



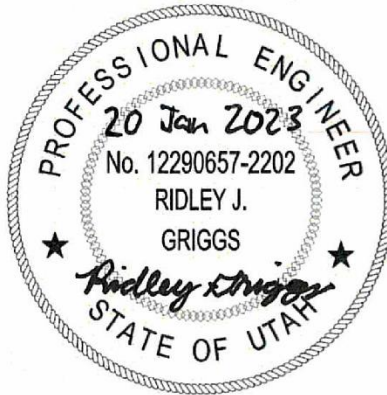
PRESSURIZED IRRIGATION WATER IMPACT FEE FACILITY PLAN AND IMPACT FEE ANALYSIS

(HAL Project No.: 412.23.100)

January 2023

PAYSON CITY
PRESSURIZED IRRIGATION WATER
IMPACT FEE FACILITY PLAN AND IMPACT FEE ANALYSIS

(HAL Project No.:412.23.100)



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Payson City Government

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IMPACT FEE CERTIFICATION

The Utah Impact Fee Act requires certifications for the Impact Fee Facility Plan (IFFP) and Impact Fee Analysis (IFA). Hansen, Allen & Luce provides these certifications with the understanding that the recommendations in the IFA are followed by City Staff and elected officials. If all or a portion of the IFA are modified or amended, or if assumptions presented in this analysis change substantially, this certification is no longer valid. All information provided to Hansen, Allen & Luce, Inc. is assumed to be correct, complete, and accurate.

IFFP Certification

Hansen, Allen & Luce, Inc. certifies that the Impact Fee Facilities Plan (IFFP) prepared for the pressurized irrigation water system:

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;
 - c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement; and
3. complies in each and every relevant respect with the Impact Fees Act.

HANSEN, ALLEN & LUCE, INC.

IFA Certification

Hansen, Allen & Luce, Inc. certifies that the Impact Fee Analysis (IFA) prepared for the pressurized irrigation water system:

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;
 - c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement;
 - d. costs with grants or other alternate sources of payment; and
3. complies in each and every relevant respect with the Impact Fees Act.

HANSEN, ALLEN & LUCE, INC.

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Capital Projects Cost Estimate

IMPACT FEE SUMMARY

The **purpose** of the Impact Fee Facility Plan (IFFP) and Impact Fee Analysis (IFA) is to comply with the requirements of the Utah Impact Fees Act by identifying demands placed on the existing pressurized irrigation water system by new development and by identifying the means by which the City will meet these new demands. This analysis is an update to the Secondary Water System IFFP and IFA prepared in 2019 to address changes in conditions and assumptions that result in a change in the proposed secondary water impact fee. The Payson City Pressurized Irrigation Water System Master Plan has been used in support of this analysis, in addition to other information compiled by Payson City since the master plan was completed.

The most significant **changes** in this update include increased projects costs, locations of anticipated development, and construction of additional infrastructure. There are several growth-related capital facilities anticipated to be needed in the next 10 years, so the calculated impact fee is based on anticipated capital facility projects as well as existing excess capacity and documented historic costs. The calculated impact fee is less than the previous fee due to the introduction of the ULS pipeline project into this 10-year planning window. The cost for this will be captured in other fees rather than this impact fee.

The impact fee **service area** is the pressurized irrigation water system service area, which includes the current city boundary and future areas anticipated to be annexed into the city.

The proposed **level of service** for the pressurized irrigation water system includes the following:

Water Supply

- Peak Day Source Capacity: 6.0 gallons per minute per irrigated acre (gpm/irr-ac)
- Source Volume: 3.2 acre-feet/irr-ac (Annual Demand)
- Storage Capacity: 6,480 Gallons/irr-ac
- Transmission Capacity: 40 pounds per square inch (psi) minimum during peak day demand conditions and 30 psi minimum during peak instantaneous conditions

The proposed level of service is less than the amount of water currently being used by City residents. It was chosen because the City is currently in the process of restructuring billing rates, which will motivate customers to water at a responsible level. This is expected to result in substantial conservation.

The existing system served about 921 irrigated acres at the end of 2021. Projected **growth** adds 165 irrigated acres in the next 10 years, for a total of 1,086 irrigated acres.

The costs calculated for the capacity required for growth in the next 10 years comes from the proportional historical buy-in costs of **excess capacity** and **new projects** required entirely to provide capacity for new development.

The **pressurized irrigation water impact fee** is calculated based on the estimated cost of projects needed to support anticipated growth. The fee is calculated to be **\$8,014** per irrigated acre. A typical single-family connection which requires outdoor water from the pressurized irrigation water system was assumed to have an area of 0.18 irrigated acres, with a fee of **\$1,443**.

**Total Proposed Impact Fee Per Irrigated
Acre and Typical Single-Family Connection**

Component	Per Irrigated Acre	Per Typical Residential Connection
Storage	\$0.00	\$0.00
Transmission	\$6,632.85	\$1,193.91
Source	\$1,233.54	\$222.04
Planning	\$147.84	\$26.61
Total	\$8,014	\$1,443

Impact fees for nonresidential development or single-family developments with varying lot sizes should be calculated according to the following formula.

$$\text{Impact fee} = (\text{Irrigated acres on site}) * \$8,014$$

For example, a nonresidential development with 1.8 irrigated acres on-site would have an impact fee as follows.

$$\text{Impact fee} = 1.8 * \$8,014 = \mathbf{\$14,425}$$

SECTION 1 INTRODUCTION

1.1 Background

Payson is located in southern Utah County, alongside I-15 and between Payson Canyon and West Mountain. Payson has an estimated population of 22,030. The primary pressurized irrigation water sources for Payson are Peteetneet Creek (in Payson Canyon), Spring Lake, and the Strawberry High Line Canal.

1.2 Purpose

The City has recognized the need to plan for increased demands on its pressurized irrigation water system as a result of growth. To do so, an Impact Fee Facility Plan (IFFP) and Impact Fee Analysis (IFA) were completed to allow the City to charge an impact fee to help pay for capital projects necessary to support future growth.

