Payson City Pressurized Irrigation Water Meters

The project of this proposal consists of the installation of individual irrigation water meters at each residence of the existing Payson City Secondary Pressurized Irrigation System. Through this project, Payson City will continue to conserve water and monitor accurate irrigation usage throughout the city. At the beginning of the meter project, citywide irrigation data was unavailable with little or no water conservation by individual residents throughout the city, due to the lack of accountability in regards to individual water consumption.

Payson City will serve as the applicant for this proposal, with Brent Arns serving as the project manager.

Payson City Corporation
439 West Utah Avenue
Payson, Utah 84651

Brent P. Arns
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Water Superintendent
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Table of Contents

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Executive Summary

The Payson City Pressurized Irrigation Water Meters project is the installation of individual irrigation water meters at each residence of the existing Payson City Secondary Pressurized Irrigation System. The task area of this project is Task A – Water Conservation, Metering.

Currently there are 4,473 secondary irrigation connections. The estimated usage through the secondary system is 4,375 Acre-Ft, based on master meter flow measurements taken from city irrigation storage ponds. The amount of conservation and water management for this project will be based on new conservation due to new metered usage, as currently there is little or no water conservation by individual residents throughout the city.

The project is estimated to begin at the end of the irrigation water season beginning November 1, 2015. The project will be completed by April 30, 2017.

Project Manager
Brent P. Arns
Assistant City Engineer
Water Superintendent
439 West Utah Avenue
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Background Data

The project area will be confined to the Payson City Irrigation system, which can be found on the associated map.

The city irrigation sources consist of flows from Peteetneet Creek and associated watershed streams and springs, water diverted from city owned irrigation reservoirs located in Payson Canyon, water obtained from the Strawberry Highline Canal, and water delivered through the Strawberry Water Users Lateral 20.

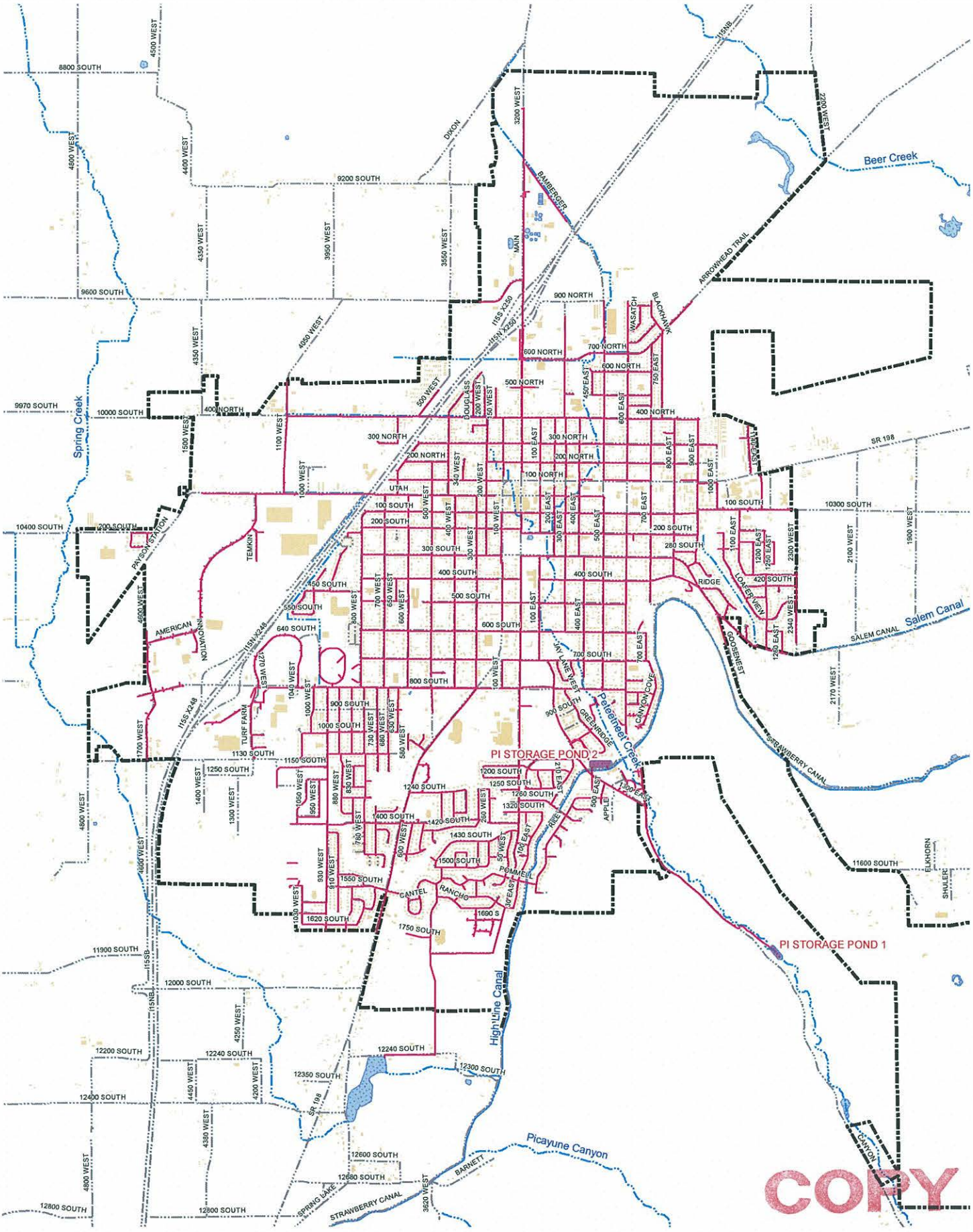
Current irrigation water rights entitle Payson City to use 11,574 acre-feet annually from canyon springs and wells as shown below. This amount of irrigation water shares should be enough to supply Payson City's irrigation needs until the population exceeds 31,000.

