Conserving Water Through Innovation: Installing Commercial Water Meters in Idaho Falls

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Executive Summary

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Category A applicant

Idaho Falls Public Works will install water meters at 250 commercial properties across the city. The project is expected to result in annual water savings of 595 acre-feet resulting in an energy savings of 334,825 KWH and an annual system electrical cost savings of $23,115.75. Conservation of groundwater supplements surface water shortages by increasing river reach gains (where groundwater naturally reenters the river channel) and spring flows, which in turn will ease surface water shortages for senior priority surface and spring water users, as well as supplement stream flows for hydropower generation facilities. The conservation of water will allow for continued growth throughout the City of Idaho Falls and Bonneville County. Groundwater conserved because of this project will benefit endangered species such as Snake River physa snail, sockeye salmon, and steelhead trout by supplementing surface water during times of shortage that would otherwise negatively impact their status. We anticipate the project taking place from July 2024 through September 2026. The proposed project is not located on a federal facility.

Project Location

Conserving Water Through Innovation: Installing Commercial Water Meters in Idaho Falls will install 250 water meters in Idaho Falls located in Bonneville County Idaho. The project latitude is {43.4927ºN} and longitude is {112.0408ºW}. Idaho Falls (Figure 1), the fourth largest city in the State of Idaho, is a vibrant, growing municipality with a current population of approximately 67,000. Situated along the I-15 corridor in southeast Idaho - in Congressional District 2 - about midway between the states of Montana and Utah, Idaho Falls resides in an alpine desert region with semi-arid climate and receives between 10-12 inches of annual precipitation. Idaho's climate varies substantially from the dry rangelands of southern Idaho to the temperate wet forests of the panhandle[1]. Much of the winter precipitation that falls as snow in Idaho's mountains is stored seasonally as snowpack. Idaho's dry, warm summers necessitate water storage to sustain water for multiple needs. Snow delays the release of mountain moisture and serves as a natural reservoir, with snowmelt in the spring and early summer providing a buffer to compensate for the seasonal mismatch in water demands[2]. The diverse climate across the state shapes many of the natural resources that, in turn, shape Idaho's economic sectors and culture such as irrigation for agricultural lands, habitat for trophy fisheries, low-carbon hydropower, and recreational opportunities. Idaho Falls is currently growing at a rapid pace and water conservation is becoming more vital.

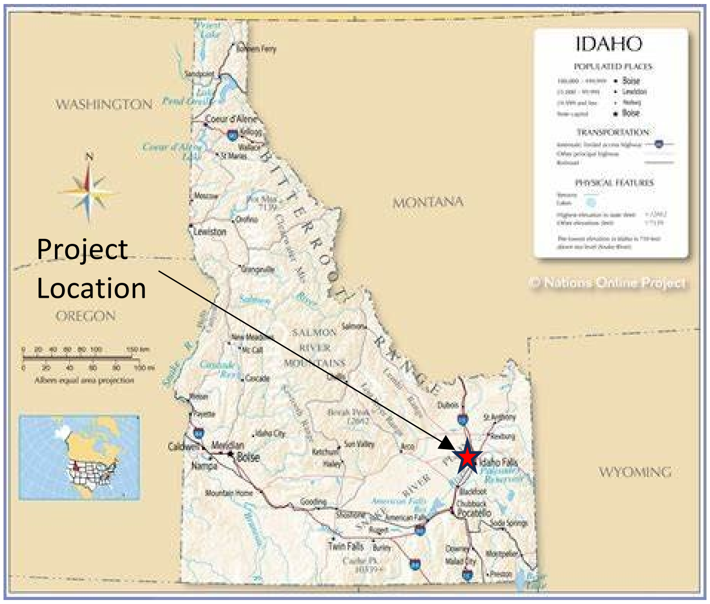

Figure 1. Project Location – City of Idaho Falls

Idaho Falls sits above the Eastern Snake Plain Aquifer (ESPA), a large groundwater supply with an approximate surface area the size of Lake Erie. The ESPA (Figure 2) is the sole source for the City's culinary water system. The water is abundant and of high quality, making it an ideal source for the wide variety of municipal uses if water rights can be obtained.

