



## ALPINE CITY COUNCIL AGENDA

**NOTICE** is hereby given that the **CITY COUNCIL** of Alpine City, Utah, will hold a Public Meeting on **Tuesday, January 27, 2026, at 6:00 pm**, at 20 North Main Street which can be viewed on the **Alpine City YouTube Channel**. A direct link to the channel can be found on the home page of the Alpine City website: [alpineut.gov](http://alpineut.gov). Public comments will be accepted during the Public Comment portion of the meeting.

## **I. CALL MEETING TO ORDER**

- A. Roll Call** **Mayor Carla Merrill**
- B. Prayer** **Jessica Smuin**
- C. Pledge** **Sarah Blackwell**

## II. LEGISLATIVE REPORT – Representative Kristen Chevrier / Senator Brady Brammer

### III. WORK SESSION

**Presentation of the Pressurized Irrigation & Sewer Master Plans – Horrocks Engineers**

#### IV. CONSENT CALENDAR

- A. Approve City Council Minutes from January 13<sup>th</sup> City Council Meeting
- B. Approval of Payment – Cab and Chassis for New Dump Truck, Premier Truck Group: \$160,787.00
- C. Resolution R2026-08: Approval of Amended Consolidated Fee Schedule – (PI Rates)

## **V. PUBLIC COMMENT**

## VI. REPORTS & PRESENTATIONS

- A. Open and Public Meetings Act (OPMA) Training
- B. FY2026 Second Quarter Financial Report

## VII. ACTION/DISCUSSION ITEMS

- A. **Resolution R2026-09: Appointment of City Prosecutor**
- B. **Ordinance 2026-04: Public Facilities Zone Setbacks**
- C. **Ordinance 2026-05: Senior Housing Overlay Amendments**

## VIII. STAFF REPORTS

## IX. COUNCIL COMMUNICATION

**X. CLOSED MEETING:** Discuss litigation, property acquisition, or the professional character, conduct, or competence of personnel

Mayor Carla Merrill  
January 23, 2026

THE PUBLIC IS INVITED TO PARTICIPATE IN ALL CITY COUNCIL MEETINGS. If you need a special accommodation to participate, please call City Recorder's Office (304) 756-6247, ext. 3.

please call the City Recorder's Office at (801) 756-6347 x 3.

**CERTIFICATE OF POSTING.** The undersigned duly appointed recorder does hereby certify that the above agenda notice was on the bulletin board located inside City Hall at 20 North Main Alpine, UT. This agenda is also available on our website at [alpineut.gov](http://alpineut.gov) and on the Utah Public Meeting Notices website at [www.utah.gov/pmpn/index.html](http://www.utah.gov/pmpn/index.html).

# ALPINE CITY GENERAL PLAN



## Public Facilities and Services Element

*DRAFT 2025 Pressurized Irrigation System  
Master Plan,  
Impact Fee Facility Plan  
&  
Impact Fee Analysis*

*Prepared by*



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## **Abbreviations**

AAPR	Annual Percentage Growth Rate
CCI	Construction Cost Index
ERU	Equivalent Residential Unit
fps	Feet per Second
gpd	Gallons per Day
gpdpc	Gallons per Day per Capita
gpm	Gallons per Minute
IFA	Impact Fee Analysis
IFFP	Impact Fee Facility Plan
sf	Square Foot

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## ***Chapter 1 - Summary and Recommendations***

### **Introduction**

Horrocks Engineers developed water master plan updates in 1996, 2001, 2007 and 2021 to help the City prepare for growth and to correct water system deficiencies. A city-wide pressurized irrigation system was constructed in 2002 and greatly reduced the demand on the culinary system. This 2025 pressurized irrigation system master plan update addresses the changes since 2021. User rates and impact fees were re-analyzed in order to stay current with costs and growth in the City.

This study was performed assuming the city-wide secondary irrigation system will supply the majority of outdoor water demand. There are a few areas (Box Elder, Three Falls, Pine Grove and Willow Canyon) that currently are not fully connected to the pressurized irrigation system; therefore, they will continue to use culinary water for their outdoor use.

Alpine City's current and future conditions are discussed in this study, including the existing land use and zoning, projected population, number of connections, developable areas, and projected demand. Using the projected population, design requirements, and historical demand, required system capacity is projected through the planning period.

To develop an impact fee, a minimum level of service must be established. The following is the minimum level of service (LOS) to be provided by the Pressurized Irrigation system.

- Provide 40 psi at all locations in the distribution system during peak day demands
- Provide 30 psi at all locations in the distribution system during peak hour demands
- Maintain a maximum 8 fps water velocity during peak hour demands
- Maintain a maximum 5 fps water velocity during peak day demands unless pressures are not compromised.
- Maintain a minimum of 2,322 gallons of storage per ERU
- Maintain a minimum of 2.22 ac-ft of water right per ERU
- Maintain a minimum of 4.3 gpm of water source per ERU

A computer program was used to analyze the existing water system to determine if the LOS minimum could be met. The capital improvements required to bring the existing water system up to the minimum LOS were also determined. In addition, recommendations for improvements were made to meet future demand.

The feasibility of the recommended improvements depends on the available funding. Recommendations are made to provide the funding needed to implement the recommended capital improvements.

## **Projected Population**

Alpine City currently has a population of 10,784 people. However, the City's population is projected to increase by 36 percent to 13,320 people by the year 2046. This growth will add an additional 631 ERU's to the system.

## **Projected Water Demand**

Calculations in this report assume that the secondary irrigation system is used for most outdoor water use. It is also assumed that all residents connected to the secondary irrigation system use the system for their outdoor watering needs.

The Box Elder, Three Falls, and Pine Grove Subdivisions and six (6) lots of the Willow Canyon Subdivision currently are not served by the pressurized irrigation system. These lots will continue to use culinary water for both indoor and outdoor usage.

Landscape irrigation water use has varied significantly over the history of Alpine City. Prior to the construction of the pressurized irrigation system the peak day outdoor demand was approximately 3.27 gpm per irrigated acre. In 2021 the peak day demand was approximately 9.6 gpm per irrigated acre. The peak day flow in 2021 was 11,799 gpm over an estimated 1,235 irrigated acres. By comparison the State of Utah Division of Drinking Water requires a culinary public water system to provide 3.39 gpm per irrigated acre in this area of the State. Alpine's pressurized irrigation system was originally designed to handle 7.2 gpm per irrigated acre.

Alpine's current pressurized irrigation system cannot handle the current usage rates without compromising service in some areas.

## **Recommended Pressurized Irrigation System Improvements**

These recommendations were determined by using a computer model of Alpine City's pressurized Irrigation system and input from City staff.

## **Existing Deficiency Improvement Plan**

Table 1 shows the improvements to address deficiencies in the existing pressurized Irrigation system. These improvements are shown in Figure 2 in the appendix. A portion of the improvements listed will serve future as well as existing connections and the proportion associated with each are shown.

**Table 1 Improvements to Address Existing Deficiencies**

<b>Item</b>	<b>Description</b>	<b>Cost</b>	<b>Existing</b>	<b>Growth</b>
1	Grove Drive PRV to Mid Zone	\$359,844	\$295,154	\$64,689.85
2	Heritage Hills Well	\$6,255,392	\$5,130,847	\$1,124,544.88
3	Healey Booster Upsize	\$412,650	\$338,467	\$74,182.95
4	Low Zone Tank Expansion	\$4,983,577	\$558,805	\$4,424,772.34
5	400 West Booster and Piping Upsize	\$2,453,693	\$2,012,588	\$441,105.55
<b>Grand Total</b>		<b>\$14,465,157</b>	<b>\$8,335,861</b>	<b>\$6,129,296</b>

April 2025 CCI = 13798

Costs are in 2025 dollars

### **Buildout Improvement Plan**

Table 2 shows the improvements necessary to provide capacity for future growth. These improvements are shown in Figure 3 in the appendix. Some costs are shown as benefiting existing users such as when system improvement replaces an existing facility.

**Table 2 Buildout Improvements**

<b>Item</b>	<b>Description</b>	<b>Cost</b>	<b>Existing</b>	<b>Growth</b>
1	Alpine BLVD Booster Station	\$1,305,653	\$0	\$1,305,653.01
2	Country Manor Lane to Lambert Tank Connection	\$489,035	\$0	\$489,035.14
3	Country Manor Lane to East Mountain Dr Connection	\$566,821	\$0	\$566,821.27
4	Ranch Drive to Alpine Highway Connection	\$1,341,426	\$0	\$1,341,425.53
5	Mainline Upsizes	\$16,863,598	\$6,527,926.51	\$10,335,671.47
<b>Grand Total</b>		<b>\$20,566,533</b>	<b>\$6,527,927</b>	<b>\$14,038,606</b>

April 2025 CCI = 13798

Costs are in 2025 dollars

S E C T I O N

2

## ***Chapter 2 - Current and Future Conditions***

Future conditions in Alpine City will affect the pressurized irrigation demands and the improvements needed to meet those demands. As factors change, the projected future conditions made in this study could be affected. To help minimize the effect of the changing future conditions, the recommendations made in this study have been based upon ERU's served by Alpine City's pressurized irrigation system rather than time periods.

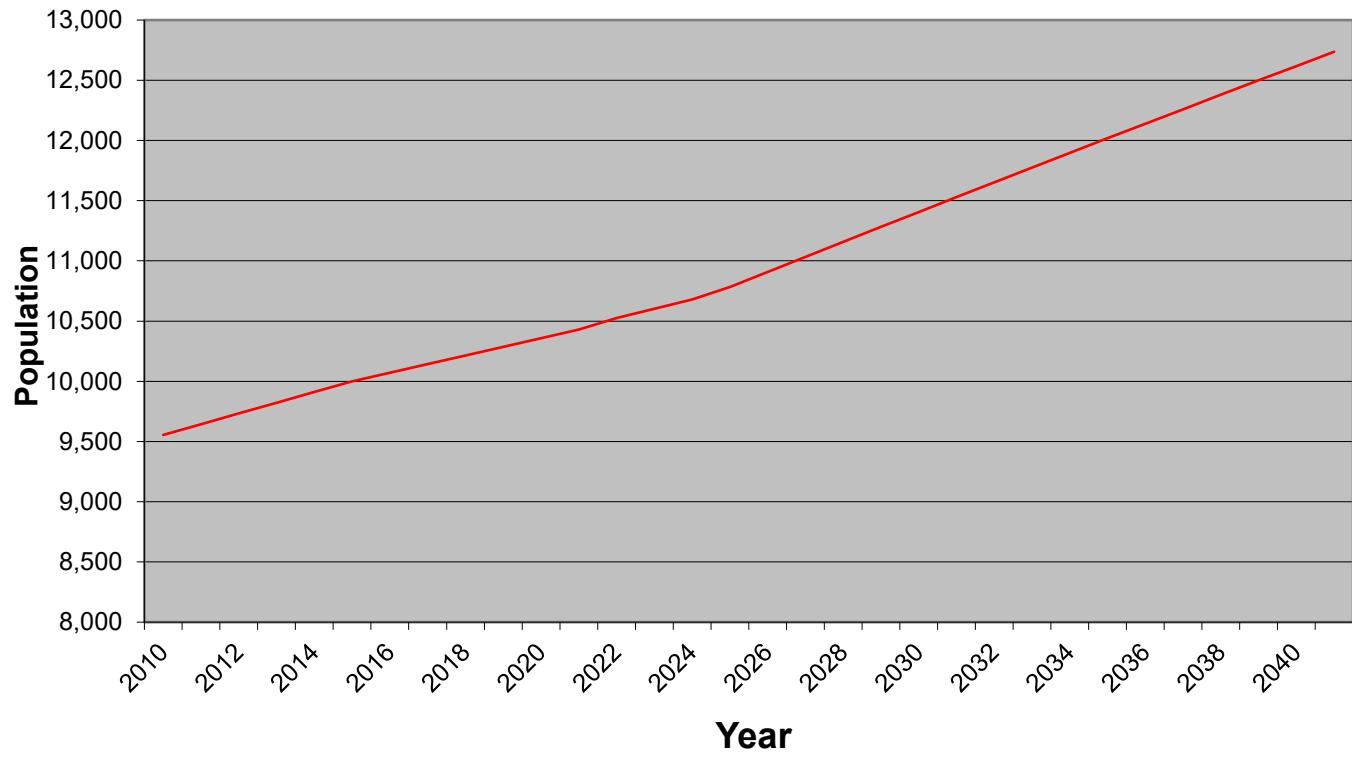
This chapter discusses Alpine City's population projections through the planning and ultimate build-out periods. The projected number of ERU's has been determined based upon the GIS analysis of developable land. In addition, using the potential areas of development, historical water demands, and selected LOS, the pressurized irrigation demands projected through the planning and ultimate build-out periods are discussed.

The master plan includes minor areas in the City's annexation declaration that are below 5,350 feet in elevation that can be served by the existing culinary water system. Additional potential areas of annexation above this elevation, such as north of Box Elder and Alpine Cove are not included in this analysis. If these areas are to be considered for annexation, they should be required to modify the master plan and provide all the water sources, booster pumps, storage, and distribution lines necessary to serve their development. It is likely that any proposed development in this category would utilize the culinary water system for both indoor and irrigation water.

### **Projected Population**

Population projections have been determined in consultation with Alpine City Staff until total build-out is reached near the year 2046. Intermediate numbers were calculated by interpolation and are shown in Table 3. Alpine City's projected population is also shown on Figure 1. The projected annual percentage growth rate (AAPR) from 2014 to 2046 is approximately 1.64 percent. Figures 4 and 5 in the appendix show the current zoning and land use within Alpine City.

## Alpine City Population Projection



**Figure 1 Population Projections**

### Equivalent Residential Unit (ERU)

In the past few years, the City has installed meters on all connections to their pressurized irrigation system and therefore actual usage at each connection was used to model existing demand. Future usage was projected via a combination of projected irrigated acreage and the measured average of 2.21 ERUs per irrigated acre. ERU's are expected to grow at approximately the same rate as population. Table 3 also shows the projected Growth in ERU's.

**Table 3 Population and ERU Projections**

Year	Population	Growth Rate	ERU
2025	10,784	0.99%	2,879
2026	10,910	1.16%	2,909
2027	11,034	1.14%	2,939
2028	11,159	1.13%	2,969
2029	11,283	1.11%	2,999
2030	11,407	1.10%	3,029
2031	11,530	1.08%	3,059
2032	11,652	1.06%	3,089
2033	11,775	1.05%	3,119
2034	11,896	1.03%	3,149
2035	12,018	1.02%	3,179
2036	12,139	1.01%	3,210
2037	12,259	0.99%	3,240
2038	12,379	0.98%	3,270
2039	12,499	0.97%	3,300
2040	12,618	0.95%	3,330
2041	12,737	0.94%	3,360
2042	12,855	0.93%	3,390
2043	12,973	0.92%	3,420
2044	13,091	0.91%	3,450
2045	13,208	0.89%	3,480
2046	13,320	0.85%	3,510

### **Irrigated Acreage**

Pressurized irrigation demands are generated from different land use types within the City. Residential irrigation demand is based on the zoning while commercial, industrial, and institutional are based on a typical average. Table 4 shows the percentage of each parcel that is assumed irrigated for modeling and planning purposes. Values were determined by measuring a representative sample of each land use and typical values seen in surrounding communities.

**Table 4 Irrigated Acreage by Land Use**

<b>Zoning or Land Use</b>	<b>% of Lot Irrigated</b>	<b>Measured ERU per Connection</b>
5 Acre (typical of CE 5 Zone)	20%	NA
1 Acre (typical of CR 40K Zone)	66%	1.21
0.5 Acre (typical of CR 20K Zone)	63%	0.87
0.25 Acre (typical of TR 10K Zone)	52%	0.84
BC	20%	NA
Commercial	20%	NA
Religious	30%	NA
Educational	50%	NA

## **Existing Pressurized Irrigation System**

The existing Alpine City pressurized irrigation system includes sources, storage, water rights, and distribution piping. The following sections describe the existing pressurized irrigation system components.

### **Pressurized Irrigation Sources**

Table 5 shows the City's existing pressurized irrigation sources and their capacity. Table 6 shows the current need versus supply. Alpine City currently has excess pressurized irrigation sources system wide but not necessarily in each pressure zone. Improvements necessary to meet the needs in all zones are recommended along with the benefit associated with existing and future users.

**Table 5 Existing Pressurized Irrigation Sources**

<b>Water Source</b>	<b>Flowrate Capacity(gpm)</b>	<b>Pressure Zone</b>
Dry Creek	2,000	High Zone
300 North Well	625	Mid Zone
Fort Creek	800	Low Zone
100 West Well	500	Low Zone
Carlisle Well	1,000	Low Zone
Healey Well	2,800	Low Zone
Ranch Dr Well	2,100	Low Zone
CUP Connection	5,400	Low Zone
<b>Totals</b>	<b>15,225</b>	

**Table 6 Pressurized Irrigation Source Need Versus Supply**

	<b>Projected Need (gpm)</b>	<b>Potential Supply (gpm)</b>	<b>Excess/(Deficit)</b>
Current	12,380	15,225	2,845

### **Pressurized Irrigation Storage**

Table 7 shows the City's existing pressurized irrigation storage facilities and their capacity. Table 8 shows the current need versus supply. Alpine City currently has inadequate pressurized irrigation storage.

**Table 7 Existing Pressurized Irrigation Storage**

<b>Tank</b>	<b>Capacity (gallons)</b>	<b>Zone</b>
Upper Reservoir	3,000,000	High Zone
Lambert Reservoir	2,000,000	Mid Zone
Lower Reservoir	1,500,000	Low Zone
Total	6,500,000	

**Table 8 Pressurized Irrigation Storage Need Versus Supply**

	<b>Projected Need (gallons)</b>	<b>Potential Supply (gallons)</b>	<b>Excess/(Deficit)</b>
Current	6,685,038	6,500,000	(185,038)

### **Pressurized Irrigation Rights**

Alpine City maintains a portfolio of their own water rights and has sufficient to meet the needs of the existing pressurized irrigation system.

### **Pressurized Irrigation Distribution Piping**

Figure 6 in the appendix shows the City's existing distribution system including piping, sources, storage, etc. Figure 7 in the appendix shows the pressure zones within the pressurized irrigation system.

The recommended improvements listed in Table 1 are needed to bring the pressurized irrigation system up to the minimum LOS and provide capacity for future growth. These are basically distribution system improvements needed to make source and storage assets available throughout the system. They are sized such that they can meet the needs of existing and future users and thus the cost share is split between existing and future users.

## Projected Pressurized Irrigation System Requirements

The projected population and LOS requirements were used to project the pressurized irrigation needs through the planning period. Using the projected ERUs, Table 9 shows the projected source, storage, and water right needs through the planning period.

**Table 9 Projected Pressurized Irrigation Needs**

Year	ERU	Flow Required (gpm)	Storage Volume Required (gallons)	Water Rights Required (ac-ft)
2025	2,879	12,380	6,685,038	6,391
2026	2,909	12,509	6,754,809	6,458
2027	2,939	12,638	6,824,579	6,525
2030	3,029	13,026	7,033,891	6,725
2035	3,179	13,672	7,382,744	7,058
2040	3,330	14,318	7,731,597	7,392
2045	3,480	14,964	8,080,449	7,725
Buildout	3,510	15,093	8,150,220	7,792

## Buildout Pressurized Irrigation Sources

Table 10 shows the buildout need versus supply. It is projected that Alpine City will have adequate pressurized irrigation sources at buildout system wide but not in individual zones. The extra source capacity necessary will come from the proposed well and well rehabilitation. The cost of the well is apportioned equally between existing and future users because it serves both an existing LOS need by making source available in areas of the system that needs it and providing additional source for future users. The well rehabilitation is planned to increase the capacity of the source to help meet the future need.

**Table 10 Buildout Source Needs Versus Supply**

	Projected Need (gpm)	Potential Supply (gpm)	Excess/(Deficit)
Buildout	15,093	15,225	132

## Buildout Pressurized Irrigation Storage

Table 11 shows the buildout need versus supply. It is projected that Alpine City will have inadequate pressurized irrigation storage at buildout. It is recommended that the City's lower reservoir be expanded to meet the future need.

**Table 11 Buildout Storage Needs Versus Supply**

	<b>Projected Need (gallons)</b>	<b>Potential Supply (gallons)</b>	<b>Excess/(Deficit)</b>
Buildout	8,150,220	6,500,000	(1,650,220)

## Buildout Pressurized Irrigation Rights

Alpine City maintains a portfolio of their water rights and will have sufficient to meet the needs of the pressurized irrigation system at buildout as developers are required to dedicate water rights to the City as a condition of development.

## Pressurized Irrigation Distribution Piping

Figure 10 in the appendix shows the City's proposed buildout distribution system including piping, sources, storage, etc. Table 2 (page 8) shows improvements necessary to the City's distribution system to provide the minimum LOS at buildout. Where appropriate costs are apportioned to both existing and future users based on the benefit provided to each. For example, if a pipeline is upsized the existing users pay for the existing replacement size and the future users pay for the upsize.

## Zone by Zone Analysis

A zone by zone analysis of pressurized irrigation system needs is given in the appendix. It shows the source, storage, and water right needs for each pressure zone in the pressurized irrigation system both for existing and buildout. It also shows the existing ERU's and projected buildout ERU's in each zone. Figure 7 in the appendix shows the pressurized irrigation pressure zones for Alpine City

## ***Chapter 3 – Pressurized Irrigation System Analysis***

Alpine City's pressurized irrigation system was analyzed to find the capacity of the current system and to determine the improvements needed to meet the demands of the projected population. In this chapter, a description of the existing pressurized irrigation system is given along with a discussion of the concerns and recommended improvements. Alpine City standard requirements were used as criteria to analyze the pressurized irrigation system. Information obtained from a computer model of Alpine's pressurized irrigation system is presented with the recommended improvements needed to meet the projected pressurized irrigation demand.

Alpine City currently has approximately 59 miles of pressurized irrigation pipelines that transmit and distribute pressurized irrigation throughout the City. Figure 6 in the appendix shows the existing pressurized irrigation system. Pipelines in the City range from 4 inches to 18 inches.

### **Design Standards**

The State of Utah does not provide regulations for pressurized irrigation system design. It is recommended that Alpine City adopt the following criteria as the minimum level of service for the pressurized irrigation system:

To develop an impact fee, a minimum level of service must be established. The following is the minimum level of service to be provided by the pressurized irrigation system.

- Provide 40 psi at all locations in the distribution system during peak day demands
- Provide 30 psi at all locations in the distribution system during peak hour demands
- Maintain a maximum 8 fps water velocity during peak hour demands
- Maintain a maximum 5 fps water velocity during peak day demands unless pressures are not compromised.
- Maintain a minimum of 2,322 gallons of storage per ERU
- Maintain a minimum of 2.22 ac-ft of water right per ERU
- Maintain a minimum of 4.3 gpm of water source per ERU

In addition to the minimum level of service criteria listed above the City has noted several operational concerns that should be addressed in the modeling planning for improvements. They are listed below.

- Filling the upper reservoir in dry years and prior to July 10 in all years

- Fully utilizing wet year high surface water flows rather than pumping
- Misc low pressure areas (Northwest high zone, East mid zone, etc)
- Over pressure low zone when use declines in the daytime but wells are operating to fill the reservoirs
- Conservation

## Computer Model of Pressurized Irrigation System

A computer program called WaterGEMS 2024 was used to model Alpine City's pressurized irrigation system. The program uses the flows demanded at each node to calculate the pressures, flows, and velocity of flow for each node and pipe. Output of the model includes, pipe velocity, node demands, pressures, and available fire flow. Information for the existing pressurized irrigation system includes the pipe diameters, lengths, tanks, sources, pumps, PRV stations, etc.

Several different scenarios were modeled to determine the necessary improvements. First both peak day and peak hour modeling are performed to ensure the minimum levels of service are met. Second both wet year and dry year conditions were modeled. Wet year modeling utilized local high surface water flows first prior to utilizing the wells while dry year modeling utilizes wells with the minimum expected surface water flows. There could be any number of wet year/dry year conditions in any given year. Peak day/peak hour and wet year/dry year conditions were analyzed in both the current conditions and projected buildout conditions. In addition an extended period simulation was set up in both the wet year and dry year conditions where demands varied during the day. This analysis was performed to determine if sources and storage were balanced over an extended period.

Water usage and supply conditions are very seldom the same from day to day or from year to year and it is not possible to model the complete range of conditions that may apply. The intent of this analysis is to provide the City with recommendations that, if implemented, will provide flexibility in operation to meet the myriad of operational conditions that will exist. For example, various booster pumps will allow flexibility to move water to different zones under different demand and supply conditions.

The number of ERU's was estimated based on build-out conditions with the 2025 zoning and assuming 20 percent of the area was used in the development of roadways, sidewalks, parks, etc. The flows generated by the number of ERU's achieved at build-out were entered into WaterGEMS. WaterGEMS was run to determine upgrades needed for demands on the existing pressurized irrigation system and demands to be placed on the system during buildout.

## Existing Deficiency Improvement Plan

Table 12 shows the improvements needed to address deficiencies in the existing pressurized irrigation system. These improvements are shown in Figure 2 in the appendix. A portion of the improvements listed will serve future as well as existing connections and the proportion associated with each are shown. Figures 8 and 9 in the appendix show the existing peak hour pressure and velocity respectively.

**Table 12 Improvements Needed to Address Existing Deficiencies**

<b>Item</b>	<b>Description</b>	<b>Cost</b>	<b>Existing</b>	<b>Growth</b>
1	Grove Drive PRV to Mid Zone	\$359,844	\$295,154	\$64,689.85
2	Heritage Hills Well	\$6,255,392	\$5,130,847	\$1,124,544.88
3	Healey Booster Upsize	\$412,650	\$338,467	\$74,182.95
4	Low Zone Tank Expansion	\$4,983,577	\$558,805	\$4,424,772.34
5	400 West Booster and Piping Upsize	\$2,453,693	\$2,012,588	\$441,105.55
<b>Grand Total</b>		<b>\$14,465,157</b>	<b>\$8,335,861</b>	<b>\$6,129,296</b>

April 2025 CCI = 13798

Costs are in 2025 dollars

## **Buildout Improvement Plan**

Table 13 shows the improvements necessary to provide capacity for future growth. These improvements are shown in Figure 3 in the appendix. Figure 10 in the appendix shows the proposed buildout water system. Figures 11 and 12 in the appendix show the projected peak hour pressure and velocity respectively at buildout.

**Table 13 Buildout Improvements**

<b>Item</b>	<b>Description</b>	<b>Cost</b>	<b>Existing</b>	<b>Growth</b>
1	Alpine BLVD Booster Station	\$1,305,653	\$0	\$1,305,653.01
2	Country Manor Lane to Lambert Tank Connection	\$489,035	\$0	\$489,035.14
3	Country Manor Lane to East Mountain Dr Connection	\$566,821	\$0	\$566,821.27
4	Ranch Drive to Alpine Highway Connection	\$1,341,426	\$0	\$1,341,425.53
5	Mainline Upsizes	\$16,863,598	\$6,527,926.51	\$10,335,671.47
<b>Grand Total</b>		<b>\$20,566,533</b>	<b>\$6,527,927</b>	<b>\$14,038,606</b>

April 2025 CCI = 13798

Costs are in 2025 dollars

A summary of the recommended improvements, scheduling, and estimated costs is shown in Table 14. Figures 2 and 3 in the appendix shows the recommended improvements. With contingencies, engineering, legal, and administrative fees, the total estimated cost is \$37,107,089.

**Table 14 Full Improvement Schedule**

Fiscal Year	Description	% Benefit to Existing			Impact Expense	Operating Expense
		Cost	82.02%	38.71%		
2025-26	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Healey Booster Upsize	\$412,650	82.02%		\$74,183	\$338,467
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
2026-27	5 Year Master Plan Update	\$40,000	82.02%		\$7,191	\$32,809
	Heritage Hills Well	\$3,127,696	82.02%		\$562,272	\$2,565,424
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
2027-28	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Heritage Hills Well	\$3,127,696	82.02%		\$562,272	\$2,565,424
	Low Zone Tank Expansion	\$2,491,789	11.21%		\$2,212,386	\$279,402
2028-29	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	400 West Booster and Piping Upsize	\$1,226,847	82.02%		\$220,553	\$1,006,294
	Low Zone Tank Expansion	\$2,491,789	11.21%		\$2,212,386	\$279,402
2029-30	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	400 West Booster and Piping Upsize	\$1,226,847	82.02%		\$220,553	\$1,006,294
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
2030-31	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Grove Drive PRV to Mid Zone	\$359,844	82.02%		\$64,690	\$295,154
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
2031-32	5 Year Master Plan Update	\$40,000	82.02%		\$7,191	\$32,809
	Ranch Drive to Alpine Highway Connection	\$1,341,426	0.00%		\$1,341,426	\$0
2032-33	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Alpine BLVD Booster Station	\$652,827	0.00%		\$652,827	\$0
2033-34	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Alpine BLVD Booster Station	\$652,827	0.00%		\$652,827	\$0
2034-35	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
2035-36	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
2036-37	5 Year Master Plan Update	\$40,000	82.02%		\$7,191	\$32,809
	Country Manor Lane to Lambert Tank Connection	\$489,035	0.00%		\$489,035	\$0
2037-38	100 West Well Redevelopment	\$550,200	82.02%		\$98,911	\$451,289
	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
2038-39	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
2039-40	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
2040-41	Country Manor Lane to East Mountain Dr Connection	\$566,821	0.00%		\$566,821	\$0
	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
2041-42	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
	5 Year Master Plan Update	\$40,000	82.02%		\$7,191	\$32,809
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148

Fiscal Year	Description	Cost	% Benefit to Existing		Impact Expense	Operating Expense
			Cost	Benefit to Existing		
2042-43	5 Year Master Plan Update	\$4,000	82.02%		\$719	\$3,281
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
2043-44	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Annual Master Plan Review	\$1,297,200	38.71%		\$795,052	\$502,148
2043-44	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
2045-46	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
<b>Total Expenditures</b>		<b>\$37,107,089</b>			<b>\$21,102,852</b>	<b>\$16,004,237</b>

## Pressurized Irrigation Rate Review

Table 15 shows the revenue and expense summary for the past five year for the pressurized irrigation fund. It appears that the current fees are inadequate to cover expenses and depreciation. These fees should be evaluated on a yearly basis and adjusted as needed.

**Table 15 Revenue and Expense Summary**

Description	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016
Irrigation Water Sales	\$958,477.00	\$908,979.00	\$917,867.00	\$966,177.00	\$923,720.00
Other Revenue	\$5,102.00	\$550.00	\$550.00	\$0.00	\$1,048.00
Connection Fee	\$48,724.00	\$2,625.00	\$25,651.00	\$4,740.00	\$4,123.00
Impact Fee	\$89,633.00	\$87,833.00	\$74,006.00	\$84,858.00	\$89,663.00
Interest Earnings	\$24,230.00	\$43,821.00	\$49,794.00	\$27,966.00	\$10,594.00
Developer Contributions	\$114,972.00	\$395,381.00	\$54,812.00	\$159,839.00	\$18,059.00
<b>Total Revenue</b>	<b>\$1,241,138.00</b>	<b>\$1,439,189.00</b>	<b>\$1,122,680.00</b>	<b>\$1,243,580.00</b>	<b>\$1,047,207.00</b>
Operating Expenses	\$760,264.00	\$554,335.00	\$525,159.00	\$541,201.00	\$500,269.00
Depreciation	\$287,398.00	\$235,719.00	\$248,448.00	\$227,717.00	\$227,596.00
Debt Service	\$116,928.00	\$133,134.00	\$123,889.00	\$145,003.00	\$153,851.00
<b>Total Expenses</b>	<b>\$1,164,590.00</b>	<b>\$923,188.00</b>	<b>\$897,496.00</b>	<b>\$913,921.00</b>	<b>\$881,716.00</b>
<b>Net Gain/(Loss)</b>	<b>\$76,548.00</b>	<b>\$516,001.00</b>	<b>\$225,184.00</b>	<b>\$329,659.00</b>	<b>\$165,491.00</b>
<b>Net Gain/(Loss)*</b>	<b>-\$38,424.00</b>	<b>\$120,620.00</b>	<b>\$170,372.00</b>	<b>\$169,820.00</b>	<b>\$147,432.00</b>

\*Excluding Developer Contributions

## Pressurized Irrigation System Replacement

Alpine City's pressurized irrigation system was constructed in 2002 and is well within its design life of approximately 50 years. It is recommended that Alpine City continue to budget for system replacement by maintaining the depreciation category. Current budgeting includes depreciation on existing infrastructure in the amount of approximately \$275,000 per year and these funds could be utilized to replace failing

infrastructure as it reaches its design life. Table 16 shows the existing pressurized irrigation system total replacement costs. If the City were to replace the whole system over an 80-year period the yearly costs would be approximately \$2,189,079 per year.

**Table 16 Existing Pressurized Irrigation System Replacement Cost**

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$6,365,914
2	4 inch PVC	44,315	LF	\$85.49	\$3,788,460
3	6 inch PVC	142,315	LF	\$94.04	\$13,383,057
4	8 inch PVC	47,424	LF	\$101.13	\$4,796,174
5	10 inch PVC	30,717	LF	\$109.55	\$3,365,188
6	12 inch PVC	17,639	LF	\$126.42	\$2,229,876
7	14 inch DIP	9,688	LF	\$171.92	\$1,665,552
8	16 inch DIP	5,213	LF	\$210.13	\$1,095,422
9	18 inch DIP	16,542	LF	\$267.43	\$4,423,861
10	24 inch DIP	0	LF	\$310.00	\$0
12	30 inch DIP	0	LF	\$380.00	\$0
13	Service Connections	2,571	EA	\$3,312.71	\$8,516,983
13	PRV Stations	3	EA	\$175,000.00	\$525,000
13	Water Supply Wells	5	EA	\$4,500,000.00	\$22,500,000
13	Stream Diversions System	3	EA	\$641,170.07	\$1,923,510
13	Booster Pump Station	3	EA	\$865,579.59	\$2,596,739
13	Storage Tanks	7	MG	\$1,517,435.82	\$9,863,333
17	Class "A" Road Repair	1,752,588	SF	\$9.83	\$17,230,173
19	Imported Backfill	87,629	TON	\$38.28	\$3,354,265
21	Valves and Fittings	1	LS	\$17,373,795.21	\$17,373,795
22	Traffic Control	1	LS	\$6,949,518.09	\$6,949,518
23	Utility Relocation	1	LS	\$1,737,379.52	\$1,737,380
Sub Total (Construction)					\$133,684,201
Contingencies					\$20,052,630
Total (Construction)					\$153,736,831
Design and Construction Engineering					\$20,052,630
Administration, Legal, and Bond Counsel					\$1,336,842
Total (Professional Services)					\$21,389,472
<b>Grand Total</b>					<b>\$175,126,303</b>
April 2025 CCI = 13798					
Data From Water Model Data Base					
Costs are in 2025 dollars					
<b>Replacement Costs Per Year (80 Years)</b>					<b>\$2,189,079</b>

S E C T I O N

4

## ***Chapter 4 - Impact Fee Facility Plan (IFFP)***

### **General Background**

Alpine City has experienced significant growth in recent years. This growth, through the construction of homes, parks, commercial areas, and other amenities incidental to development, has added to the load on the City's pressurized irrigation system. As development continues, additional demands will be placed on the pressurized irrigation system. Alpine City's objective is to provide adequate pressurized irrigation facilities to meet the drinking water and fire protection needs of the residents.

Alpine City adopted a water system component update of the General Plan in 2001 and an update in 2007 and 2021 to plan culinary and secondary irrigation facilities. In 2025, a master plan update was completed on the pressurized irrigation system component of the General Plan. This plan proposes guidelines and suggests controls for the design and installation of pressurized irrigation facilities. The plan also establishes estimated costs associated with pressurized irrigation facilities.

### **Required Elements of an IFFP**

The purpose of this IFFP is to identify pressurized irrigation demands placed on existing pressurized irrigation facilities by new development and propose means by which Alpine City will meet these demands. Various funding possibilities for these facilities will also be discussed.

An IFFP, or its equivalent, must be in place if impact fees are to be considered as a financing source. Impact fees are one-time fees charged to new development to cover costs of increased capital facilities necessitated by new development. They are a critical financing source for Alpine City to consider, given the growth occurring in Alpine City.

According to Utah Code Title 11 Chapter 36a, known as the Impact Fee Act, local political subdivisions with a population of 5,000 or greater must prepare a separate IFFP before imposing impact fees unless the requirements of Utah Code Ann. §11-36-301 (3) (a) are included as part of the General Plan. Because the Alpine City General Plan does not satisfy these requirements, this IFFP has been prepared to meet the legal requirement.

Utah Code Ann. §11-36a-302 provides that the plan shall identify:

- (i) Demands placed upon existing public facilities by new development activity; and

(ii) The proposed means by which the local political subdivision will meet those demands.

## **Demands on Existing Facilities**

### **Service Area**

Alpine City is located in the northern most portion of Utah County near the base of the Wasatch Mountains and includes an area of approximately 7.4 square miles. It is bordered on the West by Highland and Draper, on the South by Highland, and on the North and East by mountains and Uinta National Forest. Existing land uses vary from pasture and farmland to high-density residential housing and commercial complexes. Therefore, the community can be classified as both rural and suburban.

Alpine City owns and operates a pressurized irrigation system that delivers pressurized irrigation water. The existing system can be seen in Figure 6 in the appendix

### **Pressurized Irrigation Design Requirements**

The following is the minimum level of service to be provided by the pressurized irrigation system.

- Provide 40 psi at all locations in the distribution system during peak day demands
- Provide 30 psi at all locations in the distribution system during peak hour demands
- Maintain a maximum 8 fps water velocity during peak hour demands
- Maintain a maximum 5 fps water velocity during peak day demands unless pressures are not compromised.
- Maintain a minimum of 2,322 gallons of storage per ERU
- Maintain a minimum of 2.22 ac-ft of water right per ERU
- Maintain a minimum of 4.3 gpm of water source per ERU

### **Existing Pressurized Irrigation Facilities**

Existing conditions at the time of this study were established using data collected from the City. Some of the data gathered and used includes an existing pressurized irrigation model, the existing water master plan, existing City maps, and field flow data. Figure 6 in the appendix shows Alpine's existing pressurized irrigation system and facilities.

Connections to the pressurized irrigation system include residential, school, church, commercial, and City owned facility connections for a total of 2,879 ERU's.

### **Existing Pressurized Irrigation Source**

Tables 17 and 18 describe the City's existing water sources and requirements.

**Table 17 Existing Pressurized Irrigation Source Capacity**

Water Source	Flowrate Capacity(gpm)	Pressure Zone
Dry Creek	2,000	High Zone
300 North Well	625	Mid Zone
Fort Creek	800	Low Zone
100 West Well	500	Low Zone
Carlisle Well	1,000	Low Zone
Healey Well	2,800	Low Zone
Ranch Dr Well	2,100	Low Zone
CUP Connection	5,400	Low Zone
<b>Totals</b>	<b>15,225</b>	

**Table 18 Existing Pressurized Irrigation Source Available**

	Projected Need (gpm)	Potential Supply (gpm)	Excess/(Deficit)
Current	12,380	15,225	2,845

Alpine City needs to meet the following criteria with regards to water source.

- Provide 4.3 gpm per ERU

Alpine City currently has excess source capacity system wide. Additional recommendations are made to address the ability to deliver these sources to the areas necessary.

### **Existing Pressurized Irrigation Storage**

Tables 19 and 20 describe the City's existing water storage facilities and requirements.

**Table 19 Existing Pressurized Irrigation Storage Capacity**

Tank	Capacity (gallons)	Zone
Upper Reservoir	3,000,000	High Zone
Lambert Reservoir	2,000,000	Mid Zone
Lower Reservoir	1,500,000	Low Zone
Total	6,500,000	

**Table 20 Existing Pressurized Irrigation Storage Available**

	<b>Projected Need (gallons)</b>	<b>Potential Supply (gallons)</b>	<b>Excess/(Deficit)</b>
Current	6,685,038	6,500,000	(185,038)

Alpine City needs to meet the following criteria with regards to water storage.

- Provide 2,322 gallons of storage per ERU

Alpine currently has inadequate storage capacity.

### **Existing Pressurized Irrigation Rights**

Alpine City needs to meet the following criteria with regards to water rights.

- Provide 2.22 ac-ft of water right per ERU

Alpine City currently has excess pressurized irrigation water right capacity.