This report identifies those items that the Utah Impact Fees Act specifically requires, including demands placed upon existing facilities by new development, and the proposed means by which the municipality will meet those demands. This analysis was based on continued monitoring of the system that has shown revised growth areas and projections. The Pressurized Irrigation Water Master Plan that was prepared in 2019 was also used to support this analysis. The master plan identified several growth-related projects needed within the 10-year planning window. Therefore, the calculated impact fee is based on excess capacity and documented historic costs, as well as future capital projects.

1.3 Impact Fee Collection

Impact fees enable local governments to finance public facility improvements necessary for growth, without burdening existing customers with costs that are exclusively attributable to growth.

An impact fee is a one-time charge on new development to pay for that portion of a public facility that is required to support that new development.

In order to determine the appropriate impact fee, the cost of the facilities associated with future development must be proportionately distributed. As a guideline in determining the “proportionate share”, the fee must be found to be roughly proportionate and reasonably related to the impact caused by the new development.

1.4 Master Planning

A Pressurized Irrigation Water System Master Plan was prepared in 2019 and used in conjunction with this analysis. The master plan for the City’s pressurized irrigation water system

is more comprehensive than the IFFP and IFA. It provides the basis for the IFFP and IFA and identifies all Capital Facilities required for the Pressurized Irrigation Water System inside the 20-year planning range, including maintenance, repair, replacement, and growth-related projects. This updated IFFP and IFA is also based on ongoing planning undertaken since the last report was completed. The projected rates and areas of growth areas have been revised to more accurately reflect the recent development that the City has seen.

The recommendations made within the master plan are in compliance with current City policies and standard engineering practices.

A hydraulic model of the pressurized irrigation water system was used to complete the Pressurized Irrigation Water System Master Plan. The model was used to assess existing performance, level of service, to establish a proposed level of service and to confirm the effectiveness of the proposed capital facility projects to maintain the proposed level of service over the next 10 years.

SECTION 2 IMPACT FEE FACILITY PLAN

2.1 General

The purpose of this section is to identify the current level of service, characterize the facilities of the existing system, and determine the remaining capacity of these facilities.

Payson's existing pressurized irrigation water system is comprised of a pipe network, water storage ponds, pumping facilities, and water sources. These facilities are found within three separate pressure zones. Figure 2-1 illustrates the existing water system that services the entire City.

2.2 Pressure Zones

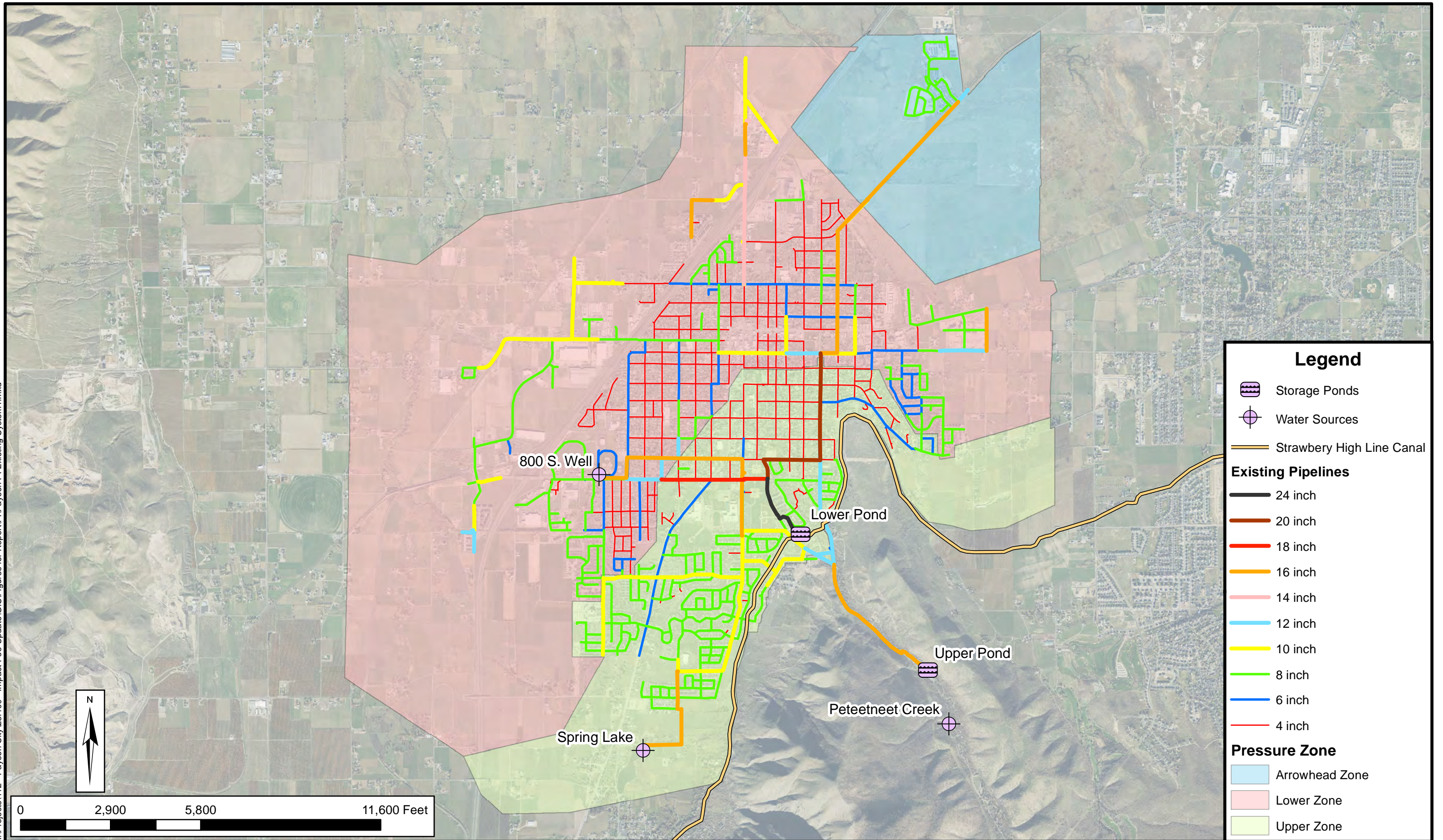
The water system is comprised of three pressure zones, with the Lower pressure zone extending north to the Nebo Power Plant and the Payson wastewater treatment plant, and the Upper pressure zone extending south to the High Line Canal. The pressure zones were designed to provide pressures between 40-100 psi. The City has recently constructed the third pressure zone in the northeastern portion of the City, in the vicinity of Arrowhead Trail Road. This pressure zone is known as the Arrowhead pressure zone.

