4,098⁵

Impact Fee per ERU (no bonding) =

\$1,384

Impact Fee per ERU with Bond Interest =

\$1,417

NOTES:

1. Project order in which development will occur in City is approximated and will change as development dictates.

2. 2040 projected Residential and Non-Residential ERU's minus Red Ledges because Red Ledges does not pay sewer impact fees.

3. S-020, S-021, and S-037 are divided by 4 to spread over 20 year window.

4. Must borrow sufficient funds to cover shortfall in fees collected. Must keep Fund Running Balance low to insure fees are spent in 6 years.

Assessing Sewer Impact Fees

Although sewer facilities are designed for an average yearly flow of 312 gpd/ERU which includes inflow and infiltration, impact fees are assessed using 140 gpd/ERU for non-residential connections since they are calculated at the ERU connection location prior to any inflow and infiltration. Single family and multi-family residential connections are assessed 1 ERU per unit regardless of size. This is because water meter records have not shown a consistent measurable difference in the indoor usage among various types of residential units.

Non-residential connections have significant variations from one to another and require a more detailed method to calculate the proper impact fee when a building permit is requested. The method used is based on the water fixtures proposed for the connection, and other available information, to estimate the impact on the sewer system. Non-residential connections are assumed to generate wastewater in quantities equal to their average metered water use. Sewer

fixtures are counted, weighted according to unit values from the International Plumbing Code, and multiplied by the flow per fixture unit to estimate the average flow that would be generated from the connection.

An example is given of how this method works. If a new retail property has two toilets that have a value of four fixture units each, and two sinks that have a value of two fixture units each, the property would be assigned a total of 12 fixture units. The average yearly flow for similar use properties would be determined from City or other meter records, for example 11 gpd per fixture unit. Multiplying the two values together results in an estimated flow for the new connection of 132 gpd. Dividing estimated flow by 140 gpd/ERU, which is the historical 3-year average yearly flow at the source, equates to 0.94 ERU's for the non-residential connection. Table 5-6 lists the unit values used for various types of fixtures per the International Plumbing Code, Table 709.1. The minimum ERU's allowed by Heber City for new non-residential properties is 1 ERU per connection, therefore the 0.94 ERU's, from the example above, would be rounded to 1.

Table 5-6. Fixture Type and Unit Value (IPC Table 709.1)

FIXTURE TYPE	UNIT VALUE
Automatic clothes washers – Commercial	3
Automatic clothes washers – Residential	2
Bathroom group - (≤ 1.6 gpf)	5
Bathroom group - (> 1.6 gpf)	6
Bathtub – w/wo shower or whirlpool	2
Bidet	1
Combination sink and tray	2
Dental lavatory	1
Dental unit or cuspidor	1
Dishwashing machine – Domestic	2
Drinking fountain	0.5
Emergency floor drain	0
Floor drain / Janitor Sink	2
Kitchen sink - Domestic	2
Kitchen sink - Domestic w/grinder or dishwasher	2
Laundry tray	2
Lavatory - (Restroom)	1
Shower	2
Sink	2
Urinal	4
Urinal - (≤ 1.0 gpf)	2
Wash sink - (circular or multiple) each set of faucets	2
Water closet - Flushometer tank, Public or Private	4
Water closet - (≤ 1.6 gpf) Private	3
Water closet - (> 1.6 gpf) Private	4
Water closet - (≤ 1.6 gpf) Public	4
Water closet - (> 1.6 gpf) Public	6

Chapter 6

Street System

6.1 Summary and Recommendations

Introduction

Heber City's future street plan contains six road classifications: Minor Local, Major Local, Minor Collector, Major Collector, Minor Arterial, and Principal Arterial. This Street System Master Plan designates each future street as one of these types. At a minimum, developers are required to provide Minor or Major Local streets within their developments consistent with this master plan. Traffic generated by the development itself may facilitate the need for streets larger than locals. Developers are required to provide the street classification necessary to accommodate the development.

Residents in the county and other areas outside of Heber City limits also impact the City's street system. Mountainland Association of Governments (MAG) traffic data for the Heber Valley has been incorporated into the study to help determine the City's future street system needs. Future planned development areas, MAG traffic information, and the City's most recent Transportation General Plan have all been used to determine the recommendations for future street improvements throughout Heber City.

The Heber City Design Criteria used in this study are summarized below:

- Road Width:

- Minor Local	ROW 56 feet	Asphalt 26 feet
- Major Local	ROW 62 feet	Asphalt 32 feet
- Minor Collector	ROW 68 feet	Asphalt 38 feet
- Major Collector	ROW $\geq$ 80 feet	Asphalt 50 feet
- Minor Arterial	ROW $\geq$ 90 feet	Asphalt $\geq$ 60* feet
- Principal Arterial	ROW per UDOT	Asphalt varies
- Trip Generation:

- Single Family	8.32 Average Trips/Unit
- Townhomes	7.20 Average Trips/Unit
- Multi-family	6.74 Average Trips/Unit
- Non-Residential	152 Average Trips/Unit

Projected Population

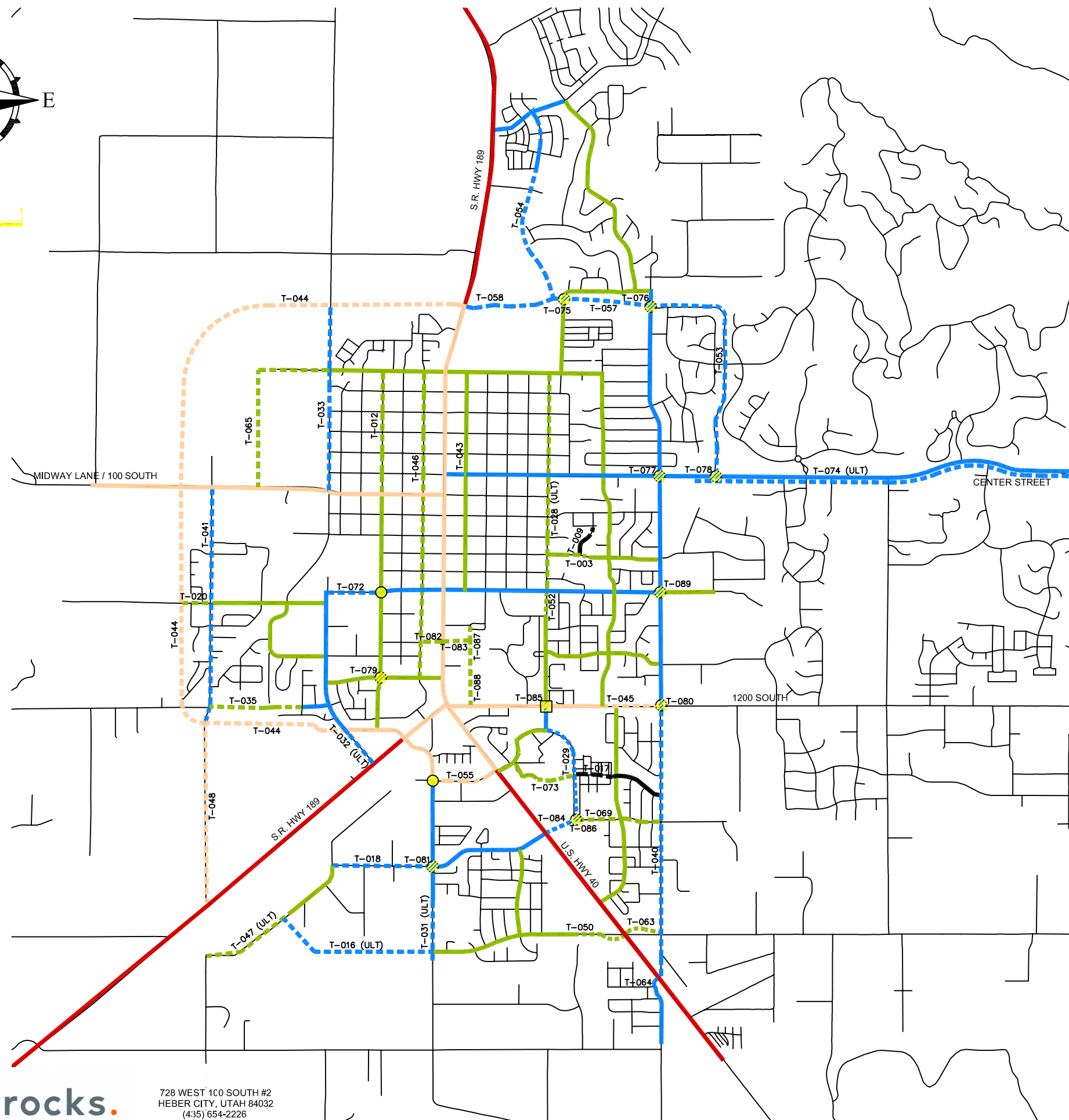
Heber City's population is expected to increase by approximately 61.8%, from 18,347 to 29,682 by the year 2043. This increase in population will generate more traffic on the city streets.

Street System Master Plan

Figure 6-1 shows the Street System Master Plan. The existing and future streets shown in the master plan reflect the major network of streets, transportation needs, and improvements for the fully developed City under the present 20-year zoning plan and existing City limit restraints. Future streets are those that should be constructed to meet the needs of the projected population and traffic growth. New future streets will generally be constructed by developers, and existing streets that need to be improved will be constructed by a combination of the City, UDOT, developers, and other potential stakeholders.

Development Standards

Heber City's streets mainly comprise five typical street classifications: Minor Local, Major Local, Minor Collector, Major Collector, and Minor Arterial. The Principal Arterial streets are generally owned and maintained by UDOT. The Master Plan designates each existing and future major street as one of these classifications as shown in Figure 6-1. A description of the widths and typical costs of the respective streets are shown in Table 6-1. Developers are required to construct Minor and/or Major Local streets depending on input from Heber City Planning and Engineering, unless the Street Master Plan recommends a larger street to be constructed. The developer may be reimbursed from impact fees for the upgraded street costs depending on the street classification needed for the development itself.



	EXISTING LOCAL STREET
	EXISTING MINOR COLLECTOR
	EXISTING MAJOR COLLECTOR
	EXISTING MINOR ARTERIAL
	EXISTING PRINCIPAL ARTERIAL
	NEW OR UPGRADED LOCAL STREET
	NEW OR UPGRADED MINOR COLLECTOR
	NEW OR UPGRADED MAJOR COLLECTOR
	NEW OR UPGRADED MINOR ARTERIAL
	NEW OR UPGRADED PRINCIPAL ARTERIAL
	EXISTING ROUNDABOUT
	FUTURE ROUNDABOUT
	FUTURE SIGNAL



H:\Heber City\City Projects\2022 Heber City Master Plan Update\Project Data\Chap 6 Streets\Future 2017.dwg - Layout1 - 1/19/2024 01:48pm, ChuckR

Table 6-1 Heber City's Portion of Cost and Street Size Requirements

Classification	Right-of-Way Width (ft)	Paved Width (ft)	Cost Increase from Major Local (\$/LF)
Minor Local	56	26	N/A
Major Local	62	32	N/A
Minor Collector	68	38	\$102.80
Major Collector	80	>50	\$308.39
Minor Arterial	90	>60	\$479.72

* See Current Heber City Standard Drawing Cross Section. If pavement width varies cost per LF is \$14.60.

Upkeep and Maintenance

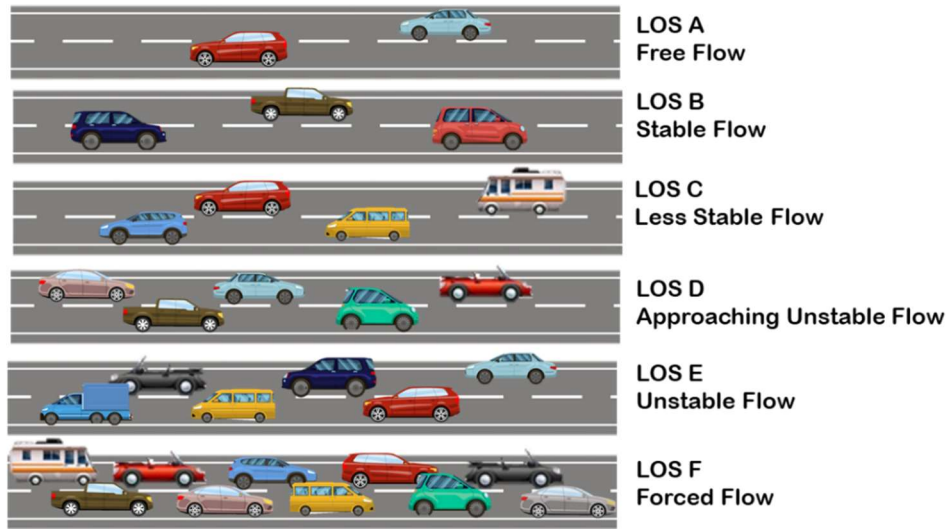
Not only do the road widths and classification need to be appropriate for the traffic conditions, but acceptable street conditions need to be maintained. It is recommended that Heber City do preventive maintenance to keep ahead of any road deterioration, and quickly give attention to streets that need to be repaired or replaced. The street's life can be increased by doing asphalt pavement spot repairs with FOG seals, slurry seals, or chip seals every 5-6 years, while also crack sealing at 2 to 3 year intervals, or as needed. 2-inch asphalt overlays with asphalt spot repairs are anticipated every 10 to 15 years. Asphalt spot repairs include replacing failed sections of the asphalt and possibly the base and subbase materials depending on the depth of the failure. Milling the asphalt should also be considered prior to placing a 2-inch overlay depending on the thickness of the existing asphalt. It is anticipated that all asphalt and some of the sub-base material will need to be replaced every 15 to 20 years, depending on the road classification, change in loading conditions, and increases in truck or heavy equipment traffic. Based on the road conditions found, a decision should be made as to the type of improvement needed, i.e. chip seal, slurry seal, FOG seal, 2-inch overlay, asphalt spot repair, reconstruction, etc. The original design of the street will be a factor in the street's life. Heber City should continue to research, discover, and implement new materials and methods for road maintenance and upkeep.

Level of Service

Street systems offer a wide range of choices in terms of services provided. The characteristics of streets are often evaluated in terms of travel time, frequency, comfort, reliability, convenience, and safety. The term Level-Of-Service (LOS) is used to describe the relative value of these attributes.

The current LOS on Heber City streets is the following: Minor and Major Locals operate at a LOS of A, Minor and Major Collectors operate at a LOS of C or better depending on the time of day. At LOS C, stable operation is provided, but flows approach the range at which an increase in volume immediately results in a deterioration of service. Table 6-2 describes in more specific terms the LOS A through F.

Figure 6-2 Level of Service



Recommended Street System Improvements

Capital improvements recommended to meet the projected population are shown in Figure 6-1. These recommendations were determined by projecting the future areas of development, reviewing the adopted Heber City Transportation General Plan, comparing MAG's traffic count data, and incorporating input from City Officials. A detailed listing of the recommended improvements is given in the following paragraphs.

Local Street Improvements

T-009 600 East: 600 East should be constructed as a Local street between 200 South and 400 South.

T-017 1600 South: 1600 South should be constructed as Local street between approximately 600 East and Sawmill Boulevard.

Minor Collector Street Improvements

T-003 400 South: 400 South should be constructed as a Minor Collector between 600 East and 700 East. This project also includes a bridge across the Wasatch Canal.

T-012 300 West: 300 West should be improved as a Minor Collector between 500 North and 100 South. This project includes sidewalk on one side of the road. The sidewalk is included in the impact fees costs because once the road is widened for future growth, the walking area on the shoulder will be removed. The walking area needs to be replaced with sidewalk.

(Ultimate) T-016 2400 South: 2400 South should be constructed as a Minor Collector between Daniels Road and South Airport Road.

T-018 Airport Road: Airport Road should be improved to a Minor Collector between Daniels Road and Hangers.

T-020 650 South: 650 South should be improved to a Minor Collector between 1200 West and the West Bypass.

(Ultimate) T-028 500 East: 500 East should be improved to a Minor Collector between 500 North and 600 South. This project includes installing sidewalk on one side of the street. This quantity will fill in the gaps of sidewalk that are missing on this street. The sidewalk is included in the impact fees costs because once the road is widened for future growth, the existing walking area on the shoulder will be replaced with sidewalk.

T-035 1200 South: 1200 South should be constructed as a Minor Collector between 700 West and Southfield Road.

T-043 100 East: 100 East should be improved to a Minor Collector between 500 North and 600 South.

T-046 100 West: 100 West should be improved to a Minor Collector between 500 North and 1000 South.

(Ultimate) T-047 South Airport Road: South Airport Road should be improved to be a Minor Collector between 670 West and 1200 West.

T-050 2400 South: 2400 South should be constructed as a Minor Collector between approximately 700 East and US 40.

T-052 500 East: 500 East should be constructed as a Minor Collector between 600 South and 720 South.

T-065 500 North to Midway Lane: A Minor Collector should be construction between 500 North and Midway Lane on the northwest side of town.

T-069 1900 South: 1900 South should be constructed as a Minor Collector between Mill Road and approximately 600 East.

T-073 Providence Drive: Providence Drive should be constructed as a Minor Collector between approximately 1600 South and approximately 600 East.

T-082 850 South: 850 South should be constructed as Minor Collector between 100 West and Main Street.

T-083 850 South: 850 South should be constructed as Minor Collector between Main Street and 120 East

T-087 120 East: 120 East should be constructed as a Minor Collector between 800 South and 1000 South.

T-088 120 East: 120 East should be constructed as a Minor Collector between 1000 South and 1200 South.

Major Collector Street Improvements

T-029 600 East: 600 East should be constructed as a Major Collector between 1300 South and Hidden Creek Lane.

(Ultimate) T-032 Industrial Parkway: Industrial Parkway should be improved to a Major Collector between 910 South and Highway 189. This project may be adjusted once recommendations are available from UDOT's Bypass Environmental Study.

T-033 600 West: 600 West should be constructed as a Major Collector between the West Bypass and 100 South.

T-040 1200 East: 1200 East should be improved to a Major Collector between 1200 South and US 40 where not already completed by developers.

T-041 Southfield Road: Southfield Road should be improved to a Major Collector between 100 South and 1200 South. Project includes widening railroad crossing and installation of crossing arms at approximately 1000 South.

T-053 East Bypass- Center Street to 1050 E (Red Ledges): The East Bypass road should be constructed as a Major Collector between Center Street and 1050 East. A small portion of this road just east of 1050 East has already been constructed.

T-054 Ostler Peak Road: Ostler Peak Road should be constructed as a Major Collector between Coyote Canyon Parkway and 900 North. A portion of this road just north of 1800 North has been constructed.

T-057 East Bypass – 1050 E to 550 E: The East Bypass road should be constructed as a Major Collector at approximately 900 North between 1050 East and 550 East along the east side of the City Cemetery.

T-058 East Bypass – Main St 550 E: The East Bypass road should be constructed as a Major Collector at approximately 900 North between 550 East and Main Street.

T-072 600 South: 600 South should be restriped as a 3-lane roadway without parking between 300 West and to the west to 650 South.

T-084 Airport Road: Airport Road should be constructed to the east of US 40 as a Major Collector.

Minor Arterial Street Improvements

T-044 West Bypass: A Minor Arterial should be constructed between 900 North and 1300 South along the west edge of Heber City. This will be a UDOT project.

T-045 1200 South: 1200 South should be improved to a Minor Arterial between 820 East and 1200 East.

T-048 Southfield Road: Southfield Road should be improved to a Minor Arterial between 1200 South and SR 189. The street should be coordinated with the alignment of the West Bypass alignment to ensure access to Southfield Road. This will be a UDOT project.

T-055 South Bypass: A Minor Arterial should be constructed between Daniel Road and US 40.

Intersection Improvements

T-063 Intersection Alignment US 40 and 2400 South: Intersection at US 40 and 2400 South needs to be aligned perpendicular to US 40 and improved to a Major Collector. This project includes any improvements needed to widen 2400 South to Mill Road.

T-064 Intersection Alignment US 40 and Mill Road: Intersection at US 40 and Mill Road needs to be aligned perpendicular to US 40 and improved to a Major Collector.

T-075 Roundabout 900 North & 550 East: Install a roundabout at the intersection of 900 North and 550 East when it meets warrants for an All-Way Stop control.

T-076 Roundabout 900 North & Mill Road: Install a roundabout at the intersection of 900 North and Mill Road when it meets warrants for an All-Way Stop control.

T-077 Traffic Signal or Roundabout at Mill Road & Center Street: Install a traffic signal or a roundabout at the intersection of 1400 East and Center Street when it meets warrants for a traffic signal.

T-078 Roundabout 1400 East & Center Street: Install a roundabout at the intersection of 1400 East and Center Street when it meets warrants for an All-Way Stop control.

T-079 Roundabout 300 West & 1000 South: Install a roundabout at the intersection of 300 West and 1000 South when it meets warrants for an All-Way Stop control.

T-080 Traffic Signal or Roundabout at 1200 South & Mill Road: Install a traffic signal at the intersection of Mill Road and 1200 South when it meets warrants for a traffic signal.

T-081 Roundabout Airport Road & Daniel Road: Install a roundabout at the intersection

of Airport Road and Daniel Road when it meets warrants for an All-Way Stop.

T-085 Traffic Signal at 1200 South & 500 East: Install a traffic signal at the intersection of 1200 South and 500 East when it meets warrants for a traffic signal.

T-086 Roundabout Airport Road & 600 East: Install a roundabout at the intersection of Airport Road, 600 East, and Hidden Creek Lane when it meets warrants for an All-Way Stop.

T-089 Traffic Signal or Roundabout at 600 South & Mill Road: Install a traffic signal or roundabout at the intersection of Mill Road and 600 South when it meets warrants for a traffic signal.

Other Improvements

(Ultimate) T-031 Daniels Road: Daniels Road should be improved to a Major Collector between 2300 South and the City limit at approximately 2500 South. This road is currently in the Daniel City boundary and not within Heber City. If the road comes into the City in the future, this project includes road widening and installing sidewalk on one side of the street.

T-042 Annual Master Plan Update.: Every five years an annual master plan update should be performed to update the city infrastructure maps. All new development should be included in the update process.

(Ultimate) T-059 Downtown Angled Parking: Streets in the downtown area between 100 West and 100 East, 400 North to 500 South, should be improved to a 54-foot asphalt width to accommodate angled parking per the City's adopted Transportation General Plan.

T-067 Heber City Public Works Facility Expansion Ph.1: The Heber City Public Works Department Building was expanded in 2018 to accommodate growth and maintain the same level of service on the City's street system. Impact fees were used to pay for the streets portion of this expansion which was debt funded with payments continuing through the master plan 20-year window. See Appendix A for the construction cost allocation.

T-068 Heber City Public Works Facility Expansion Ph.2: The Heber City Public Works Department Building and Maintenance Site will be expanding to maintain the current level of service that the Public Works department currently provides in maintaining the City's street system. Phase 2 is anticipated in 2028. Impact fees will pay for all of this phase since it is only needed for future growth.

T-070 Downtown Angled Parking (partial): Streets in the downtown area between 100 West and 100 East, 400 North to 500 South, should be improved to a 54-foot asphalt width to accommodate angled parking per the City's adopted Transportation General

Plan. This project assumes a portion of the parking will be needed in the next 20 years.

(Ultimate) T-074 Center Street east of East Bypass: The Center Street Road to the east of the East Bypass road can only be expanded with coordination of the county as the roadway is on the City boundary. The ultimate build of this roadway could be a Major Collector with 5-lanes.

Feasibility Recommendations

The existing street impact fees (January 2024) are \$229 per trip generated. City subsidies reduce this to \$126 for Non-Residential. This equates to \$2,153 per Single-Family Residential unit, and \$1,252 per Multi-Family Residential unit. The new estimated street impact fee will increase to \$504 per trip generated. If City subsidies remain at 45%, the fee would reduce to \$277 for Non-Residential. The Single-Family Residential fee will increase to \$3,626 and the Multi-Family residential fee will increase to \$2,371. These funds will generate sufficient revenue to fund the recommended capital improvements.

The City Council has requested that the Non-Residential per trip impact fee continue to be subsidized at 45% to reduce the burden on businesses that generate revenue for the City. This will require that the City general fund or another source be identified to make up the difference described later in this chapter.

To keep abreast of increasing inflation and construction costs, the street impact fees should be analyzed annually to make sure funding is available for improvements and capital expenditures.

6.2 Future Conditions

Introduction

A variety of factors will affect the traffic and the street improvements needed to meet the future growth in Heber City. Some of the sources of data used to determine the future traffic conditions and the proposed street improvements are:

- Population growth rates
- Mountain Land Association of Governments (MAG) Traffic and Transit Counts
- Utah Department of Transportation (UDOT) Corridor Preservation Study
- Utah Department of Transportation (UDOT) Road Classification Map
- Various Traffic Studies
- Projected Residential and Non-Residential development
- Heber City Transportation Plan

As these factors change, the timing of improvements recommended in this study could be affected. To help minimize this effect, the recommendations made in this study will be based upon the number of people served by Heber City's street system rather than time periods and/or external factors beyond the City's control.

Projected populations were used to determine where the new streets should be constructed based on the potential areas of development. Existing traffic patterns and Average Daily Traffic counts (ADT) were used to help project future traffic patterns and potential areas in need of road improvements. MAG's future traffic models of the Heber Valley were compared with Heber City's adopted General Transportation Plan and UDOT's Road Classification Map for Heber City. Each road within Heber City was checked to confirm future road classifications and needed road widths to accommodate the projected growth.

Projected Population

The projected population for Heber City from 2023 to 2043 is discussed in Chapter 3, Projected Population. The 2023 population is estimated to be 18,347. The 2043 Heber City population is projected to be 29,682.

6.3 Street System Analysis and Level of Service

Street Impact Fees Administration

An impact fee is a one-time fee with the purpose of raising revenue for new or expanded public facilities required to serve new development and maintain the existing level of service. Impact fees cannot be used to correct existing roadway deficiencies or for routine maintenance activities. The premise behind impact fees is based on the critical assumption that if no new development were allowed, the existing street system would adequately serve the existing level of development in the City. Therefore, the recommended roadway improvements, outlined in the Street System Master Plan Update, are used in the development of the impact fees. These improvements are growth related and are needed to accommodate the projected growth to maintain a minimum level of service "C".

Trip Generation Rates

Each area associated with a land use in the Heber City General Plan will generate traffic trips as the land is developed. The residential land uses allow for a variety of housing types. Each housing type was found in the *Institute of Transportation Engineers (ITE) Trip Generation Manual 11th Edition*, and the number of trips associated with each type was determined. Six categories were chosen, Single Family Detached Housing, Single Family Attached Housing, Multifamily Housing (Low-Rise), Multifamily Housing (Mid-Rise), Senior Housing Single Family, and Senior Housing Multifamily to reflect most of the housing in Heber City. These housing types and respective trips they generate were used to determine a proportionate share of improvement costs needed for each type. The multifamily and high-density housing were averaged together to simplify the impact fee calculation and distribution of impact fees. This is discussed further in the next section. The trip generation rates for residential land uses are summarized in Table 6-3 below. See Appendix D for ITE Trip Generation information.

Table 6-3 Residential Trip Rates

Dwelling Unit Type	Trips Generated per Day
Single Family Detached Housing (210)	9.43
Single Family Attached Housing (215)	7.20
Multifamily Housing (Low-Rise) (220)	6.74
Multifamily Housing (Mid-Rise) (221)	4.54
Senior Adult Housing – Single-Family (251)	4.31
Senior Adult Housing – Multifamily (252)	3.24

Because of the wide range of different types of Commercial and Industrial development that occur in Heber City, non-residential impact fees are determined on an individual basis. The fee is based on the amount of new trips generated by the individual business. For this study an average of 152 new trips per day per business was used based the average number of trips prior businesses have generated in the City. Each departure or arrival from a business or residence is counted as a trip, i.e., one car equals two trips.

Table 6-4 shows the improvement costs over the next 20 years. The distribution of costs between operating funds, corridor preservation funds and/or UDOT, developer contributions, and impact fees are shown in the table as well. The projects listed in Figure 6-1 may be built in any order.

Table 6-4 Heber City's Estimated Cost of Street Improvements

ULT CIP #		Recommended Improvements	Total Cost			Funding Proportionate Share Analysis						
				Operating	Developer	Other ¹		Impact Fee				
		ROW	%	\$	%	\$	%	\$	%	\$		
ULT	T-003	400 South - 600 East to 700 East & Bridge	68	\$722,290	0%	\$0	0%	\$0	0%	\$0	100%	\$722,290
	T-009	600 East - 200 South to 400 South	62	\$548,976	0%	\$0	100%	\$548,976	0%	\$0	0%	\$0
	T-012	300 West - 500 North to 100 South	68	\$478,440	44%	\$210,240	0%	\$0	0%	\$0	56%	\$268,200
	T-016	2400 South - Daniel Rd to South Airport Rd	68	\$0	0%	\$0	91%	\$0	0%	\$0	0%	\$0
	T-017	1600 South - 600 East to Sawmill Blvd	62	\$609,973	0%	\$0	100%	\$609,973	0%	\$0	0%	\$0
	T-018	Airport Road - Daniel Rd to Hangers	68	\$1,243,693	8%	\$99,495	38%	\$472,603	0%	\$0	54%	\$671,594
	T-020	650 South - 1200 West to West Bypass	68	\$725,231	5%	\$36,262	0%	\$0	0%	\$0	95%	\$688,970
ULT	T-028	500 East - 500 North to 600 South	68	\$0	13%	\$0	0%	\$0	0%	\$0	0%	\$0
	T-029	600 East - 1300 South to Hidden Cr Ln	80	\$3,523,529	0%	\$0	78%	\$2,748,353	0%	\$0	22%	\$775,176
ULT	T-031	Daniels Rd - 2100 South to 2500 South	80	\$0	11%	\$0	35%	\$0	0%	\$0	0%	\$0
ULT	T-032	Industrial Pkwy - West Bypass to SR189	68	\$0	12%	\$0	31%	\$0	0%	\$0	0%	\$0
	T-033	600 West - West Bypass to 100 South	80	\$2,614,531	10%	\$261,453	0%	\$0	0%	\$0	90%	\$2,353,078
	T-035	1200 South - 700 West to Southfield Rd	68	\$2,648,397	0%	\$0	78%	\$2,065,750	0%	\$0	22%	\$582,647
	T-040	1200 East - 1200 South to US40 *	80	\$3,952,199	9%	\$355,698	31%	\$1,225,182	0%	\$0	60%	\$2,371,319
	T-041	Southfield Rd - 100 South to 1200 South & RR	80	\$3,926,577	29%	\$1,138,707	31%	\$1,217,239	0%	\$0	40%	\$1,570,631
	T-042	Master plan Update (4 times)		\$240,000	0%	\$0	0%	\$0	0%	\$0	100%	\$240,000
	T-043	100 East - 500 North to 600 South Historic	82	\$2,730,601	100%	\$2,730,601	0%	\$0	0%	\$0	0%	\$0
	T-044	West Bypass - 900 North to 1300 South UDOT	104	\$0	0%	\$0	0%	\$0	0%	\$0	100%	\$0
	T-045	1200 South - 820 East to 1200 East	90	\$980,222	9%	\$88,220	53%	\$519,517	0%	\$0	38%	\$372,484
	T-046	100 West - 500 North to 1000 South Historic	82	\$3,780,832	11%	\$415,892	31%	\$1,172,058	0%	\$0	58%	\$2,192,883
	T-047	South Airport Rd - 670 West to 1200 West	68	\$0	12%	\$0	38%	\$0	0%	\$0	0%	\$0
	T-048	Southfield Rd - 1200 South to SR189 UDOT	104	\$0	0%	\$0	0%	\$0	0%	\$0	100%	\$0
	T-050	2400 South - 700 East to US40	68	\$1,444,580	0%	\$0	36%	\$520,049	0%	\$0	64%	\$924,531
	T-052	500 East - 600 South to 720 South	68	\$601,908	0%	\$0	0%	\$0	0%	\$0	100%	\$601,908
	T-053	East Bypass - Center St to 1050 East	80	\$4,383,286	0%	\$0	100%	\$4,383,286	0%	\$0	0%	\$0
	T-054	Ostler Peak Rd - 1800 North to 900 North	80	\$6,088,658	0%	\$0	78%	\$4,749,153	0%	\$0	22%	\$1,339,505
	T-055	South Bypass - Daniel Rd to US40	80	\$2,225,578	0%	\$0	0%	\$0	67%	\$1,500,039	33%	\$725,538
	T-057	East Bypass - 1050 East to 550 East Cemetery	80	\$1,551,606	0%	\$0	0%	\$0	97%	\$1,500,403	3%	\$51,203
	T-058	East Bypass - 550 East to Main St	80	\$3,241,647	0%	\$0	78%	\$2,528,484	0%	\$0	22%	\$713,162
	T-059	Downtown Angle Parking - 400 North to 500 South	84	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	T-063	Intersection Alignment US40 & 2400 South	80	\$1,117,475	4%	\$44,699	31%	\$346,417	0%	\$0	65%	\$726,359
	T-064	Intersection Alignment US40 & Mill Rd	80	\$869,148	4%	\$34,766	31%	\$269,436	0%	\$0	65%	\$564,946
	T-065	500 North to Midway Ln	68	\$4,710,588	0%	\$0	91%	\$4,286,635	0%	\$0	9%	\$423,953
	T-067	Heber City Public Works Facility Exp Ph1		\$486,246	0%	\$0	0%	\$0	0%	\$0	100%	\$486,246
	T-068	Heber City Public Works Facility Exp Ph2		\$1,696,673	0%	\$0	0%	\$0	100%	\$1,696,673	0%	\$0
	T-069	1900 South - Mill Rd to 600 East	68	\$2,093,595	0%	\$0	91%	\$1,905,171	0%	\$0	9%	\$188,424
	T-070	Downtown Angle Parking - 400 North to 500 South	84	\$554,696	0%	\$0	0%	\$0	0%	\$0	100%	\$554,696
	T-072	600 South - 300 West to 650 South Restripe		\$27,600	0%	\$0	0%	\$0	0%	\$0	100%	\$27,600
	T-073	Providence Dr - 1500 South to 600 East	68	\$1,564,962	0%	\$0	91%	\$1,424,115	0%	\$0	9%	\$140,847
	T-074	Center St Widening - 1400 East to the East	80	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	T-075	Roundabout at 900 North & 550 East		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-076	Roundabout at 900 North & Mill Rd		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-077	Roundabout at Mill Rd & Center St		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-078	Roundabout at 1400 East & Center St		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-079	Roundabout at 300 West & 1000 South		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-080	Roundabout at Mill Rd & 1200 South		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-081	Roundabout at Airport Rd & Daniel Rd		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-082	850 South - 100 West to Main St	66	\$1,403,461	3%	\$42,104	0%	\$0	41%	\$581,033	56%	\$780,325
	T-083	850 South - Main St to 120 East	66	\$2,222,147	3%	\$66,664	0%	\$0	97%	\$2,155,483	0%	\$0
	T-084	Airport Rd - US40 to 600 East	80	\$1,127,529	8%	\$90,202	0%	\$0	0%	\$0	92%	\$1,037,327
	T-085	Traffic Signal at 1200 South & 500 East		\$345,000	0%	\$0	0%	\$0	0%	\$0	100%	\$345,000
	T-086	Roundabout at Airport Rd & 600 East		\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
	T-087	120 East - 790 South to 1000 South	66	\$1,403,461	3%	\$42,104	46%	\$645,592	0%	\$0	51%	\$715,765
	T-088	120 East - 1000 South to 1200 South	66	\$1,052,596	3%	\$31,578	0%	\$0	0%	\$0	97%	\$1,021,018
	T-089	Roundabout at Mill Rd & 600 South	0	\$552,000	0%	\$0	0%	\$0	0%	\$0	100%	\$552,000
TOTAL EXPENDITURES				\$73,905,932		\$5,688,685		\$31,637,989		\$7,433,631		\$29,145,627

NOTES:

1. "Other" includes grants, special assessments, and previously collected impact fees.
2. A total of \$4,500,000 listed in the "Other" column is funded by the existing impact fee account as of April 17, 2023. Applied to T-082, T-083, T-068
3. For projects T-055 and T-057 a \$1.5M grant is included in "other" for each project.
4. The aerial digital map and Master Plan update needs to be done four times in the next 20 years. Total cost is divided by four in the Impact Fee Expenditure Plan Improvement Costs.
5. Assumed 5.0 % interest rate on bonds with payoff by 2043
6. Projects with * have been partially completed with previous CIP projects.

6.4 Economic Feasibility Analysis

Impact Fee Fund

The impact fee amount was calculated by taking the total cost of improvements associated with impact fees, plus the necessary bond interest payments, divided by the projected new trips, based on the future zoning and population increases for 20 years. The impact fees for all 20 years are the same and are shown in 2023 equivalent dollars. Bonding becomes necessary when projects are grouped into five-year windows because there are insufficient impact fees collected during the early years to cover the projected improvement costs.

By considering the full 20-year window to determine the projected impact fees, and then grouping the projects into five-year increments, the impact fees are distributed evenly to all developments in the 20-year plan. Development within the 20-year planning window will all pay equally for future projects; therefore, earlier developments only pay their fair share of facilities that also benefit later developments. These numbers in this report exclude the North Village area of Heber City which are covered by a separate master plan.

Using the trip rates shown in Table 6-3, the total number of projected trips were calculated and presented in Table 6-5 with additional detail in the Appendix D. The average trip rate for Residential was calculated using a weighted proportion of Single Family Detached and Attached Housing trips per day, and Multi-Family Average trips per day. Approximately 45.7% of the future proposed residential development will be multi-family development, therefore the weighted average residential trip rate is 6.67 trips per unit.

Table 6-5 Projected Trip Ends in Year 2043

Category	Est 2023 Units	New 2023 to 2043 Units	Total 2043 Units	Trip Rate	Total Trips
Residential	5223	3,227	8,450	6.67	56,329
Non-Residential	475	293	768	152	116,691
Total Trips					173,020

Developer Contributions

The City has a policy that developers are responsible for 100% of the cost of on-site improvements needed to serve their development. Streets are required to be extended either through or along the front of a development to the farthest property line to facilitate extension by future adjacent property owners. Developers are also responsible for extending off-site, full width street improvements needed to serve their development. Reimbursement for a portion of these costs may be available through reimbursement agreements for the purpose of collecting funds from future adjacent property owners that front the street. The City also reimburses developers the cost to upgrade streets from a major local to a minor collector, major collector, or minor arterial if they are identified in this Master Plan and impact fee funds are available.

Currently the street impact fee charged to new development is \$2,153 per unit for Single-Family, \$1,252 per unit for Multi-Family, and \$126 per trip for Non-Residential. To continue funding the street improvements necessary to provide safe roads and access to property for future growth, it

is recommended that Heber City assess street impact fee of \$4,070 per unit for Single Family, \$2,304 per unit for Multi-Family, and \$490 per trip generated for Non-Residential. The revenue collected will generate the funds required to construct the necessary improvements to accommodate the growth in Table 6-5, and to maintain the minimum level of service.

The impact fees are based on the estimated total cost for improvements, with bond interest added, of \$32,331,526 (\$29,145,627 + \$3,185,900) over the next 20 years; and the projected number of new trips added by growth of 66,048 trips as shown in Table 6-6.

Table 6-6 Projected Impact Fee Revenue and Expenditure Plan.

Impact Fee Expenditure Plan									Collected vs Cost	Bond Loan Plus Payments	Fund Running Balance
Year	Trips	Impact Fee Collected (\$)	Available Funds (\$)	Improvement Projects ^{1,2}					Improvement Costs (\$)		
2024	4,700	\$2,300,723		T-042	T-040	T-058	T-076	T-087			
2025	4,765	\$2,332,542		T-067	T-041	T-063	T-078	T-088			
2026	4,985	\$2,440,235		T-020	T-045	T-064	T-080	T-089			
2027	5,208	\$2,549,397		T-029	T-055	T-065	T-083				
2028	5,434	\$2,660,028	\$12,282,925	T-033	T-057	T-075	T-085		\$16,360,165	(\$4,077,240)	\$11,248
2029	5,664	\$2,772,616		T-042	T-050	T-073					
2030	6,048	\$2,960,590		T-067	T-068	T-077					
2031	6,284	\$3,076,116		T-003	T-069	T-081					
2032	1,798	\$880,149		T-035	T-070	T-084					
2033	1,805	\$883,576	\$10,573,047	T-046	T-072	T-086			\$8,208,806	\$2,364,241	\$22,968
2034	1,812	\$887,002		T-042	T-054						
2035	1,819	\$890,429		T-067	T-079						
2036	1,826	\$893,855		T-012							
2037	1,833	\$897,282		T-018							
2038	1,992	\$975,115	\$4,543,684	T-052					\$3,614,769	\$928,914	(\$639)
2039	2,000	\$979,031		T-042							
2040	2,007	\$982,458		T-067							
2041	2,015	\$986,374		T-082							
2042	2,023	\$990,290									
2043	2,030	\$993,717	\$4,931,870						\$961,886	\$3,969,984	\$0
66,048		\$32,331,526							\$29,145,627	\$3,185,900	(\$3,185,900)

NOTES:

1. Project order in which development will occur in City is approximated and will change as development dictates.

2. T-042, T-067 are divided by 4 to spread over 20 year window.

3. Must borrow sufficient funds to cover shortfall in fees collected. Must keep Fund Running Balance low to insure fees are spent in 6 years.

Estimated Total Trips = 66,048	Impact Fee per Trip (No Bonding) = \$441
Estimated Total Non-Res Trips = 44,536	Non-Residential Impact Fee per Trip (w/Bond Interest) = \$490
Estimated Total Residential Trips = 21,512	Single Family Impact Fee per ERU (w/Bond Interest) = \$4,070
Average Trips per Single-Family Unit = 8.32	Multi-Family Impact Fee per ERU (w/Bond Interest) = \$2,304
Average Trips per Multi-Family Unit = 4.71	
	Non-Residential Impact Fee per Trip Subsidized @ 45% = \$269
	Total Amount Needed to Fund Subsidy = \$9,810,480
	Annual Amount Needed to Fund Subsidy = \$490,524

The City Council has historically had a policy of subsidizing 45% of the Non-Residential trip impact fee to reduce the burden on businesses generating revenue for the City. Continuing this policy will reduce the Non-Residential street impact fee to \$269 per trip and will require the City general fund or another source be identified to make up the difference. It is estimated that over the next 20 years, new business will generate an additional 44,536 trips. To keep the Non-Residential impact fee at \$269 per trip, the City will need to provide approximately \$9,810,480 (44,536 trips @ 45% of \$490 per trip) from other sources or approximately \$490,524

(\$9,810,480 / 20 yr) per year. This Non-Residential subsidy is only applicable to businesses generating property tax revenue for Heber City. All others pay the full streets impact fee.

Road Fund Sources

Class B and C road funds are part of a funding program established by the Utah Legislature in 1937 as a means of aiding counties and incorporated municipalities for the improvement of roads and streets throughout the State. 30% of state highway user taxes and fees are allocated to the class B and class C road account. This is a restricted account to be used for the construction and maintenance of county roads and municipal streets that have been documented as eligible for funding according to regulations governing this fund. Class B and C road funds are distributed bi-monthly using the formula prescribed in Utah Code 72-2-108(2-5). The UDOT small urban fund is another source that dedicates funds to small urban communities who demonstrate a qualified need for transportation improvements.

Chapter 7

Storm Drain System

7.1 Summary and Recommendations

Introduction

Population growth in Heber City has increased storm water runoff into the existing storm drain system throughout the City. The amount of precipitation runoff that is produced from a given area is related to the amount of water that infiltrates into the soil and/or is retained by vegetation. When soil and vegetation conditions are altered to cause less infiltration and retention, a larger amount of runoff results. Constructing impervious surfaces such as roads, sidewalks, driveways, and homes in previously open areas increase the volume of water, rate of runoff, and concentration of pollutants in the runoff. These issues can change the hydrology and water quality, and result in a variety of problems, including habitat modification, increased flooding, decreased aquatic wildlife diversity, and increased sedimentation and erosion.

This chapter evaluates the storm drain requirements for the ultimate 2043 boundary area. Calculations and recommendations are based on the most recent City zoning and annexation plan. Recommendations are made to ensure that the system remains adequate to meet the projected increases in storm water flow and water quality requirements. As development occurs, storm drain systems will continue to be required, with historic discharge allowed where feasible and full retention when necessary. Recommended City improvements include improving the existing ditch system, providing a first flush detention pond system, adding hydrodynamic separators at strategic locations, annual maintenance and cleaning of existing storm drain facilities, and implementing a storm water management program.

The design criteria in this document are for use on public and private projects within the City. There are other adopted documents that also reference requirements related to City storm drain systems within the City. These documents include the Heber City Standard Specifications and Drawings, the Heber City Municipal Code. Also the newly adopted Storm Water Design Manual that provides design guidelines and requirements for new developments within the City.

The Heber City Design criteria used in this study are summarized below:

- | | | |
|---------------------------|---|--------------------------|
| • Peak Flow | - Rational Method (< 100 ac) | Q=CIA |
| | - “C” per improvements and soil | 0.10-0.95 |
| | - “I” | 100-yr storm |
| | - SCS Method (>100 ac) | |
| • Allowable Release Rate: | - Discharge feasible | 0.10 cfs/ac |
| • Basin Capacity: | - Detention w/0.10 cfs release rate | 24-hr / 25-yr storm |
| | - Retention w/0.0 cfs release rate | 24-hr / 100-yr storm |
| | - 80 th Percentile storm retention | |
| • Pipe Capacity: | - Peak Flow @ 100% Full | 10-yr storm @ $\leq T_c$ |
| • Pipe Sizes (Mains): | - Minimum | 18 inches |

- Velocities: - Minimum 2 fps
- First Flush - Minimum 2-yr storm
- Pre-treatment - Minimum 2-yr storm

Note: See Heber City Storm Water Design Manual for more detailed information.

Projected Population

Heber City's population is expected to increase by approximately 61.8%, from 18,347 to 29,682 by the year 2043, excluding the North Village and Jordanelle Ridge areas. This is based on an analysis of recorded lots, unrecorded lots that have received approval, and potential future developments. At this growth rate, it is projected that an additional 4,478 (11,727-7,249) ERU's from Residential and Non-Residential development will be added. Of these, 380 ERU's have been deducted for the Red Ledges area which is a private community that maintains its own storm drain system. Heber City's storm drain system is therefore estimated to have a total of 11,347 ERU's, or an additional 4,098 ERU's, by 2043. Growth beyond 2043 to Ultimate build out will be addressed in future Master Plan updates.

Discharge Standard

Heber City has adopted a 0.10 cfs per acre maximum release standard for undeveloped areas; i.e. areas outside Central Heber. This rate is assumed to be the historical undeveloped flow and has been used in previous storm drain master plans. For example, a 10-acre housing development would be able to have a post-development discharge rate of 1.0 cfs (10 acres x 0.10 cfs/acre) provided there is a suitable point to discharge to. If the historic flow is found to be less than the 0.1 cfs per acre, this shall be the allowed post-development discharge. To ensure that flow from new developments do not exceed 0.10 cfs per acre, detention basins with controlled discharge are required. In cases where there is no suitable point to discharge to, retention basins are required.

Storm Drain System

Heber City controls storm water runoff through sumps, catch basins, collection pipes, street curb and gutter networks, irrigation ditches, flood channels, and detention basins. Storm drain pipes shall be designed to have the capacity to pass the flow expected from 10-year storm events at a duration equal to or less than the time of concentration (Tc). All developments shall demonstrate the ability to safely pass storms that exceed the 10-year pipe capacity up to a 100-year storm event without flooding. All detention basins and sumps shall be sized to handle flows expected from 24-hour, 25-year storm events with an allowable discharge of 0.10 cfs. All retention basins and sumps shall be sized to capture the flow from 24-hour, 100-year storm events without any overflow. The minimum pipe size for storm drain mains shall be 18-inch. The minimum pipe size for storm drain laterals to single catch basins shall be 15-inch.

Water Quality Measures

Heber City currently controls storm water quality through storm drain facilities such as retention and detention basins, oil separators, pollutant removal devices, and controlled discharge features. Current City ordinances help control runoff pollutants and roadway contamination from building construction.

Utah Pollution Discharge Elimination System (UPDES) permits are required on construction sites larger than one acre and on sites less than one acre if they are part of a common larger development. With this Master Plan revision, measures to control water quality are recommended to be continued and implemented. The measures include public outreach, facilities

inventory mapping, official construction site storm water runoff control, pollution prevention, and good housekeeping. In addition to new water quality control measures implemented with the Master Plan, an official Storm Water Management Program should be created and implemented.

As Heber City's population grows, its water quality measures will come under increased State scrutiny. In the future, the State may designate Heber as a Small MS4 community and require a discharge permit to be obtained. Although Heber City is not currently on the Utah MS4 list, it is anticipated to become an MS4 community in the future. LID is required by the Utah Department of Environmental Quality as part of an MS4 Program. To prepare for future compliance with the MS4 storm water discharge program and to reduce post-development storm water run-off in general, developments within Heber City must retain and treat the 80th percentile rainfall event as part of Low Impact Development (LID) requirements. LID measures can also help achieve the onsite retention and treatment requirements. One of the considerations in determining the eligibility of a community for a permit is if its population has exceeded 10,000 people. Heber's population is past the 10,000 mark and the continued growth is therefore creating a need for increased water quality measures. Without growth, it would be very unlikely that the State would consider regulating Heber City's storm water quality, and it would remain as it currently is. This study recommends several water quality improvements, including a First Flush Pond for Central Heber, Hydro Dynamic Separators (HDS), and a Storm Water Management Program (SWMP), to address these growth-related issues.

Recommended Improvements

The recommended capital improvements are shown in Figure 7-1. This figure provides a guide for the location of planned future new storm drain facilities and improvements. The figure also shows existing facilities.

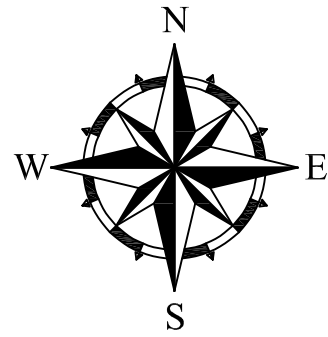
The recommendations that are provided were determined by creating a Bentley StormCAD V8 XM model and Pond Pack model of the central portion of the City. The modeling was performed with the 2010 Master Plan update. These models combine contour data, contributing area, and surface information with conveyance system input to produce peak flows through the network for specified storm events. Pipes sizes are optimized to minimize cost while ensuring that adequate capacity is provided for the high-intensity, short-duration storm that is most likely to strain the limits of pipe performance.

First flush pond recommended volumes are based on the SCS Type II 2-year 24 hour storm event models in PondPack, where the existing condition of the Central Heber was modeled to estimate the required collection volume based on the current irrigation ditch system (see Figure X). Factors such as runoff curve number, time of concentration, and outflow curve types, were taken into account to ensure that inflow and outflow hydrographs are as accurate as possible and a reasonable balance is obtained between performance and cost. Note that only the required volume of the pond is called out as part of this report. The actual area needed is based on a number of adjustable factors including depth of pond, release rates, sediment loading, elevation of outlets, etc. These issues cannot be finalized until the design and construction phase.

HDS systems shall be sized to treat the peak runoff flow rate generated by the 2-year storm event equal to or less than T_c , when using the Rational Method. The storm duration and distribution that creates the highest flow rate during a 2-year storm event shall be used when other runoff computation methods are used.

It is recommended that when a pipeline is designed the size should be verified for the actual contributing area. Similarly, site constraints of a first flush detention pond(s) may make it necessary to adjust the location, depth, etc. of the pond(s) when it is designed. In generating the recommendations for this report, dozens of detailed alternatives were considered with respect to location of a facility, contributing area to each pipe and pond, time of concentration, and other factors. To ensure that the City improvements are fully understood, subsequent master plans should also analyze the improvements during each update.

It is important to note that the use and capacity of existing canals, streams, and irrigation ditches, were not evaluated as part of this report. A capacity analysis of these facilities was beyond the scope of this Master Plan update. The capacity of these facilities is not being improved with this study nor by the Capital Facilities which may be funded by impact fees. Heber City runoff discharging into these channels may be restricted due to their use for spring runoff passing through the City or summer irrigation. For this reason the City has assumed that runoff from development will only be released at historic rates or 0.10 cfs/acre, to avoid adversely impacting the channels.



EXISTING CREEKS AND CANALS

- ① LAKE CREEK
- ② LOWER WASATCH CANAL
- ③ NORTH LAKE CREEK
- ④ HUMBUG CANAL
- ⑤ WASATCH CANAL
- ⑥ CENTER CREEK
- ⑦ TIMPANOGOS CANAL
- ⑧ FLOOD CHANNEL
- ⑨ SAGEBRUSH AND SPRING CREEK CANAL

MIDWAY LANE / 100 SOUTH

CENTER STREET

1200 SOUTH

S.R. HWY 189

U.S. HWY 40

FIGURE 7-1

HEBER CITY

FUTURE STORM DRAIN FACILITIES

- ULTIMATED BUILDOUT BOUNDARY
- - - HEBER CITY BOUNDARY
- EXISTING ROADS

EXISTING STORM DRAIN LINES

PIPE SIZE (inches)	PIPE COLOR
<15	
15	
18	
21	
24	
27	
30	
36	
42	
48	
54	
60	
UNKNOWN SIZE	
UNDERDRAIN	
DITCH	

- Proposed HDS System
- POND
- Existing First Flush Pond



PROPOSED STORM DRAIN FACILITIES

PROPOSED PONDS



728 WEST 100 SOUTH #2
HEBER CITY, UTAH 84032
(435) 654-2226

Capital Improvements

Capital improvements required to meet the existing and future storm water control needs of Heber City are given in the following paragraphs. Projects labeled as “Ultimate” are beyond the 20-year planning window and therefore the improvement cost and associated populations served have been excluded from the impact fee calculations.

D-015 Ditch Storm Drain System Improvements: This project is to correct deficiencies within the existing irrigation ditch system in the central part of Heber City (Existing Ditch Map in Appendix E). The project is to improve the ditch system to facilitate storm drain conveyance. Improvements include the following: pipe, outlet, and pollutant removal devices at each discharge point, identify and install pipe in abandoned ditch locations, and divert dead-ends into channels.

D-016 (Ultimate) First Flush Detention Ponds: This project is to construct a pond or ponds to capture the 2-year storm event (first flush) from the central part of Heber City which currently uses the ditch system as a storm drain system. The existing pond for School House Estates was converted to a detention pond for the existing subdivision and a first flush pond for the area in Heber City between Main Street and 500 West and 600 South and 1000 South. The location for remaining first flush pond(s) has not been identified at this time because property would need to be identified which is not in the scope of this masterplan, but they could potentially be installed in addition to HDS systems at those corresponding HDS locations

D-022 Maintain Existing Storm Drain and Ditch System: As part of the Storm Water Management Program, the existing storm drain system needs to be maintained. Each year the system will be inspected and cleaned, and records kept of maintenance.

D-023 Master Plan Update: The Master Plan should continue to have yearly updates with major updates every five years.

D-025 Storm Water Management Program: The project consists of creating a Storm Water Management Program (SWMP), implementing the SWMP, and enforcing the SWMP. The SWMP is necessary due to City growth.

(Ultimate) D-026 Central Heber Storm Drain System in Old Town Heber: This drainage system consists of a network of pipes to replace the existing ditch system. It may ultimately be needed if curb and gutter is installed in the old part of Heber City.

D-028 Heber City Public Works Facility Expansion Phase 2: The Heber City Public Works Department Building and Maintenance Site will be expanding to maintain the current level of service that the Public Works department currently provides in maintaining the storm drain system. Phase 2 will likely commence around 2028. All of Phase 2 will be paid for by impact fees, however, there is not currently a recommended impact fee for storm drain, therefore, the storm drain portion of the cost will need to come from another fund until a storm drain impact fee is implemented.

D-029 Hydrodynamic Separators prior to First Flush Ponds: It is proposed that the existing ditch system go through an HDS prior to entering a first flush pond. There are 4

proposed areas, and one first flush pond that is already functional to handle first flush for the part of Central Heber between 600 S and 1000 S and 500 West to Main Street, where HDS should be installed. These shall differ and are in addition to pollutant discharge devices mentioned in D-015 description.

Impact Fee Recommendations

Heber City currently does not charge an impact fee for growth related storm drain projects within the City. Projects that are not 100% developer responsibility are funded through revenue from the City's storm drain utility fee. This fee currently ranges between \$11.83 per acre per month to \$15.20 per unit depending of the nature of the property.

7.2 Storm Water Runoff

Future growth in Heber City has the potential to affect the storm water flows and water quality of the downstream channels and water bodies of the Heber Valley. It is imperative that control guidelines are followed and needed improvements are implemented to ensure proper storm water control now and in the future. The hydrology and water quality of the Heber Valley should not be adversely affected by Heber City growth. Some of the sources and criteria used to determine future storm water control needs are:

- Growth rates
- Environmental regulations of EPA, FEMA, and DEQ
- Residential / non-residential development
- City General Plan and zoning maps
- County and Provo River Watershed requests

As these factors change, the recommendations made in this study could be affected. To minimize the effect of changing future conditions, recommendations made in this report are based upon future zoning, planned roadway improvements, recent water quality regulations, and the impact they may have upon future land uses. Storm drain improvement projects should be completed in conjunction with water quality needs and land development.

Projected Population

The projected population for Heber City from 2023 to 2043 is discussed in Chapter 3 - Projected Population Growth. The 2023 population was estimated to be 18,347. The 2043 Heber City population was projected to be 29,682.

Historical Storm Drainage

The City has historically had a restrictive discharge policy of 0.10 cfs per acre. This policy was established when Heber City saw increased development and no regional drainage conveyance facilities existed. Prior to establishing this policy, the mechanism for handling runoff was existing irrigation ditches and canals in both developed and undeveloped areas. To avoid overwhelming the existing system, the City limited runoff to no more than what historically occurred. In recent years discharges above 0.10 cfs per acre have been detained on site by individual developments. In cases where no suitable discharge point is available, 100 percent of the drainage has been retained on the development site. Currently the City has several detention/retention ponds scattered throughout the more recently developed areas as shown in the

City Storm Drain Facilities list in Table 7-2. These ponds help safeguard water quality downstream and provide flood protection.

As water quality regulations become more restrictive, the City will need a regulated system to convey and treat storm water runoff. The City recently adopted a Storm Water Design Manual that further establishes these regulations for new developments in detail. Systematic water quality control will be provided through improved maintenance of the existing facilities and implementing a storm water management program.

The central portion of Heber City (500 N to 600 S) does not currently have all the required water quality measures, other than the natural cleaning action of the ditches, roadside swales themselves, and a few oil separator snouts. This area needs additional processes to address water quality. The first flush pond, ditch improvements, and HDS proposed for this area will be a step toward reducing pollutant loading in runoff from these portions of the City.

Calculation of Storm Runoff

There are a variety of methods available for calculating runoff. The method used needs to be accurate for the available input and conditions of the site being evaluated. The limitations of each method must also be considered. Refer to the City's Storm Water Manual for the appropriate methodology to use when designing for new development.

Future Growth

The projected number of residential and non-residential storm drain users is determined using the growth numbers in Chapter 3. Total storm drain numbers projected for 2043 equal 8,578 residential units and 3,149 non-residential equivalent residential units (ERU's). Of these, 380 ERU's have been deducted for the Red Ledges area which is a private community that maintains its own storm drain system. Heber City's storm drain system is therefore estimated to have a total of 11,347 ERU's, or an additional 4,098 ERU's, by 2043, spread over a total of 6,655 gross acres.

Future capital facility projects are associated with water quality requirements, storm drain conveyance, and maintenance of facilities related to existing conditions and overall City-wide growth. The projects are proposed to be funded by the storm drain utility fee which is paid by existing and new users.

Modeling of Storm Water Runoff

The storm water runoff from Central Heber has historically been uncontrolled. The existing irrigation ditch system in this area has been used to convey storm water runoff to downstream streams and canals. Since this system has provided an acceptable level of service in the past it is anticipated that this area will continue to be served through these conveyance systems for the foreseeable future. A pressurized irrigation system may be installed in this area in the future. Once this takes place, additional capacity for storm water will be available in the ditches. Runoff quantities may not increase from what they are projected today, but water quality should be addressed.

In the previous 2018 Master Plan update, storm drain models were created for the central portion of Heber City using both StormCAD V8 XM and PondPack. StormCAD was used to model the pipe sizes using the Rational Method, and PondPack was used to model the ponds using the SCS

Type II 24 hour storm. The area was divided into four main drainage areas.

- Area 1 extends from 500 N to 200 N (500 W to 600 E)
- Area 2 extends from 200 N to 200 S (600 W to 600 E)
- Area 3 extends from 200 S to 600 S (500 W to 600 E)
- Area 4 extends from 600 S to 1000 S (600 W to Main)

Each area has a discharge point on the west end, similar to the existing ditch system layout. Two scenarios were modeled. A model of existing conditions was set up in PondPack with the time of concentration and curve number based on runoff through the existing ditch system. Peak flow from several storm events (2-yr, 10-yr, & 25-yr) was modeled based on the existing conditions. Each ditch was not modeled. A model of future conditions was set up in both PondPack and StormCAD with the time of concentration and runoff coefficients (C) based on the existing streets having curb & gutter and the ditch system being piped. The street layout was based on the master street plan. Necessary pipe sizes were determined for the 10-year storm event, and peak flow from several storm events (2-yr, 10-yr, & 25-yr) was modeled based on the potential future conditions.

Table 7-1 below summarizes each area in Central Heber. The table shows the respective pond volumes for the existing ditch conditions and ultimate conditions if curb & gutter is installed, and the ditches are piped. A first flush pond is recommended which could utilize one single pond or four separate pond locations. This pond(s) are recommended to help remove discharge pollutants created from existing users and future growth and traffic in the central portion of Heber City. Area 4 volumes were removed from Table 7-1 in the 2017 update, because the detention pond west of School House Way just south of 600 South was modified to function not only as a detention pond, but a first flush pond as well. However a HDS shall be installed upstream of this pond to enhance water quality measures.

Table 7-1 Central Heber Pond Summary

Area ID ²	Area (acres)	Existing Conditions Pond Volume (ac-ft)			Ultimate Conditions ¹ Pond Volume (ac-ft)		
		First Flush	10 Year	25 Year	First Flush	10 Year	25 Year
Area 1	175	4.3	7.7	11.2	4.8	8.3	11.7
Area 2	248	2.0	4.0	7.6	2.3	4.8	8.3
Area 3	246	1.2	2.3	5.6	1.4	3.1	6.0
Total	669	7.4	14.0	24.4	8.5	16.2	26.0

1. Ultimate conditions assumes curb & gutter and ditches piped through central part of Heber

2. Area 1=500 N to 200 N 500 W to 600 E, Area 2= 200 N to 200 S 600 W to 600 E, Area 3= 200 S to 600 S 500 W to 600 E

3. See Appendix E for additional information

Summary of Projected Storm Water Runoff

There are standard practices for estimating storm water runoff. The above listed Rational and SCS methods need to be followed to maintain historic or less than historic storm water runoff in Heber City. Water quality also needs to be considered. New development should continue to retain and/or detain storm water to keep discharge equal to or less than historic, and help improve or maintain water quality downstream. New development should also implement LID's. An LID is a Low Impact Development with the goal of improving water quality by reducing the amount of storm runoff generated by a project by relying on infiltration or evaporation to handle

runoff where it is generated; they basically try to mimic the historic drainage to not increase flows to downstream waterways and conveyance systems. The existing areas in Heber which do not have water quality control measures need consideration to ensure protection of the downstream water quality. Measures to provide additional water quality support include additional first flush pond(s) and HDS for the central part of Heber.

7.3 Storm Water Control and Level of Service

Types and Purpose of Storm Drain System

The purpose of the storm drain system is to create a system that detains runoff and/or safely conveys storm water to prevent flooding and/or pollution from the 2-year, 25-year and 100-year storm events. The recommended control methods for handling storm runoff in Heber City are:

- Retention of storm water to eliminate downstream discharge and to capture pollutants.
- Detention of storm water to control release rates into drainage facilities and help settle pollutants before they are discharged downstream.
- 80th percentile rainfall retention in detention/retention basins.
- Project specific designed pretreatment pollutant removal devices of varying types and sizes (HDS).
- LID's.
- Construction site runoff control.
- Detention basins for pollution control capturing the "first flush" 2-year event, for areas that historically have direct discharge.
- Regular maintenance and good housekeeping are key.
- Public education on pollutant control.
- Facility inventory management.

Detaining and retention of storm water runoff are good methods to help control water quality. Detention of water allows oil skimming and a large amount of sediment to settle out of the water before it is released into the streams. Pretreatment type devices such as Stormceptors, or other HDS are effective, but need to be regularly maintained to remain effective, just as with all inlets, sumps, and ponds. The Environmental Protection Agency (EPA) presently regulates the water quality released into streams from large cities. Although Heber is not considered a large city, the EPA has plans to place water quality restrictions on smaller cities in the future. In anticipation of stricter water quality regulations in the future, the City should continue to develop more advanced storm water control measures as well as provide additional storm water regulations. The newly adopted design manual enforces some of these advanced measures for new development.

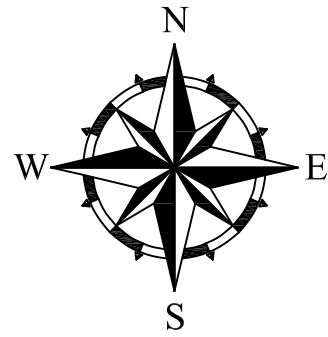
Existing Conditions and LOS

Heber City's existing storm drain facilities are shown in Figure 7-2. Much of the Central Heber has historically discharged storm water into existing irrigation ditches and canals. Most of the new developments since about 1980 have had storm drain systems installed. The systems consist of pipes, inlets, sumps, oil separators, and ponds which collect storm water and control it. Some of these systems discharge the storm water after it has been detained. However, they have been installed per Heber City's requirements and, as a result, the storm drain Level of Service (LOS) in all new developments in Heber City has been maintained, and follows the design criteria used

in this study.

Central Heber does have a slightly lower LOS than newer developments (after 1980) in the City. This area of town does not currently have retention or detention ponds and is lacking HDS. While the City has grown in the last 20 years, the storm water runoff and pollution discharge in this area has not measurably increased. However, as the City continues to grow it is anticipated that, additional traffic, businesses, and people will increase the impervious surface in this area of the City as well, which will in turn increase the storm water runoff and pollution. As a result of this growth, additional measures will need to be incorporated in order to maintain the existing LOS and ensure that downstream water bodies are not affected. The capacities of the irrigation ditches and canals are unknown and are not included in the scope of work in this report. However, the size of a “first flush” type of pond(s) has been analyzed. HDS are also recommended upstream of first flush ponds.

Table 7-2 is a list of Heber City’s developments which have public storm drain systems. Ponds, the discharge from those ponds, and the pollution prevention devices associated with each development are listed.



EXISTING CREEKS AND CANALS

- ① LAKE CREEK
- ② LOWER WASATCH CANAL
- ③ NORTH LAKE CREEK
- ④ HUMBUGH CANAL
- ⑤ WASATCH CANAL
- ⑥ CENTER CREEK
- ⑦ TIMPANOGOS CANAL
- ⑧ FLOOD CHANNEL
- ⑨ SAGEBRUSH AND SPRING CREEK CANAL

MIDWAY LANE / 100 SOUTH

CENTER STREET

1200 SOUTH

S.R. HWY 189

U.S. HWY 40

FIGURE 7-2

HEBER CITY

EXISTING STORM DRAIN FACILITIES

- ULTIMATED BUILDOUT BOUNDARY
- - - HEBER CITY BOUNDARY
- EXISTING ROADS

EXISTING STORM DRAIN LINES

PIPE SIZE (inches)	PIPE COLOR
<15	
15	
18	
21	
24	
27	
30	
36	
42	
48	
54	
60	
UNKNOWN SIZE	
UNDERDRAIN	
DITCH	
EXISTING FIRST FLUSH POND	
PONDS & SUMPS	

Table 7-2 – Heber City Storm Drain Storage Facilities

Public Facility (Name)	Storage Facility(s)	Volume (cf) ¹	Volume (ac-ft)	Sumps (each)	Discharge (cfs)	Pollution Protection
Alpine Acres	pond/underground rock	51,330		0	0	pond
Alpine Meadows Phase 1	pond	12,775		0	1.24	pond
Alpine Meadows Phase 2	pond/underground rock	23,172		-	0	pond
Aspen Point	pond/underground rock	37,411		-	8.7" orifice	snout, pond
Birmingham Subdivision	pond	10,364		0	0	pond
Broadhead Estates Phase I	pond & stormtech system	3,221		-	0.898	stormtech, snout
Broadhead Estates Phase II	2 ponds, sump	12,740		1	2.5" Orifice	snout
Cedar Meadows	pond w/sump	17,604		2	12" pipe no known restrictions	pond
Cottages at Valley Station Phase 2 & 3	3 ponds, sumps	35,479		3	none	snouts, ponds
Country Meadow Estates	7 ponds	11,354		0	none	ponds
Cove Estates Pond	pond w/sumps	118,805		4	none	snout, pond
Crews Court	stormtech system	2,387		-	none	stormtech, snout
Daniels Gate Daniels Gate B	pond w/ sump	33,098		1	none	snout, pond
District at Valley Station	ponds w/sumps	4,290		3	none	snouts, ponds
Elmbridge	ponds	34,203		0	4.4" & 1.8" orifices	snout, ponds
Greenfield Town Homes	pond w/ sump	35,200		1	none	pond
Habitat for Humanity 400 W 300 N	sumps	2,164		2	none	sumps
Harvest Fields	pond w/ sump	18,000		1	none	snout, ponds, sump
Hat Creek	pond	18,690		0	5.6" orifice and overflow	pond
Heber City Public Safety Building	pond	4,000		0	none	snout, pond
Heber Gateway Plaza Phase 1	pond w/sump	21,319		1	4.3" Orifice, 1.06 cfs	snout, pond
Heber Landing Subdivision Phase 1	pond w/sump	24,700		1	none	pond
Heber Meadows Phase 1	pond w/ sump	31,541	0.7200	2	none	snout, pond
Heber Meadows (2800 S Mill Road Sump)	sump			1	none	snout, pond
Hog Business Park	sumps with underground rock	57,000	0.3300	4	none	snout, sump
Last Stand	pond w/sump	7,910		1	none	pond, snout
Liberty Station & Liberty Crossing	2 stormtech systems	14,400		0	none	stormtech, snout
Majestic Mountain Acres/Noble/Browning	pond w/ stormtech systems	36,237		0	none	stormtech, snout
Mayers Meadows Subdivision	stormtech system	11,204		0	none	stormtech, snout
Meadows at South Field	pond w/sumps	25,708		10	none	pond, snout
Mill Road Estates Phase 1 and 2	pond		2.2000	0	1.1	pond
Mill Road Estates Phase 3	pond	3,400		0	3" orifice	pond, snout
Mill Road Estates Phase 4	pond	7,701		0	3" orifice	pond, snout
Mountain Meadows Phase 1 & 2	none	0		0	100%	none
Mountain View Estates	pond	12,500		0	overflow at 35.67"	pond
Murfield Phase 1	pond	6,431		0	1.00	pond
Murfield Phase 2	pond	57,115		0	yes not sure how much	pond
Murfields Phase 4A and 4B	pond	10,219		0	1.16	pond
My Mountain Home Plat A and B	pond	18,180		0	15" pipe unlimited	pond
My Mountain Home Plat C	pond	6,000		0	0	pond
Old Mill Country Estates	pond	42,250		0	5.4" orifice	pond
Park Properties	sump	500		1	none	snout
Pine Meadows	pond /sump	15,000		3	15" pipe no known restrictions	pond
Power Industrial Park	pond	6,000		0	0	pond, snout
Sage Acres	pond	18,000		0	overflow to canal	pond
School House Way Estates & First Flush Pond	storage pond and first flush	113,256	3.2900	1	16" orifice with overflow box	snout, pond
Silver Ridge Properties	underground rock storage	12,250	0.2800	3	none	snout
Swiftcreek Subdivision	pond w/sump	6,872		1	none	pond, snout
The Cove at Valley Hills	pond w/sump	118,804	2.7270	4	none	pond
Timp Meadows	pond	18,000		0	15" pipe no known restrictions	pond
Timp Meadows East	pond	39,000		0	15" pipe no known restrictions	pond
Timp Meadows North	Pond	64,856		0	none	pond
Timp View Crossing	pond w/sumps	7,083		3	none	pond, snout
Valley Heights Subdivision	pond w/sumps	20,940		12	none	pond, snout
Valley Station	pond/sump with underground	32,565		1	1.68	Vortechs (3 ea)
Walgreens	sump	1,000		1	none	sumps
Wasatch Vista	pond w/sump	70,225		1	2.75	pond, snout
Wheeler Park Phase 1 and 2	pond w/ sump and	214,515	4.9200	1	none	pond, snout
Willow Creek Estates	underground rock storage	5,328		1	none	snout
Wing Point (Private?)	pond /underground rock	21,000		2	none	pond
Witt Commercial	pond w/sump	8,581		1	none	pond, snout
Valley Hills Drive 800 North Basin	pond	5,472		0	discharge to ditch possible	pond
David Fields Commercial (public)	sump	842		1	none	sump
Sorenson Dental Office	sump	828		2	none	sump
Street Inlets and Catch Basins, City Wide	n/a	varies		n/a	varies	varies

1. Volume is maximum and includes freeboard if there is any.

Design Requirements

Storm water runoff collection in Heber City is provided through a collection pipes, ditches, curb & gutter, detention basins, retention basins, sumps, streams, canals and a variety of other collection and storage type facilities. The design and sizing of these facilities is based on storm water runoff. Peak runoff from existing land or developed areas can be determined by a variety of approved models. Refer to the City's Storm Water Manual for methodology.