### **Existing Distribution System**

Alpine City has set the following minimum LOS standards with regards to its pressurized irrigation distribution system.

- Provide a minimum of 40 psi at all points in the distribution system during peak day demands
- Provide a minimum of 30 psi at all points in the distribution system during peak hour demands
- Maintain a maximum 8 fps water velocity during peak hour demands
- Maintain a maximum 5 fps water velocity during peak day demands unless pressures are not compromised.

Alpine City' existing water system does not meet these criteria in several areas.

### **Deficiencies Based on Existing Development**

Alpine City's current pressurized irrigation system delivers pressurized irrigation water throughout the City. Figure 2 in the appendix shows the improvements that are recommended to correct existing system deficiencies. Table 21 lists the existing deficiencies in the system. A portion of the improvements listed will serve future as well as existing connections and the proportion associated with each are shown.

**Table 21 Existing System Deficiencies**

<b>Item</b>	<b>Description</b>	<b>Cost</b>	<b>Existing</b>	<b>Growth</b>
1	Grove Drive PRV to Mid Zone	\$359,844	\$295,154	\$64,689.85
2	Heritage Hills Well	\$6,255,392	\$5,130,847	\$1,124,544.88
3	Healey Booster Upsize	\$412,650	\$338,467	\$74,182.95
4	Low Zone Tank Expansion	\$4,983,577	\$558,805	\$4,424,772.34
5	400 West Booster and Piping Upsize	\$2,453,693	\$2,012,588	\$441,105.55
<b>Grand Total</b>		<b>\$14,465,157</b>	<b>\$8,335,861</b>	<b>\$6,129,296</b>

April 2025 CCI = 13798

Costs are in 2025 dollars

## Future Demand and Capital Facilities

### Future Pressurized Irrigation Requirements

The same design requirements for the current system will apply for future development. All new development will be required to install a minimum of 6-inch pressurized irrigation lines (4 inch in some cul-de-sacs) or the appropriate size to serve their development, whichever is larger.

### Future Capital Pressurized Irrigation Facilities

Future conditions at the time of this study were established using data collected from the City. A buildout pressurized irrigation model was created with the projected pressurized irrigation system using the buildout number of ERU's. Figure 10 in the appendix shows Alpine's buildout pressurized irrigation system and facilities.

### Future Pressurized Irrigation Source

Alpine City currently has approximately 15,225 gpm of pressurized irrigation source capacity. Analyzing a total buildout scenario, it is projected that the City will need approximately 15,093 gpm pressurized irrigation capacity. Table 22 shows Alpine's existing water sources that could be used to meet future needs. Table 23 gives the projected excess and deficits. Alpine City has adequate source capacity for buildout system wide but will need additional sources in specific areas of the system.

**Table 22 Existing Pressurized Irrigation Source Capacity**

Water Source	Flowrate Capacity(gpm)	Pressure Zone
Dry Creek	2,000	High Zone
300 North Well	625	Mid Zone
Fort Creek	800	Low Zone
100 West Well	500	Low Zone
Carlisle Well	1,000	Low Zone
Healey Well	2,800	Low Zone
Ranch Dr Well	2,100	Low Zone
CUP Connection	5,400	Low Zone
<b>Totals</b>	<b>15,225</b>	

**Table 23 Buildout Pressurized Irrigation Source Available**

	Projected Need (gpm)	Potential Supply (gpm)	Excess/(Deficit)
Buildout	15,093	15,225	132

### **Future Pressurized Irrigation Storage**

Alpine City currently has approximately 6,500,000 gallons of pressurized irrigation storage capacity. Analyzing a total buildout scenario, it is projected that the City will need approximately 8,150,220 gallons of pressurized irrigation storage capacity. Table 24 shows Alpine's existing pressurized irrigation storage that could be used to meet future needs. Table 25 gives the projected excess and deficits. Alpine City has inadequate pressurized irrigation storage capacity for buildout.

**Table 24 Buildout Pressurized Irrigation Storage Capacity**

Tank	Capacity (gallons)	Zone
Upper Reservoir	3,000,000	High Zone
Lambert Reservoir	2,000,000	Mid Zone
Lower Reservoir	1,500,000	Low Zone
<b>Total</b>	<b>6,500,000</b>	

**Table 25 Buildout Pressurized Irrigation Storage Available**

	<b>Projected Need (gallons)</b>	<b>Potential Supply (gallons)</b>	<b>Excess/(Deficit)</b>
Buildout	8,150,220	6,500,000	(1,650,220)

### **Future Pressurized Irrigation Water Right Requirements**

Alpine City maintains a portfolio of their water rights and will have sufficient to meet the needs of the pressurized irrigation system at buildout as developers are required to dedicate water rights to the City as a condition of development.

### **Future Capital Facilities**

Figure 10 in the appendix shows the proposed pressurized irrigation system layout. Table 26 shows the improvements necessary for buildout. Table 27 shows the anticipated ten-year improvement schedule with associated impact fee related costs.

**Table 26 Buildout System Improvements**

<b>Item</b>	<b>Description</b>	<b>Cost</b>	<b>Existing</b>	<b>Growth</b>
1	Alpine BLVD Booster Station	\$1,305,653	\$0	\$1,305,653.01
2	Country Manor Lane to Lambert Tank Connection	\$489,035	\$0	\$489,035.14
3	Country Manor Lane to East Mountain Dr Connection	\$566,821	\$0	\$566,821.27
4	Ranch Drive to Alpine Highway Connection	\$1,341,426	\$0	\$1,341,425.53
5	Mainline Upsizes	\$16,863,598	\$6,527,926.51	\$10,335,671.47
<b>Grand Total</b>		<b>\$20,566,533</b>	<b>\$6,527,927</b>	<b>\$14,038,606</b>

April 2025 CCI = 13798

Costs are in 2025 dollars

Buildout connections to the pressurized irrigation system include residential, school, church, commercial, and City owned facility connections for a total of 3,510 ERUs.

### **Capital Facility Cost and Proportionate Share**

#### **Cost of Capital Facilities**

Detailed engineer's estimates of cost are included in the appendix. A summary of those costs are included in Table 21 and 26 previously. These costs are associated with master planned improvements in order to

properly handle future development demands and are thus eligible for inclusion in an impact fee. Only that portion of the capital facilities that will benefit growth in the 10-year planning period are eligible for inclusion. An appropriate inflation factor can be incorporated in the analysis to cover rising costs in the future.

### **Cost of Master Planning**

The City expects to expend money every year to review the pressurized irrigation master plan, IFFP, and IFA and every five years to fully update the same. These costs are eligible for inclusion in an impact fee. Only that portion of the master planning that will benefit growth in the 10-year planning period are eligible for inclusion. An appropriate inflation factor can be incorporated in the analysis to cover rising costs in the future.

### **Value of Free Capacity in Pressurized Irrigation System**

The existing pressurized irrigation system has excess capacity or free capacity available for future growth. For this analysis only those items that are easily identified as having excess capacity and the original cost is known are included in the analysis. The list of assets that included can be seen in Table 32 in the IFA. The current City asset list can be seen in the appendix. It is acceptable for future users to pay for their portion of the existing system through an impact fee to reimburse existing users. The free capacity portion of the impact fee will be utilized to repay the exiting pressurized irrigation enterprise account to recoup actual costs spent on the original system improvements. Only actual costs can be utilized in this analysis and not current replacement costs or inflation adjusted costs.

### **Cost Associated with Existing Deficiencies**

As described previously, the existing pressurized irrigation system has deficiencies but these are not associated with future connections and cannot be included in an impact fee analysis (IFA). Some existing system deficiency improvements will serve the needs of buildup as well as cure an existing deficiency. These costs can be included in an impact fee and the portion of that cost is identified in Table 20.

### **Developer Contributions**

As growth occurs throughout the City, developers are required to install minimum size pressurized irrigation lines to serve the homes within their development. Sometimes lines throughout the City need to be upsized to accommodate homes outside the development. The City collects impact fees from all development to cover the cost of upsizing. The detailed cost estimates prepared in the Master Plan only include those costs related to upsizing developer provided facilities or wholly City constructed facilities. No impact fees can be collected for developer provided facilities.

### **10-Year Improvement Schedule**

Table 27 provides the anticipated schedule for master planning and improvement construction. The costs represent present value in 2025 dollars.

**Table 27 10 Year Improvement Schedule**

Fiscal Year	Description	Cost	% Benefit to Existing		Impact Expense	Operating Expense
2025-26	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Healey Booster Upsize	\$412,650	82.02%		\$74,183	\$338,467
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
2026-27	5 Year Master Plan Update	\$40,000	82.02%		\$7,191	\$32,809
	Heritage Hills Well	\$3,127,696	82.02%		\$562,272	\$2,565,424
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
2027-28	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Heritage Hills Well	\$3,127,696	82.02%		\$562,272	\$2,565,424
	Low Zone Tank Expansion	\$2,491,789	11.21%		\$2,212,386	\$279,402
2028-29	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	400 West Booster and Piping Upsize	\$1,226,847	82.02%		\$220,553	\$1,006,294
	Low Zone Tank Expansion	\$2,491,789	11.21%		\$2,212,386	\$279,402
2029-30	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	400 West Booster and Piping Upsize	\$1,226,847	82.02%		\$220,553	\$1,006,294
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
2030-31	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Grove Drive PRV to Mid Zone	\$359,844	82.02%		\$64,690	\$295,154
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
2031-32	5 Year Master Plan Update	\$40,000	82.02%		\$7,191	\$32,809
	Ranch Drive to Alpine Highway Connection	\$1,341,426	0.00%		\$1,341,426	\$0
2032-33	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Alpine BLVD Booster Station	\$652,827	0.00%		\$652,827	\$0
2033-34	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Alpine BLVD Booster Station	\$652,827	0.00%		\$652,827	\$0
2034-35	Annual Master Plan Review	\$4,000	82.02%		\$719	\$3,281
	Mainline Upsizes	\$1,297,200	38.71%		\$795,052	\$502,148
<b>Total Expenditures</b>		<b>\$23,710,234</b>			<b>\$12,771,767</b>	<b>\$10,938,468</b>

## Revenue Source to Finance System Improvements

### General Fund Revenues

While general fund revenues can be used to fund capital facilities, they are generally insufficient to meet the demands of large infrastructure projects. General fund revenues are mainly drawn from property, sales, and franchise tax revenues.

### Grants and Donations

Grants monies or low interest loans for capital facilities may be available through a variety of state and federal programs. Competition for these types of funds is often strong, but they should not be overlooked as a potential funding source.

## **Pressurized Irrigation Utility**

Many municipalities have enacted a pressurized irrigation utility to pay the cost of capital facilities. A pressurized irrigation utility would charge all residents a monthly fee based on water usage. Monthly fees could then be used to maintain the system and/or construct capital facility improvements.

## **Impact Fees**

Impact fees are an important means of financing future pressurized irrigation capital facility improvements, especially given the growth Alpine City is experiencing. The fees collected can be used for infrastructure as outlined in this IFFP. Impact fees are a one-time fee charged to new development that allow development to “pay its own way” in terms of the additional costs cities experience when growth occurs. Impact fees must meet the requirements of Utah law, must demonstrate that there is a rational connection between the fees charged to correct deficiencies in an existing system, and must provide that adjustment to impact fees be made to appropriately credit any significant past payments or anticipated future payments to capital facilities. This is to insure that the new development is not “double charged” for capital facilities. Impact fees are necessary in order to achieve an equitable allocation between the costs borne in the past and the cost to be borne in the future. Existing residential and businesses are well served by the existing pressurized irrigation system. However, with additional growth improvements and expansion of the pressurized irrigation system will be needed to provide adequate service.

## **Debt Financing**

Alpine City can also fund pressurized irrigation facilities through bonding. Bonding is often a good approach when large sums are needed up-front because it allows the payments to be spread over a longer time period. Alpine City does have a revenue source in pressurized irrigation user rates to back a debt service payment for pressurized irrigation system improvements. Bonding can be obtained on the open market or through governmental agencies such as the Utah Division of Drinking Water.

## IFFP Certification

I certify that the attached impact fee facility plan (IFFP):

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 in each and every relevant respect with the Impact Fees Act.

This certification made in accordance with Utah Code Annotated, 11-36a-306(1), with the following caveats:

1. All of the recommendations for implementation of the IFFP made in the IFFP are followed in their entirety by Alpine City staff and Council in accordance to the specific policies established for the service area.
2. If all or a portion of the IFFP 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 Alpine City and outside sources.

Date \_\_\_\_\_

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John E. Schiess, P.E.  
Horrocks

## ***Chapter 5 - Impact Fee Analysis (IFA)***

### **General Background**

Alpine City has experienced significant growth in recent years. This growth, through the construction of homes, parks, commercial areas, and other amenities incidental to development, has added to the demand on the City's pressurized irrigation system. As development continues, additional demands will be placed on the pressurized irrigation system. Alpine City's objective is to provide adequate pressurized irrigation facilities to meet the drinking water and fire protection needs of the residents.

Alpine City adopted a water system component update of the General Plan in 2001 and an update in 2007 and 2021 to plan culinary and secondary irrigation facilities. In 2025, an update was completed on the pressurized irrigation system component of the General Plan (Master Plan) and the IFFP in preparation for this IFA. This plan update proposes guidelines and suggests controls for the design and installation of pressurized irrigation facilities. The plan also establishes estimated costs associated with pressurized irrigation facilities.

### **Impact Fee Overview**

An impact fee is a one-time fee charged to new development to recover the City's historic and future costs of constructing pressurized irrigation facilities with capacity to handle the new development. The fee is assessed at the time of building permit issuance as a condition of approval. This analysis is done following the Impact Fees Act (UCA 11-36a-101 et seq) to ensure that the fee is equitable, fair, and legally defensible.

This analysis shows that there is a fair comparison, or rational nexus, between the impact fees charged to new development and the impact that new development places on the pressurized irrigation system.

This impact fee analysis is intended to fairly allocate the costs of expanding the pressurized irrigation system and unused capacity in the existing system to the new growth that requires more capacity. The final impact fee is calculated by dividing the proportionate costs of existing and future projects by the demand that is estimated to occur within the next ten years. There will be project constructed within the next ten years that will provide capacity that is in excess of the capacity required for the next ten year's development. This analysis discounts the existing and future projects to only include the portion of the cost and capacity that relates to the ten year demand therefore achieving a fair comparison of cost and demand.

Costs that can be included in an impact fee include the following:

- New pressurized irrigation capital infrastructure needed to serve new growth or up-sized existing facilities need to serve new growth;
- Professional and planning services related to the construction of growth related facilities;
- Interest costs on bonds used for facilities constructed that will serve future growth;
- Appropriate inflation adjusted costs to reflect the year construction is planned relative to current dollars; and
- Proportion of historic costs of existing improvements than can serve future growth.

Costs that cannot be included in the impact fee include the following:

- Improvements necessary to cure deficiencies for existing users;
- Improvements that increase the level of service above that which is currently provided;
- Portions of upsizing projects that replace capacity that already exists;
- Operation and maintenance costs;
- Costs for facilities funded by grants or other funds that the City does not have to repay; and
- Costs to reconstruct facilities that do not have capacity for future growth.

## Service Area

Alpine City is located in the northern most portion of Utah County near the base of the Wasatch Mountains and includes an area of approximately 7.4 square miles. It is bordered on the West by Highland and Draper, on the South by Highland, and on the North and East by mountains and Uinta National Forest. Existing land uses vary from pasture and farmland to high-density residential housing and commercial complexes. Therefore, the community can be classified as both rural and suburban.

Alpine City owns and operates a pressurized irrigation system that delivers pressurized irrigation water. The existing system can be seen in Figure 6 in the appendix

## Pressurized Irrigation Design Requirements

The following is the minimum level of service to be provided by the pressurized irrigation system.

- Provide 40 psi at all locations in the distribution system during peak day demands
- Provide 30 psi at all locations in the distribution system during peak hour demands
- Maintain a maximum 8 fps water velocity during peak hour demands
- Maintain a maximum 5 fps water velocity during peak day demands unless pressures are not compromised.
- Maintain a minimum of 2,322 gallons of storage per ERU
- Maintain a minimum of 2.22 ac-ft of water right per ERU
- Maintain a minimum of 4.3 gpm of water source per ERU

The Alpine City pressurized irrigation master plan, IFFP, and this IFA are based on the same level of service for both existing and future users.

### **Irrigated ERU's**

Pressurized irrigation demands are generated from land use within the City. Residential irrigation demand is based on the zoning while commercial, industrial, and institutional are based on a typical average. Table 3 shows the percentage of each parcel that is assumed irrigated for modeling and planning purposes. Values were determined by measuring a representative sample of each land use and typical values seen in surrounding communities.

Population growth has been projected for Alpine City (see Table 1 and Figure 1) and subsequently ERU's. Table 28 shows the irrigated acreages utilized to determine needed improvements and calculate the impact fees.

**Table 28 ERU Summary**

ERU	
Current ERU	2,879
Buildout ERU	3,510
Undeveloped ERU	631
ERU in 10 Year CIP	300

### **Capital Project Costs**

Future conditions at the time of this study were established using data collected from the City. A buildout pressurized irrigation model was created with the projected pressurized irrigation system using the buildout number of ERU's. Buildout connections to the pressurized irrigation system include residential, school, church, commercial, and City owned facility connections for a total of 3,510 ERU's. Figure 3 in the appendix shows the necessary buildout improvements to the pressurized irrigation system. These improvements are necessary to meet the needs of future growth. The following costs are present value in 2025 dollars.

**Table 29 Buildout Pressurized Irrigation System Improvements**

<b>Item</b>	<b>Description</b>	<b>Cost</b>	<b>Existing</b>	<b>Growth</b>
1	Alpine BLVD Booster Station	\$1,305,653	\$0	\$1,305,653.01
2	Country Manor Lane to Lambert Tank Connection	\$489,035	\$0	\$489,035.14
3	Country Manor Lane to East Mountain Dr Connection	\$566,821	\$0	\$566,821.27
4	Ranch Drive to Alpine Highway Connection	\$1,341,426	\$0	\$1,341,425.53
5	Mainline Upsizes	\$16,863,598	\$6,527,926.51	\$10,335,671.47
<b>Grand Total</b>		<b>\$20,566,533</b>	<b>\$6,527,927</b>	<b>\$14,038,606</b>

April 2025 CCI = 13798  
Costs are in 2025 dollars

## Proportionate Share Analysis

### Cost of Capital Facilities

Detailed engineer's estimates of cost are described in the appendix. A summary of those costs are included in Table 29 above. These costs are associated with master planned improvements in order to properly handle future development demands and are thus eligible for inclusion in an impact fee. Only that portion of the capital facilities that will benefit growth in the 10-year planning period are eligible for inclusion. An appropriate inflation factor can be incorporated in the analysis to cover rising costs in the future. An inflation rate of 3 percent per year was applied to the buildout system improvement costs according to the year the improvements are scheduled to be constructed. Table 30 shows the proportional share of the capital projects associated with the growth expected in the next 10 years.

**Table 30 Impact Fee Improvement Projects**

<b>Component</b>	<b>Result</b>
Current ERU	2,879
Buildout ERU	3,510
Undeveloped ERU	631
ERU in 10 Year CIP	300
10 Year ERU Percentage	47.62%
Total Impact Fee Improvements	\$12,771,767
Cost per ERU	\$20,240.52

## Cost of Master Planning

The City expects to expend money every year to review pressurized irrigation master plan, IFFP, and IFA and every five years to fully update the same. These costs are eligible for inclusion in an impact fee. Only that portion of the master planning that will benefit growth in the 10-year planning period are eligible for inclusion. An appropriate inflation factor can be incorporated in the analysis to cover rising costs in the future. An inflation rate of 3 percent per year was applied to the master planning costs according to the year the costs are scheduled. Table 31 shows the proportional share of the master planning associated with the growth expected in the next 10 years.

**Table 31 Master Planning Cost Share**

Component	Result
Current ERU	2,879
Buildout ERU	3,510
Undeveloped ERU	631
ERU in 10 Year CIP	300
10 Year Contribution Percentage	9.45%
Total Master Plan Update Costs	\$112,000
Cost per ERU	\$35.23

## Value of Free Capacity in Pressurized Irrigation System

The existing pressurized irrigation system has excess capacity or free capacity available for future growth. For this analysis only those items that are easily identified as having excess capacity and the original cost is known are included in the analysis. Table 32 shows the free capacity summary which shows the cost of the original system that could be re-coupled from future connections. The current City asset list can be seen in the appendix. It is acceptable for future users to pay for their portion of the existing system through an impact fee to reimburse existing users. The free capacity portion of the impact fee will be utilized to repay the existing pressurized irrigation enterprise account to recoup actual costs spent on the original system improvements. Only actual costs can be utilized in this analysis and not current replacement costs or inflation adjusted costs.

**Table 32 Existing System Free Capacity Summary**

Item	Result
Facilities with Free Capacity	Original Cost
Original System (2002)	\$8,104,317.50
Lambert Park Filter Building (2007)	\$415,170.99
Ranch Drive Well (2002)	\$151,391.04
Fort Canyon Pump Station (2003)	\$114,176.46
Hog Hollow Booster (2008)	\$15,334.72
Carlisle Well (1998)	\$267,117.93
Healey Well (2004)	\$459,490.63
CUP Supply Booster and Pipe (2020)	\$662,986.68
CUP Filter Station (2021)	\$519,909.97
<b>Total Original Cost</b>	<b>\$10,709,895.92</b>
Current ERU	2,879
Buildout ERU	3,510
Percent Cost Associated with Growth	18.0%
Total Free Capacity Costs	\$1,925,340.26
Free Capacity Cost per ERU	<u>\$548.53</u>

### Cost Associated with Existing Deficiencies

As described previously, the existing pressurized irrigation system has deficiencies that are not associated with future connections and cannot be included in an IFA. Some existing system deficiency improvements will serve the needs of buildout as well as cure an existing deficiency. These costs can be included in an impact fee and the portion of that cost is identified in Table 33.

**Table 33 Improvement Needed to Address Existing Deficiencies**

Item	Description	Cost	Existing	Growth
1	Grove Drive PRV to Mid Zone	\$359,844	\$295,154	\$64,689.85
2	Heritage Hills Well	\$6,255,392	\$5,130,847	\$1,124,544.88
3	Healey Booster Upsize	\$412,650	\$338,467	\$74,182.95
4	Low Zone Tank Expansion	\$4,983,577	\$558,805	\$4,424,772.34
5	400 West Booster and Piping Upsize	\$2,453,693	\$2,012,588	\$441,105.55
<b>Grand Total</b>		<b>\$14,465,157</b>	<b>\$8,335,861</b>	<b>\$6,129,296</b>

April 2025 CCI = 13798

Costs are in 2025 dollars

## Developer Contributions

As growth occurs throughout the City, developers are required to install minimum size pressurized irrigation lines to serve the homes within their development. Sometimes lines throughout the City need to be upsized to accommodate homes outside the development. The City collects impact fees from all development to cover the cost of upsizing. The detailed cost estimates prepared in the Master Plan only include those costs related to upsizing developer provided facilities or wholly City constructed facilities. No impact fees can be collected for developer provided facilities.

## Existing Impact Fee Balance

The City has an existing impact fee balance collected as part of a previous IFA. Those fees were collected for projects identified as future growth related at the time of adoption. This balance will be utilized to offset the cost of capital facilities. There is a current impact fee balance of approximately \$223,000.

## Impact Fee Summary

Table 34 shows the total impact fee per acre for Alpine City pressurized irrigation system. It includes the cost to future connections of their free capacity in the existing system, their portion of master planned costs, their portion of their buildout improvements, and a discount based on the existing impact fee fund balance.

**Table 34 Total Impact Fee Summary**

Component	Cost
Free Capacity Component	\$548.53
Master Plan Updates Component	\$35.23
Buildout Improvements Component	\$20,240.52
Bond Interest Component	\$32.28
Existing Impact Fee Balance Discount	-\$265.29
<b>Total Impact Fee per ERU</b>	<b>\$20,591.27</b>

Table 35 shows the recommended impact fee for the different land uses within the City. The residential zones show the typical impact fee that should be applied to each. All non-residential uses should utilize the actual irrigated acreage to determine the impact fee based on the total impact fee per acre noted in Table 35. If a lot develops between 1, 0.5, and 0.25 acres, a linear interpolation of the measured ERU per connection is appropriate.

**Table 35 Typical Impact Fee Table**

<b>Zoning or Land Use</b>	<b>% of Lot Irrigated</b>	<b>Measured ERU per Connection</b>	<b>Impact Fee</b>
5 Acre (typical of CE 5 Zone)	20%	NA	Calculated *
1 Acre (typical of CR 40K Zone)	66%	1.21	\$24,915.44
0.5 Acre (typical of CR 20K Zone)	63%	0.87	\$17,914.40
0.25 Acre (typical of TR 10K Zone)	52%	0.84	\$17,296.67
BC	20%	NA	Calculated *
Commercial	20%	NA	Calculated *
Religious	30%	NA	Calculated *
Educational	50%	NA	Calculated *

\* Calculated by multiplying the actual irrigated acres by the average 2.21 ERU's per irrigated acre

## IFA Certification

I certify that the attached impact fee analysis (IFA):

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. offset costs with grants or other alternate sources of payment; and
4. complies in each and every relevant respect with the Impact Fees Act.

This certification made in accordance with Utah Code Annotated, 11-36a-306(2), with the following caveats:

1. All of the recommendations for implementation of the IFFP made in the IFFP or in the IFA are followed in their entirety by Alpine City staff and Council in accordance to the specific policies established for the service area.
2. If all or a portion of the IFFP or IFA 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 Alpine City and outside sources.

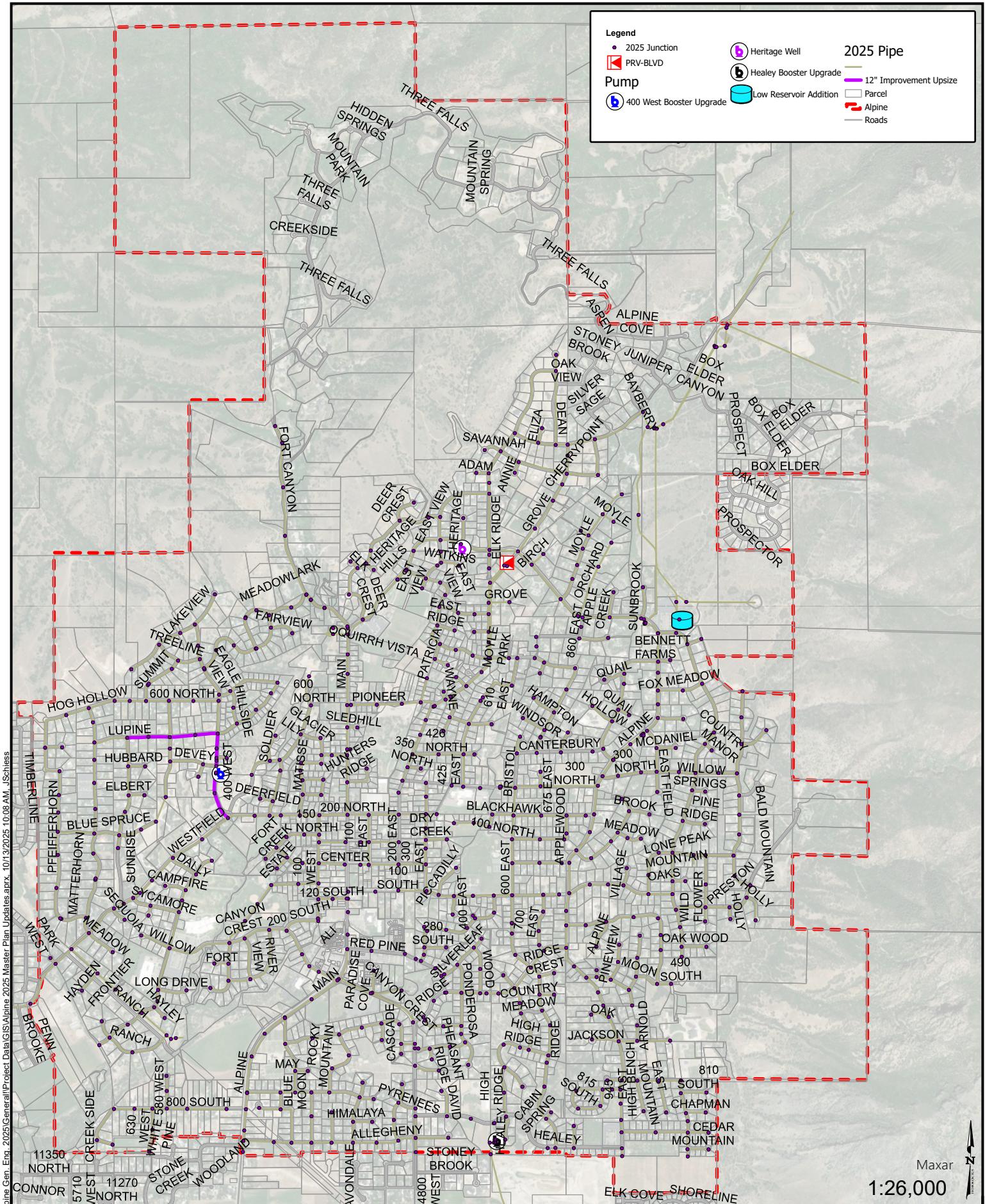
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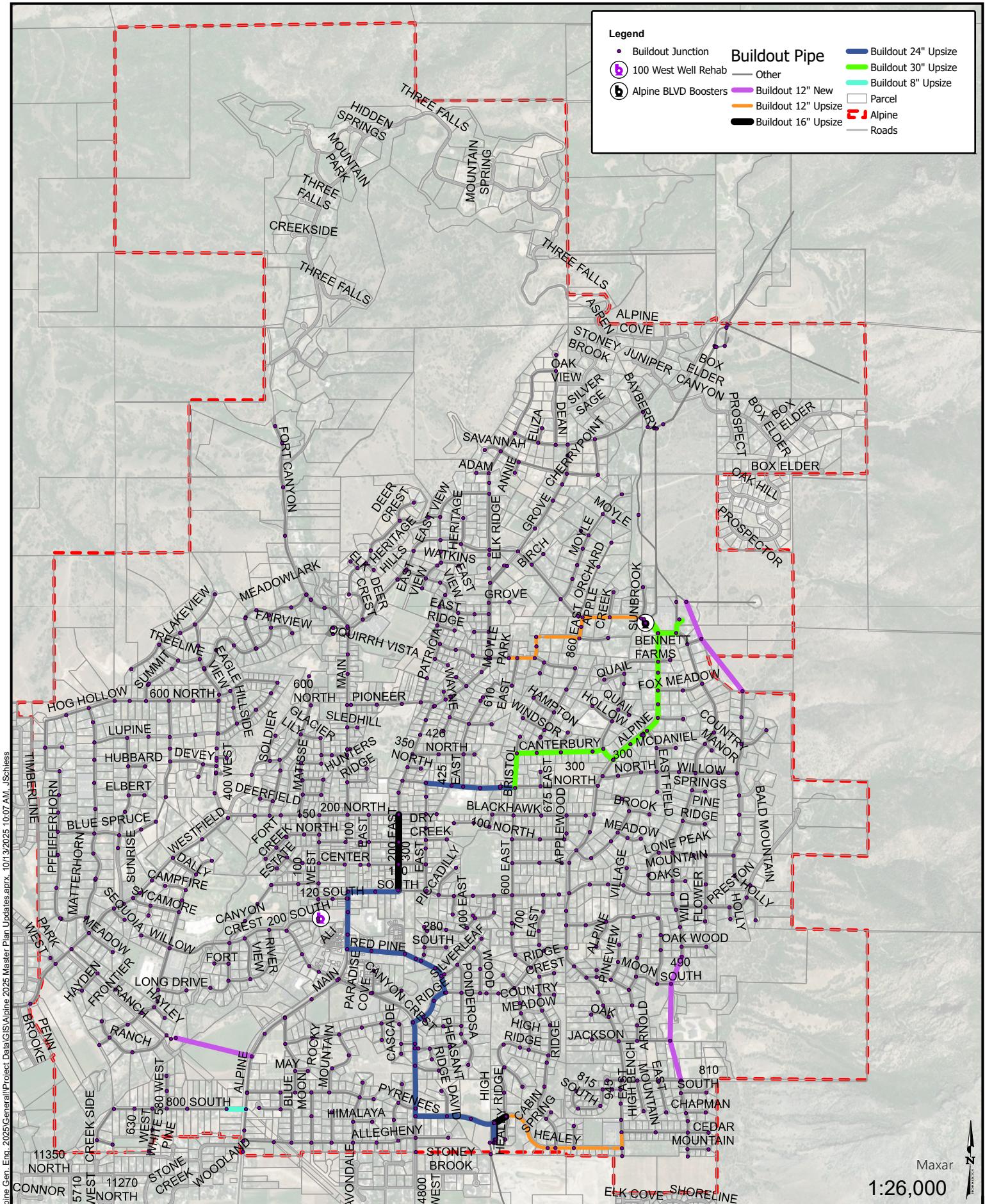
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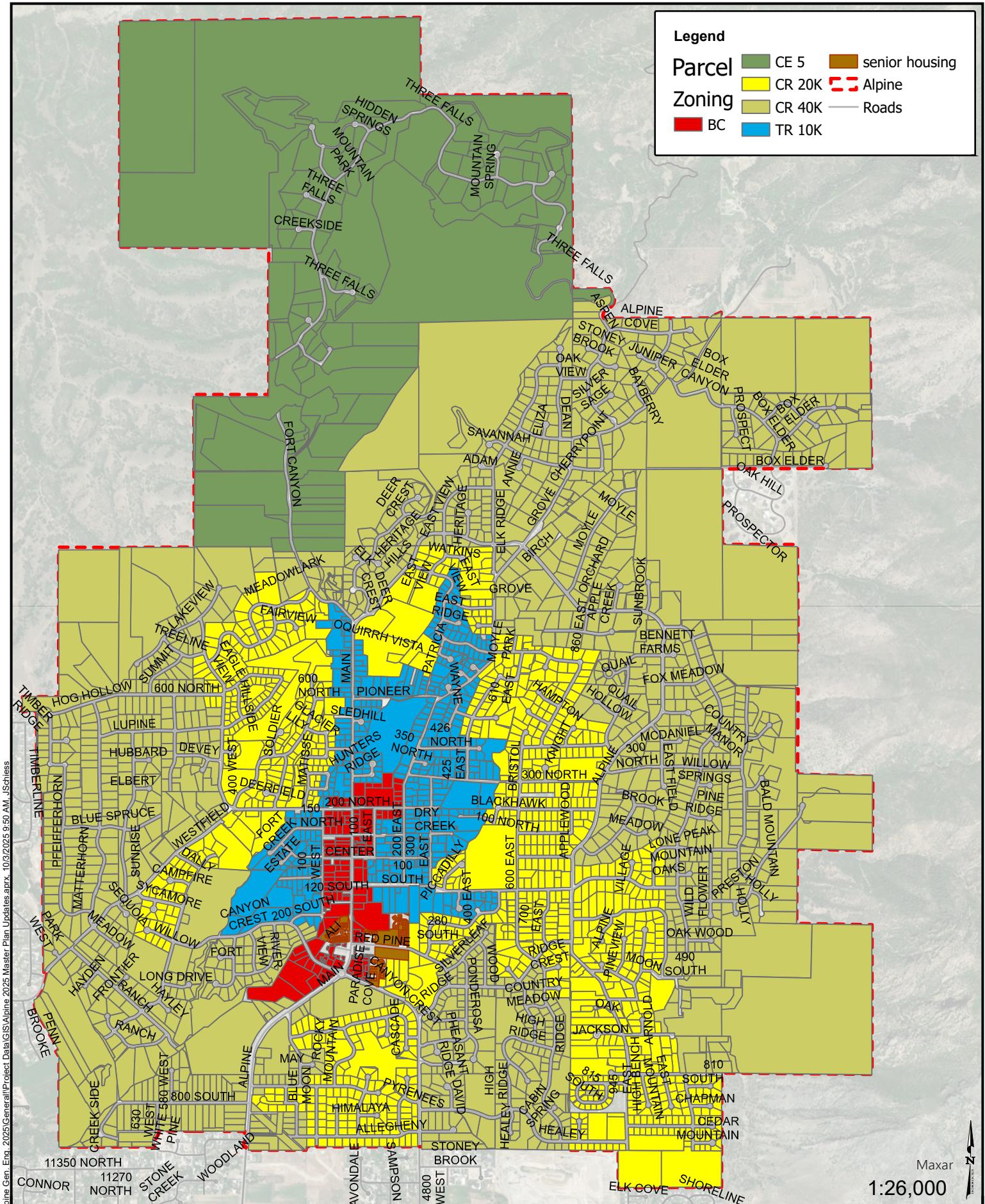
John E. Schiess, P.E.