WR #	*POINT OF DIVERSION*	*Quantity Acft*	*USES OF WATER RIGHT*
51-1053	Underground Water Wells	5.4	Irrigation Water
51-1063	Peteetneet Creek, Streams & Springs	11 cfs	Hydro-Electric Power Plant
51-1266	Surface Runoff Water	1400	Spring Lake
51-2694	Underground Water Wells	122.1	Irrigation Water
51-2868	Underground Water Wells	724	Irrigation Water
51-3781	Underground Water Wells	52	Irrigation Water
51-5402	Peteetneet Creek, Streams & Springs	50 cfs	Hydro-Electric Power Plant
51-6272	Peteetneet Creek, Streams & Springs	8512	Irrigation Water
51-7170	Underground Water Wells	266.2	Irrigation Water
51-7191	Utah Lake and Jordan River	41.31	Irrigation Water
51-7197	Utah Lake and Jordan River	163.3	Irrigation Water
51-7198	Utah Lake and Jordan River	224.8	Irrigation Water
55-9505	Utah Lake and Jordan River	62.9	Irrigation Water
	Total Irrigation Water	11,574	Acre-Feet

PAYSON CITY
PRESSURIZED IRRIGATION SERVICE AREA

0 1,500 3,000 Feet

1-16-13



The number of water users currently on the city's system is 4,473. These users are subdivided into connections based on lot size: Lots of ½ Acre or less, ½ Acre to ¾ Acre, ¾ Acre to 1 Acre, and 1+ Acres.

LOT SIZE	*NUMBER OF CONNECTIONS*
½ Acre or Less	4,162
½ Acre – ¾ Acre	165
¾ Acre – 1 Acre	58
1Acre & Up	88
Total	**4,473**

As stated this resource is used primarily in the irrigation of residential and commercial landscaping. By utilization of this secondary water resource, the drain and taxation of the city's culinary water supply is lessened. The secondary system is delivered by use of underground irrigation piping, and fed by water stored in two irrigation reservoirs. Construction of the city wide secondary irrigation system began in 1990. The operating system was completed and service was initiated in 1991, with incidental work and final completion finished in 1992.

Payson City and the Strawberry Highline Canal Company have worked jointly together previously in 2006 and 2007 with Reclamation, on the piping and relocation of the Strawberry Highline Canal Company Lateral 20.

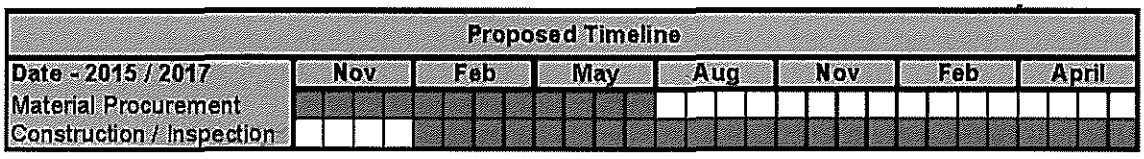
This project consisted of the installation of new High Density Polyurethane piping to Lateral 20. The project focus was to increase efficiency of Lateral 20 along with associated water conservation.