2.3 Existing Irrigated Acreage

Water demands for all users have been determined in terms of irrigated acreage. The use of irrigated acreage is a common engineering practice to describe the entire system's usage based upon a common unit of measurement. Using irrigated acres for analysis is a way for allocating existing and future demands over both residential and non-residential land uses.

At the end of 2021, the City was estimated to have 921 irrigated acres served by the pressurized irrigation water system. Irrigated areas served instead by the drinking water system were not considered in this analysis.

The City has established a level of service for the pressurized irrigation water system. It establishes the sizing criteria for the City's transmission (pipelines), source, storage facilities, and water rights. The proposed level of service standards are shown in Table 2-1. The existing standards reflect levels of use typical over the past several years. The conservation standards reflect projected future water use, after customer meters are installed and a conservation-oriented tiered rate schedule is implemented.



Legend

- Storage Ponds
- Water Sources
- Strawbery High Line Canal

Existing Pipelines

- 24 inch
- 20 inch
- 18 inch
- 16 inch
- 14 inch
- 12 inch
- 10 inch
- 8 inch
- 6 inch
- 4 inch

Pressure Zone

- Arrowhead Zone
- Lower Zone
- Upper Zone

**Table 2-1
Level of Service Requirements**

Requirement (per Irrigated Acre)	Existing	Conservation
Peak Day Source (gpm)	8.7	6.0
Annual Source Volume (ac-ft/yr)	4.2	3.2
Storage Capacity (gal)	9,396	6,480

The level of service for transmission capacity is that it must provide a minimum peak day service pressure of 40 psi and a minimum peak instantaneous service pressure of 30 psi.

Calculations for this impact fee analysis have been done according to the conservation level of service because Payson has installed meters on the pressurized irrigation system and recently implemented a tiered rate structure.

2.4 Methodology Used to Determine Existing System Capacity

Each component of the pressurized irrigation water system was assessed a capacity in terms of irrigated acres. Irrigated acreage was calculated based on lot areas and defined irrigation factors for each land use type, which were determined by analyzing aerial imagery for each land use type across Payson City.

System components include source (surface water facilities and pump stations), storage (ponds), transmission (pipes), and planning. The remaining capacity of a facility is defined as the difference between its capacity and the demand imposed on it (both expressed in terms of irrigated acreage). A hydraulic model was developed for the purpose of assessing system operation and transmission capacity.

2.5 Water Source & Remaining Capacity

Payson City's sources of pressurized irrigation water come from Peteetneet Creek (in Payson Canyon), Spring Lake, and the Strawberry High Line Canal. The City also utilizes a pump station to use High Line Canal water to meet demands in the Upper Zone and the 800 S. Well, which was recently upgraded and constructed to be able to function as either a PI source or a drinking water source. Its capacity is shown as 0 as it is planned to be used in the future drinking water system. Table 2-2 summarizes the capacity of each source and all sources total.

**Table 2-2
Existing Water Sources**

Source	Available Flow (gpm)	Existing Demand (irr-ac)	Level of Service Demand (gpm) ¹	Remaining Capacity (gpm)	Remaining Capacity (irr-ac)
Spring Lake	1,000	-	-	-	-
High Line Canal	6,284				
Peteetneet Creek	350				
800 S. Well	0				
TOTAL	7,634	921	5,526	2,108	351

1. Existing demand is higher; however, demand was calculated according to the proposed level of service because meters have been installed and a tiered rate structure has been implemented.
2. Available flow is assumed to be 0 as the 800 S. Well is equipped and planned to be used in the Drinking Water system in the future.

A substantial amount of surplus capacity will exist in the Lower pressure zone once conservation is achieved. Capacity is more limited in the Upper zone. Future source projects will be needed to help meet demands and provide a consistent source. The Spring Lake pump station is under construction to be re-equipped to provide 1,000 gpm total (an additional 300 gpm as compared to its previous capacity of 700 gpm). The actual physical capacity of the pump was increased from 1,300 gpm to 1,700 gpm.

Payson City is expecting to begin receiving water from the Central Utah Water Conservancy District (CUWCD) Utah Lake System (ULS) pipeline within the next 3 to 10 years. Payson City has a signed contract which has reserved them capacity in this pipeline and specifies terms of payment. Thus, it will be a preferred source moving forward. The future source project and its respective capacity is shown in Table 2-3 below.

**Table 2-3
Future Source Projects**

Project	Capacity (gpm)
Main Street ULS Source	7,000

2.6 Storage Facilities & Remaining Capacity

Payson currently operates two concrete-lined water storage ponds totaling 35 ac-ft (see Table 2-4). The proposed storage level of service is 6,480 gallons of storage per irrigated acre.