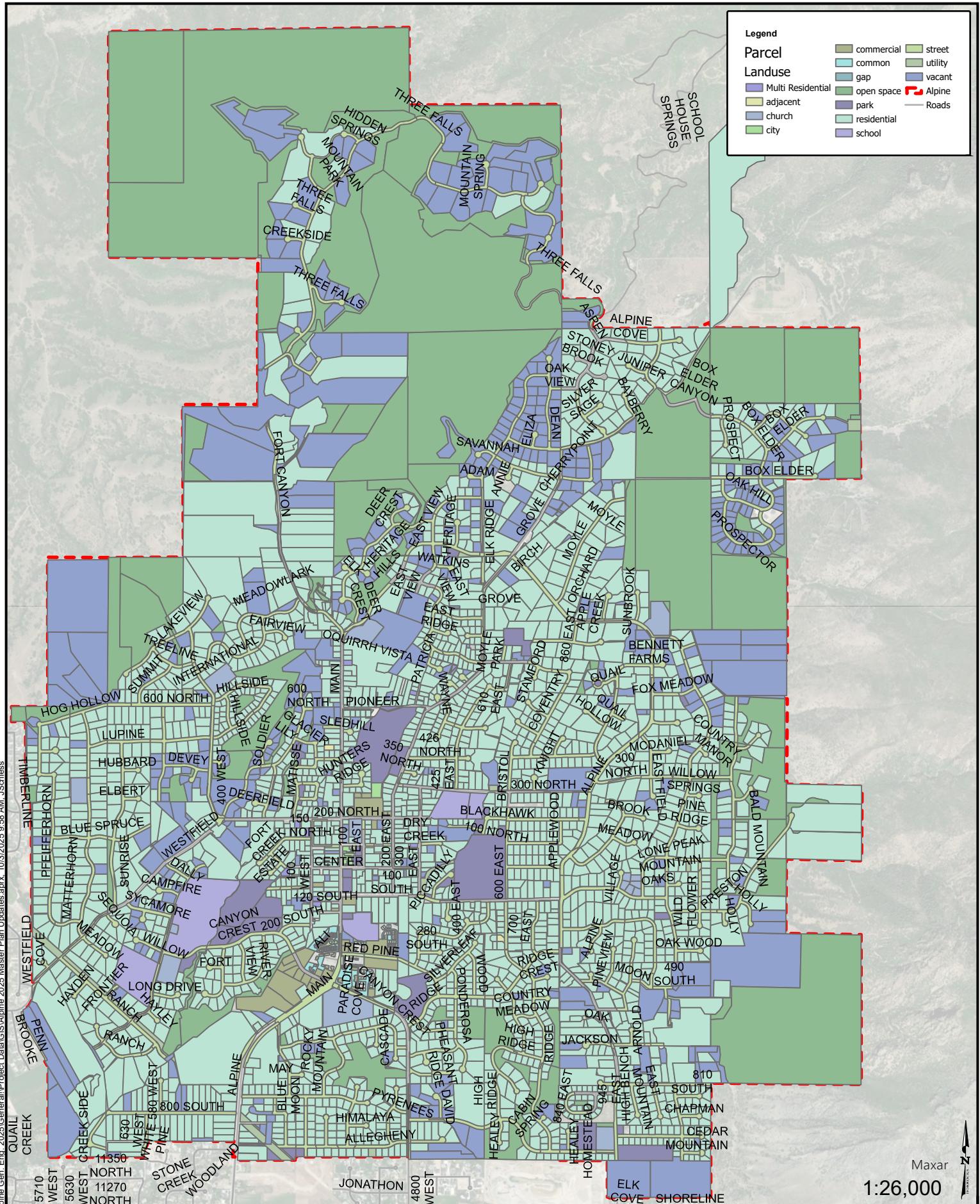
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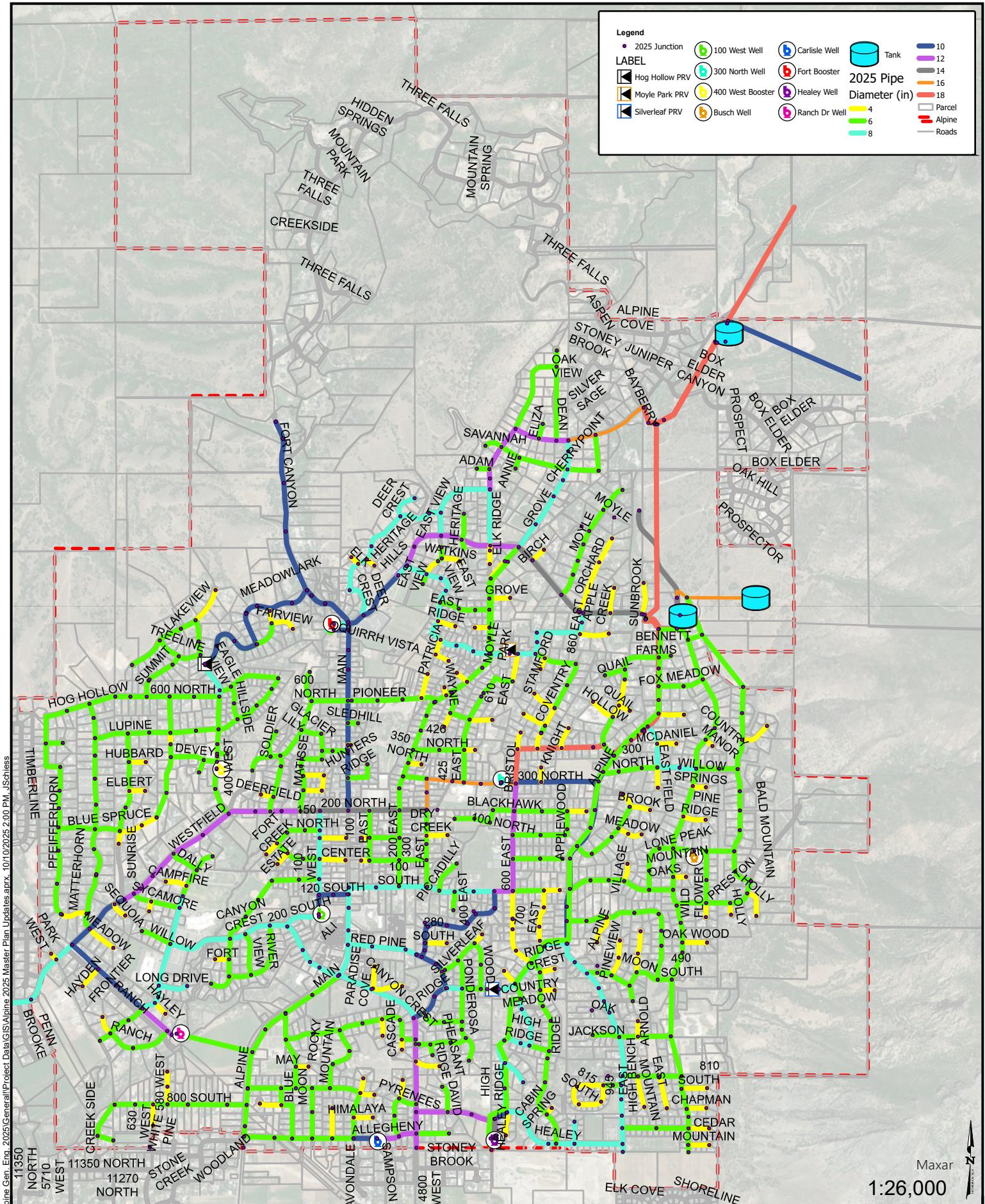
## APPENDIX

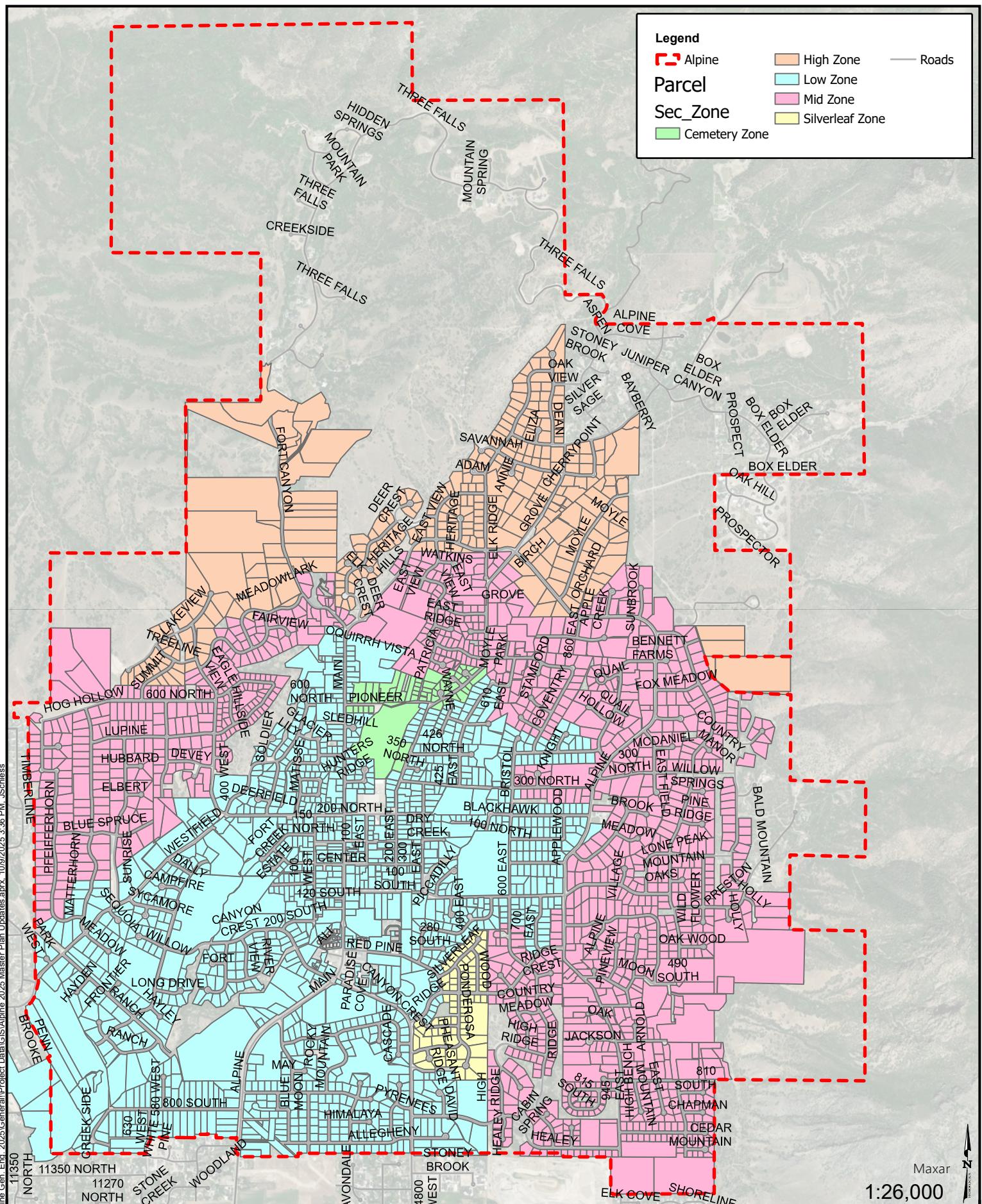


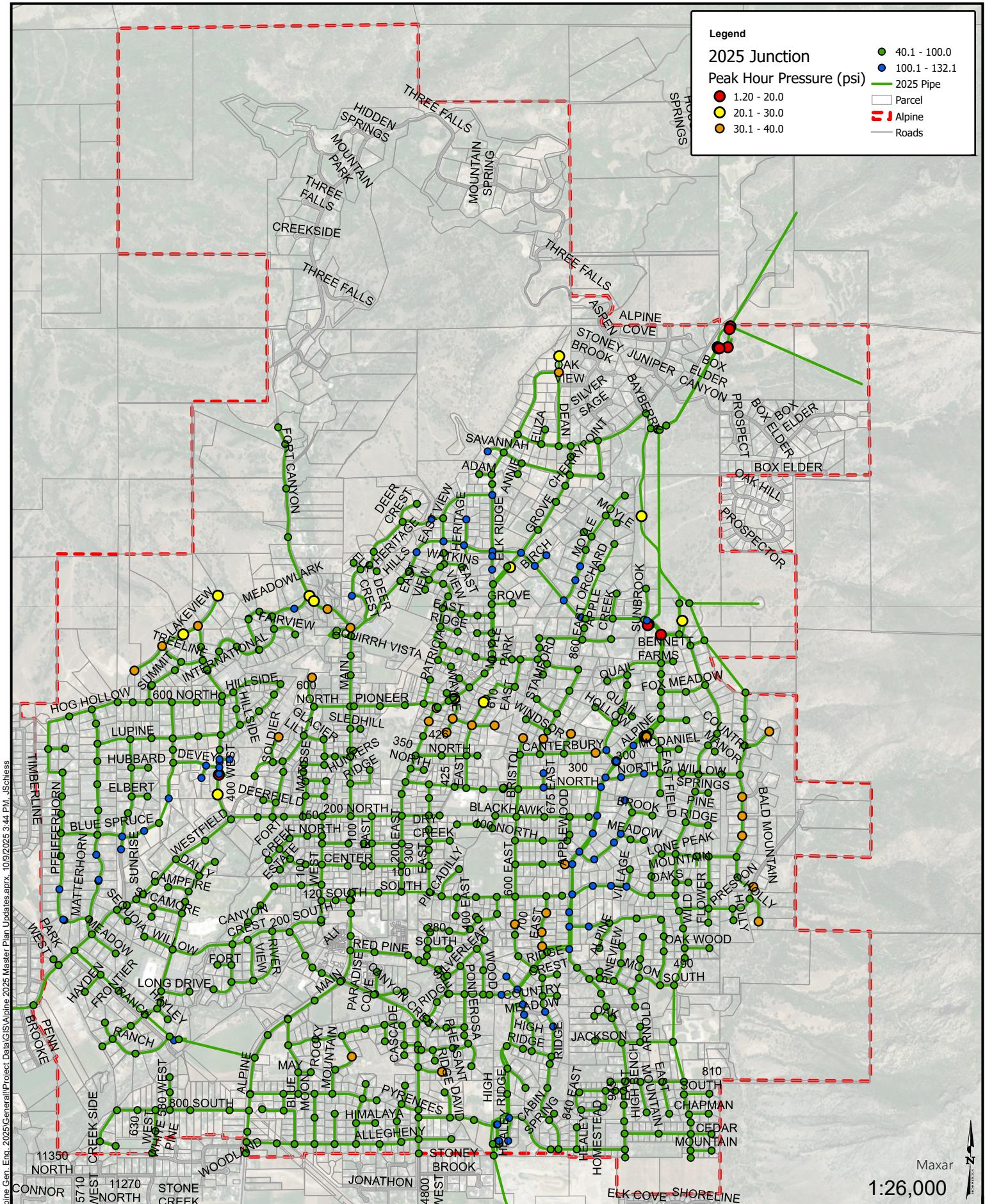


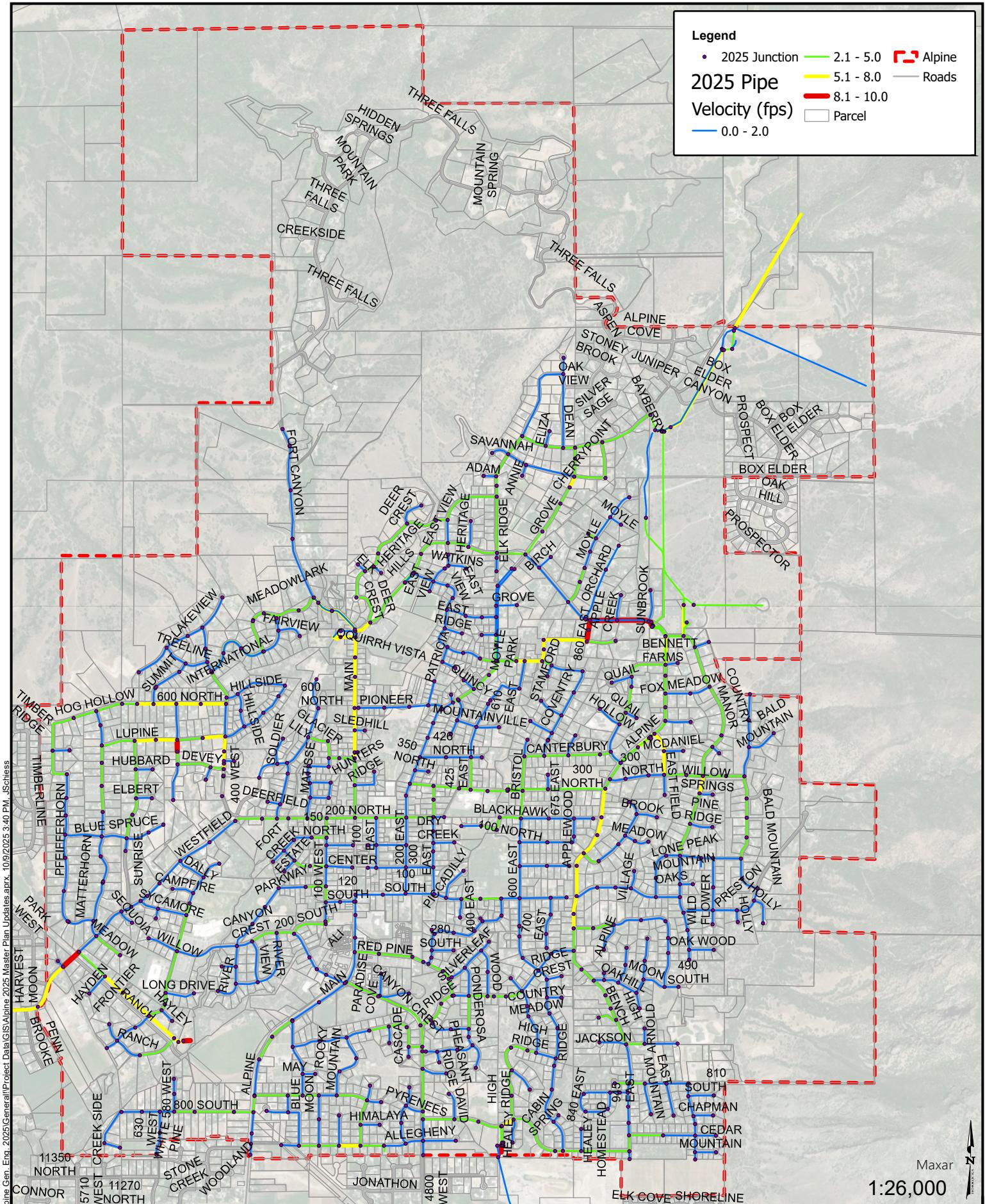


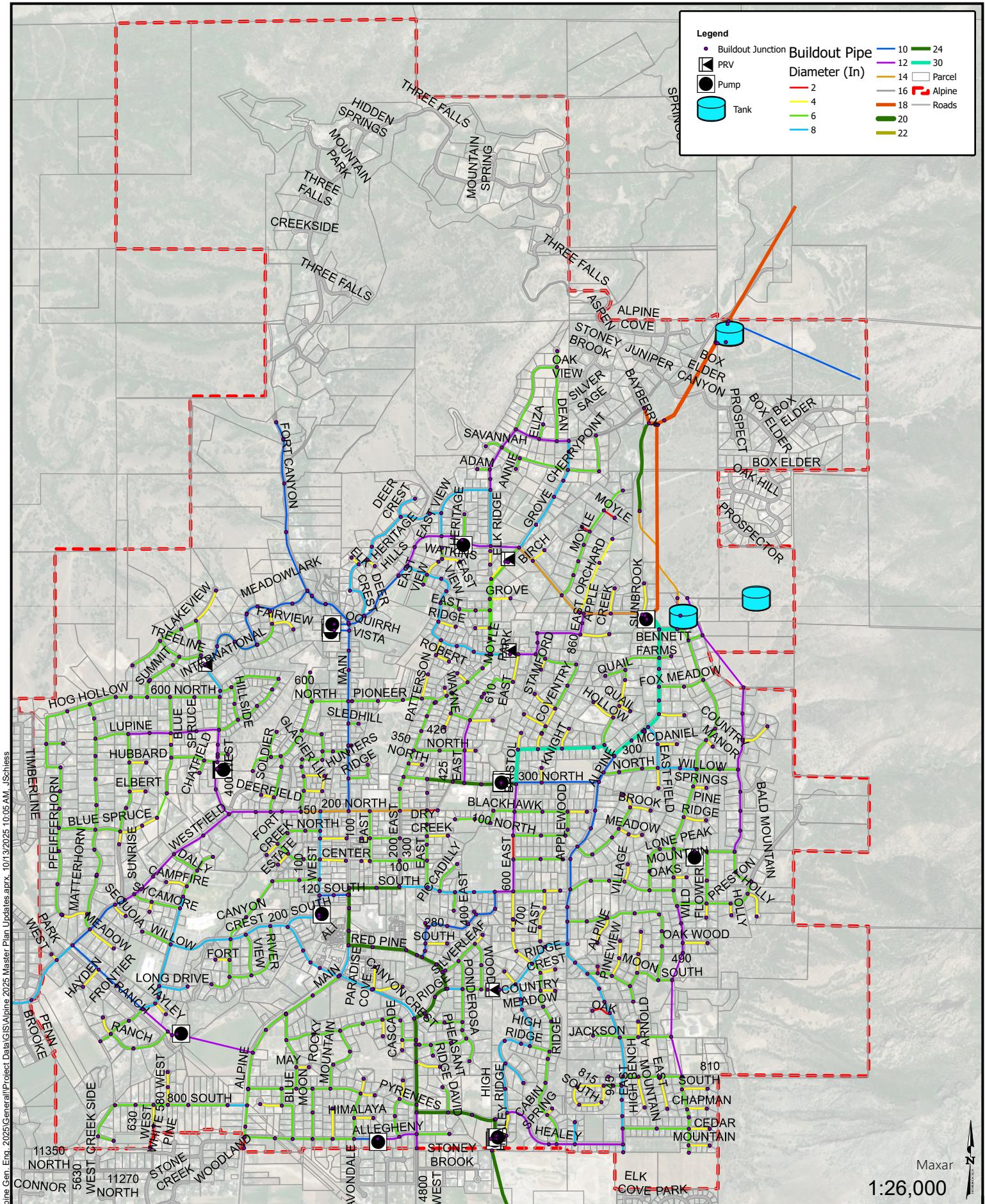


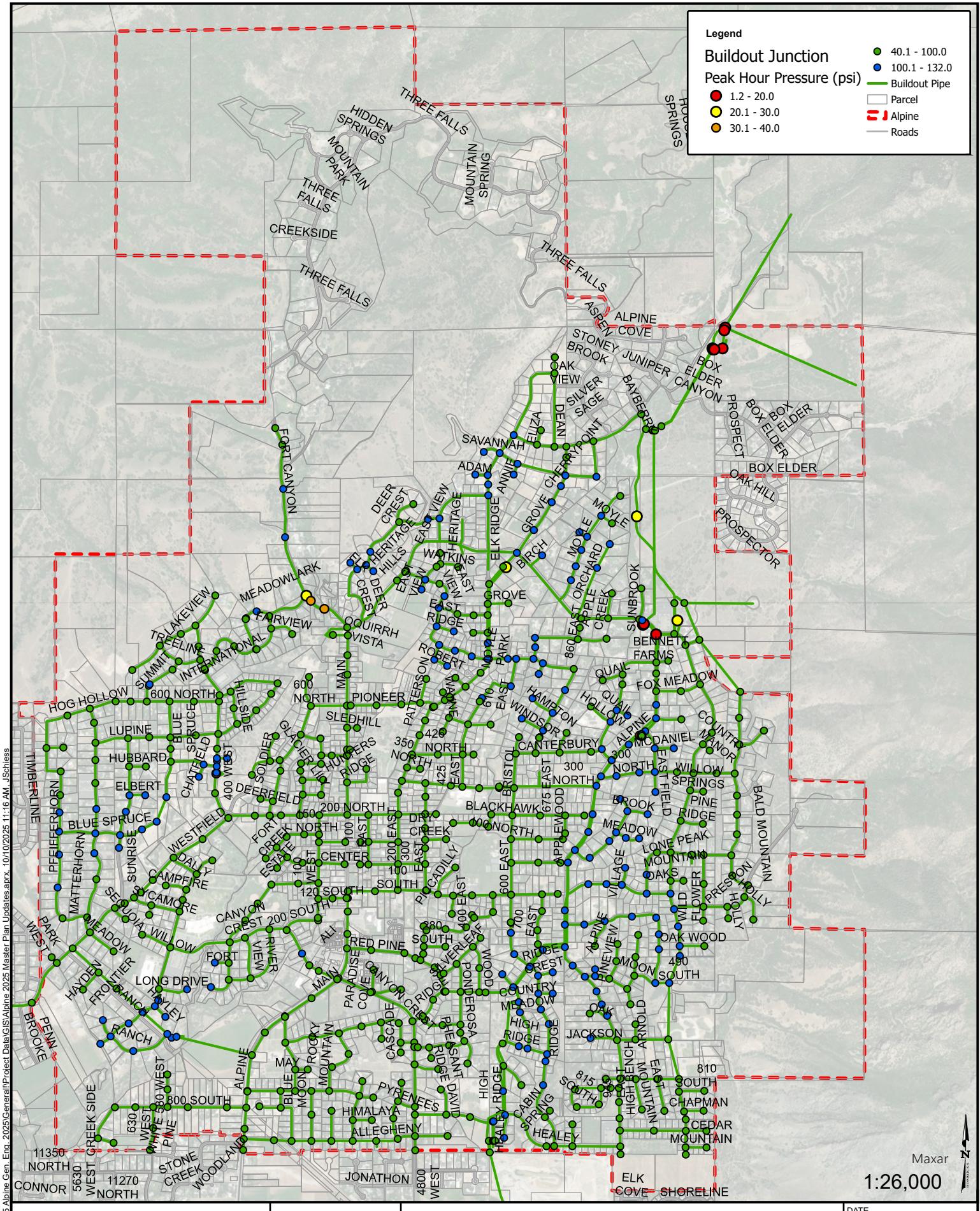


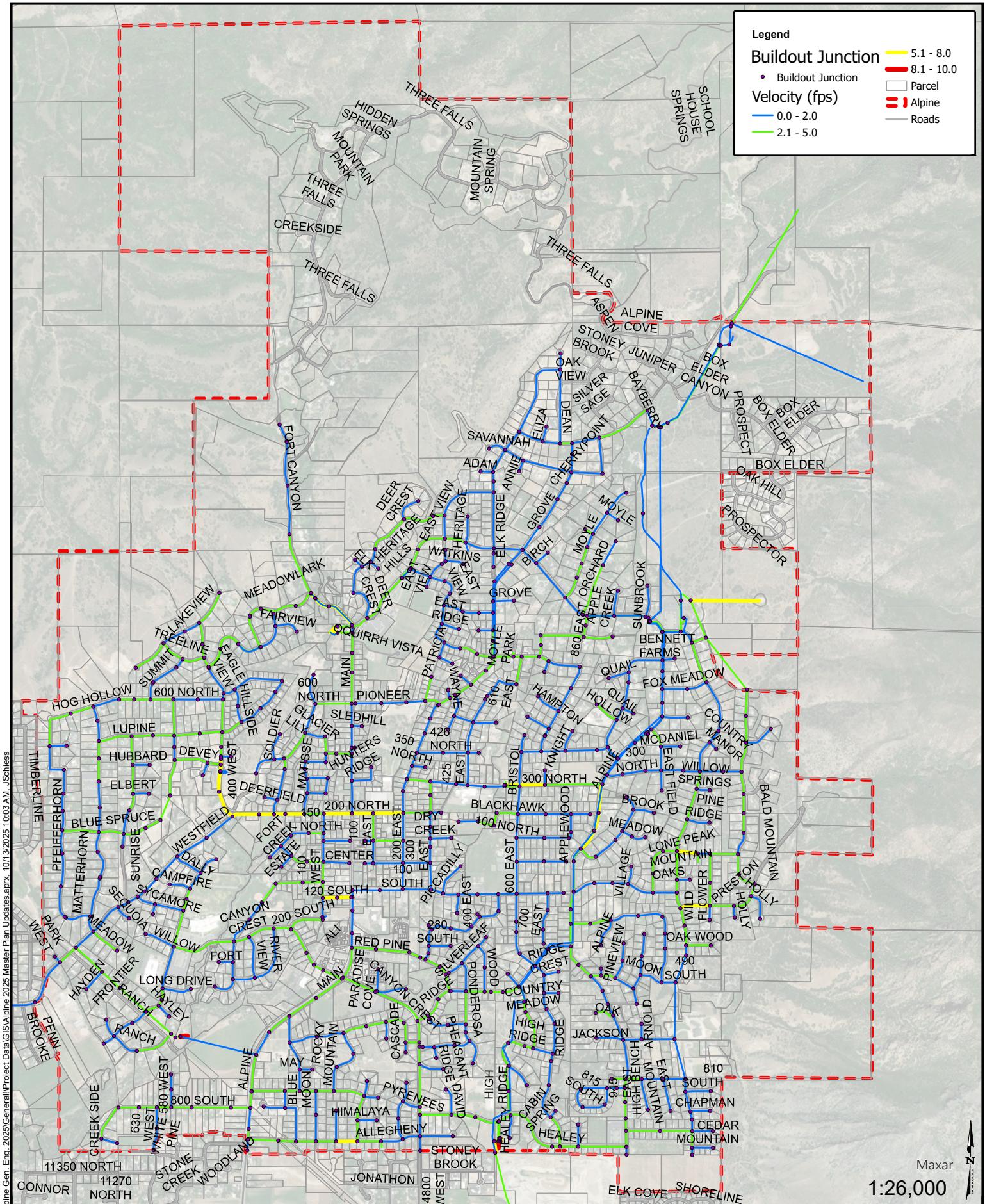












***Table 36 Pressurized Irrigation System Asset List***

**Table 37 Detailed Cost Estimates**

## Grove Drive PRV to Mid Zone

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$6,053
2	4 inch PVC	0	LF	\$32.74	\$0
3	6 inch PVC	0	LF	\$39.63	\$0
4	8 inch PVC	350	LF	\$43.08	\$15,077
5	10 inch PVC	0	LF	\$48.25	\$0
6	12 inch PVC	0	LF	\$63.75	\$0
7	14 inch DIP	0	LF	\$115.45	\$0
8	16 inch DIP	0	LF	\$124.06	\$0
9	18 inch DIP	0	LF	\$143.02	\$0
10	20 inch DIP	0	LF	\$160.25	\$0
12	30 inch DIP	0	EA	\$241.23	\$0
13	Service Connections	0	EA	\$1,550.79	\$0
14	PRV Stations	1	EA	\$86,155.06	\$86,155
15	Water Supply Wells	0	EA	\$2,843,116.93	\$0
16	Stream Diversions System	0	EA	\$370,466.75	\$0
17	Booster Pump Station	0	EA	\$620,316.42	\$0
18	Storage Tanks	0	MG	\$1,076,938.23	\$0
19	Class "A" Road Repair	2,100	SF	\$6.03	\$12,665
20	Imported Backfill	105	TON	\$25.85	\$2,714
21	Valves and Fittings	1	LS	\$3,769.28	\$3,769
22	Traffic Control	1	LS	\$301.54	\$302
23	Utility Relocation	1	LS	\$376.93	\$377
Sub Total (Construction)					\$127,112
Contingencies					\$19,067
Total (Construction)					\$146,178
Design and Construction Engineering					\$19,067
Administration, Legal, and Bond					
Counsel					\$1,271
Total (Professional Services)					\$20,338
<b>Grand Total</b>					<b>\$166,516</b>

Nov 2021 CCI = 12647

Costs are in 2021 dollars

Cost to Existing Users 71.91% \$119,738.02

Cost to Future Users 28.09% \$46,778.12

Project is needed to fix existing deficiency but will be utilized by future growth as well.

## Heritage Hills Well

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$143,095
2	4 inch PVC	0	LF	\$32.74	\$0
3	6 inch PVC	0	LF	\$39.63	\$0
4	8 inch PVC	0	LF	\$43.08	\$0
5	10 inch PVC	0	LF	\$48.25	\$0
6	12 inch PVC	200	LF	\$63.75	\$12,751
7	14 inch DIP	0	LF	\$115.45	\$0
8	16 inch DIP	0	LF	\$124.06	\$0
9	18 inch DIP	0	LF	\$143.02	\$0
10	20 inch DIP	0	LF	\$160.25	\$0
12	30 inch DIP	0	EA	\$241.23	\$0
13	Service Connections	0	EA	\$1,550.79	\$0
13	PRV Stations	0	EA	\$86,155.06	\$0
13	Water Supply Wells	1	EA	\$2,843,116.93	\$2,843,117
13	Stream Diversions System	0	EA	\$370,466.75	\$0
13	Booster Pump Station	0	EA	\$620,316.42	\$0
13	Storage Tanks	0	MG	\$1,076,938.23	\$0
17	Class "A" Road Repair	120	SF	\$6.03	\$724
19	Imported Backfill	60	TON	\$25.85	\$1,551
21	Valves and Fittings	1	LS	\$3,187.74	\$3,188
22	Traffic Control	1	LS	\$255.02	\$255
23	Utility Relocation	1	LS	\$318.77	\$319
Sub Total (Construction)					\$3,004,999
Contingencies					\$450,750
Total (Construction)					\$3,455,749
Design and Construction Engineering					\$450,750
Administration, Legal, and Bond					
Counsel					\$30,050
Total (Professional Services)					\$480,800
<b>Grand Total</b>					<b>\$3,936,549</b>

Nov 2021 CCI = 12647

Costs are in 2021 dollars

Cost to Existing Users 71.91% \$2,830,683.95

Cost to Future Users 28.09% \$1,105,864.87

Project is needed to fix existing deficiency but will be utilized to serve all users.

## Healey Booster Upsize

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$15,000
2	4 inch PVC	0	LF	\$32.74	\$0
3	6 inch PVC	0	LF	\$39.63	\$0
4	8 inch PVC	0	LF	\$43.08	\$0
5	10 inch PVC	0	LF	\$48.25	\$0
6	12 inch PVC	0	LF	\$63.75	\$0
7	14 inch DIP	0	LF	\$115.45	\$0
8	16 inch DIP	0	LF	\$124.06	\$0
9	18 inch DIP	0	LF	\$143.02	\$0
10	20 inch DIP	0	LF	\$160.25	\$0
12	30 inch DIP	0	EA	\$241.23	\$0
13	Service Connections	0	EA	\$1,550.79	\$0
13	PRV Stations	0	EA	\$86,155.06	\$0
13	Water Supply Wells	0	EA	\$2,843,116.93	\$0
13	Stream Diversions System	0	EA	\$370,466.75	\$0
13	Booster Pump Station	1	EA	\$300,000.00	\$300,000
13	Storage Tanks	0	MG	\$1,076,938.23	\$0
17	Class "A" Road Repair	0	SF	\$6.03	\$0
19	Imported Backfill	0	TON	\$25.85	\$0
21	Valves and Fittings	1	LS	\$0.00	\$0
22	Traffic Control	1	LS	\$0.00	\$0
23	Utility Relocation	1	LS	\$0.00	\$0
Sub Total (Construction)					\$315,000
Contingencies					\$47,250
Total (Construction)					\$362,250
Design and Construction Engineering					\$47,250
Administration, Legal, and Bond					
Counsel					\$3,150
Total (Professional Services)					\$50,400
<b>Grand Total</b>					<b>\$412,650</b>

Nov 2021 CCI = 12647

Costs are in 2021 dollars

Cost to Existing Users 71.91% \$296,727.36

Cost to Future Users 28.09% \$115,922.64

Project is needed to fix existing deficiency.

## 400 West Booster and Piping Upsize

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$50,927
2	4 inch PVC	0	LF	\$32.74	\$0
3	6 inch PVC	0	LF	\$39.63	\$0
4	8 inch PVC	0	LF	\$43.08	\$0
5	10 inch PVC	0	LF	\$48.25	\$0
6	12 inch PVC	3,148	LF	\$63.75	\$200,700
7	14 inch DIP	0	LF	\$115.45	\$0
8	16 inch DIP	0	LF	\$124.06	\$0
9	18 inch DIP	0	LF	\$143.02	\$0
10	20 inch DIP	0	LF	\$160.25	\$0
12	30 inch DIP	0	EA	\$241.23	\$0
13	Service Connections	0	EA	\$1,550.79	\$0
13	PRV Stations	0	EA	\$86,155.06	\$0
13	Water Supply Wells	0	EA	\$2,843,116.93	\$0
13	Stream Diversions System	0	EA	\$370,466.75	\$0
13	Booster Pump Station	1	EA	\$620,316.42	\$620,316
13	Storage Tanks	0	MG	\$1,076,938.23	\$0
17	Class "A" Road Repair	18,888	SF	\$6.03	\$113,911
19	Imported Backfill	944	TON	\$25.85	\$24,409
21	Valves and Fittings	1	LS	\$50,174.98	\$50,175
22	Traffic Control	1	LS	\$4,014.00	\$4,014
23	Utility Relocation	1	LS	\$5,017.50	\$5,017
Sub Total (Construction)					\$1,069,470
Contingencies					\$160,421
Total (Construction)					\$1,229,891
Design and Construction Engineering					\$160,421
Administration, Legal, and Bond					
Counsel					\$10,695
Total (Professional Services)					\$171,115
<b>Grand Total</b>					<b>\$1,401,006</b>

Nov 2021 CCI = 12647

Costs are in 2021 dollars

Cost to Existing Users 71.91% \$1,007,431.97

Cost to Future Users 28.09% \$393,574.01

Project is needed to fix existing deficiency.

### Alpine BLVD Booster Station

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$32,493
2	4 inch PVC	0	LF	\$32.74	\$0
3	6 inch PVC	0	LF	\$39.63	\$0
4	8 inch PVC	0	LF	\$43.08	\$0
5	10 inch PVC	400	LF	\$48.25	\$19,299
6	12 inch PVC	0	LF	\$63.75	\$0
7	14 inch DIP	0	LF	\$115.45	\$0
8	16 inch DIP	0	LF	\$124.06	\$0
9	18 inch DIP	0	LF	\$143.02	\$0
10	20 inch DIP	0	LF	\$160.25	\$0
12	30 inch DIP	0	EA	\$241.23	\$0
13	Service Connections	0	EA	\$1,550.79	\$0
13	PRV Stations	0	EA	\$86,155.06	\$0
13	Water Supply Wells	0	EA	\$2,843,116.93	\$0
13	Stream Diversions System	0	EA	\$370,466.75	\$0
13	Booster Pump Station	1	EA	\$620,316.42	\$620,316
13	Storage Tanks	0	MG	\$1,076,938.23	\$0
17	Class "A" Road Repair	240	SF	\$6.03	\$1,447
19	Imported Backfill	120	TON	\$25.85	\$3,102
21	Valves and Fittings	1	LS	\$4,824.68	\$4,825
22	Traffic Control	1	LS	\$385.97	\$386
23	Utility Relocation	1	LS	\$482.47	\$482
Sub Total (Construction)					\$682,350
Contingencies					\$102,353
Total (Construction)					\$784,703
Design and Construction Engineering					\$102,353
Administration, Legal, and Bond					
Counsel					\$6,824
Total (Professional Services)					\$109,176
<b>Grand Total</b>					<b>\$893,879</b>

Nov 2021 CCI = 12647

Costs are in 2021 dollars

### Low Zone Tank Expansion

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$123,848
2	4 inch PVC	0	LF	\$32.74	\$0
3	6 inch PVC	0	LF	\$39.63	\$0
4	8 inch PVC	0	LF	\$43.08	\$0
5	10 inch PVC	0	LF	\$48.25	\$0
6	12 inch PVC	0	LF	\$63.75	\$0
7	14 inch DIP	0	LF	\$115.45	\$0
8	16 inch DIP	0	LF	\$124.06	\$0
9	18 inch DIP	0	LF	\$143.02	\$0
10	20 inch DIP	0	LF	\$160.25	\$0
12	30 inch DIP	200	EA	\$241.23	\$0
13	Service Connections	0	EA	\$1,550.79	\$0
13	PRV Stations	0	EA	\$86,155.06	\$0
13	Water Supply Wells	0	EA	\$2,843,116.93	\$0
13	Stream Diversions System	0	EA	\$370,466.75	\$0
13	Booster Pump Station	0	EA	\$620,316.42	\$0
13	Storage Tanks	2	MG	\$1,076,938.23	\$2,476,958
17	Class "A" Road Repair	0	SF	\$6.03	\$0
19	Imported Backfill	0	TON	\$25.85	\$0
21	Valves and Fittings	1	LS	\$0.00	\$0
22	Traffic Control	1	LS	\$0.00	\$0
23	Utility Relocation	1	LS	\$0.00	\$0
Sub Total (Construction)					\$2,600,806
Contingencies					\$390,121
Total (Construction)					\$2,990,927
Design and Construction Engineering					\$390,121
Administration, Legal, and Bond					
Counsel					\$26,008
Total (Professional Services)					\$416,129
<b>Grand Total</b>					<b>\$3,407,056</b>

Nov 2021 CCI = 12647

Costs are in 2021 dollars

### Country Manor Lane to Lambert Tank Connection

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$6,998
2	4 inch PVC	0	LF	\$32.74	\$0
3	6 inch PVC	0	LF	\$39.63	\$0
4	8 inch PVC	0	LF	\$43.08	\$0
5	10 inch PVC	0	LF	\$48.25	\$0
6	12 inch PVC	1,490	LF	\$63.75	\$94,995
7	14 inch DIP	0	LF	\$115.45	\$0
8	16 inch DIP	0	LF	\$124.06	\$0
9	18 inch DIP	0	LF	\$143.02	\$0
10	20 inch DIP	0	LF	\$160.25	\$0
12	30 inch DIP	0	EA	\$241.23	\$0
13	Service Connections	0	EA	\$1,550.79	\$0
13	PRV Stations	0	EA	\$86,155.06	\$0
13	Water Supply Wells	0	EA	\$2,843,116.93	\$0
13	Stream Diversions System	0	EA	\$370,466.75	\$0
13	Booster Pump Station	0	EA	\$620,316.42	\$0
13	Storage Tanks	0	MG	\$1,076,938.23	\$0
17	Class "A" Road Repair	894	SF	\$6.03	\$5,392
19	Imported Backfill	447	TON	\$25.85	\$11,553
21	Valves and Fittings	1	LS	\$23,748.64	\$23,749
22	Traffic Control	1	LS	\$1,899.89	\$1,900
23	Utility Relocation	1	LS	\$2,374.86	\$2,375
Sub Total (Construction)					\$146,961
Contingencies					\$22,044
Total (Construction)					\$169,005
Design and Construction Engineering					\$22,044
Administration, Legal, and Bond					
Counsel					\$1,470
Total (Professional Services)					\$23,514
<b>Grand Total</b>					<b>\$192,519</b>

Nov 2021 CCI = 12647

Costs are in 2021 dollars

**Country Manor Lane to East Mountain Dr  
Connection**

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$8,111
2	4 inch PVC	0	LF	\$32.74	\$0
3	6 inch PVC	0	LF	\$39.63	\$0
4	8 inch PVC	0	LF	\$43.08	\$0
5	10 inch PVC	0	LF	\$48.25	\$0
6	12 inch PVC	1,727	LF	\$63.75	\$110,104
7	14 inch DIP	0	LF	\$115.45	\$0
8	16 inch DIP	0	LF	\$124.06	\$0
9	18 inch DIP	0	LF	\$143.02	\$0
10	20 inch DIP	0	LF	\$160.25	\$0
12	30 inch DIP	0	EA	\$241.23	\$0
13	Service Connections	0	EA	\$1,550.79	\$0
13	PRV Stations	0	EA	\$86,155.06	\$0
13	Water Supply Wells	0	EA	\$2,843,116.93	\$0
13	Stream Diversions System	0	EA	\$370,466.75	\$0
13	Booster Pump Station	0	EA	\$620,316.42	\$0
13	Storage Tanks	0	MG	\$1,076,938.23	\$0
17	Class "A" Road Repair	1,036	SF	\$6.03	\$6,249
19	Imported Backfill	518	TON	\$25.85	\$13,391
21	Valves and Fittings	1	LS	\$27,526.11	\$27,526
22	Traffic Control	1	LS	\$2,202.09	\$2,202
23	Utility Relocation	1	LS	\$2,752.61	\$2,753
Sub Total (Construction)					\$170,337
Contingencies					\$25,551
Total (Construction)					\$195,887
Design and Construction Engineering					\$25,551
Administration, Legal, and Bond					
Counsel					\$1,703
Total (Professional Services)					\$27,254
<b>Grand Total</b>					<b>\$223,141</b>