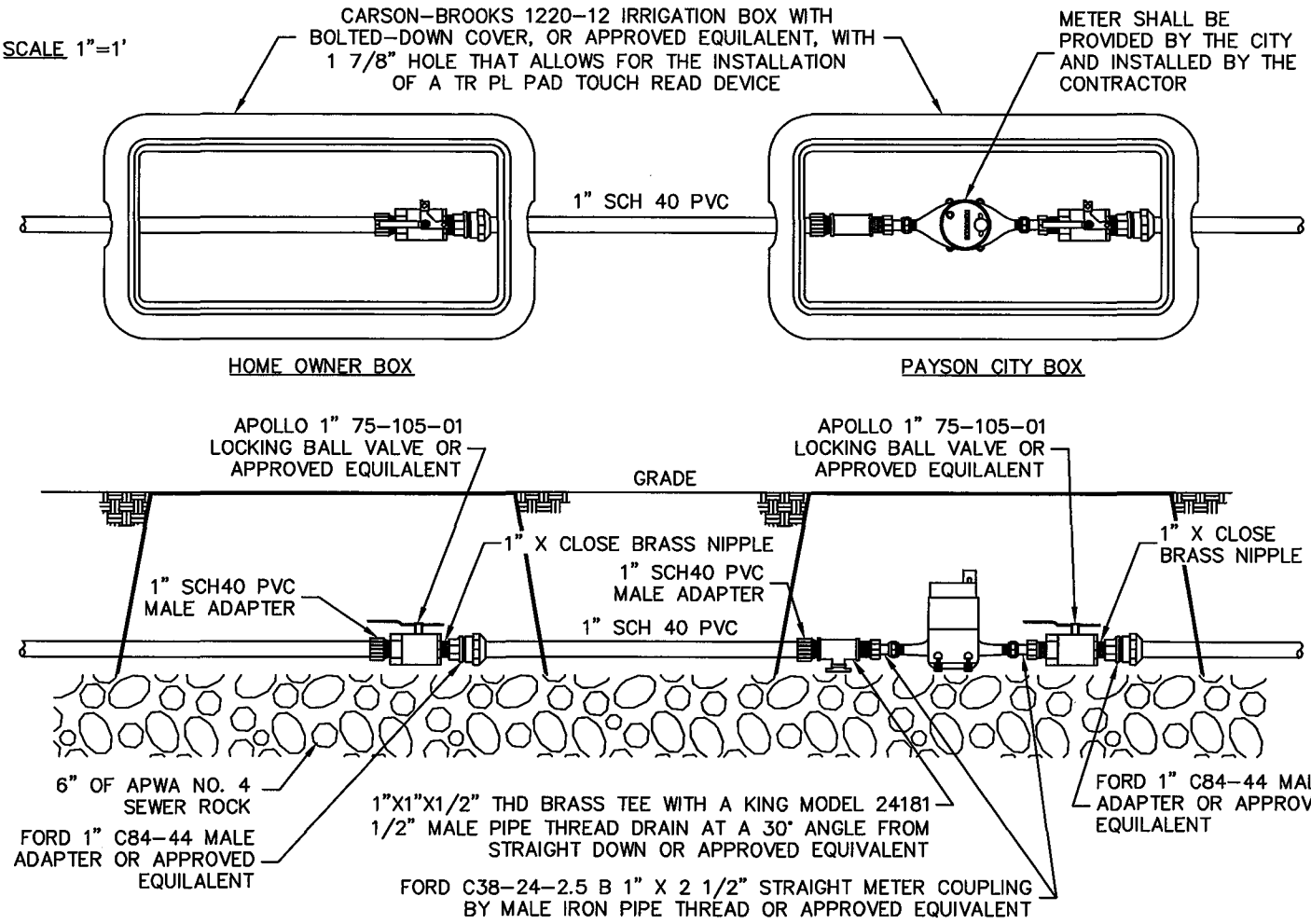
Technical Project Description

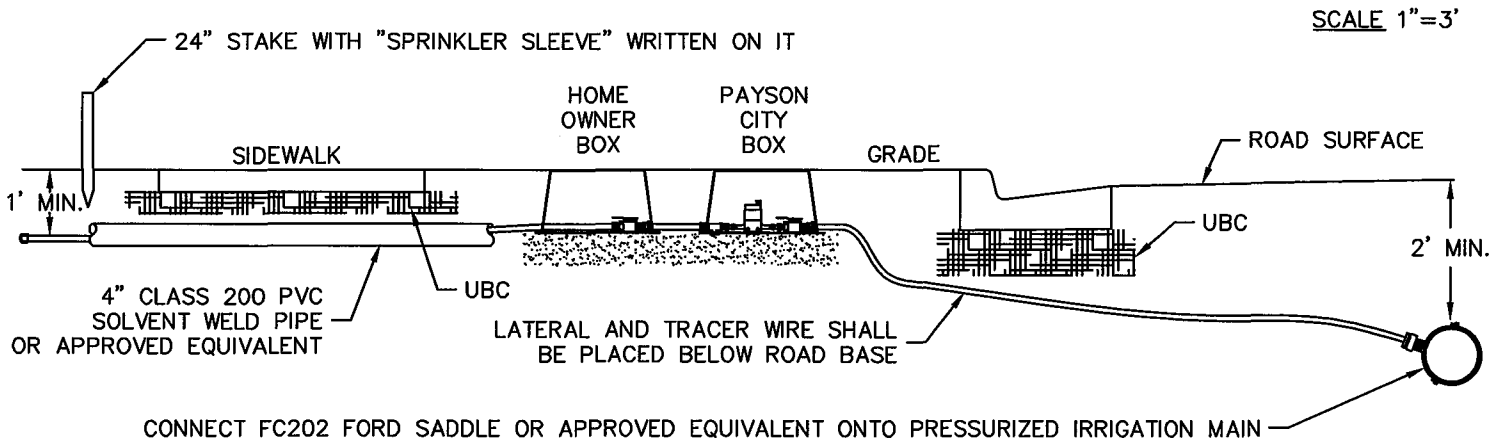
The work to be performed on this project will be the installation of 1" Badger E-55 E-Series Meter with encoder Register (ADE) and Itron Connector Cable, and radio transmitters at each individual irrigation connection. These meters and transmitters will be placed within the city utility easement with care and discernment in placement as to lessen the impact and disturbance at each residence. Installation of new meter services will follow approved city standards. The associated detail drawing and specifications will be adhered to and are included in the associated pages. Construction and installation for the project will be accomplished by bid submittal. With the current economic construction state, coupled with the current number of bids received on previous city projects, it is anticipated that competitive, economical bids will be received.