Ground Water

There are certain areas of Heber City which have had shallow ground water tables in the past. In 1983 a network of subsurface drains were installed in 500 East and 600 East. This drain system is shown on Figure 7-2. All new development is required to complete a geotechnical report which includes recommendations on ground water levels in the development area. If shallow ground water is discovered, or it is found that there is potential for shallow ground water from streams, channels, or canals nearby, development is required to provide means of controlling the ground water for all infrastructure and buildings. Additionally, retention basins and other water quality devices need to be designed such that they do not contaminate groundwater.

Storm Water Management Program

Considering the growth of Heber City, an official Storm Water Management Program is needed. Heber City and/or the Heber Valley will soon be classified as a small municipal separate storm sewer system (MS4). The Utah Department of Environmental Quality (DEQ) Division of Water Quality has storm water management regulations and guidelines to help facilitate storm water control for a small MS4. The program could be a combined effort between Wasatch County and Heber City.

The following are guidelines Heber City currently has in place which support proper storm water management:

1. Heber City Ordinance 15.08.080 was put in place to help facilitate a variety of items with respect to home construction. The ordinance provides some building site storm water control requirements, and it also helps control debris and dirt in the roadway to reduce storm drain system contamination.
2. Construction sites greater than one acre or projects less than one acre that are part of a larger common plan of development are required to obtain a Utah Pollutant Discharge Elimination System (UPDES) permit. With the permit, the site must also have an approved Storm Water Pollution Prevention Plan (SWPPP). All SWPPP plans are reviewed by the City Engineer.

In addition to the items listed above, Heber City will continue implementing the following storm water control guidelines:

1. Public Education and Outreach: City will continue public education and outreach efforts to promote a change in behavior by the public to reduce water quality impacts associated with pollutants in storm water runoff. This will include education efforts targeting residents, businesses, developers/contractors, and industrial facilities. The education and outreach will focus on specific pollutants and pollutant sources that impact downstream receiving waters including: sediments (dirt, clay, sand), fertilizer/pesticides (nutrients such as phosphorus and nitrogen), and chemicals/ hazardous wastes (oil/grease, fuels,

paint, cleaning products, etc). It is recommended the City work with the Provo River Watershed group and Wasatch County to identify specific guidelines and distribution packets.

2. Storm Water Facilities Inventory: The City will maintain a record map of all storm drain facilities, including all inlets, manholes, culverts, pipes, ponds, storage facilities, sumps, oil separator boxes, pollutant removal devices, discharge points, canals, streams, flood channels, and other pertinent storm drain facilities that discharge into State waters.
3. Construction Site Storm Water Runoff Control: City will develop and adopt an ordinance that requires the use of erosion and sediment control practices at construction sites. The ordinance shall at a minimum be equivalent with the technical requirements set forth in the UPDES Storm Water General Permit for Construction Activities found at <http://waterquality.utah.gov/UPDES/stormwatercon.htm>. The ordinance shall include the following: Sanctions to ensure compliance, for construction projects disturbing greater than or equal to one acre, and to projects less than one acre that are part of a larger common plan of development. Require construction operators to prepare a Storm Water Pollution Prevention Plan (SWPPP) and apply sediment and erosion control BMP's as necessary to protect water quality, reduce pollutant discharge, and control waste such as, but not limited to, discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste. It is recommended that the City use ordinance language previously approved and used by the Provo River Watershed Council.
4. Pollution Prevention and Good Housekeeping: The City will prepare an operations and maintenance program to complete and track the following items: Perform annual inspections to identify when cleaning and maintenance of public storm drain facilities is needed. Clean all inlets, ponds, canals, streams, and other pertinent public storm drain facilities of all debris, trash, oil accumulations, and excess sediment buildup. Repair any failures of installed public infrastructure. Maintain all access to public storm drain facilities. Monitor the drainage of all storage facilities and facilitate the proper discharge or infiltration of water from storm drain facilities to reduce stagnant water areas. Prioritize storm sewer system maintenance, with the highest priority areas being maintained at the greatest frequency. Prepare a schedule for street and public owned parking lot sweeping. Follow inspection checklists and record keeping procedures for all cleaning and maintenance. See Heber City Public Works for checklists, procedures, and guidelines.

The four storm water control items listed above are a good start to direct Heber City towards adopting the necessary programs for a beneficial storm drain system. The DEQ Division of Water Quality general permit for storm water discharge from small MS4s contains more extensive guidelines and procedures that will help Heber City implement an official Storm Water Management Program (SWMP). The following is a summary of the key components in a SWMP:

1. Provisions to develop, implement, and enforce a SWMP designed to reduce the discharge of pollutants from the MS4, protect water quality, and satisfy the appropriate water quality requirements of the Utah Water Quality Act.
2. Six Minimum Control Measures:
 - a. Public Education and Outreach and Storm Water Impacts
 - b. Public Involvement/Participation
 - c. Illicit Discharge Detection and Elimination (IDDE)
 - d. Construction Site Storm Water Runoff Control

- e. Long-Term Storm Water Management in New Development and Redevelopment (Post-Construction Storm Water Management)
- f. Pollution Prevention and Good Housekeeping for Municipal Operations
- 3. Shared Responsibility: Implementation of one or more of the six minimum measures may be shared with another entity, or the entity may fully take over the measure.
- 4. Provisions to review and Update the Storm Water Management Program

There are additional requirements of a small MS4, other than the SWMP, when implementing a storm water discharge permit, such as non-storm water discharge control, record keeping, permit conditions, and penalties. Guidelines outlining requirements for small MS4 permits may be found at https://www3.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf. It includes the specific details and requirements for the four items listed above for the SWMP. A recommended project in the next several years is that Heber City, with the involvement of Wasatch County, adopt a voluntary SWMP that focuses on the four items required of a SWMP, listed above. The official SWMP documents should be created within the next two to three years, implemented as soon as possible, and followed until the EPA and DEQ decide a mandatory Permit for Discharge is required.

Wasatch County

Heber City has a cooperative agreement with Wasatch County to maintain flood channels, canals, and streams that pass seasonal runoff through the City. City storm drain systems must therefore be designed to avoid adversely impacting these existing flood channels. To minimize any impact, this study assumes most facilities will only introduce historical flows into existing flood channels.

The County is currently looking into doing a study to combine storm drain efforts with the City and potentially install regional detention facilities for water quality purposes. In June 2000 a study was done recommending four basins be constructed to reduce the amount of sediment and phosphorus entering the Provo River system. As the City designs its own facilities, mutually beneficial opportunities should be investigated to incorporate features enhancing water quality and reducing the economic impact to both the City and County. As part of the SWMP's six minimum control measures, Heber City will work to reduce pollutant discharge to streams and water bodies which affect Wasatch County and other users downstream Heber City will also coordinate with Wasatch County in the steps to create a Storm Water Management Program that will provide benefit countywide.

New Development

The new Heber City Storm Water Design Manual that was adopted in 2022 provides guidelines for new developments. Design requirements for new development outlined in this document, in particular LID's are a requirement by the Utah Department of Environmental Quality as part of an MS4 program. Therefore in preparation for the future compliance with the MS4 program, developments in Heber City shall comply with the guidelines outlined in the manual.

Discharge Agreements

Heber City currently has agreements with groups and entities around Heber City related to storm drainage facilities. The following is a summary of those regulations.

- Wasatch County canal maintenance agreement
- Central Utah Water Conservancy District canal maintenance agreement
- Spring Creek and Sage Brush Canal maintenance and discharge agreement.

7.4 Economic Feasibility Analysis

Costs of the proposed new improvements are shown in Table 7-9. The estimated material and installation cost for the pipe improvements, 20-year maintenance program, storm water management program, and the storm drain portion of the public works expansion project is \$7,816,160. This number is based on material and labor rates that are current as of 2023, and estimates should be updated regularly to reflect changes in price.

New developments are not required to pay storm water impact fees. The funding for the proposed projects must come from the storm drain utility fee, unless other funding sources such as grants, or other programs are identified. These funds will need to generate sufficient revenue to complete the items lists in Table 7-9 or they may not be completed.

Utility Fee Methodology

Zion's Bank completed a study in 2012 which evaluated the storm drain utility fee. The Zion's study recommended a direct approach of using a per unit charge for all residential properties less than one acre; and a gross acreage charge for all non-residential properties, and multifamily properties greater than one acre. Undeveloped properties are not subject to the fees.

Table 7-9 Estimated Cost of Storm Drainage Improvements.

ULT	CIP #	Recommended Improvements	Total Cost		Funding Proportionate Share Analysis					
			Operating		Developer		Other		Impact Fee Eligible	
			%	\$	%	\$	%	\$	%	\$
ULT	D-015	Ditch Storm Drain System Improvements		\$1,621,474	100%	\$1,621,474	0%	\$0	0%	\$0
	D-016	First Flush Detention Pond(s) - Central Heber		\$1,380,083	100%	\$1,380,083	0%	\$0	0%	\$0
	D-022	Maintain Existing SD/Ditch System (20 times)		\$2,400,000	100%	\$2,400,000	0%	\$0	0%	\$0
	D-023	Master Plan Updates every 5 years (4 times)		\$48,000	100%	\$48,000	0%	\$0	0%	\$0
	D-025	Storm Water Management Program		\$336,000	100%	\$336,000	0%	\$0	0%	\$0
	D-026	Install SD System in Old Town Heber		\$0	0%	\$0	0%	\$0	0%	\$0
	D-028	Heber City Public Works Facility Exp Ph 2*		\$830,603	0%	\$0	0%	\$0	100%	\$830,603
	D-029	HDS Before First Flush Pond		\$1,200,000	100%	\$1,200,000	0%	\$0	0%	\$0
	TOTAL EXPENDITURES			\$7,816,160		\$6,985,557		\$0		\$830,603

* Impact fee eligible, however, no impact fee has been calculated or proposed for Storm Drain

Operating and Impact Fee Funds

All recommended improvements, including the Storm Water Management Program and the Heber City Public Works Facility Expansion Phase 2 will be funded by operating funds. Therefore, new developments are not required to pay storm water impact fees. The need for a storm drain impact fee will be evaluated again at a later time.

Operating Fund & Storm Drain Utility Fee

The maintenance of the storm drainage and ditch systems are funded by the storm drain utility fee charged to all existing residential and non-residential users. This fee covers the cost of storm drain projects benefiting existing users, including the Storm Water Management plan, street sweeping, and canal/ditch maintenance. The current fee is \$15.20 per month for all residential properties, and multi-family properties less than or equal to one acre; and \$11.83 per month per gross acre for multi-family properties greater than 1 acre. For Non-Residential it is \$15.20 per month for properties less than or equal to 1 acre, and \$11.83 per month per gross acre for non-residential properties greater than one acre. The storm drain utility fee should be reviewed annually to keep abreast of increasing inflation and construction costs.

Chapter 8

Pressurized Irrigation System

8.1 Summary & Recommendations

Introduction

This chapter identifies the existing condition of the pressurized irrigation (PI) system as well as recommended improvements to meet the projected 20-year population demands. Impact fees were calculated based on implementing the recommended improvements.

Future conditions in Heber City were analyzed by projecting the population through the year 2043 and calculating the number of connections or equivalent residential units (ERU's). Based upon historical PI demand and the projected average yearly, peak daily, and peak instantaneous demands, the PI flows are projected through the planning period. These flows are used to determine the required capacities of the PI system within Heber City. The Central Utah Water Conservancy District (CUWCD) supplies Heber City with irrigation water and storage for peaking. Recommendations are made to maintain the current Level of Service (LOS) and provide the needed capacity for the projected population. Additional infrastructure is also considered for areas which do not currently have PI available. User fees and impact fees are studied to determine the feasibility of the recommendations.

Heber City's water system provides water for both city and some irrigation company connections. For this study, all connections will be treated as City connections.

The Heber City Design Criteria used in this study are summarized below:

- Demand:
 - Average Yearly Outdoor 437 gpd/ERU (based on 3.0 af/ac)
 - Peak Day Average Yearly Demand x 3.4
 - Peak Instantaneous Peak Day x 2.0
 - Storage
 - CUWCD for Heber 437 gal/ERU
 - Pressure
 - Minimum Static 50 psi
 - Maximum Static 120 psi
 - Minimum Peak Day 40 psi
 - Minimum Peak Instant 30 psi
 - Pipe Sizes
 - Minimum 6-inches
 - Velocities:
 - Maximum Peak Day 5 fps
 - Maximum Peak Instant 8 fps
- Outdoor watering - Assume average lot size of 0.33 acres, 49% irrigated.

Projected Population

Heber City's population is expected to increase by approximately 61.8%, from 18,347 to 29,682 by the year 2043, excluding the North Village and Jordanelle Ridge areas. With this growth, it is projected that an additional 4,478 (11,727-7,249) ERU's from Residential and Non-Residential development will be added. Of these, 380 ERU's must be deducted for the Red Ledges area which is served by Twin Creeks Special Service District and 761 ERU's for those without access

to the PI system. Heber City's PI system is therefore estimated to have a total of 10,427 ERU's, or an additional 5,648 ERU's, by 2043. The 5,648 ERU's includes 1,550 ERU's converted from the culinary system in Central Heber after 2028. Growth beyond 2043 to Ultimate build out will be addressed in future Master Plan updates.

Projected Pressurized Irrigation Use

Using 10,427 projected ERU's in 2043, it is calculated that 10,758 gallons per minute (gpm) will be required to meet Peak Day flows. It is also projected that an average yearly demand of 4.56 million gallons per day (mgd) will be used. The usage per ERU is estimated to be 437 gpd/ERU spread over 12 months or 874 gpd/ERU over the 6-month irrigation season. This is calculated using the average residential lot size of Heber City subdivisions which use PI and the percent of each lot on average that is irrigated. The average residential lot size with PI available is 0.33 acres, and on average 49% of each lot is irrigated.

Recommended Irrigation System Improvements

Capital improvements recommended to meet the projected demands are shown in Figure 8-1. These recommendations were determined by the use of a computer model of Heber City's PI system, projected demands, and input from CUWCD and water use data. A detailed list of the recommended improvements is given below.

Projects labeled as "Ultimate" are beyond the 20-year planning window and therefore the improvement cost and associated populations served have been excluded from impact fee calculations.

I-001 Central Heber Pressurized Irrigation: The proposed project is to provide PI water to the Central Heber. There are approximately 1,550 water users within this area. The source of water for the PI system would be from Wasatch Irrigation Company delivered via the Timpanogos the Wasatch canals. Connection points would be on the Wasatch Canal near the Creamery Spring (1200 North on the Wasatch Canal), the Timpanogos Canal through the gravity feed at the T5 pump station of the WCWEP system, the Timpanogos Canal near Lake Creek Road, and the W3 pump station of the WCWEP system. These lines will be Heber City lines. W-027 and W-054 culinary water projects are in the 2024-2028 planning window. Funds from these projects will be used to help fund the PI system in Central Heber since this project postpones and reduces the size of the culinary source and storage needed in the future. Unless a larger bond is obtained, the PI system in Central Heber must be completed in phases from 2023 to 2043.

I-002 1200 W 430 S to 1100 W 100 S (6-inch): A 6-inch line should be constructed from the existing pressurized system between 1200 West 430 South and 1100 West 100 South to connect into the proposed 6 inch line in 1200 West (South Field Road). Development should install and pay for a portion of this 6-inch line and impact fees should pay for Heber City's portion.

I-003 1200 West – 430 S to 500 S (10-inch): A 10-inch line should be constructed in 1200 West from the existing line at approximately 500 South to the proposed 6-inch line at approximately 430 South. Development will install and pay for a portion of this line, and impact fees should pay for Heber City's portion of over sizing above 6-inch.

I-004 Daniel Rd –1450 S to 1300 S (8-inch): An 8-inch line should be constructed from

the existing pressurized water system in Daniel Road at approximately 1450 South to tie into the 14-inch line at approximately 1300 South. Development will most likely install and pay for a portion of this line, and impact fees will need to pay for Heber City's portion of over sizing this line above 6-inch.

I-008 East By-pass – 1500 E to 1240 E 16-inch pipeline: A 16-inch line should be constructed in the East By-pass Road from approximately 1500 East 1240 East. This line will replace the existing gravity 16 inch in at this location because the existing line does not match the new elevation of the By-pass road. Development will install 100 percent of this line. This will be a CUWCD line.

(Ultimate) I-010 Valley Hills Blvd – Mill Rd to Callaway Dr (8-inch): An 8-inch line should ultimately be constructed along Valley Hills Boulevard from Mill Road (1050 East) to the existing line in Valley Hills Boulevard near Callaway Drive. This line is necessary to feed and loop pressurized irrigation to this area.

I-011 300 East – East Bypass to 1600 N (10-inch): A 10-inch line should be constructed on 300 East from the East Bypass through the property just to the east of US 40 to connect to the pipeline at the Wasatch Canal near Coyote Lane. This line is necessary to feed and loop PI to this area. Development should install and pay for a portion of this 6-inch line and impact fees should pay for Heber City's portion of the oversizing.

I-012 East Bypass – US 40 to 300 E (12-inch): A 12-inch line should be constructed in US 40 and 800 North from approximately 700 North to approximately 300 East (I-011). The existing line in this area from the canal will be replaced with this line. Development should install and pay for a portion of this 6-inch line and impact fees should pay for Heber City's portion of over sizing this line.

I-013 Regulation Pond(s) (6 ac-ft): Regulation ponds are necessary to maintain peak day flow in Heber City. Approximately 1 ac-ft per 60 irrigated acres is necessary for flow regulation. These ponds are operated and maintained by the CUWCD. The location of these ponds are shown on Figure 8-1. Heber City needs to pay for the City's share to install these facilities since residential irrigation patterns are contributing to the need for ponds. Development will pay for a portion of this storage though impact fees to accommodate City growth.

I-014 Aerial Photography Update: The Aerial Photography should be updated every five years.

I-015 Master Plan Update: The Master Plan should continue to have yearly updates with major updates every five years.

(Ultimate) I-016 Regulation Pond(s): Regulation ponds are necessary to maintain peak day flow in Heber City. Approximately 1 ac-ft per 60 irrigated acres is necessary for flow regulation. The location of regulation ponds needed beyond the 20-year planning period is unknown. Heber City will need to help pay for the cost to install these facilities since residential irrigation patterns are contributing to the need for ponds. Impact fees will pay for the portion of the pond that is required for Heber City's growth in the future.

I-018 East Bypass – 800 E to 300 E (16-inch): A 16-inch line should be constructed in 900 North from approximately 800 East to approximately 300 East (I-011 and I-012). The existing line in this area from the canal will be replaced with this line. Development should install and pay for a portion of the 6-inch line and impact fees should pay for Heber City’s portion of over sizing this line.

I-022 1200 South Sawmill Blvd to 1050 S 1100 E (8-inch): An 8-inch line should be constructed between 1200 South Sawmill Blvd and 1050 South 1100 East. Development should install and pay for a portion of this 6-inch line and impact fees should pay for Heber City’s portion of over sizing this line.

I-023 Becca Rd – 600 E to Sawmill Blvd (6-inch): A 6-inch line should be constructed in Becca Road from 600 East to Sawmill Boulevard. Development should install and pay for a portion of the 6-inch line.

I-024 600 East – 1300 S to US 40 (6-inch): A 6-inch line should be constructed in 600 East from approximately 1300 South to US 40. Development should install and pay for a portion of the 6-inch line.

I-026 Heber City Public Works Facility Expansion Ph.1: The Heber City Public Works Department Building was expanded in 2018 to accommodate growth and maintain the same level of service on the City’s street system. Impact fees were used to pay for the irrigation portion of this expansion which was debt funded with payments continuing through the master plan 20-year window. See Appendix A for the construction cost allocation.

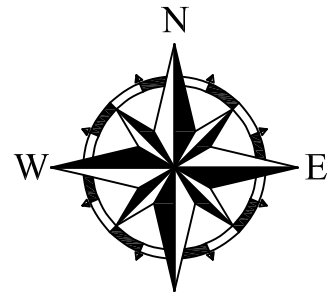
I-027 Heber City Public Works Facility Expansion Phase 2: The Heber City Public Works Department Building and Maintenance Site will be expanding to maintain the current level of service that the Public Works department currently provides in maintaining the pressurized irrigation system. Phase 2 will likely commence around 2028. Impact fees will pay for all this phase since it is only needed for future growth.

I-028 100 South from 1100 West to 900 West (8-inch): An 8-inch pipeline should be constructed at approximately 1100 West to 900 West along 100 South. This is needed to supply adequate capacity to the new High School. The new High School Development should pay for this line.

Water Rights

All water is in the process of being adjudicated in Heber Valley. Therefore, additional water rights cannot be obtained unless it is purchased from agriculture or obtained through land annexations and/or developments. Because of this, it is recommended that the City continue requiring annexed land to provide the required water for outdoor use for each new development.

Heber City currently has approximately 2,266 ac-ft of irrigation water shares. Irrigation shares are reduced by the State Engineer when converted to municipal water rights. Heber City only converts irrigation shares to municipal water rights for indoor use. Irrigation water through the pressurized irrigation system is used through the Heber City owned irrigation shares. Water Rights are discussed in more detail in section 8.3.



0 5200 10400 Feet

EXISTING CREEKS AND CANALS

- ① LAKE CREEK
- ② LOWER WASATCH CANAL
- ③ NORTH LAKE CREEK
- ④ HUMBURG CANAL
- ⑤ WASATCH CANAL
- ⑥ CENTER CREEK
- ⑦ TIMPANOGOS CANAL
- ⑧ FLOOD CHANNEL
- ⑨ SAGEBRUSH AND SPRING CREEK CANAL

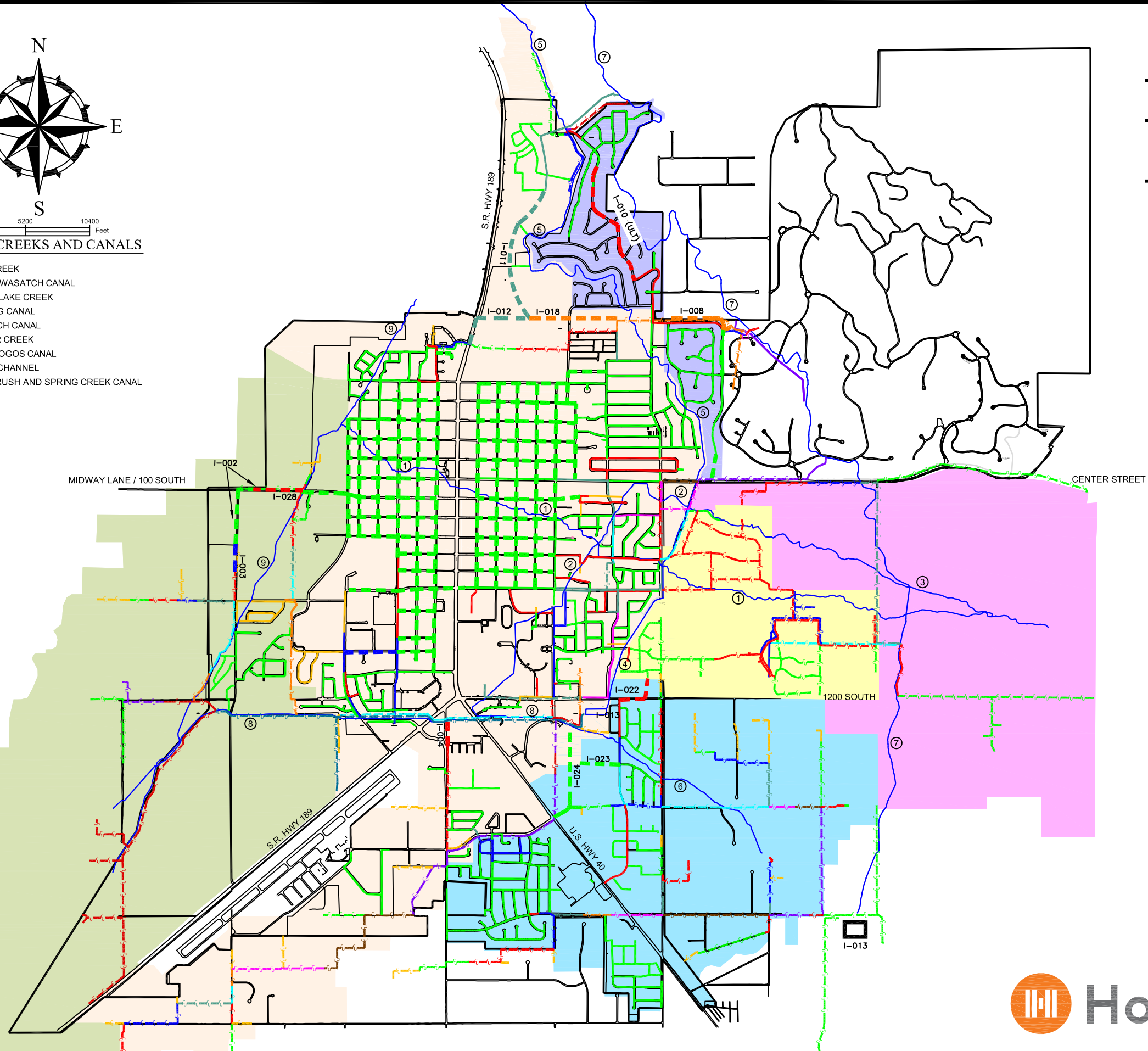


FIGURE 8-1

HEBER CITY

FUTURE PRESSURIZED IRRIGATION SYSTEM

- ULTIMATED BUILDOUT BOUNDARY
- HEBER CITY BOUNDARY
- EXISTING ROADS
- CITY IRRIGATION LINE
- CUWCD IRRIGATION LINE

EXISTING IRRIGATION LINES

PIPE SIZE (inches)	PIPE COLOR
4	
6	
8	
10	
12	
14	
16	
18	
20	
24	
30	
36	
48	

Existing Booster Pump Station



PROPOSED IRRIGATION LINES

PIPE SIZE (inches)	PIPE COLOR
6	
8	
10	
12	
16	
18	

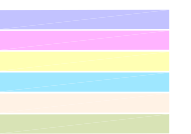
REGULATION POND SITE AREA



PROPOSED IRRIGATION ZONES

ZONE NAME	ZONE COLOR
-----------	------------

- TIMP 5 PRESSURE (T5P)
- TIMP 6 B (T6B)
- TIMP 6 C (T6C)
- TIMP 7 (T7)
- WASATCH 3 (W3)
- WASATCH S (WS)



728 WEST 100 SOUTH #2
HEBER CITY, UTAH 84032
(435) 654-2226

Operation

Central Heber does not have PI water available. A series of open ditches provide a majority of the irrigation water for this area, with some also being provided through Heber City's culinary water system. There are approximately 1,550 water users within this area. Most of the areas of Heber City located outside the central portion currently receive PI via the Wasatch County Water Efficiency Project (WCWEP) system constructed by Central Utah Water Conservancy District (CUWCD). Water for the existing open ditches comes from the Wasatch Canal. There are approximately 452 shares of Wasatch Irrigation Company stock held by users within Central Heber.

CUWCD supplies PI water to Heber City through metered connections on their system. Heber City is billed for this irrigation water use, and holds the irrigation water shares in behalf of City users. Historically the City hasn't metered PI water at individual connections but recently began a meter retrofit program to install meters. Until the retrofit program is complete the City continues to charge users a flat irrigation utility fee based on lot size. Heber City has adopted a Water Conservation Plan that provides guidelines for water conservation and helps reduce water consumption. However, as growth continues, meters and other strategies will continue to be utilized to help control PI water consumption.

Impact Fee Recommendations

It is recommended that Heber City revise the current pressurized irrigation impact fee from \$1,131 to a rate of \$844 per ERU. And for non-residential development, the fee should be revised from \$0.16 per irrigated square feet to \$0.12 per irrigated square feet.

8.2 Pressurized Irrigation Use

From the projected population, the additional future number of PI connections is determined along with the number of future ERU's. Using State design criteria and historical demands, the future water demands, including the average yearly, peak daily, and peak instantaneous demands, are projected through the planning period.

Projected Population

The projected population for Heber City from 2023 to 2043 is discussed in Chapter 3, Projected Population Growth. The 2023 population is estimated to be 18,347. The 2043 Heber City population was projected to be 29,682.

Historical Pressurized Irrigation Use

Heber City does not have historic metered PI use data. According to Heber City's PI supplier, CUWCD, historic PI use has been near the duty value used by Utah Division of Water Rights to calculate the diversion amount allowed for outside watering which is an average yearly demand of 3.0 ac-ft/acre. Heber City has historically approximated PI use by taking the difference between summer and winter use from source production records on the culinary water system and dividing it by the number of users without PI service on that system. Since this data is unavailable for the current master plan update, the prior master plan use of 402 gpd/ERU or 2.76 ac-ft per irrigated acre will continue to be used. See the outdoor water estimates in the "Outdoor Water Use" section of Chapter 4.

Equivalent Residential Unit's

Pressurized irrigation usage from typical residential connections differs from commercial, church, government, and other non-residential connections. To evaluate residential and non-residential connections on an equal basis, Equivalent Residential Unit's (ERU's) are used to compare non-residential connections. To calculate non-residential ERU's, culinary water use data was used. For this study, ERU's were approximated by dividing the historical metered winter culinary water usage of commercial, church, and government businesses by the total number of connections. This resulted in an average of 4.1 ERU's per non-residential connection between 2018 and 2021. In terms of ERU's, 2023 had approximately 5,405 PI ERU's (both residential and non-residential) connected to the system (7,249 - 1,844 ERU w/o PI) as shown in Table 8-1.

The total number of projected residential, church, government, and commercial ERU's, are shown in Table 8-1 in increments to 2043. The residential ERU's are shown for Central Heber, where currently PI is not available. These ERU's will be included in the total PI ERU's, once the system is installed in Central Heber, after 2028. There are approximately 761 ERU's outside the Central Heber area, that do not have PI available. These are also shown in Table 8-1. All PI connections within Heber City limits are counted in the estimated ERU number.

Table 8-1 Projected Pressurized Irrigation ERU's

Year	Residential Units	Non-Residential ERU's	Cent Heber ERU's	No-PI ERU's*	New ERU's	Red Ledges ERU's	Total ERU's**
2023 (est)	5,302	1,946	(924)	(761)		(159)	5,405
2024-2028	1,252	459	924		2,635	(36)	8,004
2029-2033	1,067	392			1,459	(79)	9,385
2034-2038	464	170			635	(92)	9,927
2039-2043	493	181			674	(174)	10,427
Total	8,578	3,149		(761)		(539)	10,427

* Approximate. ** Residential Units are adjusted for Red Ledges, and 626 new Cent Heber conn with remainder installed by 2028.

Pressurized Irrigation Use

The Division of Drinking Water estimates outdoor use in Section R309-510 of the Utah Administrative Code. Heber City is in map Zone 2 based on the Division of Drinking Water's water use map. State Drinking Water Rules require that water providers deliver sufficient supply to meet Peak Day and Average Yearly outdoor water demands at the source. The State Engineers procedure for estimating outdoor water use is as follows:

- Determine consumptive water use zone in which Heber City resides (Zone 2).
- Determine the Peak Day and Average Yearly demands using Table 510-3 found in State Rule R309-510.

The following are outdoor water use estimates for the Heber Valley which are based on this Code.

- Average Yearly Demand: 1,098 gpd, 1.23 acre-feet/irrigated acre
- Peak Day Demand: 4,032 gpd, 2.80 gpm/irrigated acre
- Peak Instantaneous Demand: 5.60 gpm/irrigated acre (Table 510-7)

To convert outdoor usage from a per acre basis to a per connection basis several subdivisions

were surveyed. The observations indicated that on 0.25 to 0.5 acre lots, 70% of the lot is available to be irrigated, and of that available amount, 70% on average is irrigated. This study has therefore assume that, on average, 49% of a typical lot is irrigated. It has also assumed that there are three connections per acre for residential land use. These assumptions and the State Drinking Water criteria result in a Peak Day demand of 659 gpd/ERU, and an Average Yearly demand of 179 gpd/ERU.

$$\frac{4,032 \text{ gal}}{\text{irr ac} - \text{day}} \times \frac{0.49 \text{ irr ac}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{3 \text{ ERU}} = 659 \text{ gpd/ERU}$$

$$\frac{1,098 \text{ gpd}}{\text{irr acr}} \times \frac{0.49 \text{ irr ac}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{3 \text{ ERU}} = 179 \text{ gpd/ERU}$$

This method results in significantly lower use than Heber City's average outdoor culinary water use of 402 gpd/ERU at the source, estimated from production records between 2016 and 2019 and based on the average usage for residential connections which irrigate with culinary water. Therefore, a second method has been used in this study.

The second method of determining outdoor usage is by using the duty value used by Utah Division of Water Rights to calculate the diversion amount allowed for outside watering. This method is also used for estimating outdoor (irrigation) water right requirements for new development in the City. Heber City is considered a higher cooler valley, and the irrigation duty amount is 3 ac-ft per irrigated acre. The irrigation season is described as April 1 to October 31. This method results in an Average Yearly demand of 3.0 ac-ft/acre which converts to 437 gpd/ERU using three connections per acre and 49% irrigated landscaping per lot. The Utah Division of Water Rights duty amount 437 gpd/ERU slightly higher than the City's average metered outdoor culinary water use of 402 gpd/ERU, however, it was used in this study because it appears conservative and comparable to past City source production records.

All future development will have PI; therefore, the number of ERU's using culinary water for outdoor use should decrease. Projected total City outdoor water use from the culinary system is assumed to remain constant for this study. However, as the PI system expands into portions of Central Heber, overall, PI water use will increase.

The Peak Day demand for PI is based on a 6-month use period with the peak months being July and August. This equates to a factor of 2 for the 6-month period and additional 1.7 peaking factor for the hottest days, for a total peaking factor of 3.4. The resulting peak day demand is 1,486 gpd/ERU (437 gpd x 3.4), which equates to 6.32 gpm per irrigated acre which is greater than the peak day demand of 2.80 gpm per irrigated acre as outlined Table 510-3 of R309-510-9. This was determined from information gathered from CUWCD.

$$\frac{1,486 \text{ gal}}{\text{ERU} - \text{day}} \times \frac{1 \text{ day}}{24 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{3 \text{ ERU}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{0.49 \text{ irr ac}} = \frac{6.32 \text{ gpm}}{\text{irr ac}}$$

The peak instantaneous demand is determined by multiplying the peak day demand of 1,486 gpd/ERU, by the nighttime peaking factor of 2.0. This results in a peak instantaneous demand of 2,970 gpd/ERU. This was determined from information gathered from CUWCD.

$$\frac{437 \text{ gal}}{\text{ERU} \cdot \text{day}} \times \frac{1 \text{ day}}{24 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{3 \text{ ERU}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{0.49 \text{ irr ac}} = \frac{1.86 \text{ gpm}}{\text{irr ac}}$$

$$\frac{2,970 \text{ gal}}{\text{ERU} \cdot \text{day}} \times \frac{1 \text{ day}}{24 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{3 \text{ ERU}}{1 \text{ gross ac}} \times \frac{1 \text{ gross ac}}{0.49 \text{ irr ac}} = \frac{12.63 \text{ gpm}}{\text{irr ac}}$$

There are approximately 1,550 users in Central Heber with new connections currently being installed to 626 users. Using 437 gpd per ERU, peaked at the outdoor peaking factor of 3.4, results in a peak day demand of 954 gpm for PI use. Estimated PI Use and projected future use are shown in Appendix F.

Projected Number of Pressurized Irrigation Connections

The projected numbers of new residential pressurized irrigation connections are determined using the growth numbers in Chapter 3. The residential connections are assumed to increase at the same rate as population growth in addition to the new connections from a pressurized irrigation system in Central Heber City. In 2023 there were an estimated 3,458 residential PI connections (7,249 Total - 1,550 Cent Heber + 626 currently being installed - 761 Other - 159 RedL - 475 Non-Res x 4.1).

Commercial, church/government, and other non-residential connections are assumed to increase at a rate equal to the City's projected population. In 2023 there were approximately 475 commercial, church, and government connections or 1,948 PI ERUs assuming 4.1 ERUs per connection.

Agricultural connections are used to water livestock and irrigate fields. There are several agricultural connections within Heber City limits. CUWCD supplies the water to these connections.

Projected Areas of Development

To relate the projected population to the improvements needed to serve them, the areas expected to be developed need to be determined. The areas projected to be developed by the increased population are determined based on existing zoning regulations, available land within City limits, and land presently being annexed.

City officials have anticipated where and how future development will occur. This study uses a building and planning map provided by Heber City's Planning department for the planning area, shown in Figure 3-2.

System Losses

Distribution systems have inherent losses that are functions of the size of pipe, joint construction, temperature, and age of the system. Typical municipal systems lose as much as 15-25% of the water flowing through the system. Heber City does not have the measurement means to determine the leakage within the pressurized irrigation system. It is recommended that the City monitor potential losses in the pressurized irrigation system.

Summary of Projected Water Flows

Projected Average Yearly outdoor water demand for the PI system is shown in Table 8-2 The PI water demand is based on 437 gpd/ERU, the number of PI connections, the assumption that all new development will have PI available, and that a percentage of the existing culinary users will

switch to PI for their outdoor use in the future.

Table 8-2 Required Minimum Capacities Pressurized Irrigation Use

Year	Number of ERU's*	Average Yearly Demand (mgd)	Average Yearly Demand (ac-ft)	Peak Day Demand (mgd)	Peak Day Demand (gpm)	Peak Instantaneous (gpd)	Peak Instantaneous (gpm)
2023	5,405	2.36	2,646	8.03	5,576	16.06	11,153
2028	7,080	3.09	3,466	10.52	7,305	21.04	14,610
2033	9,385	4.10	4,594	13.94	9,682	27.89	19,365
2038	9,927	4.34	4,859	14.75	10,242	29.50	20,484
2043	10,427	4.56	5,104	15.49	10,758	30.98	21,516

* Residential Units are adjusted for Red Ledges, and 626 new Cent Heber conn with remainder installed by 2028.

8.3 Pressurized Irrigation System Analysis and Level of Service

Heber City's present PI system's capacity and Level of Service (LOS) were checked by analyzing the distribution systems. Heber City uses the State's minimum sizing requirements for water facility design and operation per Rule R309-510 to determine their minimum LOS for the distribution system. Future improvements needed to serve projected population demands are sized to maintain the existing capacities and LOS. This section describes the present system, design parameters, and recommendations for needed improvements.

Sources

Heber City's PI system is presently supplied by CUWCD and their sources.

Water Rights

All water is being adjudicated in Heber Valley. Therefore, additional water rights cannot be obtained for new culinary wells unless it is purchased from agriculture or obtained through land annexations and/or developments. Because of this, it is recommended that the City continue requiring annexed land to provide the required water for indoor and outdoor use for each new development. After irrigation shares are obtained, they can be converted to water rights for municipal use.

Irrigation Shares

Heber City currently owns 452 Wasatch irrigation shares, 136 Timpanogos Class D irrigation shares, 20 Timpanogos irrigation shares, and variety of other company shares which are summarized in Table 8-3. These shares are currently used for the existing pressurized system or leased out for irrigation purposes and have not been converted to municipal water use.

Change applications were filed in 2019 and 2020 for Timpanogos and Wasatch Irrigation Company shares which converted approximately 1,744 ac-ft of the irrigation rights that the City held. The Change applications converted 379 Timpanogos shares (486 ac-ft) and 535 Wasatch shares (1,258 ac-ft) to municipal use but retained the flexibility to use them for either culinary (Depletion) or irrigation (Diversion) purposes. Though these rights were converted, they continue to be used for the existing pressurized irrigation system.

Table 8-3 shows the current shares and the respective municipal water conversion rates used in Heber City for converting irrigation shares to municipal use. When converting from irrigation to municipal use in Heber City, the State allows 2.07 acre-ft depletion per acre of irrigation water.

Table 8-3 Heber City's Irrigation Shares and Municipal Conversion

Irrigation Company	Irrigation			Municipal Conversion			
	Shares	Diversion (ac-ft /share)	(ac-ft)	Depletion per 1 acre (ac-ft)	Depletion Allowed (ac-ft)	(cfs)	(gpm)
Daniels Irrigation	137	0.75	103	2.07	71	0.098	44.0
Extension Irrigation	371	0.30	111	2.07	77	0.106	47.6
Sage Brush Irrigation	6	0.30	2	2.07	1	0.002	0.8
Spring Creek Irrigation	74	0.60	44	2.07	30	0.042	18.9
Timpanogos Irrigation	20	1.85	38	2.07	26	0.036	16.2
Timpanogos Class D	136	3.00	409	2.07	282	0.389	174.8
Wasatch Irrigation	452	3.40	1,535	2.07	1,059	1.463	656.7
Other	-	-	24	-	-	-	-
Total			2,266		1,547		959

Heber City currently has approximately 2,266 ac-ft of diversion irrigation water rights. Table 8-4 shows the current irrigation water share allotted use. Development that has been completed, with water shares previously supplied to the City, will use 986 (460 + 526 ac-ft) ac-ft for both culinary water and PI water use. Up to 1,162 ac-ft of water will be needed for the PI system being installed in Central Heber. This leaves the City with a balance of 118 ac-ft.

Additional irrigation shares and water rights should continue to be collected from all new development, as recommended and discussed in Chapter 4 - Culinary Water, to insure Heber City has adequate irrigation water rights for projected growth.

Table 8-4 Heber City's Irrigation Share Balance

Irrigation Share Use	Units	Average Use				Diversion Shares Used ²
	(ERU)	(gpd/ERU)	(gpd)	(gpm)	(ac-ft)	(ac-ft)
City Banked Irrigation Shares						2,266
Vacant Lots Use (indoor use)	1,074	264	283,536	197	318	(460)
Vacant Lots Use (outdoor use)	1,074	437	469,338	326	526	(526)
Future Central Heber PI System ¹	1,550	669	1,036,950	720	1,162	(1,162)
Irrigation Share Balance						118

¹ Average day for Central Heber is higher due to larger irrigated area.

² Average indoor use must be converted from depletion to diversion for comparable water right shares. Depletion x 3 / 2.07 = Diversion shares.

Storage

Heber City's PI system is presently supplied by CUWCD and their respective storage facilities.

DISTRIBUTION SYSTEM

The capacity of Heber City's existing PI distribution system will be discussed in this section. Improvements will then be recommended to meet the projected water demand in areas of future development. Figure 8-2 shows the existing distribution system.

Distribution System Requirements

The distribution system needs to be able to meet the Peak Day demand and maintain 40 psi at all connections. It must also meet the peak instantaneous while maintaining a minimum of 30 psi at all connections within the system.

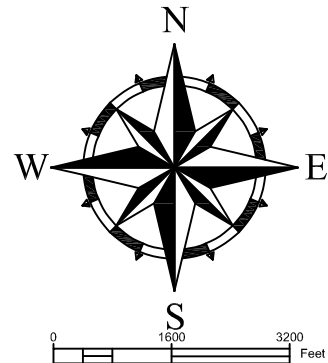
Computer Model of Pressurized Irrigation System

A computer program called *WaterGEMs Connect Edition* was used to model Heber City's water system. The program requires that all pipes, elevations at intersections, sources, reservoirs, canals, pumps, and pressure reducing valves (PRV) be entered into the model as they are constructed. System demands are then entered in. The program calculates static pressure throughout the system based on the given elevations. Sources, pumps, pipes, demand nodes, and other system elements are modeled and can be graphed throughout the time period.

After the model is run and problem areas are defined, improvements can be modeled to bring the system up to the minimum level of service (LOS). Determining which improvements in the system will bring the system up to the minimum LOS in the most economical manner is a trial and error process.

The existing PI system was modeled and calibrated. The areas that are nearing minimum LOS were identified. Improvements were determined that would allow minimum flows and pressures to be preserved throughout the existing system. These improvements are recommended in this section and were shown previously in Section 8.1, Figure 8-1.

Heber City's General Plan map was used to determine future development densities, and the projected number of ERU's in undeveloped areas were determined. The additional demand projected for undeveloped areas was added to the present demand. From this information, the ultimate build-out water system was modeled, and the future improvements were identified to provide the necessary flows and pressures to maintain the pressurized irrigation LOS in Heber City.



EXISTING CREEKS AND CANALS

- ① LAKE CREEK
- ② LOWER WASATCH CANAL
- ③ NORTH LAKE CREEK
- ④ HUMBUG CANAL
- ⑤ WASATCH CANAL
- ⑥ CENTER CREEK
- ⑦ TIMPANOGOS CANAL
- ⑧ FLOOD CHANNEL
- ⑨ SAGEBRUSH AND SPRING CREEK CANAL

FIGURE 8-2
HEBER CITY
EXISTING PRESSURIZED
IRRIGATION SYSTEM

LEGEND

- ULTIMATED BUILDOUT BOUNDARY
- HEBER CITY BOUNDARY
- EXISTING ROADS
- CITY IRRIGATION LINE
- CUWCD IRRIGATION LINE

EXISTING IRRIGATION LINES

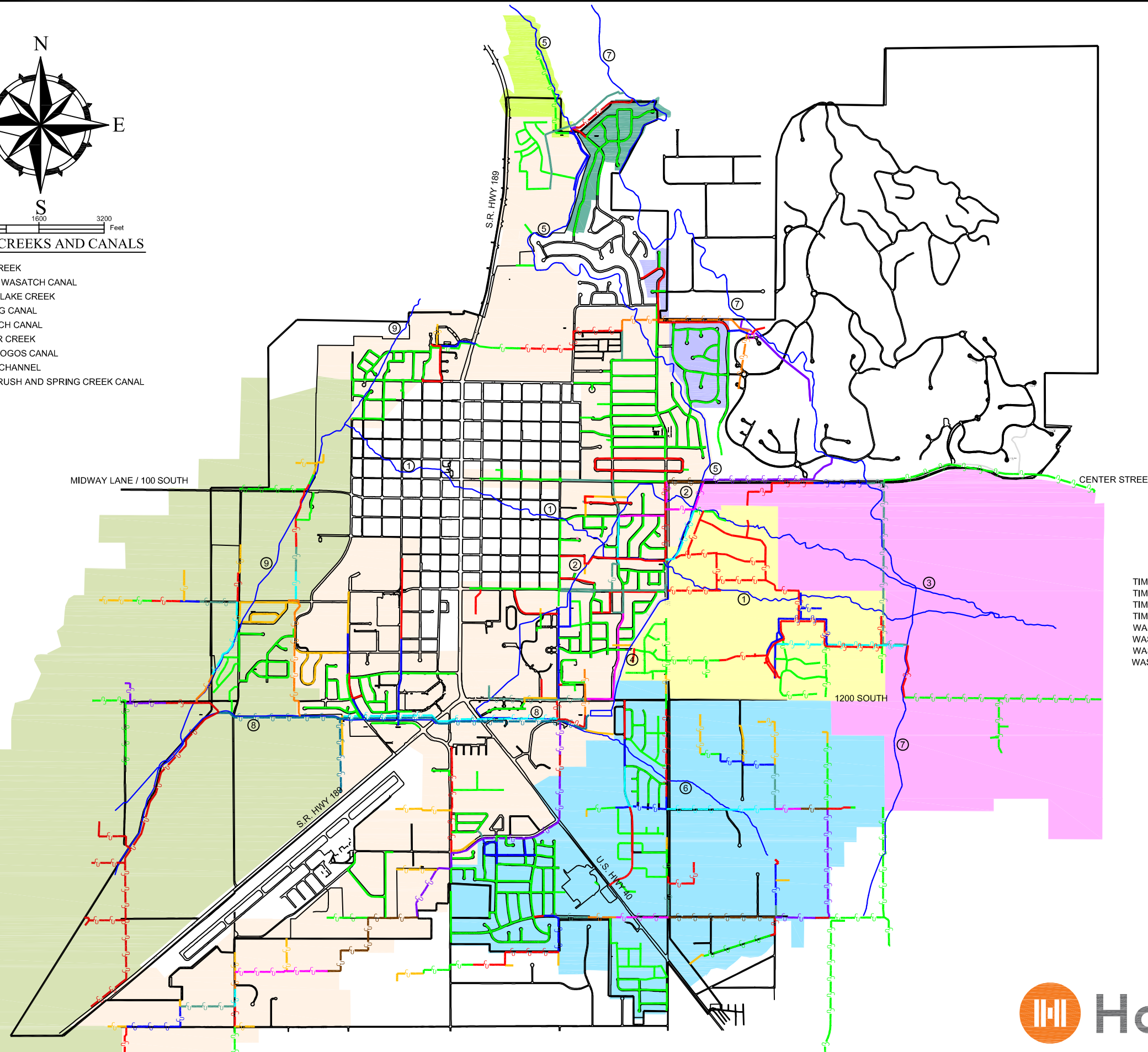
PIPE SIZE (inches)	PIPE COLOR
4	Orange
6	Yellow
8	Red
10	Blue
12	Green
14	Cyan
16	Light Blue
18	Pink
20	Brown
24	Purple
30	Dark Red
36	Light Green
48	Dark Blue

Existing Booster Pump Station



IRRIGATION ZONES

ZONE NAME	ZONE COLOR
TIMP 5 PRESSURE (T5P)	Light Purple
TIMP 6 B (T6B)	Yellow
TIMP 6 C (T6C)	Light Blue
TIMP 7 (T7)	Light Green
WASATCH 1 PRESSURE (W1P)	Dark Green
WASATCH 1 GRAVITY (W1G)	Light Green
WASATCH 3 (W3)	Light Blue
WASATCH S (WS)	Light Green



728 WEST 100 SOUTH #2
HEBER CITY, UTAH 84032
(435) 654-2226

Distribution System Recommendations

The entire Heber City portion of the PI system and key elements of the CUWCD pressurized irrigation system was modeled for both present and projected populations for instantaneous conditions and a 24-hour extended period simulation. Water system information and recommendations were obtained from CUWCD and incorporated into the recommended future water system and water model. Deficiencies for the future system were identified which helped expose the ideal locations for the future waterline projects.

Recommended improvements and estimated costs are shown in Table 8-5. The costs of the improvements include construction costs, engineering costs, legal and administrative fees and contingencies. The total estimated cost for the recommended improvements is \$15,850,552.

The most significant project in the proposed PI program is the Central Heber Pressurized Irrigation Project (I-001). The total cost to install PI in Central Heber is estimated to be \$9,086,772. Installing this system, along with continuing to require PI for new development can reduce or postpone the need for both the Culinary Water Source (W-027) and Storage Tank (W-054) projects till 2030 or beyond. A portion of the funding from these culinary water projects is proposed to be used to pay for the Central Heber irrigation project (I-001). The total impact fee revenue proposed to be transferred to I-001 is approximately \$5,440,438. These leaves \$9,511,066 in funding to be paid for by grants or other means.

Table 8-5 Heber City's Estimated Cost of Pressurized Irrigation Improvements

ULT	CIP #	Recommended Improvements	Size (in)	Total Cost	Funding Proportionate Share Analysis							
					Operating		Developer		Other ¹		Impact Fee	
					%	\$	%	\$	%	\$	%	\$
ULT	I-001	Central Heber Pressurized Irrigation Project		\$9,086,772	0%	\$0	0%	\$0	100%	\$9,086,772	0%	\$0
	I-002	1200 W 430 S to 1100 W 100 S (6")	6	\$266,875	0%	\$0	54%	\$144,113	0%	\$0	46%	\$122,763
	I-003	1200 West - 430 S to 500 S (10")	10	\$409,018	0%	\$0	45%	\$184,058	0%	\$0	55%	\$224,960
	I-004	Daniel Rd - 1450 S to 1300 S (8")	8	\$246,758	0%	\$0	65%	\$160,393	35%	\$86,365	0%	\$0
	I-008	East By-pass - 1500 E to 1240 E	16	\$558,029	0%	\$0	100%	\$558,029	0%	\$0	0%	\$0
	I-010	Valley Hills Blvd - Mill Rd to Callaway Dr (8")*	8	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	I-011	300 East - East Bypass to 1600 N (10")	10	\$593,309	0%	\$0	30%	\$177,993	0%	\$0	70%	\$415,316
	I-012	East Bypass - US 40 to 300 E (12")	12	\$290,736	0%	\$0	55%	\$159,905	45%	\$130,831	0%	(\$0)
	I-013	Regulation Pond(s) (6 ac-ft)		\$1,834,457	0%	\$0	0%	\$0	0%	\$0	100%	\$1,834,457
	I-014	Aerial Digital Map Updates (4 times)		\$23,040	0%	\$0	0%	\$0	0%	\$0	100%	\$23,040
ULT	I-015	Master Plan Updates every 5 years (4 times)		\$288,000	0%	\$0	0%	\$0	0%	\$0	100%	\$288,000
	I-016	Regulation Pond(s)		\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0
	I-018	East Bypass - 800 E to 300 E (16")	16	\$845,222	0%	\$0	23%	\$194,401	77%	\$650,821	0%	\$0
	I-022	1200 S Sawmill Blvd to 1050 S 1100 E (8")	8	\$161,482	0%	\$0	60%	\$96,889	0%	\$0	40%	\$64,593
	I-023	Becca Rd - 600 E to Sawmill Blvd (6")	6	\$339,840	0%	\$0	65%	\$220,896	35%	\$118,944	0%	\$0
	I-024	600 East - 1300 S to US 40 (6")	6	\$469,555	0%	\$0	50%	\$234,778	50%	\$234,778	0%	\$0
	I-026	Heber City Public Works Facility Exp Ph 1		\$35,676	0%	\$0	0%	\$0	0%	\$0	100%	\$35,676
	I-027	Heber City Public Works Facility Exp Ph 2		\$149,501	0%	\$0	0%	\$0	0%	\$0	100%	\$149,501
I-028	100 South - 1100 W to 900 W (8")	8	\$252,282	0%	\$0	100%	\$252,282	0%	\$0	0%	\$0	
TOTAL EXPENDITURES				\$15,850,552		\$0	\$2,383,736		\$10,308,511		\$3,158,305	

NOTES:

1. "Other" includes grants, special assessments, contributions from WCWEP, and/or previously collected impact fees.
2. Project I-001 may be subsidized by funding from Projects W-054 and W-027 since this project offsets source and storage capacity to be built by the culinary projects. It is assumed that a water saving grant may also be available to help pay for part of I-001 as the project is constructed. The project will be funded by impact fee money and grants combined in the "Other" column of I-001 per the following allocation: 1) \$2,246,000 from Culinary Source project (W-027), 2) \$2,347,000 from Culinary Tank (W-054), and 3) the remainder from Water Saving or other grants. If City is unable to obtain grants or other funding, portions of the Central Heber PI replacement project will be postponed or scaled back.
3. Assumed 5.0% interest rate on bonds. All bonds for impact fees assumed to be paid off by 2043.
4. The Aerial Digital Map and Master Plan update needs to be done four times in the next 20 years. The total cost is divided by four in the Impact Fee Expenditure Plan Improvement Costs.
5. A total of ±\$1,199,000 listed in the "Other" column is funded by the existing impact fee account as of April 17, 2023. Applied to I-002 through I-027, excluding I-013.
6. ERUs based on 2042 ERU projection minus Red Ledges 380 (1,186 / 3.12) full time units served by Twin Creeks. Non-PI users on culinary that will be converted have been excluded.
7. All new irrigation lines will be owned by Heber City. All oversizing is for Heber City future capacity needs.

8.4 Economic Feasibility Analysis

The two types of funding for Heber City's pressurized irrigation system are operating and non-operating funds. Independently, these two funds should generate sufficient revenue to fund the respective needs of the irrigation system. Operating expenses include the monies used for personnel and contractual services, betterment and replacement type capital improvement projects, materials, supplies, depreciation, and other operating expenses. Revenue to fund these operating expenses is generated from irrigation user fees.

Non-operating expenses comprise expansion type capital improvement projects, developer reimbursements, master planning, aerial mapping, and bond repayment. The revenue for non-operating expenses is generated from impact fees. Generally, operating expenses should be funded by the existing connected population, and non-operating expenses necessary for future development should be paid by the future population by way of impact fees.

In this section, only the non-operating expenses are discussed. Projected revenue and expenditures have been analyzed to determine if present fees are sufficient to fund the recommended improvements and other related expenditures.

Impact Fee Fund

The Impact Fee Fund or capital project fund is used to fund improvements needed to meet the increased demands due to growth. Revenue is currently generated from the “impact fee” charged to new developments. This revenue is used for capital improvement projects and debt service.

The impact fee can be used to fund capital improvements, including construction costs, land acquisition, material costs, planning, surveying, and engineering fees provided for and related directly to the construction of the system improvements; and debt service charges to the principal and interest on bonds, notes or other obligations issued to pay the cost of the system improvements. This revenue can also be used to fund annual Master Plan reviews and Master Plan updates approximately every five years.

Developer Contributions

The City has a policy that developers are responsible for 100% of the cost of on-site improvements needed to serve their development. Developers are also responsible for extending any off site services needed to serve their development. However, reimbursement for a portion of these costs may be available through reimbursement agreements or impact fees if the facilities have previously been identified in this Master Plan. The City’s policy for pressurized irrigation pipelines is to reimburse the incremental over-sizing cost for lines above 6-inches, unless the oversized line is needed specifically to meet the needs of the development.

Currently, the irrigation impact fee that is charged to new development is \$1,103 per ERU for residential development and \$0.016 per irrigated square foot for non-residential development. Based on the estimated cost of the required improvements in Table 8-5, with bond interest added, the total cost for improvements over the next 20 years is \$3,460,689 (\$3,158,305 + \$302,383). The projected number of new residential and non-residential ERU’s is 4,098. The recommended new impact fees are \$844 per ERU for residential development and \$0.12 per irrigated square foot for non-residential.

All new development pays the irrigation impact fee which will generate sufficient revenue to fund the recommended capital improvements and bond re-payments shown in Table 8-6 and excludes the operating portion of the improvements identified in Table 8-5.

Table 8-6 Projected Impact Fee Revenue and Projected New Connections.

Impact Fee Expenditure Plan							Collected vs Cost	Bond Loan Plus Payments	Fund Running Balance
Year	ERUs ²	Impact Fee Collected (\$)	Available Funds (\$)	Improvement Projects ¹		5-year Improvement Costs (\$)			
2024	295	\$249,122		I-014	I-012			\$0	\$0
2025	308	\$260,101		I-015	I-013			\$0	\$0
2026	323	\$272,768		I-026	I-018			\$0	\$0
2027	337	\$284,591		I-001	I-023			\$0	\$0
2028	353	\$298,102	\$1,364,683	I-004	I-024	\$1,921,136	(\$556,453)	\$560,000	\$3,547
2029	369	\$311,614		I-014	I-011			(\$53,952)	(\$50,405)
2030	386	\$325,970		I-015	I-022			(\$53,952)	(\$104,356)
2031	403	\$340,326		I-026	I-027			(\$53,952)	(\$158,308)
2032	102	\$86,137		I-002				(\$53,952)	(\$212,260)
2033	104	\$87,826	\$1,151,874	I-003		\$1,063,811	\$88,063	\$126,048	\$1,852
2034	105	\$88,671		I-014				(\$77,263)	(\$75,411)
2035	106	\$89,515		I-015				(\$77,263)	(\$152,673)
2036	108	\$91,204		I-026				(\$77,263)	(\$229,936)
2037	109	\$92,049						(\$77,263)	(\$307,198)
2038	111	\$93,738	\$455,176			\$86,679	\$368,497	(\$77,263)	(\$15,964)
2039	113	\$95,427		I-014				(\$77,263)	(\$93,226)
2040	114	\$96,271		I-015				(\$77,263)	(\$170,489)
2041	116	\$97,960		I-026				(\$77,263)	(\$247,751)
2042	117	\$98,804						(\$77,263)	(\$325,014)
2043	119	\$100,493	\$488,955			\$86,679	\$402,276	(\$77,263)	\$0
4,098		\$3,460,689				\$3,158,305	\$302,383	(\$302,383)	

Estimated New ERUs⁶ = 4,098
Average Irrigated SF per Residential Unit = 7,114
Total Estimated New Irrigated SF = 29,153,172

Impact Fee per Irrigated SF with Bond Interest = \$0.12
Impact Fee per ERU with Bond Interest = \$844

Estimated New ERUs⁶ = 4,098

Impact Fee per Irrigated SF with Bond Interest = \$0.12
Impact Fee per ERU with Bond Interest = \$844

NOTES:

1. Project order in which development will occur in City is approximated and will change as development dictates.
2. 2043 projected Residential and Non-Residential ERU's minus Red Ledges because Red Ledges does not pay PI impact fees.
3. I-014, I-015, and I-026 are divided by 4 to spread over 20 year window.
4. Must borrow sufficient funds to cover shortfall in fees collected. Must keep Fund Running Balance low to insure fees are spent in 6 years.
5. If Fund Running Balance has excess funds at end of 5 yr window then use to pay off debt sooner.

To keep abreast of inflation and increasing construction costs, the impact fees should be reviewed annually to ensure that the required funding will be available.

Until pressurized irrigation is installed in Central Heber, ditch irrigation will continue to be available to residents with existing irrigation shares. Currently a yearly \$22.07 per share fee is assessed by the City with a \$10.00 minimum fee for this service.

DRAFT

**CAPITAL IMPROVEMENTS
AND
IMPACT FEES**

**HEBER CITY
MASTER PLAN
2023 TO 2043
APPENDIX**



January 16, 2024

**Prepared by
Heber City & Horrocks Engineering**

APPENDIX

Heber City Master Plan 2023 to 2043

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Section A - Summary Chapters 1-3

Section B - Culinary Water System

Section C - Sanitary Sewer System

Section D - Street System

Section E - Storm Drain System

Section F - Pressurized Irrigation System

APPENDIX A

CERTIFICATION OF IMPACT FEE ANALYSIS BY CONSULTANT

In accordance with Utah Code Annotated, § 11-36a-306(2), Horrocks makes the following certification:

We certify that the attached impact fee analysis:

1. includes only the costs of public facilities that are:
 - a. allowed under the Impact Fees Act; and
 - b. actually incurred; or
 - c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. does not include:
 - a. costs of operation and maintenance of public facilities;
 - b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
3. offsets costs with grants or other alternate sources of payment; and
4. complies with the Impact Fees Act.

Horrocks makes this certification with the following caveats:

1. All of the recommendations for implementations of the Impact Fee Facilities Plans ("IFFPs") made in the IFFP documents or in the Impact Fee Analysis documents are followed in their entirety by Heber City Corporation staff and elected officials.
2. If all or a portion of the IFFPs or Impact Fee Analyses are modified or amended, this certification is no longer valid.
3. All information provided to Horrocks Engineers, its contractors or suppliers is assumed to be correct, complete, and accurate. This includes information provided by Heber City and outside sources.

Dated: _____

Horrocks.

By Chuck Richins, P.E.

CERTIFICATION OF IMPACT FEE FACILITIES PLAN BY CONSULTANT

In accordance with Utah Code Annotated, § 11-36a-306(1), Horrocks makes the following certification:

We certify that the attached impact fee facilities plan:

1. includes only the costs of public facilities that are:
 - a. allowed under the Impact Fees Act; and
 - b. actually incurred; or
 - c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. does not include:
 - a. costs of operation and maintenance of public facilities;
 - b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
3. complies with the Impact Fees Act.

Horrocks makes this certification with the following caveats:

1. All of the recommendations for implementations of the Impact Fee Facilities Plans ("IFFPs") made in the IFFP documents or in the Impact Fee Analysis documents are followed in their entirety by Heber City Corporation staff and elected officials.
2. If all or a portion of the IFFPs or Impact Fee Analyses are modified or amended, this certification is no longer valid.
3. All information provided to Horrocks, its contractors or suppliers is assumed to be correct, complete, and accurate. This includes information provided by Heber City Corporation and outside sources.

Dated: _____

Horrocks.

By Chuck Richins, P.E.

APPENDIX A

Heber City Population Projection Adjustments

Year	MAG Pop Growth Split with NV		Population Adjusted to Vacant and Future Lot Data						Growth Rates
	MAG % Chg (w/o NV & JRidge)	MAG Pop (w NV & JRidge)	Recorded / Accepted Lots	Approved Un-Recorded Lots	Potential Future Development Lots	Adjusted Projected Population	Adjusted % Chg	Chg Pop	
						Pop (From Lots)	Pop (From Adj % Chg)		
2021		16,856					16,856		MAG Avg Chg/Yr (2021-2031)
2022	2.77%	17,323					17,586	4.33%	
2023	2.77%	17,802	1,636	1,279	2,792	18,347	4.33%	761	
2024	1.59%	18,085				19,142	4.33%	794	MAG Avg Chg/Yr (2031-2041)
2025	1.54%	18,364				19,971	4.33%	829	
2026	1.52%	18,644				20,835	4.33%	865	
2027	1.51%	18,926				21,738	4.33%	902	Adjusted Pop Chg/Yr (2021-2031)
2028	1.53%	19,215				22,906	4.33%	941	
2029	1.57%	19,516				23,661	4.33%	982	
2030	1.63%	19,834				24,685	4.33%	1,025	Adjusted Pop Chg/Yr (2031-2041)
2031	1.71%	20,174				26,897	4.33%	1,069	
2032	1.12%	20,400				26,061	1.19%	306	
2033	1.07%	20,618				26,371	1.19%	310	
2034	1.02%	20,828				26,685	1.19%	314	
2035	1.16%	21,069				27,002	1.19%	318	
2036	1.12%	21,305				27,323	1.19%	321	
2037	1.08%	21,535				27,649	1.19%	325	
2038	1.04%	21,758				27,978	1.19%	329	
2039	0.99%	21,974				28,310	1.19%	333	
2040	1.20%	22,237				28,647	1.19%	337	
2041	1.16%	22,496				28,988	1.19%	341	
2042	1.13%	22,751				29,333	1.19%	345	
2043	1.10%	23,002				31,253	1.19%	349	
Total Change (2023-2043)								11,335	
Estimate 2023								18,347	
Estimate 2043								29,682	

NOTES:

- MAG = Mountainland Associations of Governments

APPENDIX A

Heber City Population Projection For Red Ledges

Year	% Chg	Red Ledges Only		Growth Rates
		Total Pop	Chg Pop	
2021		430		Est Growth Rate (2021-2031)
2022	7.00%	463	33	7.00%
2023	7.00%	496	32	
2024	7.00%	530	35	Est Growth Rate (2031-2041)
2025	7.00%	568	37	6.00%
2026	7.00%	607	40	
2027	7.00%	650	43	Est Growth Rate (2041-2043)
2028	7.00%	695	45	5.00%
2029	7.00%	744	49	
2030	7.00%	796	52	
2031	7.00%	852	56	388
2032	6.00%	903	51	
2033	6.00%	957	54	
2034	6.00%	1,015	57	
2035	6.00%	1,075	61	
2036	6.00%	1,140	65	
2037	6.00%	1,208	68	
2038	6.00%	1,281	72	
2039	6.00%	1,358	77	
2040	6.00%	1,439	81	
2041	6.00%	1,525	86	674
2042	5.00%	1,602	76	
2043	5.00%	1,682	80	156
Total Change (2023-2043)		1,186		380
Estimate 2023 ERU's		463		

- NOTES:
- Red Ledges does not have 100% full time residents, therefore this table represents full time resident growth only.
 - Full time residents are expected to be 45 percent of total units constructed. From ToddC
 - The 463 population in 2023 was calculated from info. provided by Red Ledges on 11-8-22. 330 completed homes with 45% occupancy. $(330 * 3.12 * .45)$
 - Growth rate in Red ledges is expected to be greater than overall City population growth.
 - Ultimate full time residents in Red Ledges is expected to be 1,699 $(1,210 \text{ units} * 3.12 * .45)$. 1,210 total units is from ToddC email 11-8-22.

11 Impact Fees

Heber City - 2024 Impact Fee Summary (effective 1 - 1 -24)

Impact Fees

Although the total build-out of Heber City is not anticipated for many decades, proper planning of the City's public facilities should occur now. The collection of impact fees from new development is one way to offset the cost of adding and/or expanding the existing infrastructure.

Table 1 - 2 summarizes the impact fees for facilities including Culinary Water, Sanitary Sewer, Streets, Storm Drainage, Pressurized Irrigation, and Parks and Trails. The recommended impact fees will fund the necessary improvements to the City's infrastructure that will maintain City and State standards.

Table 1-2 Summary of previous and current impact fees. (SEC. 15.16.090)		
Heber City Facility	2024 Impact Fees	Units
HC Culinary Water: Residential	\$2,826	ERU*
Non-Residential	\$2,826	0.75-inch
	\$5,024	1.00-inch
	\$11,304	1.50-inch
	\$20,095	2.00-inch
	\$45,215	3.00-inch
	\$80,383	4.00-inch
HC Sanitary Sewer:	\$2,207	ERU*
HC Streets: Single Family	\$2,153	Dwelling Unit
Multi Family	\$1,252	Dwelling Unit
Non-Residential**	\$126	Trip Generated
HC Storm Drainage: Single Family	\$ 0	Dwelling Unit
Multi Family	\$ 0	Dwelling Unit
Non-Residential	\$ 0	Trip Generated
HC Pressurized Irrigation: Residential	\$1,131	ERU*
Non-Residential	\$0.16	Landscaped SF
HC Parks/Trails: Residential	\$4,462	Dwelling Unit
Multi Family	\$3,414	Dwelling Unit
HC Public Safety: Single Family	\$254	Dwelling Unit
Multi Family	\$214	Dwelling Unit
Non-Residential**	\$0.59	Per SF
HC Per ERU (Typical Residential)	\$13,033	ERU*

*Equivalent Residential Unit ** Subsidized by other Funding *** 12/21/22 ENR Index = 13,175.00 (Engineering News Record Construction Cost Index)

In addition to **Heber City's impact fee**, the City also collects a \$4,170.00 per ERU sewer impact fee for the Heber Valley Special Service District.

Annual Adjustment of Impact Fees:

Since population growth, property values, inflation, zoning, and other variables change from year to year and affect the cost of new public facilities, it is in the best interest of Heber City to ensure that the impact fees are adjusted periodically.

The City has adopted a policy that indexes the cost of improvements to inflation and automatically adjusts impact fees. The index used is the Engineering News Record (ENR) 20 City Construction Cost Index. The ENR December 2017 index of 10,870.06 will be deemed the base index. An annual adjustment to fees will be made each January 1st based on the percentage change between the December 2017 index and the December index proceeding the current year.

North Village Facility		2024 Impact Fees	Units
NV Streets:	Single Family	\$3,498	Dwelling Unit
	Non-Residential	\$371	Trip Generated
NV Storm Drain:	Everything	\$4,605	ERU*
NV Parks/Trails:	Residential	\$4,462	Dwelling Unit
	Multi Family	\$3,414	Dwelling Unit
NV Public Safety:	Single Family	\$254	Dwelling Unit
	Multi Family	\$214	Dwelling Unit
NV Per ERU (Typical Residential)		\$12,819	ERU*

Annual Adjustment of Impact Fees

Since population growth, property values, inflation, zoning, and other variables change from year to year and affect the cost of new public facilities, it is in the best interest of Heber City to ensure that the impact fees are adjusted periodically.

The City passed Ordinance 2023-31 that approved the update to the North Village Transportation Master Plan and the North Village Transportation Storm Water Impact Fee Analysis to enact Transportation and Storm Water Impact Fees. The City has adopted a policy that indexes the cost of improvements to inflation and automatically adjusts impact fees. The index used is the Engineering News Record (ENR) 20 City Construction Cost Index. The ENR December 2023 index of 13,514.76 will be deemed the base index. An annual adjustment to fees will be made each January 1st based on the percentage change between the December 2023 index and the December index proceeding the current year.

The impact fees listed are only those collected by Heber City. Additional fees for other impacts may also apply.