**Table 2-4
Existing Water Storage**

Pond	Capacity (ac-ft)	Existing Storage Demand (irr-ac)	Level of Service Demand (ac-ft)¹	Remaining Capacity (ac-ft)	Remaining Capacity (irr-ac)
Upper	10	417	8.29	1.71	85.9
Lower	25	504	10.02	14.98	753.1
Total	35	921	18.32	16.7	839.0

1. Existing demand is higher; however, demand was calculated according to the proposed level of service.

At the proposed level of service, capacity remains in both ponds. However, it is more limited in the Upper Zone than in the Lower Zone.

2.7 Transmission System

Pipe diameters range from 4 inches to 24 inches in diameter, with the majority being 4, 6, and 8 inches in diameter. The larger pipes in the system function as transmission lines to fill the storage tanks and meet peak day demands. Smaller pipes facilitate local distribution. Figure 2-1 illustrates the existing transmission pipelines. More pipes will be needed to support future growth. Costs attributable to replacement or correction of existing deficiencies have not been incorporated into this analysis.

2.8 Capital Facilities to Support System Growth

Projects which were previously constructed but have capacity remaining to support growth are eligible to be paid for with impact fees. There are several existing projects that are eligible for impact fees based on the remaining capacity that they can serve (see Table 2-5).

**Table 2-5
Existing Transmission Projects and Remaining Capacity**

Project	Irr-ac Served	Irr-ac Remaining	Percent to Growth
Arrowhead Transmission Project	1,125 ¹	1,049 ²	93.2%
Rec Zone Source Waterline	1,125 ¹	1,049 ²	93.2%
Eastern Lower Zone Transmission	1,049 ²	1,049 ²	100%

1. Transmission infrastructure is sized to accommodate future users through year 2050. A capacity of 1,125 irr-ac was calculated as the projected year 2050 irrigable acreage (1,970) minus irrigable acreage existing at the beginning of year 2019 (845) when the project was constructed.
2. A remaining capacity of 1,094 irr-ac was calculated as the projected year 2050 irrigable acreage (1,970) minus irrigable acreage existing at the beginning of year 2022 (921).

SECTION 3 IMPACT FEE ANALYSIS

3.1 General

Data presented in the previous section was used to calculate a proposed impact fee based on an appropriate buy-in cost of existing excess capacity and the cost of projects required to support growth. This section documents expenses previously incurred and estimated cost of future projects, and discusses possible revenue sources for the City to consider.

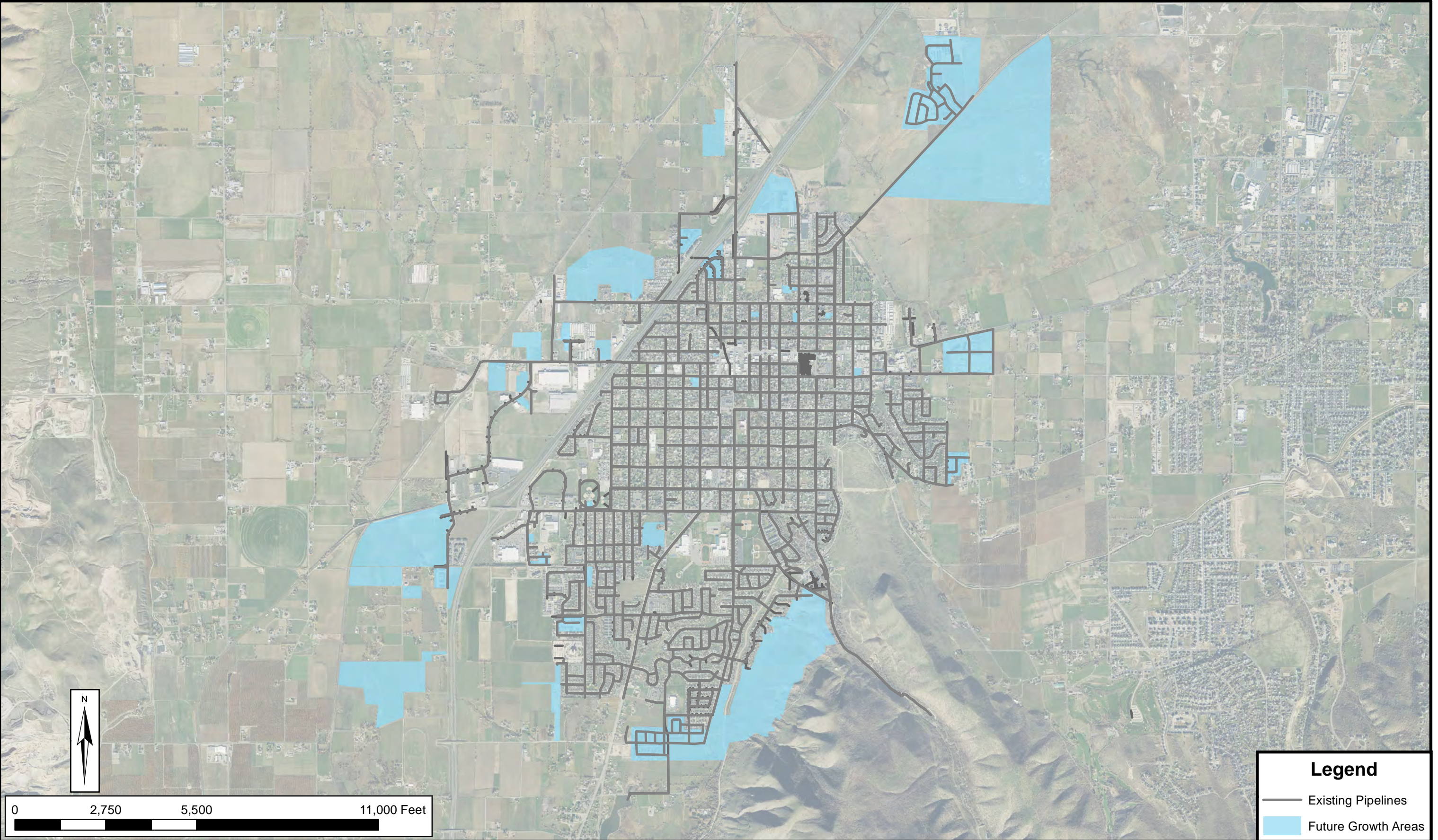
3.2 Growth Projections

The development of impact fees requires growth projections over the next ten years. Growth projections for Payson were made in consultation with Payson City personnel. Land identified as likely to develop was identified and characterized by expected land use. Irrigation factors were applied to these areas identified to estimate growth in irrigated acreage. Areas of expected growth are shown in Figure 3-1. Total growth projections for the City through 2032 are summarized in Table 3-1