The project goals are to effectively measure and quantify the individual irrigation usage of residents on the city secondary irrigation system. In an effort to maintain an adequate water supply for Payson City's growing population it is essential to quantify and accurately account for present usage and future water resource demands. Sustainability will be achieved by the project by conservation and future water accountability by Payson City residents. In association with this accountability city residents will benefit by appropriate irrigation usage and water consumption, where there is not current accountability due to misuse and inappropriate usage.

The expected project construction start date will be in November 1, 2015 at the end of the irrigation season. The project is to be completed by no later than April 30, 2017 at the beginning of the irrigation season. It is anticipated that the project duration will provide adequate time for construction, and not hamper the quality of work. A timeline of the project construction is provided below.







NOTES:
1. STANDARD SERVICE SIZE SHALL BE 1 1/2" FOR DUAL SERVICES AND 1" FOR SINGLE SERVICES.
2. STAINLESS STEEL LINER INSERTS WILL BE REQUIRED INSIDE OF TUBING AT COMPRESSION FITTINGS.
3. ALL FITTINGS SHALL BE COMPATIBLE WITH SERVICE SIZE.
4. SERVICE LATERAL SHALL SLOPE TOWARDS PRESSURIZED IRRIGATION MAIN.
5. SPRINKLER SLEEVE SHALL NOT BE IN LINE WITH ANY UTILITY BOXES.
6. 1/2" POLY CONDUIT SHALL BE BURIED 2' BELOW GRADE.
7. NO OTHER CONNECTIONS OR EQUIPMENT ARE PERMITTED BY CONTRACTOR/HOME OWNER INSIDE PAYSON CITY BOX.

PAYSON CITY
439 WEST UTAH AVE.
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(801) 465-5200

STANDARD DRAWING

1" PRESSURIZED IRRIGATION SERVICE BOX & LATERAL

SCALE VARIES

STANDARD 1 OF 1

Evaluation Criterion A: Water Conservation

Subcriterion No. A.1 – Quantifiable Water Savings:

Municipal Metering

As a case study, Payson City installed 25 residential secondary water meters randomly throughout the irrigation system to evaluate customer usage. Data has been collected for water years 2009-2012. The sample test selection consists of the average lot size of 0.33 acres, with an average of 0.20 irrigated area. According to the Utah State University Extension Office the amount of water expected to be applied for residential landscaping and irrigation in the Payson City area is 24.68 inches. The data collected from the case study also indicated that nearly 50% of the residents metered used more than the recommended 24.68 inches of water, with the highest user applying 167.12 inches or 85% more than recommended.

By using the supported numbers generated by the data collected it is estimated that there will be an average of 677 Acre Feet of Water Conservation city wide through implementation of this project. This number was calculated by multiplying the average excess water usage of 0.31 Ac-Ft per lot (obtained from the collected test data), by 50% of the total residential connections equaling 2,184. This water savings will be stored in the system irrigation ponds, with excess going back into Peteetneet Creek to be used by downstream users or by the city residents as the population grows.

Quantifiable Water Savings: 677 Acre Feet

Improved Water Management: Individual Measurement Capability

As described the irrigation system is disturbed by acreage and lot size. Individual usage and measurement is not available (excluding 25 residential meters installed by city). True user accountability is not available. Implementation of individual meters will provide a city wide total usage and a more equitable distribution of residential water usage.

Subcriterion No. A.2 – Percentage of Total Supply:

Currently the system usage is 4,375 Acre Feet. By applying the 677 Acre Feet of anticipated water savings, it is estimated that total water usage will reduce by 15% throughout the city, as the majority of users regularly exceed the necessary applied irrigation.

Percentage of Total Supply: 15%

Evaluation Criterion B: Energy-Water Nexus

Subcriterion No. B.2 – Increasing Energy Efficiency in Water Management:

As part of the water distribution system Payson City budgets $30,000 annually for electrical and pumping related costs. With the estimated 50% conservation in annual water consumption per lot, it is also anticipated that this will reduce the electrical and pumping demands. Payson city is optimistically looking for a 50% reduction in annual pumping costs equaling $15,000.