HISTORY

Adopted by Ord. [2004-10](#) on 4/1/2004

Amended by Ord. [2016-5](#) on 2/4/2016

Amended by Ord. [2018-03](#) on 1/18/2018

Amended by Res. [2019-11](#) Amend Consolidated Fee Schedule/Impact Fees on 6/18/2019

Adopted by Ord. [2020-40](#) Adopting A Revised Impact Fee For Parks, Recreation, Open Space and Trails on 11/17/2020

Amended by Ord. [2021-05](#) Amending Appendix A (CFS) Raising Utility Fees on 1/19/2021

Amended by Ord. [2020-46](#) on 2/16/2021

Amended by Res. [2021-05](#) on 6/15/2021

Amended by Other [1.27.22 Impact Fee Summary](#) on 1/27/2022

Adopted by Res. [2022-13](#) on 6/21/2022

Amended by Res. [2022-23](#) on 9/6/2022

Approved by Other [2023 Impact Fee Master Summary](#) on 12/20/2022

Adopted by Res. [2023-14](#) on 8/15/2023

Adopted by Ord. [2023-31](#) on 9/5/2023

APPENDIX A - PUBLIC WORKS BUILDING PHASE 1 COST ALLOCATION

HEBER CITY PUBLIC WORKS BUILDING COST ALLOCATION - PHASE 1

2018 Sales Tax Revenue		Public Works Building B1811				Principal Paid by Operating						Inter	
Original balance	4,232,000					Gen Fund (31)	Water (51)	Sewer (52)	Stormwater (54)	PI (55)	Gen Fund (31)	Water (51)	
Maturity	3/1/2049					36.80%	24.10%	23.10%	13.30%	2.70%	36.80%	24.10%	
Rate	1.00%												
BYAP	0.00%												
% of pmt pd by Operating fee	70.70%												
% of pmt pd by Impact fees	29.30%												
Year	Principal	Interest	Total Payment	DSRF									
3/1/2020	122,000.00	42,320.00	164,320.00	27,471.67	31,741.47	20,787.21	19,924.67	16,226.00	2,328.86	11,010.65	7,210.78		
3/1/2021	123,000.00	41,100.00	164,100.00	27,471.67	32,001.65	20,957.60	20,087.99	16,359.00	2,347.95	10,693.23	7,002.91		
3/1/2022	124,000.00	39,870.00	163,870.00	27,471.67	32,261.82	21,127.99	20,251.31	16,492.00	2,367.04	10,373.22	6,793.33		
3/1/2023	125,000.00	38,630.00	163,630.00	27,471.67	32,522.00	21,298.38	20,414.63	16,625.00	2,386.13	10,050.60	6,582.05		
3/1/2024	127,000.00	37,380.00	164,380.00	27,471.67	33,042.35	21,639.15	20,741.26	16,891.00	2,424.30	9,725.38	6,369.07		
3/1/2025	128,000.00	36,110.00	164,110.00	27,471.67	33,302.53	21,809.54	20,904.58	17,024.00	2,443.39	9,394.96	6,152.67		
3/1/2026	129,000.00	34,830.00	163,830.00		33,562.70	21,979.92	21,067.89	17,157.00	2,462.48	9,061.93	5,934.58		
3/1/2027	130,000.00	33,540.00	163,540.00		33,822.88	22,150.31	21,231.21	17,290.00	2,481.57	8,726.30	5,714.78		
3/1/2028	132,000.00	32,240.00	164,240.00		34,343.23	22,491.08	21,557.84	17,556.00	2,519.75	8,388.07	5,493.28		
3/1/2029	133,000.00	30,920.00	163,920.00		34,603.41	22,661.47	21,721.16	17,689.00	2,538.84	8,044.64	5,268.37		
3/1/2030	134,000.00	29,590.00	163,590.00		34,863.58	22,831.86	21,884.48	17,822.00	2,557.93	7,698.61	5,041.75		
3/1/2031	136,000.00	28,250.00	164,250.00		35,383.94	23,172.63	22,211.11	18,088.00	2,596.10	7,349.97	4,813.43		
3/1/2032	137,000.00	26,890.00	163,890.00		35,644.11	23,343.02	22,374.43	18,221.00	2,615.19	6,996.13	4,581.71		
3/1/2033	138,000.00	25,520.00	163,520.00		35,904.29	23,513.41	22,537.75	18,354.00	2,634.28	6,639.69	4,348.28		
3/1/2034	140,000.00	24,140.00	164,140.00		36,424.64	23,854.18	22,864.38	18,620.00	2,672.46	6,280.65	4,113.14		
3/1/2035	141,000.00	22,740.00	163,740.00		36,684.82	24,024.57	23,027.70	18,753.00	2,691.55	5,916.40	3,874.60		
3/1/2036	143,000.00	21,330.00	164,330.00		37,205.17	24,365.34	23,354.33	19,019.00	2,729.73	5,549.55	3,634.35		
3/1/2037	144,000.00	19,900.00	163,900.00		37,465.34	24,535.73	23,517.65	19,152.00	2,748.82	5,177.50	3,390.70		
3/1/2038	146,000.00	18,460.00	164,460.00		37,985.70	24,876.50	23,844.28	19,418.00	2,786.99	4,802.85	3,145.34		
3/1/2039	147,000.00	17,000.00	164,000.00		38,245.87	25,046.89	24,007.60	19,551.00	2,806.08	4,422.99	2,896.58		
3/1/2040	148,000.00	15,530.00	163,530.00		38,506.05	25,217.28	24,170.92	19,684.00	2,825.17	4,040.53	2,646.11		
3/1/2041	150,000.00	14,050.00	164,050.00		39,026.40	25,558.05	24,497.55	19,950.00	2,863.35	3,655.47	2,393.94		
3/1/2042	151,000.00	12,550.00	163,550.00		39,286.58	25,728.44	24,660.87	20,083.00	2,882.44	3,265.21	2,138.36		
3/1/2043	153,000.00	11,040.00	164,040.00		39,806.93	26,069.21	24,987.50	20,349.00	2,920.62	2,872.34	1,881.07		
3/1/2044	154,000.00	9,510.00	163,510.00		40,067.10	26,239.60	25,150.82	20,482.00	2,939.71	2,474.27	1,620.38		
3/1/2045	156,000.00	7,970.00	163,970.00		40,587.46	26,580.37	25,477.45	20,748.00	2,977.88	2,073.60	1,357.98		
3/1/2046	158,000.00	6,410.00	164,410.00		41,107.81	26,921.15	25,804.09	21,014.00	3,016.06	1,667.73	1,092.18		
3/1/2047	160,000.00	4,830.00	164,830.00		41,628.16	27,261.92	26,130.72	21,280.00	3,054.24	1,256.65	822.97		
3/1/2048	161,000.00	3,230.00	164,230.00		41,888.34	27,432.31	26,294.04	21,413.00	3,073.33	840.37	550.35		
3/1/2049	162,000.00	1,620.00	163,620.00	last payment paid by DSRF	42,148.51	27,602.69	26,457.35	21,546.00	3,092.42	421.49	276.03		
Total	4,232,000.00	687,500.00	4,919,500.00		1,101,064.83	721,077.78	691,157.54	562,856.00	80,784.65	178,871.00	117,141.06		

HEBER CITY PUBLIC WORKS BUILDING (

2018 Sales Tax Revenue

Original balance	est Paid by Operating				Principal Paid by Impact Fees				Interest Paid by Impact Fees			
	Sewer (52)	Stormwater (54)	PI (55)	Roads (46)	Water (56)	Sewer (57)	PI (58)	Roads (46)	Water (56)	Sewer (57)	PI (58)	
Maturity	23.10%	13.30%	2.70%	36.80%	24.10%	23.10%	2.70%	36.80%	24.10%	23.10%	2.70%	

Rate

BYAP

% of pmt pd by Operating fee

% of pmt pd by Impact fees

Year													Check	Check
3/1/2020	6,911.58	5,628.56	807.85	13,154.53	8,614.79	8,257.33	965.14	4,563.11	2,988.34	2,864.34	334.79	0.00	(0.00)	
3/1/2021	6,712.33	5,466.30	784.56	13,262.35	8,685.40	8,325.01	973.05	4,431.57	2,902.19	2,781.77	325.14	(0.00)	(0.00)	
3/1/2022	6,511.45	5,302.71	761.08	13,370.18	8,756.01	8,392.69	980.96	4,298.94	2,815.34	2,698.52	315.41	(0.00)	(0.00)	
3/1/2023	6,308.94	5,137.79	737.41	13,478.00	8,826.63	8,460.38	988.88	4,165.24	2,727.78	2,614.59	305.60	(0.00)	(0.00)	
3/1/2024	6,104.79	4,971.54	713.55	13,693.65	8,967.85	8,595.74	1,004.70	4,030.46	2,639.51	2,529.99	295.71	(0.00)	(0.00)	
3/1/2025	5,897.38	4,802.63	689.30	13,801.47	9,038.46	8,663.42	1,012.61	3,893.52	2,549.84	2,444.03	285.67	(0.00)	(0.00)	
3/1/2026	5,688.33	4,632.39	664.87	13,909.30	9,109.08	8,731.11	1,020.52	3,755.51	2,459.45	2,357.40	275.54	(0.00)	0.00	
3/1/2027	5,477.65	4,460.82	640.25	14,017.12	9,179.69	8,798.79	1,028.43	3,616.42	2,368.36	2,270.09	265.33	(0.00)	(0.00)	
3/1/2028	5,265.34	4,287.92	615.43	14,232.77	9,320.92	8,934.16	1,044.25	3,476.25	2,276.56	2,182.10	255.05	(0.00)	(0.00)	
3/1/2029	5,049.76	4,112.36	590.23	14,340.59	9,391.53	9,001.84	1,052.16	3,333.92	2,183.35	2,092.76	244.61	(0.00)	0.00	
3/1/2030	4,832.55	3,935.47	564.84	14,448.42	9,462.14	9,069.52	1,060.07	3,190.51	2,089.44	2,002.74	234.09	(0.00)	-	
3/1/2031	4,613.71	3,757.25	539.26	14,664.06	9,603.37	9,204.89	1,075.90	3,046.03	1,994.82	1,912.04	223.49	0.00	-	
3/1/2032	4,391.59	3,576.37	513.30	14,771.89	9,673.98	9,272.57	1,083.81	2,899.39	1,898.78	1,820.00	212.73	(0.00)	-	
3/1/2033	4,167.85	3,394.16	487.15	14,879.71	9,744.59	9,340.25	1,091.72	2,751.67	1,802.04	1,727.27	201.89	(0.00)	(0.00)	
3/1/2034	3,942.47	3,210.62	460.81	15,095.36	9,885.82	9,475.62	1,107.54	2,602.87	1,704.60	1,633.87	190.97	(0.00)	(0.00)	
3/1/2035	3,713.83	3,024.42	434.08	15,203.18	9,956.43	9,543.30	1,115.45	2,451.92	1,605.74	1,539.11	179.90	(0.00)	(0.00)	
3/1/2036	3,483.55	2,836.89	407.17	15,418.83	10,097.66	9,678.67	1,131.27	2,299.89	1,506.18	1,443.68	168.74	(0.00)	0.00	
3/1/2037	3,250.01	2,646.70	379.87	15,526.66	10,168.27	9,746.35	1,139.18	2,145.70	1,405.20	1,346.89	157.43	(0.00)	(0.00)	
3/1/2038	3,014.83	2,455.18	352.38	15,742.30	10,309.50	9,881.72	1,155.01	1,990.43	1,303.52	1,249.43	146.04	(0.00)	0.00	
3/1/2039	2,776.39	2,261.00	324.51	15,850.13	10,380.11	9,949.40	1,162.92	1,833.01	1,200.42	1,150.61	134.49	(0.00)	0.00	
3/1/2040	2,536.31	2,065.49	296.45	15,957.95	10,450.72	10,017.08	1,170.83	1,674.51	1,096.62	1,051.12	122.86	(0.00)	(0.00)	
3/1/2041	2,294.60	1,868.65	268.20	16,173.60	10,591.95	10,152.45	1,186.65	1,514.93	992.11	950.95	111.15	-	0.00	
3/1/2042	2,049.63	1,669.15	239.57	16,281.42	10,662.56	10,220.13	1,194.56	1,353.19	886.19	849.42	99.28	(0.00)	(0.00)	
3/1/2043	1,803.02	1,468.32	210.74	16,497.07	10,803.79	10,355.50	1,210.38	1,190.38	779.57	747.22	87.34	(0.00)	(0.00)	
3/1/2044	1,553.14	1,264.83	181.54	16,604.90	10,874.40	10,423.18	1,218.29	1,025.41	671.53	643.67	75.23	(0.00)	-	
3/1/2045	1,301.64	1,060.01	152.14	16,820.54	11,015.63	10,558.55	1,234.12	859.36	562.79	539.43	63.05	(0.00)	(0.00)	
3/1/2046	1,046.86	852.53	122.36	17,036.19	11,156.85	10,693.91	1,249.94	691.15	452.63	433.85	50.71	(0.00)	0.00	
3/1/2047	788.82	642.39	92.20	17,251.84	11,298.08	10,829.28	1,265.76	520.79	341.06	326.91	38.21	(0.00)	-	
3/1/2048	527.51	429.59	61.66	17,359.66	11,368.69	10,896.96	1,273.67	348.27	228.08	218.62	25.55	(0.00)	(0.00)	
3/1/2049	264.57	215.46	30.92	17,467.49	11,439.31	10,964.65	1,281.58	174.67	114.39	109.65	12.82	(0.00)	(0.00)	
Total	112,280.44	91,437.50	13,123.69	456,311.17	298,834.22	286,434.46	33,479.35	74,129.00	48,546.44	46,532.06	5,438.81			

HEBER CITY PUBLIC WORKS BUILDING (										
2018 Sales Tax Revenue										
	DSRF Paid by Operating					DSRF Paid by Impact Fees				
Original balance	Gen Fund (31)	Water (51)	Sewer (52)	Stormwater (54)	PI (55)	Roads (46)	Water (56)	Sewer (57)	PI (58)	
Maturity	36.80%	24.10%	23.10%	13.30%	2.70%	36.80%	24.10%	23.10%	2.70%	
Rate										
BYAP										
% of pmt pd by Operating fee										
% of pmt pd by Impact fees										
Year										Check
3/1/2020	7,147.47	4,680.82	4,486.59	3,653.73	524.41	2,962.11	1,939.86	1,859.37	217.33	-
3/1/2021	7,147.47	4,680.82	4,486.59	3,653.73	524.41	2,962.11	1,939.86	1,859.37	217.33	-
3/1/2022	7,147.47	4,680.82	4,486.59	3,653.73	524.41	2,962.11	1,939.86	1,859.37	217.33	-
3/1/2023	7,147.47	4,680.82	4,486.59	3,653.73	524.41	2,962.11	1,939.86	1,859.37	217.33	-
3/1/2024	7,147.47	4,680.82	4,486.59	3,653.73	524.41	2,962.11	1,939.86	1,859.37	217.33	-
3/1/2025	7,147.47	4,680.82	4,486.59	3,653.73	524.41	2,962.11	1,939.86	1,859.37	217.33	-
3/1/2026										
3/1/2027										
3/1/2028										
3/1/2029										
3/1/2030										
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3/1/2041										
3/1/2042										
3/1/2043										
3/1/2044										
3/1/2045										
3/1/2046										
3/1/2047										
3/1/2048										
3/1/2049										
Total										

APPENDIX B

APPENDIX B

WATER POPULATION & ERU's

YEAR	POPULATION (w/o NV, JRidge)			RESIDENTIAL			NON-RESIDENTIAL				RES+NON-RES		DEMAND mgd
	% CHG	TOTAL	CHG	UNITS	NEW UNITS	% CHG	CONN	CHG	NEW ERU's		NEW ERU's		
									ERU's/Conn =				gpd/ERU =
									4.1				400
2021		16,856	16,856	5,001			427						
2022	4.33%	17,586	730	5,082	82	4.33%	455	28	115		196		
2023	4.33%	18,347	761	5,302	220	4.33%	475	20	81		301		
2024	4.33%	19,142	794	5,532	230	4.33%	495	21	84		314		
2025	4.33%	19,971	829	5,772	240	4.33%	517	21	88		327		
2026	4.33%	20,835	865	6,022	250	4.33%	539	22	92		342		
2027	4.33%	21,738	902	6,282	261	4.33%	562	23	96		356		
2028	4.33%	22,679	941	6,554	272	4.33%	587	24	100	459	372	1,711	0.68
2029	4.33%	23,661	982	6,838	284	4.33%	612	25	104		388		
2030	4.33%	24,685	1,025	7,134	296	4.33%	639	27	109		405		
2031	4.33%	25,754	1,069	7,443	309	4.33%	666	28	113		422		
2032	1.19%	26,061	306	7,532	89	1.19%	674	8	33		121		
2033	1.19%	26,371	310	7,621	90	1.19%	682	8	33	392	123	1,459	0.58
2034	1.19%	26,685	314	7,712	91	1.19%	690	8	33		124		
2035	1.19%	27,002	318	7,804	92	1.19%	699	8	34		125		
2036	1.19%	27,323	321	7,897	93	1.19%	707	8	34		127		
2037	1.19%	27,649	325	7,991	94	1.19%	715	8	34		128		
2038	1.19%	27,978	329	8,086	95	1.19%	724	9	35	170	130	634	0.25
2039	1.19%	28,310	333	8,182	96	1.19%	732	9	35		132		
2040	1.19%	28,647	337	8,279	97	1.19%	741	9	36		133		
2041	1.19%	28,988	341	8,378	99	1.19%	750	9	36		135		
2042	1.19%	29,333	345	8,477	100	1.19%	759	9	37		136		
2043	1.19%	29,682	349	8,578	101	1.19%	768	9	37	181	138	674	0.27
TOTAL NEW (2024- 2043)			11,335		3,276			293	1,202		4,478		1.79
EST 2023			18,347		5,302			475	1,946		7,249		2.90
TOTAL 2043			29,682		8,578			768	3,149		11,727		4.69

Ultimate Per Landuse 36,353 11,652

APPENDIX B

Water Price List				
Size	Description	Price	Units	
8	Pipe, Fittings, and Bedding	\$91	LF	
10	Pipe, Fittings, and Bedding	\$127	LF	
12	Pipe, Fittings, and Bedding	\$154	LF	
16	Pipe, Fittings, and Bedding	\$200	LF	
	Pump Expansion	\$273,000	LS	
	PRV	\$223,000	LS	
	Rd Patch	\$155.00	LF	
	Valves (x2 per location)	\$10,800	Per 2	Spacing (ft) 500
	Fire Hydrants	\$13,000	Each	Spacing (ft) 500
	Design, CM, Insp	20%		
	Contingency	20%		

Cost Summary of Recommended Water Improvements

WATER CAPITAL IMPROVEMENTS																				
IMPROVEMENT DESCRIPTION			LENGTH / COST	L U M P S U M	8 I N C H	1 0 I N C H	1 2 I N C H	1 6 I N C H	P U M P	P R V	R D P A T C H	% R D P A T C H	V A L V E S	F I R E H Y D	E N G C M I N S P	COST				
ULT	CIP #		ft	e	f	g	h	i	j	k	l	m	n	o	p	q	r			
	W-005	Daniel Road - 2200 S to 2400 S (8")	850		X							X	10%	X	X		X	\$222,712		
	W-007	East Bypass - US 40 to Mill Rd (12")	4,400				X					X	25%	X	X		X	\$1,560,004		
	W-008	1900 South - US 40 to Mill Rd (12")	2,375				X							X	X		X	\$725,292		
	W-019	2400 South - Daniel Rd to Airport Rd (12")	4,300				X			X				X	X		X	\$1,606,502		
	W-025	1250 South PRV	1							X							X	\$321,119		
	W-027	New Source Development (2400 gpm)	\$3,742,549	X														\$4,491,059		
	W-028	Master Plan Updates every 5 years (4 times)	\$200,000	X														\$240,000		
	W-029	Aerial Digital Map Updates (4 times)	\$16,000	X														\$19,200		
	W-035	700 North - 400 E to Main St. (8")	1,750		X										X	X		X	\$383,177	
	W-036	400 East - 700 N to 500 North (8")	1,150		X							X	75%	X	X			X	\$456,066	
	W-041	US 40 - 2200 S to 2400 S (West) (8") *	1,250		X							X	10%	X	X			X	\$311,390	
	W-042	1500 South - Dusty Baker Ln (150 E) to US 40 (8")	1,030		X										X	X			X	\$239,627
	W-043	US 40 - 1300 S to 1700 S (West) (8")	450		X							X	100%	X	X			X	\$224,432	
	W-045	1200 South - 850 W to 1200 W (8")	1,700		X										X	X			X	\$373,208
	W-046	1200 West - 1200 S to 1100 S (8")	750		X							X	100%	X	X			X	\$351,206	
	W-047	600 West - 450 S to 650 S (8")*	1,200		X							X	100%	X	X			X	\$541,367	
	W-053	550 North - 550 E to 750 E (8")	950		X							X	100%	X	X			X	\$435,722	
	W-054	Future Tank Storage (1.4 MG)	\$3,259,392	X														X	\$4,693,525	
	ULT	W-058	Southfield Rd- SR 189 to 1100 S	4,700				X				X	50%	X	X				\$1,605,248	
	ULT	W-059	SR 189 - 2500 S to South Field Road (12")	2,200				X				X	50%	X	X				\$766,584	
		W-060	500 North to Midway Lane (8")	4,650		X						X	10%	X	X				\$887,627	
		W-061	Hwy 40 or Ostler Pk Rd- 1600 N to 900 N (12")	4,050				X							X	X			\$1,010,537	
		W-063	US 40 - 1500 S to 1200 E (East) (8")	5,600		X									X	X			\$958,973	
		W-064	Valley Dr PRV	1						X								X	\$393,120	
		ULT	W-065	2400 South - 850 West to US 189 (12")	4,800				X						X	X		X	\$1,430,861	
W-066		Heber City Public Works Facility Exp Ph 1	\$265,365	X														\$318,438		
W-067		600 East - 1300 S to Hidden Cr Ln (8")	2,500		X									X	X			\$443,923		
W-068		Heber City Public Works Facility Exp Ph 2	\$1,346,177	X														\$1,346,177		
W-069		2400 South PRV	1							X							X	\$321,119		
TOTAL WATER:																	\$26,678,217			

* Partially completed with previous CIP projects.

APPENDIX B

HEBER CITY CORPORATION WATER PRODUCTION AND LOSSES COMPARISON BY YEAR

	SI Usage Began					Heavy Winter											3 Yr Avg	
MONTH	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016			
Total Production - Winter	220 MG	242 MG	256 MG	295 MG	311 MG	321 MG	350 MG	330 MG	270 MG	213 MG	220 MG	212 MG	210 MG	238 MG	220 MG			
Total Production - Summer	581 MG	521 MG	496 MG	545 MG	615 MG	633 MG	574 MG	436 MG	516 MG	421 MG	581 MG	512 MG	494 MG	515 MG	511 MG			
Total Production	800 MG	763 MG	752 MG	840 MG	927 MG	954 MG	924 MG	765 MG	786 MG	633 MG	800 MG	723 MG	704 MG	752 MG	731 MG			
Total Usage - Winter	161 MG	154 MG	160 MG	165 MG	176 MG	199 MG	192 MG	188 MG	169 MG	241 MG	201 MG	180 MG	231 MG	202 MG	214 MG			
Total Usage - Summer	520 MG	485 MG	497 MG	482 MG	532 MG	597 MG	488 MG	420 MG	407 MG	405 MG	519 MG	550 MG	438 MG	427 MG	456 MG			
Total Usage	681 MG	639 MG	657 MG	646 MG	708 MG	796 MG	681 MG	608 MG	576 MG	646 MG	720 MG	730 MG	669 MG	629 MG	670 MG			
Loss - Winter	26.9%	36.4%	37.4%	44.2%	43.5%	38.1%	45.0%	42.9%	37.4%	-13.2%	8.6%	15.0%	-10.2%	15.0%	2.8%	2.6%	Loss Conv	
Loss - Summer	10.4%	6.9%	-0.2%	11.6%	13.6%	5.6%	14.9%	3.6%	21.0%	3.7%	10.6%	-7.6%	11.3%	17.0%	10.8%	13.1%		20.5%
Avg. Loss	15.0%	16.3%	12.6%	23.0%	23.6%	16.6%	26.3%	20.5%	26.7%	-2.0%	10.0%	-1.0%	4.9%	16.4%	8.4%	9.9%		
																	gpd/ERU	
GPD / ERU Indoor	286	327	437	377	386	381	408	370	319	225	232	235	225	245	218	230	264	
GPD / ERU Outdoor	231	187	210	161	184	180	129	54	141	107	189	163	150	140	143	144		
Winter Peak Day PF	1.4	1.5	1.9	1.9	1.4	1.9	2.5	1.6	2.2	1.7	2.1	2.4	1.8	2.0	1.7	2		
												ERUs	5,141	5,345	5,549			
												Total Indoor (gpd)	1,158,652	1,312,227	1,210,434	Avg Outdoor		
												Total Outdoor (gpd)	769,419	749,338	792,919	770,559		
												Total Combined (gpd)	1,928,071	2,061,564	2,003,353			
												Total Combined (gpy)	703,746,000	752,471,000	731,224,000			

APPENDIX B

HEBER CITY CORPORATION
WATER USAGE IN GALLONS
COMPARISON BY MONTH PER YEAR

						Use 2015 Data on to Report to State					Adjusted					
MONTH	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	3 Yr Avg	2020 Adjustments		
JANUARY	862,880	300,750	29,314,125	33,221,837	66,024,973	37,078,210	41,005,079	36,942,147	33,129,455	41,291,169	38,736,418	46,499,829	42,175,805	Total	723,737,431	
FEBRUARY	826,163	0	32,385,298	27,882,819	27,813,981	28,616,275	30,476,121	48,700,334	40,744,522	31,783,119	31,283,063	35,045,972	32,704,051			
MARCH	1,009,670	313,840	25,508,800	27,139,844	27,044,100	28,056,373	39,044,387	30,941,871	32,591,244	31,904,599	32,248,034	41,062,125	35,071,586	Start	12/9/2019	
APRIL	166,384,514	171,498,396	39,766,975	36,837,263	43,681,459	37,422,971	29,867,256	28,856,099	30,502,215	31,725,829	40,032,589	37,439,059	36,399,159	End	12/14/2020	
MAY	28,670,816	31,537,593	67,929,636	43,546,962	36,145,769	42,672,436	34,127,740	35,406,055	52,191,862	45,877,267	49,152,220	54,546,078	49,858,522	Usage Days	371	
JUNE	57,924,719	45,435,133	77,982,910	73,330,452	84,122,609	46,406,662	72,145,346	84,367,864	70,013,130	51,812,689	78,501,279	96,682,422	75,665,463			
JULY	81,084,516	75,989,699	106,585,079	97,745,729	120,683,085	106,679,347	89,872,660	88,974,856	96,361,492	84,820,923	94,963,104	79,940,804	86,574,944	Production Days	365	
AUGUST	89,824,046	78,741,617	109,815,940	216,659,282	80,012,229	81,838,844	95,931,040	113,439,218	114,553,874	114,998,215	106,525,072	69,721,095	97,081,461	Adjustment Factor	0.98382749	
SEPTEMBER	91,799,302	101,233,238	103,261,658	78,774,228	60,602,495	97,652,974	113,869,896	84,983,894	77,051,635	93,708,584	110,903,011	76,013,584	93,541,726			
OCTOBER	57,866,343	72,243,027	53,753,400	40,233,140	56,404,008	51,929,889	49,855,162	52,788,248	68,844,130	69,275,587	63,502,015	43,996,907	58,924,836			
NOVEMBER	94,920	37,441,877	38,839,272	28,662,979	32,661,227	32,869,859	39,126,538	44,259,564	39,548,196	29,558,992	43,281,548	34,207,359	35,682,633	Est Avg Outdoor Prod Use		
DECEMBER	40,120	31,225,640	35,061,772	26,232,787	33,799,992	37,809,104	34,519,638	30,803,248	40,758,059	31,545,667	34,609,078	41,540,095	35,898,280	gpd	+Loss gpd	
TOTAL	576,388,009	645,960,810	720,204,865	730,267,322	668,995,927	629,032,944	669,840,863	680,463,398	696,289,814	658,302,640	723,737,431	656,695,329	692,776,628	667,714	17.0% 804,595	
Summer/Winter PF	2.41	1.68	2.59	3.06	1.90	2.12	2.13	2.09	2.20	2.33	2.29	1.79	2.12			
Connections	3,850	4,083	4,142	4,141	4,229	4,435	4,611	4,768	4,950	5,168	5,290	5,389				
ERU's	4,675	5,218	5,215	4,986	5,141	5,345	5,549	5,940	6,194	6,574	6,530	6,797		Est Avg Indoor Prod Use		
GPD/ERU Avg. Yr.	338	339	378	401	357	322	331	314	308	274	304	265	281	+Loss	gpd/ERU +SF gpd/ERU	
GPD/ERU Indoor (Winter) Avg. Yr.	199	254	212	198	247	207	212	204	193	165	185	191	180	17.0%	217 21% 264	
GPD/ERU Outdoor Avg. Yr.	139	86	167	203	110	115	119	110	115	109	118	74	100			
GPD/ERU Outdoor (Summer) Avg.	277	171	333	405	219	229	237	219	230	217	236	148	200			
													3-Year			
Annual Residential ERU Growth:	0.00%	6.33%	1.56%	-0.03%	2.38%	4.54%	4.15%	3.60%	4.18%	4.14%	2.57%	1.89%	3.63%			
Annual Non-Residential ERU Growth:	-19.03%	27.52%	-4.14%	-15.95%	5.43%	2.23%	2.74%	17.98%	4.55%	11.70%	-9.05%	10.52%	2.40%			
Total Non-Residential ERU's w/o Losses:	1,169	1,490	1,429	1,201	1,266	1,294	1,330	1,569	1,640	1,832	1,666	1,842	1,780			
g Non-Residential ERU's / Conn w/o Losses:	3.4	3.8	3.6	3.1	3.6	3.4	3.4	4.0	4.1	4.3	4	4	4.1			
No Secondary	1918	1918	1918	1918	1918	1918	1918	1918	1918	1918	1860					
% No Secondary	43.2%	41.6%	40.2%	38.7%	37.1%	35.2%										
Ditch Users	250	250	250	250	250	250										
% on Ditch	5.6%	5.4%	5.2%	5.1%	4.8%	4.7%										
% using Culinary	37.6%	36.2%	35.0%	33.7%	32.3%	30.4%										
% using Secondary	56.8%	58.4%	59.8%	61.3%	62.9%	64.8%										

- Notes:
- Water use is based on GPD/ERU rather than GPD/Conn to more accurately determine impact fees.
 - Winter usage readings are partial readings taken when meters are read for changing accounts, cutoff's, etc. To get an accurate winter usage number the first citywide reading in the Spring must be included.
 - Water production vs usage notes:
 - Discrepancy could be caused by one of the following: 1) Leakage, 2) Incorrect production readings, 3) Unmetered or illegal water usage during winter.
 - Discrepancy is significantly higher in the winter and diluted down with the higher demands in the summer.
 - Discrepancy jumped higher after 2004 because more of the summer usage was shifted to the Secondary Irrigation system from culinary.
 - Water Usage data is probably more accurate for determining indoor usage in GPD/Conn since the Conn and metered usage have a one to one relationship.
 - Water Production data is probably more accurate for determining water rights needed in wells until discrepancy can be figured out.
 - In 2020 the way ERU's are calculated starting in 2015 for Commercial and Gov were modified for State reporting so ERU's decreased slightly going forward from what was used in the past.

APPENDIX B

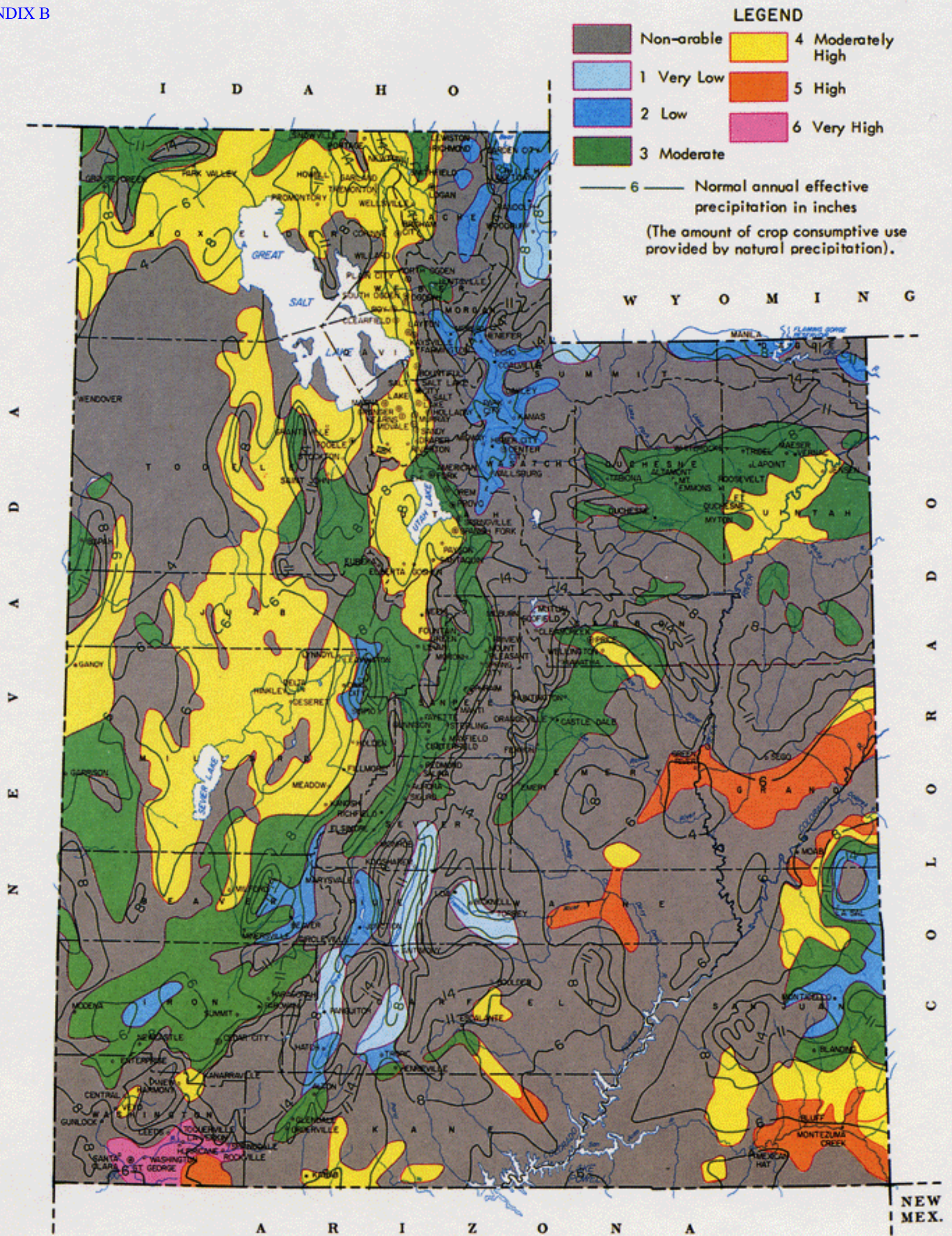
CULINARY WATER USE with PRESSURIZED IRRIGATION AVAILABLE

Indoor Avg Yr Demand (gpd/ERU) =	400	Available Storage (mg) =	4.85
Outdoor Avg Yr Prorated Demand (gpd/ERU) =	104	Indoor PF =	2.00
Outdoor Avg Yr Prorated w/Cent Heber PI =	47	Outdoor PF =	3.4
Peak Day Demand (gpd/ERU) =	1,154	Fire Flow Req (gpm) =	2,500
Fire Storage Required (gal) =	300,000		
Peak Inst Indoor (gpd/ERU) =	1,600		
Peak Inst Outdoor (gpd/ERU) =	415	Peak Inst Outdoor (gpm/irr-ac) =	7.43

Year	ERU's Total City	Red Ledges Pop	ERU's ERU's	ERU's w/o RedL	Culinary Avg Yr mgd	ac-ft/yr	Culinary Peak Day mgd	gpm	Culinary Peak Day (w/PI) mgd	gpm	Peak Day + Fire gpm	Peak Instant gpm	Source Available gpm	Source Remaining gpm	Source Rem (w/ PI) gpm
2023	7,249	(496)	(159)	7,090	3.57	4,003	8.18	5,680	6.80	4,726	8,180	9,921	5620	(60)	894
2028	8,960	(607)	(195)	8,765	4.24	4,753	9.52	6,611	8.15	5,656	9,111	11,783	5620	(991)	(36)
2033	10,419	(852)	(273)	10,146	4.80	5,372	10.62	7,377	9.25	6,423	9,877	13,316	5620	(1,757)	(803)
2038	11,053	(1,140)	(365)	10,688	5.01	5,615	11.06	7,679	9.68	6,725	10,179	13,919	5620	(2,059)	(1,105)
2043	11,727	(1,682)	(539)	11,188	5.21	5,839	11.46	7,956	10.08	7,002	10,456	14,474	5620	(2,336)	(1,382)
2023 - 2043 ERU CHANGE =				4,098											

Year	Indoor Sto mg	Outdoor Sto mg	Outdoor Sto (w/PI) mg	Fire Sto mg	Sto Req'd mg	Sto Req'd (w/PI) mg	Sto Available mg	Sto Remaining mg	Sto Rem (w/PI) mg
2023	2.84	1.47	0.67	0.30	4.61	3.80	4.85	0.24	1.05
2028	3.51	1.47	0.67	0.30	5.28	4.47	4.85	(0.43)	0.38
2033	4.06	1.47	0.67	0.30	5.83	5.02	4.85	(0.98)	(0.17)
2038	4.28	1.47	0.67	0.30	6.05	5.24	4.85	(1.20)	(0.39)
2043	4.48	1.47	0.67	0.30	6.25	5.44	4.85	(1.40)	(0.59)

- NOTES:
- Years 2023-2043 Assume no additional outdoor demand will be added to the system. All new connections will have PI available.
 - Central Heber has 1550 users without PI, minus 626 new connections currently being installed with replacement project. Assume 924 users at 437 gpd (outdoor) @ 3.4 peaking = 953 gpm. 953 gpm x 2 for 6 mo period = 0.81 mg storage for peak day. If PI system is installed in Central Heber, the demand on the culinary system would decrease significantly in the summer by this amount and the existing sources and tanks would be adequate for the next 7 yrs, with no need for tank or source in next 7 yrs and beyond.
 - ERU's have been reduced from those shown in populaton projections to account for Red Ledges not being served by the City. Total of 380 ERUs from 2023 to 2043 (539-159).
 - Storage for outdoor use is doubled since annual use occurs during 6 summer months.



IRRIGATED CROP CONSUMPTIVE USE ZONES AND NORMAL ANNUAL EFFECTIVE PRECIPITATION UTAH

Source:
Base map prepared by SCS, WTSC Carto Staff from USGS 1:1,000,000 National Atlas.
Thematic detail compiled by state staff.
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA SC-507 NORTH, TEXAS 1962

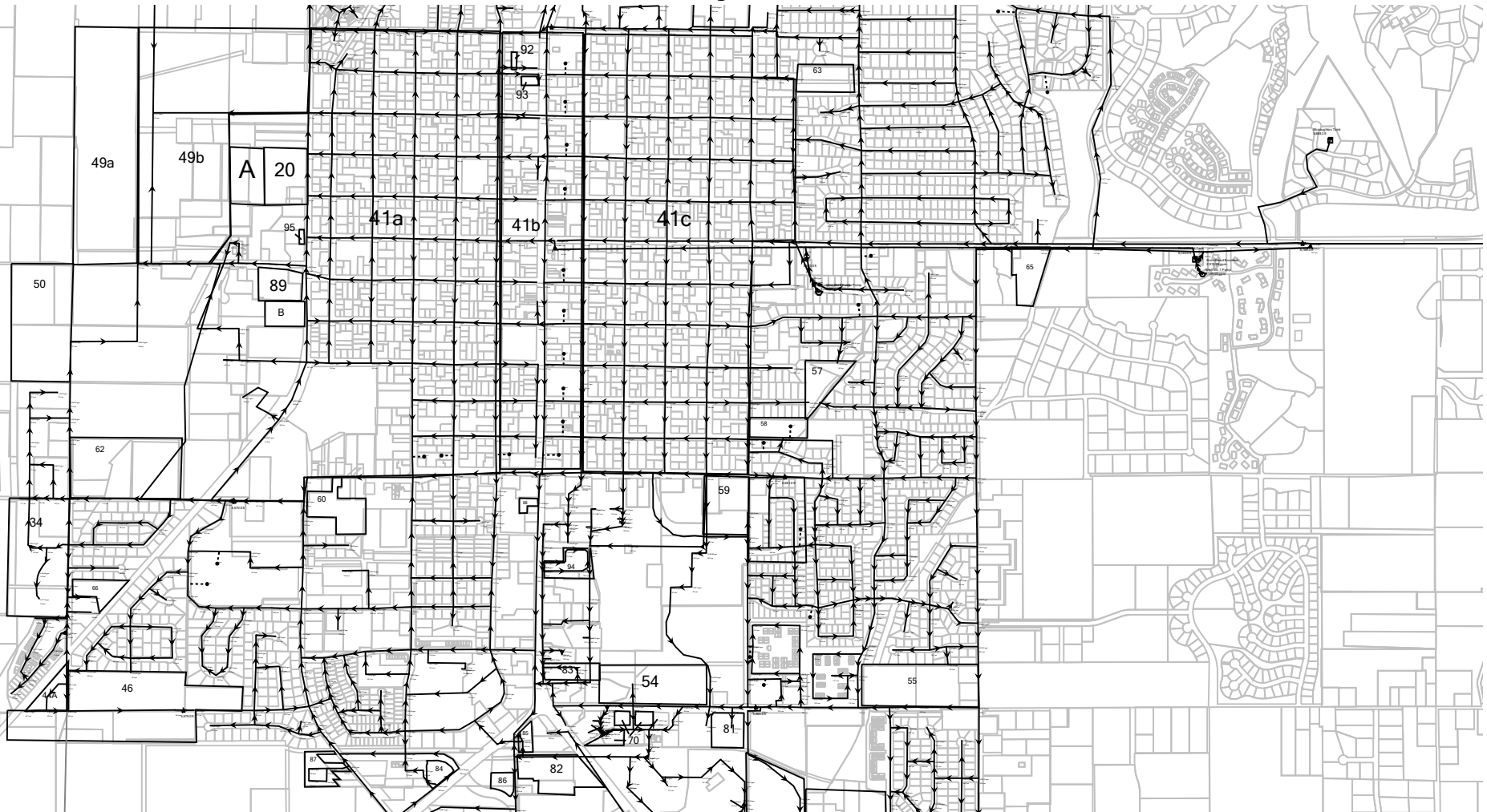
NOVEMBER 1978
10 0 10 20 30 40 50 60 MILES
SCALE 1:3,000,000

M7-OL-23893

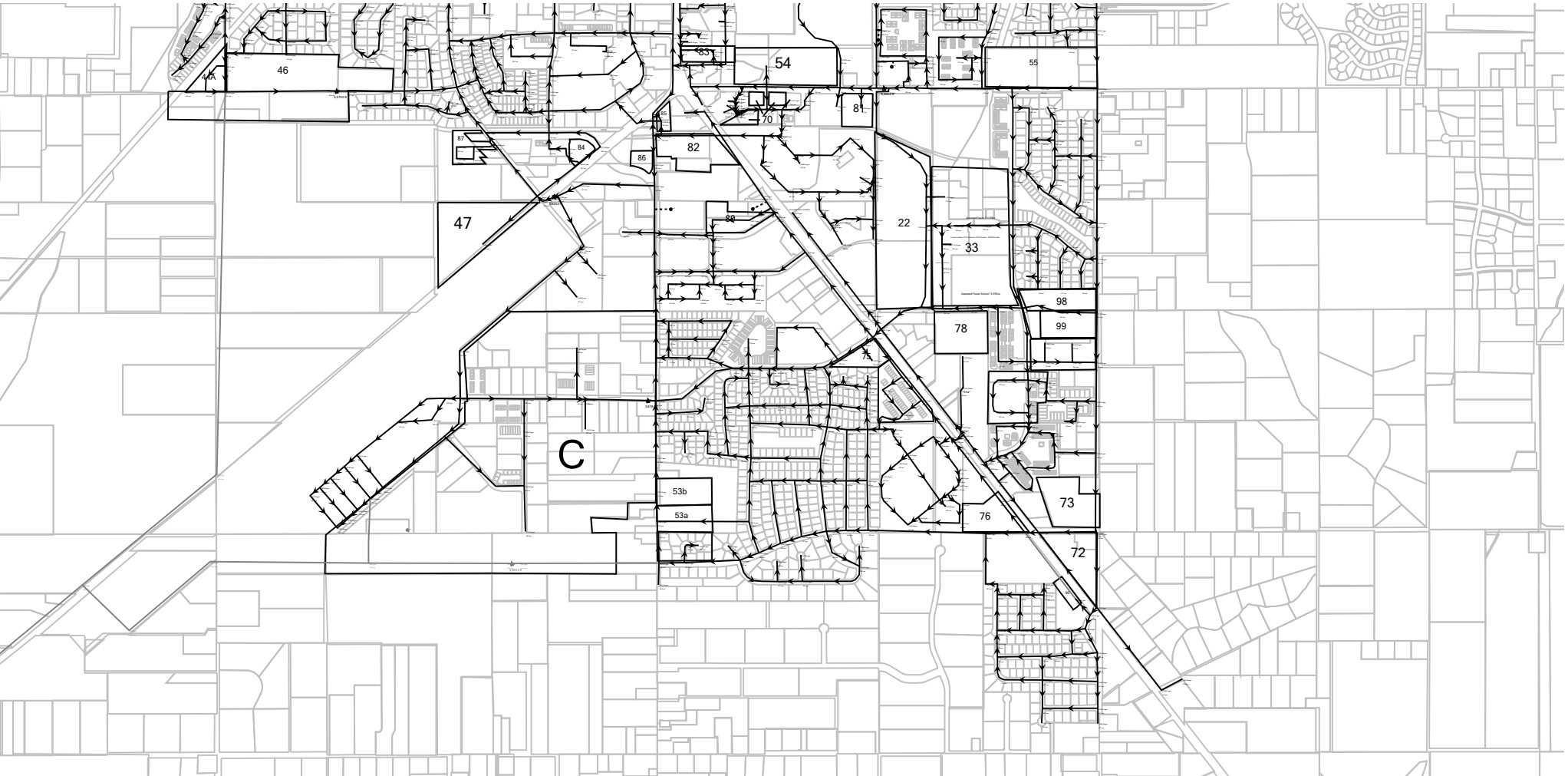
Scenario: Peak Day w/Fire Flow Future
Active Scenario: Peak Day w/Fire Flow Future



Scenario: Peak Day w/Fire Flow Future
Active Scenario: Peak Day w/Fire Flow Future



Scenario: Peak Day w/Fire Flow Future
Active Scenario: Peak Day w/Fire Flow Future



APPENDIX B - WATER RIGHTS

SHARE #	SHARES	ACRE FT	TOTAL	Captz	PROJECT (Owner)	BANKED	AMOUNT	PROJECT (Status)
WASATCH IRRIGATION SHARES (3.4)						OUTSTANDING SHARES		
3190	10.500		10.50		Cemetery. Transferred on deed from Jack Carlson Bk 64 Pg 341)			
3191	12.370		22.87					
3242	2.100		24.97		Teichert			
3578	1.500		26.47		Olsen, Bonner, Davis			
3740	5.000		31.47		Naomi Giles			
3755	15.000		46.47		Robert and Betty Young			
3762	1.000		47.47		A.D. Morrison			
3763	15.000		62.47		Moulton			
3764	0.500		62.97		Howarth			
4327	2.500		65.47		Sessions			
4576	0.500		65.97		Blain Bates Annexation		0.39	Dean / Blaine Bates
4587	15.220		81.19		Country Meadows Estates (Tom Budd)		0.28	Providence - Orthodontist
4625	39.580		120.77		Timp Meadows North (Sy Kimball)		2.54	Providence - FitStop
4627	4.750		125.52		Autumn Meadows (George Brandell)			
4629	6.500		132.02		Autumn Meadows (George Brandell)			
4640	0.500		132.52		Autumn Meadows (George Brandell)			
4653	3.970		136.49		Buell Annexation (Sy Kimball)			
4689	0.270		136.76		KC Auto (Kevin Christensen)			
4696	3.060		139.82		Wasatch County, Justice Center			
4735	0.280		140.10		Ward Winchester			
4740	0.230		140.33		Gary Broadhead			
4742	0.550		140.88		Mike Witt / Mike Witt Jr.			
4746	0.250		141.13		Kent Bethers			
4755	0.500		141.63		Ford / Finucan			
4766	0.500		142.13		Ford / Finucan			
4767	0.230		142.36		Daniels Self Sto (Darrell Merrill)			
4779	0.070		142.43		KC Auto (Kevin Christensen, Not Req'd)			
4783	5.000		147.43		Wasatch County, School Dist. (Heber Vly Elem)			
4829	0.530		147.96		LDS Church - 600 S.			
4866	4.700		152.66	FY 00	School House Estates (Heber Vly Mid School)			
4877	6.000		158.66	FY 00	Milliner, Center St Triplex, Cedar Mead (Mike Peterson)			
4880	0.500		159.16	FY 00	Bassett			
4882	1.000		160.16	FY 00	Gary Finucan / Kraig Ford			
4884	0.000		160.16	FY 00	Wing Point (Split 8.33 shares to 2.53 City/5.8 Ray Hult. See file. This cert. was turned back to irrig comp. They re-issued Cert #5084 for 2.53 shares and 5.81 to Hult)			
4900	2.000		162.16	FY 00	Spring Creek Comm Center (Brian Lee)			
4901	1.290		163.45	FY 00	Mahoney / Airport Rd			
4903	2.145		165.59	FY 00	Mtn Meadows (Kendall Woolstenhulme)			
4923	4.250		169.84	FY 00	Pine Meadows (Ramon Duke/Peterson)			
4934	0.333		170.18	FY 00	King			
4938	26.400		196.58	FY 01	Timp Meadows East (Heiner/Kimball)			
4943	0.450		197.03	FY 02	Doug Sues/Russll Morgan			
4950	0.850		197.88	FY 01	Lunt (Monaves Boren)			
4956	10.000		207.88	FY 01	Alpine Meadows I (Pangea I) (8.9 Req'd)			
4958	0.333		208.21		Baum (Lost #4958)			
4962	5.000		213.21	FY 01	Heber Vly Med Ctr (12.02 Req'd)			
4964	0.800		214.01	FY 01	Erickson			
4966	7.000		221.01	FY 02	Heber Vly Med Ctr - Addition			
4969	0.200		221.21	FY 02	Heber Vly Med Ctr - Addition			
4973	3.540		224.75	FY 01	My Mtn Home - Plat B (3.48 Req'd)			
4978	1.500		226.25	FY 01	Clifford (1.37 Req'd)			
4984	1.200		227.45	FY 02	Bessendorfer			
5010	0.250		227.70		Fast Track Sto - Gary Bauer (not included in 2021 Water Right Change application)			
5010	-0.250		227.45		Cert 5010 Lost See New Cert 6109			
5012	18.000		245.70	FY 04	Mahoney - PwrlndPk HC Purchase (Commit to PwrlndPk per Ag)	X		
5016	1.800		247.50	FY 03	Mecham/Mcconnell (need to pay 25.00 xfer fee)			
4971	15.580		263.08	FY 02	Old Mill Est (Horner)			
4991	5.780		268.86	FY 02	My Mtn Home - Plat C			
5025	0.440		269.30	FY 03	Hansen			
5034	6.400		275.70	FY 03	Alpine Meadows II (1.1 from AlpMead I)			
5037	0.250		275.95	FY 03	Cox Flag Lot (Mike Peterson)			
5054	1.000		276.95	FY 03	Autumnwood (City Purchase @ AP Holley/Nelson Zac)			
5055	1.260		278.21	FY 03	My MtnHm - A (Beehive Hms)			
5058	1.000		279.21	FY 03	Mitchell (Wayne Mitchell)			
5059	0.250		279.46	FY 03	Daphne (Kay Ryan)			
5075	0.500		279.96	FY 03	M. Petersen (Mike Petersen)			
5084	2.530		282.49	FY 03	Greenfield (Ray Hult)			
5085	0.410		282.90	FY 03	Lovelace (Glayde Stembridge)			
5093	0.540		283.44	FY 03	LDS Church - 550 E. 521 N.			
5095	0.250		283.69	FY 03	West Five (Peterson - Morrison)			
5101	0.750		284.44	FY 03	Ryan Davis			
5106	0.500		284.94	FY 03	A B CEE Properties AM Bank			
5111	0.370		285.31	FY 03	Super Wash (Besendorfer)			
5116	0.170		285.48	FY 03	Sonic			
5124	0.500		285.98	FY04	Shantell Cox			
5127	16.334		302.31	FY04	Lonesome Dove			
5130	0.170		302.48	FY04	Wes' Quik Lube			
5142	2.500		304.98	FY04	Arthur Jager			
5146	16.560		321.54	FY04	Ivory Homes			
5150	12.500		334.04	FY04	Amber Broadhead			
5156	0.290		334.33	FY04	Duard Peterson			
5162	2.140		336.47	FY04	Wasatch County (Library)			
5182	0.240		336.71	FY05	Intermountain Health Care			
5184	0.120		336.83	FY05	Heber Dental Care			
5190	0.740		337.57	FY05	Wasatch County School District			
5211	0.240		337.81	FY05	Wasatch Properties Connection LLC			
5212	0.120		337.93	FY05	Wasatch Dental			

SHARE #	SHARES	ACRE FT	TOTAL	Captz	PROJECT (Owner)	BANKED	AMOUNT	PROJECT (Status)
5218	0.200		338.13	FY05	Rocky Mnt. Collision			
5226	0.500		338.63	FY05	Habitat for Humanity			
5201	3.000		341.63	w/prop	Jay Simpson - Airport (Exist Hangers?)	X		
5233	4.830		346.46	w/prop	Jarvis - Airport (Commit 2 Shares to PwrlndPk for Ag + Exist Hangers?)	X		
5237	1.000		347.46	FY06	Fit Stop - Wasatch/Summit Pediactrics			
5244	0.600		348.06	FY06	John Morgan			
5249	15.400		363.46	FY06	Mill Road Estates			
5254	0.230		363.69	FY06	Mark Miller			
5261	0.340		364.03	FY06	Rocky Mnt. Collision			
5265	0.460		364.49	FY06	Blake Allen 200 E 300 S			
5266	0.600		365.09	FY06	Blake Allen 330 N 400 W			
5295	0.360		365.45	FY06	Mahon - 280 W Airport Road			
5321	0.200		365.65	FY06	Bakery @ Wasatch Center (Murano)			
5322	1.000		366.65	FY06	Blake Allen 500 W 300 S			
5324	0.400		367.05	FY06	Steve White			
5326	1.400		368.45	FY06	Hi-Tech Hat Creek Plat C			
5328	22.230		390.68	FY06	Aspen Pointe (Clegg)			
5338	0.540		391.22	FY06	Edgemont Cleaners (Mahon)			
5341	3.000		394.22	FY07	Wheeler Park Phase 2			
5343	13.270		407.49	FY07	Mill Road Estates Phase II			
5347	0.270		407.76	FY07	Tom Post - Post Place lot split			
5349	1.000		408.76	FY07	Wheeler Park Phase 2			
5350	2.250		411.01	FY07	Wheeler Park Phase 2			
5378	0.170		411.18	FY07	Roy Hamilton			
5380	0.430		411.61	FY07	Lee Mayoh			
5382	0.450		412.06	FY07	Heber Home #3 - Blake Allen			
5385	0.400		412.46	FY07	Steve White (Bridesdale - 500 West)			
5353	3.470		415.93	FY07	Wheeler Park Phase 2			
5572	93.875		509.81		Combine 4547,4552,4555,4804,4863,4961 for Hosp Well			
5593	25.750		535.56		Vly Hills - Plat F & G (Change order 55-8420)org 4476			
6109	0.250		535.81		Fast Track Sto - Gary Bauer (replaces cert 5010)			
3WWET	0.290	0.986	535.85	FY07	Aguirre 153 S 400 E			
4WWET	0.200	0.680	536.05	FY08	Wright/Nicholes 429 W 100 North			
5WWET	0.930	3.162	536.98	FY07	Center Pointe			
6WWET	0.670	2.278	537.65	FY07	Heber Homes #4 -Blake Allen 300 E 200 N		0.10	0.1
7WWET	2.020	6.871	539.67	FY07	Willow Creek		0.50	0.5
10WWET	0.870	2.958	540.54	FY08	Fisher Lot Split 500 North 300 East		0.50	0.5
11WWET	6.430	21.862	546.97	FY08	Majestic/ Noble Vista		0.50	0.5
12WWET	0.175	0.595	547.14	FY07	Bridesdale #2 135 N 200 W		0.50	0.5
13WWET	3.250	11.050	550.39	FY08	Harvest Ridge .50 + 2.75		0.50	0.7
14WWET	3.130	10.642	553.52	FY08	Last Stand		0.63	1.2
15WWET	2.670	9.068	556.19	FY07	Willow Creek		0.70	1.8
16WWET	0.220	0.748	556.41	FY07	Auto Spa		1.20	2.1
17WWET	0.430	1.462	556.84	FY08	Post Brothers lot split 485 S 100 E (Davis)		1.80	2.2
18WWET	7.330	24.932	564.17	FY07	Wheeler Park Phase 2 (needed 25AF pd \$700)		2.10	2.2
19WWET	23.904	81.274	588.08	FY07	Wheeler Park Phase 2		2.20	3
20WWET	2.100	7.140	590.18	FY07	Stone Creek (Transferred to Blackstone Creek LLC)		2.20	3.5
21WWET	0.350	1.190	590.53	FY08	IHC Clinic Build Out		3.00	3.6
23WWET	3.000	10.200	593.53	FY08	Silver Ridge BANK 28 shares of Wasatch(Assigned to HL&P)	X	3.50	3.6
24WWET	0.250	0.850	593.78	FY08	Brown Lot Split 100 West		3.60	4.8
25WWET	0.280	0.952	594.06	FY08	Last Stand Lot 11		3.60	4.9
26WWET	0.250	0.850	594.31	FY08	Lalyre Lot Split 200 S 300 W		4.80	5
27WWET	1.080	3.672	595.39	FY08	Paul King Plat A		4.90	5
28WWET	0.740	2.516	596.13	FY08	Heber Gateway		5.00	5.4
29WWET	9.720	33.048	605.85	FY08	Ranch Landing Phase 1		5.00	5.6
30WWET	0.280	0.952	606.13	FY08	Bybee Lot Split 298 E 400 N (Subdivision Not Recorded)		5.40	5.8
31WWET	16.740	56.916	622.87	FY08	Mill Road 3 BANK 11.87 Used 10.58 Phase 4 (Bank 1.29SH)	X	5.60	6.5
32WWET	3.185	10.829	626.05	FY08	Browning Estates/Heber Homes 5		5.80	7.4
33WWET	1.250	4.250	627.30	FY08	Paul King Plat B		6.50	7.5
34WWET	0.280	0.952	627.58	FY08	William Schmittel		7.40	7.7
35WWET	0.500	1.700	628.08	FY08	Steve Webb 2169 S Daniel Road		7.50	8
36WWET	3.680	12.512	631.76	FY08	Stone Creek-Transferred to Blackstone Creek LLC Bank 1.54af	X	7.70	8.7
37WWET	3.020	10.268	634.78	FY 21	Mill Stream PropertiesValley Heights A&B		8.00	10.6
38WWET	0.570	1.938	635.35	FY09	UDOT		8.70	10.64
39WWET	0.130	0.442	635.48	FY09	Seminary Addition		10.60	12.8
39WWET	0.360	1.224	635.84	FY09	Congino		10.64	13.8
39WWET	0.350	1.190	636.19	FY09	Richard Reece/Standard Plumbing		12.80	17.5
39WWET	0.356	1.210	636.55	FY07	Spiker/Allen		13.80	18.2
39WWET	1.140	3.876	637.69	FY 21	Stone Creek- Transferred to Black Stone 10/15/20		17.50	24.8
42WWET	0.480	1.632	638.17	FY11	Ranch Landing Sr Housing		18.20	27.8
42WWET	2.230	7.582	640.40	FY12	Ranch Landing Sr Housing		24.80	39.48
43WWET	0.300	1.020	640.70		Murphy Oil BANK THESE SHARES	X	27.80	183.424
44WWET	0.210	0.714	640.91	FY11	IHC Clinic Addition E and F		39.48	40.75
45WWET	2.000	6.800	642.91	FY12	Boyer - Dept Stores/Common Area		183.42	
46WWET	0.125	0.425	643.03	FY12	J Mac Pizza (Papa John's-David Early Bldg)		40.75	
	1.130	3.842	644.16	FY13	Wasatch School District (High School 2.45af, Football Stadium 1.41 af)		509.22	508.09
48WWET	0.210	0.714	644.37	FY13	Heber Light and Power Warehouse		(508.09)	
49WWET	0.490	1.666	644.86	FY13	Wasatch Orthodontics			
50WWET	5.000	17.000	649.86	FY14	Boyer			
51WWET	0.330	1.122	650.19	FY13	Zions Bank			
52WWET	9.700	32.980	659.89	FY 21	Elmbridge (bank 1.62 af after verifying well transfer)			
53WWET	0.390	1.326	660.28	FY12	Auto Zone			
54WWET	0.500	1.700	660.78	FY12	Watson Farms (TJ North)			
55WWET	6.270	21.318	667.05	FY14	Ranch Landing - Abbingdon Sr Center			
56WWET	0.140	0.476	667.19	FY14	IHC Medical Clinic (Providence Ctr)			
57WWET	26.320	89.488	693.51	FY16	Cottages at ValleySta 6.40 Ph 1 83.08 Ph 2 & 3			
58WWET	0.177	0.602	693.69	FY14	McDonalds rebuild			
59WWET	0.250	0.850	693.94	FY14	Muir Lot Split			

SHARE #	SHARES	ACRE FT	TOTAL	Captz	PROJECT (Owner)	BANKED	AMOUNT	PROJECT (Status)
60WWET	1.190	4.046	695.13	FY14	Swift Creek Ph1			
61WWET	0.333	1.132	695.46	FY15	Wasatch Orothodontics(Heber Valley Oral Surgery)			
62WWET	3.570	12.138	699.03	FY15	Swift Creek Ph2			
65WWET	0.840	2.856	699.87	FY15	Tractor Supply Co			
64WWET	10.540	35.836	710.41	FY15	Broadhead Phase 2			
63WWET	5.400	18.360	715.81	FY15	Ranch Landing Cottages A (18 lots)			
66WWET	0.580	1.972	716.39	FY15	Mt America CU (.52 required)			
67WWET	0.210	0.714	716.60	FY15	IHC Addition (Providence BLdg)			
67WWET	0.210	0.714	716.81	FY15	IHC Addition Central Processing and OR Remodel			
68WWET	0.125	0.425	716.94	FY15	Shoree Boyd -Tattoo Shop 1490 S Hwy 40			
71WWET	0.250	0.850	717.19	FY15	Jeff Jeppson 174 S 200 W			
69WWET	0.340	1.156	717.53	FY15	Mnt West Trailers (Hwy 40)			
70WWET	3.270	11.118	720.80	FY15	Swift Creek Ph3			
72WWET	0.250	0.850	721.05	FY16	Midway Lane Storage			
73WWET	5.290	17.986	726.34	FY16	Ranch Landing Cottages B			
74WWET	0.170	0.578	726.51	FY16	Rick and Jayne Coleman (non-resident.181 S Mill Road)			
75WWET	0.250	0.850	726.76	FY16	Miller Sm Sub			
77WWET	0.150	0.510	726.91	FY16	Midway Lane Storage			
78WWET	0.130	0.442	727.04	FY16	Heber Valley Elementary Expansion			
80WWET	3.920	13.328	730.96	FY16	Tripp - Crews Court			
79WWET	4.550	15.470	735.51	FY16	District at Valley Station Plat B (Bank .58sh less .16sh Unit 100 = .42sh banked)	X		
82WWET	8.235	27.999	743.74	FY16	District at Valley Station Plat A (Bank .776 Sh)	X		
81WWET	2.200	7.480	745.94	FY16	Ranch Landing Plat F Bldg D			
84WWET	14.840	50.456	760.78	FY17	Wasatch Vista			
85WWET	1.330	4.522	762.11	FY17	Amsource for Panda Express			
83WWET	7.500	25.500	769.61	FY17	Best Western			
86WWET	1.200	4.080	770.81	FY17	Burger King			
87WWET	1.350	4.590	772.16	FY17	HVMC Ph1 InstaCare Expansion			
88WWET	2.220	7.548	774.38	FY17	Ranch Landing Plat G Bldg E			
89WWET	0.320	1.088	774.70	FY17	Clyde Lot Split 494 E Center			
90WWET	2.600	8.840	777.30	FY17	Westmeadows			
95WWET	9.470	32.198	786.77	FY17	Rocky Mnt Care-Skilled Nursing Facility			
92WWET	2.230	7.582	789.00	FY17	Ranch Landing H			
91WWET	0.150	0.510	789.15	FY17	Daniels Self Sto (Darrell Merrill)			
93WWET	1.000	3.400	790.15	FY18	Carl,s Jr. Am Source			
94WWET	5.950	20.230	796.10	FY18	Wasatch Vista Plat B			
102WWET	0.140	0.476	796.24	FY18	ESDA Dunn Annexation			
101WWET	10.567	35.928	806.81	FY18	Village on 12th (phase 1 and landscaping)			
104WWET	3.000	10.200	809.81	FY18	TimpView Crossing			
103WWET	16.568	56.331	826.38	FY18	Stone Creek			
105WWET	0.080	0.272	826.46	FY18	Smiths 17 Deli Remodel			
98WWET	1.030	3.502	827.49	FY18	Ranch Landing Abbington Ph B			
96WWET	2.490	8.466	829.98	FY18	Ranch Landing K Prestige II			
97WWET	2.440	8.296	832.42	FY18	Ranch Landing Plat I Bldg G			
99WWET	1.250	4.250	833.67	FY18	AMSource Starbucks 2.02 AT&T .09 Bank 2.14			
115WWET	0.170	0.578	833.84	FY18	Montgomery lot split - Quinn Davis			
100WWET	2.250	7.650	836.09	FY18	Village on 12th Phase 2			
108WWET	0.534	1.816	836.62	FY 19	Silverado Storage Office Building			
106WWET	0.250	0.850	836.87	FY 19	Lawson/Hatch 356 North 400 East (.79required)			
109WWET	2.450	8.330	839.32	FY 19	Ranch Landing Plat J Building F			
110WWET	0.100	0.340	839.42	FY 19	Debbie Duke 45 N 200 E			
107WWET	14.000	47.600	853.42	FY 19	Heber City - Duke Farms			
111WWET	0.420	1.428	853.84	FY 19	Mountainland Auto/ Shane Clegg			
112WWET	12.000	40.800	865.84	FY 19	Park View Place			
113WWET	2.400	8.160	868.24	FY 19	Villages on 12th Phase 3 (bank .81af)			
116WWET	0.110	0.374	868.35	FY 19	Marble Farms (Marty Oakseon accessory building)			
114WWET	2.280	7.752	870.63	FY 19	Brookside Phase 1			
119WWET	0.970	3.298	871.60	FY 19	HVMC Ph2 Ring Road			
117WWET	0.240	0.816	871.84	FY 19	Agustin Guzman 126 S 200 W			
118WWET	4.683	15.922	876.53	FY 19	Village 12 Phase 4 (Banked 5.61af - Used on Phase 5)			
121WWET	0.050	0.170	876.58	FY 19	Witt Commercial 2 3A,4A,4B			
120WWET	0.130	0.442	876.71	FY 19	Dagen Schiess 141 N 400 E			
122WWET	1.400	4.760	878.11	FY 20	Village 12 Phase 5			
123WWET	0.230	0.782	878.34	FY 20	Tim Jones			
127WWET	17.870	60.758	896.21	FY 20	Turner Mills Sequoia			
124WWET	1.350	4.590	897.56	FY 20	The Lofts at Deer Haven			
125WWET	0.180	0.612	897.74	FY 21	Silver Eagle - Yogurt Land			
128WWET	0.460	1.564	898.20	FY 21	Culvers (Valley Sta)			
126WWET	0.100	0.340	898.30	FY 21	Gateway Lot 2 (Perry Pardole)			
132WWET	12.135	41.259	910.43	FY 21	Stone Creek 4			
129WWET	0.110	0.374	910.54	FY 21	The Lofts at Deer Haven (Tenant Fininsh)			
130WWET	0.150	0.510	910.69	FY 21	IHC Ph2 Expansion			
133WWET	0.030	0.102	910.72	FY 21	Jami Hewlett 191 W 100 S			
131WWET	0.030	0.102	910.75	FY 21	Blue Sun Tanning and Spa Smith's Lot 1 Unit E			
134WWET	3.920	13.328	914.67	FY 21	Coyote Ridge Phase 1			
137WWET	1.820	6.188	916.49	FY 21	98 E Center (26 Units)			
135WWET	0.270	0.918	916.76	FY 21	Am First Credit Union			
136WWET	14.940	50.796	931.70	FY 21	Coyote Springs (.59af banked - for sale)			
150WWET	0.090	0.306	931.79	FY 21	Olde Town Square Mnt Meals (Cusico Rustico)			
140WWET	0.300	1.020	932.09	FY 21	Troy and Melissa Olsen 420 S 600 E (Broadhead 1 Amend)			
141WWET	1.880	6.392	933.97	FY 21	Turner Mill Sequoia			
139WWET	9.500	32.300	943.47	FY 21	Wasatch Vista 3			
142WWET	8.090	27.506	951.56		Coyote Ridge 2-5			
143WWET	1.550	5.270	953.11		Dutch Bros Coffee			
144WWET	1.030	3.502	954.14	FY21	Valley Station 2 Lot 2B Tenant Finish Dr. Lobrot			
138WWET	2.000	6.800	956.14		Old Mill Village			
145WWET	9.470	32.198	965.61		Old Mill Village			
146WWET	0.130	0.442	965.74		Old Town Square Lot 8 Killowen			
							.09 left over to use	

SHARE #	SHARES	ACRE FT	TOTAL	Captz	PROJECT (Owner)	BANKED	AMOUNT	PROJECT (Status)
149WWET	1.480	5.032	967.22		Costa Vida			5.02 shares are owned by Costa Vida - the
148WWET	0.350	1.190	967.57		Dominos South			
151WWET	6.158	20.937	973.73		Turner Mill - Kleinhaus			
154WWET	11.432	38.869	985.16		Turner Mill - Kleinhaus			
155WWET	0.077	0.262	985.24		321 W 1300 S Ste 120 (Northern Lights)			
153WWET	0.100	0.340	985.34		Labrum Shop add			will have additional .45 when ROC is recorded
152 WWET	0.050	0.170	985.39		Encircle			
	0.210	0.714	985.60		Revival Builders			
147WWET	0.750	2.550	966.36		Wasatch Medical	0.03		
	0.500	1.700	966.24		Heber City Business Park (Dreaded Groomer)	0.01		
TOTAL	986.849	3,355.285						