Nov 2021 CCI = 12647

Costs are in 2021 dollars

**Ranch Drive to Alpine Highway  
Connection**

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$25,099
2	4 inch PVC	0	LF	\$32.74	\$0
3	6 inch PVC	0	LF	\$39.63	\$0
4	8 inch PVC	0	LF	\$43.08	\$0
5	10 inch PVC	0	LF	\$48.25	\$0
6	12 inch PVC	1,400	LF	\$63.75	\$89,257
7	14 inch DIP	0	LF	\$115.45	\$0
8	16 inch DIP	0	LF	\$124.06	\$0
9	18 inch DIP	0	LF	\$143.02	\$0
10	20 inch DIP	0	LF	\$160.25	\$0
12	30 inch DIP	0	EA	\$241.23	\$0
13	Service Connections	0	EA	\$1,550.79	\$0
13	PRV Stations	0	EA	\$86,155.06	\$0
13	Water Supply Wells	0	EA	\$2,843,116.93	\$0
13	Stream Crossing	1	EA	\$370,466.75	\$370,467
13	Booster Pump Station	0	EA	\$620,316.42	\$0
13	Storage Tanks	0	MG	\$1,076,938.23	\$0
17	Class "A" Road Repair	840	SF	\$6.03	\$5,066
19	Imported Backfill	420	TON	\$25.85	\$10,856
21	Valves and Fittings	1	LS	\$22,314.16	\$22,314
22	Traffic Control	1	LS	\$1,785.13	\$1,785
23	Utility Relocation	1	LS	\$2,231.42	\$2,231
Sub Total (Construction)					\$527,074
Contingencies					\$79,061
Total (Construction)					\$606,135
Design and Construction Engineering					\$79,061
Administration, Legal, and Bond					
Counsel					\$5,271
Total (Professional Services)					\$84,332
<b>Grand Total</b>					<b>\$690,467</b>

Nov 2021 CCI = 12647

Costs are in 2021 dollars

## Mainline Upsizes

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$166,380
2	4 inch PVC	0	LF	\$32.74	\$0
3	6 inch PVC	0	LF	\$39.63	\$0
4	8 inch PVC	343	LF	\$43.08	\$14,776
5	10 inch PVC	0	LF	\$48.25	\$0
6	12 inch PVC	5,750	LF	\$63.75	\$366,590
7	14 inch DIP	0	LF	\$115.45	\$0
8	16 inch DIP	1,552	LF	\$124.06	\$192,546
9	18 inch DIP	0	LF	\$143.02	\$0
10	24 inch DIP	11,142	LF	\$175.00	\$1,949,850
12	30 inch DIP	6,287	EA	\$241.23	\$0
13	Service Connections	0	EA	\$1,550.79	\$0
13	PRV Stations	0	EA	\$86,155.06	\$0
13	Water Supply Wells	0	EA	\$2,843,116.93	\$0
13	Filter Station Rebuild	1	EA	\$600,000.00	\$600,000
13	Booster Pump Station	0	EA	\$620,316.42	\$0
13	Storage Tanks	0	MG	\$1,076,938.23	\$0
17	Class "A" Road Repair	7,312	SF	\$6.03	\$44,095
19	Imported Backfill	1,828	TON	\$25.85	\$47,245
21	Valves and Fittings	1	LS	\$95,341.34	\$95,341
22	Traffic Control	1	LS	\$7,627.31	\$7,627
23	Utility Relocation	1	LS	\$9,534.13	\$9,534
Sub Total (Construction)					\$3,493,985
Contingencies					\$524,098
Total (Construction)					\$4,018,082
Design and Construction Engineering					\$524,098
Property and Easement Acquisition					\$250,000
Administration, Legal, and Bond					
Counsel					\$34,940
Total (Professional Services)					\$559,038
<b>Grand Total</b>					<b>\$4,577,120</b>

Nov 2021 CCI = 12647

Costs are in 2021 dollars

## 100 West Well Redevelopment

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$12,500
2	4 inch PVC	0	LF	\$32.74	\$0
3	6 inch PVC	0	LF	\$39.63	\$0
4	8 inch PVC	0	LF	\$43.08	\$0
5	10 inch PVC	0	LF	\$48.25	\$0
6	12 inch PVC	0	LF	\$63.75	\$0
7	14 inch DIP	0	LF	\$115.45	\$0
8	16 inch DIP	0	LF	\$124.06	\$0
9	18 inch DIP	0	LF	\$143.02	\$0
10	24 inch DIP	0	LF	\$160.25	\$0
12	30 inch DIP	0	EA	\$241.23	\$0
13	Service Connections	0	EA	\$1,550.79	\$0
13	PRV Stations	0	EA	\$86,155.06	\$0
Well Rehabilitation and flow					
13	Expansion	1	EA	\$250,000.00	\$250,000
13	Filter Station Rebuild	0	EA	\$600,000.00	\$0
13	Booster Pump Station	0	EA	\$620,316.42	\$0
13	Storage Tanks	0	MG	\$1,076,938.23	\$0
17	Class "A" Road Repair	0	SF	\$6.03	\$0
19	Imported Backfill	0	TON	\$25.85	\$0
21	Valves and Fittings	1	LS	\$0.00	\$0
22	Traffic Control	1	LS	\$0.00	\$0
23	Utility Relocation	1	LS	\$0.00	\$0
Sub Total (Construction)					
Contingencies					
Total (Construction)					
Design and Construction Engineering					
Property and Easement Acquisition					
Administration, Legal, and Bond					
Counsel					
Total (Professional Services)					
<b>Grand Total</b>					

Nov 2021 CCI = 12647

Costs are in 2021 dollars

**Table 38 Zone By Zone Needs Analysis**

System User Analysis	
Existing ERC	0.0
Existing Irrigation ERC	1,248.5
Projected ERC	0.0
Projected Irrigation ERC	1,473.0
Existing System Capacities	
Water Right (gpm)	0.0
Water Source (gpm)	10,316
Water Storage (gallons)	3,039,361

**Low Zone**

Water Right	Irrigated ERU	DDW Factor	Unit	Total Need (ac-ft)	Existing Capacity	Surplus (Deficit)
Existing Outdoor Need	1248.46	2.22	ac-ft/ERU	2771.58		
Existing Total WR Need				2771.58	-	(2771.58)
Projected Outdoor Need	1473.04	2.22	ac-ft/ERU	3270.15		
Projected Total WR Need				3270.15	-	(3270.15)

Water Source	Irrigated ERU	DDW Factor	Unit	Total Need (gpm)	Existing Capacity	Surplus (Deficit)
Existing Outdoor Need	1248.46	4.3	gpm/ERU	5368.00		
Existing Total WS Need				5368.00	10,316.00	4948.00
Projected Outdoor Need	1473.04	4.3	gpm/ERU	6334.00		
Projected Total WS Need				6334.00	6,688.00	354.00

Water Storage	Irrigated ERU	DDW Factor	Unit	Total Need (gal)	Existing Capacity	Surplus (Deficit)
Existing Outdoor Need	1248.46	2322	gal/ERU	2,898,924		
Existing Total Storage Need				2,898,924	3039361	140437
Projected Outdoor Need	1473.04	2322	gal/ERU	3,420,399		
20% Emergency Storage						
Projected Total Storage Need				3,420,399	1065916	-2354483
*Supplied from upstream						

System User Analysis	
Existing ERC	0.0
Existing Irrigation ERC	69.6
Projected ERC	0.0
Projected Irrigation ERC	76.4
Existing System Capacities	
Water Right (gpm)	0.0
Water Source (gpm)	2,045
Water Storage (gallons)	1,700,856

### Cemetery Zone

Water Right	Irrigated ERU	DDW Factor	Unit	Total Need (ac-ft)	Existing Capacity	Surplus (Deficit)
Existing Outdoor Need	69.55	2.22	ac-ft/ERU	154.40		
Existing Total WR Need				154.40	-	(154.40)
Projected Outdoor Need	76.38	2.22	ac-ft/ERU	169.56		
Projected Total WR Need				169.56	-	(169.56)

Water Source	Irrigated ERU	DDW Factor	Unit	Total Need (gpm)	Existing Capacity	Surplus (Deficit)
Existing Outdoor Need	69.55	4.3	gpm/ERU	299.00		
Existing Total WS Need				299.00	2,045.00	1746.00
Projected Outdoor Need	76.38	4.3	gpm/ERU	328.00		
Projected Total WS Need				328.00	(984.00)	(1312.00)

Water Storage	Irrigated ERU	DDW Factor	Unit	Total Need (gal)	Existing Capacity	Surplus (Deficit)
Existing Outdoor Need	69.55	2322	gal/ERU	161,495		
Fire Protection						
Existing Total Storage Need				161,495	1,700,856	1,539,361
Projected Outdoor Need	76.38	2322	gal/ERU	177,354		
20% Emergency Storage						
Fire Protection*						
Projected Total Storage Need				177,354	(256,730)	(434,084)

\*Supplied from upstream

System User Analysis	
Existing ERC	0.0
Existing Irrigation ERC	55.5
Projected ERC	0.0
Projected Irrigation ERC	55.5
Existing System Capacities	
Water Right (gpm)	0.0
Water Source (gpm)	2,284
Water Storage (gallons)	1,829,797

### Silverleaf Zone

Water Right	Irrigated ERU	DDW Factor	Unit	Total Need (ac-ft)	Existing Capacity	Surplus (Deficit)
Existing Outdoor Need	55.53	2.22	ac-ft/ERU	123.28		
Existing Total WR Need				123.28	-	(123.28)
Projected Outdoor Need	55.53	2.22	ac-ft/ERU	123.28		
Projected Total WR Need				123.28	-	(123.28)

Water Source	Irrigated ERU	DDW Factor	Unit	Total Need (gpm)	Existing Capacity	Surplus (Deficit)
Existing Outdoor Need	55.53	4.3	gpm/ERU	239.00		
Existing Total WS Need				239.00	2,284.00	2045.00
Projected Outdoor Need	55.53	4.3	gpm/ERU	239.00		
Projected Total WS Need				239.00	(745.00)	(984.00)

Water Storage	Irrigated ERU	DDW Factor	Unit	Total Need (gal)	Existing Capacity	Surplus (Deficit)
Existing Outdoor Need	55.53	2322	gal/ERU	128,941		
Fire Protection						
Existing Total Storage Need				128,941	1,829,797	1,700,856
Projected Outdoor Need	55.53	2322	gal/ERU	128,941		
20% Emergency Storage						
Fire Protection*						
Projected Total Storage Need				128,941	(127,789)	(256,730)

\*Supplied from upstream

System User Analysis	
Existing ERC	0.0
Existing Irrigation ERC	1,145.5
Projected ERC	0.0
Projected Irrigation ERC	1,595.7
Existing System Capacities	
Water Right (gpm)	0.0
Water Source (gpm)	7,210
Water Storage (gallons)	4,489,694

### Mid Zone

Water Right	Irrigated ERU	DDW Factor	Unit	Total Need (ac-ft)	Existing Capacity	Surplus (Deficit)
Existing Outdoor Need	1145.52	2.22	ac-ft/ERU	2543.05		
Existing Total WR Need				2543.05	-	(2543.05)
Projected Outdoor Need	1595.69	2.22	ac-ft/ERU	3542.43		
Projected Total WR Need				3542.43	-	(3542.43)

Water Source	Irrigated ERU	DDW Factor	Unit	Total Need (gpm)	Existing Capacity	Surplus (Deficit)
Existing Indoor Need						
Existing Outdoor Need	1145.52	4.3	gpm/ERU	4926.00		
Existing Total WS Need				4926.00	7,210.00	2284.00
Projected Indoor Need						
Projected Outdoor Need	1595.69	4.3	gpm/ERU	6861.00		
Projected Total WS Need				6861.00	6,116.00	(745.00)

Water Storage	Irrigated ERU	DDW Factor	Unit	Total Need (gal)	Existing Capacity	Surplus (Deficit)
Existing Outdoor Need	1145.52	2322	gal/ERU	2,659,897		
Fire Protection						
Existing Total Storage Need				2,659,897	4,489,694	1,829,797
Projected Outdoor Need	1595.69	2322	gal/ERU	3,705,192		
20% Emergency Storage						
Fire Protection*						
Projected Total Storage Need				3,705,192	3,577,403	(127,789)

\*Supplied from upstream



# ALPINE CITY GENERAL PLAN



## Public Facilities and Services Element

*2025 Sanitary Sewer System  
Master Plan,  
Impact Fee Facility Plan  
&  
Impact Fee Analysis*

*Prepared by*  
 **Horrocks.**

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## Abbreviations

AAPR	Annual Percentage Growth Rate
CCI	Construction Cost Index
ERU	Equivalent Residential Unit
DEQ	Division of Environmental Quality
fps	Feet per Second
gpd	Gallons per Day
gpdpc	Gallons per Day per Capita
IFA	Impact Fee Analysis
IFFP	Impact Fee Facility Plan
MG	Million Gallons
MGD	Million Gallons per Day
PF	Peaking Factor
TSSD	Timpanogos Special Service District

S E C T I O N

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## ***Chapter 1 - Summary and Recommendations***

### **Introduction**

Horrocks Engineers developed a sanitary sewer system master plan update for Alpine City in 2005, 2014, and 2022 and made recommendations to provide for the capacity needed at build-out. The major reason for this current master plan update is to stay current with the needs of the City's sanitary sewer system and to revisit the impact fees and sewer rates.

In this study, Alpine City's future conditions are identified including the projected population, number of connections, developable areas, and wastewater flows. Using the projected population, design requirements, and historical wastewater flows, the flows are projected through the planning period.

A computer model was used to analyze the existing sanitary sewer system and determine its capacity. Then using the potential areas of development and the projected wastewater flows, improvements were identified to meet the needed capacities at buildout.

Measured flows from Timpanogos Special Service District (TSSD) were used to calibrate the computer model.

The feasibility of the recommended improvements were determined based upon the present wastewater rates and connection fees. Recommendations were made to provide the funding needed to implement the recommended impact-related improvements.

Although some residents of the county (Pine Grove, Box Elder, etc) are included in the City wastewater flows, for the purposes of this study all connections are viewed as City sanitary sewer connections. These projected flows have also been added to determine the long-range pipe sizing requirements.

### **Projected Population**

Alpine City currently has a population of 10,784 people. However, the City's population is projected to increase by 24 percent to 13,320 people by the year 2046. This growth will add an additional 1,138 equivalent residential units (ERUs) to the system.

### **Projected Sewer Flow**

Historical records from TSSD over the past 5 years show the peak wastewater flow based on monthly billings in Alpine City is 55.9 gallons per day per capita (gpdpc). This value continues to trend downward. Using 55.9

gpdpc and the Alpine City average of 3.72 people per household now and 3.6 people per household at buildout, the average yearly flow is projected to increase from 229 million gallons (MG) to 301 MG.

Comparing this to the peak daily flow records for the previous year, there are two days where the peak flow was larger than 55.9 gpdpc. These two days appear to be outliers and therefore we recommend using 55.9 gpcpd.

Historical records from TSSD over the past 5 years show the average wastewater flow based on monthly billings in Alpine City is 50 (gpdpc). Using this value, the average yearly flow would increase from 205 MG to 270 MG. The master plan is developed using the more conservative 55.9 gpdpc.

Wastewater records show a negligible difference between winter and summer flows. It is therefore assumed that infiltration is minimal in Alpine City. The majority of the City is not located in high ground water areas where infiltration would be a problem.

## **Recommended Sanitary Sewer System Improvements**

These recommendations were determined by using a computer model of Alpine City's sanitary sewer system and input from city officials. A detailed list of the recommended improvements is given in the following paragraphs.

### **Existing Deficiency Improvement Plan**

The following improvements represent deficiencies in the existing sanitary sewer system. These improvements are shown in Figure 3 in the appendix.

***Ranch Drive sewer reconstruct at new grade.*** It is recommended that the 8-inch sewer line on Ranch Drive just west of Dry Creek be reconstructed at a new grade to eliminate surcharging from the existing line being installed at a reverse grade. This line would be approximately 350 feet in length.

***200 North sewer reconstruct at new grade.*** It is recommended that the 8-inch sewer line on 200 North near Deerfield Road be reconstructed at a new grade to eliminate surcharging from the existing line being installed at a reverse grade. This line would be approximately 480 feet in length.

***Alpine Highway sewer reconstruct at new grade.*** It is recommended that an 8-inch sewer line on Alpine Highway just west of Bateman Ln be reconstructed at a new grade to eliminate surcharging from the existing line being installed at a reverse grade. This line would be approximately 350 feet in length.

### **Buildout Improvement Plan**

The following improvements are those necessary to provide capacity for future growth.

No improvements are anticipated for buildout at this time. It is recommended that the master plan be reviewed on a regular basis to determine if conditions change enough to warrant additional improvements.

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## ***Chapter 2 - Current and Future Conditions***

Future conditions in Alpine City will affect the sanitary sewer flows and the improvements needed to meet these increased flows. As factors change, the projected future conditions made in this study could be affected. To help minimize the effect of the changing future conditions, the recommendations made in this study have been based upon the number of people served by Alpine City's sanitary sewer system rather than time periods.

This chapter discusses Alpine City's population projections through the planning and ultimate build-out periods. The projected number of sewer connections has been determined based upon the projected population. In addition, using the potential areas of development, historical wastewater flows, and State design requirements, the wastewater flows projected through the planning and ultimate build-out periods are discussed.

### **Projected Population**

Population projections have been estimated by Alpine City until total build-out is reached near the year 2046. Alpine City's projected population is also shown in Figure 1. The projected annual percentage growth rate (AAPR) from 2025 to 2046 averages approximately 1.01 percent. Figures 4 and 5 in the appendix show the current zoning and land use within Alpine City.

### **Equivalent Residential Unit (ERU)**

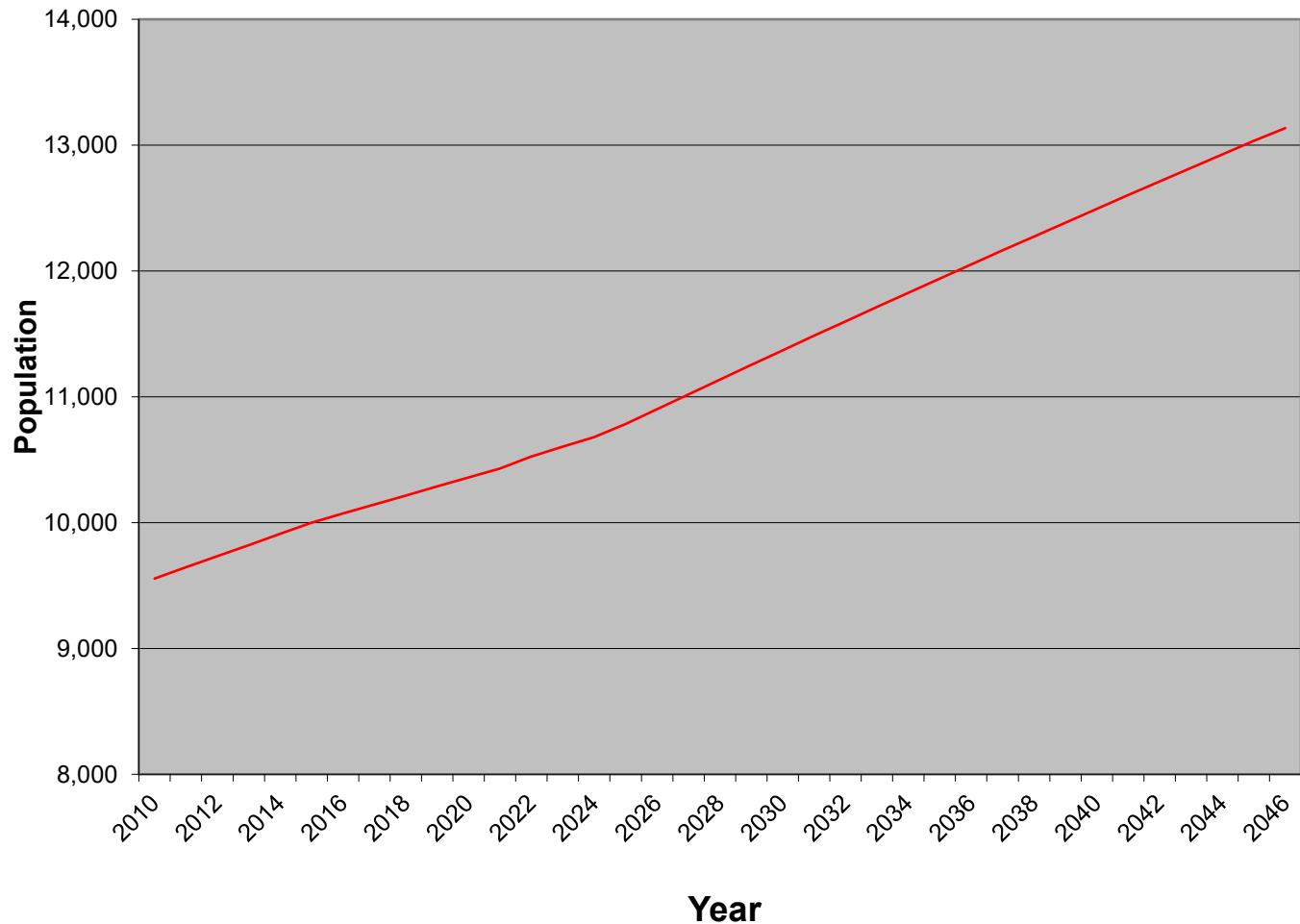
Sanitary sewer flows are generated from residential, commercial, industrial, and institutional sources and it is advantageous to relate these sources in a quantifiable manner. It was determined in the sewer master plan that an average residential home in Alpine City produced 208 gallons of sanitary waste on the peak day. The average residential home is defined as an ERU. Other sources such as churches, schools, and commercial businesses are compared to the average residential home to determine its ERU value. For example, a commercial business who generates 624 gallons of sanitary waste is assigned an ERU value of 3.0 because it generates three times the sanitary waste of an average home.

ERU's are anticipated to grow at approximately the same pattern as population. Table 1 also shows the projected ERU Growth.

**Table 1 Population Projections**

<b>Year</b>	<b>Population</b>	<b>ERU Growth Rate</b>	<b>ERU's</b>
2021	10,430	1.2%	1,918
2022	10,526	1.4%	1,946
2023	10,604	1.3%	1,970
2024	10,679	1.2%	1,994
2025	10,784	1.5%	3,021
2026	10,910	1.7%	3,072
2027	11,034	1.7%	3,123
2028	11,159	1.6%	3,174
2029	11,283	1.6%	3,226
2030	11,407	1.6%	3,278
2031	11,530	1.6%	3,331
2032	11,652	1.6%	3,384
2033	11,775	1.6%	3,437
2034	11,896	1.6%	3,490
2035	12,018	1.5%	3,544
2036	12,139	1.5%	3,598
2037	12,259	1.5%	3,652
2038	12,379	1.5%	3,707
2039	12,499	1.5%	3,762
2040	12,618	1.5%	3,818
2041	12,737	1.5%	3,873
2042	12,855	1.4%	3,930
2043	12,973	1.4%	3,986
2044	13,091	1.4%	4,043
2045	13,208	1.4%	4,100
2046	13,320	1.4%	4,159

# Alpine City Population Projection

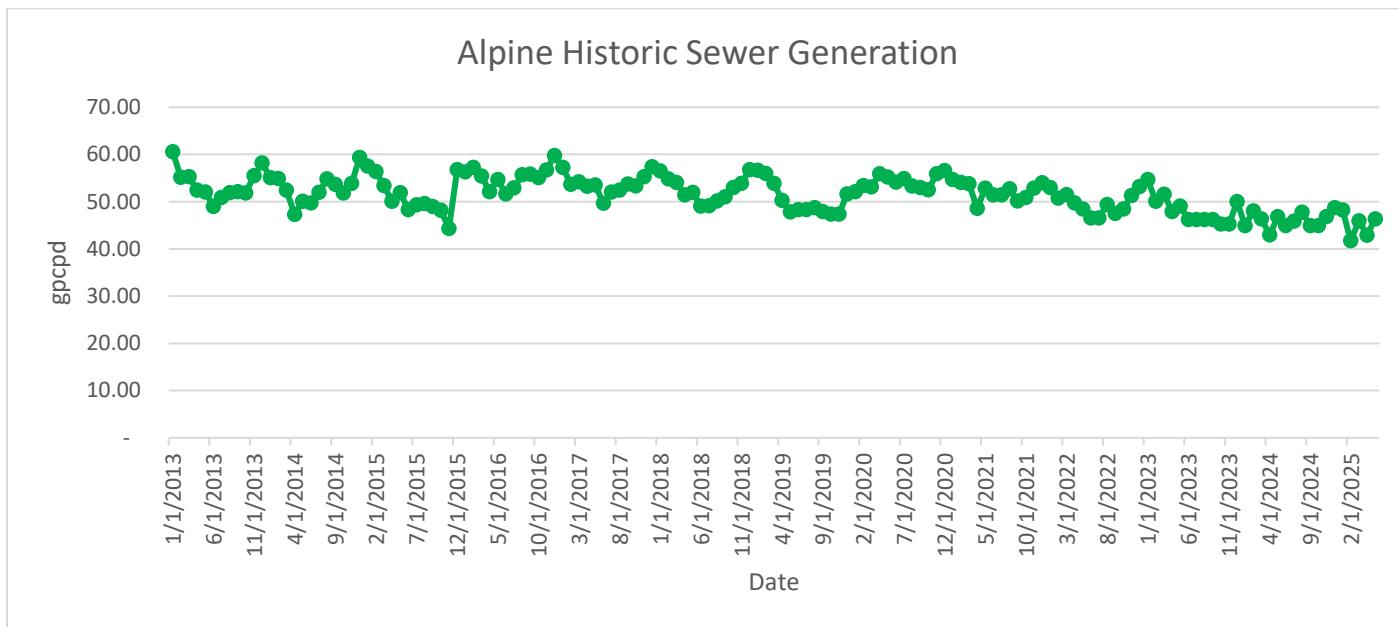


**Figure 1 Population Projections**

## Historical Sewer Flows

Sewer flows vary depending upon the amount of culinary water used and the amount of infiltration and inflow within the system. Figure 2 shows the historical sewer generated per person for Alpine City. The current average flow is 50 gpdpc based on TSSD meter data. During the winter of 2012 the average flow jumped to around 70 gpdpc. At times in the past, it has been even higher. The current trend in flows generated per person is downward.

Wastewater records show a negligible difference between winter and summer flows. It is therefore assumed that infiltration is minimal in Alpine City. The majority of the City is not located in high ground water areas where infiltration would be a problem.



**Figure 2 Alpine Historic Sewer Generation**

## Projected Sewer Flows

The projected population, historical sewer flows, and typical design criteria were used to project the sewer flows through the planning period. Projected sewer flows were entered into a computer program called *SewerGems 2024* creating a model of Alpine City's existing sanitary sewer system.

Sewer lines are required to provide capacities for peak hourly and maximum daily flows. This variation of flows is due to the hydrograph or peak that is created by the wastewater as it enters the pipes and is collected from different areas. The farther the wastewater travels in the system, the smaller the peaks become. The "peak" in the flow or hydrograph is referred to as the peaking factor (PF) and is higher for collector lines (12" and smaller) than for trunk lines (larger than 12") because the peak is reduced as the wastewater flows downstream.

PFs for the Alpine City sewer model are based upon the Department of Environmental Quality (DEQ) recommendations, historical wastewater flows, and typical design requirements. The TSSD records show that the average wastewater flow in Alpine City was 50 gallons per capita per day (gpcpd) over the past 10 years. The SewerCAD model uses a variable PF of between 2.3 and 3.0 depending on how close the flow is to where it was generated. The PF's match closely with TSSD data at the meter leaving the City and individual meter location from the previous sewer master plan update. A typical PF for small municipal sanitary sewer system is 2.5. The State of Utah DEQ recommends a PF of 2.5 for over 12-inch lines and 4.0 for 12-inch and under lines.

Using the projected ERCs and the peak daily flow, Table 2 shows the projected average yearly, average daily, and maximum daily flows through the planning period.

In summary, the number of ERUs is projected to increase by 1,138 connections by the year 2046. Using the TSSD average flow of 50 gpdpc and 3.72 people per household currently and 3.6 at buildout, the average yearly flow is projected to increase from 205 MG to 270 MG. Using the chosen design flow of 55.9 gpdpc and 3.72 people per household currently and 3.6 at buildout the average yearly flow is projected to increase from 229 MG to 301 MG.

The recommendations in this capital facilities plan are based on 55.9 gpdpc, which is the peak TSSD measurement over the past year. General use patterns over the past 20 years have been downward.

Table 2 Projected Sewer Generation

Year	Projected ERU	gpd/ERU	Flow		
			Avg Yearly (MG)	Avg Daily (MGD)	Max Daily (MGD)
<b>TSSD Flows (50 gpdpc, 3.72-3.55 people/connection, 3.0-1.4 PF)</b>					
2025	3,021	186	205	0.56	1.12
3030	3,278	184	220	0.60	1.21
3035	3,544	182	236	0.64	1.29
3040	3,818	180	251	0.69	1.37
3045	4,100	178	267	0.73	1.46
Buildout	4,159	178	270	0.74	1.48
<b>Sewer Model Design Flows (55.9 gpdpc, 3.72-3.55 people/connection, 3.0-1.4 PF)</b>					
2025	3,021	208	229	0.63	1.43
3030	3,278	206	246	0.67	1.51
3035	3,544	203	263	0.72	1.59
3040	3,818	201	281	0.77	1.67
3045	4,100	199	298	0.82	1.75
Buildout	4,159	198	301	0.83	1.74

## ***Chapter 3 – Sanitary Sewer System Analysis***

Alpine City's sanitary sewer system was analyzed to find the capacity of the current system and to determine the improvements needed to meet the flows of the projected population. In this chapter, a description of the existing sanitary sewer system is given along with a discussion of the concerns and recommended improvements. State and Alpine City standard requirements were used as criteria to analyze the sanitary sewer system. Information obtained from a computer model of Alpine's sanitary sewer system is presented with the recommended improvements needed to meet the projected population wastewater flows.

Alpine City currently has approximately 63 miles of sewer lines that collect wastewater and convey it to TSSD's 18-inch outfall line at the end of 800 South and Creek Side Pass. Figure 6 in the appendix shows the layout of the existing system. Collection lines in the City range from 8 inches to 18 inches and carry an average yearly flow of 229 MG of wastewater.

### **State Design Requirements**

The Utah DEQ provides guidelines and regulations for new sanitary sewer system design. These guidelines are useful in new construction, but measured flows have shown that these guidelines are considerably higher than actual flows and would be unnecessary for the City to fully implement. Design guidelines from other sewer districts were reviewed to help develop local standards. It is recommended that Alpine City adopt the following criteria as the minimum level of service for the sanitary sewer system:

- New collector lines must be capable of carrying a minimum peak flow of 3 times the average flow.
- New interceptors and outfall lines must be capable of carrying a minimum peak flow of 2.3 times the average flow.
- The minimum size of a collection line is 8 inches.
- The minimum velocity of a line flowing full is two feet per second (2 fps).
- 8-inch thru 12-inch sewer lines are not to exceed 50 percent capacity (by depth) at peak flow.
- Greater than 12-inch sewer lines are not to exceed 75 percent capacity (by depth) at peak flow.
- An ERU is equal to 208 gallons per day (gpd) average flow. This is based on each person producing 55.9 gallons of wastewater per day and there being 3.72 people per ERU.

The SewerCAD model uses a flow of 55.9 gpdpc which compares favorably with recently measured flows (2025) from the TSSD flow meter. The State guideline is 100 gpdpc which is higher than necessary for the city of Alpine. The SewerGems model also used a variable PF of 2.3 to 3.0. A value of 3.72 people per household was used in determining flows per ERC.

The population capacity of different sewer line sizes is shown in Table 3. The capacities are calculated as shown. PFs are used to show maximum daily peaking flows with respect to whether the pipe is a collector or trunk line. As discussed in the previous chapter, trunk lines experience smaller peaks than collector lines.

**Table 3 Pipe Design Standards**

Size (in)	Percent Full	Minimum Slopes @ 2 fps (ft/ft)	Capacity @ Minimum Slope (MGD)		Peaking Factor	ERC Capacity @ 208 gpdpc
			Capacity @ Minimum Slope (MGD)	Peaking Factor		
8	50	0.00334	0.24	3.00	384.62	
10	50	0.00248	0.38	3.00	608.97	
12	50	0.00194	0.55	3.00	881.41	
14	75	0.00158	1.36	2.00	3269.23	
15	75	0.00144	1.56	2.00	3750.00	
18	75	0.00113	2.25	2.00	5408.65	
21	75	0.00092	3.07	2.00	7379.81	
24	75	0.00077	4.01	2.00	9639.42	

#### **Computer Model of Sanitary Sewer System**

A computer program called *SewerGems 2024* was used to model Alpine City's sanitary sewer system. The program uses the flows generated at each sewer connection to calculate the full flow, maximum flow, and velocity of flow for each pipe. From the output of the model, the amount of wastewater flowing in each line can be determined. Information for the existing sanitary sewer system including the pipe diameters, lengths, manhole locations, and invert elevations, were obtained from the 2022 model.

The number of ERUs was estimated based on build-out conditions with the 2025 zoning and assuming 20 percent of the area was used in the development of roadways, sidewalks, parks, etc. The flows generated by the number of ERUs achieved at build-out were entered into *SewerGems* allowing the flows to be routed into existing lines. *SewerGems* was run to determine upgrades needed for demands on the existing sanitary sewer system and demands to be placed on the system during buildout.

The existing sanitary sewer system was modeled using PFs for both the present and future conditions. Each line that was flowing over either 50 percent of capacity for lines 12 inches and smaller or 75 percent of capacity for lines greater than 12 inches was then re-evaluated and recommendations made to provide lines with adequate capacities for the future conditions.

## **Existing Deficiency Improvement Plan**

The following improvements represent deficiencies in the existing sanitary sewer system. These improvements are shown in Figure 3 in the appendix.

***Ranch Drive sewer reconstruct at new grade.*** It is recommended that the 8-inch sewer line on Ranch Drive just west of Dry Creek be reconstructed at a new grade to eliminate surcharging from the existing line being installed at a reverse grade. This line would be approximately 350 feet in length.

***200 North sewer reconstruct at new grade.*** It is recommended that the 8-inch sewer line on 200 North near Deerfield Road be reconstructed at a new grade to eliminate surcharging from the existing line being installed at a reverse grade. This line would be approximately 480 feet in length.

***Alpine Highway sewer reconstruct at new grade.*** It is recommended that an 8-inch sewer line on Alpine Highway just west of Bateman Ln be reconstructed at a new grade to eliminate surcharging from the existing line being installed at a reverse grade. This line would be approximately 350 feet in length.

## **Buildout Improvement Plan**

The following improvements are those necessary to provide capacity for future growth.

No improvements are anticipated for buildout at this time. It is recommended that the master plan be reviewed on a regular basis to determine if conditions change enough to warrant additional improvements.

A summary of the recommended improvements, scheduling, and estimated costs is shown in Table 4. Figures 3 in the appendix shows the recommended improvements. Figure 7 in the appendix shows the anticipated capacity utilized at buildout. With contingencies, engineering, legal, and administrative fees, the total estimated cost is \$957,618.

**Table 4 10-Year Improvement Schedule**

<b>Fiscal Year</b>	<b>Description</b>	<b>Cost</b>	<b>% Benefit to Existing</b>	<b>Impact Expense</b>	<b>Operating Expense</b>
2025-26	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
	Ranch Drive Sewer Reconstruct at New Grade	\$133,247.28	100%	\$0.00	\$133,247.28
2026-27	5 Year Master Plan Update	\$40,000.00	73%	\$10,944.94	\$29,055.06
	200 North Sewer Reconstruct at New Grade	\$419,897.81	100%	\$0.00	\$419,897.81
2027-28	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
	Alpine Highway Sewer Reconstruct at New Grade	\$292,474.70	100%	\$0.00	\$292,474.70
2028-29	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
2029-30	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
2030-31	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
2031-32	5 Year Master Plan Update	\$40,000.00	73%	\$10,944.94	\$29,055.06
2032-33	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
2033-34	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
2034-35	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
<b>Total Expenditures</b>		<b>\$957,619.80</b>		<b>\$30,645.83</b>	<b>\$926,973.97</b>

## Sanitary Sewer Rate Review

Table 5 shows the revenue and expense summary for the past five years for the sewer fund. It appears that the current fees are adequate to cover expenses. These fees should be evaluated on a yearly basis and adjusted as needed, especially as TSSD fees are increase periodically.

**Table 5 Revenue and Expense Summary**

Description	FY 2020	FY2019	FY 2018	FY2017	FY2016
Sewer Service Charge	\$989,242.00	\$1,007,758.00	\$1,007,356.00	\$1,077,456.00	\$1,020,130.00
Interest Income	\$49,453.00	\$37,007.00	\$63,441.00	\$20,643.00	\$13,302.00
Sewer Connections	\$5,750.00	\$5,498.00	\$5,125.00	\$3,125.00	\$4,525.00
Sewer Impact Fee	\$19,706.00	\$21,233.00	\$17,735.00	\$13,500.00	\$16,527.00
Developer Contributions	\$248,500.00	\$50,354.00	\$26,368.00	\$161,637.00	\$44,360.00
<b>Total Revenue</b>	<b>\$1,312,651.00</b>	<b>\$1,121,850.00</b>	<b>\$1,120,025.00</b>	<b>\$1,276,361.00</b>	<b>\$1,098,844.00</b>
Operating Expenses	\$219,843.00	\$214,246.00	\$229,976.00	\$261,358.00	\$239,646.00
Depreciation	\$172,193.00	\$162,703.00	\$164,184.00	\$154,810.00	\$149,246.00
Impact Fee Related Improvements	\$37,644.00	\$32,732.00	\$6,458.00	\$30,266.00	\$289,468.00
Debt Service	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TSSD Operating Expenses	\$664,175.00	\$633,692.00	\$635,098.00	\$624,724.00	\$635,179.00
<b>Total Expenses</b>	<b>\$1,093,855.00</b>	<b>\$1,043,373.00</b>	<b>\$1,035,716.00</b>	<b>\$1,071,158.00</b>	<b>\$1,313,539.00</b>
<b>Net Gain/(Loss)</b>	<b>\$218,796.00</b>	<b>\$78,477.00</b>	<b>\$84,309.00</b>	<b>\$205,203.00</b>	<b>-\$214,695.00</b>
<b>Net Excluding Impact Funds</b>	<b>\$236,734.00</b>	<b>\$89,976.00</b>	<b>\$73,032.00</b>	<b>\$221,969.00</b>	<b>\$58,246.00</b>

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## ***Chapter 4 - Impact Fee Facility Plan (IFFP)***

### **General Background**

Alpine City has experienced significant growth in recent years. This growth, through the construction of homes, parks, commercial areas, and other amenities incidental to development, has added to the load on the City's sanitary sewer system. As development continues, additional sewer flows will be added to the sanitary sewer system. Alpine City's objective is to provide adequate sewer facilities to carry wastewater flows to TSSD in a safe and sanitary manner.

Alpine City adopted a sanitary sewer system component update of the General Plan in 2005 and an update in 2014 and 2022 to plan sewer facilities to carry wastewater flows. This plan update proposes guidelines and suggests controls for the design and installation of sewer facilities. The plan also establishes estimated costs associated with sewer facilities.

In 2022, an update was completed on the sanitary sewer system component of the General Plan. This updated was needed to update potential changes in growth in the City and better calibrated the model with updated sewer manhole survey data.

### **Required Elements of an IFFP**

The purpose of this IFFP is to identify sewer demands placed on existing Sewer Facilities by new development and propose means by which Alpine City will meet these demands. Various funding possibilities for these facilities will also be discussed.