Increasing Energy Efficiency in Water Management: Reduced Pumping Costs - $15,000

Evaluation Criterion C: Endangered Species

There will not be a direct benefit to any listed endangered species in the project construction area. However with the additional water savings that will be seen throughout the implementation of the project, and this said saved water being available to downstream users and fisheries including Utah Lake, an indirect benefit may be available to the endangered species Utah June Sucker. Any benefit would be managed and correlated through the June Sucker Recovery Implementation Program.

The June Sucker Recovery Implementation Program is a multi-agency cooperative effort designed to coordinate and implement recovery actions for June sucker. The program also recognizes the need for continued operation of existing water projects and development to meet future water needs. The program takes an adaptive management approach wherein biological information is gathered, reviewed and incorporated into the program on a continual basis. The program works to balance and accommodate water resource needs of the human population with June sucker recovery efforts.

Endangered Species: June Sucker

Evaluation Criterion D: Water Marketing

There are two different water marketing possibilities in regards to this project. The available annual water that is available for water marketing is the 677 Ac-Ft conserved water saving. The first water market available would be in the transfer of saved water into the Strawberry Highline Canal. The Strawberry Highline Canal is a part of the Bureau of Reclamation Strawberry Valley Project comprises about 45,000 irrigable acres centered around Payson and South Utah County.

The next available water marketing possibility is that of ground water recharge. Currently Payson City is a member and involved in South Utah Valley Municipal Water Association (*SUVMWA*) Groundwater Recharge Feasibility Study. This study is designed to identify and evaluate potential recharge areas throughout the project area.

Conserved water from the project (677 Ac-Ft) could then be diverted from the system into identified recharge areas. This water could in turn be utilized in the project area and integrated into the Payson City culinary water system. This water savings would be available annually.

Water Marketing: Water Banking – Groundwater Recharge

Evaluation Criterion E: Other Contributions to Water Supply Sustainability

As previously discussed the majority of the city irrigation sources consist of flows from Peteetneet Creek and water diverted from city owned irrigation reservoirs located in Payson Canyon. These reservoirs are known as the Payson Lakes and are located in the Uinta National Forest, Wasatch Range.

There are four main lakes that comprise Payson Lakes: Big East, Box Lake, Maple Lake, and McClellan Lake. These lakes are used in combination with the U.S. Forest Service in providing recreation and fisheries. With the continued demand for irrigation water the city is forced to drain the lakes throughout the summer to provide necessary water to users below. By the implementation of the metering project, water conservation and associated water saved will be available to be stored in the lakes providing recreation and much needed fishery habitat. In addition these reservoirs help to supply water during summer drought shortages and help to reduce losses due to evaporation and higher temperatures in the valleys down below.

With the implementation of the metering project community wide efficiency and conservation will be available. The project will help enforce an individual accountability of usage and help reduce wanted excess and wasting of natural resources. Along with the direct water savings the indirect electrical pumping savings will be available.

Other Contributions to Water Supply: Recreation / Fisheries – Community Efficiency and Conservation

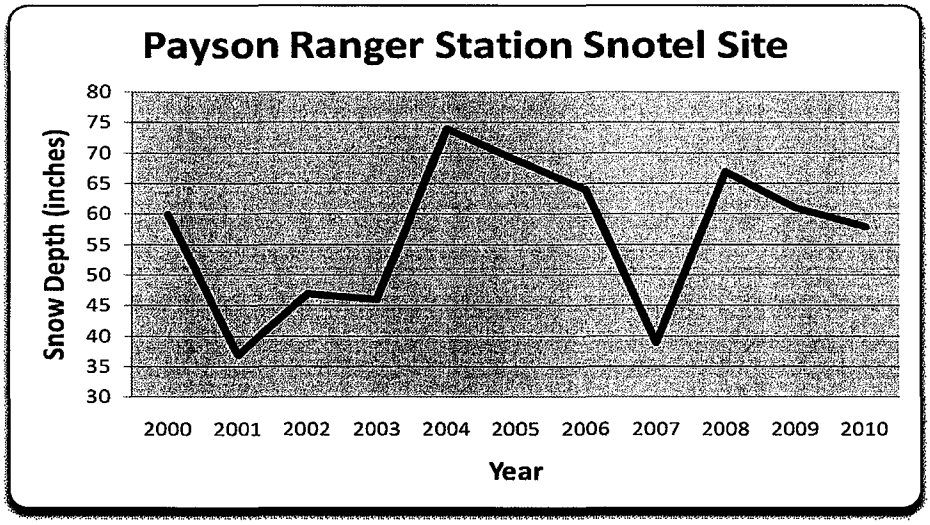
Subcriterion No. E.3 – Building Drought Resiliency:

The majority of irrigation water that is delivered into the system is provided from runoff and snow pack attributed from the Peteetneet Creek and its associated watershed streams. Quantification of potential available water is monitored from the United States Department of Agriculture Natural Resources Conservation Service (NRCS) Snotel Sites.