TIMPANOGOS IRRIGATION SHARES (1.85)								
2592	20.200		20.20		Cemetery.Org Cert 885 Replace by 2592)			William White (Bank w/City for future. Need Cert)
1742	0.780		20.98		Brown (Blain Brown)			
1798	23.040		44.02 FY 99		Heber Landing (Ray Hult)			
1855	30.210		74.23 FY 00		Wing Point (Ray Hult)			
1870	1.000		75.23 FY 00		Bowthorp (Dennis Bowthorpe)			
1887	5.470		80.70 FY 00		Mtn Meadows (Kendall Woolstenhulme)			
1929	16.000		96.70 FY 04		Wheeler/Bills (Daniels Gate B 5.84, Wheeler Ph2 1.463, Harvest Fields 8.7)			
1955	26.700		123.40 FY 01		Vly Hills - Plat H			
1977	32.000		155.40 FY 04		Mahoney (City purchase @ AP)			
1997	1.000		156.40 FY 03		KFC/TacoBell			
2007	2.050		158.45 FY 04		Greenfield (Ray Hult, Excudes Irr, See File)			
2009	1.800		160.25 FY 03		West Five (Petersen/Morrison)			
2021	0.450		160.70 FY 04		Wasatch Center			
2038	1.000		161.70 w/prop		Jay Simpson - Airport (Exist Hangers?)	X		
2040	1.000		162.70 w/prop		Simpsons Airport (Exist Hangers?)	X		
2050	2.000		164.70 FY05		Mike Peterson - Cattleman's Corner			
2056	0.100		164.80 FY05		Wasatch Center			
2067	5.000		169.80 w/prop		Lowell & Sandra Simpson - Airport (Exist Hangers?)	X		
2069	4.000		173.80 w/prop		Jay Simpson - Airport (Exist Hangers?)	X		
2108	32.000		205.80 FY06		Paul Ritchie MWE The Cove LLC			
2118	0.300		206.10 FY06		Rick Murano - Wasatch Center			
2152	10.000		216.10 FY06		Wheeler Park Phase 1 5.68, Phase 2 4.32			
2154	30.000		246.10 FY06		Wheeler Park Phase 1			
2164	3.780		249.88 FY06		Duff Johnson			
2175	2.500		252.38 FY07		Wheeler Park Phase 2			
2190	5.000		257.38 FY07		Wheeler Park Phase 2			
2215	9.500	14.725	266.88 FY07		Sage Holdings (Majestic Mnt/Noble Vista)			
2219	2.000	3.100	268.88 FY09		Sage Holdings (Majestic Mnt/Noble Vista)			
2208	0.450		269.33 FY07		Heber Meadows (Forest Service)			
2218	15.500		284.83		Rob McNeil - Swift Creek 07/1/07			
-	-15.500		269.33		Transferred back to Rob McNeil 12/17/07			
2222	0.540		269.87 FY08		Hallows Lot Split 400 S 70 W			
2248	0.130		270.00 FY08		Hallows Lot Split 400 S 70 W			
2249	6.000	9.300	276.00 FY08		Browning Estates			
2251	0.600	0.930	276.60 FY08		Head Telestar			
2255	0.430	0.667	277.03 FY08		Bybee Lot Split (Subdivision Not Recorded)			
2256	0.930	1.442	277.96 FY09		Mike Peterson Commercial			
2260	4.000	6.200	281.96 FY08		The Big Clean 1200 So Car Wash			
2262	3.000	4.650	284.96 FY08		The Big Clean 1200 So Car Wash			
	-3.000	-4.650	281.96		Transferred to Kris and Christine Pollock			
2263	0.500	0.775	282.46 FY08		The Big Clean 1200 So Car Wash			
2329	0.380	0.589	282.84 FY08		Chris Goode Mountain Meadow 204 lot split			
2284	0.300	0.465	283.14 FY08		Sorensen Dental			
2242	1.800	2.790	284.94 FY08		1.15 Findarle lot split 131 S (.65 BANK for Augustin Guzman 126 S 200 W)	X		
2276	25.000	38.750	309.94 FY17		Stone Creek (Phase 1) Transferred to Blackstone Creek LLC			
2283	0.420	0.651	310.36 FY09		Charles Boynton			
2299	1.320	2.046	311.68 FY10		County Rec Center			
2264	1.490	2.310	313.17 FY11		Activa Fit Stop			
2315	1.500	2.325	314.67 FY11		Activa .63 Skizzors, .21 DayCar, .66 Dentist			
2327	1.560	2.418	316.23 FY11		Roof Top Anchors			
2341	2.000	3.100	318.23 FY11		Elmbridge LLC			
2343	0.470	0.870	318.70 FY12		Nordgran 94 N 500 East			
2339	1.630	3.016	320.33 FY12		Kneaders			
2372	5.710	10.564	326.04 FY13		Millstream (Timpanogos RV Park)			
2386	0.850	1.573	326.89 FY14		Blake Allen 200 W 200 S			
2386	0.520	0.962	327.41 FY14		Blake Allen 100 E 271 N			
2406	0.510	0.944	327.92 FY14		Blake Allen 390 N 300 E			
2414	0.460	0.851	328.38 FY15		Silver Eagle			
2427	0.330	0.611	328.71 FY15		Labrum Chevrolet			
2440	0.630	1.166	329.34 FY15		Millstream 2 for Wheeler Park Plat Amendment			
2467	0.310	0.574	329.65 FY16		Russ Witt (Westview lot split)			
2472	0.380	0.703	330.03 FY16		Rancho Market 470 N Main			
2474	0.420	0.777	330.45 FY16		Burton Lumber			
2483	7.250	13.413	337.70 FY16		Mayers Meadow			
2509	1.130	2.091	338.83 FY16		Dorrough Dental			
2525	10.230	18.926	349.06 FY17		Valley Heights A&B			
2521	0.380	0.703	349.44 FY17		Witt Warehouse (outdoor)			
2538	1.540	2.849	350.98 FY17		Gateway Lot 5 - Dan Ivie			
2545	1.400	2.590	352.38 FY18		Valley Height C			
2556	0.650	1.203	353.03 FY18		Tumble Central			
2553	13.000	24.050	366.03 FY18		Stone Creek			
2559	0.690	1.277	366.72 FY18		Witt Warehouse -Shell finish			

SHARE #	SHARES	ACRE FT	TOTAL	Captz	PROJECT (Owner)	BANKED	AMOUNT	PROJECT (Status)
2565	0.150	0.278	366.87	FY18	Smiths 17 Deli Remodel			
2571	2.540	4.699	369.41	FY18	Auto Spa 1 and 2			
2581	0.240	0.444	369.65	FY19	Robert Giles 2206 S Mill Road			
2578	1.530	2.831	371.18	FY19	Witt Warehouse 2			
2592	0.650	1.203	371.83	FY19	Kam Kohler 550 N 500 E			
2602	4.520	8.362	376.35	FY19	Mill Road Apts (used 4.54af from Karl Malone Credits)			
2611	2.910	5.384	379.26	FY19	Blue Rooster (Crossroads Ph 1)Bldg Pmt not issued xfer 1.92 to millstr sto 2 / .38 Temp shares to Millstream Mech Shop (Remaining 1.42 AF to use at later date)			
2609	0.070	0.130	379.33	FY19	Dorrough Dental Tenant Finish B			
2610	0.040	0.074	379.37	FY19	Witt Commercial 2 High Point Church		Water Right 55-13016 (a45202) 379.37 shares	
2630	1.000	1.850	380.37	FY19	Ace Hardware/Timberline		recvd 12/28/21	
2637	0.110	0.204	380.48	FY20	Lot 5 Gateway (Ivie) Fit Camp tenant finish		recvd 12/28/21	
2652	0.610	1.129	381.09	FY20	Karl Malone shop Addition/Remodel		recvd 12/28/21	
2667	2.360	4.366	383.45	FY20	Mountain Valley RV Phase 3		recvd 12/28/21	
2671	0.310	0.574	383.76	FY21	LDS Church YSA 176 W 500 S		recvd 12/28/21	
2687	0.200	0.370	383.96	FY21	AMSource lot 6A UPS (Estimated amt)		recvd 12/28/21	
2727	1.000	1.850	384.96	FY21	Heber Business Park (Timpview Storage) Bank .71AF(.38sh)		recvd 12/28/21	
2741	14.820	27.417	399.78	FY22	Coyote Ride Ph IV		recvd 12/28/21	
TOTAL	399.780	739.593						

TIMPANOGOS CLASS D IRRIGATION SHARES (.3)

106	3.843	11.529	3.84	FY19	Brookside Phase 1			
106	7.390	22.170	11.23	FY19	Brookside Phase 5			
106	6.000	18.000	17.23	FY19	Brookside Phase 6			
107	16.050	48.150	33.28	FY20	Heber Meadows North (cert #107)			
111	11.620	34.860	44.90	FY20	Sawmill 1A (All 70 Units and Outdoor water)			
114	13.050	39.150	57.95	FY20	Brookside 2 9.02 and 4B 4.03		at end of 2020 57.953 shares	
116	3.440	10.320	61.39	FY21	Sawmill 2D 1.17 and 2C 2.27			
117	2.070	6.210	63.46	FY21	Brookside 4A			
119	7.450	22.350	70.91	FY21	Sawmill 1B			
119	6.420	19.260	77.33	FY21	Sawmill 2A			
119	9.540	28.620	86.87	FY21	Sawmill 2B			
119	8.110	24.330	94.98	FY21	Sawmill 4			
119	11.650	34.950	106.63	FY21	Sawmill 5			
121	10.470	31.410	117.10	FY21	Brookside 3			
121	3.090	9.270	120.19	FY21	Brookside 4C			
124	16.000	48.000	136.19	FY22	Old Mill Village		at 10/28/21 136.196 Shares	
TOTAL	136.193	408.579					Inv 10/28/21	

EXTENSION IRRIGATION SHARES (.3)

881	40.000		40.00		Smith 12.37Ac Parcel Power Ind Park			
887	4.300		44.30	FY04	Claude Hicken/Alpine Dentistry			
891	105.000		149.30	FY04	Critchfield (airport)			
894	15.000		164.30	w/prop	Simpson (airport)			
919	6.000		170.30	w/prop	Jarvis (airport property)			
945	4.100		174.40	FY06	Robert Johnson			
947	25.000		199.40	FY06	Wheeler Park Phase 1			
949	1.900		201.30	FY07	Johnlyn Totten			
8WWET	30.000	9.000	231.30	FY08	Majestic/Noble Vista			
40WWET	1.660	0.498	232.96	FY08	Chris Goode Mnt Meadows 204 Lot Split			
1004	53.080	15.924	286.04	FY16	Mayers Meadow			
1016	8.000	2.400	294.04	FY18	Gateway 4 Ironhorse/Mike Peterson 2.37 req			
1018	2.120	0.636	296.16	FY19	Horrocks Lot Split			
1040	38.700	11.610	334.86	FY21	Coyote Ridge Phase 1			
1047	35.830	10.749	370.69		Coyote Ridge Phase 2			
TOTAL	370.690	111.207						

OUTSTANDING SHARES

33.00 Supplemental "C" Stock CUP has cert used for rental property at airport

SPRING CREEK IRRIGATION SHARES (.6)

22WWET	73.500	44.100	73.50	FY08	Sherms Landing - Banked (Will use 27.80 AF / 46.34 Shares for Phase 1 of Kimball Villas)	x	27.16 shares are left to use on future project
TOTAL	73.500	44.100					

OUTSTANDING SHARES

SAGE BRUSH IRRIGATION SHARES (.3)

439	2.750	0.825	2.75	FY06	LDS Church - Southfield Road		
462 WWET	3.580	1.074	6.33	FY07	Last Stand		
12.75	6.330	1.899					

OUTSTANDING SHARES

DANIEL IRRIGATION SHARES (.75)

1878	4.000		4.00	FY07	Wheeler Park Phase 2		
1883	5.090		9.09	FY07	Wheeler Park Phase 2		
1955	2.000		11.09	FY07	Heber Meadows BANK .89 (used on Ph 2)		
1962	5.000		16.09	FY07	Harvest Fields (George Bills)		
2WWET	74.000	55.500	90.09	FY08	Heber Meadows LLC		
2473	2.000	1.500	92.09	FY20	Heber Meadows Bank .57	x	
2494	11.000	8.250	103.09	FY18	Mayers Meadows		
2658	12.000	9.000	115.09	FY20	Heber Meadows North Bank .81 shares	x	
2743	2.000	1.500	117.09	FY20	Webb Lot 2 Irr bank .54	x	
2754	20.000	15.000	137.09	FY21	The Orchard		

OUTSTANDING SHARES

SHARE #	SHARES	ACRE FT	TOTAL	Captz	PROJECT (Owner)	BANKED	AMOUNT	PROJECT (Status)
TOTAL	137.090	102.818						

NORTH FIELD IRRIGATION (??)						OUTSTANDING SHARES		
1536	2.000		2.00	FY22	City			

TOTAL 2.000 0.600

WATER RIGHTS ESCROW FUNDS						OUTSTANDING SHARES		
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Red Ledges Park- City payment to purchase future water rights

OTHER						OUTSTANDING SHARES		
-------	--	--	--	--	--	--------------------	--	--

55 - 12327	12.360				Lundahl Millstream and Anderson 6.93 RV Park Ph2, 5.43 Valley Heights A&B			
55 - 4706	1.340	FY09			Browning			
55 - 0894	1.816	FY10			Majestic/Noble .55 AF, State of Utah Liquor St 1.26 AF			
55 - 8400	1.480	FY09			Majestic/Noble (Bank .03 shares)			
55 - 12708	6.000				Jimmy Duke	X		
55 - 4188	1.008	FY 21			Millstream Properties (Used for Valley Heights A & B)			
55 - 7121	1.312	FY 21			Beehive Storage (bank .0572af)			
55-13262	11.202	FY 21			Coyote Spinngs			

TOTAL 36.518

Hospital Well		Secured by:	
---------------	--	-------------	--

55-1351	19.960		Water Right
55-4360	75.570		Water Right

Valley Hills Well			
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55-8420	25.750		Wasatch Irrg # 5593
---------	--------	--	---------------------

4547	34.500	570.06	Timp Meadows (Sy Kimball) (Combined into 5572)
4552	24.750	594.81	Mtn View Estates (John Walden)(Combined into 5572)
4555	8.875	603.68	Mtn View Estates (John Walden)(Combined into 5572)
4804	17.000	164.43	Muirfield (Mike Brodsky) (Combined into 5572)
4863	8.000	155.96	School House Estates (Wasatch Co Sch Dist)(Combined into 5572)
4961	0.750	208.96	FY 01 Cedar Meadows (Mike Peterson, 0.71 Req'd)(Combined into 5572)
93.875			

These certificates were combined to be assigned to the Hospital Well - new certificate number is 5572

4476	25.750	28.50	Vly Hills - Plat F & G (Change order 55-8420) new 5593
------	--------	-------	--

This certificate was replaced by certificate 5593 water right number 55-8420 assigned to Valley Hill Well

2020-2021	Wasatch Irrigation Capitalize 60.62 shares @ \$27,200 =	1,648,864.00
	Timpanogos "A" Irrigation Capitalized 1.51 shares @ \$14,800 =	22,348.00
	Timpanogos"D" Irrigation Capitalized 62.24 shares @ 24000. =	1,493,760.00
	Extension Irrigation Capitalized 38.7 shares @ \$ 2,400 =	92,880.00
	Sage Brush Irrigation Capitalized 0 shares @ \$ = \$0.	
	Spring Creek Irrigation Capitalized shares @ = \$00	
	WWET Capitalized 0 shares @ \$6,000 = \$0	
	Daniel Irrigation Capitalized 20 shares @ \$ 6,000 =	120,000.00
	Water Rights/Well Transfers 13.522 acre feet @\$8,000 =	108,176.00
	(Note: \$amt based on \$8,000 per acre foot)	3,486,028.00
	(JE DR 51-1181 CR 51-3850)	

NOTES:

September 2007 - Timpanogos Irrigation changed from 2.0 AF per share to 1.55 AF per share
April 2007 - City switched from calculating water rights from a depletion basis to a diversion basis.
March 10 2010 - Timpanogs Irrigation changed from 1.55 AF per share to 1.85 AF per state decision

APPENDIX B - WATER RIGHTS SUMMARY HORROCKS

Heber City Water Rights

This is updated from John's by CAR to aid in updating table in masterplan, but not fully updated; not budgeted for.

Water Right Number	Owner	Exchange Number	Change Application Number	Priority	Flow (cfs)	Ac-ft	Depletion limit (Ac-ft)	Use	Points of Diversion	Notes	supplimental group	Supplemental Acreage
Heber Power & Light												
55-96	Heber City	-		1930	99.82	0.00		Power	Provo River	25 ELUs, 1 EDU	406310, 409307, 409762	0.58
55-303	Heber City	-		1948	5.00	0.00		Power	Steamboat Mine Tunnel	25 ELUs, 1 EDU	406310, 409307, 403936	0.58
55-506	Heber City	-		1940	0.015	10.90		Domestic, Rec	Power Plant Well	25 ELUs, 2 EDUs	406310, 409307, 405827	0.58
55-540	Heber City	-		1950	3.60	0.00		Power	Steamboat Mine Tunnel	25 ELUs, 1 EDU	406310, 409307, 403936	0.58
55-923	Heber City	-		1977	20.00	0.00		Power	Cascade Spring	Lapsed	409397	-
55-11556	Heber, Midway, Charleston	-		1907	150.00	0.00		Power	Provo River	25 ELUs, 1 EDU	406310, 409307	0.58
Heber City Approved												
55-458	Heber City, Wasatch County	-		1949	0.11	79.64	79.64	Dom, Irr	Heber City Airport Well	40 EDUs	405402	0.23
55-8400	Heber City	a33605		1993	0.015	1.48		Dom, Stock, Irr	Underground Water Well	10 ELUs, 1 EDU	408585	0.25
55-13262	Heber City	a46453		1895	0.015473	11.20		Stock, Irr	3 underground water wells	25 ELUs	402265	11.5
55-558	Heber City	a48028		1950	0.000622	0.45		Domestic	Underground Water Well	1 EDU	406160	
55-7121	Heber City	a46085		1985	0.001812	1.31		Dom, Stock, Irr	3 underground water wells	4 ELUs, 1 EDU	407424	0.25
55-4188	Heber City	a42292		1968	0.015	10.86		Dom, Stock, Irr	3 underground water wells	6 ELUs, 1 EDU	405060	0.08
55-4706	Heber City	a34223		1975	0.001851	1.34		Dom, Stock, Irr	3 underground water wells	5 ELUs, 1 EDU	405507	0.263
55-4737	Heber City	a36680		1903	0.028999	20.99		Stock, Irr	3 underground water wells	23.365 ELUs	405534	12.48
55-12132	Heber, David M. Nelson, Timp. Irr.					47.25		Irrigation	Provo River; Timp. Canal		402020	15
55-9162	Heber City, Kent D. Shelton	a41058		1884	0.001381	1.00		Dom, Ind, Irr	3 underground water wells	1 EDU	409338	0.1
55-947	Heber City	-		1959	2.00	1447.93	1447.93	Municipal	Well #1		402263	0.58
55-1351	Heber City	a22574		1887	-	95.53	71.64	Municipal	Hospital Well	Change not Supplemental	402263	-
55-1392	Heber City	a3011		1870	2.36	1708.56	1708.56	Municipal	Broadhead Springs		402263	0.58
55-3346	Heber City	-		1934	1.00	723.97	723.97	Municipal	Hospital Well	Supplimental Supply to City	402263	0.58
55-4360	Heber City	a22574		1902	See 55-1351			Municipal	Hospital Well	Change not Supplemental	402263	-
55-5780	Heber City	a9298		1877		105.00	105.00	Municipal	Valley Hills Well		402263	0.58
55-7052	Heber City	a1577		1950		1071.34	1071.34	Municipal	Broadhead Springs	Change not Supplemental	402263	-
55-8420	Heber City, Wasatch Irrigation	a17355		1993	-	64.40	64.40	Municipal	Valley Hills Well	50 % Depletion	402263	-
55-8534	Heber City	E1053	-	1976		75.00	75.00	Municipal	Valley Hills Well		402263	-
55-12327	Heber City	a33961		1880	-	12.36	8.53	Municipal	Heber Three Wells	Will be integrated into 402263	402263	-
55-894	Heber City	a33606		1958	-	1.82	1.22	Municipal	Heber Three Wells	Will be integrated into 402264	402263	-
55-12708	Heber City	a41022		1880		6.00	4.14	Municipal	Heber Three Wells	Will be integrated into 402265	402263	
55-13325	Heber City, Wasatch Irrigation	a47110				1830.76	1257.98	Municipal	VH Well, HW No. 1, Upper BS	535.31 shares of stock	728819	
55-13016	Heber City, Timpanogos Irrigation	a45202				703.73	485.59	Municipal	VH Well, HW No. 1, Upper BS	399.57 shares of stock	726090	
Heber City Unapproved												
Heber City Rejected												
55-7041	Heber City	-		1984	13.11	-		Municipal	Drains	Rejected	-	-
55-1105	Heber City	-		1961	2.00	-		Municipal	Undeveloped Well	Rejected	-	-
Other Ossociated												
55-912	Blaine H. Smith	a4679		1958	0.035			Dom, Irr, Stock, Ind	Private Well	lapsed	409307	0.33
55-5784	Collin Richards and Chloe Jarvis			1976	0.015			Irr	Private Well		406310	0.25
55-1394	Curry, Hafen, Wallenstein			1895	0.1025	74.21		Stock, Irr	McDonald Spring	25 ELUs	402265	11.5
55-13401	Cedar Springs Partners, LLC			1895	0.1025	74.21		Stock, Irr	McDonald Spring	25 ELUs	402265	11.5
55-5975	Elmbridge, LLC			1903	4	2896		Stock, Irr	Big Creek	23.365 ELUs	405534	12.48
Supplimental Group												
Water Right Numbers				Acres				EDU		Ac-ft		
406310	96,303,506,540, 5784,11556							0.25	-		0.75	
409307	96,303,506,540,912,11556							0.33	-		0.99	
409762	96							-	-		-	
403936	303,540							-	-		-	
405402	458							0.23	40.00		18.69	
405827	506							-	1.00		0.45	
402263	947,1351,1392,3346,4360,5780,7052,8420										159.93	
625475	3955, 12327, 12708							35.30				
409133	894											
402265	1394, 13262, 13401											
405534	4737, 5975											
728819	13325											
726090	13016											

Source	Max Flow (gpm)	Full Flow Ac-ft Capacity	Water Rights(cfs)	Depletion Water Rights (ac-ft)	Historical Usage 2011 -2016 (ac-ft)		Notes
					low	high	
Hospital Well	3,000.00	4,839.35	1.00	795.61	324.00	671.00	not enough rights to cover max flow
Valley Hills Well	750.00	1,209.84	-	244.40	12.00	265.00	not enough rights to cover max flow
Well #1	1,400.00	2,258.36	2.00	1,447.93	224.00	957.00	not enough rights to cover max flow
Broadhead Spring	1,315.22	2,121.60	2.36	2,779.90	876.00	1,184.00	not enough flow to cover rights
Other Water Right combined in all wells				13.89	0	0	
VH Well, HW No. 1, Upper BS				1743.57	?	?	Depletion limits on OSE
	6,465.22	10,429.16		5,281.73	1,436.00	3,077.00	

* Updated December 2022

APPENDIX C

SEWER POPULATION & ERU's

YEAR	POPULATION				RESIDENTIAL			NON-RESIDENTIAL				RES+NON-RES		FLOW		
	% CHG	TOTAL	CHG		UNITS	NEW UNITS		% CHG	CONN	CHG	NEW ERU's		NEW ERU's		mgd	mg
									ERU's/Conn =					gpd/ERU =		
									4.1					312		
2021		16,856	16,856		5,001				427							
2022	4.33%	17,586	730		5,082	82		4.33%	455	28	115		196			
2023	4.33%	18,347	761		5,302	220		4.33%	475	20	81		301			
2024	4.33%	19,142	794		5,532	230		4.33%	495	21	84		314			
2025	4.33%	19,971	829		5,772	240		4.33%	517	21	88		327			
2026	4.33%	20,835	865		6,022	250		4.33%	539	22	92		342			
2027	4.33%	21,738	902		6,282	261		4.33%	562	23	96		356			
2028	4.33%	22,679	941	4331	6,554	272	1,252	4.33%	587	24	100	459	372	1,711		
2029	4.33%	23,661	982		6,838	284		4.33%	612	25	104		388			
2030	4.33%	24,685	1,025		7,134	296		4.33%	639	27	109		405			
2031	4.33%	25,754	1,069		7,443	309		4.33%	666	28	113		422			
2032	1.19%	26,061	306		7,532	89		1.19%	674	8	33		121			
2033	1.19%	26,371	310	3692	7,621	90	1,067	1.19%	682	8	33	392	123	1,459		
2034	1.19%	26,685	314		7,712	91		1.19%	690	8	33		124			
2035	1.19%	27,002	318		7,804	92		1.19%	699	8	34		125			
2036	1.19%	27,323	321		7,897	93		1.19%	707	8	34		127			
2037	1.19%	27,649	325		7,991	94		1.19%	715	8	34		128			
2038	1.19%	27,978	329	1607	8,086	95	464	1.19%	724	9	35	170	130	634		
2039	1.19%	28,310	333		8,182	96		1.19%	732	9	35		132			
2040	1.19%	28,647	337		8,279	97		1.19%	741	9	36		133			
2041	1.19%	28,988	341		8,378	99		1.19%	750	9	36		135			
2042	1.19%	29,333	345		8,477	100		1.19%	759	9	37		136			
2043	1.19%	29,682	349	1705	8,578	101	493	1.19%	768	9	37	181	138	674		
TOTAL NEW (2024-2043)		11,335			3,276					293	1,202		4,478		1.40 510	
EST 2023		18,347			5,302					475	1,946		7,249		2.26 825	
TOTAL 2043		29,682			8,578					768	3,149		11,727		3.66 1,335	

Ultimate Per Landuse 36,353 11,652

NOTES:

- Residential Units include Red Ledges which must be deducted to determine sewer connections served only by City.

APPENDIX C

Sewer Price List			
Size	Description	Price	Units
8	Sewer Main	\$74	LF
10	Sewer Main	\$101	LF
12	Sewer Main	\$120	LF
15	Sewer Main	\$138	LF
18	Sewer Main	\$156	LF
21	Sewer Main	\$175	LF
24	Sewer Main	\$193	LF
30	Sewer Main	\$230	LF
36	Sewer Main	\$258	LF
48	Man Hole	\$7,393.99	Each
60	Man Hole	\$11,140.99	Each
	Drain Rock Bedding	\$37	Ton
	Trench Stabilization Material	\$37	Ton
	Ex. Sewer Lateral Conflicts	\$3,747.00	Each
	Saw Cut	\$4.31	LF
	Class "A" Road Repair	\$11.90	SF
	Tunneling/Ground Water/Other	\$276,524.69	Each
	Imported Select backfill	\$46.58	Ton
	Design, CM, Insp	20%	
	Contingency	20%	

Cost Summary of Recommended Sewer Improvements

SEWER CAPITAL IMPROVEMENTS																		
IMPROVEMENT DESCRIPTION			LENGTH / COST	DIA	L U M P S U M	L I N E	M A N H O L E	B E D D I N G	S T A B I L I Z E	L A T E R A L	L A T C O N F L I C T	O T H E R	S A W C U T	A S P H A L T	F I L L	E N G C M I N S P	COST	
ULT	CIP #		ft	in	f	g	h	i	j ¹	k	l	m	n	o	p ²	q		
ULT	S-004	600 East - 1300 S to Hidden Cr Ln (15")	1,900	15		X	X	X				X					\$706,421	
	S-020	Aerial Digital Map Updates (4 times)	\$16,000		X												\$19,200	
	S-021	Master Plan Update (4 times)	\$280,000		X												\$336,000	
	S-023	US 40 - Center Creek Dr to 2200 S (West) (8")	4,000	8		X	X	X					X	X	X		\$1,378,041	
	S-024	1500 West - 100 S to 1200 S (12")	5,140	12		X	X	X	X						X		\$1,069,267	
	S-025	Sage Brush/Spring Cr Canal - 300 N to 100 S (24")	2,110	24		X	X	X	X				X		X	X	\$1,523,623	
	S-026	SR 113 - 800 W to 930 W (30")	250	30		X	X	X	X		4	X	X	X	X	X	\$1,032,613	
	S-027	SR 113 - 930 W to South Field Rd (30")	1,600	30		X	X	X	X		2	X	X	X	X	X	\$1,062,120	
	S-031	South Field Rd - US 40 to 1200 S (10")	4,700	10		X	X	X	X		3	X	X	X	X		\$2,141,602	
	S-033	US 40 - Center Creek Dr to E Airport Rd (East) (8")	5,500	8		X	X	X					X			X	\$854,153	
	S-035	Center Street - 800 E to 1300 E (8")	1,900	8		X	X	X	X				X	X		X	\$772,234	
	S-036	900 North - Main St to 500 E (8"/10")	2,500	8		X	X	X	X	X	X		X			X	\$710,991	
	S-037	Heber City Public Works Facility Exp Ph.1	\$254,354		X													\$305,225
	S-038	500 N and 600 W to 50 N and 1000 W (18")	4,220	18		X	X	X	X	X		3	X			X	X	\$1,695,018
	S-041	Heber City Public Works Facility Exp Ph.2	\$1,421,174		X													\$1,421,174
	S-044	E Airport Rd - US 40 to 600 E (10")	800	10		X	X	X										\$121,449
	S-045	1200 South - 1000 E to 1200 E (12")	400	12		X	X	X					X	X	X		X	\$575,763
S-046	550 East - Valley Hills Dr to 600 N (10")	1,600	10		X	X	X	X	X		3	X	X	X	X		\$956,064	
S-047	1000 West - 50 North to 100 South (18")	580	18		X	X	X	X	X		3	X			X	X	\$584,944	
S-048	Daniels Road - 1320 South to 1475 South (12")	700	12		X	X	X	X	X				X	X	X	X	\$341,857	
TOTAL SEWER:																	\$17,607,759	

NOTES:

¹ Stabilization material expected on 1/4 of each line

² Import Fill Expected on top 1 foot of fill

* Paritally completed by previous CIP projects.

HEBER VALLEY SPECIAL SERVICE DISTRICT
FLOW DATA FOR HEBER CITY

Heber City Corporation
HVSSD Historical Sewer Flow Comparison

State gpd/ERU	NonRes ERU/Conn	gpd/Con n	HVSSD Cap (MGD)
312	4.1	1,279.2	4

Monthly Average Flow (MG/MONTH)														MG/YR		ERU's			GPD/ERU (w/o TCSSD)				
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	TCSSD	TOTAL W/O TCSSD	RES	NON RES	TOTAL	AVG	WINTER MIN	SUMMER MAX	% Infiltration	
1996	16.027	15.214	16.021	15.093	21.662	25.798	33.612	32.650	21.501	16.572	16.300	17.359	247.809		247.809	1547	644	2,191	310	236	495	52.3%	
1997	17.795	15.636	18.806	16.606	21.135	27.415	31.736	30.729	22.839	18.123	17.383	18.603	256.806		256.806	1683	688	2,371	297	236	432	45.5%	
1998	18.278	16.140	17.816	16.460	20.843	25.418	39.170	39.598	28.748	18.510	16.199	17.384	274.564	1.630	272.934	1819	727	2,546	294	210	500	57.9%	
1999	18.116	16.464	17.719	16.952	19.470	27.527	34.476	34.720	26.221	20.642	21.248	22.537	276.092	2.280	273.812	2434	759	3,193	235	177	349	49.2%	
2000	22.805	21.171	22.156	20.314	25.063	35.440	34.458	26.765	23.955	23.060	23.537	24.936	303.660	4.690	298.970	2539	781	3,320	247	211	352	39.9%	
2001	26.275	20.026	22.056	20.829	23.815	24.476	25.854	26.616	24.306	22.122	23.036	29.769	289.180	7.600	281.580	2775	881	3,656	211	189	229	17.6%	
2002	24.474	23.692	24.206	23.396	23.222	25.623	27.293	32.505	27.727	27.613	24.976	25.750	310.477	8.680	301.797	2986	917	3,903	212	194	263	26.1%	
2003	25.069	22.795	23.635	22.353	25.765	27.179	29.330	29.346	28.274	27.369	27.248	28.327	316.690	10.290	306.400	3047	988	4,035	208	182	228	20.1%	
2004	29.737	29.087	27.510	24.623	26.496	26.800	28.668	28.633	27.768	27.242	27.179	28.778	332.521	12.830	319.691	2376	995	3,371	260	223	264	15.6%	
2005	30.024	25.452	27.500	27.877	30.939	32.135	32.597	32.079	30.405	28.950	27.681	30.898	356.537	26.040	330.497	3221	1017	4,238	214	192	236	18.4%	
2006	30.991	27.073	32.634	36.175	35.502	35.042	33.383	33.495	32.334	31.013	29.834	31.525	389.001	46.830	342.171	3332	1081	4,413	212	190	244	22.2%	
2007	31.510	29.136	35.542	33.714	36.152	32.936	33.010	33.309	31.349	30.764	29.778	30.994	388.194	39.790	348.404	3408	1207	4,615	207	191	229	16.4%	
2008	31.693	29.815	33.283	33.512	34.185	36.260	34.427	33.579	32.211	31.202	31.537	31.372	393.076	31.080	361.996	3395	1276	4,671	212	198	241	17.5%	
2009	32.560	29.004	34.572	34.530	38.311	35.114	33.328	32.668	32.275	31.188	30.863	31.670	396.083	37.530	358.553	3467	1443	4,910	200	187	231	18.9%	
2010	31.571	27.702	30.632	33.11	33.237	36.26	32.071	32.387	32.752	32.501	30.605	33.85	386.678	35.000	351.678	3467	1169	4,636	208	192	240	19.8%	
2011	31.952	28.902	39.266	41.482	44.723	44.6415	44.56	39.341	36.562	34.919	35.75	36.615	458.714	73.720	384.994	3334	1490	4,824	219	172	267	35.6%	
2012	35.598	32.99	35.653	33.413	38.328	34.291	35.983	36.861	35.462	34.388	34.572	36.045	423.584	31.400	392.184	3397	1429	4,826	223	205	238	13.9%	
2013	35.847	33.136	42.61	34.451	34.316	33.148	33.935	32.462	32.039	26.946	25.646	28.567	393.103	43.990	349.113	3396	1201	4,597	208	160	224	28.6%	
2014	30.564	26.748	27.767	26.847	29.601	30.32	32.354	32.85	29.843	29.307	26.989	28.168	351.358	42.330	309.028	3503	1266	4,769	178	163	198	17.4%	
2015	28.783	26.243	29.38	28.571	33.401	30.396	32.462	32.64	31.485	30.31	28.729	30.056	362.456	42.900	319.556	3664	1364	5,028	174	161	191	15.5%	
2016	30.41	29.145	31.372	29.401	33.277	34.145	33.773	33.899	31.998	30.737	29.599	32.037	379.793	51.360	328.433	3775	1478	5,253	171	160	190	15.8%	
2017	34.287	32.772	42.145	35.678	36.452	36.199	37.004	36.770	34.788	34.554	32.849	34.551	428.049	82.870	345.179	4371	1569	5,940	159	146	165	11.4%	
2018	34.652	30.710	34.330	31.440	35.119	33.904	36.341	38.285	34.160	35.026	32.682	34.645	411.294	56.420	354.874	4553	1640	6,193	157	151	174	13.5%	
2019	35.276	33.580	37.650	36.492	37.038	40.898	38.705	37.090	38.160	35.930	32.337	36.860	440.016	55.890	384.126	4742	1822	6,564	160	141	184	23.6%	
2020	37.300	35.030	37.520	36.260	36.240	34.800	37.443	37.250	36.679	34.688	33.169	34.316	430.695	60.000	370.695	4863	1666	6,529	156	144	162	11.1%	
2021	36.807	32.781	37.948	37.593	38.904	37.690	38.950	38.324	36.995	35.309	36.580	39.000	446.881	56.400	390.481	4934	1862	6,799	157	144	167	13.5%	
2022	32.790	29.400	33.802	24.994	30.641	30.802	33.521	36.039	33.420	39.880	37.850	44.610	407.749	47.140	360.609	5148	1943	7,087	139	130	163	20.4%	
TOTAL	791.191	719.844	813.531	772.166	843.837	874.658	918.444	910.890	834.256	788.865	764.156	819.222	9,851.059	908.690	8,942.369								
20 YR AVE	32.371	29.575	33.738	32.126	34.431	34.148	34.592	34.365	32.948	32.111	31.074	33.144	394.624	44.191	350.433								
3 YR AVE	35.632	32.404	36.423	32.949	35.262	34.431	36.638	37.204	35.698	36.626	35.866	39.309	428.442	54.513	373.928								
3 YR MIN	32.790	29.400	33.802	24.994	30.641	30.802	33.521	36.039	33.420	34.688	33.169	34.316	407.749	47.140	360.609			17 Yr Avg	185	167	206	18.5%	
3 YR MAX	37.300	35.030	37.948	37.593	38.904	37.690	38.950	38.324	36.995	39.880	37.850	44.610	446.881	60.000	390.481			10 Yr Avg	166	150	182	17.1%	
														13%	29%	Plant %			3 Yr Avg	151	140	164	15.0%
														13%	29%	Plant %							
														4%		Plant %							

HEBER VALLEY SPECIAL SERVICE DISTRICT
FLOW DATA FOR HEBER CITY

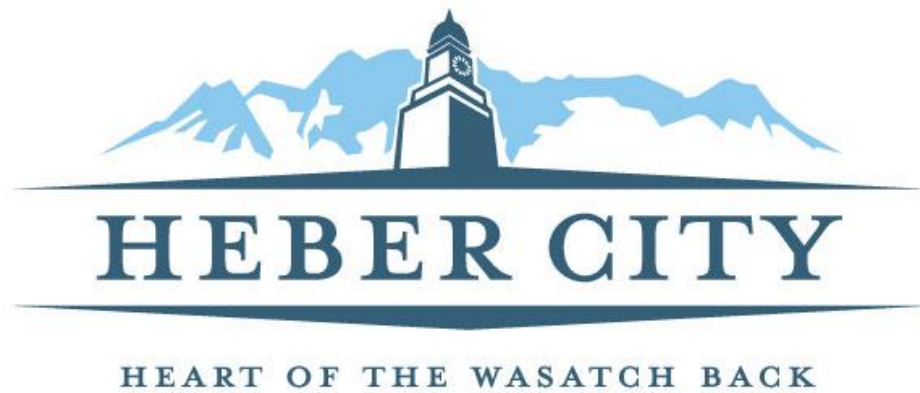
YEAR	Average Day Flow for Month with TwinCr (MGD)												Avg Yr MGD	Min MGD	Max MGD	Winter Min MGD	Summer Max MGD
	JAN avg	FEB avg	MAR avg	APR avg	MAY avg	JUN avg	JUL avg	AUG avg	SEP avg	OCT avg	NOV avg	DEC avg					
1996	0.5170	0.5434	0.5168	0.5031	0.6988	0.8599	1.0843	1.0532	0.7167	0.5346	0.5433	0.5600	0.6776	0.5031	1.0843	0.5168	1.0843
1997	0.5740	0.5584	0.6066	0.5535	0.6818	0.9138	1.0237	0.9913	0.7613	0.5846	0.5794	0.6001	0.7024	0.5535	1.0237	0.5584	1.0237
1998	0.5896	0.5764	0.5747	0.5487	0.6724	0.8473	1.2635	1.2774	0.9583	0.5971	0.5400	0.5608	0.7505	0.5400	1.2774	0.5400	1.2774
1999	0.5844	0.5880	0.5716	0.5651	0.6281	0.9176	1.1121	1.1200	0.8740	0.6659	0.7083	0.7270	0.7552	0.5651	1.1200	0.5716	1.1200
2000	0.7356	0.7561	0.7147	0.6771	0.8085	1.1813	1.1115	0.8634	0.7985	0.7439	0.7846	0.8044	0.8316	0.6771	1.1813	0.7147	1.1813
2001	0.8476	0.7152	0.7115	0.6943	0.7682	0.8159	0.8340	0.8586	0.8102	0.7136	0.7679	0.9603	0.7914	0.6943	0.9603	0.7115	0.8586
2002	0.7895	0.8461	0.7808	0.7799	0.7491	0.8541	0.8804	1.0485	0.9242	0.8907	0.8325	0.8306	0.8506	0.7491	1.0485	0.7808	1.0485
2003	0.8087	0.8141	0.7624	0.7451	0.8311	0.9060	0.9461	0.9466	0.9425	0.8829	0.9083	0.9138	0.8673	0.7451	0.9466	0.7624	0.9466
2004	0.9593	1.0388	0.8874	0.8208	0.8547	0.8933	0.9248	0.9236	0.9256	0.8788	0.9060	0.9283	0.9118	0.8208	1.0388	0.8874	0.9256
2005	0.9685	0.9090	0.8871	0.9292	0.9980	1.0712	1.0515	1.0348	1.0135	0.9339	0.9227	0.9967	0.9763	0.8871	1.0712	0.8871	1.0712
2006	0.9997	0.9669	1.0527	1.2058	1.1452	1.1681	1.0769	1.0805	1.0778	1.0004	0.9945	1.0169	1.0655	0.9669	1.2058	0.9669	1.2058
2007	1.0165	1.0406	1.1465	1.1238	1.1662	1.0979	1.0648	1.0745	1.0450	0.9924	0.9926	0.9998	1.0634	0.9924	1.1662	0.9926	1.1662
2008	1.0224	1.0648	1.0736	1.1171	1.1027	1.2087	1.1105	1.0832	1.0737	1.0065	1.0512	1.0120	1.0772	1.0065	1.2087	1.0120	1.2087
2009	1.0503	1.0359	1.1152	1.1510	1.2358	1.1705	1.0751	1.0538	1.0758	1.0061	1.0288	1.0216	1.0850	1.0061	1.2358	1.0216	1.2358
2010	1.0184	0.9894	0.9881	1.1037	1.0722	1.2087	1.0345	1.0447	1.0917	1.0484	1.0202	1.0919	1.0593	0.9881	1.2087	0.9881	1.2087
2011	1.0307	1.0322	1.2666	1.3827	1.4427	1.4881	1.4374	1.2691	1.2187	1.1264	1.1917	1.1811	1.2556	1.0307	1.4881	1.0307	1.4881
2012	1.1483	1.1782	1.1501	1.1138	1.2364	1.1430	1.1607	1.1891	1.1821	1.1093	1.1524	1.1627	1.1605	1.1093	1.2364	1.1483	1.2364
2013	1.1564	1.1834	1.3745	1.1484	1.1070	1.1049	1.0947	1.0472	1.0680	0.8692	0.8549	0.9215	1.0775	0.8549	1.3745	0.8549	1.1484
2014	0.9859	0.9553	0.8957	0.8949	0.9549	1.0107	1.0437	1.0597	0.9948	0.9454	0.8996	0.9086	0.9624	0.8949	1.0597	0.8957	1.0597
2015	0.9285	0.9373	0.9477	0.9524	1.0775	1.0132	1.0472	1.0529	1.0495	0.9777	0.9576	0.9695	0.9926	0.9285	1.0775	0.9285	1.0775
2016	0.9810	1.0409	1.0120	0.9800	1.0735	1.1382	1.0895	1.0935	1.0666	0.9915	0.9866	1.0335	1.0406	0.9800	1.1382	0.9810	1.1382
2017	1.1060	1.1704	1.3595	1.1893	1.1759	1.2066	1.1937	1.1861	1.1596	1.1146	1.0950	1.1145	1.1726	1.0950	1.3595	1.0950	1.2066
2018	1.1178	1.0968	1.1074	1.0480	1.1329	1.1301	1.1723	1.2350	1.1387	1.1299	1.0894	1.1176	1.1263	1.0480	1.2350	1.0894	1.2350
2019	1.1379	1.1993	1.2145	1.2164	1.1948	1.3633	1.2485	1.1965	1.2720	1.1590	1.0779	1.1890	1.2058	1.0779	1.3633	1.0779	1.3633
2020	1.2032	1.2511	1.2103	1.2087	1.1690	1.1600	1.2078	1.2016	1.2226	1.1190	1.1056	1.1070	1.1805	1.1056	1.2511	1.1056	1.2226
2021	1.1873	1.1708	1.2241	1.2531	1.2550	1.2563	1.2565	1.2363	1.2332	1.1390	1.2193	1.2581	1.2241	1.1390	1.2581	1.1708	1.2565
2022	1.0577	1.0500	1.0904	0.8331	0.9884	1.0267	1.0813	1.1625	1.1140	1.2865	1.2617	1.4390	1.1160	0.8331	1.4390	1.0500	1.2865
10 YR AVE	1.0862	1.1055	1.1436	1.0724	1.1129	1.1410	1.1435	1.1471	1.1319	1.0732	1.0548	1.1058	1.1098	0.9957	1.2556	1.0249	1.1994
10 YR MIN	0.9285	0.9373	0.8957	0.8331	0.9549	1.0107	1.0437	1.0472	0.9948	0.8692	0.8549	0.9086	0.9624	0.8331	1.0597	0.8549	1.0597
10 YR MAX	1.2032	1.2511	1.3745	1.2531	1.2550	1.3633	1.2565	1.2363	1.2720	1.2865	1.2617	1.4390	1.2241	1.1390	1.4390	1.1708	1.3633

NOTES:

- State recommends using 100 qpd/cap plus flow for infiltration and business which equates to approximately 312 qpd/ERU for Heber City
- Spreadsheet shows the 10 year average to be 166 qpd/ERU. Use State recommended minimum values for new development in model due to potential infiltration during storm events.
- Heber has historically used 320 qpd/ERU due to the number of people per household. Use State 312 qpd/ERU since people per household has decreased slightly.

TCSSD and Charleston Sewer Flows

		139.66%			
		6.00%			
	TCSSD			Charleston	
	(mg)			(mg)	
2005	26	26.04	0.00		
2006	28	46.83	19.23		
2007	29	39.79	10.53		
2008	31	31.08	0.07		
2009	33	37.53	4.66		
2010	35	35.00	0.15		
2011	37	73.72	36.78		
2012	39	31.40	-7.75		
2013	42	43.99	2.49		
2014	44	42.33	-1.66		
2015	47	42.90	-3.73		
2016	49	51.36	1.93		
2017	52	82.87	30.47		
2018	56	56.42	0.88		
2019	59	55.89	-2.98		
2020	62	60.00	-2.41		
2021	66	56.40	-9.75		
2022	70	47.14	-22.98		
2023	74			0	
2024	79			0	
2025	84			0	
2026	89			0	
2027	94			0	
2028	99			0	
2029	105			0	
2030	112			149	
2031	118			158	
2032	126			167	
2033	133			177	
2034	141			188	
2035	150			199	29682.31
2036	159			211	36353
2037	168			224	81.65%
2038	178			237	
2039	189			252	
2040	200			267	
2041	212			283	
2042	225			300	percent of buildout
					698 gpm
					366.8688
					299.5493



**HEBER CITY SEWER CONNECTION FEE STUDY FOR
CUSTOMERS OUTSIDE CITY LIMITS**

**SEWER CAPACITY AND FEE
ANALYSIS FOR TWIN CREEKS
SPECIAL SERVICE DISTRICT
CONNECTIONS**

Project Number: 20-005

Prepared For: Heber City Corporation

Prepared By: Horrocks Engineers

Date: August 27, 2021

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Table 2: Existing Percent Full and Future Percent Full w/ TCSSD 1200 S Connection

Table 3: TCSSD Proportional Share Replacement Costs per ERU

Figure 1: Sewer Line Location Map

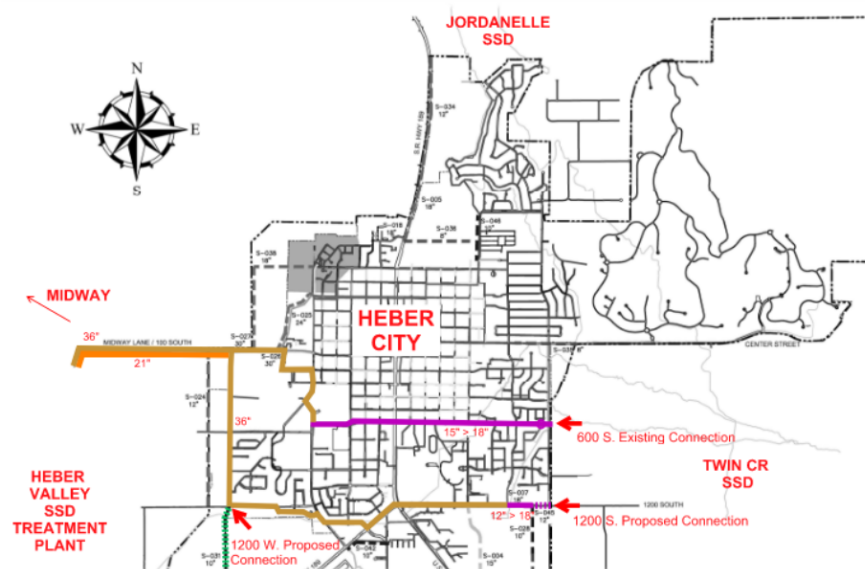
Introduction

The Heber City Sewer System is designed to handle the existing and future demand of its customers. Capital Improvement Projects are strategically planned to upsize existing facilities or install new facilities to accommodate proposed growth and increased demand on the City's facilities. The Heber City Sewer Master Plan is periodically updated to include new population growth projections, development and annexation areas, proposed capital improvements, and funding mechanisms. The Sewer Master Plan will not be updated with this study, but information available in the current plan will be considered to determine the recommendations for this study.

Heber City currently provides a sewer connection to Twin Creeks Special Service District (TCSSD) at 1200 East 600 South. The 18-inch sewer line in 600 South was originally designed to handle sewer flow from Heber City, with the first 15-inches of this line being reserved for TCSSD and having an estimated capacity of 2,494 gallons per minute (gpm) peak flow. A contract between Heber City and TCSSD was put in place for Twin Creek's conveyance of sewer through this line in 1997 and is set to expire on May 15, 2022. This contract will need to be reviewed, updated, and extended for the continuation of TCSSD's sewer conveyance through Heber City facilities from the 600 South connection to the Heber Valley Special Service District (HVSSD) treatment plant.

In addition to the 600 South connection, TCSSD has requested a second connection at 1200 East 1200 South with a total capacity request of 3,310 gpm (peak flow) from the two connections. They have requested up to 2,180 gpm at the existing 600 South connection and up to 2,000 gpm at the new 1200 South connection, with some of the flow being able to shift to either connection depending on how their growth occurs in the future. Figure 1 shows the two connection points and the flow path through the City.

Figure 1: Sewer Line Location Map



This study will complete the following items:

- Check the capacity of the existing Heber City facilities that would be impacted by a proposed TCSSD connection at 1200 South and the existing connection at 600 South. Use the Bentley SewerGEMS program and the existing Heber City sewer model to complete the analysis. Create spreadsheets showing the capacity available and utilized in the City lines.
- Determine the flow rate per Equivalent Residential Unit (ERU) to analyze the connections.
- Analyze the proportional replacement costs of the existing Heber City sewer facilities impacted by TCSSD's connections. Estimate a connection fee per ERU based on TCSSD's share of the facilities utilized.
- Compare the estimated connection fee per ERU with Heber City's current fees.
- Provide data to estimate a reasonable monthly utility fee for the TCSSD connection.
- Summarize the findings.

Sewer Model and Capacity Analysis

A sewer model analysis was completed for the proposed new TCSSD connection at 1200 South and Mill Road (1200 East). The Heber City Bentley SewerGEMS future sewer model was checked after loading a 2,000 gpm (peak) flow into the City's manhole at 1200 South, and a 1,310 gpm (peak) flow at 600 South Mill Road. As expected, the new loading at 1200 South increased the flow in the City's existing sewer lines in 1200 South, Hwy 189, 1300 South, Industrial Parkway, 1250 South, Southfield Road, and the City's Midway Lane outfall line. Table 1 below lists the roads and flow information for the City sewer lines impacted by a new connection at 1200 South.

Table 1: Sewer Model Information from TCSSD Loading at 1200 South

Road	ID	Label	Length (ft)	Slope (%)	Diameter (in)	Velocity (ft/s)	Full Flow Capacity (gpd)	Flow (gpd)	Flow / Design Capacity (% Full)	Notes
1200 South	1142	P-55	284.7	1.47	30	8.3	41,734,600	4,067,366	9.7	
1200 South	1143	P-56	356.8	1.72	30	8.9	45,230,771	4,096,368	9.1	
1200 South	1144	P-57	214.4	1.21	30	8.1	37,838,465	4,730,356	12.5	
1200 South	1145	P-58	217	1.02	30	7.7	34,777,376	4,730,356	13.6	
1200 South	1146	P-59	284.6	1.29	30	8.3	39,159,038	4,732,868	12.1	
1200 South	1147	P-60	306.2	1.08	30	7.8	35,841,306	4,732,868	13.2	
1200 South	1148	P-61	296.4	1.11	30	7.9	36,331,442	4,732,868	13	
1200 South	1149	P-62	254.9	1.16	30	8.1	37,128,406	4,777,607	12.9	
1200 South	1150	P-63	255.8	0.42	30	5.6	22,279,346	4,777,607	21.4	
1200 South	1151	P-1061	356.3	0.35	30	5.3	20,420,226	4,779,282	23.4	
1200 South	1152	P-1062	33.2	1	30	7.7	34,461,211	4,806,082	13.9	
1200 South	1155	P-1077	173.1	8.81	24	17	56,412,230	4,806,082	8.5	
1200 South	1286	P-1079	304.8	0.4	18	5.3	5,581,666	3,981,103	71.3	
1200 South	2432	P-1370	38.5	4.07	18	12.6	17,801,188	4,067,366	22.8	
1200 South	3016	P-1669	246	0.43	18	5.5	5,784,185	3,981,103	68.8	

Sewer Capacity & Fee Analysis for TCSSD

Road	ID	Label	Length (ft)	Slope (%)	Diameter (in)	Velocity (ft/s)	Full Flow Capacity (gpd)	Flow (gpd)	Flow / Design Capacity (% Full)	Notes
1200 South	3017	P-1670	84.5	0.52	18	3.5	6,385,170	4,011,253	62.8	
1200 South	3249	P-1804	360	1.42	15	7.8	6,459,780	2,910,778	45.1	Future 15" S-045
1200 South	3251	P-1805	679.8	0.47	18	5.1	6,044,700	2,910,778	48.2	Future 18" S-007
1200 South	3253	P-1806	195.8	1	18	7.4	8,825,389	3,788,478	42.9	Brookside Phase 1
1200 South	3254	P-1807	133	1.3	18	8.2	10,065,402	3,788,478	37.6	Brookside Phase 1
HWY 189	1282	P-1074	366.8	0.85	24	7.4	17,524,600	4,806,082	27.4	
HWY 189	1283	P-1075	388.7	1.22	24	8.4	21,002,735	4,806,082	22.9	
HWY 189	1284	P-1076	387.8	1.22	24	8.4	21,029,782	4,806,082	22.9	
1300 South	1276	P-1068	376.7	0.65	24	6.7	15,322,026	4,806,082	31.4	
1300 South	1277	P-1069	375.3	0.84	24	7.3	17,419,813	4,806,082	27.6	
1300 South	1278	P-1070	355.2	0.84	24	7.3	17,413,970	4,806,082	27.6	
1300 South	1279	P-1071	87.9	0.84	24	7.3	17,429,236	4,806,082	27.6	
1300 South	1280	P-1072	88.2	0.84	24	7.3	17,429,236	4,806,082	27.6	
1300 South	1281	P-1073	143.9	0.84	24	7.3	17,422,693	4,806,082	27.6	
Industrial Pwky	1275	P-1067	228.3	0.09	36	3.4	16,596,943	6,168,245	37.2	
1250 South / Field	1375	P-1231	209.7	0.1	36	3.6	18,137,700	6,292,044	34.7	
1250 South / Field	1376	P-1232	79.4	1.65	36	9.7	71,885,063	6,292,044	8.8	
1250 South / Field	1377	P-776	244	0.5	36	6.4	39,624,658	6,341,574	16	
1250 South / Field	1378	P-777	239	0.5	36	6.3	39,541,675	6,338,107	16	
1250 South / Field	1379	P-778	318.1	2.37	36	11	86,345,646	6,304,607	7.3	
1250 South / Field	1386	P-1228	199.1	0.5	36	6.3	39,524,974	6,346,598	16.1	
1250 South / Field	1387	P-1229	336.2	0.98	36	8.1	55,450,931	6,346,598	11.4	
1250 South / Field	1397	P-771	404.3	1.44	36	9.2	67,201,337	6,346,598	9.4	
1250 South / Field	1398	P-772	403.8	1.32	36	9	64,305,136	6,346,598	9.9	
1250 South / Field	1399	P-773	202.3	1.13	36	8.5	59,665,404	6,346,598	10.6	
1250 South / Field	1400	P-774	203.3	1.22	36	8.7	61,813,166	6,346,598	10.3	
1250 South / Field	1741	P-1230	243.9	1.65	36	9.7	72,017,516	6,299,581	8.7	
South Field Road	1395	P-769	202.7	0.62	36	7.2	44,148,686	7,385,099	16.7	
South Field Road	1396	P-770	238.9	0.62	36	7.2	44,097,344	7,351,599	16.7	
South Field Road	1410	P-1226	130	0.5	36	6.6	39,624,658	7,426,136	18.7	
South Field Road	1411	P-1227	221.2	0.5	36	6.6	39,534,908	7,426,136	18.8	
South Field Road	1421	P-1224	250	0.46	36	6.5	38,171,526	7,485,456	19.6	
South Field Road	1422	P-1225	245.2	0.52	36	6.8	40,345,894	7,498,856	18.6	
South Field Road	1432	P-758	130	2.32	36	11.5	85,410,708	7,508,906	8.8	
South Field Road	1433	P-759	150.2	0.39	36	6.1	35,144,786	7,508,906	21.4	
South Field Road	1436	P-1222	249.6	0.63	36	7.3	44,549,114	7,540,731	16.9	
South Field Road	1437	P-1223	270.4	0.48	36	6.6	38,734,103	7,654,631	19.8	
South Field Road	1613	P-768	296.3	0.22	36	5	26,259,796	7,811,327	29.7	
South Field Road	1614	P-751	400	0.31	36	5.7	31,326,043	7,769,453	24.8	
South Field Road	1615	P-752	399.7	0.26	36	5.3	28,436,042	7,769,453	27.3	
South Field Road	1616	P-753	399.9	0.31	36	5.7	31,451,098	7,766,103	24.7	
South Field Road	1617	P-754	399.9	0.29	36	5.6	30,307,036	7,762,753	25.6	
South Field Road	1618	P-755	399.9	0.28	36	5.5	29,652,379	7,762,753	26.2	
South Field Road	1619	P-756	399.8	0.38	36	6.1	34,315,961	7,726,907	22.5	
South Field Road	3784	P-761(1)	230.4	0.52	36	6.7	40,307,893	7,427,811	18.4	
South Field Road	3785	P-761(2)	76.9	0.52	36	6.8	40,389,192	7,468,849	18.5	
Midway Lane	1604	P-767	433.1	1.37	21	5.9	11,983,914	2,235,619	18.7	
Midway Lane	1605	P-687	393.4	1.64	21	6.3	13,129,110	2,235,619	17	
Midway Lane	1606	P-688	402.5	0.7	21	4.6	8,566,183	2,235,619	26.1	
Midway Lane	1607	P-689	401	0.5	21	4.1	7,231,995	2,235,619	30.9	
Midway Lane	2207	P-1252	41.6	4.84	36	18	123,309,814	14,150,376	11.5	
Midway Lane	2209	P-1253	74.2	2.42	36	14	87,154,775	14,150,376	16.2	
Midway Lane	2211	P-1254	330.5	1.1	36	10.6	58,764,795	14,150,376	24.1	
Midway Lane	2215	P-1256	395.4	0.8	36	9.5	50,121,669	14,280,188	28.5	
Midway Lane	2217	P-1257	364.1	0.66	36	8.8	45,502,521	14,280,188	31.4	
Midway Lane	2219	P-1258	394.2	0.16	36	4.2	17,291,541	14,280,188	82.6	

Sewer Capacity & Fee Analysis for TCSSD

Road	ID	Label	Length (ft)	Slope (%)	Diameter (in)	Velocity (ft/s)	Full Flow Capacity (gpd)	Flow (gpd)	Flow / Design Capacity (% Full)	Notes
Midway Lane	2223	P-1260	86.2	0.14	36	4.9	20,932,540	14,258,120	68.1	
Midway Lane	2225	P-1261	394.7	0.14	36	4	16,084,960	14,258,120	88.6	
Midway Lane	2227	P-1262	394.1	0.14	36	4	16,105,359	14,258,120	88.5	
Midway Lane	2229	P-1263	394.7	0.14	36	4	16,084,960	14,258,120	88.6	
Midway Lane	2231	P-1264	183.3	0.14	36	4	16,247,940	14,258,120	87.8	
Midway Lane	2234	P-1266	288	0.14	36	4	16,064,637	14,258,120	88.8	
Midway Lane	2245	P-1274	364.9	0.14	21	1.4	3,827,842	2,235,619	58.4	
Midway Lane	2247	P-1276	32	0.36	36	5.8	25,931,899	14,280,188	55.1	
Midway Lane	2248	P-1277	33.3	0.14	36	4	16,292,516	14,258,120	87.5	
Midway Lane	2250	P-1278	223.4	0.14	36	4	16,071,840	14,258,120	88.7	
Midway Lane	2252	P-1279	244.2	0.14	36	4	16,090,951	14,258,120	88.6	
Midway Lane	2254	P-1280	343.6	0.14	36	4	16,268,818	14,258,120	87.6	
Midway Lane	2256	P-1281	203.7	0.14	36	4.9	20,760,818	14,258,120	68.7	
Midway Lane	2258	P-1282	251.2	0.14	36	3.9	15,917,925	14,258,120	89.6	
Midway Lane	2260	P-1283	52.6	0.14	36	3.9	15,866,494	14,317,586	90.2	
Midway Lane	2262	P-1284	332.9	0.14	36	4	16,104,532	14,317,586	88.9	
Midway Lane	2264	P-1285	305.8	0.14	36	4	16,098,621	14,317,586	88.9	
Midway Lane	2271	P-1289	2,095.90	0.15	21	2.6	3,919,123	2,257,687	57.6	
Midway Lane	2273	P-1290	458.8	0.1	21	1.5	3,241,812	2,257,687	69.6	
Midway Lane	2275	P-1291	462.1	0.1	21	1.5	3,231,270	2,257,687	69.9	
Midway Lane	2276	P-1292	47.3	0.1	21	1.5	3,238,287	2,257,687	69.7	
Midway Lane	2277	P-1293	656.4	0.14	21	2.5	3,793,016	2,198,221	58	
Midway Lane	2280	P-1294	61.1	0.2	36	4.7	19,277,565	16,515,807	85.7	
Midway Lane	2949	P-1634	271.2	1.39	36	11.5	66,067,508	14,150,376	21.4	
Midway Lane	2950	P-1635	128.8	1.39	36	11.5	66,067,508	14,280,188	21.6	

Additional checks were also done on the lines downstream of the 600 South connection to get a better understanding of any limitations in Heber's system below the existing TCSSD connection. This was done by loading the maximum requested 2,180 gpm (peak) flow at the 600 South and Mill Road connection, and loading the total TCSSD requested flow of 3,310 gpm (peak) in the Midway Lane line. The Midway Lane line in Table 1 above reflects the total loading of 3,310 gpm from TCSSD rather than just the 2,000 gpm requested for the 1200 South connection since this line will always see the total TCSSD flow from both connections. The analysis for both connections also included the future City build-out flows that were projected in the March 29, 2018, Heber City Sewer Facilities Master Plan.

The future sewer model showed that there is existing capacity in many of the City sewer lines that could be used by TCSSD for a new connection at 1200 South and the existing 600 South connection. However, this connection would push several of the City's lines to their maximum capacities. Maximum capacity is defined as 75% full and is the level of service set by the City in its sewer master plans. The 1200 South connection would push the City's existing 36-inch line in Midway Lane to 88.9% full and the emergency 21-inch outfall line to 69.9% full (which also includes the Charleston connection), which fails to meet the City's level of service criteria. Rebalancing the flows to not exceed 75% full in the newer 36-inch line, pushes the older 21-inch line to over 100% full which also fails.

It needs to be noted that the 21-inch line was taken out of service by the City in 2011. This line is an older concrete line that was excluded in the City's master plan capacity analyses due to its age and the maintenance needed to continue using it for full time operation. It was anticipated that the 21-inch line would only be used for temporary or emergency situations to divert flow from the newer 36-inch line and avoid by-pass pumping which would reduce the City's costs. This line provides an emergency overflow for the City should the 36-inch line become plugged or damaged. If the 21-inch line were rehabilitated and reused on a permanent basis to provide capacity needed for users outside the City, it

would need to be rehabilitated. Reusing this line would also eliminate the City's emergency capacity and redundancy it currently provides. This option is not recommended as a permanent solution for providing capacity to users outside the City.

With the proposed growth in the City and the proposed TCSSD connections, it is recommended that if the City does provide or expand its service to users outside the City, the existing 21-inch line be replaced and upsized to 36-inches. The line needs to be large enough to handle not only the TCSSD connections, but also a capacity request from Charleston and the emergency capacity the City has in the existing 21-inch line. It is also recommended that prior to replacing the 21-inch line, the City confirm there are no other future capacity needs that would increase it above 36-inches since it would be difficult to construct a third line down Midway Lane in the same alignment.

The following calculation was used to estimate the size of line needed to replace the 21-inch line:

- $N=0.013$ and Slope = 0.14%
- Heber City Existing 21-inch Emergency Capacity @ 100% full = 2,661 gpm
- Twin Creeks Existing Capacity @ 75% full ~ 2,494 gpm (peak)
- Twin Creeks Total Capacity Request @ 75% full = 3,310 gpm (peak)
- Charleston Capacity Request @ 75% full = 1200 ERUs x 335 gpd/ERU = 698 gpm (peak)
- Total Capacity of New Line @ 75% full = 6,669 gpm which requires at least a 36-inch line

Sewer Facility Study

The sewer facilities within Heber City, including the outfall lines along Midway Lane, are owned, operated, and maintained by the City. These facilities have been sized according to the most recent growth and annexation information available when the Master Plan and Capital Improvement plans were updated in 2018. As specific facilities are designed and constructed, the size of each facility is checked again to ensure their capacity will handle projected future growth. Over time, the location and density of the growth can change, along with annexation boundaries, which can affect the size and location of facilities. These changes result in some facilities having excess capacity while others may be undersized and need upsizing to accommodate the City's changing needs.

The TCSSD connections would utilize some of the excess capacity in Heber City's existing sewer lines. Table 2 below lists the location of the sewer facilities that would be impacted from Mill Road to the HVSSD treatment plant and that are shown in Figure 1. The table shows the percent of capacity in these lines without TCSSD flow, and the projected percent full with the TCSSD flow included (but not including the Charleston connection). The future TCSSD flow at the 1200 South connection was modeled using the requested loading of 2,000 gpm (peak) with the remaining requested flow of 1,310 gpm (peak) coming from 600 South. The 15-inch line from 600 South to 1200 West in Table 2 represents the capacity needed by TCSSD downstream of 600 South 600 West. It should be noted, that there is a portion of this 15-inch capacity, east of South Field road in Midway Lane that is not yet built. This 15-inch capacity would be included in the capacity the City plans on building in the future when it upsizes two existing lines to meet the City's needs, and are identified as projects S-026 and S-027 in the City's master plan.

Table 2: Existing Percent Full and Future Percent Full w/ TCSSD 1200 S Connection

Location	Size (in)	Length (ft)	% Full w/o TC	% Full w/TC connection 1200 S and 600 S	% Full Increase
1200 S	18	1,003	31.6%	71.3%	39.7%
1200 S	30	2,860	11.5%	23.4%	11.9%
189/1300 S	24	2,743	14.8%	31.4%	16.6%
Industrial/1250S/Fields	36	3,311	19.8%	37.2%	17.4%
South Field Road	36	5,091	18.8%	29.7%	10.9%
600 W to 800 W	24	2,872	15.9%	28.4%	12.5%
800 W	36	652	14.5%	25.2%	10.7%
800 W to 825 W	30	218	12.8%	22.0%	9.2%
825 W to 1200 W	30	1,585	14.3%	20.8%	6.5%
Midway Lane (existing)	36	5220	58.8%	96.7%	37.9%

Table 2 shows that most of the City's existing sewer lines could accommodate TCSSD's sewer request with only two lines exceeding the City's 75% full criteria at full build-out. One of these was an existing section of 18-inch line in 1200 South that was slightly above the criteria, however, since this is close it would not be recommended to upsize it at this time.

The Midway Lane 36-inch outfall line also exceeded the criteria, nearing 100% full if no capacity was assumed in the existing 21-inch emergency line. This line was modeled with TCSSD's flow of 3,310 gpm, the City's future flow, and a request from Charleston for 698 gpm. The model showed that the existing 36-inch Midway Lane line has insufficient capacity to handle the flows and additional capacity would be needed.

It is noted that in Table 1 of the previous section that the combined capacities of the 36-inch and 21-inch lines in Midway Lane were used in the model to determine the maximum capacity from all facilities that could potentially be available to the City. Table 1 shows that unless the City forfeits its emergency backup capacity or upsizes the 21-inch Midway Lane outfall line to help meet TCSSD's needs, the lines will fail to meet the City's 75% full criteria.

Equivalent Residential Unit Flow

Equivalent Residential Units (ERUs) are used in determining flow and in estimating fees for new development. For the purpose of this analysis, the average amount of flow generated by a typical single family home or ERU was determined after reviewing information from TCSSD and Heber City's sewer master plans, HVSSD flow data, and State sewer design criteria.

Per TCSSD's capacity request and their sewer master plan, TCSSD projected their average flow to be 277 gpd/ERU. State sewer design guidelines call for sewer systems to be designed using 100 gpd per person or 335 gpd/ERU for the Heber Area. For the purposes of this analysis, and to be conservative, the state guideline of 335 gpd/ERU was used to determine future ERUs throughout the study. This insured consistency in the modeling assumptions and that the City does not under collect fees for providing service. It is important that the City be conservative in its assumptions since it does not control on how

ERU's are estimated outside the City nor how the system is operated which could introduce other unknowns.

Sewer Connection Fee

The pipeline information in Table 2 in the previous section was expanded in Table 3 below to show the estimated cost per ERU for TCSSD to use the sewer lines affected by the 1200 South and 600 South connections. The data in the table excludes the original 18-inch line constructed by TCSSD in 600 South since a portion of that line, equivalent to 15-inches, was constructed and paid for by TCSSD. The Midway Lane outfall line in the table also includes the additional flow requested by Charleston so that TCSSD's proportionate share of the line is shown correctly.

Table 3 shows how much of the existing sewer pipeline capacities the TCSSD 1200 South and 600 South connections would utilize from the connection points at 1200 South and 600 South to the HVSSD treatment plant. It lists the percent full increases for each pipeline, the estimated cost to replace the excess or new capacity used in the lines, and TCSSD's proportion of the cost.

As stated in the Sewer Model and Capacity Analysis section, it was assumed that the 21-inch outfall line would be replaced with a 36-inch line. This would maintain the City's emergency backup capacity and accommodate TCSSD's and Charleston's requested flows. The following data was used to calculate the proportionate costs to replace the 21-inch line:

- TCSSD Estimated Flow: 3,310 gpm
- Charleston Estimated Flow: 1,200 ERUs = 698 gpm
- Total Flow in new 36-inch outfall line: 4,008 gpm (Twin Creeks plus Charleston)
- Heber City 21-inch Emergency Backup Line: 2,661 gpm
- Percent of 36-inch Flow from TCSSD 1200 South and 600 South: $3,310 \text{ gpm} / 4,008 \text{ gpm} = 82.6\%$
- Percent of 36-inch Flow from Charleston: $698 \text{ gpm} / 4,008 \text{ gpm} = 17.4\%$

The cost per foot is an estimate of how much the capacity in a line is worth in today's dollars. It represents total design and construction cost if the requested capacities were installed today. The proportionate cost represents the net value of the capacity that TCSSD would use in the City's system for the proposed 1200 South and 600 South connections.