An IFFP, or its equivalent, must be in place if impact fees are to be considered as a financing source. Impact fees are one-time fees charged to new development to cover costs of increased capital facilities necessitated by new development. They are a critical financing source for Alpine City to consider, given the growth occurring in Alpine City.

According to Utah Code Title 11 Chapter 36a, known as the Impact Fee Act, local political subdivisions with a population of 5,000 or greater must prepare a separate IFFP before imposing impact fees unless the requirements of Utah Code Ann. §11-36-301 (3) (a) are included as part of the General Plan. Because the Alpine City General Plan does not satisfy these requirements, this IFFP has been prepared to meet the legal requirement.

Utah Code Ann. §11-36a-302 provides that the plan shall identify:

- (i) Demands placed upon existing public facilities by new development activity; and
- (ii) The proposed means by which the local political subdivision will meet those demands.

## **Demands on Existing Facilities**

### **Service Area**

Alpine City is located in the northernmost portion of Utah County near the base of the Wasatch Mountains and includes an area of approximately 7.4 square miles. It is bordered on the West by Highland and Draper, on the South by Highland, and on the North and East by mountains and Uinta National Forest. The Alpine City sanitary sewer system serves some unincorporated areas of Utah County northeast of the City. Existing land uses vary from pasture and farmland to high-density residential housing and commercial complexes. Therefore, the community can be classified as both rural and suburban.

Alpine City owns and operates a gravity sanitary sewer system that carries wastewater to TSSD outfall lines. With the exception of one lift station at lower Dry Creek, the remainder of the entire system operates by gravity flow.

### **Sanitary Sewer Design Requirements**

The design requirements for the sanitary sewer system are as follows:

- New collector lines must be capable of carrying a minimum peak flow of 3 times the average flow.
- New interceptors and outfall lines must be capable of carrying a minimum peak flow of 2.3 times the average flow.
- The minimum size of a collection line is 8 inches.
- The minimum velocity of a line flowing full is two feet per second (2 fps).
- 8-inch thru 12-inch sewer lines are not to exceed 50 percent capacity (by depth) at peak flow.
- Greater than 12-inch sewer lines are not to exceed 75 percent capacity (by depth) at peak flow.
- An ERU is equal to 208 gallons per day (gpd) average flow. This is based on each person producing 55.9 gallons of wastewater per day and there being 3.72 people per ERU.

As sewer lines reach the 50 percent or 75 percent capacity point, they are deemed undersized and should be upsized. The reason behind the lower capacity is to provide a buffer during abnormal peak flows. Once a pipe reaches 100 percent capacity, the system will start to surcharge which may result in flooding basements, etc.

### **Existing Sewer Facilities**

Existing conditions at the time of this study were established using data collected from the City as well as flow data generated specifically for the Master Plan. Some of the data gathered and used includes an existing sewer model, the existing sewer master plan, existing City maps, and field flow data. Figure 6 in the appendix shows Alpine's existing sanitary sewer system and facilities.

Connections to the sanitary sewer system include residential, school, church, commercial, and City owned facility connections for a total of 3,021 ERU's.

### **Deficiencies Based on Existing Development**

Alpine City's current sanitary sewer system collects wastewater throughout the City and transfers it to the TSSD treatment facility. There are three areas where flows are greater than the design capacity because of reverse grades in the sewer mainlines. Table 6 and Figure 3 in the appendix illustrate the existing deficiencies in the system. None of these improvements are related to future growth and thus cannot be funded through impact fees.

**Table 6 Existing System Deficiencies**

<b>Item</b>	<b>Description</b>	<b>Cost</b>
1	Ranch Drive Sewer Reconstruct at New Grade	\$106,224
2	200 North Sewer Reconstruct at New Grade	\$300,534
3	Alpine Highway Sewer Reconstruct at New Grade	\$213,249
<b>Grand Total</b>		<b>\$620,007</b>

May 2022 CCI = 13004

Costs are in 2022 dollars

## **Future Demand and Capital Facilities**

### **Future Sewer Requirements**

The same design requirements for the current system will apply for future development. All new development will be required to install a minimum of an 8-inch sewer line or the appropriate size to serve their development, whichever is larger.

### **Future Capital Sewer Facilities**

Future conditions at the time of this study were established using data collected from the City. A buildout sewer model was created with the projected sanitary sewer system using the buildout number of ERUs. Figure 7 in the appendix shows Alpine's buildout sanitary sewer system and facilities.

The following improvements are those necessary to provide capacity for future growth.

No improvements are anticipated for buildout at this time. It is recommended that the master plan be reviewed on a regular basis to determine if conditions change enough to warrant additional improvements.

Buildout connections to the sanitary sewer system include residential, school, church, commercial, and City owned facility connections for a total of 4,159 ERU's.

## **Capital Facility Cost and Proportionate Share**

### **Cost of Capital Facilities**

Detailed engineer's estimates of cost are described in the appendix. These costs are associated with master planned improvements in order to properly handle future development demands and are thus eligible for inclusion in an impact fee. Only that portion of the capital facilities that will benefit growth in the 10-year planning period are eligible for inclusion. An appropriate inflation factor can be incorporated in the analysis to cover rising costs in the future.

### **Cost of Master Planning**

The City expects to expend money every year to review the sanitary sewer master plan, IFFP, and IFA and every five years to fully update the same. These costs are eligible for inclusion in an impact fee. Only that portion of the master planning that will benefit growth in the 10-year planning period are eligible for inclusion. An appropriate inflation factor can be incorporated in the analysis to cover rising costs in the future.

### **Value of Free Capacity in Sanitary Sewer System**

The existing sanitary sewer system has excess capacity or free capacity available for future growth. The original sanitary sewer system for Alpine City was constructed in 1979 through 1980 at a cost of \$1,435,257.00. The current City asset list can be seen in the appendix. It is assumed the rest of the facilities after 1981 were developer contributions and cannot be included in a free capacity analysis because they are not eligible for impact fee reimbursement. It is acceptable for future users to pay for their portion of the existing system through an impact fee to reimburse existing users. The free capacity portion of the impact fee will be utilized to repay the existing sewer enterprise account to recoup actual costs spent on the original system improvements. Only actual costs can be utilized in this analysis and not current replacement costs or inflation adjusted costs.

### **Cost Associated with Existing Deficiencies**

As described previously, the existing sanitary sewer system has deficiencies, but these are not associated with future connections and cannot be included in an impact fee analysis (IFA).

## Developer Contributions

As growth occurs throughout the City, developers are required to install minimum size sewer lines to serve the homes within their development. Sometimes lines throughout the City need to be upsized to accommodate homes outside the development. The City collects impact fees from all development to cover the cost of upsizing. The detailed cost estimates prepared in the Master Plan only include those costs related to upsizing developer provided facilities or wholly City constructed facilities. No impact fees can be collected for developer provided facilities.

## 10 Year Improvement Schedule

Table 7 provides the anticipated schedule for master planning and improvement construction. The costs represent present value in 2025 dollars.

**Table 7 10-Year Improvement Schedule**

Fiscal Year	Description	Cost	% Benefit to Existing	Impact Expense	Operating Expense
2025-26	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
	Ranch Drive Sewer Reconstruct at New Grade	\$133,247.28	100%	\$0.00	\$133,247.28
2026-27	5 Year Master Plan Update	\$40,000.00	73%	\$10,944.94	\$29,055.06
	200 North Sewer Reconstruct at New Grade	\$419,897.81	100%	\$0.00	\$419,897.81
2027-28	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
	Alpine Highway Sewer Reconstruct at New Grade	\$292,474.70	100%	\$0.00	\$292,474.70
2028-29	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
2029-30	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
2030-31	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
2031-32	5 Year Master Plan Update	\$40,000.00	73%	\$10,944.94	\$29,055.06
2032-33	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
2033-34	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
2034-35	Annual Master Plan Review	\$4,000.00	73%	\$1,094.49	\$2,905.51
<b>Total Expenditures</b>		<b>\$957,619.80</b>		<b>\$30,645.83</b>	<b>\$926,973.97</b>

## Revenue Source to Finance Impacts to System Improvements

### General Fund Revenues

While general fund revenues can be used to fund capital facilities, they are generally insufficient to meet the demands of large infrastructure projects. General fund revenues are mainly drawn from property, sales, and franchise tax revenues.

## **Grants and Donations**

Grants monies or low interest loans for capital facilities may be available through a variety of state and federal programs. Competition for these types of funds is often strong, but they should not be overlooked as a potential funding source.

## **Sewer Utility**

Most municipalities have enacted a sewer utility to pay the cost of capital facilities. A sewer utility would charge all residents a monthly fee based on winter water usage. Monthly fees could then be used to maintain the system and/or construct capital facility improvements.

## **Impact Fees**

Impact fees are an important means of financing future water capital facility improvements, especially given the growth Alpine City is experiencing. The fees collected can be used for infrastructure as outlined in this IFFP. Impact fees are a one-time fee charged to new development that allow development to “pay its own way” in terms of the additional costs cities experience when growth occurs. Impact fees must meet the requirements of Utah law, must demonstrate that there is a rational connection between the fees charged to correct deficiencies in an existing system, and must provide that adjustment to impact fees be made to appropriately credit any significant past payments or anticipated future payments to capital facilities. This is to insure that the new development is not “double charged” for capital facilities. Impact fees are necessary in order to achieve an equitable allocation between the costs borne in the past and the cost to be borne in the future. Existing residential and businesses are well served by the existing sanitary sewer system. However, with additional growth improvements and expansion of the sanitary sewer system will be needed to provide adequate service.

## **Debt Financing**

Alpine City can also fund sewer facilities through bonding. Bonding is often a good approach when large sums are needed up-front because it allows the payments to be spread over a longer time period. Alpine City does have a revenue source in sewer user rates to back a debt service payment for sanitary sewer system improvements. Bonding can be obtained on the open market or through governmental agencies such as the Utah Division of Water Quality.

## IFFP Certification

I certify that the attached impact fee facility plan (IFFP):

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 in each and every relevant respect with the Impact Fees Act.

This certification made in accordance with Utah Code Annotated, 11-36a-306(1), with the following caveats:

1. All of the recommendations for implementation of the IFFP made in the IFFP are followed in their entirety by Alpine City staff and Council in accordance to the specific policies established for the service area.
2. If all or a portion of the IFFP 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 Alpine City and outside sources.

Date \_\_\_\_\_

---

John E. Schiess, P.E.  
Horrocks Engineers

# S E C T I O N

# 5

## ***Chapter 5 - Impact Fee Analysis (IFA)***

### **General Background**

Alpine City has experienced significant growth in recent years. This growth, through the construction of homes, parks, commercial areas, and other amenities incidental to development, has added to the load on the City's sanitary sewer system. As development continues, additional sewer flows will be added to the sanitary sewer system. Alpine City's objective is to provide adequate sewer facilities to carry wastewater flows to TSSD in a safe and sanitary manner.

Alpine City adopted a sanitary sewer system component update of the General Plan in 2005 and an update in 2014 and 2022 to plan sewer facilities to carry wastewater flows. This plan update proposes guidelines and suggests controls for the design and installation of sewer facilities. This plan also establishes estimated costs associated with sewer facilities.

In 2022, an update was completed on the sanitary sewer system component of the General Plan (Master Plan) and the IFFP in preparation for this IFA.

### **Impact Fee Overview**

An impact fee is a one-time fee charged to new development to recover the City's historic and future costs of constructing sanitary sewer facilities with capacity to handle the new development. The fee is assessed at the time of building permit issuance as a condition of approval. This analysis is done following the Impact Fees Act (UCA 11-36a-101 et seq) to ensure that the fee is equitable, fair, and legally defensible.

This analysis shows that there is a fair comparison, or rational nexus, between the impact fees charged to new development and the impact that new development places on the sanitary sewer system.

This impact fee analysis is intended to fairly allocate the costs of expanding the sanitary sewer system and unused capacity in the existing system to the new growth that requires more capacity. The final impact fee is calculated by dividing the proportionate costs of existing and future projects by the demand that is estimated to occur within the next ten years. There will be projects constructed within the next ten years that will provide capacity that is more than the capacity required for the next ten year's development. This analysis discounts the existing and future projects to only include the portion of the cost and capacity that relates to the ten-year demand therefore achieving a fair comparison of cost and demand.

Costs that can be included in an impact fee include the following:

- New Sanitary Sewer capital infrastructure needed to serve new growth or up-sized existing facilities need to serve new growth;
- Professional and planning services related to the construction of growth-related facilities;
- Interest costs on bonds used for facilities constructed that will serve future growth;
- Appropriate inflation adjusted costs to reflect the year construction is planned relative to current dollars; and
- Proportion of historic costs of existing improvements than can serve future growth.

Costs that cannot be included in the impact fee include the following:

- Improvements necessary to cure deficiencies for existing users;
- Improvements that increase the level of service above that which is currently provided;
- Portions of upsizing projects that replace capacity that already exists;
- Operation and maintenance costs;
- Costs for facilities funded by grants or other funds that the City does not have to repay; and
- Costs to reconstruct facilities that do not have capacity for future growth.

## **Service Area**

Alpine City is located in the northernmost portion of Utah County near the base of the Wasatch Mountains and includes an area of approximately 7.4 square miles. It is bordered on the West by Highland and Draper, on the South by Highland, and on the North and East by mountains and Uinta National Forest. Box Elder South is unincorporated Utah County; however, sewer flows from Box Elder South are served by the Alpine City sanitary sewer system. Existing land uses vary from pasture and farmland to high-density residential housing and commercial complexes. Therefore, the community can be classified as both rural and suburban.

Alpine City owns and operates a gravity sanitary sewer system that carries wastewater to TSSD outfall lines. With the exception of one lift station at lower Dry Creek, the remainder of the entire system operates by gravity flow.

## **Level of Service**

Impact fees cannot be utilized to raise the level of service for existing users. Both existing users and future growth need to pay for their respective portion of any required improvements.

The design requirements for the sanitary sewer system are as follows:

- New collector lines must be capable of carrying a minimum peak flow of 3 times the average flow.

- New interceptors and outfall lines must be capable of carrying a minimum peak flow of 2.3 times the average flow.
- The minimum size of a collection line is 8 inches.
- The minimum velocity of a line flowing full is two feet per second (2 fps).
- 8-inch thru 12-inch sewer lines are not to exceed 50 percent capacity (by depth) at peak flow.
- Greater than 12-inch sewer lines are not to exceed 75 percent capacity (by depth) at peak flow.
- An ERU is equal to 208 gallons per day (gpd) average flow. This is based on each person producing 55.9 gallons of wastewater per day and there being 3.72 people per ERU.

As sewer lines reach the 50 percent or 75 percent capacity point, they are deemed undersized and should be upsized. The reason behind the lower capacity is to provide a buffer during abnormal peak flows.

The Alpine City sanitary sewer master plan, IFFP, and this IFA are based on the same level of service for both existing and future users.

### **Equivalent Residential Unit (ERU)**

Sanitary sewer flows are generated from residential, commercial, industrial, and institutional sources and it is advantageous to relate these sources in a quantifiable manner. It was determined in the sewer master plan that an average residential home in Alpine City produced 208 gallons of sanitary waste per day. The average residential home is defined as an ERU. Other sources such as churches, schools, and commercial businesses are compared to the average residential home to determine its ERU value. For example, a commercial business who generates 624 gallons of sanitary waste is assigned an ERU value of 3.0 because it generates three times the sanitary waste of an average home.

Population growth has been projected for Alpine City (see Table 1 and Figure 1) and subsequently ERC's. Table 8 shows the ERU's utilized to determine needed improvements and calculate the impact fees.

**Table 8 ERU Summary**

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<b>ERU</b>	
Current ERU's	3,004
Buildout ERU's	4,106
Undeveloped ERU's	1,102
ERU's in 10 Year CIP	506

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### ***Capital Project Costs***

Future conditions at the time of this study were established using data collected from the City. A buildout sewer model was created with the projected sanitary sewer system using the buildout number of ERUs.

Buildout connections to the sanitary sewer system include residential, school, church, commercial, and City owned facility connections for a total of 4,106 ERU's. These ERU's are minus Box Elder South who cannot be charged an impact fee based on an agreement with Alpine City.

No improvements are anticipated for buildout at this time. It is recommended that the master plan be reviewed on a regular basis to determine if conditions change enough to warrant additional improvements.

## Proportionate Share Analysis

### Cost of Capital Facilities

Detailed engineer's estimates of cost are described in the appendix. These costs are associated with master planned improvements to properly handle future development demands and are thus eligible for inclusion in an impact fee. Only that portion of the capital facilities that will benefit growth in the 10-year planning period are eligible for inclusion. An appropriate inflation factor can be incorporated in the analysis to cover rising costs in the future. An inflation rate of 3 percent per year was applied to the buildout system improvement costs according to the year the improvements are scheduled to be constructed. Table 9 shows the proportional share of capital projects associated with the growth expected in the next 10 years.

**Table 9 Impact Fee Improvement Projects**

Component	Result
Current ERU's	3,004
Buildout ERU's	4,106
Undeveloped ERU's	1,102
ERU's in 10 Year CIP	506
10 Year ERU Percentage	45.88%
Total Impact Fee Improvements	\$0
Cost per ERU	\$0.00

### Cost of Master Planning

The City expects to expend money every year to review sanitary sewer master plan, IFFP, and IFA and every five years to fully update the same. These costs are eligible for inclusion in an impact fee. Only that portion of the master planning that will benefit growth in the 10-year planning period are eligible for inclusion. An appropriate inflation factor can be incorporated in the analysis to cover rising costs in the future. An inflation rate of 3 percent per year was applied to the master planning costs according to the year the costs are scheduled. Table 10 shows the proportional share of master planning associated with the growth expected in the next 10 years.

**Table 10 Master Planning Cost Share**

<b>Component</b>	<b>Result</b>
Current ERU's	3,004
Buildout ERU's	4,106
Undeveloped ERU's	1,102
ERU's in 10 Year CIP	506
10 Year Contribution Percentage	14.41%
Total Master Plan Update Costs	\$112,000
Cost per ERU	\$31.91

***Value of Free Capacity in Sanitary Sewer System***

The existing sanitary sewer system has excess capacity or free capacity available. The original sanitary sewer system for Alpine City was constructed in 1979 through 1980 at a cost of \$1,435,257.00. The current City asset list can be seen in the appendix. It is assumed the rest of the facilities after 1981 were contributed to the City as developer contributions and are not included in the free capacity analysis. Table 11 shows the free capacity summary which shows the cost of the original system that could be re-coupled from future connections. The sewer model shows the original system's oversized pipes have an average of 22.9 percent utilization while the buildout population would utilize 36.1 percent. This translates to 36.6 percent of the value of the existing system is utilized by future connections. The free capacity portion of the impact fee will be utilized to repay the exiting sewer enterprise account to recoup actual costs spent on the original system improvements.

**Table 11 Existing System Free Capacity Summary**

<b>Item</b>	<b>Result</b>
Total Cost of Original Sanitary Sewer System	\$1,435,257.00
Current Average Percent Utilized	27.7%
Buildout Average Percent Utilized	31.7%
Percent Cost Associated with Buildout	12.6%
Total Buy-in Costs	\$181,104.98
Buy-in Cost per ERC	\$164.36

***Cost Associated with Existing Deficiencies***

As described previously, the existing sanitary sewer system has deficiencies, but these are not associated with future connections and cannot be included in an IFA.

## Developer Contributions

As growth occurs throughout the City, developers are required to install minimum size sewer lines to serve the homes within their development. Sometimes lines throughout the City need to be upsized to accommodate homes outside the development. The City collects impact fees from all development to cover the cost of upsizing. The detailed cost estimates prepared in the Master Plan only include those costs related to upsizing developer provided facilities or wholly City constructed facilities. No impact fees can be collected for developer provided facilities.

## Existing Impact Fee Balance

The City has an existing impact fee balance collected as part of a previous IFA. Those fees were collected for projects identified as future growth related at the time of adoption. This balance will be utilized to offset the cost of capital facilities and free capacity costs for connections within the last six years. Table 12 shows the distribution of the existing impact fee balance.

**Table 12 Existing Impact Fee Fund Balance Allocation**

Component	Result
Existing Impact Fee Fund Balance	\$0.00
Previous 6 years ERC Growth	133
Buy-in Portion	\$21,859.88
Buildout Improvements Portion	-\$21,859.88

## Impact Fee Summary

Table 13 shows the total impact fee for Alpine City sanitary sewer system. It includes the cost to future connections of their buy-in to the existing system, their portion of master planned costs, their portion of their buildout improvements, and a discount based on the existing impact fee fund balance.

**Table 13 Total Impact Fee Summary**

Component	Cost
Free Capacity Component	\$164.36
Master Plan Updates Component	\$31.91
Buildout Improvements Component	\$0.00
Existing Impact Fee Balance Discount	\$19.84
<b>Total Impact Fee</b>	<b>\$216.11</b>

## IFA Certification

I certify that the attached impact fee analysis (IFA):

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. offset costs with grants or other alternate sources of payment; and
4. complies in each and every relevant respect with the Impact Fees Act.

This certification made in accordance with Utah Code Annotated, 11-36a-306(2), with the following caveats:

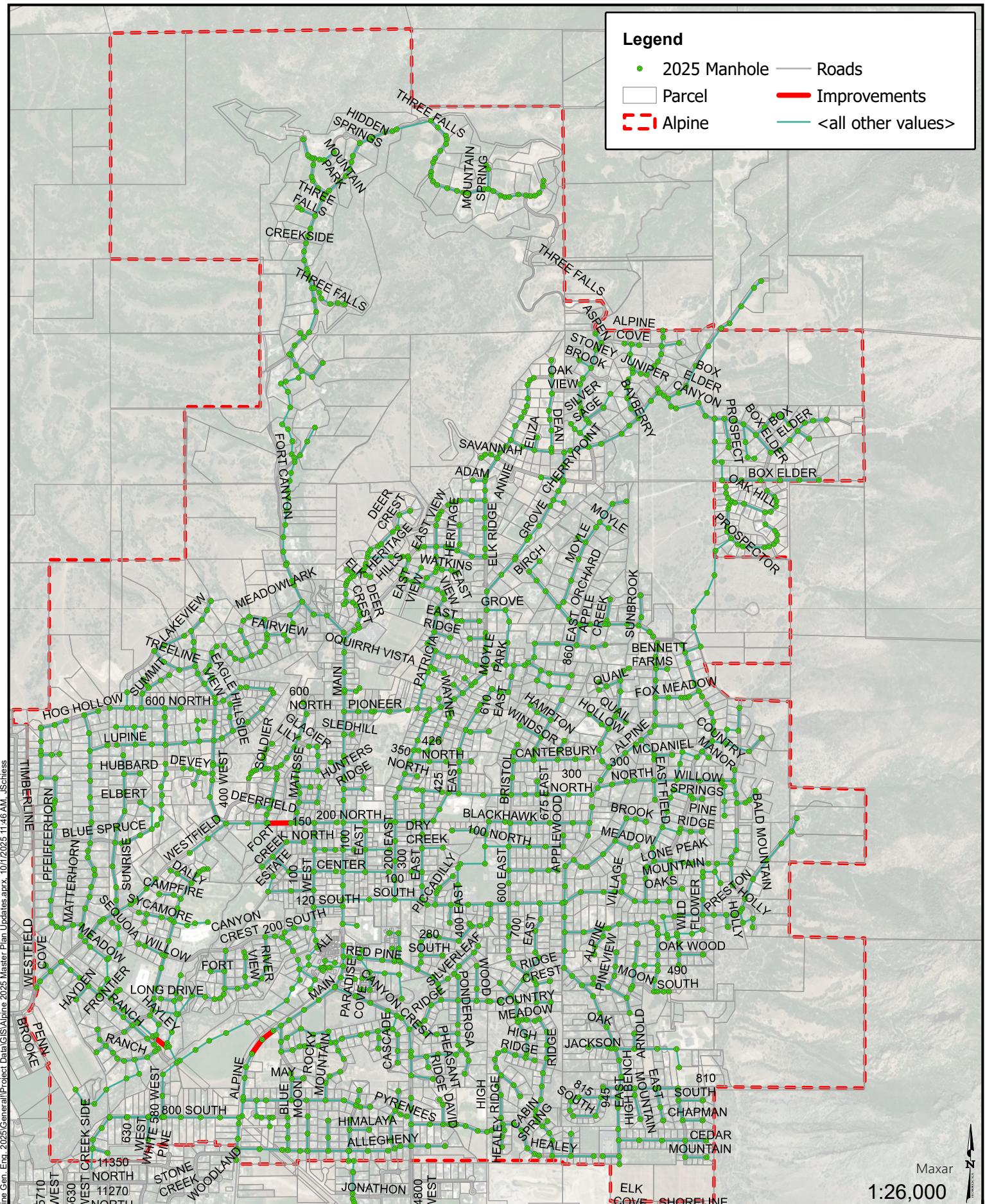
1. All of the recommendations for implementation of the IFFP made in the IFFP or in the IFA are followed in their entirety by Alpine City staff and Council in accordance to the specific policies established for the service area.
2. If all or a portion of the IFFP or IFA are modified or amended, this 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 Alpine City and outside sources.

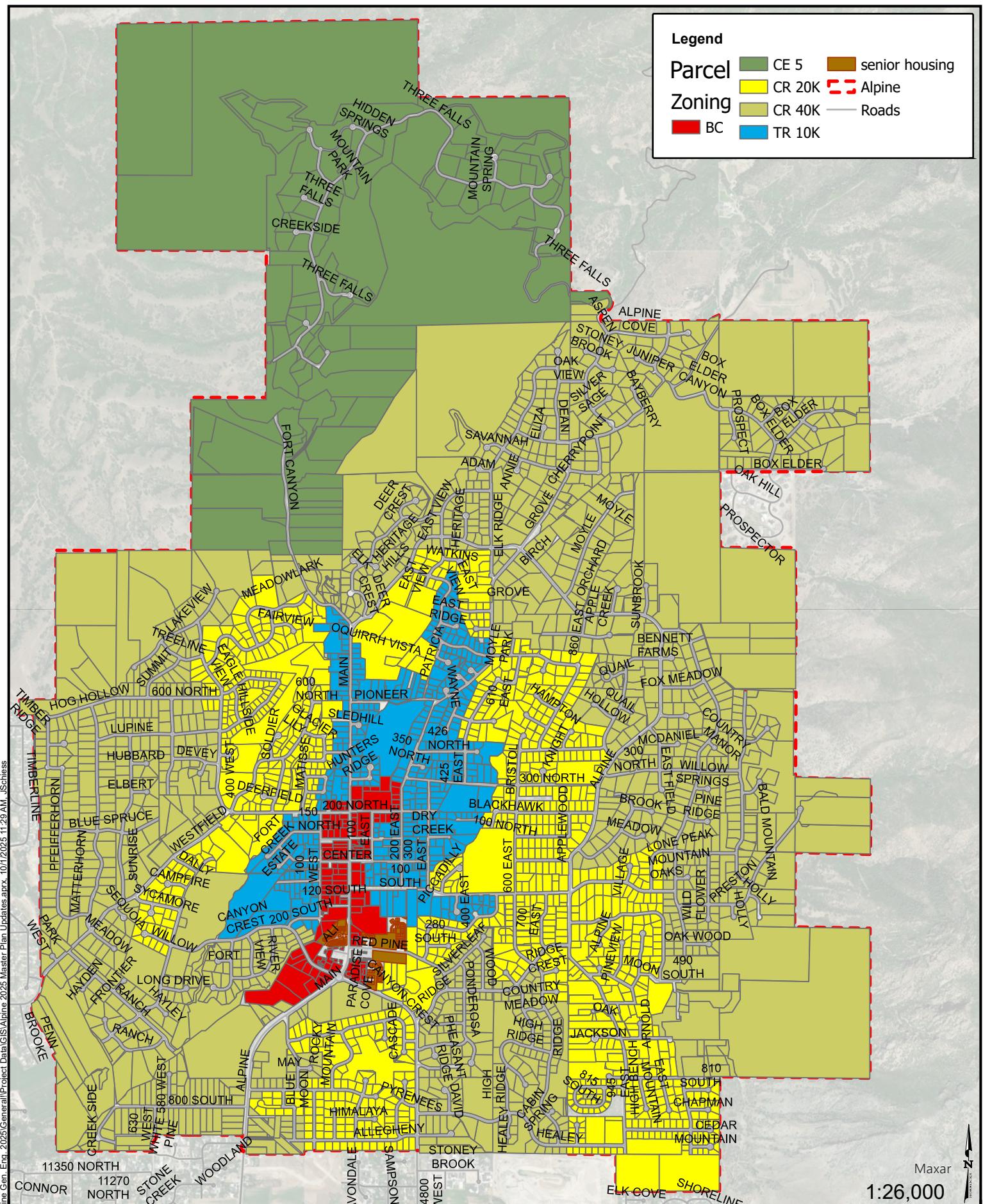
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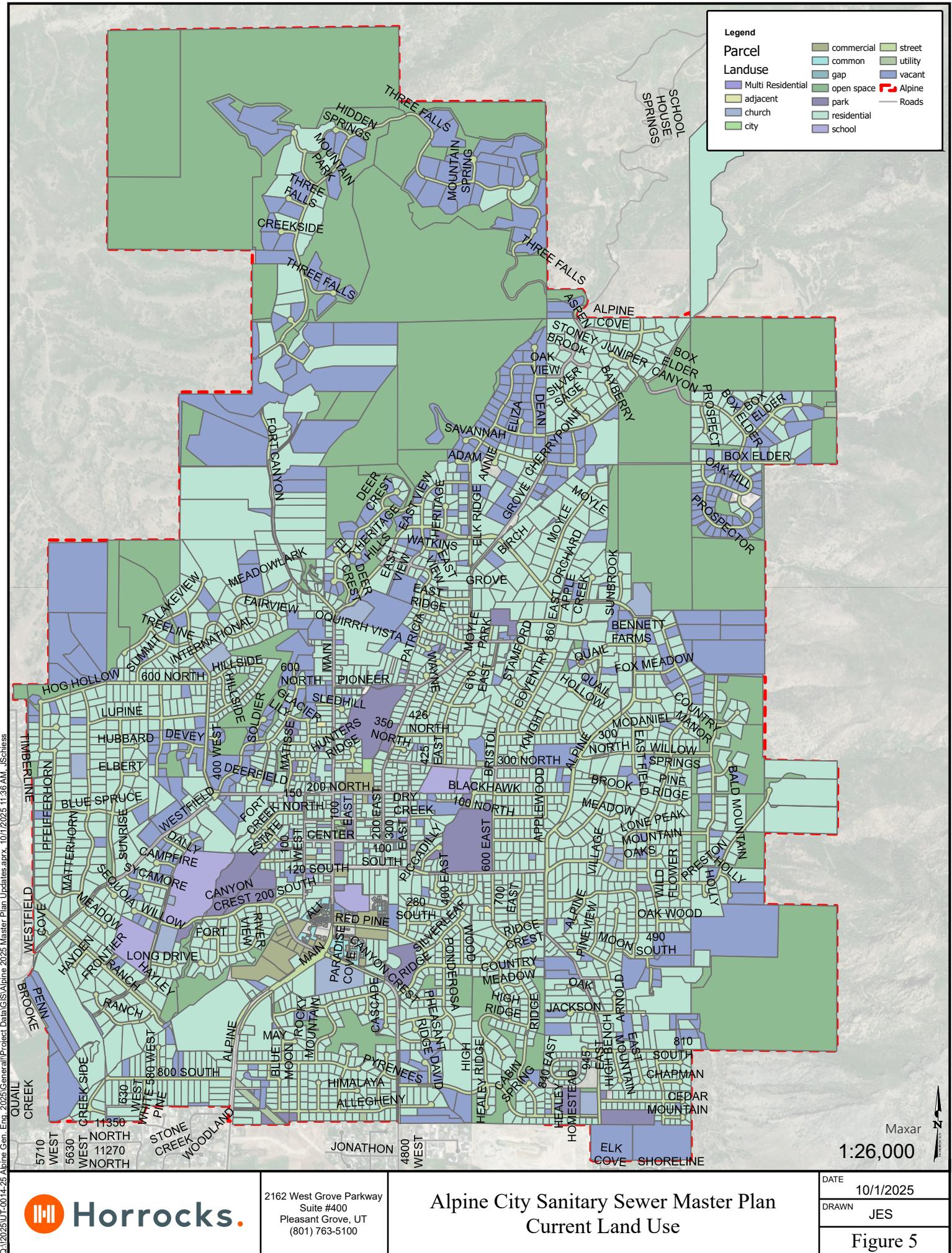
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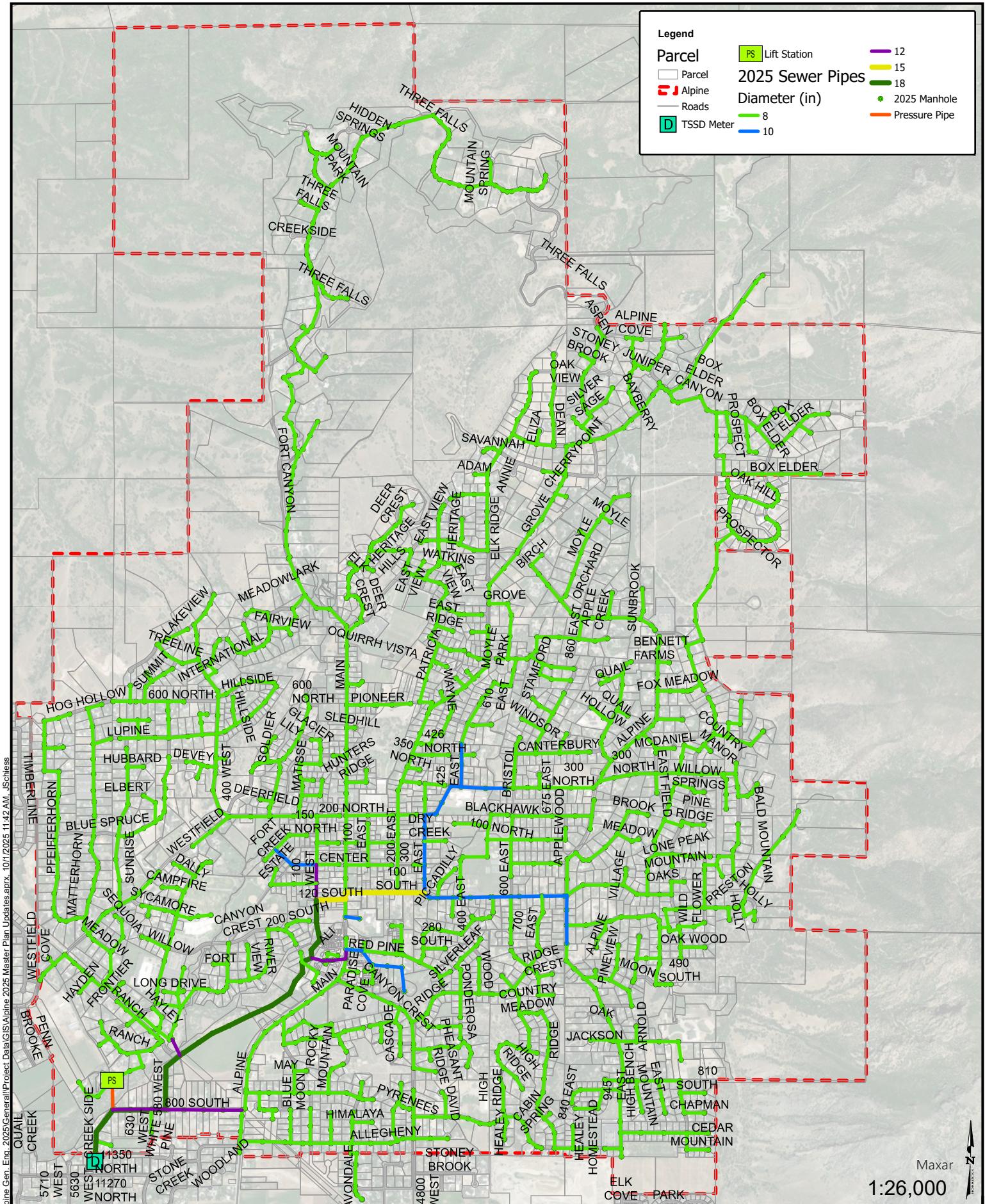
John E. Schiess, P.E.  
Horrocks Engineers

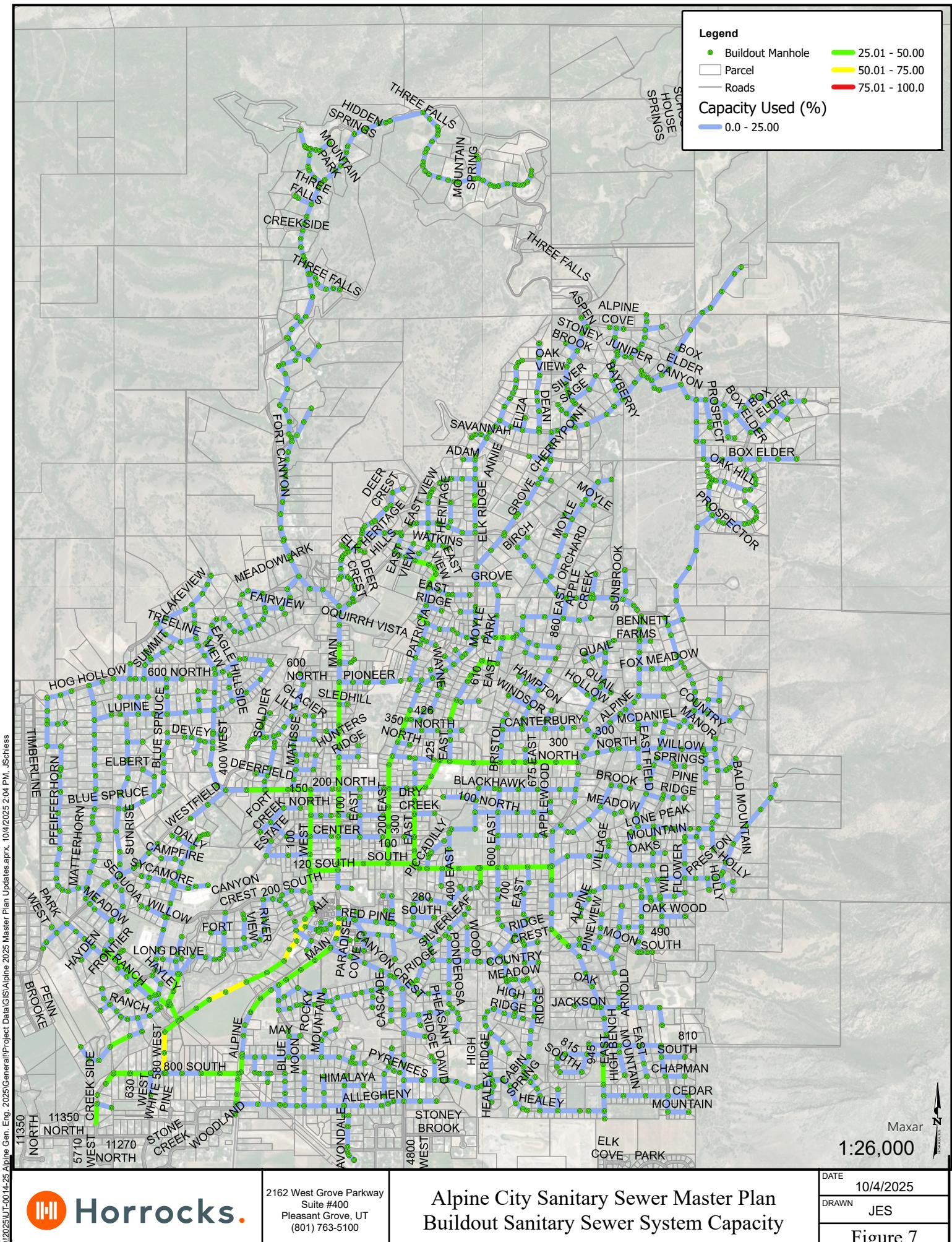
## APPENDIX











***Table 14 Sanitary Sewer System Asset List***

**Table 15 Detailed Cost Estimates**

### Existing Sanitary Sewer Replacement Cost

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$8,931,660
2	8 inch PVC	308,287	LF	\$178.84	\$55,134,047
3	10 inch PVC	9,893	LF	\$190.02	\$1,879,868
4	12 inch PVC	4,043	LF	\$207.90	\$840,540
5	15 inch PVC	2,025	LF	\$234.73	\$475,328
6	18 inch PVC	7,117	LF	\$268.26	\$1,909,206
12	5 foot manholes	1,500	EA	\$7,824.34	\$11,736,510
13	6 foot manholes	25	EA	\$10,059.87	\$251,497
15	Service Connections	1,918	EA	\$4,135.72	\$7,932,311
16	Lift Station	1	EA	\$500,000.00	\$500,000
17	Class "A" Road Repair (10 ft/lin ft)	3,313,650	SF	\$9.79	\$32,440,634
18	Imported Backfill (60 cf/lin ft)	1,325,460	TON	\$38.08	\$50,473,517
19	Traffic Control	1	LS	\$12,047,797.86	\$12,047,798
20	Bypass Pumping	1	LS	\$3,011,949.47	\$3,011,949
Sub Total (Construction)					\$187,564,865
Contingencies					\$28,134,730
Total (Construction)					\$215,699,595
Design and Construction Engineering					\$28,134,730
Administration, Legal, and Bond Counsel					\$1,875,649
Total (Professional Services)					\$30,010,378
<b>Grand Total</b>					<b>\$245,709,973</b>
May 2022 CCI = 13004					
Data From Sewer Model Data Base					
Costs are in 2022 dollars					
<b>Replacement Costs Per Year (80 Years)</b>					<b>\$3,071,375</b>

**Ranch Drive Sewer Reconstruct at New Grade**

<b>Item</b>	<b>Description</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Cost</b>	<b>Cost</b>
1	Mobilization	1	LS	---	\$3,912
2	8 inch PVC Sewer	350	LF	\$178.84	\$62,594
3	Manholes	2	EA	\$7,824.34	\$15,649
4	Service Connections	0	EA	\$4,135.72	\$0
5	Class "A" Road Repair	0	SF	\$9.79	\$0
6	Imported Backfill	0	TON	\$38.08	\$0
7	Traffic Control	0	LS	\$15,648.54	\$0
8	Bypass Pumping	1	LS	\$19,560.67	\$19,561
Sub Total (Construction)					\$101,715
Contingencies					\$15,257
Total (Construction)					\$116,973
Design and Construction Engineering					\$15,257
Administration, Legal, and Bond					
Counsel					\$1,017
Total (Professional Services)					\$16,274
<b>Grand Total</b>					<b>\$133,247</b>

April 2025 CCI = 13798

Costs are in 2025 dollars

## 200 North Sewer Reconstruct at New Grade

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$12,328
2	8 inch PVC Sewer	480	LF	\$178.84	\$85,843
3	Manholes	2	EA	\$7,824.34	\$15,649
4	Service Connections	5	EA	\$4,135.72	\$20,679
5	Class "A" Road Repair	4,800	SF	\$9.79	\$46,992
6	Imported Backfill	953	TON	\$38.08	\$36,307
7	Traffic Control	1	LS	\$41,093.93	\$41,094
8	Bypass Pumping	1	LS	\$61,640.90	\$61,641
Sub Total (Construction)					\$320,533
Contingencies					\$48,080
<b>Total (Construction)</b>					<b>\$368,613</b>
Design and Construction Engineering					\$48,080
Administration, Legal, and Bond					
Counsel					\$3,205
<b>Total (Professional Services)</b>					<b>\$51,285</b>
<b>Grand Total</b>					<b>\$419,898</b>

April 2025 CCI = 13798

Costs are in 2025 dollars

### Alpine Highway Sewer Reconstruct at New Grade

Item	Description	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	LS	----	\$8,587
2	8 inch PVC Sewer	350	LF	\$178.84	\$62,594
3	Manholes	2	EA	\$7,824.34	\$15,649
4	Service Connections	1	EA	\$4,135.72	\$4,136
5	Class "A" Road Repair	3,500	SF	\$9.79	\$34,265
6	Imported Backfill	695	TON	\$38.08	\$26,474
7	Traffic Control	1	LS	\$28,623.48	\$28,623
8	Bypass Pumping	1	LS	\$42,935.22	\$42,935
Sub Total (Construction)					\$223,263
Contingencies					\$33,489
<b>Total (Construction)</b>					<b>\$256,753</b>
Design and Construction Engineering					\$33,489
Administration, Legal, and Bond					
Counsel					\$2,233
<b>Total (Professional Services)</b>					<b>\$35,722</b>
<b>Grand Total</b>					<b>\$292,475</b>

April 2025 CCI = 13798

Costs are in 2025 dollars

1  
2  
3 **ALPINE CITY COUNCIL MEETING**  
45 **January 13, 2026**  
67 Mayor Carla Merrill called the meeting to order at 6:02 pm.  
89 **I. CALL MEETING TO ORDER**  
10

11 **A. Roll Call** Mayor Carla Merrill  
 12 The following were present at the anchor location, which constituted a quorum: Brent Rummller, Jessica  
 13 Smuin, Sarah Blackwell, Chrissy Hannemann, and Andrew Young  
 14 Staff: Shane Sorensen, Ryan Robinson, Steve Doxey, Chief Brian Patten, Jason Judd, DeAnn Parry  
 15 Others: Susan Gunby, Curtis Gunby, Thomas Olsen, Jeff Squires, Dan Blackwell, Sullivan Love, Mason  
 16 Bennett, Sheryl DeGroot, Steve Burrows, Will Jones, Taj Young, Derek Rowley, Bob Schirmer, Katherine  
 17 Johnston, Ken Berg, Lawrence Hilton, Sheryl Dame, Ross Welch, Kristin Eberting  
 18 **B. Prayer** Chrissy Hannemann  
 19 **C. Pledge** Brent Rummller

20 **II. SWEARING IN OF NEWLY ELECTED OFFICIALS**  
 21 Re-elected Mayor Carla Merrill and new City Council members Sarah Blackwell and Andrew Young were  
 22 sworn in by City Recorder DeAnn Parry.23 **Motion:** Jessica Smuin moved to change the order of the agenda to hear the presentation from the One Kind Act a  
 24 Day Foundation. Chrissy Hannemann seconded the motion. There were 5 yes votes and 0 no votes, as  
 25 recorded below. The motion passed unanimously.