A. Quantifiable Water Savings

Estimated Water Savings

Culinary water – or tap water – is defined as water that is safe for ingestion, either when drunk directly in liquid form or consumed indirectly through food preparation. It is often supplied through taps. For years, due to the capacity of the aquifer, relatively cheap power rates, and ease of obtaining new water rights, the City of Idaho Falls provided culinary water to its residents at very reasonable rates. The desire to provide this service as economically as possible led the City years ago to decide against metering customer use of culinary water. However, circumstances have changed, particularly with respect to water rights within the ESPA.

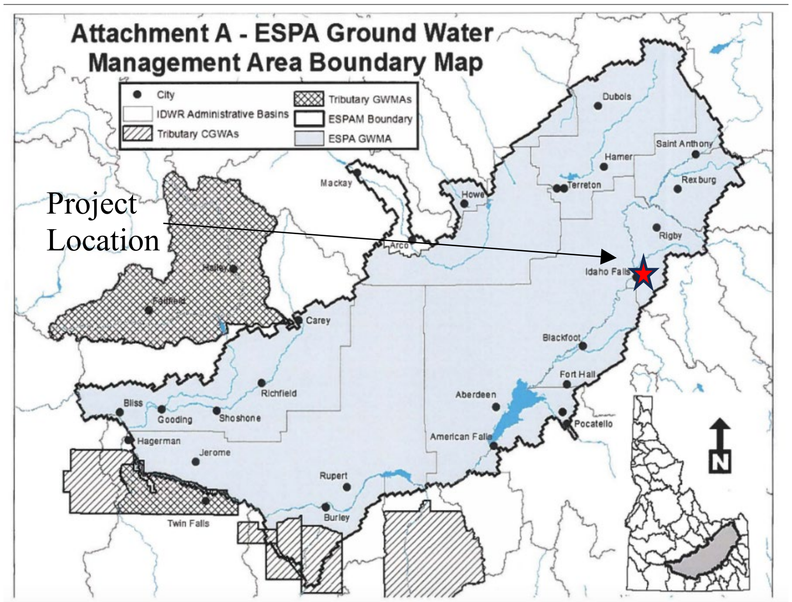

Figure 2. Eastern Snake Plain Aquifer (ESPA) Boundary

A moratorium on the issuance of new water rights with the ESPA was established in 1992, limiting water right holders to existing water rights. Idaho's management of water rights was also altered in 1994 when groundwater rights within the ESPA (originally managed separately from surface water rights) were required to be conjunctively managed with surface water rights due to the interconnectivity of the sources. In a prior appropriation-managed state such as Idaho, seniority of a water right's priority date governs with older "senior" rights having precedence over younger "junior" rights. Conjunctive management placed all groundwater users in a bind as priority dates for groundwater rights are far junior to those of surface water rights. Groundwater users such as the City of Idaho Falls now find themselves susceptible to water curtailment calls from senior surface water users. Additionally, the State of Idaho officially designated the ESPA a Groundwater Management Area in 2016.

These changes to water rights management have increased tensions between opposing parties. To ease tensions and provide security against potential curtailment orders, a coalition of cities that includes Idaho Falls entered into a mitigation agreement with senior surface water users, but longevity of the plan is contingent upon the efficacy of the plan's mitigation measures and whether identified milestones are reached. Required mitigation amounts for cities are based on the volume of groundwater pumped, so conservation has now become a key driver for Idaho Falls' future water security. The best means of water conservation is through the installation of water meters. The City's lack of metering has led to comparatively high water use as most customers are charged a flat rate regardless of how much water is used. Water conservation is crucial to ensure enough water for future City growth. Reduction in water use from the implementation of other conservation measures will most likely be marginal without the installation of water meters. When customers are required to pay for water they use, they find ways to scale back their consumption.