Table 3: TCSSD Proportional Share Replacement Costs per ERU (with existing user flow)

Location	Size (in)	Length (ft)	% Full w/o TC	% Full w/TC connection 1200 S and 600 S ¹	% Full Increase	% of Capacity at 75% Full	Estimated Cost Per Foot (\$) ²	Proportionate Costs ⁴
1200 S	18	1,003	31.6%	71.3%	39.7%	52.9%	\$450	\$238,915
1200 S	30	2,860	11.5%	23.4%	11.9%	15.9%	\$550	\$249,583
189/1300 S	24	2,743	14.8%	31.4%	16.6%	22.1%	\$550	\$333,915
Industrial/1250S/Fields	36	3,311	19.8%	37.2%	17.4%	23.2%	\$600	\$460,891
South Field Road	36	5,091	18.8%	29.7%	10.9%	14.5%	\$600	\$443,935
600 W to 800 W	24	2,872	15.9%	34.0%	18.1%	24.1%	\$550	\$381,210
800 W	36	652	14.5%	29.6%	15.1%	20.1%	\$600	\$78,762
800 W to 825 W ⁶	30	218	12.8%	25.7%	12.9%	17.2%	\$550	\$20,623
825 W to 1200 W ⁷	30	1,585	14.3%	22.6%	8.3%	11.1%	\$550	\$96,474
Midway Lane (new) ^{3,5}	36	5605	30.0%	66.6%	36.6%	82.6%	\$700	\$3,240,811
¹ Outfall line is 70% full including Heber City redundant capacity needs (does not include Charlestown). ² Cost Estimate includes total cost of facility and surface restoration (rough estimate only) ³ 36 inch line is needed to handle Twin Creeks, Charlestown, and Heber City redundant capacity. ⁴ The outfall line cost is only TCSSD's portion of replacing the 21 inch line with a 36 inch line. ⁵ % Full in columns 4 and 5 of new 36" line is percent full of the 75% full capacity. ⁶ Existing 15 inch pipe that will be upsized to 30 inch in the future ⁷ Existing 21 inch pipe that will be upsized to 30 inch in the future ⁸ 2,000 gpm in 1200 South Connection. 2,180 in 600 South Connection (from Twin Creeks)								\$5,545,117
Total								\$5,545,117
ERU (5682 total ERUs - 1,157 Existing ERUs + 363 RedL Temp ERUs = 4,888 Future ERUs)								4888
Cost Per ERU								\$1,134
Part A (Midway Lane 36" Cost of Construction)								\$663
Part B (Buy-in)								\$471

The calculation of the future TCSSD ERUs that would be available to pay for the excess capacity and outfall line replacement are shown below:

TCSSD Minimum Estimated Future ERUs

- Total Flow requested by TCSSD (peaked): 3,310 gpm
- 600 South Maximum Flow Requested (peaked): 2,180 gpm
- 1200 South Maximum Flow Requested Flow (peaked): 2,000 gpm
- 3,310 gpm / 2.5 (peaking factor) = 1,324 gpm
- 1,324 gpm x 60 min per hr x 24 hrs per day = 1,906,560 gpd
- 1,906,560 gpd / 335 gpd per ERU = 5,682 ERUs
- Total Future ERUs Added to System: 5,682 ERUs - Existing 1,157 ERUs + 363 RedL = 4,888 ERUs

Table 3 uses a proportional cost analysis approach to estimate the maximum cost to the City for providing capacity to TCSSD and the resulting fee that would need to be collected. This fee would be a minimum for the City to consider for providing service to cover its costs and not subsidize or risk under collecting funds. The following points also need to be considered when establishing the fee and what multiplier needs to be added to the calculated minimum rate:

1. It is based on the lowest number of future ERUs that could be expected to connect to TCSSD's system and pay for the capacity used through both the 1200 South and 600 South connections. It reflects a worst-case scenario of the lowest number of ERUs connecting to the 1200 South connection since TCSSD's has requested the ability to shift and use a certain number of their ERUs in either the 600 South or 1200 South connections.
2. It excludes existing TCSSD users since it would be difficult to go back and collect additional funds from them to pay for capacity they are using in the City's system but did not fully pay for. As the

City has expanded and modified its system downstream of the original line built by TCSSD in 600 South, the City has not collected any additional funds from TCSSD for the use of this expanded capacity; e.g. Southfield Rd, Midway Lane, etc.

3. Conservative values have been used for the flow per ERU (335 gpd/ERU) from TCSSD. If the actual flow is less, then the number of ERUs would go up which could result in the City collecting additional revenue.
4. It accommodates all the requested flow from TCSSD from both the new 1200 South and existing 600 South connections regardless of which connection TCSSD ERUs end up connecting to, up to the capacity they have requested at each connection.
5. It reimburses the City for all requested flow from both TCSSD connections for the excess capacity used in existing lines.
6. It pays for TCSSD's share of the cost to replace the existing Midway Lane 21-inch outfall line with a new 36-inch line that accommodates both TCSSD's and Charleston's requests, and collects sufficient funds to replace City's emergency capacity.

Some unknowns that were not considered in this analysis are if the City would need to bond for the construction and replacement of the 21-inch outfall line. TCSSD's fees will come in over a period of up to 60 years. The replacement line would need to be constructed in the next several years. Bonding could add \$100 to \$200 per ERU. Another unknown is TCSSD's methodology for calculating ERUs and how this could influence the fees; i.e. in the City an apartment is considered 1 ERU for sewer but TCSSD or the County may only consider an apartment as 0.5 ERUs. Future inflation of costs were also not considered.

Starting with a minimum cost per ERU of \$1,134, the City can now start discussions on whether it should only cover its costs, or if charging a higher amount is warranted to provide the City incentive for offering the service and protect the City against future unknowns. Historically the City has added a surcharge of 1.5 times what City residents pay as the amount for providing similar services outside the City. This would increase the base amount to \$1,701 per ERU which is slightly less than the City's \$1,859 impact fee that City customers currently pay to connect to the sewer system. Such a surcharge might provide an upper range for a connection fee that the City might negotiate with TCSSD in a new sewer capacity agreement.

One important consideration for the City in charging a connection fee of between \$1,134 and \$1,701 per ERU is that it could result in a minimum net additional revenue to the City of between \$2,302,181 ($\$1,134 \times 4,888 \text{ ERUs} - \$3,240,811$) and \$5,073,677 ($\$1,701 \times 4,888 \text{ ERUs} - \$3,240,811$) from TCSSD over the next 60 years. This could be a benefit to the City if it were used to pay for sewer replacements in Central Heber which are expected to be a significant expense in the years to come.

Sewer Utility Fee

The monthly sewer utility rate fee charged to TCSSD will also need to be considered as part of any request for sewer service. Heber City's current monthly charges for one single family residence consists of the following:

- Base Rate: \$18.85 per month; plus
- Volume Flow Charge: \$1.35 per thousand gallons of culinary water usage.

The monthly sewer fee Heber City currently charges TCSSD for the 600 South connection consists of the following charges:

- Annual Maintenance Charge: \$480.25 per month for Heber City's internal costs.
- ERU Charge: \$1.50 x Twin Creeks ERUs. This is a pass-through charge from HVSSD for their Capital Contingency Fund. In July 2020 it was calculated at 6,815 ERUs x \$1.50 x (1,157 TCSSD ERUs / 6,815 Total HC + TCSSD ERU's) = \$1,735.50 per month.
- Volume Flow Charge: \$0.52 per 1,000 gallons. This is a pass-through charge from HVSSD for TCSSD's metered flow into the City's system. In July 2020 it was estimated at \$0.52 per 1,000 gal x 4,500,000 gal / 1,000 gal = \$2,340 per month

Monthly sewer fees are usually derived from a variety of costs incurred by a municipality to provide sewer service. An analysis of how the City's above fees above were determined was not included in this study. The City should consider additional analysis of its sewer fees to determine if adjustments are needed to its rate to Heber City customers and those outside the City.

For additional comparison, several municipalities within the State of Utah and outside the State of Utah were contacted to collect typical rate information for customers outside the municipal boundary or service area verses rates for customers within the municipal boundary. Rates for customers outside of city limits vary from the same rate to up to two times higher than city residents and businesses within city limits. The following is a summary of those findings as of June 2020:

- Payson, Utah: charges twice the City municipal rate (note: Payson has own treatment plant)
- Saratoga Springs, Utah: would charge the same rate if they had outside customers
- Santaquin, Utah: charges twice the City municipal rate
- Farmington, Utah: charges the same rate as outside customers
- Renton, Washington: charges 1.5 times the City municipal rate

The above examples are generally applied to situations where the agency provides 100% of the sewer service to the customer. In TCSSD's case, they would still provide a portion of the service to the customer and use only a part of the City's system in transporting their flow to the HVSSD. Therefore, a custom base rate and volume flow charge will need to be determined.

Heber City will want to consider some of the following items in Twin Creek's rate analysis. The fee will need to cover all operation and maintenance costs incurred by Heber City for the affected sewer facilities in the City limits and any volume or ERU pass through charges from HVSSD. The fee will need to cover administrative costs associated with setting up contracts and coordinating with Twin Creeks, including billing. Costs for flow meters need to be considered along with installation so that the daily flow from Twin Creeks can be measured. Costs to connect meters to the City's SCADA system need to be included so that they can be easily monitored by Heber City Public Works. Any meter facilities need to be owned by Heber City. The costs for reading, maintaining, replacing, and powering meters need to

be included. The utility fee also needs to cover future sewer facility replacement costs so these are not borne totally by Heber City, along with inflation.

Summary and Recommendations

1. The Heber City SewerGEMs model shows that there is enough capacity in the existing Heber City sewer facilities, with the exception of Midway Lane, to accommodate the proposed new 1200 South connection from TCSSD and continue using the existing 600 South connection.
2. It is recommended that the City replace its existing 21-inch emergency line in Midway Lane with a new 36-inch line. The City should not eliminate its emergency capacity and redundancy available in the existing 21-inch line.
3. It is recommended that the City be reimbursed for its existing excess capacity and for the new pipeline capacity installed to meet TCSSD's request in proportion to the cost of the capacity used.
4. It is recommended that a base connection fee between \$1,134 and \$1,701 per ERU be charged for future connections. \$1,134 was determined to be the breakeven point where Heber City recovers its capital costs to provide the capacity requested. Heber City would need to develop a mechanism for tracking the actual number of ERUs that connect to TCSSD's system and to collect the connection fee for Heber City. Staff would work with TCSSD's and Wasatch County's building permit process to have the fees collected and transferred to the City or have them require proof of payment from the City before issuing a building permit. It is also recommended that this fee automatically increase annually for inflation.
5. Typical monthly sewer rates charged by other agencies were investigated for services rendered outside their municipal boundaries and found to be up to twice as much as that charged for service within their boundaries. However, these rates were generally for situations where the agency provided 100% of the sewer service to the customer and not where the agency provided transmission capacity in their system to another agency.
6. A sewer rate analysis for TCSSD was not included as part of this study and it is recommended that the City be prepared to determine the appropriate monthly TCSSD rates based on metered flow. The following items need to be considered in any proposed new rate. TCSSD's portion of HVSSD's Flow charge, HVSSD's Capital Contingency Fund charge, TCSSD's prorated portion of the City's sewer O&M costs, TCSSD's portion of the City's sewer replacement reserve charges, and inflation. A simplified approach could be to estimate a rate based on some portion of Heber City's current base rate, times TCSSD's ERUs, then adding HVSSD's pass-through charges. Another approach would be to do a detailed analysis of TCSSD's portion of Heber City's actual sewer O&M costs and combined it with the City's historical 1.5 multiplier for outside users, then add in HVSSD's pass-through charges.

Heber City Corporation
HVSSD Historical Sewer Flow Comparison

Heber City – 2020 Impact Fee Summary (effective 1-01-20)

Impact Fees

Although the total build-out of Heber City is not anticipated for many decades, proper planning of the City's public facilities should occur now. The collection of impact fees from new development is one way to offset the cost of adding and/or expanding the existing infrastructure.

Table 1-2 summarizes the impact fees for facilities including Culinary Water, Sanitary Sewer, Streets, Storm Drainage, Pressurized Irrigation and Parks and Trails. The recommended impact fees will fund the necessary improvements to the City's infrastructure that will maintain City and State standards.

Table 1-2 Summary of previous and current impact fees. (SEC. 15.16.090)

Facility	2020 Impact Fees	Units
Culinary Water: Residential	\$2,380	ERU*
Non-Residential	\$2,380	0.75-inch
	\$4,231	1.00-inch
	\$9,520	1.50-inch
	\$16,923	2.00-inch
	\$38,078	3.00-inch
	\$67,695	4.00-inch
Sanitary Sewer:	\$1,859	ERU*
Streets: Single Family	\$1,813	Dwelling Unit
Multi Family	\$1,054	Dwelling Unit
Non-Residential**	\$106	Trip Generated
Storm Drainage: Single Family	\$ 0	Dwelling Unit
Multi Family	\$ 0	Dwelling Unit
Non-Residential	\$ 0	Trip Generated
Pressurized Irrigation: Residential	\$953	ERU*
Non-Residential	\$0.14	Landscaped SF
Parks/Trails: Residential	\$735	ERU*
Total Per ERU (Typical Residential)	\$ 7,740	ERU*

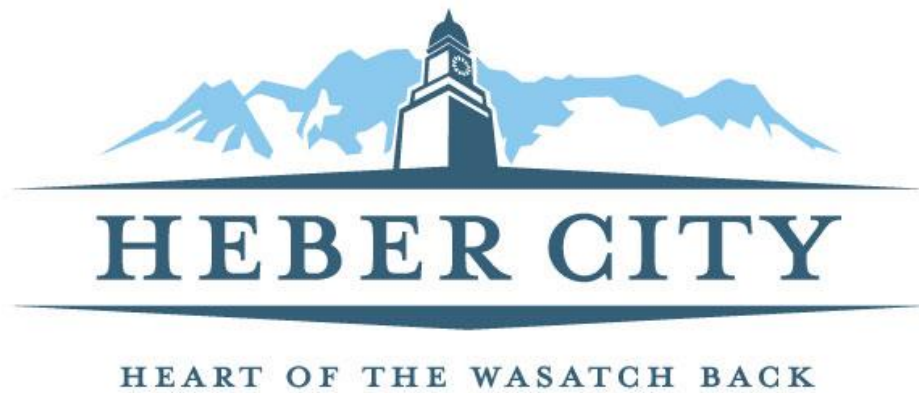
* Equivalent Residential Unit ** Subsidized by other funding *** 12/2019 ENR Index = 11,381.48

In addition to Heber City's impact fees, the City also collects a \$2,179 per ERU sewer impact fee for the Heber Valley Special Service District.

Annual Adjustment Of Impact Fees

Since population growth, property values, inflation, zoning, and other variables change from year to year and affect the cost of new public facilities, it is in the best interest of Heber City to ensure that the impact fees are adjusted periodically.

The City has adopted a policy that indexes the cost of improvements to inflation and automatically adjusts impact fees. The index used is the Engineering News Record (ENR) 20 City Construction Cost Index. The ENR December 2017 index of 10,870.06 will be deemed the base index. An annual adjustment to fees will be made each January 1st based on the percentage change between the December 2017 index and the December index proceeding the current year.



**HEBER CITY SEWER CONNECTION FEE STUDY FOR
CUSTOMERS OUTSIDE CITY LIMITS
SEWER CAPACITY AND FEE
ANALYSIS FOR CHARLESTON
CONNECTIONS**

Project Number: 20-005

Prepared For: Heber City Corporation

Prepared By: Horrocks Engineers

Date: August 27, 2021

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Table 1: Sewer Model Information from Charleston Loading at South Field Road

Table 2: Existing Percent Full and Future Percent Full w/ Charleston South Field Road Connection

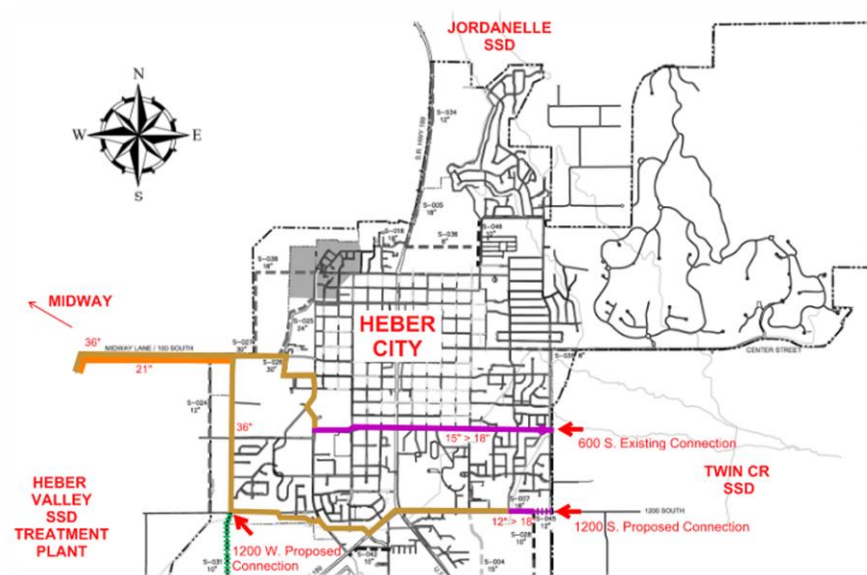
Table 3: Charleston Proportional Share Replacement Costs per ERU

Introduction

The Heber City Sewer System is designed to handle the existing and future demand of its customers. Capital Improvement Projects are strategically planned to upsize existing facilities or install new facilities to accommodate proposed growth and increased demand on the City's facilities. The Heber City Sewer Master Plan is periodically updated to include new population growth projections, development and annexation areas, proposed capital improvements, and funding mechanisms. The Sewer Master Plan will not be updated with this study, but information available in the current plan will be considered to determine the recommendations for this study.

Heber City does not currently provide a sewer connection to Charleston. The purpose of this study is to determine the feasibility of providing a sewer connection to Charleston at South Field Road and 1200 South. Figure 1 shows the connection point and flow path through the City.

Figure 1: Sewer Line Location Map



This study will complete the following items:

- Check the capacity of the existing Heber City facilities that would be impacted by a proposed Charleston connection at South Field Road. Use the Bentley SewerGEMs program and the existing Heber City sewer model to complete the analysis. Create spreadsheets showing the capacity available and utilized in the City lines.
- Determine the average flow rate per Equivalent Residential Unit (ERU) to analyze the connections. Determine the peaking factor. Acknowledge how a sewer lift station may affect the assumed peaking factor.
- Analyze the proportional replacement costs of the existing Heber City sewer facilities impacted by Charleston's connection. Estimate a connection fee per ERU based on Charleston's share of the facilities utilized.

- Compare the estimated connection fee per ERU with Heber City's current impact fees.
- Provide data to estimate a reasonable monthly utility fee for the Charleston connection.
- Summarize the findings.

Sewer Model and Capacity Analysis

A sewer model analysis was completed for the proposed Charleston connection at approximately 1200 South and South Field Road (1200 West). The Heber City Bentley SewerGEMs future sewer model was checked after loading 1200 ERUs (335 gpm with 2.5 peaking factor) into the City's manhole on South Field Road. As expected, the new loading at South Field Road increased the flow in the City's existing sewer lines in Southfield Road and in the City's Midway Lane outfall line. Table 1 below lists the roads and flow information for the City sewer lines impacted by a new connection at South Field Road.

Table 1: Sewer Model Information from Charleston Loading at South Field Road

Road	ID	Label	Length (ft)	Slope (%)	Diameter (in)	Velocity (ft/s)	Full Flow Capacity (gpd)	Flow (gpd)	Flow / Design Capacity (% Full)	Notes
South Field Road	1395	P-769	202.7	0.62	36	7.2	44,148,686	7,385,099	16.7	
South Field Road	1396	P-770	238.9	0.62	36	7.2	44,097,344	7,351,599	16.7	
South Field Road	1410	P-1226	130	0.5	36	6.6	39,624,658	7,426,136	18.7	
South Field Road	1411	P-1227	221.2	0.5	36	6.6	39,534,908	7,426,136	18.8	
South Field Road	1421	P-1224	250	0.46	36	6.5	38,171,526	7,485,456	19.6	
South Field Road	1422	P-1225	245.2	0.52	36	6.8	40,345,894	7,498,856	18.6	
South Field Road	1432	P-758	130	2.32	36	11.5	85,410,708	7,508,906	8.8	
South Field Road	1433	P-759	150.2	0.39	36	6.1	35,144,786	7,508,906	21.4	
South Field Road	1436	P-1222	249.6	0.63	36	7.3	44,549,114	7,540,731	16.9	
South Field Road	1437	P-1223	270.4	0.48	36	6.6	38,734,103	7,654,631	19.8	
South Field Road	1613	P-768	296.3	0.22	36	5	26,259,796	7,811,327	29.7	
South Field Road	1614	P-751	400	0.31	36	5.7	31,326,043	7,769,453	24.8	
South Field Road	1615	P-752	399.7	0.26	36	5.3	28,436,042	7,769,453	27.3	
South Field Road	1616	P-753	399.9	0.31	36	5.7	31,451,098	7,766,103	24.7	
South Field Road	1617	P-754	399.9	0.29	36	5.6	30,307,036	7,762,753	25.6	
South Field Road	1618	P-755	399.9	0.28	36	5.5	29,652,379	7,762,753	26.2	
South Field Road	1619	P-756	399.8	0.38	36	6.1	34,315,961	7,726,907	22.5	
South Field Road	3784	P-761(1)	230.4	0.52	36	6.7	40,307,893	7,427,811	18.4	
South Field Road	3785	P-761(2)	76.9	0.52	36	6.8	40,389,192	7,468,849	18.5	
Midway Lane	1604	P-767	433.1	1.37	21	5.9	11,983,914	2,235,619	18.7	Includes TC @ 600 S
Midway Lane	1605	P-687	393.4	1.64	21	6.3	13,129,110	2,235,619	17	Includes TC @ 600 S
Midway Lane	1606	P-688	402.5	0.7	21	4.6	8,566,183	2,235,619	26.1	Includes TC @ 600 S
Midway Lane	1607	P-689	401	0.5	21	4.1	7,231,995	2,235,619	30.9	Includes TC @ 600 S
Midway Lane	2207	P-1252	41.6	4.84	36	18	123,309,814	14,150,376	11.5	Includes TC @ 600 S
Midway Lane	2209	P-1253	74.2	2.42	36	14	87,154,775	14,150,376	16.2	Includes TC @ 600 S
Midway Lane	2211	P-1254	330.5	1.1	36	10.6	58,764,795	14,150,376	24.1	Includes TC @ 600 S
Midway Lane	2215	P-1256	395.4	0.8	36	9.5	50,121,669	14,280,188	28.5	Includes TC @ 600 S
Midway Lane	2217	P-1257	364.1	0.66	36	8.8	45,502,521	14,280,188	31.4	Includes TC @ 600 S
Midway Lane	2219	P-1258	394.2	0.16	36	4.2	17,291,541	14,280,188	82.6	Includes TC @ 600 S
Midway Lane	2223	P-1260	86.2	0.14	36	4.9	20,932,540	14,258,120	68.1	Includes TC @ 600 S
Midway Lane	2225	P-1261	394.7	0.14	36	4	16,084,960	14,258,120	88.6	Includes TC @ 600 S
Midway Lane	2227	P-1262	394.1	0.14	36	4	16,105,359	14,258,120	88.5	Includes TC @ 600 S
Midway Lane	2229	P-1263	394.7	0.14	36	4	16,084,960	14,258,120	88.6	Includes TC @ 600 S
Midway Lane	2231	P-1264	183.3	0.14	36	4	16,247,940	14,258,120	87.8	Includes TC @ 600 S
Midway Lane	2234	P-1266	288	0.14	36	4	16,064,637	14,258,120	88.8	Includes TC @ 600 S

Sewer Capacity & Fee Analysis for Charleston

Road	ID	Label	Length (ft)	Slope (%)	Diameter (in)	Velocity (ft/s)	Full Flow Capacity (gpd)	Flow (gpd)	Flow / Design Capacity (% Full)	Notes
Midway Lane	2245	P-1274	364.9	0.14	21	1.4	3,827,842	2,235,619	58.4	Includes TC @ 600 S
Midway Lane	2247	P-1276	32	0.36	36	5.8	25,931,899	14,280,188	55.1	Includes TC @ 600 S
Midway Lane	2248	P-1277	33.3	0.14	36	4	16,292,516	14,258,120	87.5	Includes TC @ 600 S
Midway Lane	2250	P-1278	223.4	0.14	36	4	16,071,840	14,258,120	88.7	Includes TC @ 600 S
Midway Lane	2252	P-1279	244.2	0.14	36	4	16,090,951	14,258,120	88.6	Includes TC @ 600 S
Midway Lane	2254	P-1280	343.6	0.14	36	4	16,268,818	14,258,120	87.6	Includes TC @ 600 S
Midway Lane	2256	P-1281	203.7	0.14	36	4.9	20,760,818	14,258,120	68.7	Includes TC @ 600 S
Midway Lane	2258	P-1282	251.2	0.14	36	3.9	15,917,925	14,258,120	89.6	Includes TC @ 600 S
Midway Lane	2260	P-1283	52.6	0.14	36	3.9	15,866,494	14,317,586	90.2	Includes TC @ 600 S
Midway Lane	2262	P-1284	332.9	0.14	36	4	16,104,532	14,317,586	88.9	Includes TC @ 600 S
Midway Lane	2264	P-1285	305.8	0.14	36	4	16,098,621	14,317,586	88.9	Includes TC @ 600 S
Midway Lane	2271	P-1289	2,095.90	0.15	21	2.6	3,919,123	2,257,687	57.6	Includes TC @ 600 S
Midway Lane	2273	P-1290	458.8	0.1	21	1.5	3,241,812	2,257,687	69.6	Includes TC @ 600 S
Midway Lane	2275	P-1291	462.1	0.1	21	1.5	3,231,270	2,257,687	69.9	Includes TC @ 600 S
Midway Lane	2276	P-1292	47.3	0.1	21	1.5	3,238,287	2,257,687	69.7	Includes TC @ 600 S
Midway Lane	2277	P-1293	656.4	0.14	21	2.5	3,793,016	2,198,221	58	Includes TC @ 600 S
Midway Lane	2280	P-1294	61.1	0.2	36	4.7	19,277,565	16,515,807	85.7	Includes TC @ 600 S
Midway Lane	2949	P-1634	271.2	1.39	36	11.5	66,067,508	14,150,376	21.4	Includes TC @ 600 S
Midway Lane	2950	P-1635	128.8	1.39	36	11.5	66,067,508	14,280,188	21.6	Includes TC @ 600 S

Additional checks were also done on the lines downstream of the South Field connection to get a better understanding of any limitations in Heber's system below the new connection.

The future sewer model showed that there is existing capacity in the City sewer lines that could be used by Charleston for a new connection at South Field Road and 1200 South. However, this connection would push several of the City's lines in Midway Lane to their maximum capacities. Maximum capacity is defined as 75% full and is the level of service set by the City in its sewer master plans. In the model, the City's existing 36-inch line in Midway Lane would increase to 88.9% full and the emergency 21-inch outfall line would increase to 69.9% full (which includes the Twin Creeks Connections), which fails to meet the City's level of service criteria. This assumes the City provides capacity of up to 3,310 gpm (peak) to Twin Creeks Special Service District (TCSSD).

To further explain, the 21-inch line was taken out of service by the City in 2011. This line is an older concrete line that was excluded in the City's master plan capacity analyses due to its age and the maintenance needed to continue using it for full time operation. It was anticipated that the 21-inch line would only be used for temporary or emergency situations to divert flow from the newer 36-inch line and avoid by-pass pumping which would reduce the City's costs. This line provides an emergency overflow for the City should the 36-inch line become plugged or damaged. If the 21-inch line were rehabilitated and reused on a permanent basis to provide capacity for users outside the City, it would eliminate the City's emergency capacity and redundancy. This option is not recommended as a permanent solution for providing capacity to users outside the City.

With the proposed growth in the City and the proposed Charleston connection, it is recommended that if the City does provide or expand its service to users outside the City, the existing 21-inch line be replaced and upsized to 36-inches. The line needs to be large enough to handle not only Charleston's capacity request, but also the existing and additional capacity requested by TCSSD, and the emergency capacity the City has in the existing 21-inch line. It is also recommended that prior to replacing the 21-inch line, the City confirm there are no other future capacity needs that would increase it above 36-inches since it would be difficult to construct a third line down Midway Lane in the same alignment.

The following calculation was used to estimate the size of line needed to replace the 21-inch line for this study:

- $N=0.013$ and Slope = 0.14%
- Heber City Existing 21-inch Emergency Capacity @ 100% full = 2,661 gpm
- Charleston Capacity Request @ 75% full = 1200 ERUs x 335 gpd/ERU = 698 gpm (peak)
- Twin Creeks Existing Capacity @ 75% full = 2,494 gpm (peak)
- Twin Creeks Total Capacity Request @ 75% full = 3,310 gpm (peak)
- Total Capacity of New Line @ 75% full = 6,669 gpm which requires at least a 36-inch line

Sewer Facility Study

The sewer facilities within Heber City, including the outfall lines along Midway Lane, are owned, operated, and maintained by the City. These facilities have been sized according to the most recent growth and annexation information available when the Master Plan and Capital Improvement plans were updated in 2018. As specific facilities are designed and constructed, the size of each facility is checked again to ensure their capacity will handle projected future growth. Over time, the location and density of the growth can change, along with annexation boundaries, which can affect the size and location of facilities. These changes result in some facilities having excess capacity while others may be undersized and need upsizing to accommodate the City's changing needs.

The Charleston connection would utilize some of the excess capacity in Heber City's existing sewer lines in South Field Road. Table 2 below shows the location of the sewer facilities that would be impacted from South Field Road to the HVSSD treatment plant. The table shows the percent of capacity in these lines without the Charleston flow, and the projected percent full with the Charleston flow included. The future Charleston flow at the South Field Road connection was modeled using the requested loading of 1200 ERU's (698 gpm).

Table 2: Existing Percent Full and Future Percent Full w/ Charleston South Field Road Connection

Location	Size (in)	Length (ft)	% Full w/o Charleston	% Full w/Charleston Connection at 1200 S & SF Rd	% Full Increase
South Field Road	36	5091	15.0%	18.8%	3.8%
Midway Lane (existing)	36	5220	58.8%	72.9%	14.1%

Table 2 shows that the existing 36-inch line in South Field Road could easily accommodate Charleston's sewer request. It also shows that if there was not an existing connection with TCSSD at 600 South the Midway Lane outfall line could also accommodate Charleston's flows. With the existing and new TCSSD connections added, however, the existing 36-inch Midway Lane outfall line exceeds the City's criteria, reaching over 100% full, assuming no capacity is used in the existing 21-inch emergency line. The 2,494 gpm loading from TCSSD will continue in the future if their contract is extended, or increase if their additional capacity request is approved by the City.

It is noted that in Table 1 of the previous section that the combined capacities of the 36-inch and 21-inch lines in Midway Lane were used in the model to determine the maximum capacity from all facilities

that could potentially be available to the City. Table 1 shows that unless the City forfeits its emergency backup capacity, or upsizes the 21-inch Midway Lane outfall line to help meet Charleston and TCSSD's existing 600 South needs, the lines will fail to meet the City's 75% full criteria.

Equivalent Residential Unit Flow

Equivalent Residential Units (ERUs) are used in determining flow and estimating fees for new development. For the purpose of this analysis, the average amount of flow generated by a typical single family home or ERU was determined after reviewing information from Heber City's sewer master plan, HVSSD flow data, and State sewer design criteria.

State sewer design guidelines call for sewer systems to be designed using 100 gpd per person or 335 gpd/ERU for the Heber Area. For the purposes of this analysis, and to be conservative, the state guideline of 335 gpd/ERU was used to determine future ERUs throughout the study. This insured consistency in the modeling assumptions and that the City does not under collect fees for providing service. It is important that the City be conservative in its assumptions since it does not control how ERU's are estimated outside the City nor how the system is operated which could introduce other unknowns.

Sewer Connection Fee

The pipeline information in Table 2 in the previous section was expanded in Table 3 below to show the estimated cost per ERU for Charleston to use City sewer lines affected by a new connection at South Field Road and 1200 South. The table lists the percent full increases for each pipeline, the estimated cost to replace the excess or new capacity used in the lines, and Charleston's proportion of the cost. The Midway Lane outfall line in the table also includes the additional flow requested by TCSSD so that Charleston's proportionate share of the line is shown correctly.

As stated in the Sewer Model and Capacity Analysis section, it was assumed that the 21-inch outfall line would be replaced with a 36-inch line. This would maintain the City's emergency backup capacity and accommodate Charleston's and TCSSD's requested flows. The following data was used to calculate the proportionate costs to replace the 21-inch line:

- Charleston Estimated Flow: 1,200 ERUs = 698 gpm
- TCSSD Estimated Flow: 3,310 gpm
- Total Flow in new 36-inch outfall line: 4,008 gpm (Twin Creeks plus Charleston)
- Heber City 21-inch Emergency Backup Line: 2,661 gpm
- Percent of 36-inch Flow from TCSSD 1200 South and 600 South: $3,310 \text{ gpm} / 4,008 \text{ gpm} = 82.6\%$
- Percent of 36-inch Flow from Charleston: $698 \text{ gpm} / 4,008 \text{ gpm} = 17.4\%$

The cost per foot is an estimate of how much the capacity in a line is worth in today's dollars. It represents total design and construction cost if the requested capacities were installed today. The proportionate cost represents the net value of the capacity that Charleston would use in the City's system for the proposed South Field Road connection at 1200 South.

Table 3: Charleston Proportional Share Replacement Costs per ERU

Location	Size (in)	Length (ft)	% Full w/o Charleston	% Full w/Charleston Connection at 1200 S & SF Rd	% Full Increase	% of Capacity at 75% Full	Estimated Cost Per Foot (\$)²	Proportionate Costs⁴
South Field Road	36	5091	15.0%	18.8%	3.8%	5.1%	\$600	\$154,766
Midway Lane (New)³	36	5605	30.0%	38.0%	8.0%	17.4%	\$700	\$682,689
1. Outfall line is 38% full including Heber City redundant capacity needs.								\$837,455
2. Cost Estimate includes total cost of facility and surface restoration (rough estimate only)								
3. 36 inch line is needed to handle Twin Creeks, Charleston, and Heber City redundant capacity.								\$129
4. The outfall line cost is only Charleston's portion of replacing the 21 inch line with a 36 inch line.								\$569
5. % Full only includes the capacity that is needed, not capacity of the entire line.								
Total								\$837,455
ERU's								1,200
Cost Per ERU								\$698
Part A (Midway Lane 36" Cost of Construction)								\$569
Part B (Buy-in)								\$129

The calculation of the future Charleston's ERUs that would be available to pay for the excess capacity and outfall line replacement is shown below:

Charleston's Future ERUs

- Total Flow allowed by Charleston (peaked at 2.5): 698 gpm
- 698 gpm / 2.5 (peaking factor) = 279 gpm
- 279 gpm x 60 min per hr x 24 hrs per day = 402,000 gpd
- 402,000 gpd / 335 gpd per ERU = 1,200 ERUs
- Total Future ERUs Added to City's System: 1,200 ERUs

Table 3 uses a proportional cost analysis approach to estimate the maximum cost to the City for providing capacity to Charleston and the resulting fee that would need to be collected. This fee would be a minimum for the City to consider for providing service to cover its costs and not subsidize or risk under collecting funds. The following points also need to be considered when establishing the fee and what multiplier needs to be added to the calculated minimum rate:

1. A total of 1200 ERUs have been requested by Charleston. This ERU value could be less depending on approved development in Charleston. Lower ERU values may result in less funds collected over time from Charleston. In addition, the City needs to consider if they would allow additional ERUs from Charleston and how this may or may not affect the capacity in the lines which is solely dependent on the actual gallons per ERU coming from the Charleston connection.
2. All sewer lines, lift stations, and facilities outside the Charleston connection point at South Field Road and 1200 South will be owned, operated, and maintained solely by Charleston. Heber City will not have any responsibility for lines outside the connection point.
3. The actual peaking factor in the South Field Road line may vary depending on how much existing flow is in the line and peak flow that discharges from the Charleston lift station when the pump turns on. The actual peaking factor for South Field road may need to be adjusted in the sewer model later as more information from the proposed future lift station is provided. If the lift station utilizes more capacity than what has been estimated with the 2.5 peaking factor, the Charleston proportionate share and replacement costs may need to be adjusted. A higher peaking factor would result in a higher fee.

4. The peaking factor is estimated to be 2.5 in the Midway Lane Outfall line.
5. Conservative values have been used for the flow per ERU (335 gpd/ERU) from Charleston.
6. The minimum cost per ERU in Table 3 reimburses the City for all the flow from the new Charleston connection for the excess capacity used in existing lines as long as the ERU value is not reduced and the peaking factor does not go up due to the sewer lift station.
7. The minimum cost per ERU in Table 3 pays for Charleston's share of the cost to replace the existing Midway Lane 21-inch outfall line with a new 36-inch line that accommodates both TCSSD's and Charleston's requests, and collects sufficient funds to replace City's emergency capacity.

Some unknowns that were not considered in this analysis are if the City would need to bond for the construction and replacement of the 21-inch outfall line. Charleston's fees will come in over a period of up to 60 years. The replacement line would need to be constructed in the next several years. Bonding could add \$100 to \$200 per ERU. Another unknown is Charleston's methodology for determining how many ERUs are really needed and how this could influence the fees; i.e. in the City an apartment is considered 1 ERU for sewer but Charleston may only consider an apartment as 0.5 ERUs. Future inflation of costs were also not considered.

Starting with a minimum cost per ERU amount of \$698, the City can now start discussions on whether it should only cover its costs, or if charging a higher amount is warranted to provide the City incentive for offering the service and protect the City against unknowns. Historically the City has added a surcharge of 1.5 times what City residents pay as the amount for providing similar services outside the City. This would increase the base amount to \$1,047 per ERU which is still much lower than the City's \$1,859 impact fee that City customers currently pay to connect to the sewer system. The current impact fee should provide the upper range for a connection fee that the City would negotiate with Charleston in a new sewer connection agreement.

One important consideration for the City in charging a connection fee of between \$698 and \$1,859 per ERU is that it could result in a minimum net additional revenue to the City of between \$154,911 ($\$698 \times 1,200 \text{ ERUs} - \$682,689$) and \$1,548,111 ($\$1,859 \times 1,200 \text{ ERUs} - \$682,689$) from Charleston over the next 60 years. This could be a benefit to the City if it were used to pay for sewer replacements in Central Heber which are expected to be a significant expense in the years to come.

Sewer Utility Fee

The monthly sewer utility rate fee charged to Charleston will also need to be considered as part of any request for sewer service. Heber City's current monthly charges for one single family residence consists of the following:

- Base Rate: \$18.85 per month; plus
- Volume Flow Charge: \$1.35 per thousand gallons of culinary water usage.

The monthly sewer fee that Heber City would charge to outside customers must consider the following costs to the City:

- Maintenance Charges for use of the City lines.
- HVSSD ERU fee for their Capital Contingency Fund: The fee from HVSSD is currently \$1.50 per ERU. This would be a pass-through charge from HVSSD for their Capital Contingency
- HVSSD Volume Flow Charge: The fee from HVSSD is currently \$0.52 per 1,000 gallons. This would need to be a pass-through charge from HVSSD.

Monthly sewer fees are usually derived from a variety of costs incurred by a municipality to provide sewer service. An analysis of how the City's above fees above were determined was not included in this study. The City should consider additional analysis of its sewer fees to determine if adjustments are needed to its rate to Heber City customers and those outside the City.

For additional comparison, several municipalities within the State of Utah and outside the State of Utah were contacted to collect typical rate information for customers outside the municipal boundary or service area verses rates for customers within the municipal boundary. Rates for customers outside of city limits vary from the same rate to up to two times higher than city residents and businesses within city limits. The following is a summary of those findings as of June 2020:

- Payson, Utah: charges twice the City municipal rate (note: Payson has own treatment plant)
- Saratoga Springs, Utah: would charge the same rate if they had outside customers
- Santaquin, Utah: charges twice the City municipal rate
- Farmington, Utah: charges the same rate as outside customers
- Renton, Washington: charges 1.5 times the City municipal rate

The above examples generally apply to situations where the agency provides 100% of the sewer service to the customer. In Charleston's case, they would still provide a portion of the service to the customer and use only a part of the City's system to transporting their flow to the HVSSD. Therefore, a custom base rate and volume flow charge will need to be determined.

Heber City will want to consider some of the following items in Charleston's rate analysis. The fee will need to cover all operation and maintenance costs incurred by Heber City for the affected sewer facilities in the City limits and any volume or ERU pass through charges from HVSSD. The fee will need to cover administrative costs associated with setting up contracts and coordinating with Charleston, including billing. Costs for flow meters need to be considered along with installation so that the daily flow from Charleston can be measured. Costs to connect meters to the City's SCADA system need to be included so that they can be easily monitored by Heber City Public Works. Any meter facilities need to be owned by Heber City. The costs for reading, maintaining, replacing, and powering meters need to be included. The utility fee also needs to cover future sewer facility replacement costs so these are not borne totally by Heber City, along with inflation.

Summary and Recommendations

1. The Heber City SewerGEMs model shows that there is enough capacity in the existing Heber City sewer facilities, with the exception of lines in Midway Lane, to accommodate the proposed new connection from Charleston at South Field Road.
2. It is recommended that the City replace its existing 21-inch emergency line in Midway Lane with a new 36-inch line. The City should not eliminate its emergency capacity and redundancy available in the existing 21-inch line.
3. It is recommended that the City be reimbursed for its existing excess capacity and for the new pipeline capacity installed to meet Charleston's request in proportion to the cost of the capacity used.
4. It is recommended that a base connection fee between \$698 and \$1,859 per ERU be charged for future connections. \$698 was determined to be the breakeven point where Heber City recovers its capital costs to provide the capacity requested if the peaking factor from the lift station is at or lower than 2.5 and the number of ERU's is at least 1200. Heber City would need to develop a mechanism for tracking the actual number of ERUs that connect to Charleston's system and to collect the connection fee for Heber City. Staff would work with Charleston's building permit process to have the fees collected and transferred to the City or have them require proof of payment from the City before issuing a building permit. It is also recommended that this fee automatically increase annually for inflation.
5. Typical monthly sewer rates charged by other agencies were investigated for services rendered outside their municipal boundaries and found to be up to twice as much as that charged for service within their boundaries. However, these rates were generally for situations where the agency provided 100% of the sewer service to the customer and not where the agency provided transmission capacity in their system to another agency.
6. A sewer rate analysis for Charleston was not included as part of this study and it is recommended that the City be prepared to determine the appropriate monthly Charleston rate based on metered flow. The following items need to be considered in any proposed new rate. Charleston's portion of HVSSD's Flow charge, HVSSD's Capital Contingency Fund charge, Charleston's prorated portion of the City's sewer O&M costs, Charleston's portion of the City's sewer replacement reserve charges, and inflation. A simplified approach could be to estimate a rate based on some portion of Heber City's current base rate, times Charleston's ERUs, then adding HVSSD's pass-through charges. Another approach would be to do a detailed analysis of Charleston's portion of Heber City's actual sewer O&M costs and combined it with the City's historical 1.5 multiplier for outside users, then add in HVSSD's pass-through charges.

Appendix

Heber City Corporation
HYSSD Historical Sewer Flow Comparison

State NonRes NonRes
gpd/ERU ERU/Conn gpd/Conn
335 3.6 1,206.0

YEAR	Monthly Average Flow (MG/MONTH)												MG/YR		ERU's			GPD/ERU (w/o TWIN CREEKS)				
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	TCSSD	TOTAL W/O TCSSD	RES	NON RES	TOTAL	AVG	MIN	MAX	% Infiltration
2014	30.564	26.748	27.767	26.847	29.601	30.32	32.354	32.85	29.843	29.307	26.989	28.168	351.358	40.900	310.756	3503	1266	4,769	178	164	199	17.4%
2015	28.783	26.243	29.38	28.571	33.401	30.396	32.462	32.64	31.485	30.31	28.729	30.056	362.456	42.700	319.756	3664	1364	5,028	174	161	191	15.9%
2016	30.41	29.145	31.372	29.401	33.277	34.145	33.773	33.899	31.998	30.737	29.599	32.037	379.793	45.000	334.793	3775	1478	5,253	175	163	193	15.6%
																		3 Yr Avg	176	163	194	16.2%

YEAR	Average Day Flow for Month with TwinCr (MGD)												Avg Yr. MGD	Min MGD	Max MGD	Infiltration %
	JAN avg	FEB avg	MAR avg	APR avg	MAY avg	JUN avg	JUL avg	AUG avg	SEP avg	OCT avg	NOV avg	DEC avg				
1996	0.5170	0.5434	0.5108	0.5031	0.6983	0.8599	1.0843	1.0532	0.7167	0.5346	0.5433	0.5031	0.6776	0.5031	1.0843	53.60%
1997	0.5740	0.5584	0.6066	0.5535	0.6818	0.9138	1.0237	0.9913	0.7613	0.5846	0.5784	0.6001	0.7024	0.5535	1.0237	45.93%
1998	0.5896	0.5764	0.5747	0.5487	0.6724	0.8473	1.2635	1.2774	0.9583	0.5971	0.5400	0.5608	0.7505	0.5400	1.2774	57.73%
1999	0.5844	0.5880	0.5716	0.5651	0.6281	0.9176	1.1121	1.1200	0.8740	0.6659	0.7083	0.7270	0.7552	0.5651	1.1200	49.55%
2000	0.7356	0.7561	0.7147	0.6771	0.8085	1.1813	1.1115	0.8634	0.7985	0.7439	0.7846	0.8044	0.8316	0.6771	1.1813	42.68%
2001	0.8476	0.7152	0.7115	0.6943	0.7682	0.8159	0.8340	0.8586	0.8102	0.7136	0.7679	0.9603	0.7914	0.6943	0.9603	27.70%
2002	0.7895	0.8461	0.7808	0.7799	0.7491	0.8541	0.8804	0.8485	0.9242	0.8907	0.8325	0.8306	0.8506	0.7491	1.0485	28.56%
2003	0.8087	0.8141	0.7624	0.7451	0.8311	0.9060	0.9461	0.9466	0.9256	0.8829	0.9083	0.9138	0.8673	0.7451	0.9466	21.29%
2004	0.9593	1.0388	0.8874	0.8208	0.8547	0.8933	0.9248	0.9236	0.9256	0.8788	0.9060	0.9283	0.9118	0.8208	1.0388	20.99%
2005	0.9685	0.9090	0.8871	0.9292	0.9880	1.0712	1.0515	1.0348	1.0135	0.9339	0.9227	0.9667	0.9763	0.8871	1.0712	17.18%
2006	0.9997	0.9669	0.9577	1.2058	1.1463	1.1880	1.0769	1.0805	1.0778	1.0094	0.9945	1.0169	1.0655	0.9669	1.2058	19.82%
2007	1.0165	1.0406	1.1465	1.1238	1.1662	1.0979	1.0648	1.0745	1.0450	0.9924	0.9926	0.9988	1.0634	0.9924	1.1662	14.90%
2008	1.0234	1.0648	1.0736	1.1171	1.1027	1.2087	1.1105	1.0832	1.0737	1.0065	1.0512	1.0120	1.0772	1.0065	1.2087	16.73%
2009	1.0503	1.0359	1.1152	1.1510	1.2358	1.1705	1.0751	1.0538	1.0758	1.0061	1.0288	1.0216	1.0850	1.0061	1.2358	18.59%
2010	1.0184	0.9894	0.9881	1.1037	1.0722	1.2897	1.0345	1.0447	1.0917	1.0484	1.0202	1.0919	1.0593	0.9881	1.2897	18.25%
2011	1.0307	1.0322	1.2666	1.3827	1.4427	1.8963	1.4374	1.2691	1.2187	1.1264	1.1917	1.1811	1.2896	1.0307	1.8963	45.65%
2012	1.1483	1.1782	1.1501	1.1138	1.2384	1.1430	1.1607	1.1891	1.1821	1.1083	1.1524	1.1627	1.1605	1.1093	1.2384	10.28%
2013	1.1564	1.1834	1.3745	1.1484	1.1076	1.1049	1.0947	1.0472	1.0680	0.8692	0.8549	0.9215	1.0775	0.8549	1.3745	37.81%
2014	0.9859	0.9553	0.9857	0.9849	0.9548	1.0107	1.0437	1.0597	0.9948	0.9454	0.8996	0.9086	0.9624	0.8949	1.0597	15.55%
2015	0.9285	0.9373	0.9477	0.9524	1.0775	1.0132	1.0472	1.0529	1.0495	0.9777	0.9576	0.9695	0.9926	0.9285	1.0775	13.83%
2016	0.9810	1.0409	1.0120	0.9800	1.0735	1.1382	1.0895	1.0935	1.0666	0.9915	0.9866	1.0335	1.0406	0.9800	1.1382	13.89%
10 YR AVE													1.0808	0.3791	1.2602	20.55%

Heber City – 2020 Impact Fee Summary (effective 1-01-20)

Impact Fees

Although the total build-out of Heber City is not anticipated for many decades, proper planning of the City's public facilities should occur now. The collection of impact fees from new development is one way to offset the cost of adding and/or expanding the existing infrastructure.

Table 1-2 summarizes the impact fees for facilities including Culinary Water, Sanitary Sewer, Streets, Storm Drainage, Pressurized Irrigation and Parks and Trails. The recommended impact fees will fund the necessary improvements to the City's infrastructure that will maintain City and State standards.

Table 1-2 Summary of previous and current impact fees. (SEC. 15.16.090)

Facility	2020 Impact Fees	Units
Culinary Water: Residential	\$2,380	ERU*
Non-Residential	\$2,380	0.75-inch
	\$4,231	1.00-inch
	\$9,520	1.50-inch
	\$16,923	2.00-inch
	\$38,078	3.00-inch
	\$67,695	4.00-inch
Sanitary Sewer:	\$1,859	ERU*
Streets: Single Family	\$1,813	Dwelling Unit
Multi Family	\$1,054	Dwelling Unit
Non-Residential**	\$106	Trip Generated
Storm Drainage: Single Family	\$ 0	Dwelling Unit
Multi Family	\$ 0	Dwelling Unit
Non-Residential	\$ 0	Trip Generated
Pressurized Irrigation: Residential	\$953	ERU*
Non-Residential	\$0.14	Landscaped SF
Parks/Trails: Residential	\$735	ERU*
Total Per ERU (Typical Residential)	\$ 7,740	ERU*

* Equivalent Residential Unit ** Subsidized by other funding *** 12/2019 ENR Index = 11,381.48

In addition to Heber City's impact fees, the City also collects a \$2,179 per ERU sewer impact fee for the Heber Valley Special Service District.

Annual Adjustment Of Impact Fees

Since population growth, property values, inflation, zoning, and other variables change from year to year and affect the cost of new public facilities, it is in the best interest of Heber City to ensure that the impact fees are adjusted periodically.

The City has adopted a policy that indexes the cost of improvements to inflation and automatically adjusts impact fees. The index used is the Engineering News Record (ENR) 20 City Construction Cost Index. The ENR December 2017 index of 10,870.06 will be deemed the base index. An annual adjustment to fees will be made each January 1st based on the percentage change between the December 2017 index and the December index proceeding the current year.

Heber City, Twin Creeks, and Charleston Agreement for Shared Waste Water Delivery and Facilities

Agreement for the establishment, maintenance and repair of a new Sewer Line and Facilities, (Agreement), administered by, through and between Heber City, a Municipal Corporation (City), Twin Creeks Special Service District (TCSSD) and the Town of Charleston, a Municipal Corporation (Charleston). The purpose of this Agreement is to make available Heber City's sewer system capacity and build new Facilities to transport waste water to the Heber Valley Special Service District (District).

1. **Counter Parties.** The Parties to this Agreement are:
 - A. Heber City, Utah, a Municipal Corporation (City)
 - B. Twin Creeks Special Services District (TCSSD)
 - C. Town of Charleston, Utah, a Municipal Corporation (Charleston)
2. **Services to be Provided.** City agrees to furnish to TCSSD and Charleston, and users agree to utilize and pay for the following:
 - A. Use of City sewer conveyance system to transport the User's wastewater from the User's system to Heber Valley Special Services District (HVSSD).
 - B. Construction of additional sewer capacity on Midway Lane by constructing new 36" line and abandoning existing 21" line.
3. **Term.** This Contract shall be in full force and continue in effect for a term of forty (40) years, with Users' options for two additional terms of twenty (20) years each.
4. **Definitions.**
 - A. Users: TCSSD and Charleston
 - B. Facilities:
 - 1) Facilities. Refers to Existing Shared Facilities and Future Shared Facilities.
 - 2) Existing Shared Facilities. Existing Shared Facilities are all City owned facilities shared by the users and existing as of the date of this Agreement. Refer to Exhibit A for complete list of Existing Shared Facilities.
 - 3) Independent Facilities. Independent Facilities are those built and exclusively owned by a single user and connect to City's Existing Shared Facilities. All connection points and associated meters are owned by City.
 - a. TCSSD Independent Facilities. Facilities owned by TCSSD with two proposed connections to City Facilities. An existing connection at 600 S. and Mill Road and a new connection at 1200 S. and Mill Road.
 - b. Charleston Independent Facilities. Facilities owned by Charleston with a single connection to City Facilities at approximately 1200 West and 1200 South.
 - 4) Future Shared Facilities. Future Shared Facilities are all City owned facilities shared by the users and constructed after the date of this Agreement with capacity used by the Users and City. City shall construct and own the Future Shared Facilities, but TCSSD and Charleston shall pay the cost of construction. Future Shared Facilities include a new 36" sewer line to be built on Midway Lane. The new 36" line is to replace City's existing 21" line dedicated to temporary City back-up.
 - a. City currently owns and utilizes an existing 36" line on Midway Lane that is projected to meet future City capacity demands. City also owns an existing 21" line on Midway Lane that currently serves as a temporary back up. If not for future capacity flow of TCSSD and Charleston, City would not need to construct

or participate in the construction of a second 36" line. Therefore, the new 36" line will be paid for by TCSSD and Charleston.

- b. TCSSD and Charleston shall pay for using capacity in the new 36" line though a Connection Fee per Section 8.

5. Rates and Charges. In consideration for the services to be provided by City, TCSSD and Charleston agree to pay City a Wheeling Fee and Connection Fee.

A. **Wheeling Fee:** TCSSD and Charleston agree to pay City a monthly Wheeling Fee to cover City's actual administration costs, City portion of District treatment costs, City operation and maintenance costs, and City renewal and replacement costs for Existing and Future Shared Facilities.

- 1) The monthly Wheeling Fee will equal one-twelfth of that portion of the total annual budget that is established for each User's use of City's Existing and Future Shared Facilities.
 - a. Within 90 days of Agreement execution, City will commence a cost of service study to identify all wheeling costs stemming from TCSSD and Charleston's use of City's Existing and new Shared Facilities. In addition to identifying annual wheeling costs, study will identify a reasonable methodology for determining wheeling costs in subsequent years. This Agreement will initially be adopted contingently, providing TCSSD and Charleston an opportunity to review and agree with proposed wheeling costs and methodology for establishing future annual budgets.
 - b. Wheeling Fee will include compensation to City for Users temporary use of City's existing 36" line in Midway Lane until New 36" Future Shared Facilities are constructed.
- 2) Upon execution of an Agreement and at the beginning of each fiscal year thereafter, City shall calculate and project the Annual Budget of the Facilities, using the recommendations of the wheeling fee study. If the prior year's actual annual budget exceeds the projected Annual Budget for said prior year so that City is required to pay the deficiency during that year, or if the prior year's Annual Budget exceeds the actual annual budget for said prior year so that surplus monies remain at the end of that year, an adjustment shall be made in the following year's Annual Budget to rectify the resulting credit or debit.

B. **Connection Fee:** TCSSD and Charleston agree to collect on behalf of and remit to the City a one-time Connection Fee that has a twofold purpose. The first part (**Part A**) of the Connection Fee shall fund the City's "**Cost of Construction**" for the new 36" line in Midway Lane; i.e. Future Shared Facilities, including the planning, construction and financing of this line. The second part of the fee (**Part B**) shall satisfy the "**Buy-In**" portion of the Connection Fee for using the City's Existing Shared Facilities. The Buy-In portion shall represent the value of replacing the reserve, surplus capacity of the City's existing lines.

- 1) Initial Connection Fee amounts have been estimated in separate studies commissioned by the City, entitled *Sewer Capacity and Fee Analysis for Twin Creeks Special Service District / Charleston Connections*, based on the capacities requested by the Users.
- 2) Users will collect the Connection Fee's based on Equivalent Residential Units (ERU's) when issuing building permits in their respective service areas.
 - a. TCSSD will pay \$1,134 per ERU. (Part A \$663 + Part B \$471)
 - b. Charleston will pay \$698 per ERU. (Part A \$569 + Part B \$129)
- 3) Connection Fee will be collected for the City by TCSSD and Charleston on all development occurring in their respective jurisdictions that utilize City Facilities. The Connection Fees collected on behalf of the City will be remitted monthly to City by the

25th of the subsequent month following collection. Remittance shall commence within 90 days after a public hearing required for adoption of new fees, or, on or before the 1st day of February, 2022, whichever first occurs.

- 4) Cost of Construction portion (Part A) of the Connection Fee shall have the future ERU values and the estimated costs for the New 36" Future Shared Facilities updated jointly by the parties every five (5) years from the date of this Agreement to insure ERU's and estimated construction costs of the Future Shared Facilities are accurate.
- 5) Buy-In portion (Part B) of the Connection Fee shall remain fixed at the amount determined at the time this Agreement is executed, except for annual inflation adjustments described below.
- 6) Maximum capacity granted to Users is fixed at the original requested amounts of 3,310 gpm total peak flow (2,180 gpm 600 South, 2,000 gpm 1200 South) for TCSSD; and 698 gpm total peak flow for Charleston. Additional capacity above these requests are subject to renegotiation. Flow into the City Facilities above the original requested amounts, that continues for a minimum period of 30 days, may subject the Users to a penalty, at the sole discretion of the City, payable to City, of up to \$5,000 per day for every day the original capacity request is exceeded. Capacity will be monitored at metering stations installed by Users and owned by City at each initial point of connection to City Facilities.
- 7) Beginning January 1st, 2022, all City fees shall be adjusted on January 1st of each year for inflation by and pursuant to the percentage change in the ENR 20 City Construction Cost Index from January to December of the prior year.
- 8) Cost of Construction portion (Part A) of the Connection Fee shall be deposited into an independent, interest bearing account. The City shall provide notice to the Users when it has established the independent, interest-bearing account. The City shall not commingle Part A Connection Fees with other City funds. The City will hold these Connection Fees in trust to be used for the sole purposes set forth in this Agreement and for no other purpose.

6. Construction and Funding of Future Shared Facilities. To insure capacity in the City's existing 36" line on Midway Lane is not exceeded, City shall begin planning for expansion of Future Shared Facilities no less than 24 months prior to date City projects capacity in the existing Midway Lane line is to be exceeded. The City shall provide written notice to the Users when the City begins such planning. Planning for the expansion will commence 24 months prior to the advanced timeline date determined jointly by the parties.

- A. City will be responsible for planning, financing, construction, and ultimate payment of the cost of Future Shared Facilities (i.e. New 36" sewer line on Midway Lane).
- B. TCSSD and Charleston shall be responsible for planning, financing, construction, and ultimate payment of the cost of their respective Independent Facilities up to City's existing facilities.
- C. City will utilize accrued Connection Fees submitted to City for expansion of Future Shared Facilities. City will first consider a pay-as-you-go funding strategy, evaluating whether Connection Fees submitted to City are sufficient to cover 100% of costs for planning and construction of Future Shared Facilities.
- D. Should Connection Fees, submitted to City by Users since the execution of Agreement, be insufficient to complete the planning and construction of Future Shared Facilities, City will seek to finance the planning, construction, and financing costs for Future Shared Facilities. City will first pledge submitted Connection Fees to project costs and finance difference.
- E. Should City determine, in conjunction with TCSSD and Charleston, that issuing debt is the best strategy for funding the planning, design, construction, and financing of Shared

Facilities, City will arrange for issuance of debt for all project costs of Future Shared Facilities.

- F. City will pledge Connection fees submitted by Users to annual interest and principal payments. Should submitted Connection Fees be insufficient to make an annual interest and principal payments, TCSSD and/or Charleston will advance the difference to the City within 40 days of receipt of written notice from the City of the required Principal and Interest payment. Whichever party is responsible for the delinquency or insufficiency in covering the fees and costs associated with Future Shared Facilities described in this Agreement, shall pay said delinquent amount. In the event there is an overpayment paid to the City, such shall be reimbursed back by the City at the final accounting after the completion of Future Shared Facilities. In the event TCSSD or Charleston is unable or refuses to pay the annual interest and principal payments (P&I payments) within the said 20 days required payment schedule, the Parties specifically agree pursuant to the governing provision of the Agreement, that the City shall be allowed to seek a judgment against the non-paying party and secure a lien, including but not limited to any other remedy available by law or in a court of equity, without opposition or defense from or by the non-paying party, unless the City is in default of this Agreement.
- G. Notwithstanding the description of the Future Shared Facilities herein as 36-inch in diameter, the parties will work together in the design phase to find the most economical way to convey the prescribed design flows. This may, or may not, be a 36-inch diameter pipe along the full project length.

- 7. **Maintenance and Repair of Facilities.** City shall be responsible for providing for the operation, maintenance and repair of Facilities and any decisions in that regard shall be made solely and exclusively by City. The City shall operate, maintain, and repair the Facilities in a good and workmanlike manner, using at least the standard of care that the City uses in the operation maintenance, and repair of its own facilities.
- 8. **Maintenance of Respective Collection Systems.** City and Users shall each maintain and be responsible for the repair and proper operation of their respective collection system. Should Users not properly maintain their respective collection systems causing City to sustain increased operating and maintenance costs for Facilities, these costs shall be paid by the User responsible for the increased costs.
 - A. Each User hereto agrees to make reasonable efforts to monitor the wastewater originating within its collection system so as to prevent the introduction of wastewater which adversely affects the operation of the Facilities and to prevent the discharge of springs, flood waters and other non-sewage waters in its collection system.
 - B. Each User agrees to abide by all reasonable rules, regulations and instructions in the operation and maintenance of their respective collection systems.
 - C. Any discharge by the User which exceed facility design levels or contain abnormally high concentrations of pollutants as defined in Heber City code, will require pretreatment to bring said discharges into compliance.
- 9. **Advisory Group.** Upon request by any user, a meeting shall be convened comprising representatives of City, TCSSD, and Charleston for the purpose of discussing problems, policies, revenues, expenditures and any other matter effecting the operation of the Facilities. The conclusions, recommendations, or information emanating from a meeting shall be presented to City for its consideration and used in the operation, maintenance and/or improvement of Facilities. It is understood that the purpose of this meeting is to further cooperation between parties and to

render advisory assistance, but in no way to limit the right of ownership or operational requirements.

10. Contract Termination.

- A. By mutual agreement of City and User at any time, excluding item C below.
- B. By the User giving written notice of termination to City within 90 days after receipt of written notice from City that City intends to undertake the expansion of the new Shared Facilities on Midway Lane.
- C. If notice of termination is not received by City within 90 days of written notice that City intends to undertake expansion of Future Shared Facilities; Users are bound financially to their financial obligations related to system expansion of the Future Shared Facilities.
- D. In the event that a Party terminates their participation in the Agreement, and stops their flow, and Future Shared Facilities are built to completion, the exiting Party shall leave the association and the Agreement with no ownership, and no reimbursement for any payments or investment.
- E. In the event that a Party terminates their participation in the Agreement, and stops their flow, and the Future Shared Facilities are NOT built to completion, the exiting Party shall pay it's remaining, respective share of the costs and fees insomuch as the remaining Party or Parties are made whole. The exiting Party shall be reimbursed their construction, planning and financing fees, and not the Wheeling Fee or Buy-In portion of the Connection Fee. The Parties specifically agree that in the event there are unpaid fees or costs owing from an exiting Party or Parties, that the remaining Party or Parties shall be allowed to seek a judgment against the exiting Party or parties, and secure a lien, including but not limited to any remedy available by law or in a court of equity, sufficient to make the remaining party or parties whole, without opposition or defense from or by the delinquent, exiting Party, unless the City is in default of this Agreement.

11. Insurance on Facilities. City, in its operation of the Facilities, will carry insurance, including but not limited to workman's comp and public liability insurance, in such amounts and to such extent as is normally carried. The cost of such insurance shall be considered an operation and maintenance expense of the Facilities. In the event of loss or damage, insurance proceeds shall be used for the purpose of restoring or replacing the property lost or damaged.

12. Obligation of User Hereunder. Users agree to impose such rates and charges for service supplied by City and will make possible the prompt payment of all expenses incurred in operating and maintaining such Facilities, including the payments due hereunder and the prompt payment of all obligations of the Users.

13. Default. If after written notice from the City, in the event billings are not paid within forty (40) days after they are received each month, a late charge of 1.5% per month on the unpaid principle balance shall be added thereto, unless the billing is contested in good faith, in which event the parties will either resolve the dispute before the next billing date or the User will pay the billed amount under protest with a right to recoup any portion later determined to be an overpayment.

14. Enforcement of Contract. Each party hereto is hereby granted the right to bring such suits and to institute such litigation against the other party and its officials as may be necessary to require the full performance by the other party of all the agreements herein contained and all duties devolving on it under the provisions hereof, which suits may, but without limitation, include suits for mandamus or injunction.

- 15. Compliance with Laws.** All parties hereto agree to comply in every respect with any applicable State, Federal or County laws regulating the safe, sanitary and healthful operation of Facilities.
- 16. Liability of City.** City shall not be responsible for damages from any failure of the Facilities which cause a backup of effluent in Users mains. The Users agrees to save and hold City harmless from any damage to their collection systems or resulting from its Collection System by reason of sewer backup or inability of the System to accept the total effluent delivered to City's Facilities, unless it can be shown that a loss resulted from the gross negligence or intentional wrongful act of Heber, its agent, officers, or employees.
- 17. Joint Cooperation.** The parties hereby agree to cooperate with each other in the common planning and use of sewer lines and systems where such cooperation will result in greater efficiency and economy. It is recognized that such constraints as topography and practicality may logically require Interlocal cooperation from time to time. In the event of such planning or the common use of sewer lines not otherwise within the scope of the agreement the installation, operation and maintenance thereof shall be subject to the provisions of separate written agreement between the parties.
- Charleston agrees not to annex Parcels 08-7721 and 08-8083 and 08-8075 and 11-8252, and 08-8208 for a period of three years from the date this Agreement is recorded, or UDOT has identified a corridor for the potential realignment of State Highway 189 as it nears Heber City, whichever occurs first. In the event Charleston does desire to annex Parcel 08-8208, Charleston shall reserve by easement or other legally binding means sufficient area on the east end of Parcel 08-8208 to accommodate the associated portion of a bypass road/highway configuration passing through and upon said Parcel until the conditions stated above are satisfied.
- Charleston agrees not to annex any parcels of land that are located north of 2400 South Road and east of the Sagebrush and Spring Creek Canal. More particularly, these are Parcels 08-7580 and 08-7598 and the numerous parcels currently owned by Heber Valley Special Service District.
- City agrees not to annex any parcels of land that are located south of 2400 South, or west of the Sage Brush and Spring Creek Canal and south of 1200 South Road. In the event that City at some time re-considers annexation of these parcels, the City shall first offer Charleston a first right of refusal to annex said parcels described herein.
- 18. Miscellaneous.** Parties shall not be deemed to be partners or joint ventures in any manner in the use or operation of the facilities. Contract may be amended from time to time by mutual agreement.
- 19. No Waiver.** Failure of any Party hereto to exercise any right hereunder shall not be deemed a waiver of any such right and shall not affect the right of such Party to exercise at some future date any such right or any other right it may have.
- 20. Severability.** If any provision of this Agreement is held by a court of competent jurisdiction to be invalid for any reason, the Parties consider and intend that this Agreement shall be deemed amended to the extent necessary to make it consistent with such decision and the balance of this Agreement shall remain in full force and affect.
- 21. Force Majeure.** Any prevention, delay or stoppage of the performance of any obligation under this Agreement which is due to strikes, labor disputes, inability to obtain labor, materials,

equipment or reasonable substitutes therefor; acts of nature, inclement weather, governmental restrictions, regulations or controls, judicial orders, enemy or hostile government actions, wars, civil commotions, fires or other casualties, public health orders or other causes beyond the reasonable control of the Party obligated to perform hereunder shall excuse performance of the obligation by that Party for a period equal to the duration of that prevention, delay or stoppage.

- 22. Time is of the Essence.** Time is of the essence to this Agreement and every right or responsibility shall be performed within the times specified.
- 23. Mutual Drafting.** Each Party has participated in negotiating and drafting this Agreement and therefore no provision of this Agreement shall be construed for or against either Party based on which Party drafted any particular portion of this Agreement.
- 24. Applicable Law.** This Agreement is entered into in the City in the State of Utah and shall be construed in accordance with the laws of the State of Utah irrespective of Utah's choice of law rules.
- 25. Recordation and Running with the Land.** This Agreement shall be recorded in the office of the Wasatch County Recorder. The provisions of this Agreement shall constitute real covenants, contract and property rights and equitable servitudes, which shall run with all of the land subject to this Agreement. The burdens and benefits hereof shall bind and inure to the benefit of each of the Parties hereto and all successors in interest to the Parties hereto. All successors in interest shall succeed only to those benefits and burdens of this Agreement which pertain to the portion of the Project Area to which the successor holds title. Such titleholder is not a third party beneficiary of the remainder of this Agreement or to zoning classifications and benefits relating to other portions of the Project Area. The obligations of TCSSD and the Charleston hereunder are enforceable by the City, and no other Person shall or may be a third party beneficiary of such obligations unless specifically provided herein.
- 26. Authority.** The parties to this Agreement each warrant that they have all of the necessary authority to execute this Agreement. Specifically, on behalf of the City, the signature of the Mayor of the City is affixed to this Agreement lawfully binding the City.
- 27. Covenant of Good Faith and Fair Dealing.** No party shall do anything which shall have the effect of injuring the right of another party to receive the benefits of this Agreement or do anything which would render its performance under his agreement impossible. Each party shall perform all acts contemplated by this Agreement to accomplish the objectives and purposes of this Agreement.
- 28. Further Actions and Instruments.** The Parties agree to provide reasonable assistance to the other and cooperate to carry out the intent and fulfill the provisions of the Agreement. Each of the parties shall promptly execute and deliver all documents and perform all acts as necessary to carry out the matters contemplated by this Agreement.
- 29. Partial Invalidity Due to Governmental Action.** In the event state or federal laws or regulations enacted after the Effective Date of this Agreement, decision of any court of competent jurisdiction, or formal action of any governmental jurisdiction other than City, prevent compliance with one or more provisions of this Agreement, or require changes in plans, or permits approved by City, the parties agree that the provisions of this Agreement shall be modified extended or suspended only to the minimum extent necessary to comply with such laws or regulations.

- 30. Attorney Fees and Costs.** In the event of the failure of either Party hereto to comply with any provision of this Agreement, and the Parties do not resolve any such dispute by mediation, the defaulting Party shall pay any and all costs and expenses, including reasonable attorneys' fees, costs of investigations, taking depositions and discovery, and all other necessary costs incurred in, arising out of or resulting from such default (including any incurred in connection with any appeal or in bankruptcy court) incurred by the injured Party in enforcing its rights and remedies except as otherwise specifically stated in this Agreement.
- 31. Records and Audit.** The City shall maintain all books, records, and other documentation related to this Agreement, specifically including all books, records and other documentation related to its receipt and expenditure of funds pursuant to this Agreement, and shall allow Users to inspect and audit such books, records and other documentation upon reasonable request.
- 32.** This Agreement contains the entire agreement between the Parties, and no statement, promise or inducement made by either party hereto, or agent of either party hereto which is not contained in this written Agreement shall be valid or binding; and this Agreement may not be enlarged, modified or altered except in writing approved by the Parties.
- 33.** This Agreement shall be a covenant running with the land, and shall be binding upon the parties and their assigns and successors in interest. This Agreement shall be recorded with the Wasatch County Recorder.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year this Agreement was first above written.