The snotel site that pertains to Payson City's irrigation system is the Payson Ranger Station, Site # 686, located in Payson Canyon. The elevation of the site is 8,066 feet and has been in operation since 1979.

During high snow fall years, the city irrigation system can adequately sustain summer watering demands. However during years of low or fluctuating precipitation the irrigation demand far exceeds the available water supply.

These low precipitation years represent substantial shortfalls to the cities irrigation requirements. Within the past ten years these shortfalls have been more prevalent, in turn necessitating the need for more delivery control, individual accountability and conservation.



Building Drought Resiliency: Lessen Demand on Winter Precipitation

Evaluation Criterion F: Implementation and Results

Subcriterion No. F.1 – Project Planning

Payson City has and does participate in the State of Utah Water Conservation Plan. In association with this project one of the goals in the city water conservation plan is to:

Improve irrigation practices and water efficient landscapes that can enhance the beauty of the city. As a part of the water conservation plan the following information on efficient outdoor water use is included:

- Irrigation of landscaping is not needed before or after the pressurized irrigation system is turned on in the spring or shut off in the fall.
- Water landscape only as much as required by the type of landscape, and the specific weather patterns, including cutting back on watering times in the spring and fall.
- Do not water on hot, sunny, and/or windy days.
- Sweep sidewalks and driveways instead of using water to clean them off.
- Check for and repair leaks in all pipes, hoses, faucets, couplings, valves.
- Keep your lawn well trimmed and all other landscaped areas free of weeds to reduce overall water needs of your yard.
- In new development, it is mandatory for all landscaped areas to be water by an automated irrigation system.

Implementation of the metering project will enhance and help enforce the current water conservation plan adopted by the City.

Project Planning: Enhancement and Enforcement of Water Conservation Plan

Subcriterion No. F.2 – Readiness to Proceed

This project is ready to proceed with a start date to begin at or near upon the completion of the current water season. Applicable standards and specifications have been prepared. Necessary meters and equipment are available continuously from vendors. This phase of the project is said to be shovel ready, and can proceed upon receipt funding grant. No delays are expected or anticipated. There will be no environmental compliance interruptions or delays.

Readiness to Proceed: Project is Shovel Ready

Subcriterion No. F.3 – Performance Measures

The performance measurement of the project goal will be obtained upon completion of the project. Currently there isn't individual residential water usage data collected in the secondary irrigation system. With the completion of Phase I and II the much needed quantification of the system water resources will be accomplished and utilized. Additional performance measures will the quantification of water conservation approximately 677 Acre Feet.

Performance Measures: Water Conservation and Quantification – 677 Acre Feet

Subcriterion No. F.4 – Reasonableness of Costs

The reasonableness of cost for the project is very good, new meters that will be installed have a manufactures warranty lifecycle of 20 years. The total project cost in relation to total water savings, revenue generated, and water conserved far out way the project upfront costs.

Reasonableness of Costs: Project is Sound Financial & Conservation Investment

Evaluation Criterion G: Additional Non-Federal Funding

Funding of the project will be broken down between WaterSmart 2015 Federal Grant monies and monies provided by Payson City Irrigation Department annual budgets.

Below is the breakdown of Federal to Non-Federal Funding. The percent of Non-Federal Funding was calculated to be 89%

Non-Federal Funding	$2,457,492
Total Project Cost	$2,757,492

Non-Federal Funding: 89%

Evaluation Criterion H: Connection to Reclamation Project Activities

As stated in the previous funding application a portion of irrigation water source is obtained from the Strawberry Highline Canal, which is part of the Bureau of Reclamation Strawberry Valley Project comprises about 45,000 irrigable acres centered around Payson and South Utah County.

Another source of irrigation supply is from water delivered through the Strawberry Water Users Lateral 20. Payson City previously was a partner with the Strawberry Water Users in grants that further installed the Lateral 20 distribution line. All proposed work will contribute to the watershed and basin of previous Reclamation projects.

Connection to Reclamation Project Activities: Project will be included and receive Previous Reclamation Project Waters

Potential Environmental Impacts

The project construction will be limited to existing city utility easements. All necessary precautions will be taken to minimize potential damage to existing residential landscapes and properties. All construction debris and trash will be maintained daily during the construction process. All construction vehicles will be properly maintained and serviced to minimize potential oil/fuel leakage and or spillage.

Currently located in the proposed construction areas there aren't any endangered or threatened species, also no wetlands will be disturbed. In addition there are not any existing historical structures, buildings, archeological sites or other features that will be impacted.

The project will not result in any modification of or effects to individual irrigation systems. All construction and enhancements will take place before individual residential irrigation and sprinkling systems.

There will be no disproportionately high or adverse effect on low income individuals or families. The project intent is to act in reverse and support low income individuals to insure that correct billing is proportionate to actual water usage.

There are not any environmental impacts or issues anticipated for the project.