Given changes to water right management, City officials recently made the decision to convert all customers to metered water billing over the next 20 years. The water system for the City of Idaho Falls is largely non-metered. There are no residential meters and only about 12% of commercial customers are being metered. Capital costs associated with implementing city-wide metering has long been a hindrance to conversion from non-metered billing since most customers do not have a meter box in which to install a meter. Meter conversions require digging to the depth of the service line supplying the customer's premises, installing a meter box with meter, and then restoring surface improvements.

Conversion will come at great expense, but will ensure more efficient use of water rights along with future city growth. Idaho Falls is applying for this grant to assist with the conversion of commercial customers within the system. As the City does not currently have meters it is not possible for us to determine how much water will be saved and/or cost savings. Therefore we look to neighboring cities – Rexburg and Pocatello – to approximate savings. With a limited number of similar sized cities to use as reference points, Rexburg and Pocatello were chosen due to their proximity to Idaho Falls, their use of water meters, and a similar sized population. Rexburg is slightly smaller with a population of 35,000 and Pocatello is home to 57,000 people. A direct comparison of per capita consumption for average winter, irrigation season, and peak month uses for the cities of Idaho Falls, Pocatello, and Rexburg is shown in Figure 3.

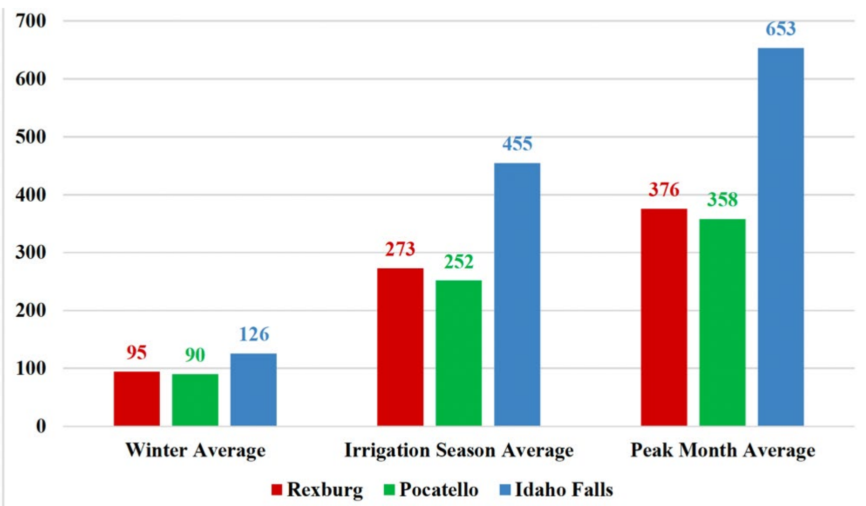

Figure 3. Comparison of Per Capita Water Use (gallons per capita day).

Metered data was supplied by the cities of Rexburg and Pocatello for comparative purposes. Since Idaho Falls does not meter consumption, production values for Idaho Falls' scources have been adjusted to estimate consumption values for use in the comparison. The water system for the City of Idaho Falls most resembles the City of Pocatello's system in terms of size, complexity, and age. However, the City of Rexburg's water system more accurately resembles the City of Idaho Falls with respect to water pressure. A weighted value of 70% was applied to Pocatello's water statistics (as it more closely resembles the Idaho Falls' water system) and the remaining weighted value was applied to Rexburg's statistics.