DATED this 13th day of January, 2021. 2

HEBER CITY

By: _____

Kelleen Potter

Mayor Kelleen Potter



ATTEST:

Kina W. Locke

Heber City Recorder

TWIN CREEKS SPECIAL SERVICE DISTRICT (TCSSD)

By: _____

Max Covey

Max Covey, General Manager

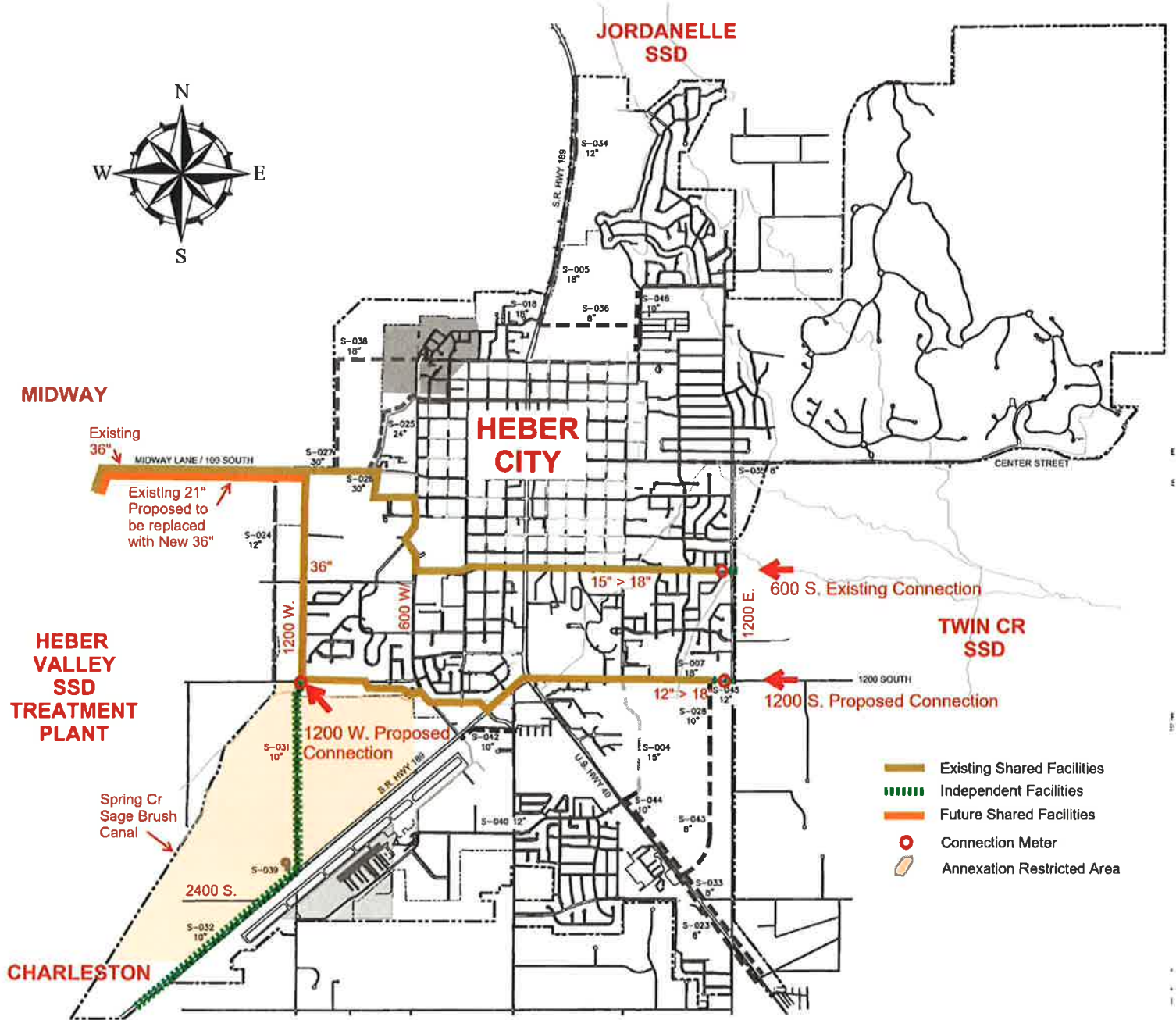
TOWN OF CHARLESTON, A MUNICIPAL CORPORATION (Charleston)

By: _____

Brenda Kozlowski

Mayor Brenda Kozlowski

EXHIBIT A



5. the applicant's preferred alternative for conducting the bypass;
6. the projected date of initiation of bypass.
- C. Approval or Denial of a Construction-related Bypass
 1. The request for a construction-related bypass will be approved or denied following a thorough review with due consideration of compliance with the discharge permit(s); water quality standards; and all known available and reasonable methods to abate water pollution.
 2. An approval issued to permit bypass will contain all restrictions necessary to minimize the duration of bypassing. A denial determination will state the reasons for the denial and will direct the permittee to initiate a plan of action to implement an alternative to bypassing.
- 1.12. Innovative Processes Evaluation
 - A. Basic requirements. The Director will consider the evaluation of innovative approaches to wastewater treatment in the interest of encouraging advances in technology, processes, equipment and material not covered by this rule, provided that:
 1. a favorable recommendation has been made by a professional engineer licensed to practice in Utah, following his own evaluation of developmental processes or equipment or material, for a specific project;
 2. the applicant has capital and technical resources to replace or modify developmental processes, equipment and material with conventional processes, equipment and material;
 3. the risk incurred with the experimentation rests solely with the proponent of processes, equipment and material as evidenced by the written acknowledgement to the Director; and
 4. the applicant will replace the failed processes, equipment and material with a proven conventional processes, equipment and material as evidenced by the written acknowledgement to the Director.
 - B. Approval Limitations
 1. The Director may approve developmental processes, equipment and material may be approved in the form of terms and conditions to a construction permit, when reliable operating data from full scale installations are not available. The term and conditions may include such as, but not necessarily limited to, demonstration period for a successful application, requirements to submit reports on the operation of the system during the experimental period.
 2. The Director may limit the number of approvals for the same developmental processes, equipment and material until reliable and valid operational experience is gained.
 - C. Evaluation Criteria. The evaluation of innovative processes will include the following factors:
 1. anticipated performance of the system in full scale field conditions,
 2. ability to consistently meet required effluent and water quality standards,
 3. any evidence of equivalence to conventional technology,
 4. the owner's ability to finance, and to operate and maintain the system with the level of expertise necessary, and
 5. submission of process descriptions, schematics, reports, monitoring and performance data, costs, specific studies, bench scale test data and pilot plant test data, and any other information appropriate and necessary for the evaluation.

R317-3-2. Sewers.

- 2.1. General. Construction of a new sewer system project may not begin unless the applicant has submitted an engineering report detailing the design, and construction plans to the Director for review and approval evidenced by a construction permit. The Director will not normally review construction plans for extensions of the existing sewer systems to new areas or replacement of sanitary sewers in the existing sewer systems unless requested or required by state or federal funding programs. Rain water from roofs, streets, and other areas, and ground water from foundation drains must not be allowed to enter the sewer system through planning, design and construction quality assurance and control measures.
- 2.2. Basis of Design
 - A. Planning Period. Sewers should be designed for the estimated ultimate tributary population or the 50-year planning period, whichever requires a larger capacity. The Director may approve the design for reduced capacities provided the capacity of the system can be readily increased when required. The maximum anticipated capacity required by institutions, industrial parks, etc. must be considered in the design.
 - B. Sewer Capacity. The required sewer capacity shall be determined on the basis of maximum hourly domestic sewage flow; additional maximum flow from industrial plants; inflow; ground water infiltration; potential for sulfide generation; topography of area; location of sewage treatment plant; depth of excavation; and pumping requirements.
 1. Per Capita Flow. New sewer systems shall be designed on the basis of an annual average daily rate of flow of 100 gallons per capita per day (0.38 cubic meter per capita per day) unless there are data to indicate otherwise. The per capita rate of flow includes an allowance for infiltration/inflow. The per capita rate of flow may be higher than 100 gallons per day (0.38 cubic meter per day) if there is a probability of large amounts of infiltration/inflow entering the system.
 2. Design Flow
 - a. Laterals and collector sewers shall be designed for 400 gallons per capita per day (1.51 cubic meters per capita per day).
 - b. Interceptors and outfall sewers shall be designed for 250 gallons per capita per day (0.95 cubic meter per capita per day), or rates of flow established from an approved infiltration/inflow study.
 - c. The Director will consider other rates of flow for the design if such basis is justified on the basis of supporting documentation.

C. Design Calculations. Detailed computations, such as the basis of design and hydraulic calculations showing depth of flow, velocity, water surface profiles, and gradients shall be submitted with plans.

2.3. Design and Construction Details

A. Minimum Size

1. No gravity sewer shall be of less than eight inches (20 centimeters) in diameter.
2. A 6-inch (15 centimeters) diameter pipe may be permitted when the sewer is serving only one connection, or if the applicant justifies the need for such diameter on the basis of supporting documentation.

B. Depth. Sewers should be sufficiently deep to receive sewage from basements and to prevent freezing. Insulation shall be provided for sewers that cannot be placed at a depth sufficient to prevent freezing.

C. Odor and Sulfide Generation. The design shall incorporate features to control and mitigate odor and sulfide generation in sewers. Such features may include steeper slope to achieve higher velocity, reaeration through induced turbulence, etc.

D. Slope

1. The pipe diameter and slope shall be selected to obtain velocities to minimize settling problems.
2. All sewers shall be designed and constructed to give mean velocities of not less than 2 feet per second (0.61 meter per second), when flowing full, based on Manning's formula using an n value of 0.013.
3. Sewers shall be laid with uniform slope between manholes.
4. Table R317-3-2.3(D)(4) shows the minimum slopes which shall be provided; however, slopes greater than these are desirable.

E. Flatter Slopes. Slopes flatter than those required for the 2-feet-per-second (0.61 meter per second)-velocity criterion when flowing full, may be permitted by the Director provided that:

1. there is no other practical alternative;
2. the depth of flow is not less than 30 percent of the diameter at the average design rate of flow;
3. the design engineer has furnished with the report the computations showing velocity and depth of flow corresponding to the minimum, average and peak rates of flow for the present and design conditions in support of the request for variance; and
4. the operating authority of the sewer system submits a written acknowledgement of the ability to provide any additional sewer maintenance required by flatter slopes.

F. Steep Slopes

1. Where velocities greater than 15 feet per second (4.6 meters per second) are attained, special provision shall be made to protect against displacement by erosion and shock.
2. Sewers on 20 percent slopes or greater shall be anchored securely against lateral and axial displacement with suitable thrust blocks, concrete anchors or other equivalent restraints, spaced as follows:

a. Not over 36 feet (11 meters) center to center on grades 20 percent and up to 35 percent;
b. Not over 24 feet (7.3 meters) center to center on grades 35 percent and up to 50 percent;
c. Not over 16 feet (4.9 meters) center to center on grades 50 percent and over.

G. Alignment. Sewers 24 inches (61 centimeters) in diameter or less shall be laid with a straight alignment between manholes. The alignment shall be checked by either using a laser beam or lamping.

H. Changes in Pipe Size. When a smaller sewer joins a large one, the invert of the larger sewer should be lowered sufficiently to maintain the same energy gradient. An approximate method for securing these results is to place the 0.8 depth point of both sewers at the same elevation.

I. Materials

1. The material of pipe selected should be suitable for local conditions. The material of sewer pipe should be compatible with factors such as industrial wastewater characteristics, putrescibility, physical and chemical properties of adjacent soil, heavy external loading, etc.

2. The material of pipe must withstand superimposed loads without any damage. The design of trench widths and depths should allow for loads. Special bedding, concrete cradle or encasement, or other special construction may be used to withstand extraordinary superimposed loading.

2.4. Curved Sewers. Curved sewers are permitted only under circumstances where conventional sewer construction is not feasible. A conceptual approval must be obtained before beginning the design.

A. Design

1. The minimum radius of curvature shall be greater than 200 feet or one-half of the maximum deflection angle for the material of pipe allowed by the manufacturer.
2. The design n value for the sewer pipe shall be 0.018.
3. Only one horizontal curve in the sewer alignment will be allowed between manholes. No vertical curves shall be permitted.

4. Manhole spacing shall not exceed 400 feet (122 meters).

5. Manholes must be provided at the beginning and the end of a curved alignment (i.e. change in radius of curvature).
6. The design should consider increased erosion potential due to high velocities.

B. Other Requirements

1. Maintenance equipment shall be available at all times for inspection and cleaning.

2. Horizontal and vertical alignment of the sewer after the construction must be verified and certified by a registered professional engineer.

a. Accurate record or as-built drawings must be prepared showing the physical location of the pipe in the ground, and submitted to the division in accordance with the requirements of R317-3-1.

2.5. Installation Requirements

A. Standards

1. The technical specifications shall require that installation be in accordance with the requirements based on the criteria, standards and procedures established by:

- a. this rule;
- b. recognized industry standards and practices as published in their technical publications;
- c. the product manufacturer's recommendations and guidance;
- d. Uniform Building Code, Uniform Plumbing Code, Uniform Mechanical Code and National Electrical Code;
- e. American Society of Testing Materials;
- f. American National Standards Institute; and
- g. Occupational Safety and Health Administration (OSHA), US Department of Labor or its succeeding agencies.

2. Requirements shall be set forth in the specifications for the pipe and methods of bedding and backfilling thereof so as not to damage the pipe or its joints, impede cleaning operations and future tapping, nor create excessive side fill pressures or ovalation of the pipe, nor seriously impair flow capacity.

B. Identification of Sewer Lines. A clearly labelled tracer location tape shall be placed two feet above the top of sewer lines less than or equal to 24 inch (61 centimeters) in diameter, along its entire length.

C. Deflection Test

1. Deflection test shall be performed on all flexible pipes. The test shall be conducted after the final backfill has been in place at least 30 days.

2. No pipe shall show a deflection in excess of 5 percent.

3. If the deflection test is run using a rigid ball or mandrel, it shall have a diameter equal to 95 percent of the inside diameter of the pipe. The test shall be performed without mechanical pulling devices.

D. Joints and Infiltration

1. Joints. The installation procedures of joints and the materials to be used shall be included in the specifications. Sewer joints shall be designed to minimize infiltration and to prevent the entrance of roots throughout the life of the system.

2. Leakage Tests. Procedures for leakage tests shall be specified. This may include appropriate water or low pressure air testing. The leakage outward or inward (exfiltration or infiltration) shall not exceed 200 gallons per inch of pipe diameter per mile per day (0.19 cubic meter per centimeter of pipe diameter per kilometer per day) for any section of the system. An exfiltration or infiltration test shall be performed with a minimum positive head of 2 feet (0.61 meter). The air test, if used, shall, as a minimum, conform to the test procedure described in the American Society of Testing Materials standards. The testing methods selected should take into consideration the range in ground water elevations projected during the test.

E. Inspection

1. The specifications shall include requirements for inspection of manholes for water-tightness prior to placing in service, including television inspection.

2. Records of television inspection shall be retained for future reference.

2.6. Manholes

A. Location. Manholes shall be installed at:

1. the end of each line exceeding 150 feet (46 meters) in length;
2. all changes in grade, size, or alignment;
3. all intersections; and
4. distances not greater than:
 - a. 400 feet (120 meters) for sewers 15 inches (38 centimeters) or less; and
 - b. 500 feet (150 meters) for sewers 18 inches (46 centimeters) to 30 inches (76 centimeters).

5. Distances up to 600 feet (180 meters) may be approved in cases where adequate cleaning equipment for such spacing is provided.

6. Greater spacing may be permitted in larger sewers.

7. Cleanouts shall not be substituted for manholes nor installed at the end of lines greater than 150 feet (46 meters) in length.

B. Drop Type Manholes

1. A drop pipe should be provided for a sewer entering a manhole at an elevation of 24 inches (61 centimeters) or more above the manhole invert. Where the difference in elevation between the incoming sewer and manhole invert is less than 24 inches (61 centimeters), the invert should be filleted to prevent solids deposition.

2. Drop manholes should be constructed with an outside drop connection. If an inside drop connections is necessary, it shall be secured to the interior wall of the manhole and provide access for cleaning.

3. Due to the unequal earth pressures that would result from the backfilling operation in the vicinity of the manhole, the entire outside drop connection shall be encased in concrete.

C. Diameter. The minimum diameter of manholes shall be 48 inches (1.22 meters); larger diameter manholes are preferable for large diameter sewers. A minimum diameter of 22 inches (56 centimeters) shall be provided for safe access.

D. Flow Channel. The flow channel through manholes should be made to conform in shape and slope to that of the sewers. The depth of flow channels should be up to one-half to three-quarters of the diameter of the sewer. Adjacent floor area should drain to the channel with the minimum slope of 1 inch per foot (8.3 centimeters per meter).

E. Watertightness

1. Manholes shall be of the pre-cast concrete or poured-in-place concrete type. Manholes shall be waterproofed on the exterior.

2. Inlet and outlet pipes shall be joined to the manhole with a gasketed flexible watertight connection arrangement that allows differential settlement of the pipe and manhole wall to take place.

3. Watertight manhole covers shall be used wherever the manhole tops may be flooded by street runoff or high water. Locked manhole covers may be desirable in isolated easement locations or where vandalism may be a problem.

F. Electrical. Electrical equipment installed or used in manholes shall conform to appropriate National Electrical Code requirements.

2.7. Inverted Siphons. Inverted siphons shall consist of at least two barrels, with a minimum pipe size of 6 inches (15 centimeters) with an arrangement to exclude debris and solids. The siphon shall be provided with necessary appurtenances for convenient flushing and maintenance. The manholes shall have adequate clearances for rodding; and in general, sufficient head shall be provided and pipe sizes selected to secure velocities of at least 3.0 feet per second (0.92 meter per second) for average flows. The inlet and outlet details shall be so arranged that the normal flow is diverted to 1 barrel, and that either barrel may be cut out of service for cleaning. The vertical alignment should permit cleaning and maintenance.

2.8. Sewers In Relation To Streams

A. Location of Sewers on Streams

1. The top of all sewers entering or crossing streams shall be at a sufficient depth below the natural bottom of the stream bed to protect the sewer line. In general, the following cover requirements must be met:

- a. one foot (30 centimeters) of cover is required where the sewer is located in bedrock;
- b. three feet (90 centimeters) of cover is required in other material;
- c. cover in excess of 3 feet (90 centimeters) may be required in streams having a high erosion potential; and
- d. in paved stream channels, the top of the sewer must be placed below the bottom of the channel pavement.

2. If the proposed sewer crossing will not interfere with the future improvements to the stream channel, then reduced cover may be permitted.

B. Horizontal Location. Sewers shall be located along streams outside of the stream bed and sufficiently removed therefrom to provide for future possible stream widening and to prevent pollution by siltation during construction.

C. Structures. The sewer outfalls, headwalls, manholes, gate boxes, or other structures shall be located so they do not interfere with the free discharge of flood flows of the stream.

D. Alignment

1. Sewers crossing streams should be designed to cross the stream as nearly at right angles to the stream flow as possible, and shall be free from change in grade.

2. Sewer systems shall be designed to minimize the number of stream crossings.

E. Construction

1. Materials. Sewers entering or crossing streams shall be constructed of cast or ductile iron pipe with mechanical joints; otherwise they shall be constructed so they will remain watertight and free from changes in alignment or grade. Material used to backfill the trench shall be stone, coarse aggregate, washed gravel, or other materials which will not cause siltation.

2. Siltation and Erosion. Construction methods that will minimize siltation and erosion shall be employed. The design engineer shall include in the project specifications the method(s) to be employed in the construction of sewers in or near streams to provide adequate control of siltation and erosion. Specifications shall require that cleanup, grading, seeding, and planting or restoration of all work areas shall begin immediately. Exposed areas shall not remain unprotected for more than seven days.

F. Aerial Crossings

1. A carrier pipe shall be provided for all aerial sewer crossings. Support shall be provided for all joints in pipes utilized for aerial crossings. The supports shall be designed to prevent frost heave, overturning and settlement.

2. Precautions against freezing, such as insulation and increased slope, shall be provided. Expansion jointing shall be provided between above-ground and below-ground sewers.

3. The design engineer shall consider the impact of flood waters and debris for aerial stream crossings. The bottom of the pipe should be placed below the elevation of twenty-five (25) year flood. Crossings, in no case, shall block the channel.

2.9. Protection of Water Supplies. The applicant must review the requirements stated in R309-112-2 - Distribution System Rules, Drinking Water and Sanitation Rules, to assure compliance with the said rule.

A. Water Supply Interconnections. There shall be no physical connections between a public or private potable water supply system and a sewer, or appurtenance thereto which would permit the passage of any sewage or polluted water into the potable supply. No water pipe shall pass through or come in contact with any part of a sewer manhole.

B. Relation to Water Mains

1. Horizontal Separation

a. Sewers shall be laid at least 10 feet (3.0 meters) horizontally from any existing water main. The distance shall be measured edge to edge. In cases where it is not practical to maintain a ten foot separation, a deviation may be allowed based on

the supportive data from the design engineer. Such deviation may allow installation of the sewer closer to a water main, provided that the sewer is laid:

- (1) in a separate trench, or
- (2) on an undisturbed earth shelf located on one side of the sewer trench, or
- (3) in the sewer trench which has been backfilled and compacted to not less than 95 percent of the optimum density as determined by the ASTM Standard D-690, as amended, and

b. In each of the above cases, the bottom of the water main shall be at least 18 inches (46 centimeters) above the top of the sewer.

2. Crossings. Sewers crossing above water mains shall be laid to provide a minimum vertical distance of 18 inches (46 centimeters) between the outside of the water main and the outside of the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main.

3. Special Conditions. When it is impossible to obtain proper horizontal and vertical separation as stated above, the sewer shall be designed and constructed of cast iron, ductile iron, galvanized steel or protected steel pipe with mechanical joints for the minimum distance of 10 feet on either side of the point of crossing. The design engineer may use other types of joints if equivalent joint integrity is demonstrated. The lines shall be pressure tested to assure watertightness before backfilling.

R317-3-3. Sewage Pumping Stations.

3.1. General. Sewage pumping station structures, and electrical and mechanical equipment shall be protected from physical damage that would be caused by a 100-year flood. Sewage pumping stations must remain fully operational and accessible during a 25-year flood.

3.2. Design

A. Pumping Rates. The pumps and controls of main pumping stations, and especially pumping stations pumping to the treatment works or operated as part of the treatment works, should be selected to operate at varying delivery rates to permit discharging sewage at approximately its rate of delivery to the pump station.

B. System - Head Calculation

1. The design engineer shall submit system-head calculations and curves. System-head curves for C values of 100, 120 and 140 in the Hazen William's equation for calculating head loss corresponding to minimum, median and maximum water levels shall be developed.

2. A system-head curve for C value of 120 corresponding to median (normal operating) water level shall be used to make preliminary selection of motor and pump. The pump and motor must operate satisfactorily over the entire range of system-head curves for C values of 100 and 140 corresponding to minimum and maximum water levels intersected by the head-discharge relationship of a given pump.

3. Pumps and motors shall be sized for the 10-year peak flows; preferably the 20-year sewage flow requirements. These operating points shall be shown on the system-head curves.

C. Accessibility. The pumping station shall be readily accessible by maintenance vehicles during all weather conditions. The facility should be located off the traffic way of streets and alleys.

D. Grit. Where it is necessary to pump sewage before grit removal, the design of the wet well and pump station piping shall be such that operational problems from the accumulation of grit are avoided.

E. Odor and Corrosion Control. The pumping station design should incorporate measures for:

1. mitigating the effects of sulfide corrosion to structure and equipment; and
2. effective odor control when a populated area is within close proximity.

F. Structures

1. Dry wells, including their superstructure, shall be completely separated from the wet well.

2. Provision shall be made to facilitate maintenance and removal of pumps, motors, and other mechanical and electrical equipment.

3. Safe means of access and proper ventilation shall be provided to dry wells and to wet wells containing either bar screens or mechanical equipment requiring inspection or maintenance.

a. For built-in-place pump stations, a stairway with rest landings shall be provided at vertical intervals not to exceed 12 feet (3.7 meters). For factory-built pump stations over 15 feet (4.6 meters) deep, a rigidly fixed landing shall be provided at vertical intervals not to exceed 10 feet (3.0 meters). Where a landing is used, a suitable and rigidly fixed barrier shall be provided to prevent an individual from falling past the intermediate landing to a lower level.

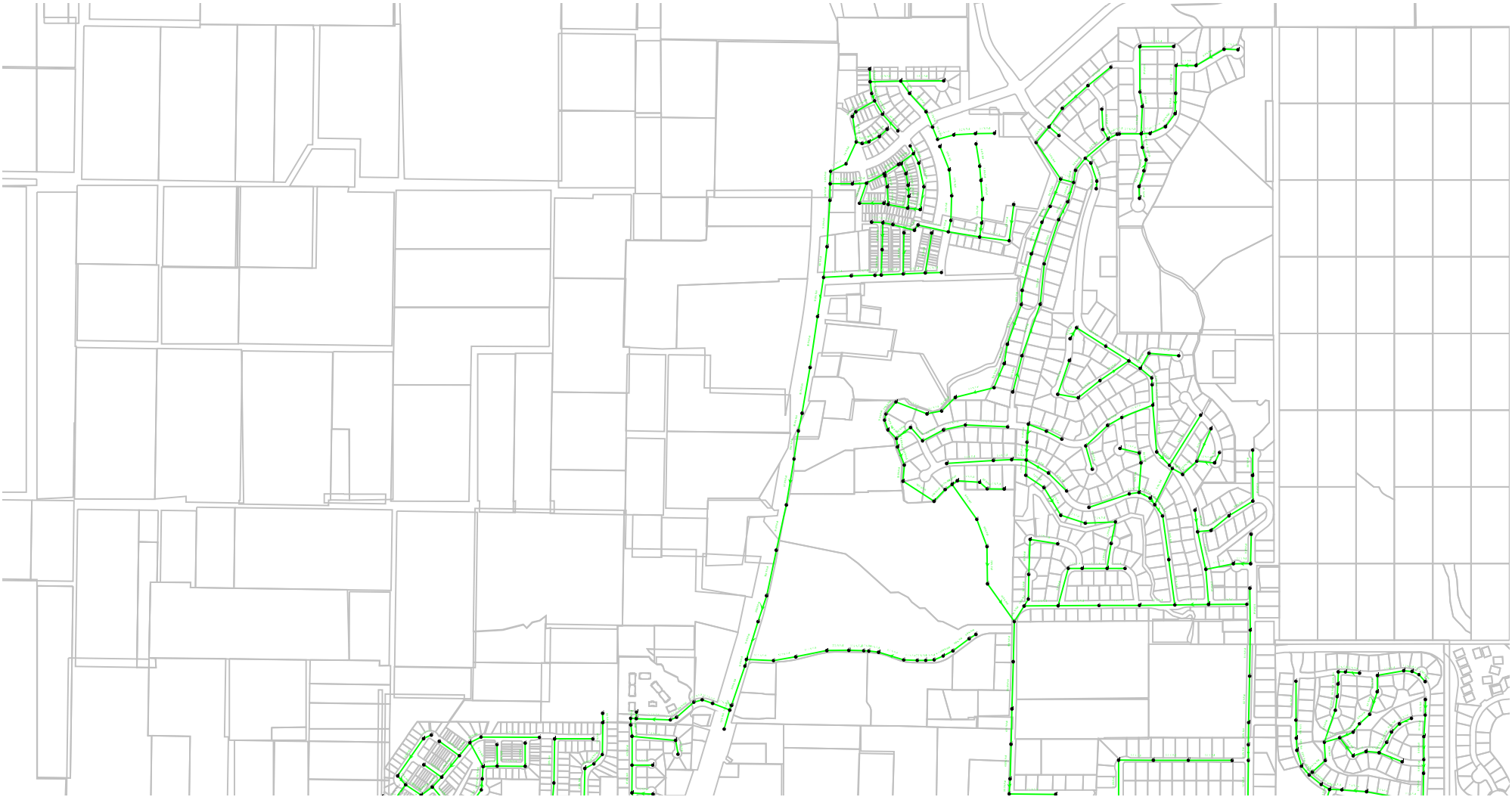
b. Where space requirements are insufficient, the design may provide for a manlift or elevator in lieu of landings in a factory-built station if the design includes an emergency access or exit.

c. Local, state and federal safety requirements, including those in applicable fire code, the Uniform Building Code, etc., must be reviewed and complied with. Those requirements, if more stringent than the ones stated above, shall be incorporated in the design.

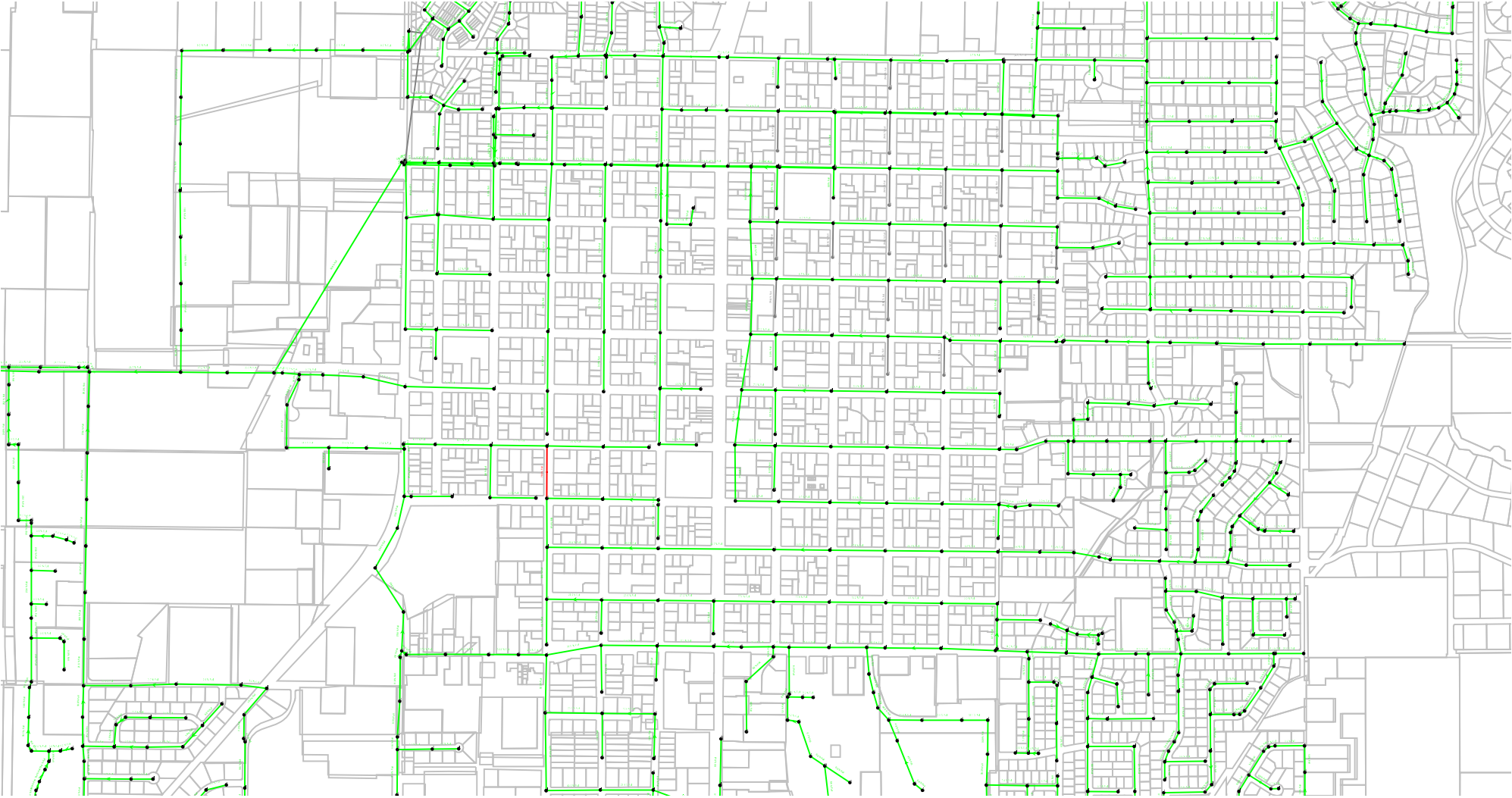
4. Construction Materials. The materials selected in construction and installation must be safe and able to withstand adverse operating environmental conditions caused by presence of hydrogen sulfide and other corrosive gases, greases, oils, and other constituents frequently present in sewage.

3.3. Pumps and Pneumatic Ejectors

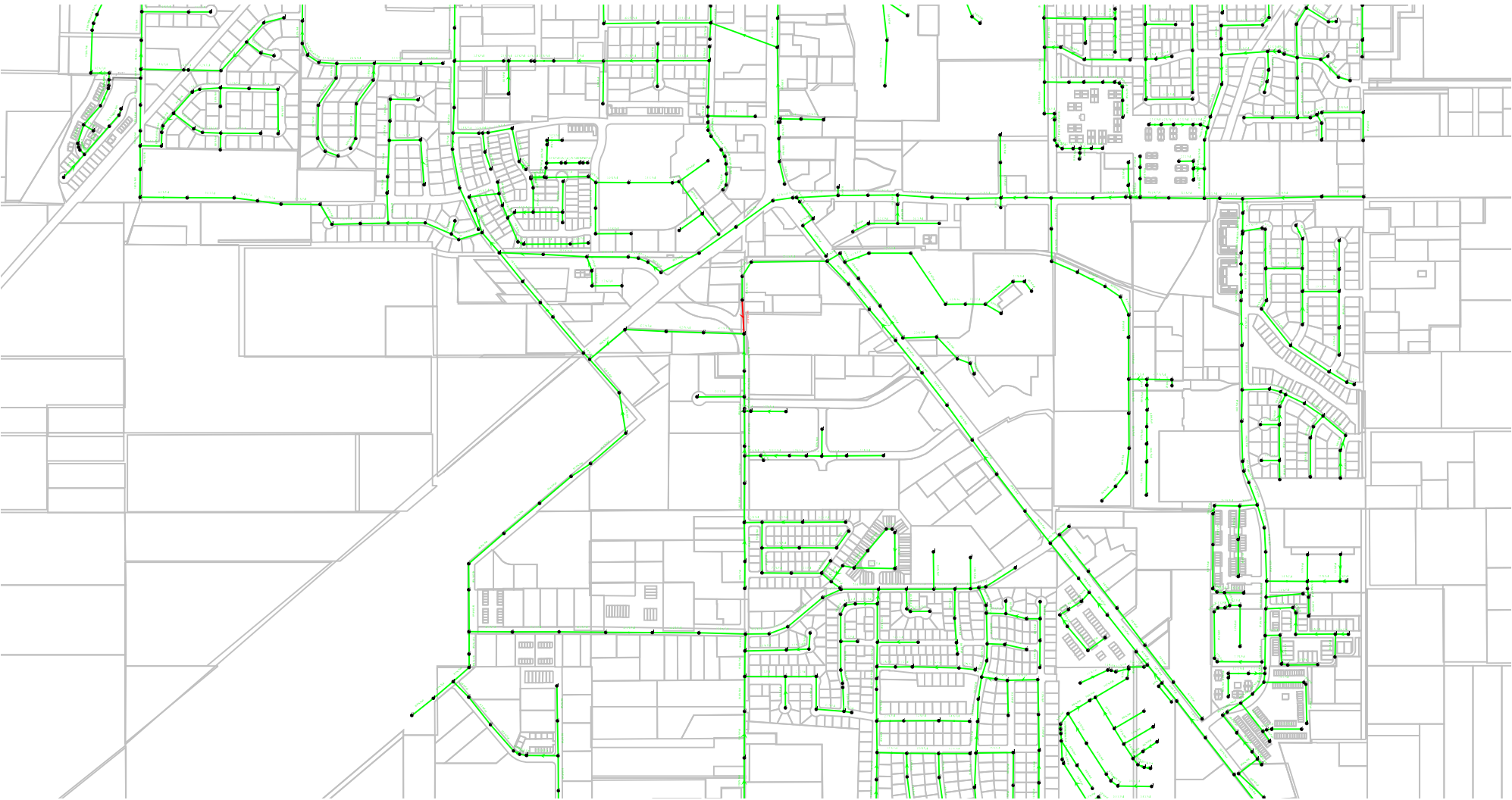
A. Multiple Units



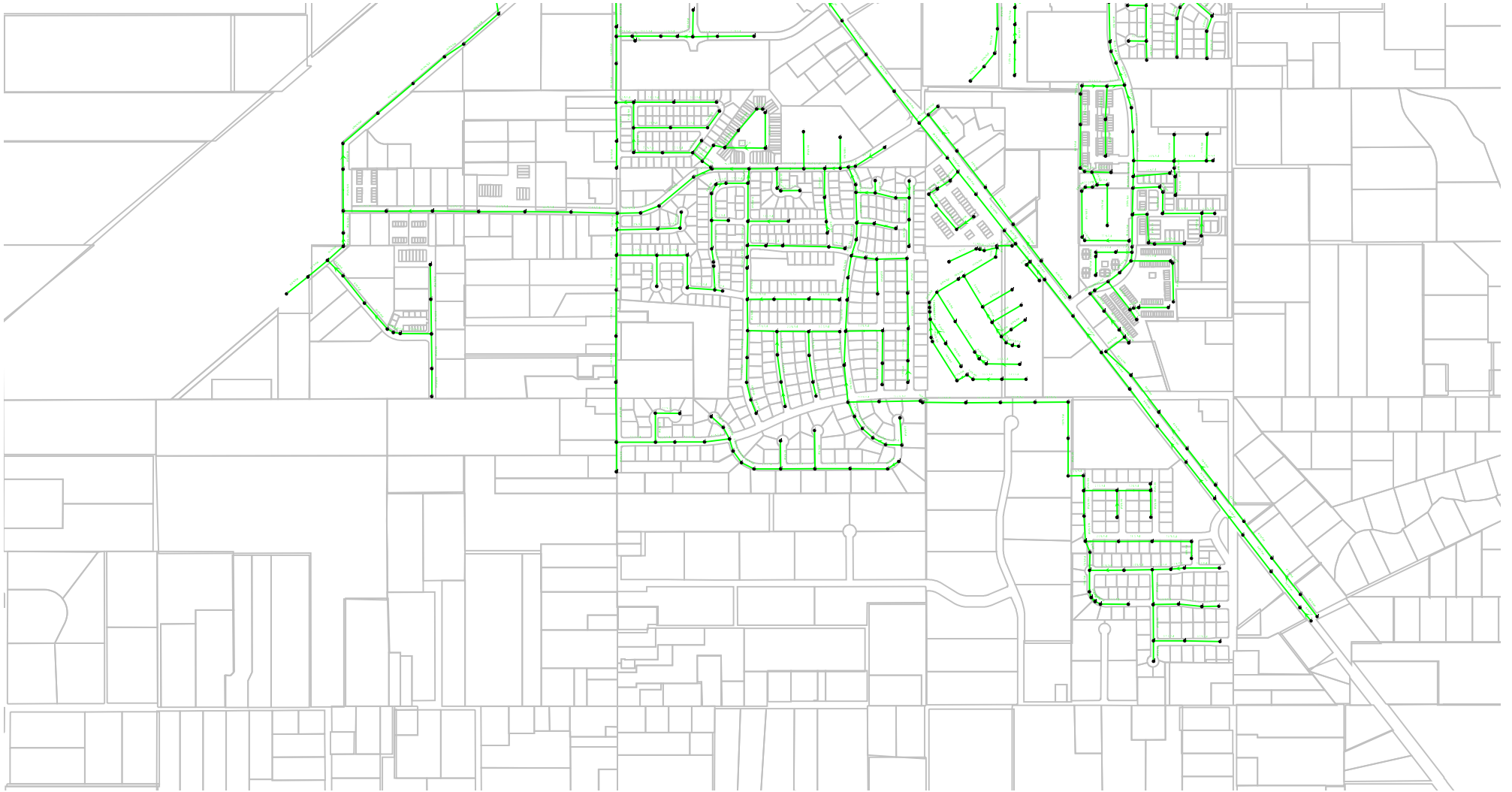
Title: Scenario: Future



Title: Scenario: Future



Title: Scenario: Future



Title: Scenario: Future



APPENDIX D

APPENDIX D

STREET POPULATION & ERU's

YEAR	% CHG	POPULATION		HEBER CITY RESIDENTIAL			NON-RESIDENTIAL				RES+NON-RES	
		TOTAL	CHG	UNITS	CHG	NEW TRIP'S	% CHG	CONN	CHG	NEW TRIP'S	NEW TRIP'S	
						Trip's/Unit = 6.67				Avg Trip's/Unit = 152.00		
2021		16,856		5,001				427				
2022	4.33%	17,586		5,082	82	544	4.33%	455	28	4,256	4,800	
2023	4.33%	18,347	761	5,223	141	937	4.33%	475	20	3,040	3,977	
2024	4.33%	19,142	794	5,449	226	1,508	4.33%	495	21	3,192	4,700	
2025	4.33%	19,971	829	5,685	236	1,573	4.33%	517	21	3,192	4,765	
2026	4.33%	20,835	865	5,931	246	1,641	4.33%	539	22	3,344	4,985	
2027	4.33%	21,738	902	6,188	257	1,712	4.33%	562	23	3,496	5,208	
2028	4.33%	22,679	941	6,456	268	1,786	4.33%	587	24	3,648	5,434	25,092
2029	4.33%	23,661	982	6,736	280	1,864	4.33%	612	25	3,800	5,664	
2030	4.33%	24,685	1,025	7,027	292	1,944	4.33%	639	27	4,104	6,048	
2031	4.33%	25,754	1,069	7,332	304	2,028	4.33%	666	28	4,256	6,284	
2032	1.19%	26,061	306	7,419	87	582	1.19%	674	8	1,216	1,798	
2033	1.19%	26,371	310	7,507	88	589	1.19%	682	8	1,216	1,805	21,599
2034	1.19%	26,685	314	7,596	89	596	1.19%	690	8	1,216	1,812	
2035	1.19%	27,002	318	7,687	90	603	1.19%	699	8	1,216	1,819	
2036	1.19%	27,323	321	7,778	91	610	1.19%	707	8	1,216	1,826	
2037	1.19%	27,649	325	7,871	93	617	1.19%	715	8	1,216	1,833	
2038	1.19%	27,978	329	7,964	94	624	1.19%	724	9	1,368	1,992	9,282
2039	1.19%	28,310	333	8,059	95	632	1.19%	732	9	1,368	2,000	
2040	1.19%	28,647	337	8,155	96	639	1.19%	741	9	1,368	2,007	
2041	1.19%	28,988	341	8,252	97	647	1.19%	750	9	1,368	2,015	
2042	1.19%	29,333	345	8,350	98	655	1.19%	759	9	1,368	2,023	
2043	1.19%	29,682	349	8,450	99	662	1.19%	768	9	1,368	2,030	10,075
TOTAL NEW (2023 to 2043)		11,335			3,227	21,512			293	44,536	66,048	
EST 2023		18,347			5,223	34,818			475	72,155	106,973	
TOTAL 2043		29,682			8,450	56,330			768	116,691	173,021	

Ultimate Per Landuse 33,512 10,004

APPENDIX D

Road Price List		
Description	Price	Units
Right Of Way	\$250,000.00	Acre
Pavement & UBC	\$5.00	S.F.
Granular Fill	\$40.00	C.Y.
Clear & Grub	\$3.50	C.Y.
Chip Seal	\$2.00	S.Y.
Curb, Gutter, Storm Drain (1 Side)	\$85.00	L.F.
2" Overlay	\$2.00	S.F.
Sidewalk (1 Side)	\$25.00	L.F.
Design, CM, Insp	15%	
Contingency & Util Conflicts	20%	

Cost/LF Increase From New Local		
M Collector (38')	102.80	12%
Collector (>50')	308.39	36%
Arterial (>60)	479.72	56%
Local (32')	851.85	

Calculation Of Typical Developer Impact Fee Percentages		Minor Collector		Major Collector		Minor Arterial	
		\$	%	\$	%	\$	%
Existing Rd - Overlay, Seal	Operating (26')	\$179,400	14%	\$466,440	12%	\$100,464	10%
Existing Rd Widen - Pave, Fill, Grub	ImpFee (32' widened to 38'/50')	\$138,192	11%	\$1,077,895	27%	\$361,141	37%
	Developer (26' widened to 32')	\$167,101	14%	\$434,464	11%	\$93,577	10%
Existing Rd - Curb, Drain, Sidewalk	Developer	\$759,000	61%	\$1,973,400	50%	\$425,040	43%
TOTAL		\$1,243,693	100%	\$3,952,199	100%	\$980,222	100%
New Rd - Pave, Fill, Grub	ImpFee (32' widened to 38'/50')	\$380,350	9%	\$770,980	22%		
	Developer (32' width)	\$2,071,320	6%	\$1,399,541	40%		
New Rd - Curb, Drain, Sidewalk	Developer	\$2,002,452	45%	\$1,353,008	38%		
TOTAL		\$4,454,123	100%	\$3,523,529	100%		

- The following example projects were used to generate the percentages in the table above: T-016, T-018, T-029, T-040, T-045

Cost Summary of Recommended Street Improvements

		STREET CAPITAL IMPROVEMENTS																				
IMPROVEMENT DESCRIPTION		LENGTH / COST	L U M P S U M	L O C A L	M I N O R	M A J O R	R O W	A S P H A L T	R A S P H A L T	P A V E M E N T	G R A N U L A R	C U T & G R U B	C U R B & G U T T E R	S I D E W A L K	O V E R L A Y	W I D E N I N G	E N G I N E E R I N G	C O S T				
ULT	CIP#	ft	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t		Eligible Proj \$'s	Asphalt	% Eligible
	T-003	400 South - 600 East to 700 East & Bridge	600				68	38	X	X	X	X	X	X			X		\$722,290			
	T-009	600 East - 200 South to 400 South	900		X	X	62	32	X	X	X	X	X	X			X		\$548,976			
	T-012	300 West - 500 North to 100 South	2,920				68	38						X		X	X		\$478,440			
	T-016	2400 South - Daniel Rd to South Airport Rd	3,700		X		68	38	X	X	X	X	X	X			X		\$4,454,123			
	T-017	1600 South - 600 East to Sawmill Blvd	1,000		X		62	32	X	X	X	X	X	X			X		\$609,973			
	T-018	Airport Road - Daniel Rd to Hangers	2,500			X	68	38				X	X	X		X	X	X	\$1,243,693			
	T-020	650 South - 1200 West to West Bypass	700			X	68	38	X			X	X	X		X	X	X	\$725,231			
	T-028	500 East - 500 North to 600 South	5,100			X	68	38				X	X	X		X	X	X	\$2,361,184			
	T-029	600 East - 1300 South to Hidden Cr Ln	2,500			X	80	50	X	X	X	X	X	X			X		\$3,523,529			
	T-031	Daniels Rd - 2100 South to 2500 South	1,600			X	80	50											\$0			
	T-032	Industrial Pkwy - West Bypass to SR189	1,100			X	68	38				X	X	X		X	X	X	\$547,225			
	T-033	600 West - West Bypass to 100 South	4,300			X	80	50				X	X	X		X	X	X	\$2,614,531			
	T-035	1200 South - 700 West to Southfield Rd	2,200			X	68	38	X	X	X	X	X	X		X	X	X	\$2,648,397			
	T-040	1200 East - 1200 South to US40 *	6,500			X	80	50				X	X	X		X	X	X	\$3,952,199			
	T-041	Southfield Rd - 100 South to 1200 South & RR	5,800			X	80	50				X	X	X		X	X	X	\$3,926,577	\$2,818,297	38	72%
	T-042	Master plan Update (4 times)	\$200,000	X															\$240,000			
	T-043	100 East - 500 North to 600 South Historic	5,200			X	82	41				X	X	X		X	X	X	\$2,730,601			
	T-044	West Bypass - 900 North to 1300 South UDOT	19,000				X	###	84										\$0			
	T-045	1200 South - 820 East to 1200 East	1,400			X	90	60				X	X	X		X	X	X	\$980,222			
	T-046	100 West - 500 North to 1000 South Historic	7,200			X	82	41				X	X	X		X	X	X	\$7,830,832			
	T-047	South Airport Rd - 670 West to 1200 West	2,600			X	68	38				X	X	X		X	X	X	\$1,293,441			
	T-048	Southfield Rd - 1200 South to SR189 UDOT	4,500			X	###	84											\$0			
	T-050	2400 South - 700 East to US40	1,200			X	68	38	X	X	X	X	X	X			X		\$1,444,580			
	T-052	500 East - 600 South to 720 South	500			X	68	38	X	X	X	X	X	X			X		\$601,908			
	T-053	East Bypass - Center St to 1050 East	5,650			X	80	50	X	X	X	X	X	X			X		\$4,383,286	\$3,758,659	38	86%
	T-054	Ostler Peak Rd - 1800 North to 900 North	4,320			X	80	50	X	X	X	X	X	X			X		\$6,088,658	\$5,611,068	38	92%
	T-055	South Bypass - Daniel Rd to US40	1,600			X	80	48	X	X	X	X	X	X			X		\$2,225,578			
	T-057	East Bypass - 1050 East to 550 East Cemetery	2,000			X	80	50	X	X	X	X	X	X			X		\$1,551,606			
	T-058	East Bypass - 550 East to Main St	2,300			X	80	50	X	X	X	X	X	X			X		\$3,241,647			
	T-059	Downtown Angle Parking - 400 North to 500 South	6,380			X	84	52											\$0			
	T-063	Intersection Alignment US40 & 2400 South	900			X	80	50	X				X	X		X	X	X	\$1,117,475			
	T-064	Intersection Alignment US40 & Mill Rd	700			X	80	50	X				X	X		X	X	X	\$869,148			
	T-065	500 North to Midway Ln	4,500			X	68	38	X	X	X	X	X	X					\$4,710,588			
	T-067	Heber City Public Works Facility Exp Ph1	405,205																\$486,246			
	T-068	Heber City Public Works Facility Exp Ph2	\$1,413,894	X															\$1,696,673			
	T-069	1900 South - Mill Rd to 600 East	2,000			X	68	38	X	X	X	X	X	X					\$2,093,595			
	T-070	Downtown Angle Parking - 400 North to 500 South	1,000			X	84	52					X	X		X	X		\$554,696			
	T-072	600 South - 300 West to 650 South Restripe	\$20,000	X														X	\$27,600			
	T-073	Providence Dr - 1500 South to 600 East	1,300			X	68	38	X	X	X	X	X	X			X		\$1,564,962			
	T-074	Center St Widening - 1400 East to the East	8,500			X	80	50											\$0			
	T-075	Roundabout at 900 North & 550 East	\$400,000	X														X	\$552,000			
	T-076	Roundabout at 900 North & Mill Rd	\$400,000	X														X	\$552,000			
	T-077	Roundabout at Mill Rd & Center St	\$400,000	X														X	\$552,000			
	T-078	Roundabout at 1400 East & Center St	\$400,000	X														X	\$552,000			
	T-079	Roundabout at 300 West & 1000 South	\$400,000	X														X	\$552,000			
	T-080	Roundabout at Mill Rd & 1200 South	\$400,000	X														X	\$552,000			
	T-081	Roundabout at Airport Rd & Daniel Rd	\$400,000	X														X	\$552,000			
	T-082	850 South - 100 West to Main St	1,200			X	66	36	X	X	X	X	X	X			X		\$1,403,461	\$1,359,240	32	97%
	T-083	850 South - Main St to 120 East	1,900			X	66	36	X	X	X	X	X	X			X		\$2,222,147	\$2,152,130	32	97%
	T-084	Airport Rd - US40 to 600 East	800			X	80	50	X	X	X	X	X	X			X		\$1,127,529	\$1,039,087	38	92%
	T-085	Traffic Signal at 1200 South & 500 East	\$250,000	X														X	\$345,000			
	T-086	Roundabout at Airport Rd & 600 East	\$400,000	X														X	\$552,000			
	T-087	120 East - 790 South to 1000 South	1,200			X	66	36	X	X	X	X	X	X			X		\$1,403,461	\$1,359,240	32	97%
	T-088	120 East - 1000 South to 1200 South	900			X	66	36	X	X	X	X	X	X			X		\$1,052,596			
	T-089	Roundabout at Mill Rd & 600 South	\$400,000	X														X	\$552,000	\$552,000	32	100%
TOTAL:																			\$82,561,904	\$18,649,721		

NOTE:

- Road Widening assumes existing road asphalt is 26 feet wide. Widening is difference between existing road asphalt and master planned asphalt width; ie. Local 32', Minor Collector 38', Major Collector 50'.
- Road Overlay assumes existing road asphalt being overlayed is 26 feet wide.
- Percent paid by developers for road widening costs on existing roads: Locals 100%, Minor Collectors 88%, Major Collectors 64%, Arterials 44%.
- Percent paid by developers for cost to construct new roads: see above notes
- Curb and gutter price with storm drain system price of \$50 per foot is for one side of the road. The formula multiplies by 2 to cover both side of the road and all of the storm drain system.

ITE Trip Generation

Land Use: 210

Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing -- single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077, 1078, 1079

Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 174

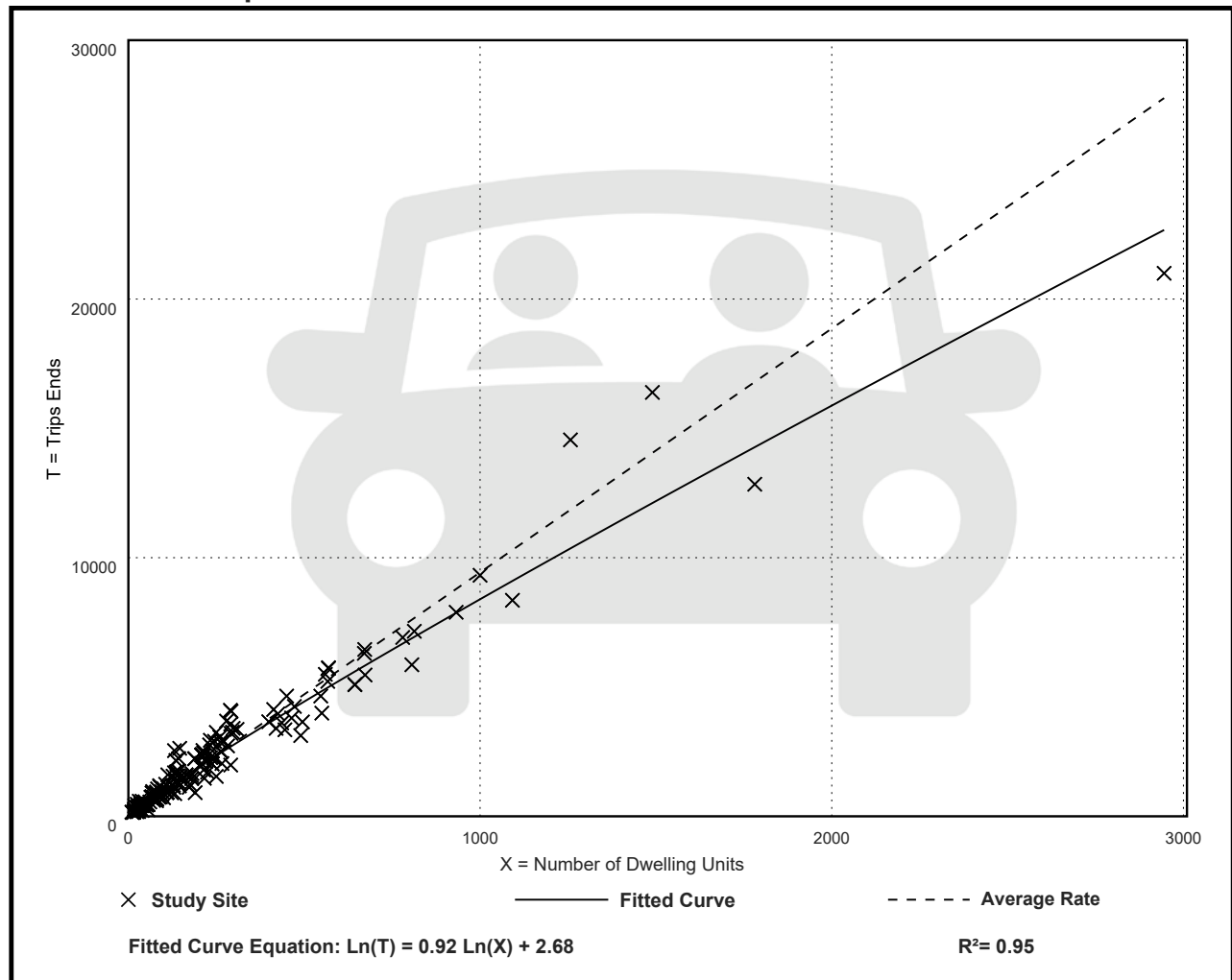
Avg. Num. of Dwelling Units: 246

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Land Use: 215

Single-Family Attached Housing

Description

Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space.

Additional Data

The database for this land use includes duplexes (defined as a single structure with two distinct dwelling units, typically joined side-by-side and each with at least one outside entrance) and townhouses/rowhouses (defined as a single structure with three or more distinct dwelling units, joined side-by-side in a row and each with an outside entrance).

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in British Columbia (CAN), California, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Dakota, Utah, Virginia, and Wisconsin.

Source Numbers

168, 204, 211, 237, 305, 306, 319, 321, 357, 390, 418, 525, 571, 583, 638, 735, 868, 869, 870, 896, 912, 959, 1009, 1046, 1056, 1058, 1077

Single-Family Attached Housing (215)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 22

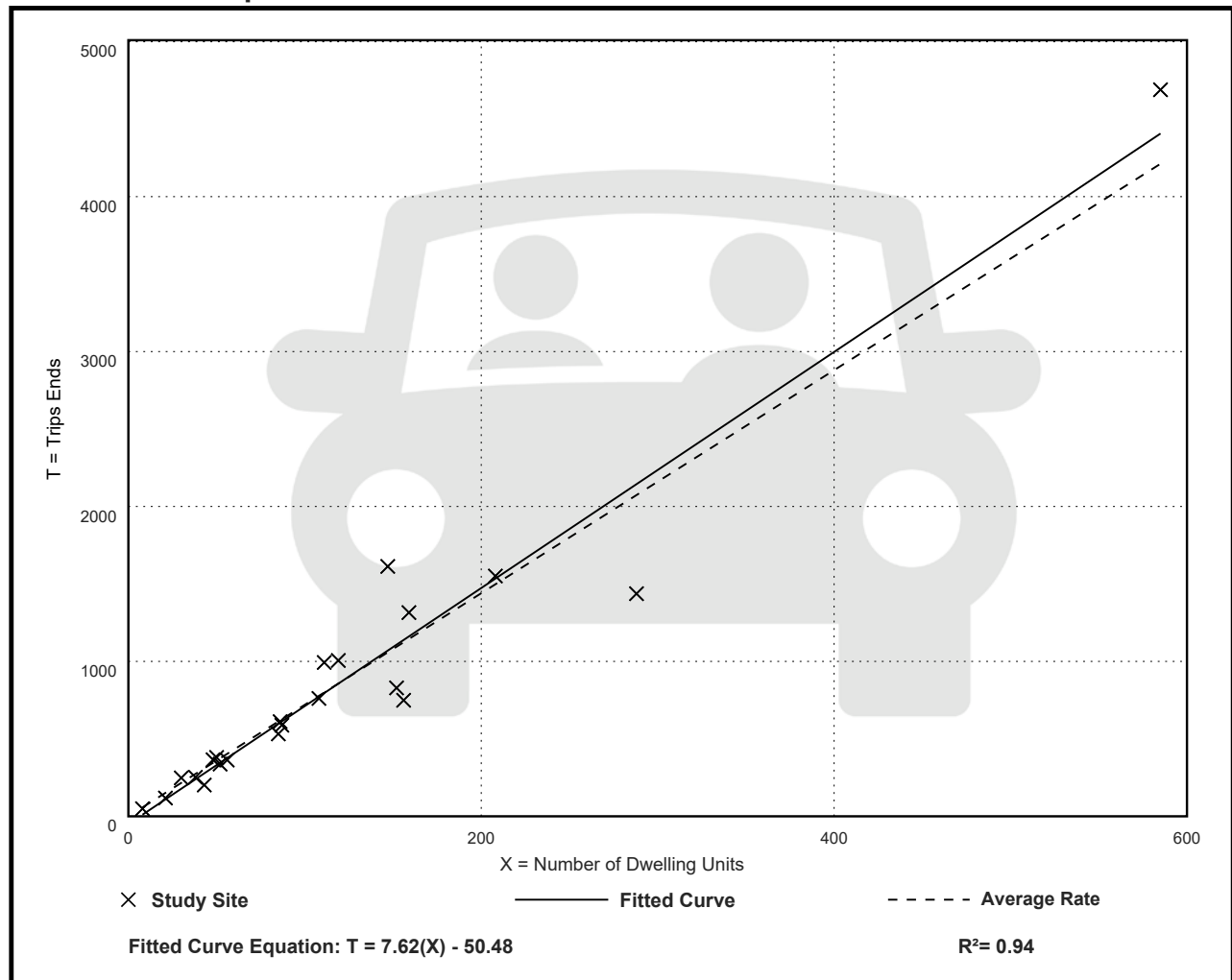
Avg. Num. of Dwelling Units: 120

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



Land Use: 220

Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.

- A walkup apartment typically is two or three floors in height with dwelling units that are accessed by a single or multiple entrances with stairways and hallways.
- A mansion apartment is a single structure that contains several apartments within what appears to be a single-family dwelling unit.
- A fourplex is a single two-story structure with two matching dwelling units on the ground and second floors. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.
- A stacked townhouse is designed to match the external appearance of a townhouse. But, unlike a townhouse dwelling unit that only shares walls with an adjoining unit, the stacked townhouse units share both floors and walls. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.

Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), affordable housing (Land Use 223), and off-campus student apartment (low-rise) (Land Use 225) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip

Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 22

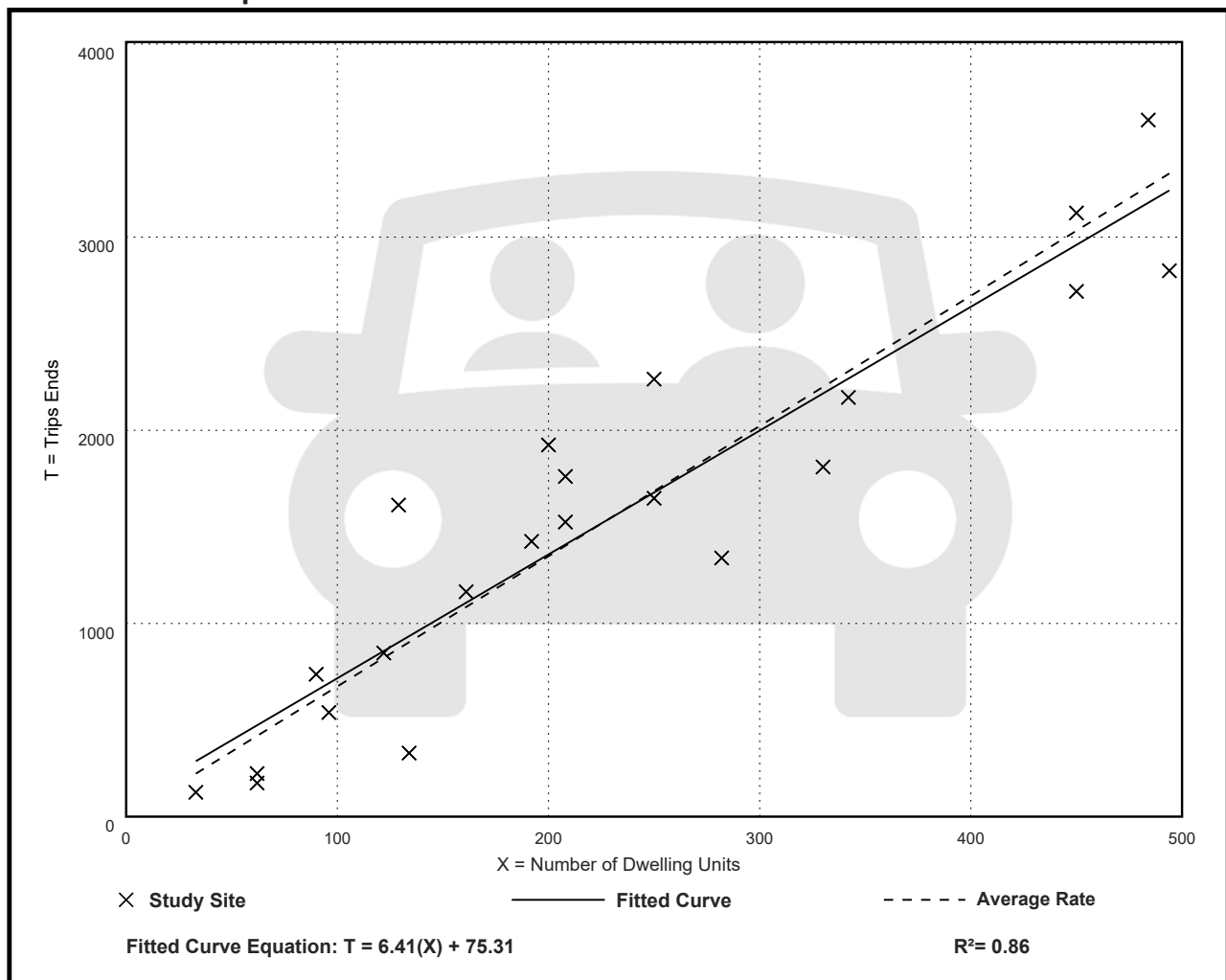
Avg. Num. of Dwelling Units: 229

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Land Use: 251

Senior Adult Housing—Single-Family

Description

Senior adult housing—single-family sites are independent living developments that are called various names including retirement communities, age-restricted housing, and active adult communities. The development has a specific age restriction for its residents, typically a minimum of 55 years of age for at least one resident of the household.

Residents in these communities are typically considered active and requiring little to no medical supervision. The percentage of retired residents varies by development. The development may include amenities such as a golf course, swimming pool, 24-hour security, transportation, and common recreational facilities. They generally lack centralized dining and on-site health facilities.

The dwelling units can be either detached or attached. The types of housing types represented by sites in the database include traditional single-family detached homes, patio homes, duplexes, and townhouses. Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space.

Senior adult housing—multifamily (Land Use 252), congregate care facility (Land Use 253), assisted living (Land Use 254), and continuing care retirement community (Land Use 255) are related land uses.

Additional Data

Caution should be used when applying trip rates for this land use as it may contain a wide variety of studies ranging from communities with very active, working residents to communities with older, retired residents. As more data become available, consideration will be given to future stratification of this land use.

Many factors affected the trip rates for detached senior adult housing. Factors such as the average age of residents, development location and size, affluence of residents, employment status, and vehicular access should be taken into consideration when conducting an analysis. Some developments were located within close proximity to medical facilities, restaurants, shopping centers, banks, and recreational activities.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

For the six sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 98 percent of the units were occupied.

Senior Adult Housing - Single-Family (251)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 15

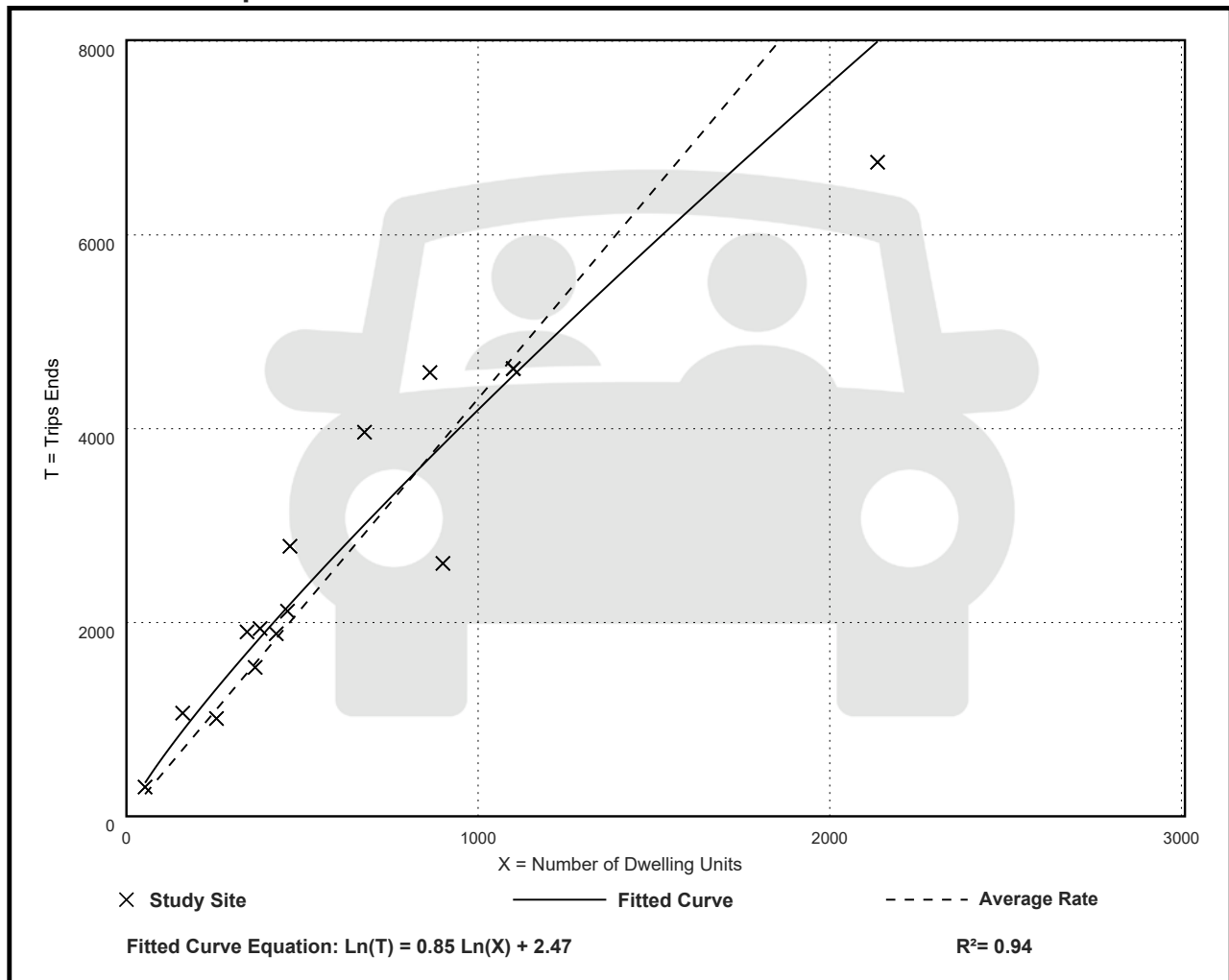
Avg. Num. of Dwelling Units: 646

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.31	2.90 - 6.66	1.07

Data Plot and Equation



Land Use: 252

Senior Adult Housing—Multifamily

Description

Senior adult housing—multifamily sites are independent living developments that are called various names including retirement communities, age-restricted housing, and active adult communities. The development has a specific age restriction for its residents, typically a minimum of 55 years of age for at least one resident of the household.

Residents in these communities are typically considered active and requiring little to no medical supervision. The percentage of retired residents varies by development. The development may include amenities such as a golf course, swimming pool, 24-hour security, transportation, and common recreational facilities. They generally lack centralized dining and on-site health facilities.

The dwelling units share both floors and walls with other units in the residential building. Senior adult housing—single-family (Land Use 251), congregate care facility (Land Use 253), assisted living (Land Use 254), and continuing care retirement community (Land Use 255) are related land uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 1990s, and the 2000s in Alberta (CAN), California, Maryland, New Hampshire, New Jersey, Ontario (CAN), and Pennsylvania.