**Table 3-1
Growth Projections Over Next Ten Years**

Year	Irrigated Acres			
	Lower Zone	Upper Zone	Arrowhead	Total
2022	479	417	25	921
2023	488	418	29	935
2024	497	418	33	948
2025	506	419	37	962
2026	515	419	42	976
2027	524	420	48	992
2028	534	420	54	1008
2029	544	421	62	1027
2030	554	421	70	1045
2031	564	422	79	1065
2032	574	422	90	1086

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Legend

- Existing Pipelines
- Future Growth Areas



PAYSON CITY

PROJECTED 10-YR GROWTH AREAS

**FIGURE
3-1**

The existing system served about 921 irrigated acres at the end of 2021. Projected growth adds 165 irrigated acres in the next 10 years for a total of 1,086 irrigated acres. Areas of projected growth are shown in Figure 3-1.

3.3 Cost of Existing and Future Pressurized irrigation Water Facilities

The impact fee will be calculated based on the cost of existing projects with excess capacity and future projects. The cost of each of these existing and type of facility is shown in Table 3-2.

**Table 3-2
Type and Cost of Existing Facilities**

Year	Master Plan Project Number	Project	Transmission	Source	Total
2019	1	Arrowhead Transmission Project	\$852,793.63	\$0.00	\$852,793.63
2019	2	Rec Zone Waterline	\$1,126,826.37	\$0.00	\$1,126,826.37
2022	3	Eastern Lower Zone Transmission	\$471,970.00	\$0.00	\$471,970.00
2022	N/A	Spring Lake Pump Rehabilitation	\$0.00	\$775,050	\$775,050.00
Total			\$2,451,590.00	\$775,050.00	\$3,226,640.00

The impact fee eligible cost for each existing facility is shown below in Table 3-3. These values are based on the remaining capacity for each facility. The remaining cost is attributable to growth and can be counted towards the impact fee.

**Table 3-3
Impact Fee Eligible Cost of Existing Facilities**

Project	Total Cost	% To Growth	Eligible Transmission Cost	Eligible Source Cost	Total
Arrowhead Transmission Project	\$852,793.63	93.2% ¹	\$795,182.68	\$0	\$795,182.68
Rec Zone Waterline	\$1,126,826.37	93.2% ¹	\$1,050,702.99	\$0	\$1,050,702.99
Eastern Lower Zone Transmission	\$471,970.00	100% ¹	\$471,970.00	\$0	\$471,970.00
Spring Lake Pump Rehabilitation	\$775,050.00	30% ²	\$0.00	\$232,515	\$232,515.00
Total	\$3,397,020.00	-	\$2,317,855.67	\$232,515.00	\$2,550,370.67

1. See Table 2-5

2. Calculated as the additional capacity added (300 gpm) divided by the new total capacity (1,000 gpm).

The estimated costs of future projects needed to support growth and are impact fee eligible are shown in Table 3-4 and on Figure 3-2.

**Table 3-4
Cost of Future Facilities**

Project	Map ID	Transmission	Source	Total
Eastern Upper Zone Transmission	1	\$1,990,000.00	\$0.00	\$1,990,000.00
Main Street ULS Source	2	\$0.00	\$1,640,000.00	\$1,640,000.00
1950 West Transmission	3	\$2,530,000.00	\$0.00	\$2,530,000.00
Lateral 20 Connection Upgrade	4	\$120,000.00	\$0.00	\$120,000.00
Total		\$4,640,000.00	\$1,640,000.00	\$6,280,000.00

3.4 Impact Fee Unit Calculation

Impact fee calculations are based on irrigated acreage. It is recommended that the City base single-family residential impact fees on lot size. For multi-family or nonresidential developments, it is recommended that the City document irrigated acreage of developments and charge impact fees accordingly.