<u>Yes</u>	<u>No</u>	<u>Excused</u>
Chrissy Hannemann		
Andrew Young		
Brent Rummller		
Jessica Smuin		
Sarah Blackwell		

35 **III. REPORTS & PRESENTATIONS**  
 36

37 **A. Presentation: One Kind Act a Day Foundation**  
 38

39 Mason Bennett explained that One Kind Act a Day is a non-profit organization funded by the Semnani  
 40 Family Foundation to inspire daily acts of kindness. They have enjoyed the partnership with Alpine City  
 41 and our three schools. Alpine's Youth Council enthusiastically installed more signs than any other city,  
 42 and the Foundation was pleased to be included in the Alpine Days parade. Jen Wadsworth and Juliette  
 43 Ensign have served as wonderful liaisons, but as Juliette has moved from Alpine, they would like to recruit  
 44 another representative.

45 Mason presented the city with an attractive framed proclamation and congratulated everyone on achieving  
 46 official status as a City of Kindness,

47 Brent Rummller commented that he appreciates the daily texts sent out by the foundation with kindness  
 48 quotes and suggestions.

51 **III. WORK SESSION**  
 52

53 **A. Presentation of Culinary Water Master Plan Update – Horrocks Engineers**  
 54

55 John Schiess from Horrocks Engineers provided an update on the Culinary Water Master Plan. He  
 56 explained that the purpose is to review state and federal requirements, analyze current water usage, and  
 use a computer model to evaluate how the existing water system is performing. The model is also used to  
 project future growth and anticipated water demand, and to identify the improvements needed to meet

1 those future needs. John said that this process is required by the State in order for the city to set impact  
2 fees.

3 John explained that the update includes three main components. The first is the Water Master Plan, which  
4 looks at how the city meets current needs, plans for future culinary needs, and identifies other needed  
5 improvements. The second is the Impact Fee Facilities Plan (IFFP), which identifies specific infrastructure  
6 projects needed to serve growth. The third is the Impact Fee Analysis (IFA), which assigns costs to those  
7 projects and determines what portion can be attributed to growth and recovered through impact fees.  
8

9 John reviewed a map of the current water system and explained that, overall, the system is in good  
10 condition with only minor deficiencies. He discussed facilities including the Box Elder, Grove, and Willow  
11 Canyon tanks, and the various waterline improvements around the city that are intended to improve fire  
12 flow.

13 John pointed out the need for a larger waterline on the east side of the city and explained that many of the  
14 planned improvements will benefit both current and future residents. Project costs are split between those  
15 that address existing needs and those related to growth. Only the growth-related portions are eligible to be  
16 funded through impact fees.

17 John explained that fire flow standards are set by the International Fire Code and they change regularly,  
18 which makes long-term planning a challenge. Water tanks that met standards when they were built may be  
19 considered too small with new requirements. Fire flow needs are calculated based on the size of the largest  
20 structure in an area and whether it has fire sprinklers.

21 The Box Elder and Willow Canyon tanks were evaluated assuming the largest homes in those areas do not  
22 have sprinklers. John explained that if those homes *do* have sprinklers, the required fire flow storage would  
23 be lower, and existing tanks may be adequate. He recommended taking a closer look at those areas with  
24 the Fire Marshal to better understand the actual requirements and if adding tanks or booster pumps would  
25 be best for each area.

26 Since the previous master plan was created, the city has installed electronic water meters which have  
27 provided much better usage data. This data was used in the updated model, giving us a more accurate  
28 analysis of the system and future needs.

29 John explained the concept of level of service, which describes the standard the water system is designed  
30 to meet. The plan first looks at whether the existing system meets that standard and then suggests  
31 improvements to maintain the same level of service as the city grows. Only improvements that go beyond  
32 the existing level of service can be funded through impact fees.

33 John reviewed the project costs and timelines included in the plan. He explained that project costs are  
34 shown as total costs, with portions assigned to existing needs and growth. The recommended timing of  
35 projects is based on engineering judgment, but staff can adjust the schedule to account for the budget,  
36 priorities of other projects, or construction timing. The water system was close to breaking even with user  
37 fees in 2024, and the plan does not propose current changes to water rates, although adjustments may be  
38 needed in the future.

39 The expansion of the Grove tank is the most expensive project identified in the plan. It receives water from  
40 Grove Spring and has functioned well for approximately 60 years. This is beyond the typical life for a  
41 concrete tank. The current capacity is adequate, but future growth is expected to exceed that capacity. Other  
42 pressure zones rely on booster pumps that draw from the Grove tank, and increasing storage there would  
43 reduce the water spilling into the PI system and allow the city to keep more spring water in the culinary  
44 system. We will need further study before deciding whether to replace the tank or add to its storage  
45 capacity.

46 The council discussed fire flow standards, the necessity of fire sprinklers in reducing infrastructure needs,  
47 and the city's responsibility to provide adequate fire protection for everyone. Large homes that are not in

1 the Wildland Interface also affect the calculations for fire flow. Culinary water must be used for fire  
 2 protection because it is available all year and is free from mud and debris that can damage the equipment.  
 3

4 Mayor Carla Merrill thanked John Schiess for his presentation. The mayor also mentioned that Jason Judd,  
 5 our new City Engineer, was at the meeting tonight and she appreciated him attending.  
 6  
 7

8 **IV. CONSENT CALENDAR**

9 **A. Approve City Council Minutes from the December 4<sup>th</sup> Training and December 9<sup>th</sup> Meetings**

10 **B. Approval of Proposal to Conduct Main Street Crosswalk and Related Items Warrant Study – Fehr**  
**& Peers: \$16,700**

11 **C. Partial Payment No. 1 – CDBG ADA Ramp Project, Pronghorn Construction: \$38,081.60**

12 **D. Final Payment – CDBG ADA Ramp Project, Pronghorn Construction: \$76,229.71**

13 **E. Resolution R2026-01: Reappointment of Trail Committee Members**

14 **F. Resolution R2026-02: Reappointment of Prime-Time Committee Members**

15 **G. Resolution R2026-03: Approval of Amended Consolidated Fee Schedule – TSSD Impact Fee**

16 **H. Resolution R2026-04: Appointment of Brent Rummller and Chrissy Hannemann to the Lone Peak**  
**Public Safety District Board**

17 **I. Resolution R2026-05: Appointment of Shane Sorensen to the Timpanogos Special Service District**  
**Board**

18 **J. Resolution R2026-06: Appointment of Ryan Robinson and Mayor Carla Merrill to the Central Utah**  
**911 Board**

19 **K. Ordinance 2026-01: Adoption of the 2006 Wildland Urban Interface Code**

20 A discussion about the Consent Calendar resulted in the following clarifications:  
 21

- 22 - The warrant study will look at relocating the Main Street crosswalk as well as other traffic mitigation  
 23 ideas such as staggered school release times and direction of travel implications. The study by Fehr &  
 24 Peers will be completed soon and should give the council a bigger picture view of the issues.
- 25 - The Trails Committee has done an excellent job in the past, and Andrew Young has been assigned to  
 26 work with them going forward. If additional members are needed after an evaluation period, the  
 27 committee can work with the mayor to request additional help.
- 28 - Brent Rummller has done great work on the TSSD Board. Recently the board requested someone with  
 29 engineering and technical knowledge to help with the large budget decisions that are ahead. This is a  
 30 current specialized need and the reason for Shane Sorensen's appointment to the board.
- 31 - Assignments for the LPPSD Board will be updated in 2027 so that terms of service can be staggered.

32 **Motion:** Chrissy Hannemann moved to approve the Consent Calendar as presented. Sarah Blackwell seconded the  
 33 motion. There were 4 yes votes and 1 no vote, as recorded below. The motion passed.  
 34

<u>Yes</u>	<u>No</u>	<u>Excused</u>
Chrissy Hannemann	Andrew Young	
Brent Rummller		
Jessica Smuin		
Sarah Blackwell		

47 **V. PUBLIC COMMENT**

48 **Steven Burrows – Meadowlark Drive, Alpine**

49 *Steven said this is a historic meeting with the new City Council members being sworn in. He has lots of  
 50 confidence in the city staff and appreciates the improvements made on Canyon Crest Road. He supports the  
 51 continued effort to make positive changes in the water systems, which are like a three-legged stool. Mother  
 52 Nature provides water at high or low levels; retention helps us use what we receive and takes planning and  
 53 funding; distribution and conservation help in the effort to meet water needs. We are experiencing the lowest  
 54 snowfall in 25 years, so Steven looks forward to continued discussions about our water systems.*

1 **VI. REPORTS & PRESENTATIONS**2 **B. City Council Assignments – 2026**3 Mayor Carla Merrill said she attends as many city events as possible and encouraged the council members  
4 to do the same and be involved in our community.  
5  
6 The following committee assignments were announced:  
7

Board or Committee	Assigned
Mayor Pro Tem	Jessica Smuin
Aging Advisory Council	Carla Merrill
Alpine Days Rodeo Parking	Andrew Young
Alpine Water District	Andrew Young
Alpine Youth Council	Sarah Blackwell
American Fork Canyon Work Group	Carla Merrill
American Fork Chamber Executive Council	Carla Merrill
American Fork Chamber of Commerce	Sarah Blackwell
American Fork Hospital Outreach	Carla Merrill
Aspen Peaks School District Superintendent Candidate Review Committee	Carla Merrill Chrissy Hannemann
Corridor Preservation Review Committee	Carla Merrill
Council of Governments (COG)	Carla Merrill Alt: Chrissy Hannemann
Finance Committee	Chrissy Hannemann
History Committee	Jessica Smuin
Joint Policy Advisory Committee	Carla Merrill Alt: Jessica Smuin
Lone Peak Public Safety District	Brent Rummel Carla Merrill Alt: Chrissy Hannemann
Metropolitan Planning Organization	Carla Merrill
MAG Budget and Audit Committee	Carla Merrill
Mountainland Association of Governments (MAG)	Carla Merrill Alt: Chrissy Hannemann
Mountainland Continuum of Care	Carla Merrill
Moyle Park	Jessica Smuin
Trails Committee	Brent Rummel Andrew Young
Utah County Boundary Commission	Carla Merrill
Wasatch Front Regional Council	Carla Merrill

8 It was noted that training for council members will take place April 22-24 and again in October. Detailed  
9 information should be available later this month. Those planning to attend should coordinate with Carolyn  
10 Riley for hotels and registration.  
11  
1213 **VII. ACTION/DISCUSSION ITEMS**14 **A. Approval of Contract with Landmark Design for Parks Master Plan Update: \$50,635 (additional  
15 optional items \$43,160)**16 Ryan Robinson explained that the current Alpine City Parks Master Plan was created in 2004 and needs to  
17 be updated to meet the current needs and demands of the city. A master plan is a long-range document that  
18 guides how a city will develop, improve, and manage its parks, trails, and recreational facilities. It evaluates  
19 existing park assets, identifies current and future community needs, and establishes goals, standards, and  
20 priorities for land acquisition, facility improvements, and maintenance. The plan will serve as a policy  
21 framework to help elected officials and staff make consistent decisions, coordinate capital improvement  
22

1 projects, and ensure that park investments align with population growth, recreation demands, and the  
2 community's overall vision.  
3

4 Three consulting firms submitted bids for this project, with bids ranging from \$50,000 (with additional  
5 options and costs), to \$199,130. Staff reviewed each proposal in detail and checked with multiple  
6 references for each firm. Heidi Smith, Parks & Recreation, has a background in design and marketing and  
7 also reviewed the proposals. Staff recommend that the council approve Landmark Design for the Alpine  
8 City Parks Master Plan. Their bid came in at a base price of \$50,635, with additional optional services not  
9 to exceed a total of \$93,795. The options should be evaluated carefully to determine if they are needed.  
10 This project is planned for a six-month timeline but can be adjusted. Public surveys and resident feedback  
11 are an important element.  
12

13 **Public Notice**

14 No public hearing is required for this agenda item.  
15

16 **General Plan Reference**

17 Pages 20-27 of the Alpine General Plan cover high level goals and policies associated with the various  
18 parks.  
19

20 **Staff Recommendation**

21 Approve Landmark Design as the consultant for the Alpine City Parks Master plan.  
22

23 Shane Sorensen said that in order to charge impact fees we must have justification. He suggested that we  
24 do not include the operations and management option at this time, as we can add it in the future if it is  
25 beneficial. Entities like Landmark create these plans as part of their business so they know the rules,  
26 requirements, and how to analyze existing deficiencies and figure out the needed growth-related  
27 improvements. Annual updates to the plan can be paid for from impact fees. One concern is staff  
28 bandwidth. Even when using a consultant, there is significant staff time involved in providing  
29 information, attending meetings, and preparing presentations for the City Council.  
30

31 Alpine added significant infrastructure and completed major projects with impact fees during our high  
32 growth period. This benefits the city now, as construction costs are much more expensive today.  
33

34 The projects submitted by council members for the budget include a significant number of parks  
35 projects. To be eligible for impact fee use, they must be in the master plan. By State law, changes to  
36 impact fees do not go into effect for 90 days after approval by the City Council.  
37

38 Brent Rummller said that it is important that we create a thorough survey for residents and have really good  
39 advertising. Staff can determine which additional services would be best included in this plan. The  
40 Utah League of Cities and Towns (ULCT) suggested using consultants to write proposals to be more  
41 successful. It is important to have resident input on this matter, but when we advertised the option to  
42 form a Parks Committee, we only received one application. There are not many people ready to step  
43 up and volunteer. Another benefit of the master plan will be to make sure our impact fees are  
44 defensible.  
45

46 Ryan Robinson said that with the surveys we have conducted recently (Main Street and community  
47 wellbeing), the team from Utah State was impressed with our citizen level of response. We can create  
48 the survey questions ourselves and submit them in February. It will require funds to create the plan  
49 now but will help us get grants in the future. Some grants are a 50 percent match, but Federal matches  
50 are lower. Our Main Street plan only cost the city \$6,000, and the remaining \$100,000 was paid from  
51 a grant through the Mountainland Association of Governments (MAG). Ryan appreciated that  
52 Landmark gave us a base price with optional add-ons.  
53

54 Andrew Young was concerned about the cost for the plan update and said he would like to see an example  
55 of a master plan for another city previously created by Landmark. He suggested we have residents  
56 work on the plan to save money. Andrew said we could gather resident ideas, form them into goals,

1 submit the goals for feedback, and then send the results to a designer. He expressed criticism of the  
 2 Main Street plan design, and recommended tabling this proposal.

3 Jessica Smuin liked the idea of an interactive map so people can find the various parks. She thinks we need  
 4 a way to educate residents about our assets.

5 Mayor Carla Merrill said that Draper City has interactive map for their trail system which lets people know  
 6 if a trail is open or closed. There is some federal funding available for this type of project, but it is  
 7 drying up quickly.

8 Shane Sorensen clarified that the interactive map mentioned in the proposal is for the master plan process  
 9 and would allow designers to move photos around. The map is not proposed as an end-user experience  
 10 at this time.

11 Chrissy Hannemann confirmed that some of the payment for this study could come from PARC tax funds  
 12 and suggested it would be helpful to have some park-related questions on the survey. She would like  
 13 to see a five-year plan for parks so we can plan when we will address which needs. The previous plan  
 14 is 20 years old, so this will be a big improvement. The Parks Master Plan was included in the budget  
 15 because the council saw the need.

16 Sarah Blackwell confirmed that updating the master plan will help us identify and qualify for more grants.  
 17 She wondered if Landmark could also guide us to specific grant opportunities for the city.

18 **Motion:** Jessica Smuin moved to approve Landmark Design for the Alpine City Parks Master Plan with a not-to-exceed amount of \$64,500 and the additional service of the parks related financing and funding analysis.  
 19 Brent Rummel seconded the motion. There were 4 yes votes and 1 no vote, as recorded below. The motion  
 20 passed.

<u>Yes</u>	<u>No</u>	<u>Excused</u>
Chrissy Hannemann	Andrew Young	
Brent Rummel		
Jessica Smuin		
Sarah Blackwell		

21 Brent Rummel mentioned the email sent out recently listing upcoming projects to be considered for the  
 22 budget. He appreciated the work staff have done to send information to council members so they can ask  
 23 questions and be prepared to make informed decisions.

24 **B. Resolution R2026-07: Approval of Amended and Restated Interlocal Agreement for the Lone Peak  
 25 Public Safety District to Amend the Fire Funding Formula**

26 Shane Sorensen said that over the last several months, the city has been working with Highland City,  
 27 through the Lone Peak Public Safety District (LPPSD) Board, to address some of Highland's concerns  
 28 with the LPPSD Interlocal Agreement (ILA), particularly with the fire funding formula. Late in 2025, an  
 29 ILA amendment was approved by both cities clarifying the process for changing the funding formula.

30 Once the ILA was amended to clarify the process, the LPPSD Board considered a new fire funding  
 31 formula at their November 19<sup>th</sup> board meeting. Three options were considered, all of which were based  
 32 on the taxable value of all real property within the city in comparison to the aggregate taxable value of all  
 33 real property within the district. These options are summarized as follows:

- 34 • Option 1 – Based on taxable value with the change going into effect July 1, 2026 (FY2027).
- 35 • Option 2 – Allows for a transition into the new formula over a two fiscal year period, with a 50  
 36 percent step in for year one and the full amount in year two.
- 37 • Option 3 – Allows for a transition into the new formula over a two fiscal year period but uses the  
 38 LPPSD fund balance to make up the difference of Alpine's assessment in year one and provides a  
 39 payout to Highland in year one in a proportionate amount to the fund balance used by Alpine in that

1 year. (Note: Pending the conclusion of the FY2025 audit, there is approximately \$3.4M in the fund  
 2 balance, with \$830,000 being assigned to administration. Even with next year's budget numbers not  
 3 being known, it appears that sufficient funds are available from the fund balance for this option.)  
 4

5 After a lengthy discussion by the board, Option 1 was approved. Based on the current FY2026 fire  
 6 budget, this option would be an increase of \$281,251 for Alpine City, with a decrease of the same  
 7 amount for Highland City. Highland City did mention that there is some support from their council for  
 8 Option 3, and that it could still be an option. This increase would take effect in the new budget year in  
 9 July.  
 10

11 With Option 1 based on this year's fire budget, the funding allocation for each city would be as follows:  
 12

City	Old Assessment	New Assessment	Difference
Alpine	\$1,529,294	\$1,810,544	\$281,251
Highland	\$2,817,049	\$2,535,799	(\$281,251)

13 The Highland City Council approved Option 1 at their December 2<sup>nd</sup> City Council meeting. The proposal  
 14 is now being presented to the Alpine City Council for consideration. The 2026 Amended and Restated  
 15 Interlocal Agreement that was previously approved by the LPPSD Board and the Highland City Council  
 16 was included in the packet.  
 17

18 **Staff Recommendation**

19 Review and consider approval of Resolution R2026-07, approving an amendment to the Lone Peak  
 20 Public Safety District Interlocal agreement, changing the fire funding formula to be based on the taxable  
 21 value of property.  
 22

23 Staff and council members shared their opinions:

24 Shane Sorensen clarified that it was Highland City that proposed the new funding formula, not the fire  
 25 department. An additional fire fighter position was approved, but will not be filled until the funding is  
 26 also approved. If a funding change is proposed for the police department as well, it would have to  
 27 come from one of the cities.  
 28

29 Chrissy Hannemann said that the police and fire chiefs do not discuss funding, as that is the City Councils'  
 30 responsibility. The LPPSD has built up adequate funds in their balance to soften the financial blow  
 31 while we do more research and consider police funding. We have time to study the issues. The district  
 32 receives revenue from Alpine, wildland deployment, and reimbursement from the school district for  
 33 officers assigned to the schools.  
 34

35 Chrissy personally likes Option 3. If the council approves Option 1 tonight, portions of the fund  
 36 balance could be allocated to cover some of the revenue for the next few years. We could also add a  
 37 stabilizing clause to the motion.  
 38

39 Andrew Young stated that public safety is the most expensive thing we will pay for in the next few years.  
 40 Alpine's property tax value is higher than Highland's, and if we do not go along with the new funding  
 41 formula Highland said they will consider leaving the district. He is concerned that a large property tax  
 42 increase will be needed to fund public safety. Andrew thinks that Alpine could run their own fire  
 43 department with similar costs. He feels that the new funding formula is like a mortgage for Alpine.  
 44 Andrew would like to see the funding formula locked in for more than three years.  
 45

46 Brent Rummel commented on staffing levels for the fire department. Seventy percent of the time Highland  
 47 has had only three fire fighters and Alpine has had four, but Highland has been paying 66 percent of  
 48 the costs. This is why they asked for a funding formula adjustment.  
 49

50 The police department situation is different because SR-92 is in Highland, and they have more traffic  
 51 accidents, more commercial properties, and more crime. Highland receives more police services than  
 52 Alpine.  
 53

1  
2 Highland City basically required this funding adjustment be approved or they may pull out of the  
3 combined public safety district. Withdrawing requires a two-year window for either city. If we lock in  
4 the formula for three years it would not eliminate our option to withdraw at some point.  
5

6 Jessica Smuin said she would like to lock in the formula for a time period. We also need to calculate how  
7 many more homes will be built in Alpine. The formula could work in our favor, because Highland has  
8 more open land and could experience more growth.  
9

10 Sarah Blackwell wondered if we kept the formula the same for five years, would it help or hurt Alpine.  
11 She liked the idea of a timeline to lock in the formula and commented that Alpine's property values  
12 are significantly higher than those in Highland.  
13

14 Mayor Carla Merrill said that budget discussions for the police department will likely happen in March or  
15 April. Both cities have a fire station, but the police department is housed entirely in Highland City.  
16 The new fire department funding formula will go into effect in July with the new fiscal year. In this  
17 meeting we are just voting on the fire department funding formula based on property tax values, not  
18 on a precise budget amount.  
19

20 **Motion:** Chrissy Hannemann moved to approve Resolution R2026-07 an amendment to the Lone Peak Public Safety  
21 District Interlocal Agreement changing the fire funding formula to be based on the taxable value of  
22 property, with a stipulation that we will set the funding formula for three years, including the intent that  
23 through the budgetary process we allow a transition time using the fund balance. Brent Rummel seconded  
24 the motion. There were 3 yes votes and 2 no votes, as recorded below. The motion passed.  
25

<u>Yes</u>	<u>No</u>	<u>Excused</u>
Chrissy Hannemann	Andrew Young	
Brent Rummel	Sarah Blackwell	
Jessica Smuin		

32 **C. Pine Grove Annexation Petition**

33 Ryan Robinson explained that Ken Berg with Berg Engineering has submitted an annexation petition to  
34 annex four parcels totaling 153.09 acres into Alpine City limits. This area is included in the city's  
35 annexation declaration. Inclusion in the declaration does not mean the City is required to annex it, only  
36 that it is eligible to be considered because of past studies and decisions made by the City Council.  
37

38 The decision before the council at this time, in accordance with *Alpine Development Code 5.03 City*  
39 *Council Review and Action*, is to determine if they would like to send the application to the Planning  
40 Commission, staff and/or consultants for recommendations. If the petition is approved for further study  
41 and review, the Planning Commission will hold a public hearing before making a recommendation to the  
42 City Council to accept or deny the annexation.  
43

44 As part of the review done by the Planning Commission, a concept plan with subdivision layout is  
45 typically submitted, after a review of needed infrastructure (roads), and a slope analysis to determine that  
46 the minimum lot size and frontage requirements can be met. The surrounding area is zoned CR-40,000 so  
47 it is anticipated that that this property will also be CR-40,000, if approved.  
48

49 Noticing

50 A public hearing will be held during future meetings after the required notices have been posted.  
51

52 Staff Recommendation

53 Because this is a legislative decision the standards for approval or denial are that the proposed  
54 application should be compatible with the standards found in the General Plan as well as the current city  
55 code and policies. A decision for approval or denial should be based on those criteria.  
56

1 Ross Welch, representing the landowners, was invited to the microphone. He said they previously  
 2 completed a slope analysis of this property which generated about 41 lots. They are currently  
 3 planning 36 lots, but this number may decrease as trails are included. They will provide everything  
 4 staff requires, so the city can evaluate the pros and cons of annexation, including the water system  
 5 analysis. Ross stated that the previous annexation issues were very different from this situation. He  
 6 knows that when you join a city you need to show that you are bringing value to that city. There will  
 7 be opportunities for public hearings and resident input as the process moves forward.  
 8

9 Ryan Robinson explained that there are standards in our code that must be considered during the  
 10 evaluation process. Staff will work with the developer and the landowner to obtain any information  
 11 needed. There is plenty of time for further study of the petition.  
 12

13 Andrew Young said there is a time scheduled to walk this property with residents and the developers, and  
 14 he appreciates that opportunity. He is concerned about the need to heal from past problems and  
 15 wondered if the developer will be willing to balance property rights with the health, wellbeing, and  
 16 safety of the community. He wants this to work but is concerned because of previous litigation with  
 17 the landowner.  
 18

19 Chrissy Hannemann commented that we should not bring in issues from the past, but that every petition  
 20 should be considered on its own merit. It is the council's job to balance the needs of landowners with  
 21 the residents of Alpine.  
 22

23 Jessica Smuin said that when we accept a petition for study, we are also committing our staff to a  
 24 significant amount of work. Every petition should be evaluated on its own merit, but we are making  
 25 decisions representing our constituents. We need to decide if an annexation is in the best interest of  
 26 Alpine.  
 27

28 Brent Rummller reiterated that the decision to study the petition does not bind us to a final result. He did  
 29 not see any value in tabling the petition.  
 30

31 Mayor Carla Merrill said that we should not be making assumptions. Any petitioner should be considered  
 32 as a brand-new entity, without baggage. This is a clean slate. If the council votes for further study,  
 33 we can address trails, density, and water. If we cannot agree with the developer on these issues and it  
 34 comes to a vote, the council can deny the annexation. It does not make sense to table this now. The  
 35 County has made changes to their zoning map, and this area is now a one-acre zone. The previous  
 36 situation was much different.  
 37

38 Attorney Steve Doxey clarified that this action is to accept or deny the petition (not the annexation itself).  
 39 The council can accept the petition for further study or deny it.  
 40

41 **Motion:** Brent Rummller moved to accept for further study the petition to annex parcels 49:810:0200, 49:764:0003,  
 42 11:043:0015, and 49:764:001, and to send the petition to the Planning Commission for review. Chrissy  
 43 Hannemann seconded the motion. There were 4 yes votes and 1 no vote, as recorded below. The motion  
 44 passed.  
 45

<u>Yes</u>	<u>No</u>	<u>Excused</u>
Chrissy Hannemann	Andrew Young	
Brent Rummller		
Jessica Smuin		
Sarah Blackwell		

1   **Motion:** Brent Rummler moved to extend meeting until the city business listed on the agenda is complete. Jessica  
 2   Smuin seconded the motion. There were 5 yes votes and 0 no votes, as recorded below. The motion passed  
 3   unanimously.  
 4

<u>Yes</u>	<u>No</u>	<u>Excused</u>
Chrissy Hannemann		
Andrew Young		
Brent Rummler		
Jessica Smuin		
Sarah Blackwell		

12   **D. Ordinance 2026-02: Guest House Amendments**

13   Ryan Robinson said that the petitioner, Ezra Lee, has submitted a request for a text amendment to Alpine  
 14   Development Code (ADC) 3.23.060 – Guest Houses, specifically regarding the minimum lot size on which  
 15   a guest house may be constructed. The current standard requires a minimum lot size of five (5) acres for a  
 16   guest house.  
 17

18   The proposed amendment would allow guest houses on lots as small as two (2) acres within the CE-5 Zone  
 19   only, subject to additional standards intended to address potential impacts associated with smaller lots:  
 20

1. A guest house may not be subdivided from the primary residence.
2. The guest house must share the same address as the primary residence.

21   After reviewing the proposal, staff recommend adding the following additional requirement:  
 22

3. For any guest house located on a lot smaller than five (5) acres, the guest house shall not exceed forty percent (40%) of the square footage of the primary dwelling or 1,500 square feet, whichever is smaller.

23   These standards are intended to maintain neighborhood compatibility, preserve the low-density character  
 24   of the CE-5 Zone, and ensure accessory units remain subordinate to the primary residence.  
 25

26   **Public Notice**

27   This item required a public hearing to take place and has been noticed according to State and city  
 28   requirements.  
 29

30   **General Plan Reference**

31   Land zoned as CE-5 shall consist of areas primarily located in mountainous areas of the city considered  
 32   appropriate for very low-density residential development. These areas as a result of the presence of steep  
 33   slope, adverse soil characteristics, flood hazard, mud flow, earthquake potential, wildfire hazard or similar  
 34   critical and sensitive natural conditions, are considered environmentally fragile. As a result of the large  
 35   amount of area that is considered environmentally fragile, development will be clustered and interspersed  
 36   with large and undisturbed open space areas.  
 37

38   **City Code Reference**

- 45   • Alpine Development Code 3.23.060 - Guest Houses

46   **Staff Recommendation**

47   As this is a legislative decision, the City Council should evaluate whether the proposed amendment aligns  
 48   with city policies and maintains consistency with the Development Code. If the council chooses to  
 49   recommend approval, staff recommend that the additional standards listed above be included in the final  
 50   ordinance language.  
 51

52   The council and staff discussed the following:  
 53

- 55   - There is already a guest house on this property, and the owners would like to make it legal. It was  
 56   shown on the original plans as a large office-like space but was then turned into a guest house.

- 1 - We do not want to set the precedent that someone can build whatever they want and then ask for a
- 2 change in the ordinances to make it okay. Granting exceptions can be a slippery slope.
- 3 - If the amendment does not pass, the city can impose fines or a tax lien on the property for non-
- 4 compliance.
- 5 - The city currently allows only internal ADUs (like basement apartments).
- 6 - At some point the State may require cities to allow detached accessory dwelling units. We could wait
- 7 and see what they require, or we could set our own guidelines first.
- 8 - Detached ADUs would increase the impact on our sewer system and other infrastructure.
- 9 - A reduction in the parcel size required for a guest house may affect others area in town besides Three
- 10 Falls.
- 11 - The Three Falls HOA is not in favor of this code change.

12 **Motion:** Andrew Young moved deny Ordinance 2026-02 the proposed amendments to Alpine Development Code  
 13 3.23.060 – Guest Houses based on the finding that the proposal does not adequately support the very low-  
 14 density residential development in the Alpine General Plan CE-5 Zone that states, “These areas, as a result  
 15 of the presence of steep slope, adverse soil characteristics, flood hazard, mud flow, earthquake potential,  
 16 wildfire hazard or similar critical and sensitive natural conditions are considered environmentally fragile.  
 17 As a result of the large amount of area that is considered environmentally fragile, development will be  
 18 clustered and interspersed with large and undisturbed open space areas.” Sarah Blackwell seconded the  
 19 motion. There were 5 yes votes and 0 no votes, as recorded below. The motion passed unanimously.

<u>Yes</u>	<u>No</u>	<u>Excused</u>
Chrissy Hannemann		
Andrew Young		
Brent Rummel		
Jessica Smuin		
Sarah Blackwell		

30 **E. Ordinance 2026-03: Farmstand Definition**

31 Ryan Robinson said that the owners and operators of Burgess Orchards have submitted an application  
 32 requesting the creation of a new conditional use of “Farm Stand” within the CR-40,000 Zone. This code  
 33 amendment would create a formal definition for “Farm Stand,” identify the land use authority for future  
 34 applications, and set forth required development standards for the use.

35 At this stage, the request is only to create the land-use category, definition, and accompanying standards.  
 36 If the Planning Commission recommends approval and the City Council adopts the amendment, the  
 37 applicant must then submit a separate Conditional Use Permit (CUP) application for their specific farm  
 38 stand proposal. Because this use would be added to the CR-40,000 Zone as a conditional use, any property  
 39 meeting the minimum requirements in this zone would be eligible to apply for a CUP as a farm stand.

40 To implement the proposed land use, amendments are required in the following sections of the Alpine  
 41 Development Code:

- 42 • ADC 3.01.110 – Definitions: Add a definition for “Farm Stand.”
- 43 • ADC 3.04.030 – Conditional Uses in the CR-40,000 Zone: Add “Farm Stand” as a conditional use.
- 44 • ADC Chapter 3.23 – Conditional Use Permits: Establish specific standards for the use and designate  
 45 the land use authority.

46 The draft ordinance language reflecting these changes was included in the meeting packet. Public  
 47 comments offered during the Planning Commission meeting raised questions regarding the scope of the  
 48 definition, agricultural qualifications, potential impacts to surrounding properties, permitting and  
 49 enforcement, and traffic and safety concerns. One resident spoke in favor of the farm stand concept, citing  
 50 its contribution to Alpine’s rural character and community identity.

51 Following the public hearing, the commission discussed the differences between a produce stand and the  
 52 proposed farm stand, expressing concern that the new definition was overly broad and could resemble a

1 commercial retail or food service use within a residential zone. Key issues included potential food  
 2 preparation, increased traffic, longer visitor stay times, and the lack of detailed analysis on safety impacts.  
 3

4 Planning Commission member Jeff Davis moved to recommend denial of the proposed amendments to the  
 5 Alpine Development Code 3.01.110, 3.04.030, and Chapter 3.23 to create a “Farm Stand” use in the CR-  
 6 40,000 Zone as proposed, for the following reasons:  
 7

1. It expands too much on a residential zone.
2. It carries with it increased safety concerns which have not been mitigated nor studied.
3. The language of products including baked goods and meats, and the handling and preparation of  
 10 fresh food could lead to the possibility of restaurant food being prepared and sold.