Source Numbers

237, 272, 576, 703, 734, 970, 1060

Senior Adult Housing - Multifamily (252)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 6

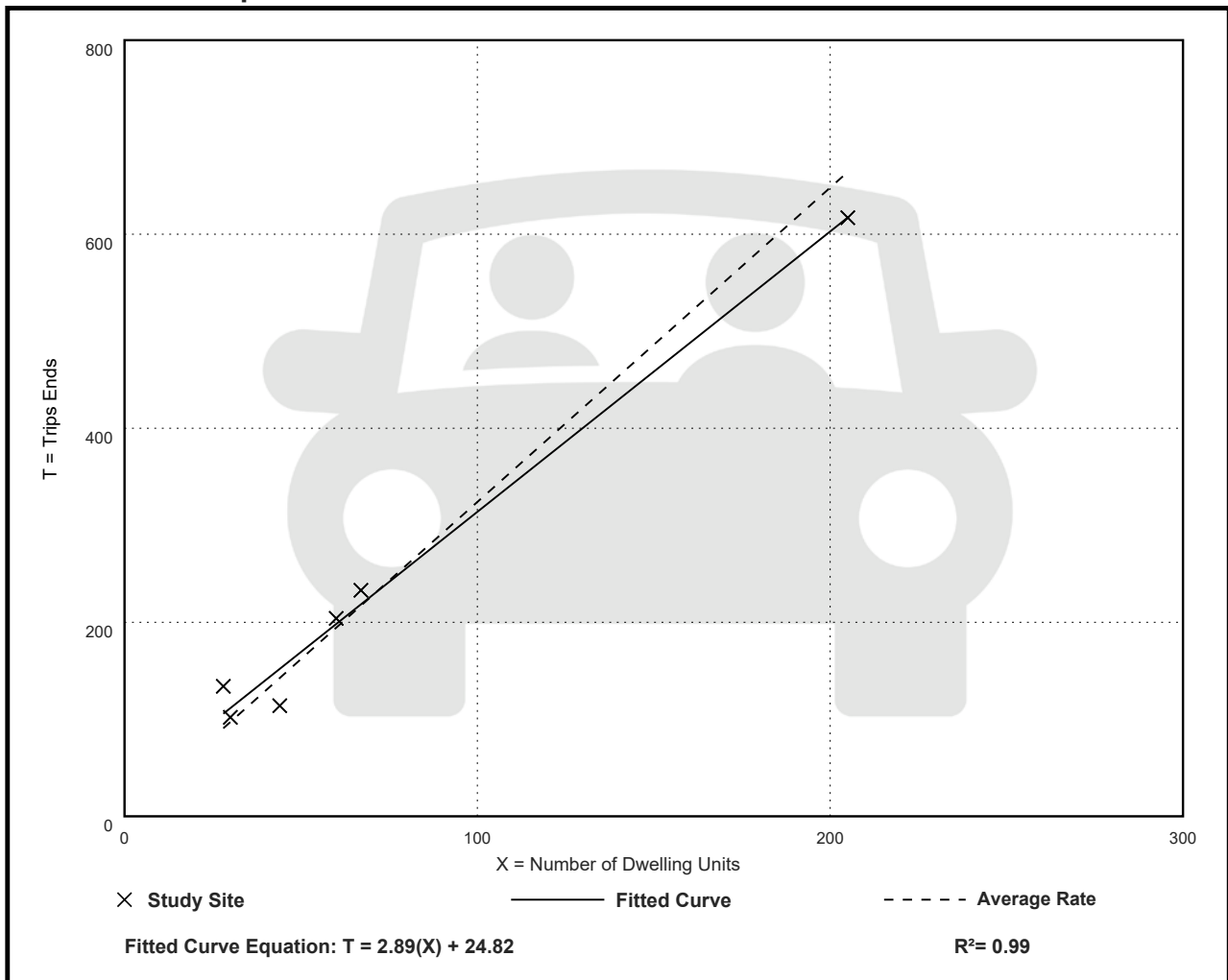
Avg. Num. of Dwelling Units: 72

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
3.24	2.59 - 4.79	0.53

Data Plot and Equation



APPENDIX D - WEIGHTED TRIP CALCULATION

Table 6-3 & 6-5 Residential Trip Rates (Appendix Detail)

Dwelling Unit Type (ITE #)	Trips Generated per day	% Pop
Single Family Detached Housing (210)	9.43	
Single Family Attached Housing (215)	7.20	
Single Family Average	8.32	54.3%
Multi-Family Housing (Low-Rise) (220)	6.74	
Multi-Family Housing (Mid-Rise) (221)	4.54	
Senior Adult Housing – Single-Family (251)	4.31	
Senior Adult Housing – Multifamily (252)	3.24	
Multi-family Average	4.71	45.7%
Residential Weighted Average @ 45.7% Multi-Family*	6.67	100.0%

* Weighted Average = SF Avg x % SF + MF Avg x % MF

Non Residential Street Impact Fee

8/31/2017					
NAME	TRIPS	9.67		ERU'S	
Smiths Fuel Center	May-10	27.0	2.79	Fuel Sta	188 trips - 86%pass-by
J Ellis	Oct-10	52.0	5.38		
Standard Plumbing	Aug-10	420.0	43.43		
Wasatch Animal	Nov-10	5.0	0.52	SF	
Heber Valley Medical Center	Aug-10	17.0	1.76	SF	
Wadman- Walmart	Dec-10	((4388))	((453.77))		
AVERAGE		104.2	10.8		
Chase Bank	Mar-11	126.0	13.03	SF	186 trips - 25% pass-by
Lythgoe ?	Mar-11	111.0	11.48		
Airport	May-11	6.0	0.62		
Wadman IHC - Womens Crt Addit	Jun-11	68.0	7.03	SF	
Heber City Storage	Nov-11	6.0	0.62		
Heber City Storage	Nov-11	13.0	1.34		
AVERAGE		55.0	5.7		
Prestige	Jan-12	80.0	8.27	units	
Auto Zone	Mar-12	209.0	21.61	SF	457 trips - 43% pass-by trips. Credited existing 3,325sf & shed
Petco	Apr-12	335.0	34.64	SF	447 trips - 23% pass-by (used 42.9 trips per VS agreement)
Probst Electric	May-12	40.0	4.14	SF	
GNC	May-12	38.0	3.93	SF	51 trips - 23% pass-by (used 42.9 trips per VS agreement)
Papa Johns	May-12	65.0	6.72		
Sports Clips	Jun-12	38.0	3.93		51 trips - 23% pass-by (used 42.9 trips per VS agreement)
Wasatch High School	Jun-12	((2050))	((212))	SF	credit for old high school and 1 res credit
Wasatch Ortho	Oct-12	115.0	11.89	SF	
Heber L&P	Oct-12	((2520))	((260.60))	SF	
AVERAGE		115.0	11.9		
Mountain Valley RV	Jan-13	416.0	43.02	Pads	93 trailer sites +4 tent +7 Cabin Sites
Rocky Road Outfitters	Jan-13	22.0	2.28		
Anytime Fitness	Feb-13	152.0	15.72		202 trips - 25% pass-by (used 42.9 trips per VS agreement)
Little Cesars	Apr-13	49.0	5.07		66 trips - 25% pass-by (used 42.9 trips per VS agreement)
Millstream	May-13	28.0	2.90		
Heber City Storage	Jun-13	21.0	2.17		
Heber City Storage	Jun-13	21.0	2.17		
Bullfrog Spa	Jun-13	42.0	4.34		55 trips - 25% pass-by (used 42.9 trips per VS agreement)
Boyer	Jul-13	84.0	8.69		
Zions Bank	Jul-13	665.0	68.77	SF	Includes credits 1489 trips - 47% pass-by
HVMC Dialysis	Oct-13	73.0	7.55		
Mrs. Calls Candy	Oct-13	64.0	6.62		
Abbingtion	Oct-13	194.0	20.06	Units	
Michael Sieter	Nov-13	19.0	1.96	SF	
Russ Witt	Nov-13	21.0	2.17	SF	
AVERAGE		124.7	12.9		
McDonalds Re-build	Jan-14	409.0	42.30	SF	Credit for old Bldg and 1 house 801 Trips - 49% pass-by
The Underground	Jan-14	40.0	4.14	SF	
Red Ledges Club House	Mar-14	79.0	8.17	SF	Assume 5 trips/1000 sf
Ogilvie Office	Mar-14	26.0	2.69	SF	
Armando's Mercado	Apr-14	7.0	0.72	SF	
Heber City Storage	May-14	21.0	2.17	SF	
HV Oral Surgery	May-14	50.0	5.17	SF	
AVERAGE		90.3	9.3		
redmond	Aug-14	8.0	0.83	SF	
Heber City Storage	Aug-14	29.0	3.00		
Tractor Supply	Sep-14	340.0	35.16	SF	654 trips - 48% pass-by
Labrum Ford Showroom	Oct-14	33.0	3.41	SF	Addition
Labrum Addition	Oct-14	33.0	3.41		Traffic study. Credits given for Heber Ranch
Ichiban	Oct-14	41.0	4.24	SF	Credit given for pizza hut, added upstairs apt.
Sportsman Warehouse	Nov-14	610.0	63.08	SF	814 trips - 23% pass-by (used 42.9 trips per VS agreement)
Mountain America Credit Union	Apr-15	256.0	26.47	SF	484 trips - 47% pass-by
HVMC-Central Processing	Apr-15	60.0	6.20	SF	
Millstream Storage	Jul-15	143.0	14.79	SF	
Red Ledges Golf School	Aug-15	7.0	0.72		
Heber City Storage	Sep-15	24.0	2.48		
Millstream RV Park Clubhouse/pool/laundr	Oct-15	224.0	23.16	Sites	56 trailer sites
Burton Lumber	Oct-15	468.0	48.40	SF	used traffic study
AVERAGE		162.6	16.8		
Silver Eagle/Subway	Mar-16	107.0	11.07	SF	
Midway Lane	Mar-16	187.0	19.34	SF	187 trips + 1 mult unit
Heber Station	Apr-16	56.0	5.79	Per Bay	28 Trips per bay, 4 bays, credit given for 2 bays (2*28=56)
Dorrough Dental (Lythgoe)	May-16	176.0	18.20	SF	
Probst Electric - Power Ind Park	May-16	154.0	15.93	SF	
Probst Electric -Storage	May-16	63.0	6.51	SF	
Panda Express	Sep-16	643.0	66.49	SF	1286 trips - 50% pass-buy
H&C Best Western??	Sep-16	467.0	48.29	Per Rm	
Labrum	Oct-16	33.0	3.41	SF	Addition - used informal traffic study
Burger King	Oct-16	((1110))	((114.79))	SF	2220 Trips - 50% pass-by
Mrs. Calls Candy	Oct-16	64.0	6.62	SF	Addition
Heber City Storage	Oct-16	17.0	1.76	SF	
AVERAGE		178.8	18.5		
Mrs. Calls Candy	Jan-17	8.0	0.83	SF	
IHC	Feb-17	297.0	30.71	SF	Traffic Study
Specialty Retailer	Mar-17	486.0	50.26	SF	
RMC SFN	May-17	218.0	22.54	Beds	Per bed (92 beds)
Heber Gateway	Jun-17	518.0	53.57	SF	
Standard Plumbing	Jul-17	209.0	21.61	SF	403 trips - 48% pass-by
Carls Jr	Jul-17	603.0	62.36	SF	1206 trips - 50% pass-by
AVERAGE		334.1	34.6		

AVERAGE ALL BUSINESSES

152

14

*NOTE: The four highest Non-Res trips have been excluded since they are unusual.

APPENDIX D

Project Impact Fee Eligibility Analysis

Project	Location	Existing Functional Class	Existing Volume	Existing Capacity	Buildout Volume	Pass Through %	Pass Through Volume	New Development Trips	Existing Plus Development Trips	Built Functional Class	Built Capacity	Minimum Capacity	Reduction Required	Project Cost	Heber City Eligible Responsibility	Impact Fee Eligible Portion	Impact Fee Eligible Cost	
T-003	400 South - 600 East to 700 East & Bridge	N/A	321	-	3,000	1.00%	30.00	2,649	2,970	Minor Collector	9,700	2,000	NO	\$ 722,290	\$ 722,290	100%	\$ 722,290	
T-009	600 East - 200 South to 400 South	N/A	0	-	1,400	1.00%	14.00	1,386	1,386	Local	2,000	500	NO	\$ 548,976	\$ -	0%	\$ -	
T-012	300 West - 500 North to 100 South	Local	1520	2,000	2,540	1.00%	25.40	995	2,515	Minor Collector	9,700	2,000	NO	\$ 478,440	\$ 268,200	100%	\$ 268,200	
T-016	2400 South - Daniel Rd to South Airport Rd	N/A	0	-	6,200	1.00%	62.00	6,138	6,138	Minor Collector	9,700	2,000	NO	\$ 4,454,123	\$ 400,871	100%	\$ 400,871	
T-017	1600 South - 600 East to Sawmill Blvd	N/A	0	-	-	1.00%	0.00	-	0	Local	2,000	500	NO	\$ 609,973	\$ -	0%	\$ -	
T-018	Airport Road - Daniel Rd to Hangers	Minor Collector	4,900	9,700	10,800	1.00%	108.00	5,792	10,692	Major Collector	10,800	4,200	NO	\$ 1,243,693	\$ 671,594	100%	\$ 671,594	
T-020	650 South - 1200 West to West Bypass	Local	1200	10,800	2,480	1.00%	24.80	1,255	2,455	Minor Collector	9,700	2,000	NO	\$ 725,231	\$ 688,970	100%	\$ 688,970	
T-028	500 East - 500 North to 600 South	Local	1,900	2,000	4,610	1.00%	46.10	2,664	4,564	Minor Collector	9,700	2,000	NO	\$ 2,361,184	\$ 2,054,230	100%	\$ 2,054,230	
T-029	600 East - 1300 South to Hidden Cr Ln	N/A	0	-	7,170	1.00%	71.70	7,098	7,098	Major Collector	10,800	4,200	NO	\$ 3,523,529	\$ 775,176	100%	\$ 775,176	
T-032	Industrial Pkwy - West Bypass to SR189	Minor Collector	2100	9,700	3,940	1.00%	39.40	1,801	3,901	Minor Collector	9,700	2,000	NO	\$ 547,225	\$ 311,918	100%	\$ 311,918	
T-033	600 West - West Bypass to 100 South	Minor Collector	3,320	9,700	3,500	1.00%	35.00	145	3,465	Minor Collector	9,700	2,000	NO	\$ 2,614,531	\$ 2,353,078	100%	\$ 2,353,078	
T-035	1200 South - 700 West to Southfield Rd	N/A	260	-	2,100	1.00%	21.00	1,819	2,079	Minor Collector	9,700	2,000	NO	\$ 2,648,397	\$ 582,647	100%	\$ 582,647	
T-040	1200 East - 1200 South to US40 *	Major Collector	2540	10,800	12,200	1.00%	122.00	9,538	12,078	Major Collector	10,800	4,200	NO	\$ 3,952,199	\$ 2,371,319	100%	\$ 2,371,319	
T-041	Southfield Rd - 100 South to 1200 South & RR	Minor Collector	1,580	10,800	3,140	1.00%	31.40	1,529	3,109	Major Collector	10,800	4,200	YES	\$ 3,926,577	\$ 1,765,143	72%	\$ 1,266,930	
T-043	100 East - 500 North to 600 South Historic	Local	2,063	2,000	9,700	1.00%	97.00	7,540	9,603	Minor Collector	9,700	2,000	NO	\$ 240,000	\$ -	100%	\$ -	
T-045	1200 South - 820 East to 1200 East	Minor Arterial	4,540	10,800	14,200	1.00%	142.00	9,518	14,058	Minor Arterial	28,500	9,100	NO	\$ 980,222	\$ 372,484	100%	\$ 372,484	
T-046	100 West - 500 North to 1000 South Historic	Local	1,284	9,700	2,425	1.00%	24.25	1,117	2,401	Minor Collector	9,700	2,000	NO	\$ 3,780,832	\$ 2,192,883	100%	\$ 2,192,883	
T-047	South Airport Rd - 670 West to 1200 West	Local	1,800	9,700	3,600	1.00%	36.00	1,764	3,564	Minor Collector	9,700	2,000	NO	\$ 1,293,441	\$ 646,720	100%	\$ 646,720	
T-050	2400 South - 700 East to US40	N/A	0	-	2,040	1.00%	20.40	2,020	2,020	Minor Collector	9,700	2,000	NO	\$ 1,444,580	\$ 924,531	100%	\$ 924,531	
T-052	500 East - 600 South to 720 South	N/A	0	-	4,520	1.00%	45.20	4,475	4,475	Minor Collector	9,700	2,000	NO	\$ 601,908	\$ 601,908	100%	\$ 601,908	
T-053	East Bypass - Center St to 1050 East	N/A	2,190	-	3,460	1.00%	34.60	1,235	3,425	Major Collector	10,800	4,200	NO	\$ 4,383,286	\$ -	100%	\$ -	
T-054	Ostler Peak Rd - 1800 North to 900 North	N/A	0	-	2,060	1.00%	20.60	2,039	2,039	Minor Collector	9,700	2,000	NO	\$ 6,088,658	\$ 1,339,505	100%	\$ 1,339,505	
T-055	South Bypass - Daniel Rd to US40	N/A	530	-	5,660	1.00%	56.60	5,073	5,603	Major Collector	10,800	4,200	NO	\$ 2,225,578	\$ 1,224,068	100%	\$ 1,224,068	
T-057	East Bypass - 1050 East to 550 East Cemetery	N/A	4780	-	5,760	1.00%	57.60	922	5,702	Major Collector	10,800	4,200	NO	\$ 1,551,606	\$ 1,551,606	100%	\$ 1,551,606	
T-058	East Bypass - 550 East to Main St	N/A	6,110	-	6,960	1.00%	69.60	780	6,890	Major Collector	10,800	4,200	NO	\$ 3,241,647	\$ 713,162	100%	\$ 713,162	
T-065	500 North to Midway Ln	N/A	0	-	2,540	1.00%	25.40	2,515	2,515	Minor Collector	9,700	2,000	NO	\$ 4,710,588	\$ 423,953	100%	\$ 423,953	
T-069	1900 South - Mill Rd to 600 East	N/A	0	-	3,060	1.00%	30.60	3,029	3,029	Minor Collector	9,700	2,000	NO	\$ 2,093,595	\$ 188,424	100%	\$ 188,424	
T-072	600 South - 300 West to 650 South Restripe	Minor Collector	1670	9,700	3,170	1.00%	31.70	1,468	3,138	Minor Collector	9,700	2,000	NO	\$ 27,600	\$ 27,600	100%	\$ 27,600	
T-073	Providence Dr - 1500 South to 600 East	N/A	0	-	5,750	1.00%	57.50	5,693	5,693	Minor Collector	9,700	2,000	NO	\$ 1,564,962	\$ 140,847	100%	\$ 140,847	
T-082	850 South - 100 West to Main St	N/A	0	-	2,200	1.00%	22.00	2,178	2,178	Minor Collector	9,700	2,000	NO	\$ 1,403,461	\$ 1,403,461	100%	\$ 1,403,461	
T-083	850 South - Main St to 120 East	N/A	0	-	2,200	1.00%	22.00	2,178	2,178	Minor Collector	9,700	2,000	NO	\$ 2,222,147	\$ 2,222,147	100%	\$ 2,222,147	
T-084	Airport Rd - US40 to 600 East	N/A	0	9,700	4,320	1.00%	43.20	4,277	4,277	Major Collector	10,800	4,200	NO	\$ 1,127,529	\$ 1,127,529	92%	\$ 1,127,529	
T-087	120 East - 790 South to 1000 South	N/A	0	-	1,800	1.00%	18.00	2,002	2,502	Minor Collector	9,700	2,000	NO	\$ 1,403,461	\$ 737,902	100%	\$ 737,902	
T-088	120 East - 1000 South to 1200 South	N/A	0	-	1,800	1.00%	18.00	2,305	2,305	Minor Collector	9,700	2,000	NO	\$ 552,000	\$ 1,052,596	100%	\$ 1,052,596	
														\$76,041,092	\$ 29,856,765		\$36,106,175	
Intersection Projects Included in Total					Road Type	ROW	Paved	Cost Increase From Local Road										\$39,934,917

Intersection Projects Included in Total			Road Type	ROW	Paved	Cost Increase From Local Road		
T-063	Intersection Alignment US40 & 2400 South	\$1,117,475	Minor Collector:	68	38	\$102.80	LF	
T-064	Intersection Alignment US40 & Mill Rd	\$869,148	Major Collector:	80	50	\$308.39	LF	33%
T-075	Roundabout at 900 North & 550 East	\$552,000	Minor Arterial:	90	60	\$479.72	LF	21%
T-076	Roundabout at 900 North & Mill Rd	\$552,000						
T-077	Roundabout at Mill Rd & Center St	\$552,000						
T-078	Roundabout at 1400 East & Center St	\$552,000						
T-079	Roundabout at 300 West & 1000 South	\$552,000						
T-080	Roundabout at Mill Rd & 1200 South	\$552,000						
T-081	Roundabout at Airport Rd & Daniel Rd	\$552,000						
T-085	Traffic Signal at 1200 South & 500 East	\$345,000						
T-086	Roundabout at Airport Rd & 600 East	\$552,000						
		\$6,747,623						

Note: This sheet excludes UDOT, Ultimate, and Other Improvements in Project Costs sheet projects.

APPENDIX E

STORM DRAIN POPULATION & ERU's

YEAR	POPULATION			RESIDENTIAL			NON-RESIDENTIAL				RES+NON-RES	
	% CHG	TOTAL	CHG	UNITS	NEW UNITS		% CHG	CONN	CHG	NEW ERU's	NEW ERU's	NEW ERU's
										ERU's/Conn = 4.1		
2021		16,856		5,001				427				
2022	4.33%	17,586	730	5,082	82		4.33%	455	28	115		196
2023	4.33%	18,347	761	5,302	220		4.33%	475	20	81		301
2024	4.33%	19,142	794	5,532	230		4.33%	495	21	84		314
2025	4.33%	19,971	829	5,772	240		4.33%	517	21	88		327
2026	4.33%	20,835	865	6,022	250		4.33%	539	22	92		342
2027	4.33%	21,738	902	6,282	261		4.33%	562	23	96		356
2028	4.33%	22,679	941	6,554	272	1,252	4.33%	587	24	100	459	372
2029	4.33%	23,661	982	6,838	284		4.33%	612	25	104		388
2030	4.33%	24,685	1,025	7,134	296		4.33%	639	27	109		405
2031	4.33%	25,754	1,069	7,443	309		4.33%	666	28	113		422
2032	1.19%	26,061	306	7,532	89		1.19%	674	8	33		121
2033	1.19%	26,371	310	7,621	90	1,067	1.19%	682	8	33	392	123
2034	1.19%	26,685	314	7,712	91		1.19%	690	8	33		124
2035	1.19%	27,002	318	7,804	92		1.19%	699	8	34		125
2036	1.19%	27,323	321	7,897	93		1.19%	707	8	34		127
2037	1.19%	27,649	325	7,991	94		1.19%	715	8	34		128
2038	1.19%	27,978	329	8,086	95	464	1.19%	724	9	35	170	130
2039	1.19%	28,310	333	8,182	96		1.19%	732	9	35		132
2040	1.19%	28,647	337	8,279	97		1.19%	741	9	36		133
2041	1.19%	28,988	341	8,378	99		1.19%	750	9	36		135
2042	1.19%	29,333	345	8,477	100		1.19%	759	9	37		136
2043	1.19%	29,682	349	8,578	101	493	1.19%	768	9	37	181	138
TOTAL NEW (2023-2043)			11,335		3,276				293	1,202		4,478
EST 2023			18,347		5,302				475	1,946		7,249
TOTAL 2043			29,682		8,578				768	3,149		11,727

Ultimate Per Landuse

36,353

11,652

Storm Drain Price List			
Size	Description	Price	Units
18	Main	\$50.00	LF
21	Main	\$55.00	LF
24	Main	\$60.00	LF
27	Main	\$70.00	LF
30	Main	\$75.00	LF
36	Main	\$85.00	LF
42	Main	\$100.00	LF
48	Main	\$175.00	LF
54	Main	\$250.00	LF
	Pond	\$33,106	Ac-ft
	48" Man Hole	\$2,900.00	Each
	60" Man Hole	\$3,800.00	Each
	Drain Rock Bedding	\$15.00	Ton
	Oil Separator	\$4,000.00	Each
	Saw Cut	\$1.00	LF
	Class "A" Road Repair	\$3.50	SF
	Imported Select backfill	\$13.50	Ton
	Design, CM, Insp	15%	
	Contingency	10%	

Notes:

- Pipe cost data from Heber Bond Database

- Pond cost estimate generated in terms of land and excavation costs.

- Land assumed to be \$100,000 per acre or \$2.30 per sf.

- Excavation assumed to be \$10.00 per cubic yard or \$0.37 per cubic foot.

- Excavation assumed to be 5 feet deep.

- Price per acre foot is \$33,106 (1x43,560/5x2.30+0.37*43,560)

Cost Summary of Recommended Storm Drain Improvements

STORM DRAIN CAPITAL IMPROVEMENTS																
IMPROVEMENT DESCRIPTION			AMOUNT / COST	PEAK FLOW	DISCHARGE	LUMP SUM	LINE SIZE	MANHOLE	BEDDING	INLET BOXES	POND	OIL SEPARATOR	SAW CUT	ASPHALT	FILL	ENGINEERING INSPECTION
ULT				cfs	cfs	g	h	i	j	k	l	m	n	o	p	q
	D-015	Ditch Storm Drain System Improvements														
		Pipe and oil separator at discharge points	400				18					4				X
		Install pipe in abandoned locations	4,000				18		X	X				X		X
		Divert dead ends into channels	2,000				18		X	X						X
	D-016	First Flush Detention Pond(s) - Central Heber		58	2											
		Pond 1 - 4.8 acre-ft	4.8							X	X					X
		Pond 2 - 2.3 acre-ft	2.3							X	X					X
		Pond 3	1.4							X	X					X
		Pond 4	1.5							X	X					X
		Pipe/headworks for pond	2,000				36	X		X						X
			2,725	38	38		30	X	X	X		1		X	X	X
	D-022	Maintain Existing SD/Ditch System (20 times)														
		Includes subdivisions, ditches, streams, canals, and channels, yearly maintenance.	2,000,000				X									
	D-023	Master Plan Updates every 5 years (4 times)						X								
			40,000													
	D-025	Storm Water Management Program														
		Create SWMP. Implement and Enforce over next 20 years @ \$10,000 per year.	80,000				X									
			200,000				X									
ULT	D-026	Install SD System in Old Town Heber														
		Calculate payment using existing and new residents in old town, over 20 years.	24,810				18	X	X	X						X
			6,665				21	X	X	X						X
			7,924				24	X	X	X						X
			5,980				30	X	X	X						X
			4,455				36	X	X	X						X
			7,010				42	X	X	X						X
			1,713				54	X	X	X						X
	D-027	Heber City Public Works Facility Exp Ph 1*	957,867													
	D-028	Heber City Public Works Facility Exp Ph 2*	451,243													
TOTAL STORM DRAIN:				96	40											\$12,368,378

FIGURE 1



Legend

	12"
	15"
	18"
	21"
	24"
	30"
	36"
	42"
	48"
	54"
	60"

Legend

- 12"
- 15"
- 18"
- 21"
- 24"
- 30"
- 36"
- 42"
- 48"
- 54"
- 60"



HORROCKS
ENGINEERS
2162 West Grove Parkway, Suite #400
Pleasant Grove, UT (801) 763-5100

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APPENDIX E - MODEL CALCULATIONS CENTRAL HEBER

Detention Volume SCS_existing

Type.... Target Outflow Volume Estimates
Name.... POND 20

Page 0.01

File.... C:\Heber SDMP Jacob Work\Ponds\Heber Existing.ppw

DETENTION STORAGE ESTIMATES -- Target Peak Outflow Rate

Return Events	Peak In (cfs)	Target (cfs)	Lower (ac-ft)	Linear (ac-ft)	Curvlinr (ac-ft)	Upper (ac-ft)	Total (ac-ft)
10	89.654	17.500	4.995	5.956	7.763	8.249	13.207
10	54.071	24.800	1.606	2.677	4.030	4.352	10.011
10	37.900	24.600	.566	1.294	2.262	2.625	7.810
10	41.318	16.000	1.227	1.864	2.662	2.833	6.458

CALCULATION TIME RANGES

Return Events	Lower		Linear		Curvilinear		Upper		Total	
	From (hrs)	To (hrs)	From (hrs)	To (hrs)	From (hrs)	To (hrs)	From (hrs)	To (hrs)	From (hrs)	To (hrs)
10	11.88	13.80	11.35	13.80	9.15	13.80	9.15	13.80	9.15	26.75
10	12.15	13.34	11.80	13.34	11.40	13.34	11.40	13.34	11.40	27.05
10	12.26	13.10	11.90	13.10	11.60	13.10	11.60	13.10	11.60	27.05
10	12.05	13.15	11.80	13.15	11.50	13.15	11.50	13.15	11.50	26.35

Area 1 7.7 Acre-ft 10-year
Area 2 4 Acre-ft
Area 3 2.3 Acre-ft
Area 4 2.7 Acre-ft

Type.... Target Outflow Volume Estimates
Name.... POND 20

Page 0.01

File.... C:\Heber SDMP Jacob Work\Ponds\Heber Existing.ppw

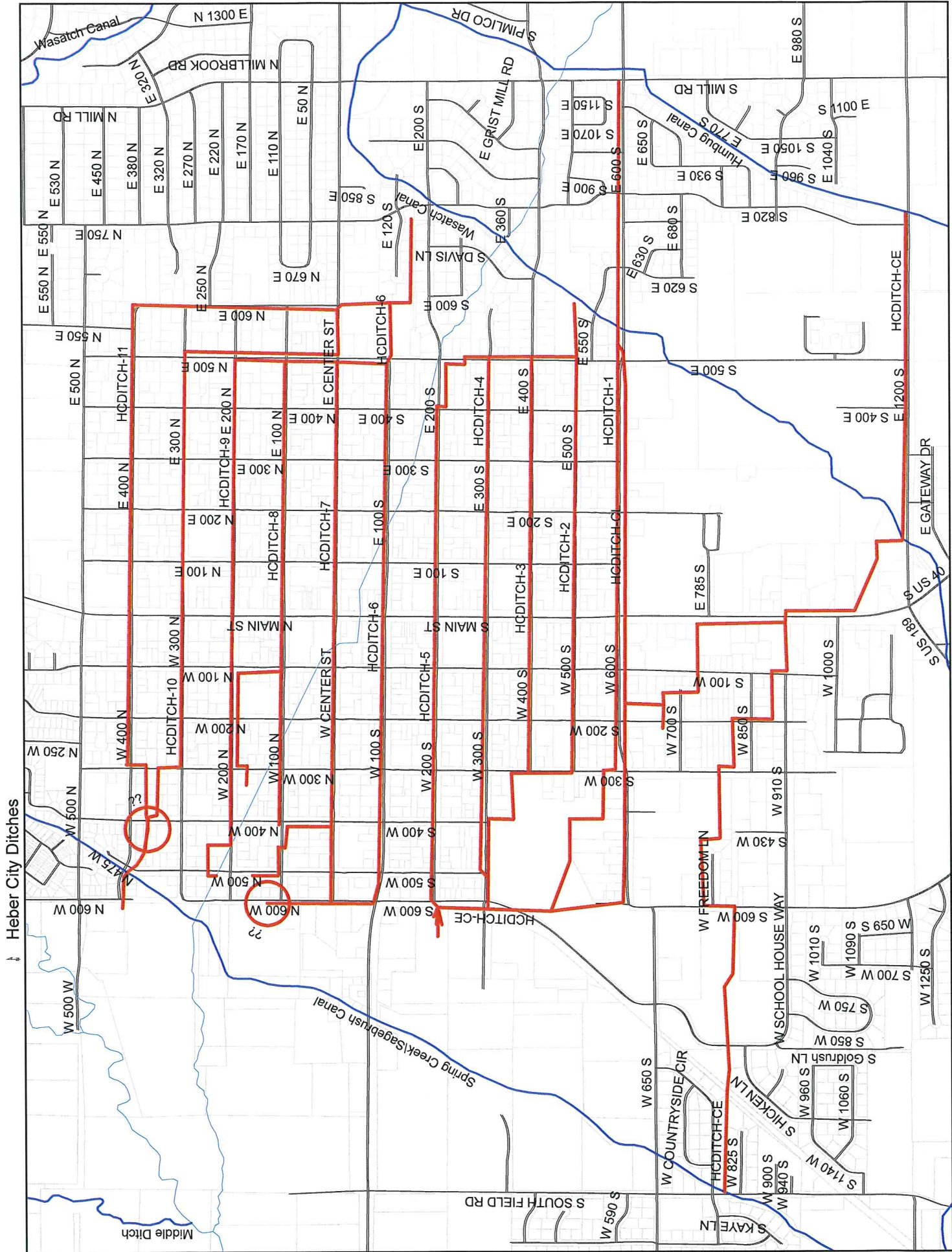
DETENTION STORAGE ESTIMATES -- Target Peak Outflow Rate

Return Events	Peak In (cfs)	Target (cfs)	Lower (ac-ft)	Linear (ac-ft)	Curvlinr (ac-ft)	Upper (ac-ft)	Total (ac-ft)
25	121.319	17.500	7.785	8.881	11.163	11.933	17.666
25	84.777	24.800	4.115	5.646	7.582	7.874	14.699
25	64.466	24.600	2.445	3.737	5.334	5.608	11.925
25	65.097	16.000	2.863	3.739	4.894	5.052	9.481

CALCULATION TIME RANGES

Return Events	Lower		Linear		Curvilinear		Upper		Total	
	From (hrs)	To (hrs)	From (hrs)	To (hrs)	From (hrs)	To (hrs)	From (hrs)	To (hrs)	From (hrs)	To (hrs)
25	11.80	14.14	10.90	14.14	8.35	14.14	8.35	14.14	8.35	26.75
25	12.03	13.73	11.70	13.73	11.05	13.73	11.05	13.73	11.05	27.05
25	12.10	13.53	11.75	13.53	11.45	13.53	11.45	13.53	11.45	27.05
25	11.96	13.49	11.60	13.49	11.05	13.49	11.05	13.49	11.05	26.40

Area 1 11.2 Acre-ft 25-year
Area 2 7.6 Acre-ft
Area 3 5.6 Acre-ft
Area 4 5 Acre-ft



APPENDIX E

Heber City - Storm Drain Facilities

Public Facility (Name)	Storage Facility(s)	Volume (cf) ¹	Volume (ac-ft)	Sumps (each)	Discharge (cfs)	Pollution Protection
Alpine Acres	pond/underground rock storage	51,330		0	0	pond
Alpine Meadows Phase 1	pond	12,775		0	1.24	pond
Alpine Meadows Phase 2	pond/underground rock storage	23,172		-	0	pond
Aspen Point	pond/underground rock storage	37,411		-	8.7" orifice	snout, pond
Birmingham Subdivision	pond	10,364		0	0	pond
Broadhead Estates Phase I	pond & stormtech system	3,221		-	0.898	stormtech, snout
Broadhead Estates Phase II	2 ponds, sump	12,740		1	2.5" Orifice	snout
Brookside	pond, sump	17,198		1	none	snout, pond
Cedar Meadows	pond w/sump	17,604		2	12" pipe no known restrictions	pond
Cottages at Valley Station Phase 2 & 3	3 ponds, sumps	35,479		3	none	snouts, ponds
Country Meadow Estates	7 ponds	11,354		0	none	ponds
Cove Estates Pond	pond w/sumps	118,805		4	none	snout, pond
Coyote Ridge Phase 1	2 ponds	151,693		0	none	pond
Crews Court	stormtech system	2,387		-	none	stormtech, snout
Daniels Gate Daniels Gate B	pond w/ sump	33,098		1	none	snout, pond
District at Valley Station	ponds w/sumps	4,290		3	none	snouts, ponds
Elmbridge	ponds	34,203		0	4.4" & 1.8" orifices	snout, ponds
Greenfield Town Homes	pond w/ sump	35,200		1	none	pond
Habitat for Humanity 400 W 300 N	sumps	2,164		2	none	sumps
Harvest Fields	pond w/ sump	18,000		1	none	snout, ponds, sump
Hat Creek	pond	18,690		0	5.6" orifice and overflow	pond
Heber City Public Safety Building	pond	4,000		0	none	snout, pond
Heber Gateway Plaza Phase 1	pond w/sump	21,319		1	4.3" Orifice, 1.06 cfs	snout, pond
Heber Landing Subdivision Phase 1	pond w/sump	24,700		1	none	pond
Heber Meadows Phase 1	pond w/ sump	31,541	0.7200	2	none	snout, pond
Heber Meadows North	2 ponds	85,060		2	none	pond, snout
Hog Business Park	sumps with underground rock	57,000	0.3300	4	none	snout, sump
Jordanelle Ridge Village 2 Phase 1A	pond and lids	102,042		0	none	stormtech, snout
Jordanelle Ridge Plat B	pond	151,600		0	none	pond, snout
Last Stand	pond w/sump	7,910		1	none	pond, snout
Liberty Station & Liberty Crossing	2 stormtech systems	14,400		0	none	stormtech, snout
Majestic Mountain Acres/Noble/Browning	pond w/ stormtech systems	36,237		0	none	stormtech, snout
Mayers Meadows Subdivision	stormtech system	11,204		0	none	stormtech, snout
Meadows at South Field	pond w/sumps	25,708		10	none	pond, snout
Mill Road Estates Phase 1 and 2	pond		2.2000	0	1.1	pond
Mill Road Estates Phase 3	pond	3,400		0	3" orifice	pond, snout
Mill Road Estates Phase 4	pond	7,701		0	3" orifice	pond, snout
Mountain Meadows Phase 1 & 2	none	0		0	100%	none
Mountain View Estates	pond	12,500		0	overflow at 35.67'	pond
Murfield Phase 1	pond	6,431		0	1.00	pond
Murfield Phase 2	pond	57,115		0	yes not sure how much	pond
Murfields Phase 4A and 4B	pond	10,219		0	1.16	pond
My Mountain Home Plat A and B	pond	18,180		0	15" pipe unlimited	pond
My Mountain Home Plat C	pond	6,000		0	0	pond
Old Mill Country Estates	pond	42,250		0	5.4" orifice	pond
Old Mill	sumps	8,742		27	none	snout
Park Properties	sump	500		1	none	snout
Pine Meadows	pond /sump	15,000		3	15" pipe no known restrictions	pond
Power Industrial Park	pond	6,000		0	none	pond, snout
Red Ledges 3K	Timp canal overflow channel	NA		NA	50 cfs	NA
Sage Acres	pond	18,000		0	overflow to canal	pond
Sawmill	pond	40,200		0	none	
School House Way Estates & First Flush Pond	storage pond and first flush	113,256	3.2900	1	16" orifice with overflow box	snout, pond
Sequoia Apartments at Turner Mill	ponds w/underground storage	25,430		0	none	snout
Silver Ridge Properties	underground rock storage	12,250	0.2800	3	none	snout
Springs at Coyote Ridge	underground storage	24,186		0	none	snout
Stone Creek	pond	46,831		0	none	pond
Swiftcreek Subdivision	pond w/sump	6,872		1	none	pond, snout
The Cove at Valley Hills	pond w/sump	118,804	2.7270	4	none	pond
The Orchard	underground storage	4,275		0	none	snout
Three Strings	pond	37,702		0	none	pond, snout
Timp Meadows	pond	18,000		0	15" pipe no known restrictions	pond
Timp Meadows East	pond	39,000		0	15" pipe no known restrictions	pond
Timp Meadows North	Pond	64,856		0	none	pond

Heber City - Storm Drain Facilities

Public Facility (Name)	Storage Facility(s)	Volume (cf) ¹	Volume (ac-ft)	Sumps (each)	Discharge (cfs)	Pollution Protection
Timp View Crossing	pond w/sumps	7,083		3	none	pond, snout
Valley Heights Subdivision	pond w/sumps	20,940		12	none	pond, snout
Valley Station	pond/sump with underground	32,565		1	1.68	Vortechs (3 ea)
Walgreens	sump	1,000		1	none	sumps
Wasatch Vista	pond w/sump	70,225		1	2.75	pond, snout
Wheeler Park Phase 1 and 2	pond w/ sump and underground	214,515	4.9200	1	none	pond, snout
Willow Creek Estates	underground rock storage	5,328		1	none	snout
Wing Point (Private?)	pond /underground rock storage	21,000		2	none	pond
Witt Commerical	pond w/sump	8,581		1	none	pond, snout
Valley Hills Drive 800 North Basin	pond	5,472		0	discharge to ditch possible	pond
David Fields Commercial (public)	sump	842		1	none	sump
Sorenson Dental Office	sump	828		2	none	sump
Street Inlets and Catch Basins, City Wide	n/a	varies		n/a	varies	varies
1. Volume is maximum and includes freeboard if there is any.						

APPENDIX F

PRESSURED IRRIGATION POPULATION & ERU's

	POPULATION				RESIDENTIAL			NON-RESIDENTIAL				RES+NON-RES		DEMAND
YEAR	% CHG	TOTAL	CHG		UNITS	NEW UNITS		% CHG	CONN	CHG	NEW ERU's		NEW ERU's	
								ERU's/Conn =						gpd/ERU =
										4.1				437
2021		16,856		16,856	5,001				427					
2022	4.33%	17,586	730		5,082	82		4.33%	455	28	115		196	
2023	4.33%	18,347	761		5,302	220		4.33%	475	20	81		301	
2024	4.33%	19,142	794		5,532	230		4.33%	495	21	84		314	
2025	4.33%	19,971	829		5,772	240		4.33%	517	21	88		327	
2026	4.33%	20,835	865		6,022	250		4.33%	539	22	92		342	
2027	4.33%	21,738	902		6,282	261		4.33%	562	23	96		356	
2028	4.33%	22,679	941	4331	6,554	272	1,252	4.33%	587	24	100	459	372	1,070
2029	4.33%	23,661	982		6,838	284		4.33%	612	25	104		388	
2030	4.33%	24,685	1,025		7,134	296		4.33%	639	27	109		405	
2031	4.33%	25,754	1,069		7,443	309		4.33%	666	28	113		422	
2032	1.19%	26,061	306		7,532	89		1.19%	674	8	33		121	
2033	1.19%	26,371	310	3692	7,621	90	1,067	1.19%	682	8	33	392	123	666
2034	1.19%	26,685	314		7,712	91		1.19%	690	8	33		124	
2035	1.19%	27,002	318		7,804	92		1.19%	699	8	34		125	
2036	1.19%	27,323	321		7,897	93		1.19%	707	8	34		127	
2037	1.19%	27,649	325		7,991	94		1.19%	715	8	34		128	
2038	1.19%	27,978	329	1607	8,086	95	464	1.19%	724	9	35	170	130	385
2039	1.19%	28,310	333		8,182	96		1.19%	732	9	35		132	
2040	1.19%	28,647	337		8,279	97		1.19%	741	9	36		133	
2041	1.19%	28,988	341		8,378	99		1.19%	750	9	36		135	
2042	1.19%	29,333	345		8,477	100		1.19%	759	9	37		136	
2043	1.19%	29,682	349	1705	8,578	101	493	1.19%	768	9	37	181	138	409
TOTAL NEW (2024-2043)			11,335			3,276				293	1,202		4,478	1.11
EST 2023			18,347			5,302				475	1,946		7,249	3.17
TOTAL 2043			29,682			8,578				768	3,149		11,727	4.27

gpd/conn
1792

Ultimate Per Landuse

36,353

11,652

APPENDIX F

Pressurized Irrigation Price List

Size	Description	Price	Units
8	Pipe, Fittings, and Bedding	\$91	LF
10	Pipe, Fittings, and Bedding	\$127	LF
12	Pipe, Fittings, and Bedding	\$154	LF
16	Pipe, Fittings, and Bedding	\$200	LF
	Pump Expansion	\$273,000	LS
	PRV	\$223,000	LS
	Rd Patch	\$155	LF
	Valves	\$10,800	Per 2 Spacing (ft) 500
	Air Vac	\$9,000	Each Spacing (ft) 1000
	Design, CM, Insp	20%	
	Contingency	20%	

Cost Summary of Recommended Pressurized Irrigation Improvements

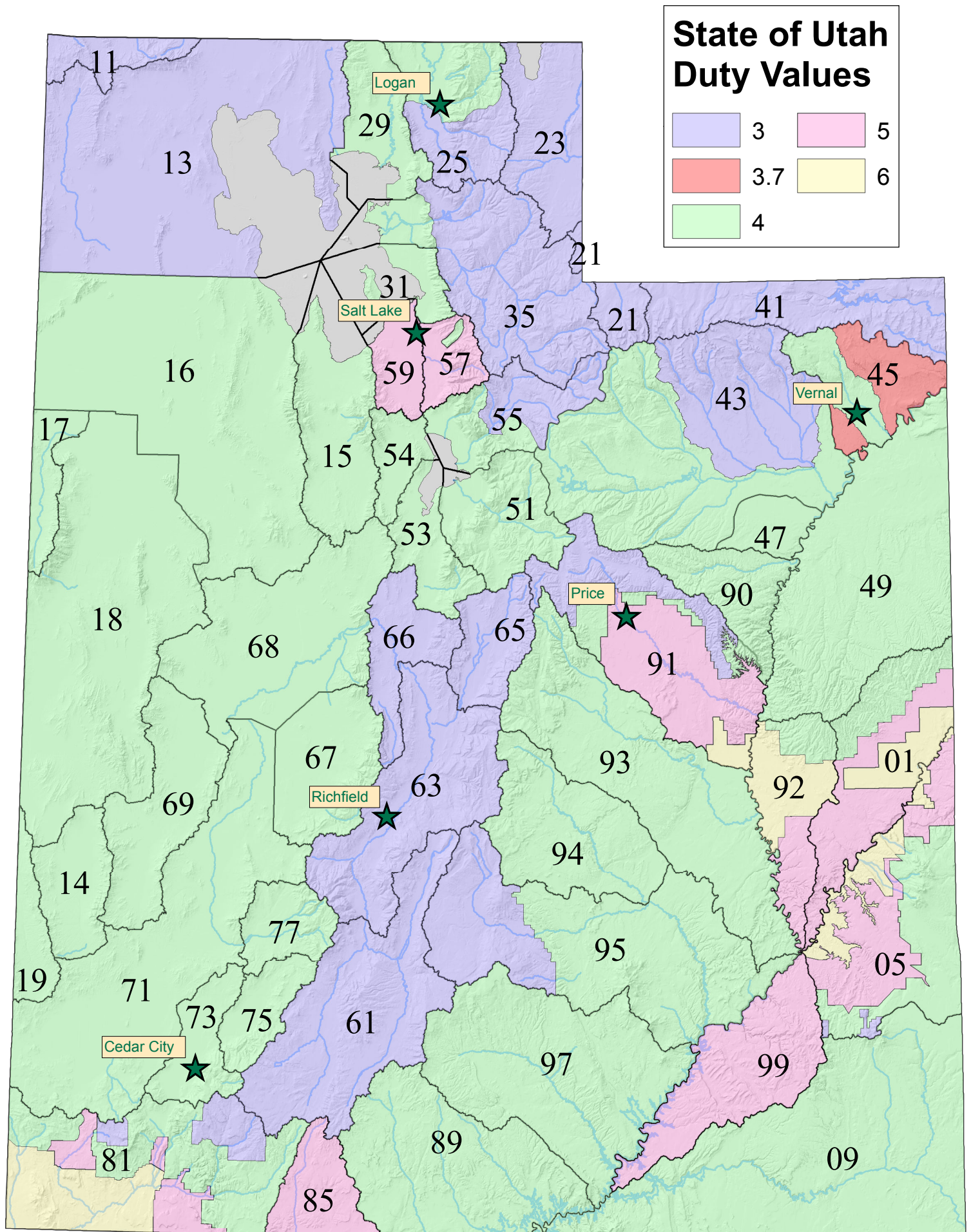
PRESSURIZED IRRIGATION CAPITAL IMPROVEMENTS																			
IMPROVEMENT DESCRIPTION			LENGTH / COST	L U M P S U M	6 & 8 I N C H	1 0 I N C H	1 2 I N C H	1 6 I N C H	P U M P	P R V		R D P A T C H	% R D P A T C H	V A L V E S			E N G C M I N S P	COST	
				e	f	g	h	i	j	k	l	m	n	o	p	q	r		s
ULT			ft	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	
ULT	I-001	Central Heber Pressurized Irrigation Project	\$7,572,310	X														\$9,086,772	
	I-002	1200 W 430 S to 1100 W 100 S (6")	1,550		X									X			X	\$266,875	
	I-003	1200 West - 430 S to 500 S (10")	900			X						X	100%	X			X	\$409,018	
	I-004	Daniel Rd - 1450 S to 1300 S (8")	600		X							X	100%	X			X	\$246,758	
	I-008	East By-pass - 1500 E to 1240 E	1,700					X						X			X	\$558,029	
	I-010	Valley Hills Blvd - Mill Rd to Callaway Dr (8")*	3,420		X							X	100%	X			X	\$1,333,428	
	I-011	300 East - East Bypass to 1600 N (10")	2,700			X								X			X	\$593,309	
	I-012	East Bypass - US 40 to 300 E (12")	1,000				X					X	10%	X			X	\$290,736	
	I-013	Regulation Pond(s) (6 ac-ft)	\$1,528,715	X															\$1,834,457
	I-014	Aerial Digital Map Updates (4 times)	\$16,000	X														X	\$23,040
ULT	I-015	Master Plan Updates every 5 years (4 times)	\$200,000	X														X	\$288,000
	I-016	Regulation Pond(s)	\$7,393,992	X														X	\$10,647,348
	I-018	East Bypass - 800 E to 300 E (16")	2,600					X						X			X	\$845,222	
	I-022	1200 S Sawmill Blvd to 1050 S 1100 E (8")	900		X									X			X	\$161,482	
	I-023	Becca Rd - 600 E to Sawmill Blvd (6")	2,000		X									X			X	\$339,840	
	I-024	600 East - 1300 S to US 40 (6")	2,800		X									X			X	\$469,555	
	I-026	Heber City Public Works Facility Exp Ph 1	29,730	X														\$35,676	
	I-027	Heber City Public Works Facility Exp Ph 2	\$149,501	X														\$149,501	
	I-028	100 South - 1100 W to 900 W (8")	1,460		X									X			X	\$252,282	
TOTAL PRESSURIZED IRRIGATION:																		\$27,831,329	

PRESSURIZED IRRIGATION USE

	2017	Future	
PI Avg Yr Demand (gpd/ERU) =	333	437	
Culinary Avg Yr Demand Cent Heber	104		Available Storage (mg) = 2.00
Peak Day Demand (gpd/ERU) =	1,486		Outdoor PF = 3.40
			Peak Inst Demand (gpm/irr-ac) = 12.36
Storage Demand (gal/ERU)=	437		

Year	ERU's	Cent Heber	VlyHills + Other	Red Ledges		ERU's w/o Non-PI, RedL	PI Avg Yr (12 mo)		PI Peak Day		PI Peak Instant (night)	
		Non-PI ERU's	Non-PI ERU's	POP	ERUs		mgd	af/yr	mgd	gpm	mgd	gpm
2023	7,249	(924)	(761)	(496)	(159)	5,405	2.36	2,646	8.03	5,576	16.06	11,153
2028	8,960	(924)	(761)	(607)	(195)	7,080	3.09	3,466	10.52	7,305	21.04	14,610
2033	10,419	-	(761)	(852)	(273)	9,385	4.10	4,594	13.94	9,682	27.89	19,365
2038	11,053	-	(761)	(1,140)	(365)	9,927	4.34	4,859	14.75	10,242	29.50	20,484
2043	11,727	-	(761)	(1,682)	(539)	10,427	4.56	5,104	15.49	10,758	30.98	21,516
2023 - 2043 ERU CHANGE =						5,022						

- NOTES:
- ERUs have been adjusted for Red Ledges
 - Assume all new connections after 2020 use PI and no additional outdoor demand will be added to the culinary system.
 - Central Heber will be converted to PI and is included in demand after year 2028.
 - Storage is provided by CUWCD. See City storage agreement which has been paid for future years.

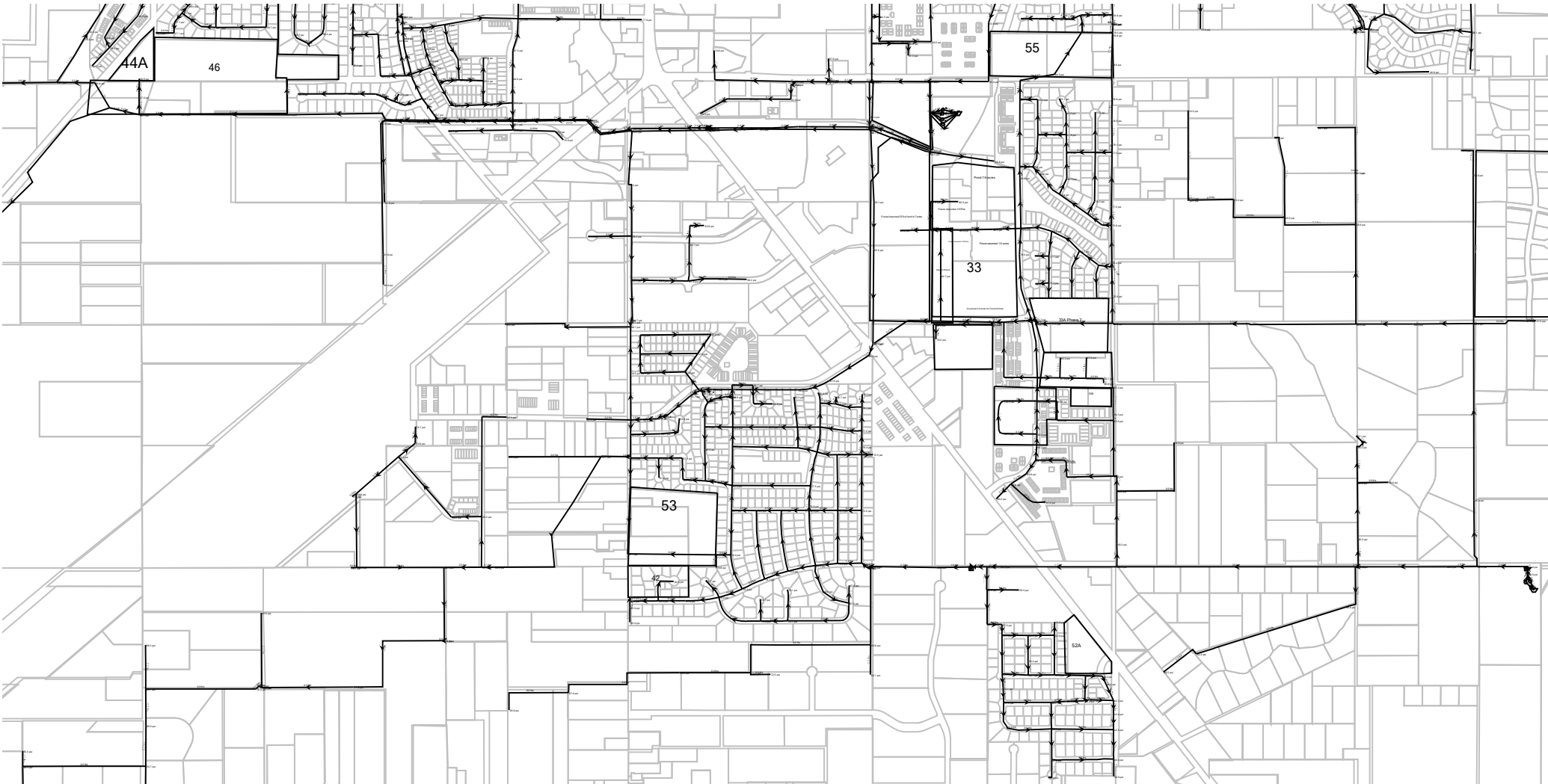




Scenario: Future PI Model Steady State Peak Day 3.4



Scenario: Future PI Model Steady State Peak Day 3.4



ORDINANCE NO. O2024-03

**ORDINANCE ADOPTING AN UPDATED IMPACT FEE ENACTMENT FOR
CULINARY WATER, SANITARY SEWER, STREETS, STORM DRAIN AND
PRESSURIZED IRRIGATION IMPACT FEES; PROVIDING FOR THE
CALCULATION AND COLLECTION OF SUCH FEES; AND OTHER RELATED
MATTERS**

The City Council (“Council”) of Heber City, Utah (the “City”), finds that it is in the public interest to adopt this Impact Fee Enactment to address impacts of development upon the City; impose culinary water, sanitary sewer, streets, storm drain and pressurized irrigation impact fees; provide for the calculation and collection of such fees; provide for appeal, accounting, and severability of the same and other related matters.

WHEREAS, the City is a local political subdivision of the State of Utah and has authority pursuant to Utah Code Ann. § 11-36a-101, *et seq.* (the “Impact Fee Act”) to mitigate the impact of new development on public facilities by enacting an impact fee; and

WHEREAS, the City has caused to be prepared a Capital Improvements and Impact Fees Master Plan 2023 to 2043 (the “IFA/IFFP”), a copy of which is attached hereto as Exhibit A; and

WHEREAS, the Council finds that the IFA/IFFP identifies demands placed upon existing public facilities by new development activity and proposes means by which the City will meet those demands and has generally considered all revenue sources, including impact fees, and anticipated dedication of in-system improvements to finance the impacts on system improvements; and

WHEREAS, the IFA/IFFP identifies the anticipated impacts on or consumption of existing capacity of public facilities by anticipated development activities, identifies impact on system improvements required by anticipated development activities to maintain the established level of service for each public facility, demonstrates how those anticipated impacts are reasonably related to the anticipated development activities and estimates the proportionate share of the cost for existing capacity that will be recouped and the cost of impacts on system improvements that are reasonably related to the new development activity; and

WHEREAS, the Council finds that the impact fees which are enacted pursuant to this Ordinance (“Impact Fee Enactment”) are necessary to achieve an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received; and

WHEREAS, in accordance with Utah Code Ann. § 11-36a-504, the City has complied with the notice requirements to adopt this Impact Fee Enactment; and

WHEREAS, after careful consideration and review of the comments at the public hearings, the council has determined that it is in the best interest of the health, safety, and welfare of the inhabitants of the City to adopt this Impact Fee Enactment.

BE IT ORDAINED by the City Council of Heber City, Utah:

Section 1. Findings; Authority; Purpose.

The Council finds and determines that growth and development activities in the City will create additional demand and need for culinary water, sanitary sewer, streets, storm drain and pressurized irrigation impact fees facilities, and the Council finds that persons responsible for growth and development activities should pay a proportionate share of the costs of such planned facilities needed to serve the growth and development activity. The Council further finds that based on the IFA/IFFP that impact fees are necessary to achieve an equitable allocation to the costs borne in the past and to be borne in the future, in comparison with the benefits already received and yet to be received. The provisions of this Impact Fee Enactment shall be liberally construed to carry out the purpose and intent of the Council in establishing the impact fee program.

Section 2. Definitions.

Except as provided below, words and phrases that are defined in the Impact Fee Act shall have the same meaning in this Impact Fee Enactment.

2.1 Allowable Credits or Reimbursement. A developer may be allowed a credit against or proportionate reimbursement of an impact fee if the developer dedicates land for a system improvement, builds and dedicates some or all of a system improvement, or dedicates a public facility that the City and the developer agree will reduce the need for a system improvement above and beyond the normal required improvements to offset the reasonable impacts of the development. A credit or proportionate reimbursement against an impact fee shall be granted for any dedication of real property for, improvements to, or new construction of, any system improvements provided by the developer if the facilities are system improvements, or are dedicated to the Public and offset the need for identified system improvements.

2.2 Applicant. A person or entity required to pay an impact fee under this Impact Fee Enactment.

2.3 Gross Impact Fee. The stated impact fee assessed (prior to the computation of allowable credits, exemptions, or adjustments) for system improvements based on the requirements of this Impact Fee Enactment.

2.4 Impact Fee Agent. The person or persons designated by the City Council to evaluate impact fee applications and calculate gross impact fees, allowable credits, exemptions, adjustments, and net impact fees.

2.5 Impact Fee Applicant or Impact Fee Applications. An application submitted by an applicant for development approval that is required to pay an impact fee prior to obtaining subdivision approval or other development approval from the City Council or the building official of the City prior to issuance of a building permit.

2.6 Net Impact Fee. The gross impact fee less all allowable credits, exemptions, adjustments, and credit adjustments required by this Impact Fee Enactment.

Section 3. Impact Fees Imposed.

3.1 Impact Fees. Based on the Council approval and adoption of the IFA/IFFP, the City Council hereby adopts culinary water, sanitary sewer, streets, storm drain and pressurized irrigation impact fees in the following amounts:

Culinary Water

Residential	\$2,778 ERU	
Non-Residential	\$2,778	- 0.75 inch
	\$4,939	- 1.0 inch
	\$11,113	- 1.5 inch
	\$19,757	- 2.0 inch
	\$44,453	- 3.0 inch
	\$79,028	- 4.0 inch

Sewer \$1,417 ERU

Streets

Single Family	\$4,070 Dwelling Unit
Multi Family	\$2,304 Dwelling Unit
Non-Residential	\$269 Trip

Pressurized Irrigation

Residential	\$844 ERU
Non-Residential	\$0.12 Irrigated Square Foot.

3.2 Annual Adjustment. Impact Fees shall be adjusted annually in accordance with Heber City Code Section 15.16.085.

3.3 Impact Fees Accounting. The City will establish a separate interest-bearing ledger account for each type of public facility for which impact fees are collected. Interest earned on such account shall be allocated to that account.

(a) *Reporting.* At the end of each fiscal year, the City shall prepare a report on each fund or account showing the source and amount of all monies collected, earned, and received by the fund or account and each expenditure from the fund or account. The report shall identify impact fees by the year in which they were received, the project from which the funds were collected, the system improvements for which the funds were budgeted, and the projected schedule for expenditures. The report shall be in a format developed by the State Auditor that is certified by the City's Chief Financial Officer and shall be transmitted annually to the State Auditor.

(b) *Impact Fee Expenditures.* The City may expend impact fees collected pursuant to this Impact Fee Enactment for systems improvements that are public facilities identified in the IFA/IFFP.

(c) *Time of Expenditure.* Impact fees collected pursuant to this Impact Fee Enactment are to be expended or encumbered for a permissible use within six (6) years of the receipt of those funds by the City. For purposes of this calculation, the first funds received shall be deemed to be the first funds expended.

(d) *Extension of Time.* The City may hold unencumbered fees for longer than six (6) years if the Council identifies in writing (i) an extraordinary and compelling reason why the fees should be held longer than six (6) years; and (ii) an absolute date by which the fees will be expended.

3.4 Additional Fees and Costs. The impact fees authorized hereby are separate from and in addition to user fees and other charges lawfully imposed by the City, such as engineering and inspection fees, building permit fees, review fees, and other fees and costs that may not be included as itemized component parts of the impact fee.

3.5 Fees Effective at Time of Payment. Unless the City is otherwise bound by a contractual requirement, the impact fee shall be determined in accordance with the provisions of Section 5 below.

Section 4. Impact Fee Amount and Procedure.

4.1 Impact Fee Imposed. Impact fees are hereby imposed based on and shall be calculated in accordance with the IFA/IFFP and shall be paid either as a condition of the issuance of a building permit, or as a condition to connecting to any current or future system improvements if a building permit is not required in an amount set forth in the IFA/IFFP.

4.2 Application Procedure. Each Applicant for development approval shall make application in writing to the City on forms provided for the City for determination of the

amount of the required impact fees payable by the Applicant. Each Applicant shall provide all information requested by the City to allow the City to verify the accuracy of the information presented by the Applicant. The Impact Fee Agent shall consider the information presented by the Applicant and determine the gross impact fee, allowable credit, exemptions, adjustments, and net impact fee.

4.3 Impact Fee Amount. The amount of the impact fees imposed hereby shall be the gross amount as set forth in the IFA/IFFP.

Section 5. Exemptions, Adjustments, and Credits.

5.1 Exemption. The Council may, on a project-by-project basis, authorize exemptions to the impact fee imposed for development activity that the Council determines to be of broad public purpose to justify the exception, development activities attributable to low-income housing, the state, a school district, or a charter school (the school district and charter school on the same basis).

5.2 Adjustments. The Council shall ensure that the impact fees are imposed fairly and may adjust impact fees at the time the fee is charged to (i) respond to unusual circumstances in specific cases, (ii) respond to a request for a prompt and individualized impact review for the development activities of the state or a school district or a charter school and an offset or credit for a public facility for which an impact fee has been or will be collected, and (iii) permits adjustments of the amount of the impact fee to be imposed on a particular development based upon studies and data submitted by the developer.

5.3 Credits or Reimbursement. A developer, including a school district or charter school, shall receive a credit against or proportionate reimbursement of an impact fee, in the discretion of the City, if the developer dedicates land for a system improvement, builds and dedicates some or all of a system improvement, or dedicates a public facility that the City and the Developer agree will reduce the need for a system improvement in excess of the reasonable amounts otherwise required by the City as part of the Project. The value of the land shall be based on the pre-development approval value of land for the Project. A credit against the impact fee shall also be given for any dedication of land for, improvements to, or new construction of, any system improvements provided by the developer if the facilities are system improvements, or are dedicated to the public and offset the need for identified system improvements.

Section 6. Service Area.

The Service area, as established and set forth on the IFA/IFFP, shall be the municipal boundaries of the City.

Section 7. Appeal Procedures. Any appeal shall be in accordance with Heber City Code Section 15.16.100.

7.1 Statute of Limitations / Remedies. Nothing in the Impact Fee Enactment or Heber City Code shall be interpreted or construed to extend the time limitations to initiate a challenge set forth in Utah Code Ann. § 11-36a-702 or expand the remedies available for a challenge to the impact fees under Utah Code Ann. § 11-36a-703.

Section 8. Severability. If any section, subsection, paragraph, clause, or phrase of this Impact Fee Enactment shall be declared invalid for any reason, such decision shall not affect the remaining provisions of this Impact Fee Enactment, which shall remain in full force and effect, and for this purpose, the provisions of this Impact Fee Enactment are declared to be severable.

Section 9. Effective Date. The Impact Fee Enactment pursuant to this Impact Fee Ordinance shall take effect 90 days after its enactment.

ADOPTED by the City Council of Heber City, Utah, this _____ day of _____, 2024.

HEBER CITY

Heidi Franco, Mayor

ATTEST:

Trina Cooke, City Recorder



Heber City Council Staff Report

MEETING DATE: 2/6/2024
SUBJECT: Ordinance 2024-02 Updating the C-3 Commercial Zone, C-3 Design Criteria and Parking Regulations within the C-3 Zone
RESPONSIBLE: Tony Kohler
DEPARTMENT: Planning
STRATEGIC RELEVANCE: Community Development

SUMMARY

With the Envision Central Heber Vision adopted on September 5th, it provides guidance for several implementation efforts. The Vision suggests amending key zoning policies for implementation including the C-3 Zone Purpose and Objectives, C-3 Zone Uses and C-3 Zone Design Criteria. Other Vision suggested implementation zoning strategies will be addressed in 2024 as a follow up such as C-2 and C-4 zone updates, residential transition zone (a new zone) and infill strategies.

Recent discussions have also suggested eliminating the parking requirement for retail and restaurant uses and to establish a lower parking requirement for residential uses in the Downtown/C-3 zone.

In the City Council meeting on December 5, 2023, setbacks in relationship to Public Utility Easements (PUEs), for the C-3 zone (and other zones too, but those are not C-3 zone issues) were discussed by the Power Company and Public Works. Staff was asked to do some research in other communities that have dealt with this issue for some time. That research is included in this staff report and has resulted in slight changes to the proposed ordinance, and future changes to emphasize utility plans being conceptualized up front in the Permitted and Conditional Use Application Requirements chapter and the Subdivision ordinance.

This staff report is essentially the same, except for the discussion of utilities. Slight modifications to the last draft are included to modify the utility and parking issues, based on discussion at the City retreat.

RECOMMENDATION

Staff recommends approval of Ordinance 2024-02, adopting the update to the C-3 Zone and Parking Code with the suggested changes.

BACKGROUND

The Envision Heber 2050 general plan was adopted a few years ago. It covers the downtown area but not in the detail needed for developing priorities/steps for the City to consider in implementation. Updates to the C-3 and parking chapters are being presented concurrently with the General Plan updates. In addition, People+Place will be trying to wrap up the general on-going ordinance updates by the end of the year.

Anticipated future ordinance work during 2024, includes:

1. Review the Flag Lots requirements and Frontage/Areas to increase housing flexibility for Central Neighborhoods
2. Review and update the Midway Lane Overlay District Update
3. Create a Downtown Transition Zone Overlay District
4. C-2 and C-4 Zone Uses/Design Standards Districts Update
5. Potential map changes to conform the zoning with the Vision
6. Potential Rezone of I-1 Zoned areas around 600 West

In a previous update the three zones C-2, C-3, C-4 were combined into one chapter. Uses were updated including no additional car/RV sales in the C-3 zone. This new draft continues that update and adds a series of design standards covering materials, a build-to line, height restrictions near City-owned property, and an emphasis on historic design.

The historic design section is based on Lane Lythgoe's sketch, currently housed in your "Design Guidelines". The concept promoted here allows the developer some design discretion/choices, except for the storefront requirements along Main Street, while assuring that the end result reflects historic design. From the many features shown in the sketch, the developer needs to pick at least 4. This is a staff suggested reduction after the input received in the Planning Commission's public hearing. This allows some flexibility and choice for the developer after incorporating storefront designs along Main Street.

The changes are limited to the C-3 zone. Partially this is due to the new noticing requirements (hopefully changing in the 2024 Legislative session) that require a mailed notice to all of the property owners in the C-3 zone. If we included the C-2 and C-4 zones in the proposed changes, the mailout would be huge/costly and the main priority of addressing what needs to be done in the C-3 zone could be highly watered down, by other issues presented in the other two zones. With an intent to complete the C-3 updates by the end of the year, this seemed counterproductive. We will get back to those updates during 2024.

Summary changes in the C-3 zone

1. Slight expansion of the chapter purpose
2. Added arts type uses, no drive-ins allowed (no policy change there), added Hotels back as CUP, restricted commercial parking so that private paid parking lots don't front on Main,

dropped hospitals out of the C-3, residential use on first floor not allowed on Main, corner plazas.

3. Front yard setbacks are suggested to be reduced to zero, in keeping with the historic pattern already established.
4. Many design features required covering storefront windows, awnings, main entrance doors, building length
5. Building materials are limited
6. Historic design features based on the sketch
7. Adaptive reuse covered with some incentives. Removal of false facades required.
8. Residential use open space requirements or a payment in lieu
9. Height – 3 stories unless a stepback is included then can go to 4 and limits height around publicly owned land (City Park and City Hall areas)

Parking chapter change

Reduced the parking requirement for existing uses, even if a change of use occurs that could potentially increase parking demand. Expansions of existing uses and new uses must meet the standards for off street parking.

Public Open House input (October 11th)

An open house was held to allow for public input concerning the updates to the C-3 zone. Every property owner was sent a notice for the open house and for the public hearing on the 24th. Attendance was mostly from potential candidates for the upcoming election, planning commission members, the Mayor, and several property owners. General comments were supportive but focused on the following:

- The need for a parking garage to allow for more on-site development – an options analysis is in process from Zions Public Finance
- Should 100 East and West become one-way streets?
- Continue to allow the drive-up restaurants but the drive-up window not facing Main Street is reasonable
- Concerns about the chain store prohibitions, although the flexibility in the definition is greater than some other communities. Even with a more restrictive ordinance in Park City, one meeting participant said he sees many national/international chains on the PC Main Street.
- Will the requirement for at least 6 historic features (now changed to 4) from the Lane Lythgoe sketch (6 of 14 shown on the sketch) be enough to provide the historic flavor for new buildings within the C-3 zone? We may get some input from the State Historic Preservation Office, prior to the meeting.

DISCUSSION

The Planning Commission held a public hearing on October 24, 2023, and continued the discussion of the C-3 zone updates. The priority issues for discussion included: parking, materials, historic features, and chain store prohibitions. The following is intended to discuss those issues that the PC

discussed in greater depth to provide an understanding of their concerns, and the basis for their recommendation.

Parking

As previously discussed, the Parking ordinance is suggested to be amended to eliminate parking requirements for commercial uses and lower the requirements for residential use to one on-site parking space per unit. This suggestion is based on input from Roger Brooks so that more of the space on a lot can be devoted to buildings instead of parking lots. It is intended to be an incentive for development to occur in the Downtown.

An alternative was offered that places some burden on the development community to assist the City with the parking issue. Each development would be required to stripe an equal amount of parking, equal to what they normally would have been required, but limited to the block they face. The striping would occur on the adjacent street and would need to include street improvements where none exist (only the one side of the block). The Central Heber Vision did suggest that on-street parking could temporarily address the parking needs for development Downtown.

Longer term needs for an off-street surface parking lot or a parking structure are not actually a zoning responsibility. Recent contact with Zions Public Finance provided these financing options, for your information:

1. Best source, and most commonly used source for parking garages is tax increment (CRA generated).
2. City could issue sales tax bonds and make payments with parking garage fees
3. City could create a Special Assessment Area (SAA) but this is not likely as many property owners would likely object. The legal threshold to enact is having at least 60% of the property owners agreeing. If 40 percent object, it can't be created. Most City Councils would be hesitant to create a SAA if there were considerable objections (10%-20% perhaps)
4. Local Districts – Jonathan and I don't think you can legally create one for the purpose of building a parking garage. The State Code section (17B-1-202) describes the services allowed under a District. Our guess is that parking garages are not included because they aren't considered a "legitimate public service".
5. P3 partnership – a public entity can contract with a private entity to construct and maintain a particular service but the revenues would have to be sufficient to make it attractive to a private entity. I've seen this done with fiber, toll roads, hospitals, but haven't seen it done with a parking garage.
6. Business Improvement Districts – these are purely voluntary groups and have no legal powers to issue bonds or to require member payments from year to year.

Parking changes for the C-3 zone are only suggested for expansions of existing uses and new uses.

Materials

The following text is from the draft and includes some amendments since the hearing based on comments at the hearing:

New development in the C-3 zone shall incorporate common, locally found materials such as granite, stone, sandstone, or brick as part of the first floor façade of each building for at least 75% of the first floor, excluding the windows. All stories above the first floor shall incorporate at least 50% of the above specified materials. Stucco and EIFS are prohibited for use as materials on any façade visible from a right-of-way, except if located on an the side upper floor of a building or on the side or rear or upper floors façade. Where used they shall be sculpted to resemble brick, and/or sandstone blocks.

The above changes would assure the integrity of storefront design on the first floor and allow more flexibility on upper floors. The updated draft includes the above language.

Historic Features

Historic features are insured in two ways. The first is a basic requirement for first floor storefront design along Main Street. This includes windows at 50% of that first floor face, transom windows above, and a bulkhead below. The second means of assuring historic design, is to choose 4 features from the Lane Lythgoe sketch, not including the three required items above. This provides the developer the ability to choose the features that they want to incorporate into the building, instead of dictating everything. The 4 feature requirement is a reduction from the previous draft where 6 were suggested.

Chain Stores

Again, this is Roger Brooks' suggestion. The definition that was reviewed is a more flexible version of Park City's chain store definition. Several have noted that Park City may not have been following this definition in recent years. Checking on Midway, it appears that their architectural design requirements have prevented most chains from locating there. A "chain store" definition is not found in their definitions chapter.

One could imply from the above that if we have the historic design, that in and of itself could prevent or limit chain stores from locating there. There are also arguments to be made that some chain stores can benefit the community and the prohibition could prevent some desired stores from locating in Heber. It may be logical to postpone the chain store decision for a future discussion. The Planning Commission recommended letting the historic design requirements control the chain store interest in locating in Downtown.

Just making "chain stores" a conditional use is ***not an option***. Conditional uses are administrative uses and if they meet the standards of your ordinances, and mitigate any actual detrimental effects, they should be approved.