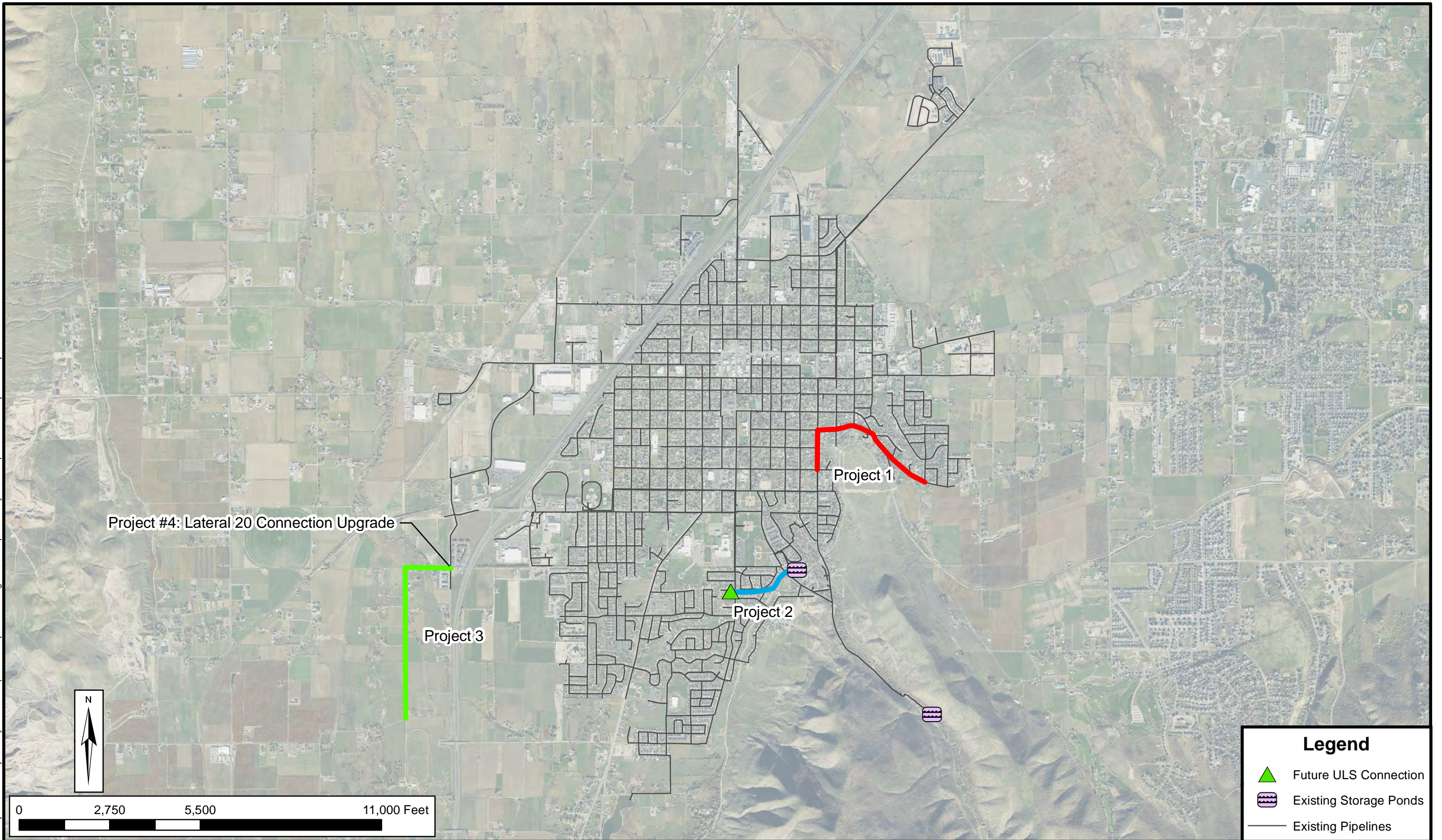
Storage

Existing storage is expected to support growth for the next 10 years. There is no proposed impact fee for storage.

Transmission

The City has recently funded the construction of some pipes for the PI system (See Table 3-2). There is a planned transmission project within the 10-year impact fee planning period (See Table 3-4).

The portion of the transmission impact fee attributable to growth within 10 years was calculated using remaining capacity of irrigated acres from existing conditions to the year 2050. This increase is 1,094 acres with the calculations shown in Table 3-5.



Legend

- Future ULS Connection
- Existing Storage Ponds
- Existing Pipelines



PAYSON CITY

IMPACT FEE FACILITY PLAN PROJECTS

**FIGURE
3-2**

**Table 3-5
Transmission Impact Fee Unit Calculation**

	Existing¹	Future²	Total
Eligible Cost	\$2,317,855.67	\$4,640,000	\$6,957,855.67
Capacity (irr-ac) ³	1,049	1,049	1,049
Transmission Impact (per irr-ac)⁴			\$6,632.85

1. See Table 3-3
2. See Table 3-4
3. Transmission infrastructure is sized to accommodate future users through year 2050. A remaining capacity of 1,094 irr-ac was calculated as the projected year 2050 irrigable acreage (1,970) minus irrigable acreage existing at the beginning of year 2022 (921).
4. Calculated as the sum of existing and future eligible costs divided by the sum of existing and future eligible capacity

Expected transmission costs by timed period are listed in Table 3-6. Transmission facilities are expected to support growth for more than 10 years. The portion of their costs attributable to growth outside of the 10-year planning window is not impact fee-eligible.

**Table 3-6
Transmission Cost by Time Period**

Time Period	Irr-ac served	Buy-in Cost	Growth Cost	Total Cost
Existing	921	\$133,734.33	\$0.00	\$133,734.33
Next 10 years	165	\$364,581.68	\$729,837.94	\$1,094,419.62
Beyond 10 years	884	\$1,953,273.99	\$3,910,162.06	\$5,863,436.05
Total	1,970	\$2,451,590.00	\$4,640,000.00	\$7,091,590.00

Source

The City has recently funded the construction of one source project for the PI system (See Table 3-3). The existing eligible costs from impact fees and its capacity is shown in Table 3-7.

**Table 3-7
Source Impact Fee Unit Calculation**

	Existing¹	Future²	Total
Eligible Cost	\$232,515.00	\$1,640,000.00	\$1,872,515.00
Capacity (gpm)	2,108	7,000	9,108
Source impact (per gpm) ³ :			\$205.59
Source impact (per irr-ac) ⁴			\$1,233.54

1. See Table 2-2 and 3-3
2. See Table 2-3 and 3-4
3. Calculated as the sum of existing and future eligible costs divided by the sum of existing and future eligible capacity
4. Calculated at a proposed level of service of 6 gpm/irr-ac

The portion of the source impact fee attributable to growth within 10 years was calculated using additional capacity that was added to the well and the remaining capacity in the entire PI system. These results are shown in Table 3-8.

**Table 3-8
Source Cost by Time Period**

Time Period	Irr-ac served	Buy-in Cost	Growth Cost	Total Cost
Existing	921	\$542,535.00	\$0.00	\$542,535.00
Next 10 years	165	\$25,273.37	\$178,260.87	\$203,534.24
Beyond 10 years	884	\$207,241.63	\$1,461,739.13	\$1,668,980.76
Total	1,970	\$775,050.00	\$1,640,000.00	\$2,415,050.00

Planning

The planning portion of the impact fee was calculated as shown in Table 3-9. Portions of the City's 2019 master plan study that are attributable to growth (approximately 60% of the total expenditures) are impact fee eligible. 100% of costs associated with the Impact Fee Facility Plan and Impact Fee Analysis are impact fee eligible.