11 The Planning Commission voted 6–1 to recommend denial of the proposed amendments.  
 12

#### 13 Public Notice

14 This item required a public hearing held by the Planning Commission, which was noticed and took place  
 15 according to State and city requirements.  
 16

#### 17 General Plan Reference

18 (Country Residential – 40,000 square foot minimum lot size) shall include, but is not exclusive to, land  
 19 generally located around the periphery of the city center considered appropriate for low-density residential  
 20 development. These areas should provide for the perpetuation of the rural and open space image of the  
 21 city. (Policy 2.5).  
 22

#### 23 City Code Reference

- 24 • Alpine Development Code 3.01.110 Definitions
- 25 • Alpine Development Code 3.04.030 Conditional Uses in the CR-40,000 Zone
- 26 • Alpine Development Code 3.23 Conditional Use Permits

#### 28 Staff Recommendation

29 Because this request is legislative in nature, the council should consider whether the proposed code  
 30 amendment is consistent with General Plan policies supporting rural character, and whether the amendment  
 31 aligns with the purpose and standards of the Development Code.  
 32

33 Staff recommend that the council review the proposed language and determine whether the creation of the  
 34 “Farm Stand” conditional use appropriately supports agricultural operations and rural preservation within  
 35 the CR-40,000 Zone.  
 36

37 Council members shared their opinions:  
 38

39 Sarah Blackwell said she spoke with the stand owners, and they would like this location to be like Ballerina  
 40 Farms in Midway. That stand is in a commercial zone. Oliver’s Place in Pleasant Grove is also in a  
 41 commercial zone, and the farm stand in Kamas is located in an agricultural/tourism zone. A farm stand  
 42 seems to fit better in a commercial zone.  
 43

44 Andrew Young said that residents in the neighborhood are not against the agricultural endeavor, but the  
 45 commercial use of the stand has expanded beyond its bounds. He referenced a letter submitted by  
 46 neighbors about their concerns and opposing the farm stand change. He said that more discussion is  
 47 needed with the neighbors.  
 48

49 Brent Rummel said the neighbors have provided examples of how the produce stand has negatively  
 50 impacted them. Expanding this venture into a farm stand and allowing additional items for sale is not  
 51 appropriate. If this area is zoned commercial in the future, expansion could be considered.  
 52

53 Chrissy Hannemann said there was significant support for an agricultural feel in Alpine when residents  
 54 were consulted at the Main Street open house. While it is helpful to give the orchard owners room to  
 55 succeed, the rules will apply to all applicants on large farming parcels. Greenbelt regulations are  
 56 specific and require that almost 100 percent of the land be dedicated to agriculture with a reasonable  
 57 expectation of profit. If farm stands were only allowed on parcels with greenbelt status it would limit

1 the possible locations. She also said that at some point, the city will need an updated plan for the south  
 2 end of town  
 3

4 Jessica Smuin said that the current venture is more like a farm stand, and she has not seen a farm stand that  
 5 became a restaurant. She did not think adding a few more items for sale would increase the traffic  
 6 significantly.  
 7

8 Jessica Smuin and Sarah Blackwell both said that they have received positive comments about the produce  
 9 stand from Alpine residents.  
 10

11 **Motion:** Andrew Young moved to deny Ordinance 2026-03 the proposed amendments to Alpine Development Code  
 12 3.01.110, 3.04.030, and Chapter 3.23 to create a “Farm Stand” use in the CR-40,000 Zone based on the  
 13 findings that it does not appropriately support agricultural operations and residential rural preservation  
 14 within the CR-40,000 Zone by broadly expanding into scaled commercial operations incongruent with the  
 15 CR-40,000 residential rural zone, and that it expands traffic, parking, and crowds near Bateman Lane and  
 16 Alpine Highway, negatively impacting the health and safety of the surrounding community. Sarah  
 17 Blackwell seconded the motion. There were 4 yes votes and 1 no vote, as recorded below. The motion  
 18 passed.  
 19

<u>Yes</u>	<u>No</u>	<u>Excused</u>
Chrissy Hannemann	Jessica Smuin	
Andrew Young		
Brent Rummel		
Sarah Blackwell		

27 **F. Consideration for Approval of Setback Encroachment – Larry Hilton**

28 Ryan Robinson explained that Larry Hilton has submitted a request for a reduced side yard setback for  
 29 the property located at 333 S Main Street. The request involves expanding the existing balcony across a  
 30 drive-through lane to provide weather protection for patrons and an extended balcony for the second  
 31 floor. The project also includes the construction of a new outdoor staircase to create an alternative access  
 32 point for the second floor condo.  
 33

34 Applicable Code: Alpine Development Code §3.07.050 – *Location Requirements* provides that in  
 35 commercial developments adjacent to other commercial areas, the side yard and rear yard setbacks shall  
 36 not be less than ten (10) feet, unless recommended by the Planning Commission and approved by the  
 37 City Council where circumstances justify.  
 38

- 39 • The current side yard setback is approximately 20 feet (measured from the property line to the  
 40 building foundation).
- 41 • If approved, the proposed setback exception would reduce the setback to approximately zero feet,  
 42 with the building expansion located on or near the property line.

43 The Planning Commission reviewed this item during their October 7, 2025, meeting. Commission  
 44 members expressed concerns about the setbacks proposed and the potential impact of placing a solid wall  
 45 along the property line, which could create an undesirable alleyway effect. The commission noted that  
 46 the proposal did not meet the city's requirement of a justified circumstance for the reduced setbacks.  
 47 Following the discussion, Jeff Davis moved to recommend denial of the requested side yard setback  
 48 exception, and John MacKay seconded. The motion passed unanimously, with all seven members voting  
 49 in favor of denial.  
 50

51 The applicant has submitted two options to consider based on the feedback from the Planning  
 52 Commission. Option A was reviewed by the Planning Commission. Option B is a smaller version, with a  
 53 reduced landing off the balcony that will also be extended.  
 54

55 This application came before the City Council on October 28<sup>th</sup>, 2025, and was tabled with the following  
 56 requirements:  
 57

- A recorded document will be submitted that would transfer with property ownership and title.

1           • Signs on the building will be brought up to current sign code guidelines for the Main Street Historic  
 2           District.  
 3           • The property owner to the north will be notified and their input sought.

5           The applicant has submitted documentation from the ownership of the development stating that they  
 6           approve this extension. Staff have also reviewed the existing signs on the building and found that they  
 7           currently comply with the sign ordinance for business commercial buildings. The building owner to the  
 8           north has also been contacted and made aware of this request on the agenda.

10          Alpine City Code

11          • Alpine City Code 3.07.050 Location Requirements.

13          General Plan

14          • Gateway Historic District Guidelines

- 15           ○ Orientation of new construction should be to the street to establish a pedestrian-friendly quality.
- 16           ○ Chapter 1 pg. 3 Design Standards
- 17           ○ The use of stone, brick, wood, or stucco is encouraged for use as the primary exterior material.
- 18           ○ Chapter 3 pg. 5
- 19           ○ The use of color schemes should be compatible with the surrounding area. Simplicity is
- 20           encouraged – excessive amounts of different colors should not be used. Chapter 7 pg. 9
- 21           ○ The natural colors of brick masonry, stone, or other existing building materials should dominate
- 22           the color scheme of the building. Other colors should be respectful of adjacent buildings.
- 23           ○ Chapter 7 pg. 9

25          Public Notice

26          City and State Codes do not require a public hearing or additional notice for this agenda item.

28          Staff Recommendation

29          The City Council should review the proposal and determine whether circumstances justify the reduced  
 30           setback.

32          The council discussed the following points:

- 33          - The addition of the balcony and stairs could balance the visual aspects of the building.
- 34          - In a previous meeting the Fire Chief stated that we cannot have residential units without safe ingress
- 35           and egress.
- 36          - The business HOA is in support of the proposal.
- 37          - The business neighbor to the north already has a basement stairway that encroaches into their setback.
- 38           They are also in support of the proposal.
- 39          - Acceptance of a zero-foot setback could seem to set a political precedent, but this is a unique situation
- 40           that is not likely to arise again.
- 41          - Option A is preferable to provide higher truck clearance in the drive-through.

43          **Motion:** Brent Rummel moved to approve the requested side yard setback exception at 333 S. Main Street with  
 44           Option A as presented, based on the finding that the circumstances justify the reduced setback under Alpine  
 45           City Code 3.07.050. Jessica Smuin seconded the motion. There were 3 yes votes and 2 no votes, as recorded  
 46           below. The motion passed.

<u>Yes</u>	<u>No</u>	<u>Excused</u>
Brent Rummel	Chrissy Hannemann	
Jessica Smuin	Andrew Young	
Sarah Blackwell		

1   **VIII. STAFF REPORTS**

2    Due to the late hour, no staff reports were given this evening.

3   **IX. COUNCIL COMMUNICATION**

4    Due to the late hour, no council communications were offered this evening.

5   **Motion:** Jessica Smuin moved to pause the regular meeting and move into a closed meeting to be held in the  
6    Conference Room at City Hall to discuss property disposal, and that at the end of the closed meeting the  
7    open City Council meeting would be adjourned. Brent Rummller seconded the motion. There were 5 yes  
8    votes and 0 no votes, as recorded below. The motion passed unanimously.

	<u>Yes</u>	<u>No</u>	<u>Excused</u>
	Chrissy Hannemann		
	Andrew Young		
	Brent Rummller		
	Jessica Smuin		
	Sarah Blackwell		

22   The open City Council meeting was paused at 10:16 pm.

23   **X. CLOSED MEETING:** To discuss property disposition

28   The closed meeting began at 10:22 pm and was adjourned at 11:25 pm.

## **ALPINE CITY COUNCIL AGENDA**

**SUBJECT: Consent Calendar – Approval of Payment – Cab and Chassis for New Dump Truck, Premier Truck Group: \$160,787.00**

**FOR CONSIDERATION ON: January 27, 2026**

**PETITIONER: Staff**

**ACTION REQUESTED BY PETITIONER: Review and approve payment to Premier Truck Group.**

### **BACKGROUND INFORMATION:**

As part of the FY2026 budget, a new 10-wheel dump truck was approved. This payment is for the cab and chassis. The dump body is on order and should be available soon so the truck build can be completed.

### **STAFF RECOMMENDATION:**

Approve the payment to Premier Truck Group as part of the consent calendar.

#### **SAMPLE MOTION TO APPROVE:**

Approve the payment in the amount of \$160,787.00 to Premier Truck Group for the 2026 Western Star cab and chassis.



PREMIER TRUCK - SALT LAKE CITY  
2240 S 5370 W  
SALT LAKE CITY UT 84120  
Phone: (800) 574-2707

# Invoice - Bill of Sale

Invoice #: 775DE-65559

Department: New

Contract Date: 01/14/2026

Deal Packet: DE-65559

Branch: 775

Salesperson: Skylar Dyreng

Bill To: 77532895

ALPINE CITY  
181 E 200 N  
ALPINE UT 84004-1625  
P:(801) 756-6347

Ship To:

ALPINE CITY  
181 E 200 N  
ALPINE, UT 84004-1625

Stock#:WU8176      VIN:3BJHBFM4TDWU8176    New 2026 WESTERN STAR 47X

Price: \$160,377.00

Tire Tax \$10.00

Per Unit: \$160,387.00

**Total Price** \$160,387.00

Documentary Fee \$400.00

**Total** \$160,787.00

**Net Total** \$160,787.00

CUSTOMER PO# DUMP MY26

**Your business is always appreciated!**

# ALPINE CITY COUNCIL AGENDA

**SUBJECT:** Resolution R2026-08: Update to the Consolidated Fee Schedule – Pressurized Irrigation Rates

**FOR CONSIDERATION ON:** January 27, 2026

**PETITIONER:** City Staff

**ACTION REQUESTED BY PETITIONER:** Review and Approve Resolution R2026-08 amending the consolidated fee schedule for PI rates.

## BACKGROUND INFORMATION:

The City Council adopted a new user rate format in early 2023 that considers metered usage for pressurized irrigation. As part of the overall rate plan, a 3% increase was approved for both the base and usage rates for years 2024-2027. The base rate will increase from \$42.44/acre per month to \$43.71/acre per month. The usage rate will increase by 3% for each tier according to the table in Exhibit A. Shareholder rates will also increase by 3%.

A draft and final version of these changes have been attached. A full version will be attached to the Resolution if approved for the final records.

### STAFF RECOMMENDATION:

Review and approve Resolution R2026-08 adopting the consolidated fee schedule with amendments as outlined above.

### SAMPLE MOTION TO APPROVE:

I move to approve Resolution R2026-08 adopting the consolidated fee schedule with amendments as outlined.

### SAMPLE MOTION TO APPROVE WITH CONDITIONS:

I move to approve Resolution R2026-08 adopting the consolidated fee schedule with amendments as outlined, with the following conditions/changes:

\*\*insert finding\*\*

### SAMPLE MOTION TO TABLE/DENY:

I move to table/deny Resolution 2026-xx based on the following:

\*\*insert finding\*\*

**ALPINE**  
**RESOLUTION NO. 2026-08**

**A RESOLUTION ADOPTING THE AMENDED CONSOLIDATED FEE SCHEDULE FOR 2026**

**WHEREAS**, the City of Alpine (the “*City*”) has previously adopted by resolution the fee schedule in accordance with the requirements of the state statute; and

**WHEREAS**, the city administrator has prepared and filed with the City Council a proposed revised fee schedule for consideration by the City; and

**WHEREAS**, the City determined that amending the proposed fee schedule is in the best interest of the health, safety, and financial welfare of the City; and

**WHEREAS**, on January 27<sup>th</sup>, 2026, the proposed amended fee schedule was duly noticed as an agenda item for the consideration and action of the City Council; and

**NOW, THEREFORE, BE IT RESOLVED** by the City Council of Alpine City as follows:

The revised fee schedule attached hereto as *Exhibit A* and made a part of this Resolution is hereby-adopted effective January 27<sup>th</sup>, 2026.

**SIGNED, EXECUTED AND RECORDED** in the office of the City Recorder, and accepted as required herein.

**PASSED AND APPROVED** this 27<sup>th</sup> day of January 2026.

**ALPINE CITY COUNCIL**

By: \_\_\_\_\_  
Carla Merrill, Mayor

**[SEAL]**

**VOTING:**

Jessica Smuin	Yea <input type="checkbox"/>	Nay <input type="checkbox"/>	Absent <input type="checkbox"/>
Brent Rummeler	Yea <input type="checkbox"/>	Nay <input type="checkbox"/>	Absent <input type="checkbox"/>
Chrissy Hannemann	Yea <input type="checkbox"/>	Nay <input type="checkbox"/>	Absent <input type="checkbox"/>
Sarah Blackwell	Yea <input type="checkbox"/>	Nay <input type="checkbox"/>	Absent <input type="checkbox"/>
Andrew Young	Yea <input type="checkbox"/>	Nay <input type="checkbox"/>	Absent <input type="checkbox"/>

**ATTEST:**

\_\_\_\_\_  
DeAnn Parry  
City Recorder

**DEPOSITED** in the office of the City Recorder this 27<sup>th</sup> day of January, 2026.

**RECORDED** this 27<sup>th</sup> day of January, 2026.

**EXHIBIT A**

**Consolidated Fee Schedule**

2" Meter installation with provisions for meter	2"	\$1,300
Other	-	Actual cost of parts and labor

9. Pressurized Irrigation Rates (Temporary disconnection is not permitted unless authorized by the Alpine City Administrator. See example calculation in Appendix C):

Users	Rate
All Users - meter fee	\$1.00
Residential, Commercial, Church and School Users	Base Rate + Usage Rate = Total Bill (see Base Rate and Usage Rates below)
Residential shareholders in Alpine Irrigation Co.	\$0.000682 \$0.000702 per square foot per month
Agricultural shareholder in Alpine Irrigation Co.	\$1.27 \$1.31 per acre per month
Excess Share Credit	\$5.52 \$5.68 per share per month

- 2025 Pressurized Irrigation Base Rate Calculation = ~~\$42.44~~ \$43.71 per acre per month
- 2025 Pressurized Irrigation Usage Rate Calculation = Cost is calculated through a tiered rate structure based on an allocation of water for the size and type of property, gallons used and which month the water is used. Tiered rates, allocation amounts and allocations by month are all shown below:

Tiered Rates	
Tier	Cost/1,000 gallons
1	\$0.129 <ins>\$0.133</ins>
2	\$0.368 <ins>\$0.379</ins>
3	\$0.459 <ins>\$0.473</ins>
4	\$0.734 <ins>\$0.756</ins>
5	\$1.102 <ins>\$1.135</ins>
6	\$1.396 <ins>\$1.438</ins>
Allocation Amounts*	
Use	Allocation (gallons/acre)
Residential	118,175
Commercial	36,930
Churches	64,627
Schools	97,864

\*Allocation amounts fluctuate by month to account for seasonal water needs as follows:

Month	Percentage of Gallons Allowed by Tier
April/October	34%
May/June/September	92%
July/August	129%

(See example calculations in Appendix C)

Monthly Gallons Allowed per Acre for Each Tier					
Use	Tier	% Allocation Allowed	April / October	May/June/September	July/August
Residential	1	0-75%	30,000	81,750	114,000
	2	75-100%	10,000	27,250	38,000
	3	100-150%	20,000	54,500	76,000
	4	150-200%	20,000	54,500	76,000

Presentation

**Open and Public Meetings Act**

**OPMA TRAINING**

by City Attorney Steve Doxey

# Financial Report

as of December 31, 2025

Presented at the January 27, 2026 City Council Meeting



ALPINE CITY CORPORATION  
 COMBINED CASH INVESTMENT  
 DECEMBER 31, 2025

COMBINED CASH ACCOUNTS

01-1111	CASH IN BANK, ALTA BANK	932,698.67
01-1112	XPRESS BILL PAY	1,909.63
01-1131	PETTY CASH	1,000.00
01-1154	SAVINGS PTIF #158	29,038,815.41
		<hr/>
	TOTAL COMBINED CASH	29,974,423.71
01-1190	CASH - ALLOCATION TO OTHER FUN	( 29,974,423.71)
		<hr/>
	TOTAL GENERAL FUND CASH	.00
		<hr/>

CASH ALLOCATION RECONCILIATION

10	ALLOCATION TO GENERAL FUND	3,844,418.20
11	ALLOCATION TO CLASS C ROADS	775,223.86
15	ALLOCATION TO RECREATION IMPACT FEES	462,299.50
16	ALLOCATION TO STREET IMPACT FEES	169,463.32
44	ALLOCATION TO PARC FUND	108,223.36
45	ALLOCATION TO CAPITAL IMPROVEMENTS FUND	10,310,800.89
51	ALLOCATION TO WATER FUND	3,936,758.00
52	ALLOCATION TO SEWER FUND	3,404,740.28
55	ALLOCATION TO PRESSURIZED IRRIGATION FUND	1,759,466.29
56	ALLOCATION TO STORM DRAIN FUND	779,203.07
70	ALLOCATION TO TRUST AND AGENCY FUND	813,750.44
71	ALLOCATION TO CEMETERY PERPETUAL CARE FUND	1,862,277.19
81	ALLOCATION TO WATER IMPACT FEES	833,387.39
82	ALLOCATION TO SEWER IMPACT FEES	165,035.55
85	ALLOCATION TO PI IMPACT FEES	523,379.15
86	ALLOCATION TO STORM DRAIN IMPACT FEES	225,997.22
		<hr/>
	TOTAL ALLOCATIONS TO OTHER FUNDS	29,974,423.71
	ALLOCATION FROM COMBINED CASH FUND - 01-1190	( 29,974,423.71)
		<hr/>

ZERO PROOF IF ALLOCATIONS BALANCE

.00

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# FY2026 2<sup>nd</sup> Quarter Highlights

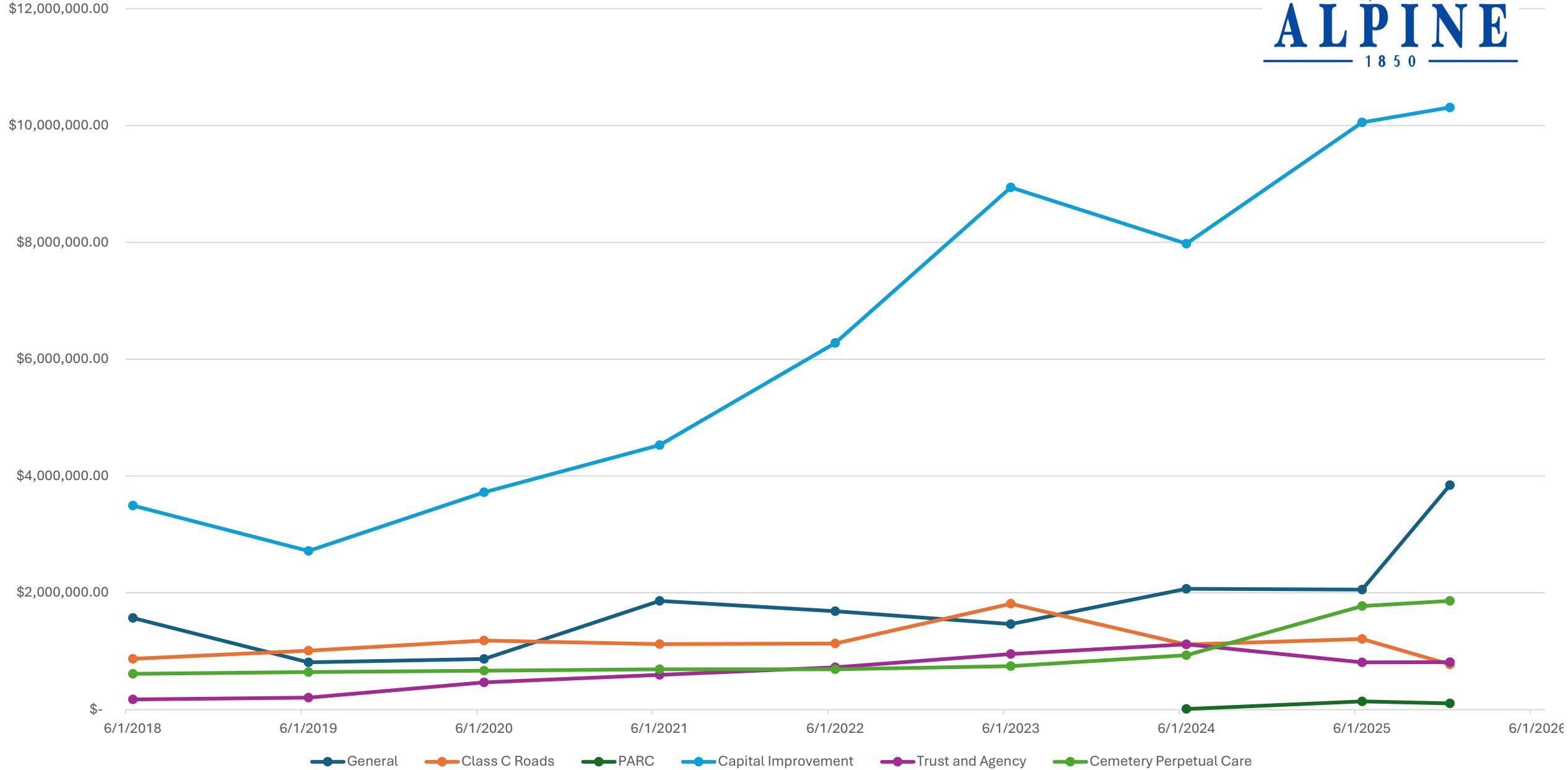
- Revenue
  - \$1M grant reimbursement for street maintenance
  - Property tax distribution
  - Sales tax flat
- Expenditures
  - Canyon Crest PI project
  - Street maintenance projects
  - Storm drain projects



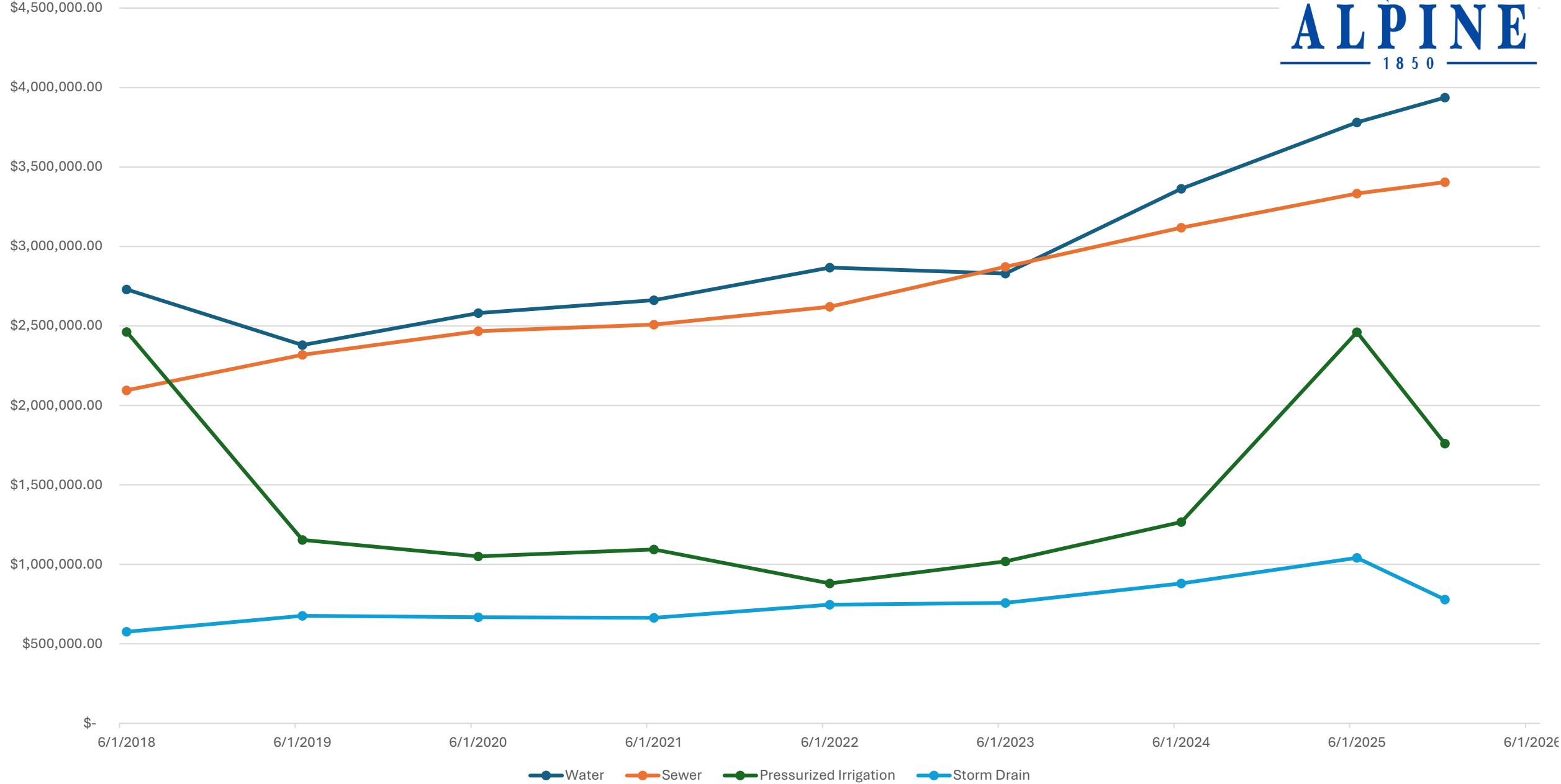
## Historical Fund Balance Trends

Fund Balance (based on EOY fund balance)									
Fund	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025	12/31/2025
General	\$ 1,570,685.36	\$ 810,809.31	\$ 868,135.61	\$ 1,861,558.34	\$ 1,687,206.64	\$ 1,464,080.79	\$ 2,067,757.61	\$ 2,057,173.57	\$ 3,844,418.20
Class C Roads	\$ 871,638.29	\$ 1,009,431.75	\$ 1,182,219.50	\$ 1,123,346.55	\$ 1,131,279.68	\$ 1,813,199.69	\$ 1,116,569.15	\$ 1,209,221.23	\$ 775,223.86
PARC							\$ 11,724.39	\$ 142,101.42	\$ 108,223.36
Capital Improvement	\$ 3,495,391.32	\$ 2,717,533.22	\$ 3,720,864.78	\$ 4,530,898.83	\$ 6,275,987.85	\$ 8,940,728.93	\$ 7,977,369.73	\$ 10,056,315.46	\$ 10,310,800.89
Trust and Agency	\$ 175,841.18	\$ 205,304.18	\$ 468,920.05	\$ 596,642.33	\$ 727,132.30	\$ 953,415.35	\$ 1,119,777.48	\$ 810,443.12	\$ 813,750.44
Cemetery Perpetual Care	\$ 614,030.74	\$ 642,634.99	\$ 667,780.99	\$ 691,834.74	\$ 692,871.99	\$ 745,970.49	\$ 932,925.74	\$ 1,773,567.67	\$ 1,862,277.19
Fund	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025	12/31/2025
Water	\$ 2,730,121.61	\$ 2,379,936.56	\$ 2,580,896.16	\$ 2,661,881.33	\$ 2,866,646.65	\$ 2,829,628.96	\$ 3,362,827.99	\$ 3,781,245.73	\$ 3,936,758.00
Sewer	\$ 2,095,400.62	\$ 2,318,088.55	\$ 2,466,772.34	\$ 2,508,328.96	\$ 2,620,750.12	\$ 2,872,224.02	\$ 3,118,368.55	\$ 3,333,601.78	\$ 3,404,740.28
Pressurized Irrigation	\$ 2,462,768.52	\$ 1,154,286.07	\$ 1,050,534.41	\$ 1,094,277.63	\$ 880,115.94	\$ 1,019,172.72	\$ 1,266,039.38	\$ 2,461,285.04	\$ 1,759,466.29
Storm Drain	\$ 576,203.12	\$ 676,090.77	\$ 667,622.67	\$ 663,658.96	\$ 747,041.71	\$ 757,773.60	\$ 880,176.76	\$ 1,041,123.59	\$ 779,203.07
Fund	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025	12/31/2025
Water Impact Fees	\$ 292,553.93	\$ 373,676.93	\$ 484,678.07	\$ 464,721.28	\$ 471,243.64	\$ 553,323.82	\$ 641,760.33	\$ 756,692.78	\$ 833,387.39
Sewer Impact Fees	\$ 57,176.98	\$ 76,805.08	\$ 98,281.48	\$ 136,396.64	\$ 134,115.02	\$ 152,627.06	\$ 167,657.12	\$ 167,430.41	\$ 165,035.55
Pressurized Irrigation Impact Fees	\$ 88,682.44	\$ 166,589.73	\$ 260,690.05	\$ 223,420.31	\$ 329,912.05	\$ 411,475.83	\$ 407,848.61	\$ 588,447.91	\$ 523,379.15
Storm Drain Impact Fees	\$ 227,551.53	\$ 122,810.87	\$ 129,442.70	\$ 147,719.70	\$ 179,798.70	\$ 196,359.94	\$ 208,568.94	\$ 221,917.86	\$ 225,997.22
Recreation Impact Fees	\$ 704,726.99	\$ 767,887.39	\$ 656,237.39	\$ 702,776.41	\$ 802,951.05	\$ 628,914.38	\$ 668,101.38	\$ 447,207.36	\$ 462,299.50
Street Impact Fees	\$ 263,692.80	\$ 322,383.46	\$ 373,764.88	\$ 401,672.92	\$ 415,407.08	\$ 430,816.08	\$ 453,828.08	\$ 163,536.55	\$ 169,463.32
Totals	\$ 16,226,465.43	\$ 13,744,268.86	\$ 15,676,841.08	\$ 17,809,134.93	\$ 19,962,460.42	\$ 23,769,711.66	\$ 24,401,301.24	\$ 29,011,311.48	\$ 29,974,423.71

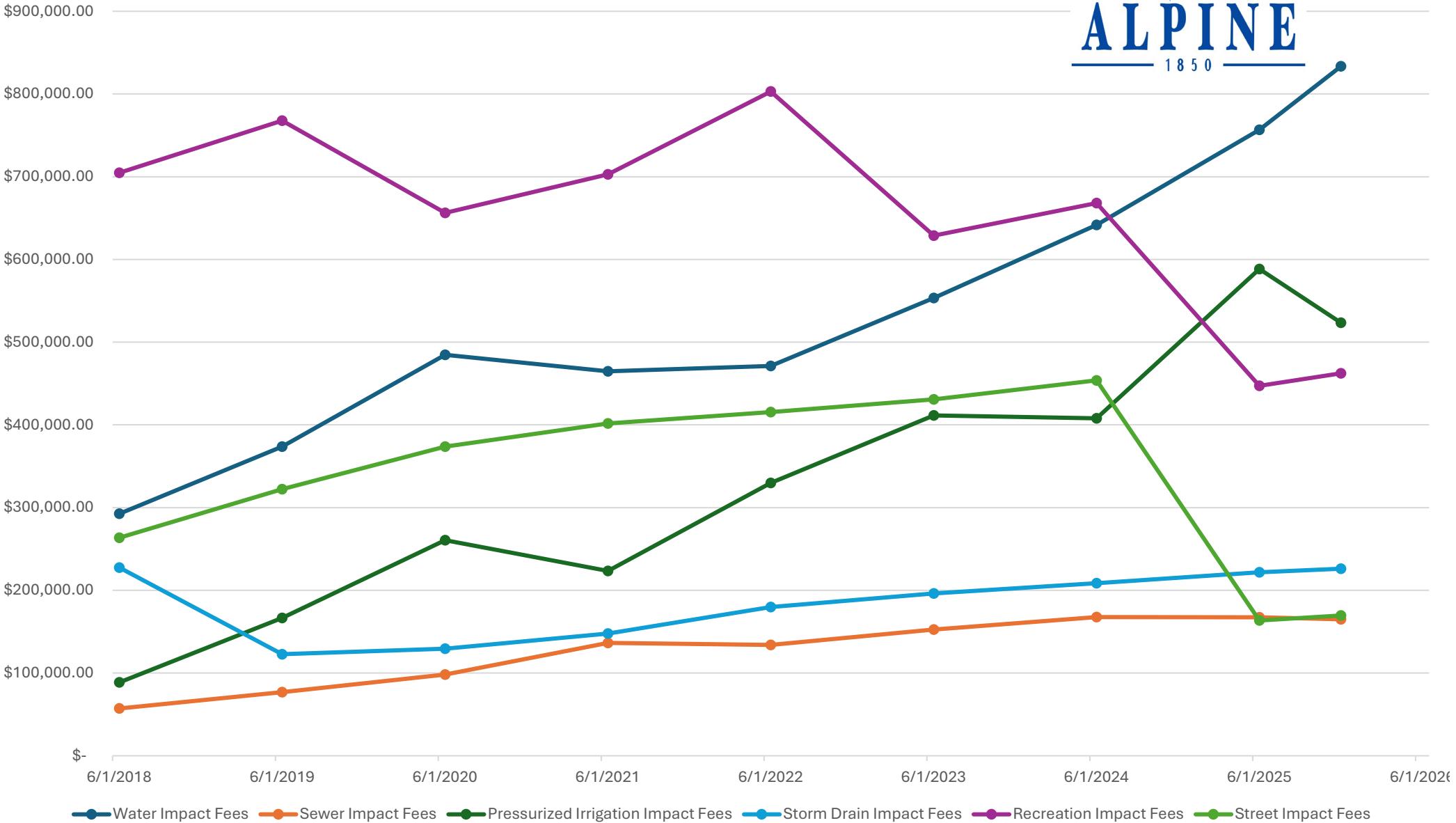
## Fund Balance Trends - General Funds



## Fund Balance Trends - Utilities



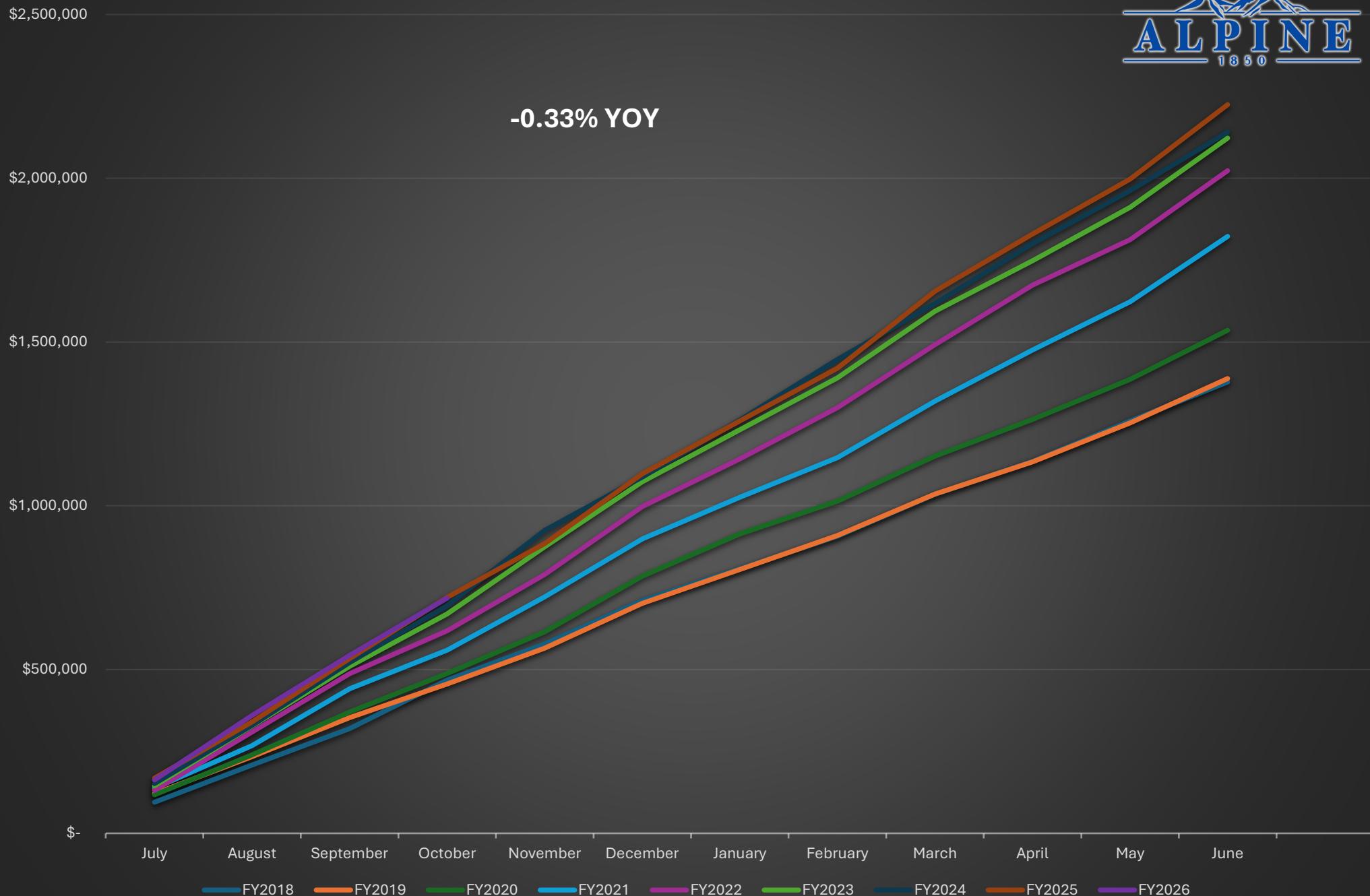
## Fund Balance Trends - Impact Fees



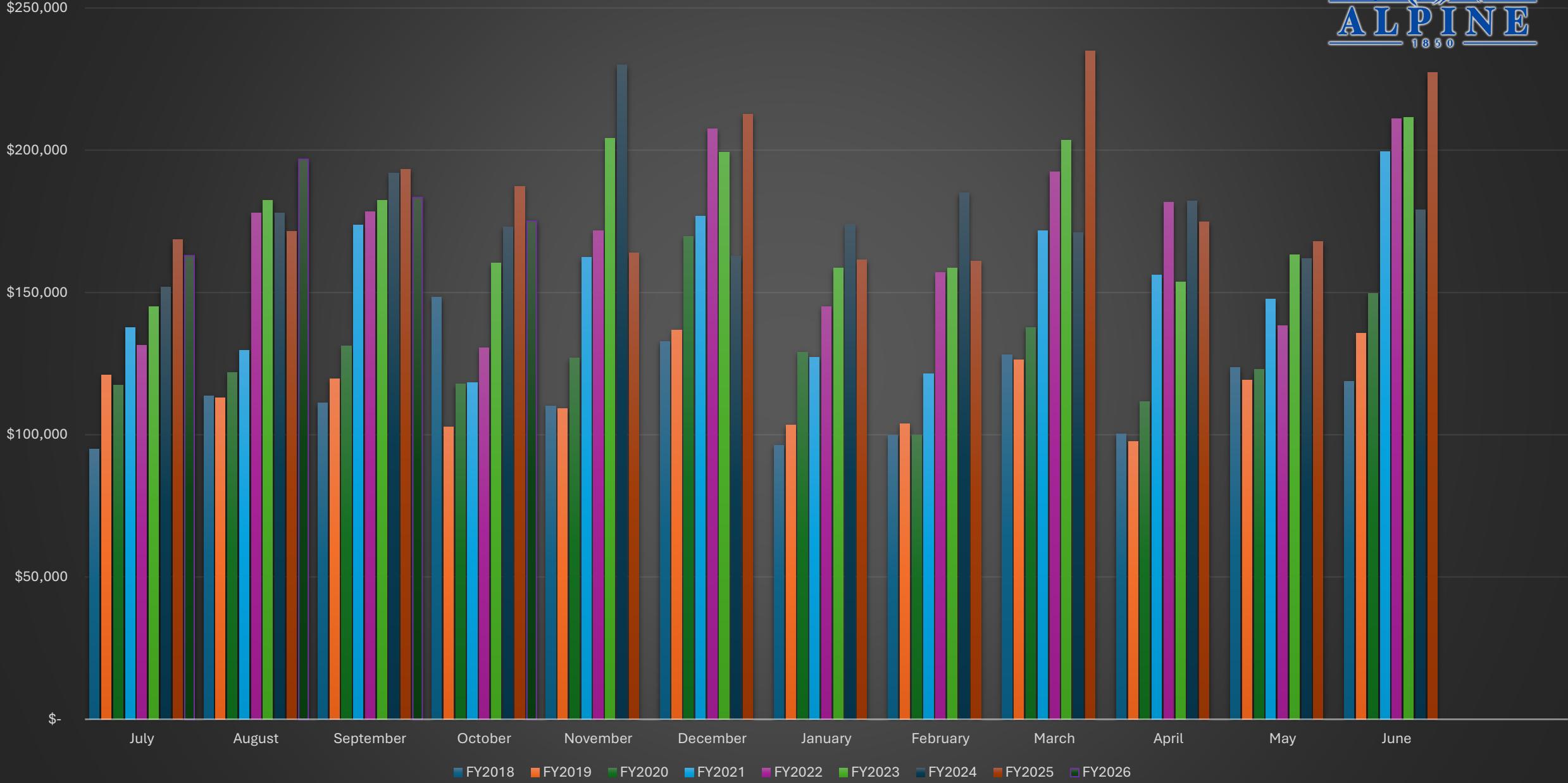
# Cummulative Sales Tax Revenue Comparison



-0.33% YOY



# Sales Tax Revenue by Month



# Upcoming Expenses

- Fire Station – anticipate breaking ground May 2026
- Closing on Carlton Shop – February 2026
- Capital projects
- Well maintenance

# ALPINE CITY COUNCIL AGENDA

**SUBJECT:** Resolution R2026-09: Appointment of City Prosecutor

**FOR CONSIDERATION ON:** January 27, 2026

**PETITIONER:** City Staff

**ACTION REQUESTED BY PETITIONER:** Review and Approve Resolution R2026-09 appointing a city prosecutor.

## BACKGROUND INFORMATION:

Alpine and Highland cities have used Hansen Law to do prosecution work for the justice court for approximately 20 years. We were notified late last year that Hansen Law will only offer these services through February 25, 2026. In planning for the next steps, a request for proposals was issued for a contract city prosecutor. Two proposals were received. After reviewing the proposals for qualifications, experience and other factors, we are recommending that the two cities enter a contract with Carl Hollan. The proposed contract is included in the packet. Based on the proposed rate structure, we do not anticipate an increase in cost for the City.