Required Permits / Approvals

Permits & Applications

All appropriate approvals and permits for the project are under the jurisdiction of Payson City. All Payson City ordinance and procedures will be followed and obtained. In addition any applicable Utah State laws or Federal laws and ordinances will be followed.

All work will be contained to city utility easements. Any other additional work necessary in city street rights-of-way will also fall under jurisdiction of the city. The contractor that is awarded the project will also be under and constrained to follow all necessary laws and regulations.

Official Resolution

Be it Resolved: This resolution is to guarantee the support of Payson City to the Bureau of Reclamation WaterSMART Grant Program: Water and Energy Efficiency Grants for FY 2015. We have reviewed the proposal and are in support of it. Payson City stands to provide the required matching funds to complete the Payson City Pressurized Irrigation Meters grant.

Owner's signature: David C. Tuckett
(Signature of City Manager)

Acknowledgement

State of Utah)
) ss.
County of Utah)

The foregoing instrument was acknowledged before me this January 8, 2014
by David C. Tuckett
City Manager
(person acknowledging, title and representative capacity, if any).

Notary's signature

439 W Utah Ave
Residing at

February 19, 2018
My commission expires:

JON LUNDELL
NOTARY PUBLIC - STATE OF UTAH
My Comm. Exp. 2/19/2018
Commission # 674595

Notary's seal

COPY

Funding Plan

Contributions by Payson City for project cost-sharing funding will include both in-kind and monetary contributions. In-kind contributions are to include Engineering, Design, Inspection, and Quality Control. This contribution includes city employee salaries, wages, benefits etc. Any use of city owned equipment, vehicles, and other use of Payson City owned materials. All funding for this project will be provided from Payson City and the matching funds provided from the WaterSMART: Water and Energy Efficiency Grants for FY 2015. No other outside funding will be obtained. Monetary contributions made by Payson City, will be made and obtained from the City Water Budget. This budget is funded by water revenues generated throughout the city by the collections of user rates and fees. As per the grant application, Payson City would request that funding be provided during the 2015 Fiscal Year

Funding Group II Request			
Funding Requested	Year 1 (FY2015)	Year 2 (FY2016)	Year 3 (FY 2017)
	$300,000	-	-

Letters of Commitment

All funding will be provided by the applicant Payson City through the City Water Budget, no other outside funding will be obtained for this project. As such letters of Commitment will not be necessary for implementation of the project. Below is the summary of non-Federal and Federal Funding Sources Chart as prescribed in the grant application.

FUNDING SOURCES	***FUNDING AMOUNT***
Non –Federal Entities:	
1. Payson City Corporation	$ 2,457,492
Other Federal Entities:	
1. N/A	$ 0
Requested Reclamation Funding:	$ 300,000
Total Project Funding:	**$ 2,757,492**

Budget Proposal

Below is the proposed budget for the Payson City Pressurized Irrigation Meters Project.

No.	Description	Quantity	Unit	Unit Cost	Recipient Funding	Reclamation Funding	Amount
1	Construction Materials						
2	1" Irrigation Meters	4,473	Each	$ 217.50			$ 972,877.50
3	*(Meter, Register, Meter Set)*						
4	Radio Transmitter (ERT)	4,473	Each	$ 86.50			$ 386,914.50
5	*(ERT - 100w)*						
6	Meter Housing	4,473	Each	$ 125.00			$ 559,125.00
7	*(2) Carson-Brooks Irrigation Box - $40.00 Each = $80.00)*						
8	*(Apollo Ball Valve - $12.00)*						
9	*(2) Ford Meter Coupler - $6.50 Each = $13.00)*						
10	*(2) Ford Male Adapter - $3.50 Each = $7.00)*						
11	*(King Model Pipe Drain - $10.00)*						
12	*(Brass Tee - $3.00)*						
13							
14	Construction Labor						
15	Installation Per Connection	4,473	Each	$ 155.00			$ 693,315.00
16	*(Personnel - 3 Man Crew - $39.59 + $39.47 + $32.45 = $111.51)*						
17	*(Equipment - Backhoe $30.00 + Utility Truck $13.49 = $43.49)*						
18							
19	Const. Inspection / Quality Control	1,000	Hourly	$ 59.00			$ 59,000.00
20	*(Personnel - Inspector $46.52)*						
21	*(Equipment - Truck $12.48)*						
22	Engineering / Design	250	Hourly	$ 160.00			$ 40,000.00
23	*(Personnel - Engineer $64.76 + Assist Engineer $46.52 + Survey $48.35 = $159.63)*						
24	Environmental Inspection	220	Hourly	$ 143.00			$ 31,460.00
25	*(Personnel - Assist Engineer $46.52 + Dept. Head $52.21 + Clerical $32.07 = $130.80)*						
26	*(Equipment - Truck $12.48)*						
27	Clerical / Reporting	200	Hourly	$ 74.00			$ 14,800.00
28	*(Personnel - Clerical $32.07 = $29.87 = $61.94)*						
29	*(Equipment - Computer $6.00 Each = $12.00)*						
30							
31	In-Kind Funding				$ 145,260.00		
32	Monetary Funding				$ 2,312,232.00		
33							
34	**Total Estimated Construction Cost**						$ 2,757,492.00
35							
36	**Total Cost**				$ 2,457,492.00	$ 300,000.00	$ 2,757,492.00

Budget Narrative

The budget for this project has been broken out in the following components. All engineering and design work will be performed by the Payson City engineering staff. In addition all associated construction inspection and quality control will be performed by the Payson City engineering / inspection staff. All construction and installation will be completed and preformed by qualified contractors awarded the contract through the bid submittal process.