**Table 3-9
Planning Component of Impact Fee**

Planning Document	Cost	% of Plan Associated with Growth	Cost Associated with Growth	Irrigated Acreage Served	Cost per Irrigated Acre
2019 Master Plan	\$28,640	60%	\$17,184	183	\$93.90
2022 IFFP and IFA	\$8,900	100%	\$8,900	165	\$53.94
Total	\$37,540	-	\$26,084	-	\$147.84

The expected planning cost by time period is shown in Table 3-10. It is assumed there will be another Pressurized Irrigation Master Plan in the next 10 years, with a similar unit cost per irrigated acre to that of the previous master plan. That cost is factored into the growth costs in the next 10 years.

**Table 3-10
Planning Cost by Time Period**

Time Period	Irr-ac served	Buy-in Cost	Growth Cost	Total Cost
Existing	921	\$7,136.52	\$0.00	\$7,136.52
Next 10 years	165	\$10,047.48	\$14,346.30	\$24,393.77
Beyond 10 years	884	\$0.00	\$0.00	\$0.00
Total	1,970	\$17,184.00	\$14,346.30	\$31,530.30

3.5 Total Impact Fee Calculation for a Typical Single-Family Residence

Based on the calculations in section 3.4, the total impact fee per irrigated acre is \$8,014. For purposes of this study, a typical single-family residence in Payson will be defined as a 15,000 square foot lot with an irrigated area of 0.15 acres, plus 0.03 irr-ac for parks and open space. Accordingly, the proposed Pressurized irrigation Water System impact fee for one typical residential connection is **\$1,443** (See Table 3-11). This impact fee is less than the previous fee due to the introduction of the ULS pipeline project into this 10-year planning window. The cost for this will be captured in other fees rather than this impact fee.

**Table 3-11
Total Proposed Impact Fee**

Component	Per Irrigated Acre	Per Typical Residential Connection
Storage	\$0.00	\$0.00
Transmission	\$6,632.85	\$1,193.91
Source	\$1,233.54	\$222.04
Planning	\$147.84	\$26.61
Total	\$8,014	\$1,443

It is recommended that the City charge impact fees on a per-irrigated acre basis for all nonresidential and multi-family residential developments (including a fair proportion for parks and open space). For single-family residential developments, the impact fee should be charged as shown in Table 3-12. This will ensure each connection pays a proportionate share.

**Table 3-12
Total Proposed Impact Fee by Lot Size**

Lot size (sq. ft.)	% Irrigated	Irrigated Acreage¹	Impact Fee
5000	25%	0.06	\$481
6000	30%	0.07	\$561
7000	35%	0.09	\$721
8000	40%	0.10	\$801
9000	45%	0.12	\$962
10000	45%	0.13	\$1,042
11000	45%	0.14	\$1,122
12000	45%	0.15	\$1,202
13000	45%	0.16	\$1,282
14000	45%	0.17	\$1,362
15000	45%	0.18	\$1,443
16000	50%	0.21	\$1,683
17000	50%	0.23	\$1,843
18000	50%	0.24	\$1,923
19000	50%	0.25	\$2,004
20000	55%	0.28	\$2,244
21000	55%	0.30	\$2,404
22000	60%	0.33	\$2,645
23000	60%	0.35	\$2,805
24000	60%	0.36	\$2,885
25000	60%	0.37	\$2,965
26000	60%	0.39	\$3,126
27000	60%	0.40	\$3,206
28000	60%	0.42	\$3,366
29000	60%	0.43	\$3,446
30000	60%	0.44	\$3,526
31000	60%	0.46	\$3,687
32000	60%	0.47	\$3,767
33000	65%	0.52	\$4,167
34000	65%	0.54	\$4,328
35000	65%	0.55	\$4,408
36000	65%	0.57	\$4,568
37000	65%	0.58	\$4,648
38000	65%	0.60	\$4,809
39000	65%	0.61	\$4,889
40000	65%	0.63	\$5,049
41000	65%	0.64	\$5,129
42000	65%	0.66	\$5,289
43000	65%	0.67	\$5,370

1. Includes 0.03 irrigated acres per ERC for parks and open space

3.6 Impact Fees for Multi-Family Residential Developments

Impact fees for multi-family developments should be calculated according to the following formula. Each unit is assigned 0.03 irrigated acres for parks and open space.

$$\text{Impact fee} = [(\text{Irrigated acres on site}) + (\text{number of units}) * (0.03 \text{ irr-ac per unit})] * \$8,014$$

For example, a multi-family development with 2.5 irrigated acres on-site and 130 units would have an impact fee as follows.

$$\text{Impact fee} = [2.5 + (130 * 0.03)] * \$8,014 = \mathbf{\$51,290}$$

3.7 Impact Fees for Nonresidential Developments

Impact fees for nonresidential developments should be calculated according to the following formula.

$$\text{Impact fee} = (\text{Irrigated acres on site}) * \$8,014$$

For example, a nonresidential development with 1.8 irrigated acres on-site would have an impact fee as follows.

$$\text{Impact fee} = 1.8 * \$8,014 = \mathbf{\$14,225}$$

3.8 Facility Costs by Time Period

Only those costs attributed to the new growth in the next 10 years can be included in the impact fee. Table 3-13 is a summary of the existing and future facility costs by pressurized irrigation water system component and by time period. Existing costs are those costs attributed to capacity currently being used by existing connections. Costs attributed to the next 10 years are costs for the existing capacity or new capacity for the assumed growth in the next 10 years. Costs attributed to beyond 10 years are costs for the existing capacity or new capacity for the assumed growth beyond 10 years.