## STAFF RECOMMENDATION:

Review and approve Resolution R2026-09 appointing Carl Hollan as the city prosecutor.

## SAMPLE MOTION TO APPROVE:

I move to approve Resolution R2026-09 appointing Carl Hollan as the city prosecutor.

## SAMPLE MOTION TO APPROVE WITH CONDITIONS:

I move to approve Resolution R2026-09 appointing Carl Hollan as the city prosecutor, with the following conditions/changes:

\*\*insert finding\*\*

## SAMPLE MOTION TO TABLE/DENY:

I move to table/deny Resolution 2026-09 based on the following:

\*\*insert finding\*\*

## PROPOSAL FOR CRIMINAL PROSECUTING ATTORNEY SERVICES

Carl Hollan, Esq.

649 N 2040 E

Spanish Fork, UT 84660

(801) 616-6722

[carlhollan@gmail.com](mailto:carlhollan@gmail.com)

6 January, 2026

Highland City  
Attn: Erin Wells  
5400 Civic Center Dr, Suite 1  
Highland, UT 84003  
[ewells@highlandut.gov](mailto:ewells@highlandut.gov)

RE: RFP for Criminal Prosecuting Attorney Services, dated 9 December, 2025

To the Evaluation Committee:

I am a highly qualified prosecuting attorney and Highland and Alpine Cities would best benefit from my services as their city prosecutor. I bring significant experience which will permit me to appropriately and expeditiously prosecute criminal cases in a manner that will contribute to the public safety of the community and provide services in a cost-effective manner.

### **Personal History**

I was born and raised in Utah County, Utah and following my education, I have established Utah County as the place to raise my family. I am wholly invested in improving the community where I live, and criminal prosecution has been a meaningful way to provide for a safe community for my family to live.

### **Educational History**

I graduated from Brigham Young University in 2011 with a dual-major in Mandarin Chinese and Asian Studies. Following graduation, I enrolled in law school at Brigham Young University. While in law school, I was selected and served as an Executive Editor for the Law Review. I graduated from BYU law school in 2014 *magna cum laude*. I took and passed the Utah State Bar in 2014 and have maintained active accreditation since that date.

### **Relevant Employment History**

Following my graduation from BYU law in 2014, I was employed as a judicial clerk in the Second District Court in Ogden, UT. During that time, I assisted judges in legal research and drafting judicial decisions. As part of my employment, I was the judicial clerk for Judge Michael DiReda during the death penalty trial of Douglas Lovell. It was during this time that I recognized the impact that a prosecuting attorney can make in building a better community.

In 2015 I began employment with the Utah County Attorney's Office, initially working as a civil attorney representing various County Departments. Approximately one year after joining the Utah County Attorney's Office I transferred to the criminal division and was a prosecutor assigned to the Utah County Justice Court. During my time in the Justice Court, I performed the functions that would be expected of the successful applicant for this position. I learned to work closely with our victim advocates and appropriately handle domestic violence cases and DUI cases, which were among the most important cases handled in that court.

Later, during my time in the Utah County Attorney's Office, I prosecuted general felonies, domestic violence felonies, sex crimes, and homicides. I also served as the prosecutor liaison for the Utah Major Crimes Task Force and was appointed as a Special Assistant United States Attorney to prosecute drug trafficking organizations in federal court. I was one of the principal prosecutors in the case against Jerrod Baum, which was a death penalty case.

In 2021, I was offered a new opportunity with the Attorney General's Office in the Internet Crimes Against Children Task Force. Soon after beginning with the AG's Office, I was appointed as a Special Assistant United States Attorney to prosecute crimes against children in federal court. At the Attorney General's Office, I prosecuted felony child sex abuse cases in sixteen (16) different counties and federal court. I was eventually promoted as Section Director for the Internet Crimes Against Children Task Force, where I worked closely with law enforcement around the state and in federal agencies to promote the safety of children around the State.

Recently, in November 2025, I was recruited to serve as Executive Director for the Statewide Association of Prosecutors. In this role I work closely with law enforcement, prosecutors, legislators, and government officials throughout the State to advocate for criminal justice policies in the State of Utah. I also present training at the POST Academy and for the Utah Prosecution Council.

During my time as a prosecutor, I have received various recognitions and awards, including the 2024 Victim Service Award from the United States Attorney's Office and the 2023 Prosecutor of the Year Award from the Utah Attorney General's Office. In 2025 I was selected for and completed the Utah State Bar Leadership Academy.

### **Approach**

Criminal prosecution grants the government great power to be a force for good, or if unwise exercised, cause great harm. My prosecution philosophy and ethics have crystallized over many years of career prosecution. Proper prosecution balances multiple government interests including accountability, restitution, community order, victim safety, rehabilitation, and the responsible allocation of public resources.

When I first receive a case, I first identify the interests at stake, including the interests of direct victims, the interests of the community, the interests of public order, and the rehabilitative potential of a defendant. I then identify realistic goals that can be achieved through criminal prosecution, for instance, ensure safety of the victim, ensure safety in the community, deter against future criminal conduct, or rehabilitate a defendant to a productive lifestyle. I then identify what tools are available to achieve those goals, such fines, treatment, protective orders, and incarceration. Then I attempt to craft a resolution that utilizes available tools to achieve the goals in furtherance of the government interests at stake.

Because my approach begins with identifying the interests at stake, I am able to distinguish between cases where it is appropriate to allocate more resources (in the form of time from the Court, prosecutor, defender, victim advocates, and law enforcement) and cases where resources would be better allocated elsewhere.

I also believe that law enforcement and victim advocates who are on the front lines in dealing with victims and community members often have a better gauge on which cases require additional resources and attention than prosecutors who are sometimes removed from those kinds of direct interactions. I have always made it a practice to prioritize cases that are a priority for law enforcement and victim advocates and will continue to do so in this position.

### **Conflicts of Interest**

None. In my entire career as a prosecutor, I have never declined a case for conflict of interest, nor would I anticipate any conflicts arising in this role.

### **References**

Carol Dain

Violent Crimes Section Chief

United States Attorney's Office, District of Utah

(801) 381-1493

Christiana Phinney

Victim Advocate Supervisor

Utah County Sheriff's Office

(801) 228-8072

Bryant LoRe

Detective

West Valley City Police Department

(801) 509-1505

Additional references available upon request.

### **Cost Proposal**

Flat monthly fee: \$5,833.33. This cost is based on the calculation of a low estimate of the number of weekly hours billed by prior counsel over the past 6 months (10 hours weekly), and considers the contracted rate of pay of \$150 per hour, along with the reimbursable costs billed to the Cities by prior counsel. The approximate amount paid was over \$75,000 per year. The flat monthly fee would result in a discount to the Cities of 10% from the prior contract and provides the Cities with certainty and predictability in calculating the outlays for this service.

Respectfully submitted this 6<sup>th</sup> day of January, 2026

/s/ Carl Hollan  
CARL HOLLAN

Incl.

1. CV of Carl Hollan
2. Draft Contract for Prosecution Services

# CARL HOLLAN

649 N 2040 E Spanish Fork UT 84660 · (801)616-6722  
[carlhollan@gmail.com](mailto:carlhollan@gmail.com)

## EXPERIENCE

NOVEMBER 2025-CURRENT

### **EXECUTIVE DIRECTOR, STATEWIDE ASSOCIATION OF PROSECUTORS AND PUBLIC ATTORNEYS**

Represent the policy interests of prosecutors and public attorneys in the State of Utah and serving as a liaison between those parties and the Utah State Legislature, staff of the Utah State Governor, and Committees, Commissions, and Boards.

OCTOBER 2021-NOVEMBER 2025

### **ASSISTANT ATTORNEY GENERAL, UTAH ATTORNEY GENERAL'S OFFICE, INTERNET CRIMES AGAINST CHILDREN TASK FORCE**

Prosecution of crimes involving computers, the internet, and children throughout the State of Utah. Screening, filing, prosecution through motion practice, and prosecution through bench or jury trial under the direction of the Utah Attorney General. Participation in legislative efforts to improve legal processes within the State of Utah.

### NOTABLE JURY TRIALS

STATE V. YULIZA PEREZ – 221911046 – OBSTRUCTION OF JUSTICE IN INVESTIGATION OF CHILD RAPE

STATE V. CHRISTOPHER AUSTIN – 221901367 – ATTEMPTED SODOMY ON A CHILD

JULY 2020-CURRENT

### **SPECIAL ASSISTANT UNITED STATES ATTORNEY, U.S. ATTORNEY'S OFFICE**

Prosecution of criminal cases involving child exploitation and internet crimes against children in U.S. Federal Court under the supervision of the United States Attorney.

MAY 2022-CURRENT

### **CAPTAIN, JUDGE ADVOCATE, UNITED STATES ARMY, UTAH ARMY NATIONAL GUARD**

Commissioned Officer in the U.S. Army and Utah Army National Guard in the Judge Advocate General Corps assigned to the 4<sup>th</sup> Infantry Division – Main Command Post Operational Detachment. Provide advice regarding the lawful use of force according to the laws of armed conflict to Detachment Commander and Division Commander (2-star Command).

FEBRUARY 2021-CURRENT

### **ADJUNCT FACULTY, UTAH VALLEY UNIVERSITY**

Adjunct Faculty in the Criminal Justice Department. Development of course materials and provision of instruction for FSCI 3880 – Expert Witnesses and Professional Practices.

OCTOBER 2017 – OCTOBER 2021

### **DEPUTY COUNTY ATTORNEY (CRIMINAL), UTAH COUNTY ATTORNEY'S OFFICE**

Prosecution of criminal cases in Utah County, including misdemeanors and felonies. Screening, filing, prosecution through motion practice, and prosecution through jury or bench trial under the supervision of the County Attorney. Previously assigned to the Special Victim's Unit and

Major Crimes Task Force (drug trafficking organizations). Prosecution of four homicide cases, including State of Utah v. Jerrod Baum, a double homicide case where the State had sought the death penalty.

#### **NOTABLE JURY TRIALS**

STATE V. BORZIN MOTTAGHIAN – 171101546 – OBJECT RAPE

STATE V. ALBERTO ANDRADE – 191401444 – ATTEMPTED RAPE OF A CHILD

STATE V. MARCOS BARAJAS – 171101501 – AGGRAVATED KIDNAPPING; AGGRAVATED SEX ABUSE OF A CHILD

STATE V. THOMAS McEVER – 171403558 – DOMESTIC VIOLENCE AGGRAVATED ASSAULT

STATE V. PHILIP HATFIELD – 171402662 – ATTEMPTED AGGRAVATED MURDER

#### **APRIL 2015 – OCTOBER 2017**

##### **DEPUTY COUNTY ATTORNEY (CIVIL), UTAH COUNTY ATTORNEY'S OFFICE**

Representation of Utah County and several County Departments. Assist Departments with all legal matters across a wide variety of legal subjects, including employment law, contract law, etc.

#### **APRIL 2014 – APRIL 2015**

##### **LAW CLERK, STATE OF UTAH; SECOND DISTRICT COURT**

#### **AUGUST 2013 – DECEMBER 2013**

##### **LAW CLERK EXTERN, UTAH FEDERAL DISTRICT COURT; JUDGE DAVID SAM**

#### **JANUARY 2013 – APRIL 2013**

##### **LAW CLERK EXTERN, UTAH STATE SUPREME COURT; JUSTICE JILL PARRISH**

## **EDUCATION**

#### **APRIL 2014**

##### **JURIS DOCTOR, J. REUBEN CLARK SCHOOL OF LAW; BRIGHAM YOUNG UNIVERSITY**

*Magna cum laude*

Law Review – Executive Editor

#### **APRIL 2011**

##### **ASIAN STUDIES (BA); MANDARIN CHINESE (BA), BRIGHAM YOUNG UNIVERSITY**

Dual major; Official Memorandum: Advanced Level Mandarin Chinese Language Certificate;

Study Abroad – Nanjing University, Nanjing China

## **NOTABLE TRAINING**

Advanced Digital Evidence for Prosecutors – US

Secret Service – National Computer Forensics Institute (2018, 2023)

Proactive Internet Investigations – Federal Bureau of Investigations (2024)

Basic Officer Leadership Course – US Army (2023)

Judge Advocate Leadership Course – US Army Judge Advocate General's Corp (2023)

Crime Scene Response in Child Abduction Cases – National Criminal Justice Training Center (2023)

Undercover Chat Operations – Homeland Security Investigations (2024)

Defense Counsel and Paralegal Training – US Army Trial Defense Service (2024)

Exposure to Child Pornography: Protecting Resiliency – FBI (2023)

FBI Cyber Investigator – First Responder Course – FBI (2022)

National Child Protection Task Force – Enforcement and Prosecution (2020, 2021)

Victim Advocate and Leadership Summit – UT Army National Guard (2022)

National Law Enforcement Training on Child Exploitation – US Department of Justice (2022, 2023)

Following the Evidence in Child Abuse and Child Exploitation Cases – National Criminal Justice Training Center (2022)

Child Abduction Response – Federal Bureau of Investigation (2022)

Data Validation of Digital Forensic Evidence – NW3C (2022)

Association of Government Attorneys in Capital Litigation Annual Conference – National District Attorney's Association (2021)

National Cyber Crime Conference (2020, 2021)

Utah Human Trafficking Symposium – Utah Attorney General's Office (2019, 2021)

Sexual Assault Nurse Examiner Testimony – International Association of Forensic Nurses (2021)

Munich Cybercrime Conference (2021)

Advanced Sexual Assault Training Course – Utah Coalition Against Sexual Assault (2021)

Utah Children's Justice Symposium – Utah Children's Justice Centers (2019, 2020, 2022, 2023)

Basic Prosecutor's Training – Utah Prosecution Counsel (2018)

Overdose Death Investigation and Prosecution – Utah Attorney General's Office (2018)

National Prosecutor's Conference on Child Abuse and Neglect – Western Regional Children's Advocacy Center (2019)

ICAC Undercover Chat Tips and Tricks (2022)

The Legal and Investigative Implications of Emojis – NW3C (2022)

AirTags and Tracking Technology: Investigative and Legal Perspectives – NW3C (2022)

Expert Testimony in Utah and Federal Courts – Utah State Bar (2021)

Expert Testimony for Child Abuse Medical Professionals and Attorneys – Western Regional Children's Advocacy Center (2020)

FBI Computer Analyst Response Team Moot Court (2020, 2022, 2023)

International Conference on Child and Family Maltreatment – Chadwick Center for Children and Families (2020)

Mexican Drug Cartel Investigations – Northeast Counterdrug Training Center (2020)

Ethical Issues and Decisions in Law Enforcement – Multijurisdictional Counterdrug Task Force Training (2020)

Multijurisdictional Counterdrug Task Force Training – Introduction to Money Laundering (2020)

Federal OEO Wiretap Training – US Office of Enforcement Operations (2019)

Electronic Crimes & Investigations Training Conference – Northern California HIDTA (2020)

Cross Examination and Expert Witnesses – Central Utah Bar Association (2020)

Utah County SWAT Hell Week (2019)

## TEACHING/LECTURES

Instructor – Peace Officer Standards and Training Academy

Presenter – Proactive Internet Investigations – 2024 FBI Training

Presenter – Child Exploitation Undercover Operations – 2023 National Law Enforcement Training on Child Exploitation

Presenter – Courtroom Testimony for Forensic Examiners – 2023 International Association for Identification Annual Utah Chapter Conference

Presenter -

Presenter – The Devil's Playground – Investigations of the online exploitation of children – 2023 Ogden Community Crime Conference

Trainer – 2023 Interdisciplinary Exchange Program (Mexico) – Attorney General's Alliance

Presenter – Proactive Internet Investigations – Internet Crimes Against Children Task Force 2022

Presenter – 2022 Victim Advocate and Leadership Summit – UT Army National Guard  
Presenter/Panelist – 2022 Utah Valley University Conference on Domestic Violence  
Trainer – Internet Crimes Against Children Academy – Utah Attorney General’s Office  
Trainer - Forensic Interview Training – Utah County Children’s Justice Center  
Presenter - Basic Courtroom Training – Courtwatch  
Presenter - Domestic Violence Investigation - Utah County Sheriff’s Department

Trainer – Officer Involved Shootings and Use of Force – Utah County SWAT Hell Week 2020, 2021, 2022  
Presenter - Felony Domestic Violence Investigation – Utah County Sheriff’s Department  
Guest Lecturer – Intro to Forensic Science – Utah Valley University  
Guest Lecturer – Public Health Law – Utah Valley University

## **CERTIFICATES, BOARD MEMBERSHIPS, AND HONORARIA**

Victim Services Commission – Child Abuse Subcommittee (2024 – present)  
2023 Prosecutor of the Year – Utah Attorney General’s Office – Internet Crimes Against Children Task Force  
Commandant’s List (top 10%) – Judge Advocate Officer Leadership Course – The Judge Advocate General’s Legal Center and School (2023)  
Academic Excellence in Fiscal and Contract Law (top student) – The Judge Advocate General’s Legal Center and School (2023)

Utah Fentanyl Task Force (2024 – present)  
Utah State Bar Leadership Academy Class of 2024  
Utah’s “Legal Elite” (2022)  
Utah Statewide Association of Prosecutors Legislative Advisory Committee (2021 – present)  
Salt Lake County Sexual Assault Response Team Advisory Board (2021 – 2024)

**ALPINE**  
**RESOLUTION NO. 2026-09**  
**A RESOLUTION APPROVING AGREEMENT FOR PROSECUTION SERVICES**

**WHEREAS**, Alpine City (the “*Alpine*”) is in need of prosecution services for crimes, infractions, and other code violations committed within Alpine city limits;

**WHEREAS**, Alpine and Highland City (“*Highland*”) desire to use the same prosecutor and share the cost of prosecution services;

**WHEREAS**, Alpine and Highland (collectively, the “*Cities*”) desire to appoint Carl Hollan to serve as city prosecutor for each of the Cities, and desire to enter into an agreement for prosecution services with Mr. Hollan in substantially the form attached as **Exhibit A**;

**WHEREAS**, the Alpine City Council finds it to be in the best interest of Alpine and its residents to enter into the agreement for prosecution services with Mr. Hollan;

**NOW, THEREFORE, BE IT RESOLVED** by the City Council of Alpine City as follows:

Alpine hereby appoints Carl Hollan to be its city prosecutor according to the terms of an agreement for prosecution services in substantially the form of **Exhibit A**, and approves and authorizes the execution of the agreement.

**SIGNED, EXECUTED AND RECORDED** in the office of the City Recorder, and accepted as required herein.

**PASSED AND APPROVED** this 27<sup>th</sup> day of January, 2026.

**ALPINE CITY COUNCIL**

By: \_\_\_\_\_  
Carla Merrill, Mayor

**[SEAL]**

**VOTING:**

Andrew Young	Yea <input type="checkbox"/>	Nay <input type="checkbox"/>	Absent <input type="checkbox"/>
Jessica Smuin	Yea <input type="checkbox"/>	Nay <input type="checkbox"/>	Absent <input type="checkbox"/>
Sarah Blackwell	Yea <input type="checkbox"/>	Nay <input type="checkbox"/>	Absent <input type="checkbox"/>
Chrissy Hannemann	Yea <input type="checkbox"/>	Nay <input type="checkbox"/>	Absent <input type="checkbox"/>
Brent Rummler	Yea <input type="checkbox"/>	Nay <input type="checkbox"/>	Absent <input type="checkbox"/>

**ATTEST:**

---

DeAnn Parry  
City Recorder

**DEPOSITED** in the office of the City Recorder this 27<sup>th</sup> day of January, 2026.

**RECORDED** this 27<sup>th</sup> day of January, 2026.



**AGREEMENT FOR PROSECUTION SERVICES BETWEEN HIGHLAND  
AND ALPINE CITIES AND CARLHOLLAN, ESO.**

**THIS AGREEMENT FOR PROSECUTION SERVICES** (“Agreement”) made this \_\_\_\_\_ day of \_\_\_\_\_, 2026, between HIGHLAND CITY, a Municipal Corporation, 5378 West 10400 North, Highland, Utah County, State of Utah, hereinafter referred to as “Highland,” ALPINE CITY, a Municipal Corporation, 20 N Main St., Alpine, Utah County, State of Utah, hereinafter referred to as “Alpine” (Highland and Alpine hereinafter referred to as “the Cities”); and CARL HOLLAN, of 649 N 2040 E, Spanish Fork, Utah County, State of Utah.

**WHEREAS** the Cities require prosecution services within the jurisdiction of the Cities; and,

**WHEREAS** the Cities have found Carl Hollan to be qualified to provide such services; and,

**WHEREAS** the Cities have found it appropriate to appoint Carl Hollan as the prosecuting city attorney for Highland and Alpine; and,

**WHEREAS** the parties desire to set forth their rights, duties, and obligations during the period of Carl Hollan’s appointment as prosecuting city attorney for the Cities.

**NOW THEREFORE**, the parties agree as follows:

**PERIOD OF AGREEMENT**

This Agreement shall be effective upon the date it is executed by all parties. The Agreement shall continue in effect for five (5) years from the date of signing. The Agreement may be renewed upon mutual agreement of the parties.

**AMENDMENTS AND TERMINATION**

The Compensation provided under this Agreement may be changed by mutual agreement of the parties as confirmed in writing, but any other modification of this Agreement shall require a written amendment signed by the parties. This Agreement, and the appointment of Carl Hollan, may be terminated by any party upon thirty (30) days’ written notice.

**DUTIES AND OBLIGATIONS OF THE CITIES**

1. The Cities shall:
  - a. Appoint Carl Hollan as the prosecuting city attorney for Highland and the prosecuting city attorney for Alpine.
  - b. Provide Carl Hollan with a city-issued email address for each city upon request by Carl Hollan.
  - c. Compensate Carl Hollan as set forth in this Agreement.

## DUTIES AND OBLIGATIONS OF CARL HOLLAN

1. Carl Hollan shall:
  - a. Under the direction of the Cities' respective city administrators and city attorneys, perform all criminal prosecution or criminal work of any kind for crimes prosecuted in the Highland/Alpine Justice Court (infractions and Class B and C misdemeanors and city code violations).
    - i. This includes but is not limited to screening criminal cases referred for prosecution; filing criminal cases in the Highland/Alpine Justice Court; arranging service of process on parties; providing discovery to defendants and defense counsel; negotiating resolutions of criminal cases; drafting and executing plea agreements; appearing in court; responding to motions filed in these criminal cases; conducting bench and jury trials; and handling trials *de novo* in district court.
    - ii. Carl Hollan shall not be obligated to perform any work on any criminal matter where an ethical conflict barring Mr. Hollan from prosecuting the case arises. In the case of such a conflict, Mr. Hollan will notify the city administrators of the respective Cities and arrange for a qualified substitute prosecutor for such matter at no additional charge to the Cities.
    - iii. Any appeals of any criminal case originating in the Highland/Alpine Justice Court to the Utah Court of Appeals, Utah Supreme Court, or any US Federal Court are beyond the scope of this Agreement and if the Cities desire Carl Hollan to represent the Cities for these matters, a separate agreement for those services must be negotiated separately from this Agreement.
  - b. Coordinate with the current prosecuting attorney for the Cities, who is resigning effective February 25, 2026, to take on and become responsible for the prosecution and management of all pending matters.
  - c. Maintain valid licensure, reasonable malpractice and liability insurance, and any necessary certifications necessary to provide prosecution services to the Cities.
  - d. Conduct all criminal prosecutions and perform all other work required or performed under this Agreement in accordance with the laws, rules, and ethical and professional standards of the state of Utah.
  - e. Arrange for a qualified substitute prosecutor to appear on Mr. Hollan's behalf for dates when Mr. Hollan may be unavailable to appear in the Highland/Alpine Justice Court at no additional charge to the Cities.
  - f. Be reasonably available to respond to inquiries from the Chief of Police for the Cities or the Chief's designee and provide legal advice regarding the legal conduction of law enforcement duties.
  - g. Be reasonably available to assist law enforcement officers in the Cities in

reviewing search warrants or responding to questions regarding the legal conduction of law enforcement duties.

- h. At the request of the Chief of Police of the Cities, prepare and present two trainings per calendar year for law enforcement officers on topics and subjects of criminal law selected by the Chief of Police of the Cities or the Chief's designee.

## **COMPENSATION**

1. In compensation for the performance of the duties and obligations of this agreement, the Cities shall compensate Carl Hollan at a combined total flat rate of \$70,000 per calendar year ("Annual Compensation") for all services provided under this agreement.
2. The parties agree that Carl Hollan shall be an independent contractor and not an employee of either of the Cities. Carl Hollan shall not be entitled to health benefits, disability benefits, retirement benefits, or other benefits offered to employees of the Cities.
3. The parties agree that the Annual Compensation shall be divided into twelve (12) equal payments of \$5,833.33, paid monthly by Highland to Carl Hollan prior to the tenth (10th) day of the month, or if the tenth day of the month falls on a weekend or federal holiday, on the first business day after the tenth day of the month. Alpine shall reimburse Highland for its portion of the Annual Compensation pursuant to the separate agreement entered into by and between Highland and Alpine.
4. No tax or other withholdings shall be made from the Annual Compensation. Carl Hollan shall be solely responsible for any tax obligations or other payments owed to any applicable government entity in connection with the Annual Compensation.
5. In the event of services being performed for a partial month, compensation for the services performed during the partial month shall be calculated pro rata.
6. The parties may renegotiate the amount of compensation owed at times and in amounts as mutually agreed upon by the parties and confirmed in writing.
7. In the event that the number of criminal misdemeanor cases filed in the Highland/Alpine Justice Courts exceeds 122 cases per year (the number filed in FY2025, plus more than 10%), or the number of traffic citations issued exceeds 2,202 per year (the number issued in FY2025, plus more than 10%), the parties agree they will meet and confer regarding an appropriate increase in compensation. In the event the number of criminal misdemeanor cases filed in the Highland/Alpine Justice Court falls below 99 cases per year (the number filed in FY2025, minus more than 10%) or the number of traffic citations issued falls below 1818 (the number filed in FY2025, minus more than 10%), the parties agree they will meet and confer regarding an appropriate reduction in compensation.
8. The parties agree that the Annual Compensation shall be increased by the equivalent of

the average, annual cost-of-living adjustment in salary granted to employees of the Cities, if any, which increase shall not exceed the Utah State Retirement System cost-of-living adjustment for Tier 2 systems for the applicable year.

#### **MISCELLANEOUS TERMS AND CONDITIONS**

1. This Agreement shall be interpreted according to the laws of the State of Utah.
2. This Agreement represents the entire agreement between the parties.

*[Signatures on following page.]*

## **SIGNATURES**

For ALPINE CITY:

DATE:

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NAME  
TITLE

For HIGHLAND CITY:

DATE:

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NAME  
TITLE

For CARL HOLLAN:

DATE:

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CARL HOLLAN  
Attorney

# ALPINE CITY COUNCIL AGENDA

**SUBJECT:** Code Amendment to 3.08.050 Location Requirements in the Public-Facility Zone.

**FOR CONSIDERATION ON:** January 27<sup>th</sup>, 2026

**PETITIONER:** City Staff

**ACTION REQUESTED BY PETITIONER:** Approval of Proposed Code Amendments.

**Review Type:** Legislative

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## BACKGROUND INFORMATION:

Alpine City recently established the Public-Facility (P-F) Zone to provide development standards for properties owned by public entities, including the City, County, and Schools.

The proposed code amendment incorporates language similar to setback provisions in the Business Commercial Zone, allowing a public entity to request reduced setbacks subject to Planning Commission review and City Council approval.

This amendment introduces reasonable flexibility where unique site characteristics or operational needs justify a deviation, while ensuring that any reduction is formally reviewed and approved by the governing body. The applicant is not guaranteed approval, they are still required to justify the circumstance like is required in the Business-Commercial Zone for a similar exception.

The Planning Commission held a public hearing on this item and made the following motion:

**MOTION:** Planning Commission member Jeff Davis moved to recommend approval of the proposed amendments to Alpine Development Code 3.08.050 Location Requirements in the Public Facility Zone, based on the findings that the amendment provides necessary flexibility for public facilities and remains consistent with the P-F Zone.

Michelle Schirmer seconded the motion. There were 7 Ayes and 0 Nays

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## General Plan Reference:

- N/A

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## City Code Reference:

- Alpine Development Code 3.08.050

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## Public Notice:

This item required a public hearing to take place, and was noticed according to State and City requirements. This hearing took place during the Planning Commission's review.

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## STAFF RECOMMENDATION:

As this is a legislative decision, the City Council should evaluate whether the proposed amendment aligns with City policies and maintains consistency with the Development Code.

Staff recommends the City Council approve the proposed amendments to Alpine City Code 3.08.050.

**Motion to Approve:**

I move to approve the proposed amendments to Alpine Development Code 3.08.050 Location Requirements in the Public-Facility Zone as proposed.

**Motion to Approve with Conditions:**

I move to approve the proposed amendments to Alpine Development Code 3.08.050 with the following conditions:

\*Insert Proposed Conditions

**Motion to Table:**

I move to table the proposed amendments to Alpine Development Code 3.08.050 to a future meeting to allow time for the following:

\*Insert additional information needed.

**Motion to Deny:**

I move to deny the proposed amendments to Alpine Development Code 3.08.050 based on the following findings:

\*Insert Findings



**SECTION 1: AMENDMENT** “3.18.080 Compliance With Subdivision Procedure” of the Alpine City Development Code is hereby *amended* as follows:

A M E N D M E N T

3.18.080 Compliance With Subdivision Procedure

All proposed development within the Senior Housing Overlay Zone shall be reviewed and approved in accordance with Alpine City's Subdivision Ordinance, ~~and with the following additions for concept approval~~ (Ord. 2004-13, 9/28/04; Ord. 2016-11, 06/14/16):

1. ~~Once the Planning Commission has given a recommendation of the applicant's concept plan and the proposed zone change, the concept plan and zone change will be forwarded to the City Council for approval. After the City Council approves the concept plan the applicant will continue the planning process in accordance with the Alpine City's Subdivision Ordinance. The City Council shall continue to move forward with the applicable zone change. The actual zone change will coincide with City Council's approval of the final plat.~~

(Ord. No. 2003-11/10-14-03, Ord. No. 2008-02/3- 11-08; Ord. No. 2016-11, 06/14/16)

**ALPINE CITY  
ORDINANCE 2026-05**

**AN ORDINANCE AMENDING SECTIONS 3.18.080 COMPLIANCE WITH  
SUBDIVISION PROCEDURE OF THE ALPINE DEVELOPMENT CODE.**

**WHEREAS**, the Planning Commission held a duly noticed public hearing on December 2nd, 2025, and reviewed the proposed amendment and addition to the Alpine City Development Code, and made a recommendation to the City Council;

**WHEREAS**, the City Council reviewed the proposed amendments and determined that the proposed amendments to Section 3.18.080 of the Alpine Development Code are in the best interest of the public health, safety, and welfare; and

**WHEREAS**, the City Council finds that the proposed amendments are consistent with the City's General Plan, and policies of the city.

**NOW THEREFORE**, be it ordained by the Council of the Alpine City, in the State of Utah, as follows:

**SECTION 1:** **AMENDMENT** “3.18.080 Compliance With Subdivision Procedure” of the Alpine City Development Code is hereby *amended* as follows:

**A M E N D M E N T**

**3.18.080 Compliance With Subdivision Procedure**

All proposed development within the Senior Housing Overlay Zone shall be reviewed and approved in accordance with Alpine City's Subdivision Ordinance.(Ord. 2004-13, 9/28/04; Ord. 2016-11, 06/14/16):

1.

(Ord. No. 2003-11/10-14-03, Ord. No. 2008-02/3- 11-08; Ord. No. 2016-11, 06/14/16)

PASSED AND ADOPTED BY THE ALPINE CITY COUNCIL

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	<b>AYE</b>	<b>NAY</b>	<b>ABSENT</b>	<b>ABSTAIN</b>
Chrissy Hannemann	_____	_____	_____	_____
Jason Thelin	_____	_____	_____	_____
Jessica Smuin	_____	_____	_____	_____
Brent Rummller	_____	_____	_____	_____
Kelli Law	_____	_____	_____	_____
Presiding Officer		Attest		

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Carla Merrill, Mayor, Alpine City

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DeAnn Parry, City Recorder, Alpine City

# ALPINE CITY COUNCIL AGENDA

**SUBJECT:** Code Amendment Subdivision Process Senior Housing Overlay Zone.

**FOR CONSIDERATION ON:** January 27<sup>th</sup>, 2026

**PETITIONER:** City Staff

**ACTION REQUESTED BY PETITIONER:** Approval of Proposed Code Amendment.

**Review Type:** Legislative

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## **BACKGROUND INFORMATION:**

City staff reviewed the existing language in Alpine Development Code 3.18.080, which outlines the review process after a development is approved within the Senior Housing Overlay Zone. The current local code language does not fully align with the review procedures required under Utah Code 10-20-805, which governs the municipal approval process for development-related petitions.

The proposed amendments are intended to bring Alpine Development Code procedures into compliance with State Law while preserving the policy intent of the Senior Housing Overlay Zone.

A public hearing was held by the Planning Commission on December 2<sup>nd</sup>, 2025 where the following motion was made:

**MOTION:** Planning Commission member Susan Whittenburg moved to recommend approval of the Proposed amendment to Alpine Development Code 3.18.080 (Senior Housing Overlay Zone).

Jeff Davis seconded the motion. There were 7 Ayes and 0 Nays

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## **General Plan Reference:**

- *The Senior Housing Overlay Zone is to provide for increased land use flexibility and specialized types of senior housing that recognizes and accommodates varied housing needs and desires of the community's senior housing population while promoting independence and a high quality of life. (Policy 3.3)*

## **City Code Reference:**

- Alpine Development Code 3.18 Senior Housing Overlay Zone

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## **Public Notice:**

This item requires a public hearing to take place, and has been noticed according to State and City requirements.

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## **STAFF RECOMMENDATION:**

Because this is a legislative decision, the City should consider whether the proposed code amendment supports the goals and policies of the General Plan and complies with Development Code standards.

As the amendment updates Alpine Development Code to align with the mandatory requirements of Utah Code 10-20-805, staff recommends that the City Council approve this code change.

**Motion to Approve:**

I move to approve the proposed Code Amendment to Alpine Development Code 3.18.080 regarding the Senior Housing Overlay Zone review process, as presented, based on the findings that the amendment is consistent with the General Plan and brings City Code into compliance with Utah Code.

**Motion to Approve with Conditions:**

I move to approve the proposed Code Amendment to Alpine Development Code 3.18.080 with the following conditions:

\*Insert Proposed Conditions

**Motion to Table:**

I move to table the proposed Code Amendment to Alpine Development Code 3.18.080 to a future meeting to allow additional time to obtain the following information:

\*Insert additional information needed.

**Motion to Deny:**

I move to deny the proposed Code Amendment to Alpine Development Code 3.18.080 based on the following findings:

\*Insert Findings



**SECTION 1: AMENDMENT** “3.08.050 Location Requirements” of the Alpine City Development Code is hereby *amended* as follows:

## A M E N D M E N T

### 3.08.050 Location Requirements

All buildings shall comply with the following setbacks:

1. Front setbacks shall be not less than thirty (30) feet from the property line on all streets; except corner lots, where setbacks shall not be less than thirty (30) feet from the property line on all streets. A reduced setback may be considered when justified by site-specific circumstances and when recommended by the Planning Commission and approved by the City Council. In no case shall an approved reduced setback on a corner lot be less than eighteen (18) feet.
2. Side yard and rear yard setbacks will be not less than thirty (30) feet unless recommended by the Planning Commission and approved by the City Council where circumstances justify.
3. Accessory buildings shall be set back not less than five (5) feet from the main building.

**ALPINE CITY  
ORDINANCE 2026-04**

**AN ORDINANCE AMENDING SECTIONS 3.08.050 LOCATION REQUIREMENTS  
OF THE ALPINE DEVELOPMENT CODE.**

**WHEREAS**, lanning Commission held a duly noticed public hearing on December 2nd, 2025, and reviewed the proposed amendment and addition to the Alpine City Development Code, and made a recommendation to the City Council;

**WHEREAS**, the City Council reviewed the proposed amendments and determined that the proposed amendments to Section 3.08.050 of the Alpine Development Code are in the best interest of the public health, safety, and welfare; and

**WHEREAS**, the City Council finds that the proposed amendments are consistent with the City's General Plan, and policies of the city.

**NOW THEREFORE**, be it ordained by the Council of the Alpine City, in the State of Utah, as follows:

**SECTION 1:** **AMENDMENT** “3.08.050 Location Requirements” of the Alpine City Development Code is hereby *amended* as follows:

**A M E N D M E N T**

**3.08.050 Location Requirements**

All buildings shall comply with the following setbacks:

1. Front setbacks shall be not less than thirty (30) feet from the property line on all streets; except corner lots, where setbacks shall not be less than thirty (30) feet from the property line on all streets . A reduced setback may be considered when justified by site-specific circumstances and when recommended by the Planning Commission and approved by the City Council. In no case shall an approved reduced setback on a corner lot be less than eighteen (18) feet.
2. Side yard and rear yard setbacks will be not less than thirty (30) feet unless recommended by the Planning Commission and approved by the City Council where circumstances justify.
3. Accessory buildings shall be set back not less than five (5) feet from the main building.

PASSED AND ADOPTED BY THE ALPINE CITY COUNCIL

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	<b>AYE</b>	<b>NAY</b>	<b>ABSENT</b>	<b>ABSTAIN</b>
Chrissy Hannemann	_____	_____	_____	_____
Jason Thelin	_____	_____	_____	_____
Jessica Smuin	_____	_____	_____	_____
Brent Rummller	_____	_____	_____	_____
Kelli Law	_____	_____	_____	_____
Presiding Officer		Attest		

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Carla Merrill, Mayor, Alpine City

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DeAnn Parry, City Recorder, Alpine City