All associated construction materials for this project have been included into the installation of the associated irrigation meters. The necessary software and equipment has also been included. It is anticipated that all other incidental construction materials and costs associated with the installation of the meters are included. Labor to install all necessary equipment at each site is included in the hourly rate. This labor is to be provided from the awarded contractor for the project. It is anticipated that all associated labor costs from the contractor (overhead, profit, salaries) have been included. Below is a breakdown of personal, wages, and costs associated with the project for Payson City.

Name	Current Wage	FICA/Med	Med/Den	Retirement	LTD	Car Allowance	Total Hourly Package
Engineering / Design							
Travis Jockumsen	$ 74,924.10	$ 5,731.69	$ 18,315.00	$ 13,838.48	$ 4,944.99	$ 6,600.00	$ 64.76
Brent Arns	$ 65,790.14	$ 5,032.95	$ 18,315.00	$ 12,151.44	$ 4,342.15	$ 6,600.00	$ 46.52
Aaron Painter	$ 64,272.00	$ 4,916.81	$ 18,315.00	$ 11,871.04	$ 4,241.95	$ 6,600.00	$ 48.35
Jon Lundell	$ 39,416.00	$ 3,015.32	$ 18,315.00	$ 7,280.14	$ 2,601.46	$ -	$ 32.07
Construction Inspection / Quality Control							
Randy Davis	$ 34,050.00	$ 2,604.83	$ 6,500.00	$ 6,289.04	$ 2,247.30	$ -	$ 39.59
Cam Phillips	$ 34,050.00	$ 2,604.83	$ 18,315.00	$ 6,289.04	$ 2,247.30	$ -	$ 39.47
Jesse Bennet	$ 34,861.00	$ 2,666.87	$ 18,315.00	$ 6,438.83	$ 2,300.83	$ -	$ 32.45
Ned Stephensen	$ 34,861.00	$ 2,666.87	$ 18,315.00	$ 6,438.83	$ 2,300.83	$ -	$ 37.41
Debbie Bushnell	$ 36,733.00	$ 2,810.07	$ 13,498.00	$ 6,784.59	$ 2,424.38	$ -	$ 29.87

Amounts and items shown under the "Construction and Labor" line item in the submitted proposal are estimates of appropriate costs associated for this project. Costs are based on discussions and bids with subcontractors and consultants for previous similar work preformed. Actual bids and costs have not been provided, as such a detail cost breakdown including labor, salary, wage benefits, and indirect costs can not be given at this time. This cost estimates represent a not to exceed amount for this project.

The proposed budget for the project will follow the breakdown below:

The construction materials are as follows: 1" Badger Meters, Radio Transmitters, and associated parts 4,473 each. Unit costs are $217.50, $86.50, and $125.00 respectively. Construction labor per connection of 4,473 is estimated to be $155.00 per hour. Engineering and Design approximately 250 hours, with a unit cost of $160.00. Construction Inspection and quality control approximately 1,000 hours, with a unit cost of $59.00. Environmental Inspection approximately 220 hours, with a unit cost of $143.00. Clerical and Reporting approximately 200 hours, with a unit cost of $74.00.

The total estimated project cost is $2,757,492. This will be divided between the recipient with $2,457,492 and reclamation funding equaling $300,000.

Performance Measures for Quantifying

The project goals and design are in accordance to Payson City Irrigation master planning and conservation plans. All construction work for the project will be completed through the bid submittal process, with the project awarded to the best qualified and most feasible contractor bid.

The performance measurement of the project goal will be obtained upon completion of the project. Currently there isn't individual residential water usage data collected in the secondary irrigation system. This much needed quantification of the system water resources will be accomplished and utilized.

In accordance with the State of Utah's statewide water conservation plan of "Slow the Flow Save H2O" the city feels that with the installation of irrigation meters residential accountability will be achieved and city residents will decrease their outdoor water consumption. Outdoor watering schedules will be observed and conservation will be obtained.

In accordance with "Task A – Water Conservation, Municipal Metering" the performance will be achieved by the accurate billing of city residents based on the actual amount of water consumed, where residents now pay a base rate with unlimited flow available. In addition with the installation of individual meters the distribution of water throughout the secondary system will become more equitable. Current trends indicate that the larger irrigation users receive the biggest benefit, and that the smaller residential lots carry the bulk of the system financial needs.