During the winter when outdoor water use is not a factor, the typical citizen in Idaho Falls uses approximately 33% more water indoors than a person in Rexburg and 40% more than an individual in Pocatello. Irrigation season values show that Idaho Falls' citizens use 67% and 80% more water than citizens of Rexburg and Pocatello, respectively. Peak month values also indicate citizens in Idaho Falls using 74% more water than Rexburg and 82% more than Pocatello. These values indicate that if the City of Idaho Falls were to install meters, indoor consumption values could potentially be reduced by 27% while irrigation season values could drop approximately 42%. A 2014 pilot study at East Bay Municipal Utility District (EBMUD), which supplies water throughout the San Francisco East Bay, installed water advanced metering infrastructure (AMI) systems that provided hourly water consumption data (in units of tenths of a gallon per hour) to customers through an online web portal. EBMUD found water savings between 5-50%, with an average of 15%, among residential customers after the installation of the savings, while noting that some of these savings are likely due to customer-side leak repair[3].

Unaccounted for Water

The City of Idaho Falls' municipal water system (Figure 4) is a public water system controlled by city government. The system's supply stems from groundwater drawn from the Eastern Snake Plain Aquifer (ESPA). The system consists of 20 operational deep wells (designated with a W in Figure 2) with a combined water right capacity of 57,963 gallons per minute. Source water is pumped from wells into storage tanks that allow chlorine adequate time to disinfect the water. The system maintains a combined total storage of nearly 6 million gallons. Booster pumps take finished water from the tanks and pump it through 360 miles of water main pipe to serve approximately 24,000 billed accounts and nearly 2,100 fire hydrants.

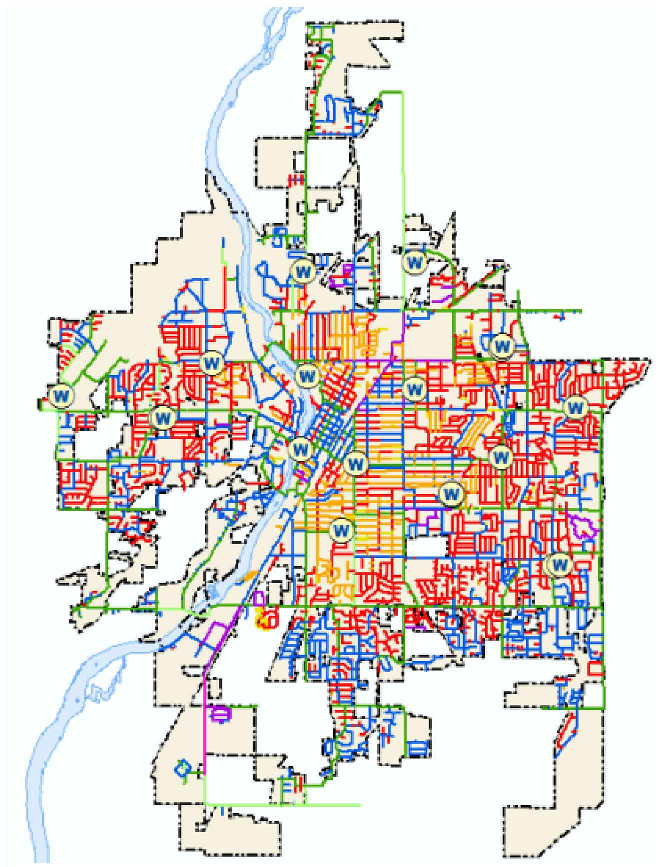

Figure 4. Existing City of Idaho Falls Water System

Current unaccounted for water for this project is due to: 1) losses, or leakage, on privately-owned water service lines (between property line and building) on the property being served; 2) leakage from water fixtures (toilets, faucets, etc.) in buildings being served; and 3) over-usage of interior and exterior water uses due to existing non-metered, flat-rate billing system that does not require customers to pay for the amount of water used. Overall, Idaho Falls' unaccounted for water as a result of not metering is determined to be 27% for interior uses and 42% for outdoor uses[4].