**Table 3-13
Facility Cost by Time Period**

	Existing	Next 10 Years	Beyond 10 Years	Total
Source	\$542,535.00	\$203,534.24	\$1,668,980.76	\$2,415,050.00
Transmission	\$133,734.33	\$1,094,419.62	\$5,863,436.05	\$7,091,590.00
Storage	\$0.00	\$0.00	\$0.00	\$0.00
Planning	\$7,136.52	\$24,393.77	\$0.00	\$31,530.30
Total Cost	\$683,405.85	\$1,322,347.63	\$7,532,416.81	\$9,538,170.30

3.9 Revenue Options

Revenue options for the recommended projects include: general obligation bonds, revenue bonds, State/Federal grants and loans, user fees, and impact fees. Although this analysis focuses on impact fees, the City may need to consider a combination of these funding options. The following discussion describes each of these options.

General Obligation Bonds through Property Taxes

This form of debt enables the City to issue general obligation bonds for capital improvements and replacement. General Obligation (G.O.) Bonds would be used for items not typically financed through the Water Revenue Bonds (for example, the purchase of water source to ensure a sufficient water supply for the City in the future). G.O. bonds are debt instruments backed by the full faith and credit of the City which would be secured by an unconditional pledge of the City to levy assessments, charges or ad valorem taxes necessary to retire the bonds. G.O. bonds are the lowest-cost form of debt financing available to local governments and can be combined with other revenue sources such as specific fees, or special assessment charges to form a dual security through the City's revenue generating authority. These bonds are supported by the City as a whole, so the amount of debt issued for the water system is limited to a fixed percentage of the real market value for taxable property within the City. For growth related projects this type of revenue places an unfair burden on existing residents as they had previously paid for their level of service.

Revenue Bonds

This form of debt financing is also available to the City for utility related capital improvements. Unlike G.O. bonds, revenue bonds are not backed by the City as a whole, but constitute a lien against the water service charge revenues of a Water Utility. Revenue bonds present a greater risk to the investor than do G.O. bonds, since repayment of debt depends on an adequate revenue stream, legally defensible rate structure /and sound fiscal management by the issuing

jurisdiction. Due to this increased risk, revenue bonds generally require a higher interest rate than G.O. bonds, although currently interest rates are at historic lows. This type of debt also has very specific coverage requirements in the form of a reserve fund specifying an amount, usually expressed in terms of average or maximum debt service due in any future year. This debt service is required to be held as a cash reserve for annual debt service payment to the benefit of bondholders. Typically, voter approval is not required when issuing revenue bonds. For growth related projects this type of revenue places an unfair burden on existing residents as they had previously paid for their level of service.

State/Federal Grants and Loans

Historically, both local and county governments have experienced significant infrastructure funding support from state and federal government agencies in the form of block grants, direct grants in aid, interagency loans, and general revenue sharing. Federal expenditure pressures and virtual elimination of federal revenue sharing dollars are clear indicators that local government may be left to its own devices regarding infrastructure finance in general. However, state/federal grants and loans should be further investigated as a possible funding source for needed water system improvements.

It is also important to assess likely trends regarding federal / state assistance in infrastructure financing. Future trends indicate that grants will be replaced by loans through a public works revolving fund. Local governments can expect to access these revolving funds or public works trust funds by demonstrating both the need for and the ability to repay the borrowed monies, with interest. As with the revenue bonds discussed earlier, the ability of infrastructure programs to wisely manage their own finances will be a key element in evaluating whether many secondary funding sources, such as federal/state loans, will be available to the City.

Not charging impact fees or significantly lowering them could be viewed negatively from the perspective of State/Federal funding agencies. Charging a proper impact fee signals to these agencies that the community is using all possible means to finance the projects required to provide vital services their residents.

User Fees

Similar to property taxes on existing residents, user fees to pay for improvements related to new growth-related projects places an unfair burden on existing residents as they had previously paid for their level of service.

Impact Fees

As discussed in Section 1, an impact fee is a one-time charge to a new development for the purpose of raising funds for the construction of improvements required by the new growth and to maintain the current level of service. Impact fees in Utah are regulated by the Impact Fee Statute and substantial case law. Impact fees are a form of a development exaction that requires a fee to offset the burdens created by the development on existing municipal services.

Funding the future improvements required by growth through impact fees does not place the burden on existing residents to provide funding of these new improvements.

APPENDIX A

Capital Projects Cost Estimate

**Payson City Capital Facility Plan
 Pressurized Irrigation Water Recommended Improvements
 Preliminary Engineers Cost Estimates**

Item	Unit	Unit Price	Quantity	Total Cost
1 Eastern Upper Zone Transmission				
12" Transmission Line - (10-in Parallel)	LF	\$ 351	1200	\$ 420,816
10" Transmission Line - (8-in Parallel)	LF	\$ 309	4000	\$ 1,236,080
		Engineering & Admin. (10%)		\$ 165,690
		Contingency (10%)		\$ 165,690
		Total to Eastern Upper Zone Transmission		\$ 1,990,000
2 Main Street ULS source				
24" Transmission Line	LF	\$ 628	2000	\$ 1,256,320
Pipe Connection and PRV Station	LS	\$ 56,000	2	\$ 112,000
		Engineering & Admin. (10%)		\$ 136,832
		Contingency (10%)		\$ 136,832
		Total to Main Street ULS source		\$ 1,640,000
3 1950 West Transmission				
10" Transmission Line	LF	\$ 351	6000	\$ 2,104,080
		Engineering & Admin. (10%)		\$ 210,408
		Contingency (10%)		\$ 210,408
		Total to 1950 West Transmission		\$ 2,530,000
4 Lateral 20 Connection Upgrade				
Lateral 20 Connection	LS	\$ 100,000	1	\$ 100,000
		Engineering & Admin. (10%)		\$ 10,000
		Contingency (10%)		\$ 10,000
		Total to Lateral 20 Connection Upgrade		\$ 120,000
		Total for Improvements		\$ 6,280,000