Restaurants with Drive-up windows

As this draft has progressed, the idea of allowing restaurants with drive-up windows has been debated back and forth. The current adopted version of the C-3 zone does not allow them and that policy is maintained in the attached draft. Drive-ups would be allowed in the other "C" zones.

Utilities/Public Utility Easements

Although there are issues with where to place the required utilities in other zones in the City, the C-3 zone, which is the historic downtown zone, has the most complexity. The recently adopted Vision suggests the buildings be located as they have been historically, up close to the right-of-way (ROW). This causes some difficulties in placing utilities in convenient locations within the ROW, where major excavations may be needed in the case of repairs, maintenance, or service upgrades. This is a common issue for most downtowns that usually have a similar form, with buildings located adjacent to the ROW.

The City Council asked the staff to do some research on how other communities handle their utilities. We communicated with the planning and engineering staff at Daybreak, Brigham City, and with the Planning Director in Logan. Summaries of those conversations are provided below:

Daybreak – a “new” community with essentially one property owner in their Soda Row downtown.

- Soda Row: utilities can be placed in rear alleys. Alleys and parking lots are excellent locations for utilities
- Soda Row: has 5-10’ setbacks which create some utility flexibility but was designed for overhangs and door swings to occur on private property
- Gas company lines are under sidewalk. Gas is recommended be 10’ from any structure, but some communities are ok with 1’.
- Power: spacing 5’ from any structure
- Gas and power must be spaced from each other
- Downtown context requires more thought for box placement – due to the ownership situation, many above ground boxes are back in parking lots
- Residential: varies a lot
- No underground vaults – with their flexible locations they are not needed
- Road cuts: pavement index condition: mill and overlay
- City doesn’t want or allow the big boxes (and developer) doesn’t want boxes along street – pushed to interior locations
- Development in Daybreak has a lot of flexibility; communication is key to solutions

Brigham City – UDOT owned Main Street but side streets in their historic downtown include buildings up next to the ROW

- Case by case utility placement decisions in their historic downtown. No standardized system – need creative solutions.
- Utilities permitted in right of way but prefer to not be under asphalt.
- Main Street-flexibility with utilities. Look for other locations, especially alleys of which they have quite a few. Their alleys have easements but are generally private.
- Back alleys can have overhead power. Some areas with utilities are not really alleys – just parking lots in the back of buildings. This includes some of the government properties.

- Residential zones are moving toward a 15' PUE.

Logan – Discussed the Main Street historic area, including Center Street, a destination street with many activities. The emphasis in Logan is on form - getting the downtown design the best it can be with buildings adjacent to the ROW and wide sidewalks, street furniture, landscaping, lighting.

- No above ground utilities allowed
- All utilities are in the ROW and that is their preferred location
- Vaults are used extensively
- Center street has very wide sidewalks(about 20') and only one lane in each direction with diagonal parking on both sides of the street that shifts to parallel parking at intersections
- They prioritize the form (downtown design) they want to achieve over the convenience of utility placement

Conclusions

1. Gas can go underneath the sidewalk. Don't allow dry utilities in the street pavement.
2. Put power in the back as often as possible or to the side of buildings, not out front. Alleys become more important.
3. Use back alleys for overhead power or underground power whenever possible
4. Power can be overhead in some cases
5. Need flexibility in the core downtown area and seek flexible solutions including the use of alleys, parking lots, side yard easements, underground, etc.
6. Don't allow utility boxes between street and buildings. Place in locations out of the ROW or underground. Keep the above ground "boxes" out of the clear view areas for intersections and driveways
7. Involve power company and other utilities at the concept plan stage to assess needs for upgrades and determine what infrastructure will be needed.
8. Review front setbacks in other zones in the City to assure more convenient, consistent utility locations. The C-3 historic downtown area is more complicated for utilities than other areas of the community.
9. Update the Permitted and Conditional Use Application chapter, Subdivision ordinance, and Standard Specifications (engineering) to address PUEs more clearly.

To some extent this conversation suggests that emphasizing the establishment of the alleys as suggested in the Vision, should be a priority in the C-3 area.

FISCAL IMPACT

Potential to incentivize growth in the Downtown. Funds for processing and drafting are already available from the Downtown and ordinance update processes. Zoning ordinance updates are only one part of the Vision – there are many capital projects needed to meet the Vision.

CONCLUSION

These basic ordinance updates would help implement the Central Heber Vision in the C-3 zone.

ALTERNATIVES

The Planning Commission’s public hearing draft is included as Exhibit 2 to provide additional context concerning their deliberations. Parking alternatives that the PC reviewed are shown as exhibit 3. A clean version of the C-3 zone, incorporating the PC’s recommendation and recent updates is included in Exhibit 1 and includes the final parking recommendation.

1. Approve as proposed
2. Approve as amended in the meeting
3. Continue
4. Deny

POTENTIAL MOTIONS

Alternative 1 – Staff Recommendation

I move to **approve Ordinance 2024-02 adopting the proposed C-3 Zone Updates**, with the findings and conditions as presented in this staff report.

Alternative 2 – Approve as Amended from discussions in the meeting

I move to **approve Ordinance 2024-02 adopting the proposed C-3 Zone Updates**, with the findings and conditions as presented in this staff report, with the following changes:

Alternative 3 – Continue

I move to **continue** the item to another meeting on , with direction to Staff on information and / or changes needed to render a decision, as follows:

Alternative 4 – Deny

I move to **deny Ordinance 2024-02 adopting the C-3 Zone Updates** with the following findings.

ACCOUNTABILITY

Department: Planning
Staff member: Tony Kohler, Community Development Director

EXHIBITS

1. Ord 2024-02 C-3 Updates
2. Exhibit 2 PC Version
3. Exhibit 3 Parking Options

ORDINANCE NO. 2024-02

**AN ORDINANCE ADOPTING UPDATES TO THE C-3 COMMERCIAL ZONE, C-3
DESIGN CRITERIA AND PARKING REGULATIONS WITHIN THE C-3 ZONE.**

BE IT ORDAINED by the City Council of Heber City, Utah, that Heber City Municipal Code Chapter 18.28 C-3 Commercial Zone is amended and Section 18.72.100 is adopted as set forth in Exhibit A, attached hereto and incorporated herein.

If any section, subsection, sentence, clause, phrase, or portion of this Ordinance is, for any reason, held invalid or unconstitutional by any court of competent jurisdiction, such provision shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

If any provisions of the Heber City Code heretofore adopted are inconsistent herewith they are hereby repealed.

To the extent that any ordinances, resolutions, or policies of Heber City materially conflict with the provisions of this Ordinance, they are hereby amended to comply with the provisions hereof.

This Ordinance shall take effect immediately upon passage.

PASSED, APPROVED and ORDERED TO BE PUBLISHED BY THE HEBER CITY
COUNCIL this _____ day of _____ 2024.

	AYE	NAY	ABSENT	ABSTAIN
Yvonne Barney	_____	_____	_____	_____
Aaron Cheatwood	_____	_____	_____	_____
Michael Johnston	_____	_____	_____	_____
Sid Ostergaard	_____	_____	_____	_____
D. Scott Phillips	_____	_____	_____	_____

APPROVED:

Mayor Heidi Franco

ATTEST:

RECORDER

Date:

Exhibit A

18.72.100 Parking Requirements in the C-3 Zone

There shall be no parking requirement for existing building floor area in the C-3 Zone, even if a change of use occurs that increases parking demand within the existing floor area. Expansions to existing floor area and new buildings shall meet the standards for off street parking (chapter 18.72).

18.28 Commercial Zones

18.28.010	Purpose and Objectives
18.28.020	Application Requirements
18.28.030	Permitted and Conditional Uses
18.28.040	Development Standards
18.28.050	Additional Regulations
18.28.060	Gross Floor Area of Buildings Limitations for Retail Business
18.28.070	Gasoline Pump Island Locations and Lighting
18.28.080	Related Provisions

18.28.010 Purpose and Objectives

- A. The C-2 commercial zone has been established to facilitate the development of attractive entrances to the City. To reduce the conflict between commercial and residential uses along principal highways and streets adjacent to the central commercial districts and to facilitate the orderly expansion of commercial uses out from the central commercial districts. Incorporating some of the historical architectural styles evident on Main Street is suggested for development in the C-2 zone.
- B. The C-3 central commercial zone has been established as a district in which the primary use of the land is for business, a mixture of uses, and community activities. The area covered by this zone is the historical core area encompassing Main Street and adjacent blocks, which acts as the dominant shopping, community gathering place, and financial center for the City and surrounding territory. For this reason, the zone has been located in the central part of the City, where the street pattern makes the variety of uses readily accessible to all parts of the City and surrounding region and where business, shopping, and engaging activities can be carried on with maximum convenience. The C-3 zone is characterized by wide, clean, well-lighted streets and ample pedestrian ways for the convenience and safety of the public. It is the historic core of the City with an historic architectural style and variety that is distinct from the rest of the City.
- C. The C-4 general commercial zone has been established as a district in which the primary use of the land is for business, recreation, and hospitality purposes.

18.28.020 Application Requirements

All permitted, and conditional uses are required to submit a site plan as part of an application available online and at the City offices.

18.28.030 Permitted and Conditional Uses

The following chart describes the uses that are appropriate in each commercial zone:

- A. Symbol definitions: **P** = PERMITTED USE (P) A site plan application is required with staff processing. Site plan applications are approved when and if they meet the ordinance standards. **C** = PLANNING COMMISSION CONDITIONAL USE REVIEW (C). A site plan application with Planning Commission review is required. Blank means prohibited.
- B. If a use is not specifically designated below, then it is prohibited.
- C. All uses listed in the use table that require a building permit shall also require a site plan application.

Commercial Zones Permitted Use Table

LAND USES	C-2	C-3	C-4	Limitations
Arts and arts-related uses, including the crafting of products for sale		P		
Caretaker dwelling	P	P	P	
Kennels, if located more than 400' from a residential zone	C			
Home Occupations	P	P	P	
In-Home Daycare/Pre-School	P	P	P	
Mixed uses within a building	C	C	C	The Main Street-facing ground floor is required to be non-residential
Bed and Breakfast Inns	P	P	P	As regulated by Section 18.108.034
Religious institutions, schools (public and private), and other public buildings	P	P	P	
Commercial Day Care Center and/or Pre-School	C	C	C	
Group Homes	P	P	P	
Fraternity/non-profit buildings, clubs, lodges	P	P	P	
Funeral establishments, mortuaries, and wedding chapels;	P	P	P	
New and Used car lots	C			No car lots permitted north of 600 South
Gymnasium/physical fitness /Spa establishments (may include massage)	P	P	P	
Pawn shops, tattoo, massage, smoke and vape shops, cash stores				Prohibited in all commercial zones
Recreation vehicle courts	C		C	As regulated by Section 18.96
Utility buildings, transmission lines, and structures, Electric substations	C	C	C	
Small Cell Installations	C	C	C	
Telecommunication towers	C		C	See Telecommunication Ordinance 18.110. Towers shall incorporate a stealth design
Public Utilities, Shops and Storage Yards, and Public Buildings	P	P	P	
Public Water Reservoir/ Public Storage Tank	P	P	P	
Gas/convenience store with or w/o car wash	C		C	
Car Wash	C			

LAND USES	C-2	C-3	C-4	Limitations
Retail Shops/Services	P	P	P	
Big Box Retail (60,000 square feet and larger)	C			
Financial Institutions	P	P	P	Excludes check cashing and loan stores
Sit Down Restaurants	P	P	P	
Restaurants with drive-thru facilities	P		P	No drive-thru windows facing the street
Professional offices, Business Medical/Dental/Optical Office/Clinics and Laboratories	P	P	P	
Private Instructional Studio - Artist, Photography, Dance, Music, Drama, Health, Exercise	P	P	P	May include retail sales
Commercial Complex	C		C	
Hotels	C	C	C	See section 18.28.040 for additional standards
Commercial parking lots and/or parking structures as a singular use	C	C	C	Not allowed within 100' of Main Street in the C-3 zone
Craftsman Industrial style Light Manufacturing	C	C	C	Within an enclosed building and including a retail component
Manufacturing and processing	C			Within an enclosed building
Indoor and outdoor welding and sheet metal shops	C		C	Only allowed south of 1200 South in the C-2 zone. Only artistic welding in the C-4 zone (no sheet metal shops).
Warehouses, trucking, and associated storage buildings	C			Truck parking and outside storage are not allowed within 60 feet of any public street
Hospitals	C		C	
Enclosed Temperature Controlled Storage Units	C			Shall include commercial uses unrelated to the storage function on the street-facing facade
Wholesale establishments with stock on-premises and a retail/office component/store but not a storage warehouse	C			
Attached Residential Developments (3 units and up)		P		Shall not occupy ground floor facing Main Street except for residential entrances and amenities.

18.28.040 Development Standards

- A. In the C-2 and C-4 Commercial Zones, there shall be no area, width, and location requirements except that all buildings and structures in the C-2 and C-4 zones

shall conform to the requirements of the adopted Heber City C-2 and C-4 Design Standards and Guidelines. In the C-3 zone, a 0 (zero) foot front setback is required.

- B. **Dry Utilities (power, communication, gas).** In the C-3 Zone where an intentional street wall is required, dry utility placement shall occur in the public Right of Way or through negotiated locations such as an alley or a public utility easements (PUE) on private property. A determination of the best locations for utilities shall occur during the application process with an application requirement for a conceptual utility plan as part of that process. No above ground utilities, especially utility boxes shall be placed in the clear view of an intersection or driveway. Any above ground utilities shall be located in an easement (PUE) behind the front face of the building, and preferably to the rear of the building.

- C. **Entrances and Windows C-3 Zone.** Entrances to the first floor of buildings shall front a public street, plaza or courtyard. Main entrances shall be covered or recessed using angular side walls to create a larger opening into the first-floor use. On double or triple-frontage lots, main doors are required where the greatest amount of pedestrian traffic is anticipated. When facing Main Street or within 100' of Main Street on a perpendicular street, all windows shall constitute at least 50% of first-floor street-facing facades, and 25 percent of all upper-story street facing facades. First-floor windows shall include transom and bulkhead features to assure historical complementary design. Windows shall be at least 50 percent transparent. Street facing windows that are not on the same façade as the main building entrance, may cover the first-floor windows with non-advertising window films using a mountain (including flora and fauna), mill, orchard, pioneers, agricultural, or mountain-related sports theme. Living screens may replace up to 50% of the window requirement for the lowest anticipated pedestrian traffic frontage. Mirrored windows are not allowed.

For residential units, balconies shall be required for at least 50% of the units. In no case shall any balconies have a separation from an opposing balcony of less than 10 feet.

Windows above the first floor in the C-3 zone shall conform to the standards described in the sketch in Section F, including sills, windowpanes, and a sash.

- D. **Building Materials.** One or more of the following exterior materials of a durable or resilient nature, such as brick, stone, composite materials, metal accents, or other materials of similar quality, hardness, and low maintenance characteristics, are required in the C-3 zones.

New development in the C-3 zone shall incorporate common, locally found materials such as granite, stone, sandstone, or brick as part of the first floor façade of each building for at least 75% of the first floor, excluding the windows. All stories above the first floor shall incorporate at least 50% of the above specified materials. Stucco and EIFS are prohibited for use as materials on any façade visible from a right-of-way, except if located on an upper floor of a building or on the side or rear façade. Where used they shall be sculpted to resemble brick, and/or sandstone blocks. Other materials may be considered by the Planning Director for soffits or as accents or unique architectural features. Twenty-five-year guarantee architectural shingles or other long-lasting materials are required for sloped roofs.

- E. **Building Length and Facades.** For the C-3 zone, no new street-facing building elevation may exceed 50 feet in length without at least a 3-foot variation in the depth of the façade along the public right of way and a 2-foot variation on other facades. Residential unit balconies shall not be interpreted to meet this requirement. No single building shall exceed 200 feet in length. Where buildings are proposed of that length, a separation between that building and the next building of a minimum of ten feet is required, creating a passageway to interior spaces. Such passageways shall be downward-lighted, provide a safe pedestrian space and include vegetation in boxes every 30 feet of length. At minimum, building facades shall provide pedestrian plazas every 200 feet of

building length to break up long building façades along public rights-of-way. Streetside outdoor dining areas may substitute for such plazas. Top floors shall have architectural differentiation from the other floors of the building, and rooflines shall vary at least every 100 feet, at a minimum. For first-floor uses in mixed use buildings, the appearance of small shops/storefronts with variation in the first-floor façade at least every 30 feet is required. If buildings fronting on Main Street include a permanent awning, it shall extend at least 7 feet from the storefront/façade to provide shade and refuge from inclement weather. Awnings shall be cantilevered from the front façade of the building. Such awnings shall be provided in colors that reflect colors incorporated as part of the exterior of the building.

F. **Building Design Features.** From the sketch below (Figure 1: Anatomy of a Main Street Building), to obtain a permitted use or conditional use permit, choose and incorporate within the building design:

1. C-3 Zone. At least 4 of the historic features, over and above any required features.
2. Storefront, Bulkhead, and Transom Windows are required as per section B above.

ANATOMY OF A MAIN STREET BUILDING:

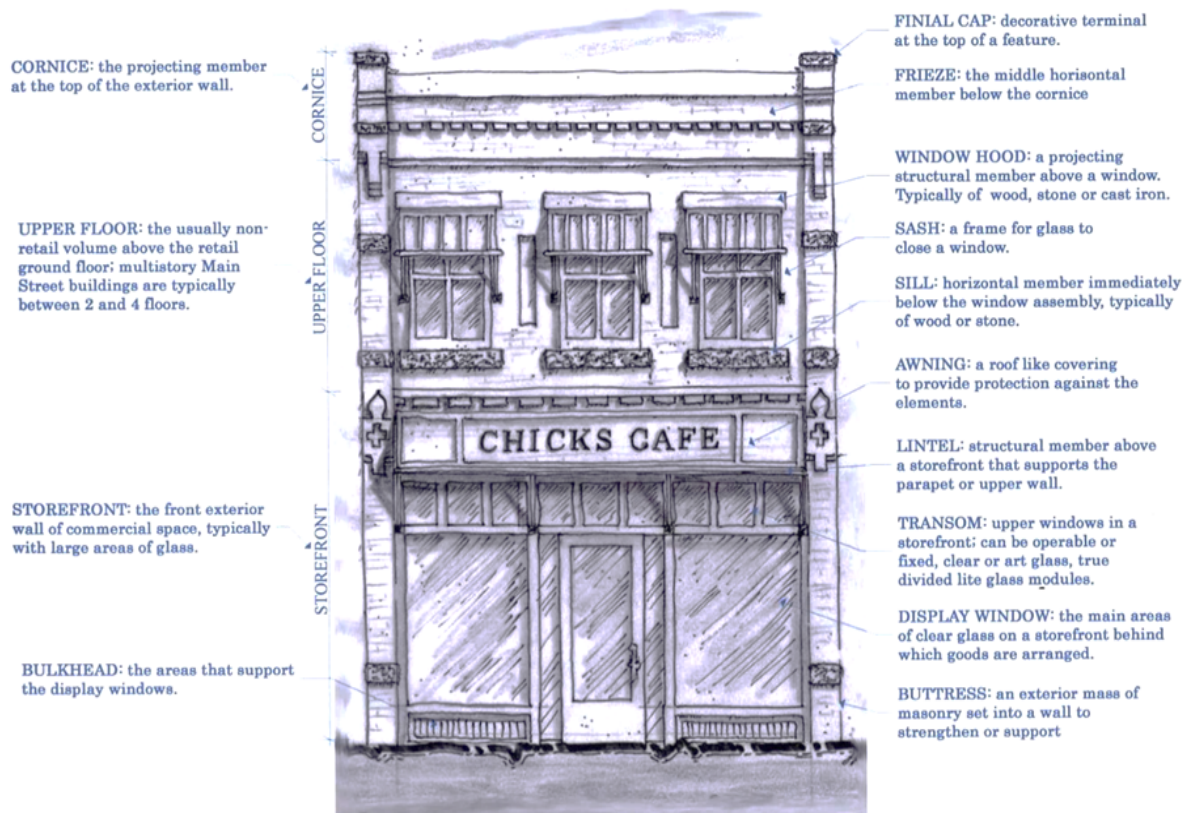


Figure 1 Sketch courtesy of Lane Lythgoe

G. **C-3 Zone Adaptive Reuse.** There are several existing buildings within the C-3 zone that could be reworked into a new use. The following general requirements are required:

1. If the character of the existing building is deemed historic or historically significant, either by Federal programs or by the Historic Master Plan or by individual application to the City, due to its age (50 plus years minimum) or displays a unique architectural style or unique features, as determined by the Planning Director, then reconstruction shall attempt to retain as much of that character as possible. False facades shall be

removed to reveal the original finish materials, which shall be rehabilitated, as per industry best practices for historic buildings.

2. The ground floor facing a public ROW shall encompass retail or restaurant uses to a minimum depth of 20’
3. The maximum height in the zone may be exceeded by up to 12’ to accommodate architectural features or an additional story. No transitional height requirement is imposed.
4. A change of use to any use allowed in the zone, permitted or conditional, is allowed. Although a change of use may occur, no additional parking is required.
5. Exterior additions shall be reflective of the historical character/style of the original building.
6. All adaptive reuse proposals shall be processed as permitted uses.

H. **C-3 Zone Site Furnishings.** Each development shall incorporate site furnishings into the site including benches facing Main Street. One additional site furnishing shall be included from this list: a patio/seating area, pedestrian plaza with benches, play areas, kiosk area, water feature, clock tower, sculpture, bike racks, and public art.

I. **Private Outdoor Lighting and Outdoor Dining.** In the C-3 Zone, lighting for streets and parking lots on the interior of the development is required. All lighting shall be dark sky compliant as required by Chapter 18.78 of Heber City Municipal Code. The applicant shall submit a plan which indicates the type and location of lights in relation to the development and designed for pedestrian/vehicular safety. Pedestrian lighting may include bollards and all lighting shall follow established themes.

Outdoor seating and dining may be partially or fully covered to extend the outdoor dining experience through the spring and fall months. Outdoor patio heaters and misters are permitted. Restaurant tables and chairs may be movable or permanent and should be reflected on the site plan. If alcohol is served, the restaurant will need to provide signage and decorative fencing per the health department code. Fencing materials shall be limited to metal picket fencing. Any accommodation for dogs shall be subject to the Wasatch County Health Department regulations.

Access Between Uses. In the C-3 zone, vehicular and pedestrian access is required between uses and does not force vehicles/pedestrians out to the adjacent streets.

J. **Open Space and Plazas.** For residential development in the C-3 zone, that includes residential mixed uses, the open space requirement is 20% of the gross area of the site.

1. This open space requirement shall be fulfilled through rooftops, terraces for general resident use, plazas and pocket parks. The required common open space shall be privately maintained for general use by the residents of the building and/or the public and be usable land areas that are not occupied by buildings, dwellings, structures, parking areas, streets, public park strips, curb-gutter-sidewalk, driveways, or alleys and shall be accessible by all residents of the development. For the purposes of this Chapter, gross site area is defined as the total area of the development excluding anything in the public right of way. For development or redevelopment involving sites that are one acre in size or greater, at least 40 percent of required open space must be in the form of a plaza that is located at the front, corner or side of the building along a street, and open and accessible to the public at all times. The following requirements must be met:
 - a. At least 50% of the plaza’s perimeter that does not front on vehicular right-of-way shall be lined by building frontages.
 - b. Fully enclosed permanent structures are not permitted.
 - c. Playgrounds are not permitted.
 - d. Minimum pervious surface = 30%
 - e. Must include seating, shade structures, and one tree (2-inch caliper minimum) per 800 sf of plaza area

- f. Special features such as fountains and for sale public art installations are encouraged. Active features, that give visitors something to do, shall be incorporated into the plaza.
2. **On-site open space/park substitution.** In-lieu Substitutions in the C-3 zone. The open space/park requirement may be modified through potential substitutions for any development within the C-3 zone. Such in-lieu substitutions are intended to enhance existing parks with features or improve park land. The three parks on Main Street and the regional facilities near 600 West are the signature open spaces in the Central Heber area and are a benefit to all development in the area.
In-lieu substitutions are encouraged for the benefit of the Main Street parks and 600 West parks by application to the City Council or City Manager, under the following circumstances:
 3. Cash in-lieu. The City may determine that in certain situations, accepting cash as an in-lieu substitution, where it can be shown that acceptance of those funds, is more effective by creating park improvements as opposed to smaller on-site private parks. Cash in-lieu payments shall not be accepted without a qualified appraisal process, managed by the City. The City shall be obligated, in a timely manner, to use the in-lieu funds within the C-3 zone for land purchases, open space, pedestrian system enhancements, the daylighting of streams, and/or traditional park related improvements.
 4. Any land which has been already dedicated, set aside, platted, or otherwise approved as park or open space, may not be substituted or used for any purpose other than those allowed by this chapter.
 5. In-lieu substitutions shall be reviewed by the City Council and/or City Manager, through an application, however, final approval of the in-lieu substitution rests with the City Council. Such approvals shall occur as part of an MDA, or prior to issuance of Final Site Plan approval or a building permit.
- K. Where buildings are located on a corner in the C-3 zone that addresses Main Street, a corner plaza creating a 10' by 10' triangle outside but adjacent to the ROW is required. Such plazas shall include street furniture that allows for seating, as a minimum.
- L. In the C-3 zone, height shall be a maximum of three stories without a stepback, and shall not exceed 46 feet or the three stories but may be raised another 12'/one additional story, if the building includes a stepback with a minimum of 10' depth, above the first story.
- M. In the C-3 zone, buildings over two stories shall include stepbacks between the second and third stories when adjacent to publicly owned properties.
- N. In the areas on the west side of 100 West and the east side of 100 East, no building shall be taller than three stories.
- O. In the C-2 and C-4 zones, height may be increased to 4 stories, not to exceed 55 feet if all of the following standards are met:
 1. The application includes at least 10% percent affordable housing, available to persons at 60% of the current County Average Median Income (AMI) or below that threshold.
 2. If it is a mixed-use building.
 3. If the building design includes a step back of a least ten feet between the second and third stories.
- P. In the C-2 zone, buildings may be increased to 5 stories with a stepback included and affordable housing is included.
- Q. Any use on a parcel larger than 1 acre in a C-3 or C-4 zone or any use with a building footprint larger than 30,000 square feet, shall become a conditional use.
- R. Any use on a parcel larger than 5 acres and any use with a building footprint larger than 60,000 square feet in the C-2 zone shall become a conditional use.

18.28.050 Additional Regulations

The following provisions apply within the Commercial Zones

- A. For buildings within the C-2 and C-4 zone, a strip of land at least fifteen feet in width adjacent to all public streets shall be landscaped as set forth in Chapter 18.76 of this title except for permitted driveways, except as required by the Heber City C-2 and C-4 Zone Design Standards and Guidelines.
- B. No dust, odors, smoke, vibration or intermittent light, glare or noise shall be emitted which is discernible beyond the premises except for normal traffic movement.
- C. Storage of all merchandise, material and products shall be carried on within a building or within an area enclosed with a sight-obscuring fence or wall except for licensed vehicles in running order.
- D. All off-street parking shall be hard-surfaced as regulated by Chapter 18.72, except within the C-3 zone where some parking requirements have been reduced.
- E. All buildings located adjacent to major streets shall have at least one entrance way facing onto said street.
- F. Sale material may be displayed on business premises during normal working hours.
- G. See 18.76.050 for building setbacks adjacent to residential use.

18.28.060 Gross Floor Area of Buildings Limitations for Retail Business

- A. **C-2 Zone.** No floor area limitation.
- B. **C-3 Zone.** Retail establishments shall not exceed 60,000 square feet of gross first floor area, considered the building footprint, within the C-3 Zone. As per section 18.28.040 (4), all buildings in the C-3 zone that exceed a 30,000 square foot footprint, be a conditional use
- C. **C-4 Zone.** No floor area limitation.

18.28.070 Gasoline Pump Island Location and Lighting

Gasoline pump islands shall be set back from any right-of-way line to accommodate the landscape setback and proper circulation/stacking for the pumps. Each pump shall provide stacking for a minimum of two standard sized vehicles defined as 20' for each. A circulation aisle beyond the stacking area is required that allows for a circular traffic movement. Pump islands shall be so located that automobiles stopped for service will not extend over the property line. In no case shall pumps be set closer than twelve feet from any street lines, nor closer than ten feet from any side or rear property line. Lots from which gasoline is dispensed to customers at retail shall be not less than seventy-five by one hundred feet in size. Canopies over pump islands may extend to the closest edge of any required landscaping. Any above ground fuel tanks such as propane tanks shall be located with a minimum setback from the ROW as per the IBC or 30' whichever is greater. See the Lighting Chapter 18.78, for lighting standards.

18.28.080 Related Provisions

- Chapter 18.12 Administration
- Chapter 18.08 Definitions

- Chapter 18.68 Supplementary Regulations
- Chapter 18.108 Conditional Use Permits
- Chapter 18.72 Off Street Parking and Loading
- Chapter 18.103 Sign Regulations
- Chapter 18.78 Lighting
- Chapter 18.174 Enforcement
- Chapter 17 Subdivisions
- Heber City C-2 and C-4 Zone Design Standards and Guidelines
- Heber City C-3 Zone Design Standards and Guidelines

Exhibit 2

(PC's public hearing version)

18.28 Commercial Zones

18.28.010	Purpose and Objectives
18.28.020	Application Requirements
18.28.030	Permitted and Conditional Uses
18.28.040	Development Standards
18.28.050	Additional Regulations
18.28.060	Gross Floor Area of Buildings Limitations for Retail Business
18.28.070	Gasoline Pump Island Locations and Lighting
18.28.080	Related Provisions

18.28.010 Purpose and Objectives

- A. The C-2 commercial zone has been established to facilitate the development of attractive entrances to the City. To reduce the conflict between commercial and residential uses along principal highways and streets adjacent to the central commercial districts and to facilitate the orderly expansion of commercial uses out from the central commercial districts. Incorporating some of the historical architectural styles evident on Main Street is suggested for development in the C-2 zone.
- B. The C-3 central commercial zone has been established as a district in which the primary use of the land is for business, a mixture of uses, and community activities purposes. The area covered by this zone is the historical core area encompassing Main Street and adjacent blocks, which acts as the dominant shopping, community gathering place, and financial center for the City and surrounding territory. For this reason, the zone has been located in the central part of the City, where the street pattern makes the ~~business buildings~~ variety of uses readily accessible to all parts of the City and surrounding region and where business ~~and~~ shopping, and engaging activities can be carried on with maximum convenience. The C-3 zone is characterized by wide, clean, well-lighted streets and ample pedestrian ways for the convenience and safety of the public. It is the historic core of the City with an historic architectural style and variety, that is distinct from the rest of the City.
- C. The C-4 general commercial zone has been established as a district in which the primary use of the land is for business, recreation, and hospitality purposes.

18.28.020 Application Requirements

All permitted, and conditional uses are required to submit a site plan as part of an application available online and at the City offices.

18.28.030 Permitted and Conditional Uses

The following chart describes the uses that are appropriate in each commercial zone:

- A. Symbol definitions: **P** = PERMITTED USE (P) A site plan application is required with staff processing. Site plan applications are approved when and if they meet the ordinance standards. **C** = PLANNING COMMISSION CONDITIONAL USE REVIEW (C). A site plan application with Planning Commission review is required. Blank means prohibited.
- B. If a use is not specifically designated below, then it is prohibited.
- C. All uses listed in the use table that require a building permit shall also require a site plan application.

Commercial Zones Permitted Use Table

LAND USES	C-2	C-3	C-4	Limitations
<u>Arts and arts-related uses, including the crafting of products for sale</u>		<u>P</u>		
Caretaker dwelling	P	<u>P</u>	P	
Kennels, if located more than 400' from a residential zone	C			
Home Occupations	P	P	P	
In-Home Daycare/Pre-School	P	P	P	
Mixed uses within a building	C	C*	C	<i>The Main Street-facing ground floor is required to be non-residential</i>
Bed and Breakfast Inns	P	P	P	As regulated by Section 18.108.034
Religious institutions, schools (public and private), and other public buildings	P	P	P	
Commercial Day Care Center and/or Pre-School	C	C	C	
Group Homes	P	P	P	
Fraternity/non-profit buildings, clubs, lodges	P	P	P	
Funeral establishments, mortuaries, and wedding chapels;	P	P	P	
New and Used car lots	C			No car lots permitted north of 600 South
Gymnasium/physical fitness /Spa establishments (may include massage)	P	P	P	
Pawn shops, tattoo, massage, smoke and vape shops, cash stores				Prohibited in all commercial zones
Recreation vehicle courts	C		C	As regulated by Section 18.96
Utility buildings, transmission lines, and structures, Electric substations	C	C	C	
Small Cell Installations	C	C	C	
Telecommunication towers	C		C	See Telecommunication Ordinance 18.110. Towers

LAND USES	C-2	C-3	C-4	Limitations
				shall incorporate a stealth design
Public Utilities, Shops and Storage Yards, and Public Buildings	P	P	P	
Public Water Reservoir/ Public Storage Tank	P	P	P	
Gas/convenience store with or w/o car wash	C		C	
Car Wash	C			
Retail Shops/Services	P	P*	P	
Big Box Retail (60,000 square feet and larger)	C			
Financial Institutions	P	P	P	Excludes check cashing and loan stores
Sit Down Restaurants	P	P*	P	
Restaurants with drive-thru facilities	P		P	No drive-thru windows facing the street
Professional offices, Business Medical/Dental/Optical Office/Clinics and Laboratories	P	P	P	
Private Instructional Studio - Artist, Photography, Dance, Music, Drama, Health, Exercise	P	P	P	May include retail sales
Commercial Complex	C		C	
Hotels	C	<u>C</u>	C	See section 18.28.040 for additional standards
Commercial parking lots and/or parking structures as a singular use	C	C	C	<u>Not allowed within 100' of Main Street in the C-3 zone</u>
Craftsman Industrial style Light Manufacturing	C	C	C	<i>Within an enclosed building and including a retail component</i>
Manufacturing and processing	C			<i>Within an enclosed building</i>
Indoor and outdoor welding and sheet metal shops	C		C	Only allowed south of 1200 South in the C-2 zone. Only artistic welding in the C-4 zone (no sheet metal shops).
Warehouses, trucking, and associated storage buildings	C			<i>Truck parking and outside storage are not allowed within 60 feet of any public street</i>
Hospitals	C	€	C	
Enclosed Temperature Controlled Storage Units	C			Shall include commercial uses unrelated to the storage function on the street-facing facade

LAND USES	C-2	C-3	C-4	Limitations
Wholesale establishments with stock on-premises and a retail/office component/store but not a storage warehouse	C			
<u>Attached Residential Developments (3 units and up)</u>		<u>P</u>		<u>Shall not occupy ground floor facing Main Street except for residential entrances and amenities.</u>

*** Conventional Chain Business.** Conventional Chain Business is a business, including but not limited to retailers or restaurants, which maintains one or more of the following standardized items which cause it to be substantially identical to more than 20 other businesses regardless of ownership or location at the time of the application: (1) standardized menu or merchandise with 50% or more of in-stock merchandise from a single distributor bearing uniform markings; or (2) a standardized array of products or merchandise; or (3) uniform apparel; or (4) standardized architectural design, the layout of facade, decor or color scheme and signs; trademarks, and service marks or logos, or similar standardized features. Such stores are not allowed in the C-3 zone.

18.28.040 Development Standards

A. In the C-2 and C-4 Commercial Zones, there shall be no area, width, and location requirements except that all buildings and structures in the C-2 and C-4 zones shall conform to the requirements of the adopted Heber City C-2 and C-4, ~~and C-3~~ Design Standards and Guidelines. In the C-3 zone a build-to front setback line is required ranging from 3' to 15'. This means a building can be placed anywhere within that 3' to 15' area. This is established to encourage outdoor dining space. See sections L-O for height restrictions.

B. Entrances and Windows

C-3 zone - entrances to the first floor of buildings shall front a public street, plaza or courtyard. Main entrances shall be covered or recessed using angular side walls to create a larger opening into the first-floor use. On double or triple-frontage lots, main doors are required where the greatest amount of pedestrian traffic is anticipated. When facing Main Street or within 100' of Main Street on a perpendicular street, all windows shall constitute at least 50% of first-floor street-facing facades, and 25 percent of all upper-story street facing facades. First-floor windows shall include transom and bulkhead features to assure historical complementary design. Windows shall be at least 50 percent transparent. Street facing windows that are not on the same façade as the main building entrance, may cover the first-floor windows with non-advertising window films using a mountain (including flora and fauna), mill, orchard, pioneers, agricultural, or mountain-related sports theme. Living screens may replace up to 50% of the window requirement for the lowest anticipated pedestrian traffic frontage. Mirrored windows are not allowed.

For residential units, balconies shall be required for at least 50% of the units. In no case shall any balconies have a separation from an opposing balcony of less than 10 feet.

Windows above the first floor in the C-3 zone shall conform to the standards described in the sketch in section D, including sills, windowpanes, and a sash.

C. Building Materials

One or more of the following exterior materials of a durable or resilient nature, such as brick, stone, composite materials, metal accents, or other materials of similar quality, hardness, and low maintenance characteristics, are required in the C-3 zones.

New development in the C-3 zone shall incorporate common, locally found materials such as granite, stone, sandstone, or brick as part of the first floor façade of each building for at least 75% of the first floor, excluding the windows. All stories above the first floor shall incorporate at least 50% of the above specified materials. Stucco and EIFS are prohibited for use as materials on any façade visible from a right-of-way, except if located on **an the side upper floor** of a building **or on the side** or rear **or upper floors** **façade**. **Where used** they shall be sculpted to resemble brick, and/or sandstone blocks. Other materials may be considered by the Planning Director for soffits or as accents or unique architectural features. Twenty-five-year guarantee architectural shingles or other long-lasting materials are required for sloped roofs.

D. Building Length and Facades

For the C-3 zone, no new street-facing building elevation may exceed 50 feet in length without at least a 3-foot variation in the depth of the façade along the public right of way and a 2-foot variation on other facades. Residential unit balconies shall not be interpreted to meet this requirement. No single building shall exceed 200 feet in length. Where buildings are proposed of that length, a separation between that building and the next building of a minimum of ten feet is required, creating a passageway to interior spaces. Such passageways shall be downward-lighted, provide a safe pedestrian space and include vegetation in boxes every 30 feet of length. At minimum, building facades shall provide pedestrian plazas every 200 feet of building length to break up long building façades along public rights-of-way. Streetside outdoor dining areas may substitute for such plazas. Top floors shall have architectural differentiation from the other floors of the building, and rooflines shall vary at least every 100 feet, at a minimum. For first-floor uses in mixed use buildings, the appearance of small shops/storefronts with variation in the first-floor façade at least every 30 feet is required. If buildings fronting on Main Street include a permanent awning, it shall extend at least 7 feet from the storefront/façade to provide shade and refuge from inclement weather. Awnings shall be cantilevered from the front façade of the building. Such awnings shall be provided in colors that reflect colors incorporated as part of the exterior of the building.

E. Building Design Features. From the sketch below (Figure 1:Anatomy of a Main Street Building), to obtain a permitted use or conditional use permit, choose and incorporate within the building design:

C-3 zone – at least 4 of the historic features, over and above any required features.

ANATOMY OF A MAIN STREET BUILDING:

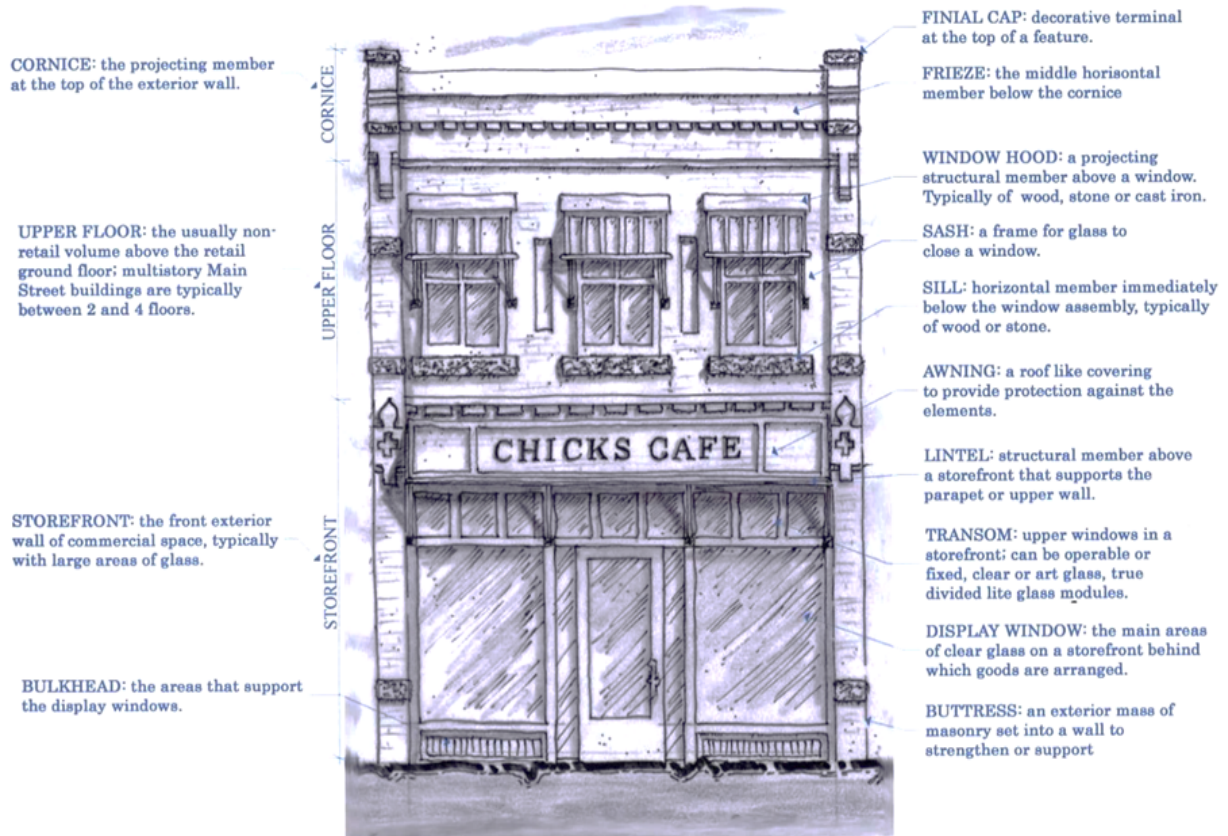


Figure 1 Sketch courtesy of Lane Lythgoe

Storefront, Bulkhead, and Transom Windows are required as per section B above.

F. C-3 Zone Adaptive Reuse – There are several existing buildings within the C-3 zone that could be reworked into a new use. The following general requirements are required:

- a. If the character of the existing building is deemed historic or historically significant, either by Federal programs or by the Historic Master Plan or by individual application to the City, due to its age (50 plus years minimum) or displays a unique architectural style or unique features, as determined by the Planning Director, then reconstruction shall attempt to retain as much of that character as possible. False facades shall be removed to reveal the original finish materials, which shall be rehabilitated, as per industry best practices for historic buildings.

- b. The ground floor facing a public ROW shall encompass retail or restaurant uses to a minimum depth of 20'
- c. The maximum height in the zone may be exceeded by up to 12' to accommodate architectural features or an additional story. No transitional height requirement is imposed.
- d. A change of use to any use allowed in the zone, permitted or conditional, is allowed. Although a change of use may occur, no additional parking is required.
- e. Exterior additions shall be reflective of the historical character/style of the original building.
- f. All adaptive reuse proposals shall be processed as permitted uses.

G. C-3 Zone Site Furnishings: Site Furnishings: Each development shall incorporate site furnishings into the site including benches facing Main Street. One additional site furnishing shall be included from this list: a patio/seating area, pedestrian plaza with benches, play areas, kiosk area, water feature, clock tower, sculpture, bike racks, and public art.

H. Private Outdoor Lighting and Outdoor Dining

In the C-3 zone, lighting for streets and parking lots on the interior of the development is required. All lighting shall be dark sky compliant as required by Chapter 18.78 of Heber City Municipal Code. The applicant shall submit a plan which indicates the type and location of lights in relation to the development and designed for pedestrian/vehicular safety. Pedestrian lighting may include bollards and all lighting shall follow established themes described in subsection W of this section.

Outdoor seating and dining may be partially or fully covered to extend the outdoor dining experience through the spring and fall months. Outdoor patio heaters and misters are permitted. Restaurant tables and chairs may be movable or permanent and should be reflected on the site plan. If alcohol is served, the restaurant will need to provide signage and decorative fencing per the health department code. Fencing materials shall be limited to metal picket fencing. Any accommodation for dogs shall be subject to the Wasatch County Health Department regulations.

I. Access Between Uses

In the C-3 zone, vehicular and pedestrian access is required between uses and does not force vehicles/pedestrians out to the adjacent streets.

J. Open Space and Plazas

- a. For residential development in the C-3 zone, that includes residential mixed uses, the open space requirement is 20% of the gross area of the site. This open space requirement shall be fulfilled through rooftops, terraces for general resident use, plazas and pocket parks. The required common open space shall be privately maintained for general use by the residents of the building and/or the public and be usable land areas that are not

occupied by buildings, dwellings, structures, parking areas, streets, public park strips, curb-gutter-sidewalk, driveways, or alleys and shall be accessible by all residents of the development. For the purposes of this chapter, gross site area is defined as the total area of the development excluding anything in the public right of way. For development or redevelopment involving sites that are one acre in size or greater, at least 40 percent of required open space must be in the form of a plaza that is located at the front, corner or side of the building along a street, and open and accessible to the public at all times. The following requirements must be met:

1. At least 50% of the plaza's perimeter that does not front on vehicular right-of-way shall be lined by building frontages.
2. Fully enclosed permanent structures are not permitted.
3. Playgrounds are not permitted.
4. Minimum pervious surface = 30%
5. Must include seating, shade structures, and one tree (2-inch caliper minimum) per 800 sf of plaza area
6. Special features such as fountains and for sale public art installations are encouraged. Active features, that give visitors something to do, shall be incorporated into the plaza.
 - a. On-site open space/park substitution – in-lieu Substitutions in the C-3 zone

The open space/park requirement may be modified through potential substitutions for any development within the C-3 zone. Such in-lieu substitutions are intended to enhance existing parks with features or improve park land. The three parks on Main Street and the regional facilities near 600 West are the signature open spaces in the Central Heber area and are a benefit to all development in the area.

In-lieu substitutions are encouraged for the benefit of the Main Street parks and 600 West parks by application to the City Council or City Manager, under the following circumstances:

1. Cash in-lieu: the City may determine that in certain situations, accepting cash as an in-lieu substitution, where it can be shown that acceptance of those funds, is more effective by creating park improvements as opposed to smaller on-site private parks. Cash in-lieu payments shall not be accepted without a qualified appraisal process, managed by the City. The City shall be obligated, in a timely manner, to use the in-lieu funds within the C-3 zone for land purchases, open space, pedestrian system enhancements, the daylighting of streams, and/or traditional park related improvements.
2. Any land which has been already dedicated, set aside, platted, or otherwise approved as park or open space, may not be substituted or used for any purpose other than those allowed by this chapter.

3. In-lieu substitutions shall be reviewed by the City Council and/or City Manager, through an application, however, final approval of the in-lieu substitution rests with the City Council. Such approvals shall occur as part of an MDA, or prior to issuance of Final Site Plan approval or a building permit.

K. Where buildings are located on a corner in the C-3 zone that addresses Main Street, a corner plaza creating a 10' by 10' triangle outside but adjacent to the ROW is required. Such plazas shall include street furniture that allows for seating, as a minimum.

L. In the C-3 zone, height shall be a maximum of three stories ~~without a stepback, and shall~~ not to exceed 46 feet ~~for the C-3 zone~~ or the three stories but may be raised another 12'/one additional story, if the building includes a stepback with a minimum of 10' depth, above the first story.

M. In the C-3 zone, buildings over two stories shall include stepbacks between the second and third stories when adjacent to publicly owned properties.

N. In the areas on the west side of 100 West and the east side of 100 East, no building shall be taller than three stories.

O. In the C-2 and C-4 zones, height may be increased to 4 stories, not to exceed 55 feet if all of the following standards are met:

- a. The application includes at least 10% percent affordable housing, available to persons at 60% of the current County Average Median Income (AMI) or below that threshold.
- b. If it is a mixed-use building.
- c. If the building design includes a step back of a least ten feet between the second and third stories.

P. In the C-2 zone, buildings may be increased to 5 stories with a stepback included and affordable housing is included.

Q. Any use on a parcel larger than 1 acre in a C-3 or C-4 zone or any use with a building footprint larger than 30,000 square feet, shall become a conditional use.

R. Any use on a parcel larger than 5 acres and any use with a building footprint larger than 60,000 square feet in the C-2 zone shall become a conditional use.

18.28.050 Additional Regulations

The following provisions apply within the Commercial Zones

- A. For buildings within the C-2 and C-4 zone, a strip of land at least fifteen feet in width adjacent to all public streets shall be landscaped as set forth in Chapter 18.76 of this title

except for permitted driveways, except as required by the Heber City C-2 and C-4 Zone Design Standards and Guidelines.

- B. No dust, odors, smoke, vibration or intermittent light, glare or noise shall be emitted which is discernible beyond the premises except for normal traffic movement.
- C. Storage of all merchandise, material and products shall be carried on within a building or within an area enclosed with a sight-obscuring fence or wall except for licensed vehicles in running order.
- D. All off-street parking shall be hard-surfaced as regulated by Chapter 18.72, except within the C-3 zone where some parking requirements have been reduced.
- E. All buildings located adjacent to major streets shall have at least one entrance way facing onto said street.
- F. Sale material may be displayed on business premises during normal working hours.
- G. See 18.76.050 for building setbacks adjacent to residential use

18.28.060 Gross Floor Area of Buildings Limitations for Retail Business

- A. **C-2 Zone.** No floor area limitation.
- B. **C-3 Zone.** Retail establishments shall not exceed 60,000 square feet of gross first floor area, considered the building footprint, within the C-3 Zone. As per section 18.28.040 (4), all buildings in the C-3 zone that exceed a 30,000 square foot footprint, be a conditional use
- C. **C-4 Zone.** No floor area limitation.

18.28.070 Gasoline Pump Island Location and Lighting

Gasoline pump islands shall be set back from any right-of-way line to accommodate the landscape setback and proper circulation/stacking for the pumps. Each pump shall provide stacking for a minimum of two standard sized vehicles defined as 20' for each. A circulation aisle beyond the stacking area is required that allows for a circular traffic movement. Pump islands shall be so located that automobiles stopped for service will not extend over the property line. In no case shall pumps be set closer than twelve feet from any street lines, nor closer than ten feet from any side or rear property line. Lots from which gasoline is dispensed to customers at retail shall be not less than seventy-five by one hundred feet in size. Canopies over pump islands may extend to the closest edge of any required landscaping. Any above ground fuel tanks such as propane tanks shall be located with a minimum setback from the ROW as per the IBC or 30' whichever is greater. See the Lighting Chapter 18.78, for lighting standards.

18.28.080 Related Provisions

- Chapter 18.12 Administration
- Chapter 18.08 Definitions
- Chapter 18.68 Supplementary Regulations

- Chapter 18.108 Conditional Use Permits
- Chapter 18.72 Off Street Parking and Loading
- Chapter 18.103 Sign Regulations
- Chapter 18.78 Lighting
- Chapter 18.174 Enforcement
- Chapter 17 Subdivisions
- Heber City C-2 and C-4 Zone Design Standards and Guidelines
- Heber City C-3 Zone Design Standards and Guidelines

Exhibit 3

(PC's parking alternatives)

18.72.100 Reserved ~~Parking Requirements in the C-3 Zone~~

Given the availability of on-street parking and existing parking lots, new commercial uses and existing commercial use expansions are not required to provide any on-site parking. Residential uses, whether configured in mixed-use buildings or single purpose buildings shall provide at least 1 off-street parking space per unit. Complete street improvements are required, that may include pavement, curbs, gutters and sidewalks, as per the Standards and Specifications for such streets.

There shall be no parking requirement for existing building floor area in the C-3 Zone, even if a change of use occurs that increases parking demand within the existing floor area. Expansions to existing floor area and new buildings shall meet the standards for off street parking (chapter 18.72).



Heber City Council Staff Report

MEETING DATE: 2/6/2024
SUBJECT: Ordinance 2024-05 Removing Section 5.26.045 Notice of Short-Term Rental Restriction
RESPONSIBLE: Jeremy Cook
DEPARTMENT: Planning
STRATEGIC RELEVANCE:

SUMMARY

In December 2023, the City Council adopted Section 5.26.045 Notice of Short-Term Rental Restriction. The section added a mechanism for HOA's to submit information to the City which could restrict the issuance of a business license for a short-term rental within the area of the HOA. The City Council is continuing to review the regulations related to short-term rentals in order to create both reasonable and enforceable regulations and regulations that protect residents in the vicinity of short-term rentals.

RECOMMENDATION

Approve Ordinance 2024-5

BACKGROUND

Section 5.26.045 Notice of Short-Term Rental Restriction was added in 2023. After further review of short-term rental issues, a number of council members requested that the item be placed back on the agenda.

DISCUSSION

FISCAL IMPACT

None

CONCLUSION

Staff recommends removal of Section 5.26.045 Notice of Short-Term Rental Restriction and adoption of ordinances establishing alternative restrictions and penalties.

ALTERNATIVES

1. Approve as proposed
 2. Approve as amended
 3. Continue
 4. Deny
-

POTENTIAL MOTIONS

Alternative 1 - Approval - Staff Recommended Option

I move to **approve** the item as presented, with the findings and conditions as presented in the conclusion above.

Alternative 2 - Approve as Amended

I move to **approve** the item as amended, as follows.

Alternative 3 - Continue

I move to **continue** the item to another meeting on , with direction to the applicant and/or Staff on information and / or changes needed to render a decision, as follows:

Alternative 4 - Denial

I move to **deny** the item with the following findings.

ACCOUNTABILITY

Department: Planning
Staff member: Jeremy Cook, City Attorney

EXHIBITS

1. Ordinance Removing Section 5.26.045 - 4859-5428-0595 - 3

ORDINANCE 2024-05

AN ORDINANCE removing Section 5.26.045 Notice of Short-Term Rental Restriction.

BE IT ORDAINED by the City Council of Heber City, Utah, that Heber City Municipal Code **Section 5.26.045 Notice of Short-Term Rental Restriction** is removed in its entirety as set forth in Exhibit A.

If any section, subsection, sentence, clause, phrase, or portion of this Ordinance is, for any reason, held invalid or unconstitutional by any court of competent jurisdiction, such provision shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

To the extent that any ordinances, resolutions, or policies of Heber City materially conflict with the provisions of this Ordinance, they are hereby amended to comply with the provisions hereof.

This Ordinance shall take effect immediately upon passage.

PASSED, APPROVED and ORDERED TO BE PUBLISHED BY THE HEBER CITY COUNCIL this _____ day of _____ 2024.

	AYE	NAY	ABSENT	ABSTAIN
Aaron Cheatwood	_____	_____	_____	_____
Michael Johnston	_____	_____	_____	_____
Sid Ostergaard	_____	_____	_____	_____
Scott Phillips	_____	_____	_____	_____
Yvonne Barney	_____	_____	_____	_____

APPROVED:

Mayor Heidi Franco

ATTEST:

RECORDER

Date: _____

Exhibit A

~~5.26.045 Notice of Short Term Rental Restriction~~

~~A. — If the City receives a Notice of Short Term Rental Restriction Form from a Homeowner Association that notifies the City that the CC&Rs controlling the area within the Homeowner Association prohibit short-term rentals, the City shall not issue a business license for any short-term rentals within that Homeowner Association. The notice from the Homeowner Association shall include the following:~~

- ~~1. A map showing the location of the properties within the Homeowner Association and parcel numbers for each property within the HOA.~~
- ~~2. A certificate showing the Homeowner Association is registered with the Utah Department of Commerce.~~
- ~~3. A copy of the CC&R's showing that short-term rentals are prohibited within the Homeowner Association.~~
- ~~4. A verified statement from the person signing the Notice of Short Term Rental Restriction Form that the Notice of Short Term Rental Restriction Form has been approved by the Homeowner Association and that the person signing the Notice of Short Term Rental Restriction Form has legal authority to execute the Notice of Short Term Rental Restriction Form on behalf of the Homeowner Association.~~
- ~~5. The name, phone number, address and email of the person signing the Notice of Short Term Rental Restriction Form.~~

~~B. — If the City receives a complete Notice of Short Term Rental Restriction Form that includes a property that has previously been issued a business license for a short-term rental, the City shall notify any person or entity with a business license for a short-term rental within the HOA that the City has received a Notice of Short Term Rental Restriction Form and that their business license will be revoked one hundred and twenty (120) days after the date of the notice from the City. —~~

2.08.020 Mayor Pro Tem -- Filling Of Vacancy

- A. The mayor shall preside at all meetings and upon the mayor's temporary absence or disability, the Legislative Body shall elect one of its number to act as mayor pro tem, who during such absence or disability, shall possess the power of mayor.
- B. If a vacancy shall occur in the office of mayor, the Legislative Body shall elect a mayor who shall possess all the rights and powers of mayor until the next municipal election and until a successor is elected and qualified.

HISTORY

Adopted by Ord. Prior Code §2-2 on 1/1/1900

Amended by Ord. [91-05](#) on 11/21/1991

Amended by Ord. [98-19](#) on 10/15/1998

Amended by Ord. [2003-25](#) on 11/20/2003

Amended by Ord. [2019-16](#) Amending Mayoral Responsibilities on 8/6/2019



Heber City Council Staff Report

MEETING DATE: 2/6/2024
SUBJECT: Council's Policy & Budget Priorities for Fiscal Year 2024-2025
RESPONSIBLE: Matt Brower
DEPARTMENT: Administrative
STRATEGIC RELEVANCE: Community Vitality; Economic Development; Infrastructure

SUMMARY

The council held their annual retreat on January 18 and 20, 2024 to finalize their budget and policy priorities for FY 24/25. The priorities have been itemized on the attached document entitled *FY 24/25 Council Policy & Budget Priorities*. Staff's focus throughout the year will be to execute on the priorities and to develop an annual budget that allocates necessary funding to complete the priorities.

RECOMMENDATION

Staff recommends Council formally adopt by motion its FY 24/25 Policy & Budget Priorities.

BACKGROUND

Annually, it is the practice of the Council to review and update their policy and budget priorities during their retreat. The council's annual retreat was held on January 18 and 20, 2024. Based on the Council's input and direction, staff has updated the Council's list of policy and budget priorities for review and adoption. Staff's focus throughout the year will be to execute on the priorities and to develop an annual budget that allocates necessary funding to complete the priorities.

DISCUSSION

The council's updated list of policy and budget priorities includes 17 priorities. Many of the priorities were brought forward from FY 23-24 with the majority being updated to include new input, direction and focus.

The development of the FY 24/25 budget kicked-off on Monday, January 22, 2024, with instruction given to staff on how to incorporate the Council's priorities into their respective budgets. These details will be provided to the Council during budget workshops that will be held in April and May

2024.

Also included with the Council's budget priorities is an Action Register that was created during the Council's retreat. The items on the Action Register represent tasks that the Mayor or Council members requested during the retreat. These items will also be tackled by staff during the forthcoming year. The Action Register does not need to be accepted or adopted by the Council, but the Council does need to verify the items on the Action Register are accurate.

FISCAL IMPACT

Fiscal impacts will be determined during the development of the FY 24/25 annual budget.

CONCLUSION

Staff recommends Council adopt by motion the updated list of policy and budget priorities for FY 24/25.

ALTERNATIVES

1. Approve as proposed
2. Approve as amended
3. Continue
4. Deny

POTENTIAL MOTIONS

Alternative 1 - Approval - Staff Recommended Option

I move to **approve** the **item** as presented, with the findings and conditions as presented in the conclusion above.

Alternative 2 - Approve as Amended

I move to **approve** the **item** as amended, as follows.

Alternative 3 - Continue

I move to **continue** the **item** to another meeting on , with direction to the applicant and/or Staff on information and / or changes needed to render a decision, as follows:

Alternative 4 - Denial

I move to **deny** the **item** with the following findings.

ACCOUNTABILITY

Department: Administrative
Staff member: Matt Brower, City Manager

EXHIBITS

1. CC Priorities and Action Register 012024 1

Heber City Strategic Annual Retreat
FY 24/25 Council Policy & Budget Priorities
Established January 20, 2024

Policy/Budget Priorities					
Priorities	Description/Strategy	Operationalizing Strategy	Target	Responsible	Status
2034 Olympic Games Focus	Begin identifying and executing on opportunities to leverage the 2034 Olympic Games to advance Council’s priorities and economic opportunities for Heber City.	Initial opportunities include 1) locating Soldier Hollow parking closer to downtown; 2) host “live sites” in Hebe during the Games; 3) advance Heber Valley Corridor (i.e. east bypass) design and construction; and 4) transformation of Hwy 40 through down town into a walkable, pedestrian friendly atmosphere.	10 Year Planning and Execution Window—year one is 2024.	MB/CC	
Envision Central Heber 2050 *Execution Phase* -Main Street District (MSD) -Arts and Recreation District (ARD) -Central Neighborhoods (CN)	Executing Envision Central Heber plans by making specific investments intended to realize the Vision. (Relevant items to be included in FY ’25 budget.)	Main Street District (MSD) 1-Main Street Enhancement Plan—develop concept plan for Main Street Enhancements. Transitioning to shovel ready plan to present to UDOT/Legislature at later time. 2-Assemble strategic properties—priority purchases include County fire station property; HL&P administration building property; and County administration building property. 3-Parking—develop plan for initially leveraging fire station building and administration building for commercial incubators supportive of the downtown vision. Initial executable parking plan to incorporate usage of existing buildings. 4-Alleyway phasing—develop phasing plan for alley way encompassing strategy for preserving/protecting preferred path. 5-Complete Band Shell 6-Complete 200S Plaza 7-Draft broad policy for burying power lines and identifying dedicated funding source 8-Street Cross section—Standard change supporting angled and parallel parking for “down town” roads. 9-Work with Roger Brooks to compete programming, parking, and recruitment scope of work for downtown. Arts & Recreation District (ARD) 1-Continue focused discussion with stakeholders to realize value added vision. Support stakeholder needs. Initial plan presented on 1/20/24.	MSD 1-Q4 ‘24 MSD 2-FY ‘24 for fire station & HL&P Bldg. FY ‘25 for County Adm. Building MSD 3-Q4 ‘24 MSD 4-Q4 ‘24 MSD 5-Q3 ‘24 MSD 6-Q3 ‘24 MSD 7-Q3 ‘24 MSD 8-Q2 ‘24 MSD 9-Q4 ‘24 ARD 1-Ongoing	1.RF/MB 2.MB/JC 3.TK/MB 4.TK/MB 5.MB 6.MB 7.TK/MS/RF 8.RF 9.DK/MB 1.MB/CC	1.TBD 2.Offers made to County & HL&P 3.Plan presented to CC on 1/20/24 4.Plan presented to CC on 1/20/24 5.Bidding in February ‘24 6.Bidding in February ‘24 7.Plan presented to CC on 1/20/24 8.Plan presented to CC on 1/20/24 9.Contract executed on 1/29/24 1.Initial plan presented to CC on 1/20/24
Envision Central Heber 2050 *Visioning Phase*	Envision Central Heber 2050 is a stakeholder driven initiative to explore, identify and implement an executable plan for central neighborhoods, Main Street and Tourism Recreation District.	1-Complete code updates—including C3 zone perfected 2-Plans for Branding/Marketing/Promotion/Events/Arts/History 3-Redevelopment in Central Heber to contain deed restriction requirements for additional density requests	1.Q3 ‘24 2.Q2 ‘24 3.Q3 ‘24	1.TK 2.RB 3.TK	1.Underway 2.Initial ideas presented to CC on 1/20/24—next step in March ‘24 3.Initial policy plan discussed by CC on 1/20/24
Community Reinvestment Agency (CRA)	Execute Remaining Interlocal Agreements	1-Wasatch County School District Interlocal Agreement 2-Wasarch County Interlocal Agreement	1-Spring ‘24 2-Spring ‘24	MB	In negotiations

Policy/Budget Priorities					
Priorities	Description/Strategy	Operationalizing Strategy	Target	Responsible	Status
Central Heber Water & Sewer Infrastructure Replacement	Develop and implement strategy for replacing aged and unreliable infrastructure (i.e. water and sewer) in Central Heber area of the City.	1-Adopt annual supporting rate increases. 2-Work to keep project on time, on budget and on scope.	1-August each year. 2-Fall '25	1.SN 2.RF	1) Ongoing 2) Ongoing
Pressurized Irrigation (PI)	Meter installation on existing system and strategic expansion	1-Project construction	Continue construction when materials available.	RF	Ongoing
Transportation Focus	Execute on key Council transportation initiatives.	1-Assess opportunities for improving capacity and safety on 600 S & Main. Conduct as part of Roads Master Plan Addendum. 2-Design road improvements for 100 W from 5 th N. to 6 th S. for improving pedestrian experience—not to be built at this time, but designed to facilitate private projects in the area (City likely to fund at later date). Delay 100 E. design and improvements until demand for redevelopment in area. 3-Complete Section B of Heritage Farms Parkway 4-Right sizing roads—conduct work meeting with City Council to better understand intent and challenges of “right sizing roads.” 5-Consider Center Street Improvements—conduct work meeting with City Council to explore reasonable, viable and affordable improvments.	1-Q4 '24 2-Start July 1, '24. Complete FY '25. 3-Q3 '24 4-Q3 '24 5-Q3-'24	1-RF 2-RF 3-RF 4-TK/RF 5-RF/TK	
Water System Redundancy	Provide for critical water system redundancy to reduce risk of system interruptions.	1—Electronic Security 2—Pumps 3—Electrical backup	Items will be included in FY '25 budget submittal.	MK	
Affordable Housing Plan	Move the needle on developing and realizing affordable housing in Heber community.	1-Managing Affordable Housing (AH) Deed Restrictions A) Verify Mountain Lands Community Housing is actively managing deed restrictions for all of Heber’s deed restricted properties. Develop and maintain relationship with Mountain Lands Community Housing. 2-Affordability Ideas A) Negotiate greater affordability with existing affordable housing obligations (80% AMI to 60% AMI) B) Explore City owned land opportunities, swapping land, use of County and/or District property for AH C) All projects to have permanent deed restrictions D) Evaluate utilization of different housing types E) Evaluate government funding opportunities F) “City Purchase Land” (Governor’s Initiative) 3-Location A) Negotiate more viable locations with existing obligations B) Explore opportunities for affordable housing projects in CRA and central neighborhoods of Heber 4-Subject Matter Experts A) Look to partner with AH expert to help move needle on establishing affordable housing in Heber City.	1-Ongoing 2-Ongoing 3-Ongoing 4-Q2 '24	TK/MB	
Cemetery Adm. Building	Cemetery Master Plan identifies development of new cemetery/parks office building as a key priority.	1-Construct building.	1-Begin construction Spring '24	MR/MB	Project to be bid in February '24.

Policy/Budget Priorities					
Priorities	Description/Strategy	Operationalizing Strategy	Target	Responsible	Status
Main Street Trees	Main Street trees are not uniform in size or shape and have a history of disease and premature death.	1-Undertake assessment to pinpoint root cause of premature tree mortality and poor health 2-Develop plan to address and solve root cause of tree mortality and poor health 3-Fund Plan—include funding in FY '25 budget. 4-Implement Plan	1,2&3:by July 1, '24 4-FY '25	MR	
Heber Valley Arts Center	Continue support for Arts Center	1-Execute on Ground Lease and Parking Agreement 2-Continue strong relationship with stakeholders—WCAC & Jordanelle Ridge	1-Ongoing 2-Ongoing	CC/MB/JC	1-Ground Lease & Parking Agreement adopted in Jan. '24. 2. Ongoing
Historic Preservation	Support recommendations of Heritage Committee for preserving and relocating train depots	1-\$50k escrow for train depot—investigate alternatives 2-\$20k Phase 2 signage	Funding will likely be in FY'24.	MS	
Trail Maintenance Reserve and Linkage	Council priority to execute on City's trail master plan closing gaps in existing trail networks and ensure sufficient reserves are set aside annually to maintain trails.	1-Incorporate funding for trails in FY '25 budget 2-Establish restricted reserve account to fund annual maintenance costs	1-Q2 '24 2-Q2 '24	SN/RF	
Dark Sky	Heber City is committed to the preservation of Valley night sky	1-Present overview of dark sky policy to CC. 2-Enforce adopted dark sky policies. 3-Transition all City facilities to dark sky compliant. 4-Work with local governments in Wasatch County to incorporate dark sky strategies and investments. 5-Implement dark sky awareness campaign for private property owners/incentives	1-Q2 '24 2-Funding FY '25 3-FY '25 4-Ongoing 5-Ongoing	1-TK 2-PS 3-MR 4-MB 5-RB	
Heber Valley Corridor Planning/Beautification	Meeting in 2x2 with area local governments to develop unified plan for key bypass elements.	1-Hold recommended Wasatch County Interlocal 2:2 meeting(s) to explore strategies for planning, beautification, land protection, etc.	1-Q1 '24	SP/SO	Meeting to be set by County
STR Policy Update	City Council supports an amendment to City's STR policy	Remove all nexus with HOAs.	Q 1 '24	TK	
Year of the Parks Continued	Begin construction on Phase 1 of Murifield Park Expansion and Coyote Springs Park	1-Complete parks designs for both parks. 2-Complete construction on phase one for both parks	1-Q4 '24 2-Q4 '24	MR/MB	

Heber City Council 2023 Strategic Retreat Action Register
Established January 11, 2023

Execution Strategy				
Action Item	Description	Target	Responsible	Status
2023/2024 Action Register Items Continued				
Inclusive Play Ground	Assess inclusive playground opportunities in Wasatch Vista, Muirfield, Coyote Springs and Main City Park.	July 1, 2024	MR	Ongoing
Open Access Fiber Agreements	Complete agreements with STRATA for N. Village area	ASAP	MB/JC	In negotiations
Airport Fee Analysis	Complete airport fee analysis (will need to consult with airport attorneys on timing to commence work).	March '24	TB	Underway
Parks Standards	Establish city-wide park standards (NVOZ as an example)	Q1 '24	MR/MS	Standards reviewed by PC on 9/12/23
GIS	Implement GIS software City wide—GIS and City Works combined.	Q3 '24	RF	Underway
N. Village Preservation Fee	Present to City Council alternatives for uses N. Village Preservation Fee	Q2 '24	TK	Underway
Staffing Assessment	Complete staffing assessment for FY '25 budget	March '24	CA	Underway
Web Site Update Finished	Complete Update	March '24	RB/MS/AB	In development
2024/2025 Action Register Items				
Business License Fee Update	Business License Fee Analysis	March 1, '24	SN	Underway
Cross Street Addendum	Adopt transportation plan in Feb '24 and commence addendum work immediately thereafter. Cost \$50-\$100k—include funding in FY '25 budget.	Q4 '24	RF	
Round-a-bout Art	Execute on plans to place art in round-a-bouts—use TAP tax as a source of funding	Ongoing	MB/TC	Underway
Airport Impact Fees	Investigate feasibility of establishing airport specific impact fees	Q1 '24	JC	
Park Storage Areas	Evaluate strategic—short and long term—means for increasing park storage capacity.	Q2 '24	MR	
Recycling	Improve Heber City organization's recycling ethic – document what is done now and what can be improved. Including how the City can better communicate private recycling services to the general public.	Q2 '24	MS/RB	
Muirfield Park Private Gardening Plan	Support Heber Valley Self Reliance goals for investing in community garden at Muirfield Park.	Ongoing	MS/MR/CC	
Flood Channel Study	Undertake flood channel study. Include funding in FY '25 budget estimated at \$50 - \$100k	FY '25	RF	
Communication Enhancements	Improve on the following communication areas: 1—Employee info internally 2—Calendar of public meetings—emphasize opportunities to give public input 3—Outreach on projects—details on project and/or where to go for info (videos)	Q2 '24	RB	
Small Business Support	Work with Dallin Kocher to develop specific training opportunities and leverage for staff development	Q3 '24	MB	
Process Mapping of Key Internal Practices	Develop strategy to document key internal processes... 1-Finance 2-Building 3-Community Development	Commence in Q2 '24	SN/TK	
Establish Library/Hub for Funding Park Amenities	Create program for encouraging public donations to public parks and place info on City website.	Q3 '24	RB	
Day Care/Senior Center	Explore how City zoning and/or “red tape” is adversely impacting establishment of such businesses.	Q2 '24	TK	
City Offices Net Zero	Look into other cities efforts to seek implementation ideas	Q3 '24	MS	
Code Enforcement	Special code enforcement emphasis... 1-Enforcement with fines – look into tracking software and include budget request in FY '25 budget. 2-Downtown weed control	1-Q2 '24 2-Ongoing	PS	