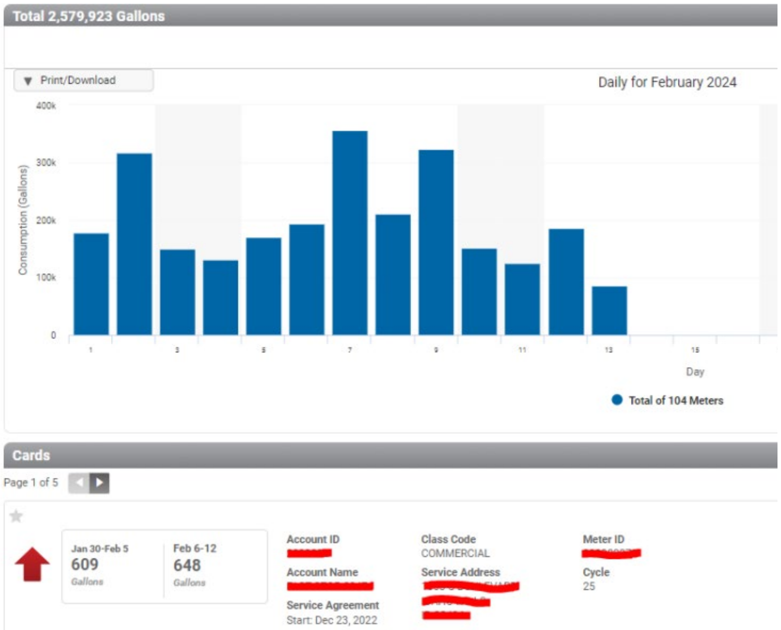

Figure 5. Dashboard of water system's daily meter readings

Service line leakage typically rises to surface or enters a building basement, although it can infiltrate back into the ground, returning to the aquifer. Fixture leakage and over-usage enters storm or sanitary sewer system. Fixture leakage will either return to surface water channels (canals or the Snake River) via pump stations or enter sanitary sewer system before being treated at the wastewater treatment plant and returned to the Snake River. Recent advancements in metering and communications technologies have resulted in drastically improved, more integrate methods of metering, communication, data storage, and analytics. Two technologies to have major impacts on water metering infrastructure are automatic reading (AMR) and advanced metering infrastructure (AMI). The water industry is trending towards AMI and more advanced supervisory control and data acquisition (SCADA) infrastructure[5,6]. With advanced metering, sensors, and controls, the wide range of data collection, controls, and analytics capabilities allow water utilities to utilize advanced metering systems to reduce water loss through improved leak detection[7], reduce operating costs through streamlined billing[8], implement volumetric rate structures to incentivize water conservation[9], and utilize high frequency, near real-time data for a various strategic system management efforts[7]. End users benefit from behind-the-meter leak detection and detailed information about their water consumption, both of which can lead to more efficient water use and lower water bills[7] (Figure 5).

In 2022 the City of Idaho Falls offered 100 drinking water customers the opportunity to have a meter installed as part of a pilot program. Only 7 households participated and during the pilot, leaks were detected at two of the participating homes. Using an online customer portal, two residences were able to identify leaks. One residence belonged to a City Councilmember who found and repaired a sprinkler system leak within a day after being notified of the leak through the portal. The City identified an unknown leak at the second customer's residence that was leaking below their driveway. The meter identified leakage well in excess of 250,000 gallons per month, although there were no visible signs of a leak. Once repaired, the customer's consumption registered by the meter dropped from 270,767 gallons in September to only 4,556 gallons in October. The metered values for this customer with his drop in consumption is shown in Figure 6.

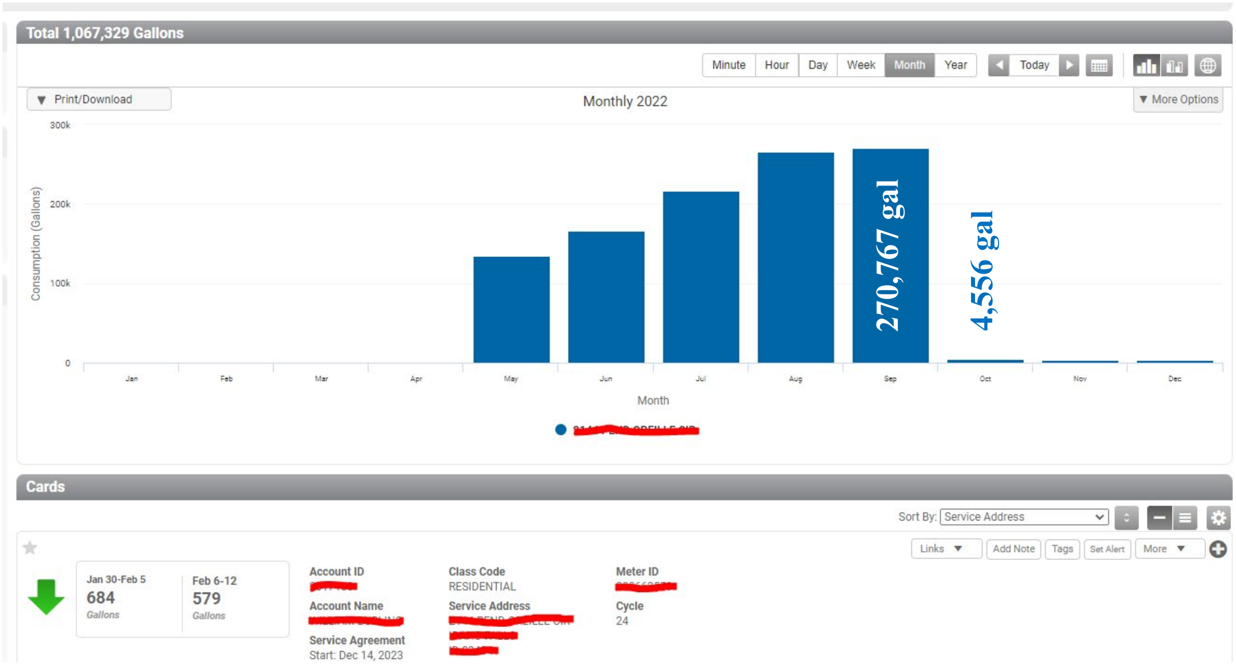

Figure 6. Example of reduced consumption due to leak repair

By augmenting current operational models and procedures, largely based on SCADA system data, with water AMI data, experts suggested that the development and application of advanced algorithms to detect leaks quickly and accurately could realize substantial operational cost savings. These analytical capabilities could enable water utilities to take preventative measures by identifying minor leaks before they become expensive catastrophic pipe failures.

Water system losses not due to evapotranspiration can either return to the aquifer to eventually be used by other groundwater systems or they can return to the benefit of the Snake River through river reach gains, canal discharges, or treated effluent from the City's wastewater treatment plant. There are no other known benefits of these losses, and any benefits attributed to them are considered negligible when compared to the City's incurred expense of pumping the water from the aquifer, disinfecting it, pumping treated water into the system, potential pumping from storm water systems into a surface water body, or treatment expenses from the City's wastewater treatment plant, all of which require consumption of electricity to perform.

Estimated Water Savings

The City of Idaho Falls analyzed both domestic (indoor) and irrigation (outdoor) water uses. This helps to separate conservation-related issues and facilitate the evaluation of conservation actions. These figures indicate the volume of water used and not the rate at which water is used. The rate at which water is consumed impacts our water system more acutely than the total volume consumed.

<u>Step 1 – Calculate system loss and consumption</u>: Since the City is largely unmetered, it is difficult to accurately determine the amount of water consumed by end users versus unaccounted for water lost through system leaks, fire hydrant use, etc. Water consumption must therefore be estimated by using water production data from City well sites in comparison with production and consumption values from neighboring, metered municipalities. The City of Idaho Falls renewed its Water Conservation Plan in 2022 when the Water Division's facility plan was updated. The update included a comparison between the City of Idaho Falls and the cities of Rexburg and Pocatello. This comparison facilitated estimations of water system losses (leaks, etc.) for Idaho Falls. Since Idaho Falls is largely non-metered, metered pump data indicates how much water is pumped into the system, but there is very little data regarding how much produced water is either lost or consumed. Rexburg and Pocatello, both fully metered systems, reported an annual average system loss of 27%. Table 1 shows the past three calendar years of production values and resultant consumption for Idaho Falls of 6,339,183,733 gallons when applying the percentage loss reported by Rexburg and Pocatello.

Table 1. Water System Loss and Consumption Calculations

Year	Annual System Production (Gal)	System Loss	Estimated System Losses (Gal)	Estimated System Consumption (Gal)
	A	B	C = A x B	D
2021	9,107,810,000	27%	2,459,108,700	6,648,701,300
2022	8,640,500,000	27%	2,332,935,000	6,307,565,000
2023	8,303,130,000	27%	2,241,845,100	6,061,284,900
			Total System Consumption:	**6,339,183,733**

Step 2 – Calculate non-metered to metered conversion percent reduction in consumption: Per capita metered consumption values supplied by Rexburg and Pocatello were compared with per capita estimates the Idaho Falls system consumption estimate calculated in Step 1. The resultant comparison is shown in Figure 1. Although the data from Table 1 was originally split between winter and irrigation season months, the data was applied to annual values for this application. A resultant annual per capita reduction of 39.8% was witnessed between non-metered values from Idaho Falls and metered values from Rexburg and Pocatello. Based on this information, switching from a non-metered system to water meters would yield a water savings of approximately 40% in annual water consumed.

Step 3 – Apply metered reduction percentage to metered values for Idaho Falls: Currently, 12% of the commercial customer base in Idaho Falls is metered. Commercial accounts have been divided into six billing classifications (Table 2). Accounts are designated a classification based on similar business types (i.e., restaurant, office, retail, etc.) and similar water consumption values.

Table 2. Commercial Billing Classifications

Classification	Description
CAT1	Apartments with rates paid by Landlord
CAT2	Bar, Church, Gym, Office Space, Retail, Salon, Shop, Warehouse
CAT3	Big Box Retail, Car Sales, Convenience Store, Fast Food, Medical Office
CAT4	Hall, Restaurant
CAT5	Grocery Store, Hotel/Rest Home with less than 20 rooms
CAT6	Car Wash, Hotel/Rest Home with 20 or more rooms

Using metered consumption values per location for the commercial billing classifications, a **non-metered** consumption amount was calculated for each location using the percent reduction calculated in Step 2. Table 3 shows the consumption amounts and calculations by billing classification. The difference between the non-metered and metered values shows the anticipated amount conserved annually per location. Per NOFO requirements, these annual conservation values were converted from gallons into acre-feet.

Table 3. Water System Conservation Calculations

Billing Classification*	3-Year Total Metered Consumption**	Average Annual Metered Consumption (gal)	Qty of Locations	Annual Metered Consumption per Location (gal)	Metered Reduction Percent***	Annual Non-Metered Consumption per Location (gal)	Annual Water Conserved per Location (gal)	Annual Water Conserved per Location (acre-ft)
	A	B = A ÷ 3	C	D = B ÷ C	E	F = D ÷ (1 - E)	G = F - D	H = G ÷ (7.48 x 43560)
CAT1	127,721,000	42,573,667	44	967,583	39.8%	1,607,281	639,698	1.9633
CAT2	464,583,000	154,861,000	202	766,639		1,273,486	506,847	1.5556
CAT3	399,659,680	133,219,893	114	1,168,596		1,941,189	772,593	2.3712
CAT4	148,583,810	49,527,937	42	1,179,237		1,958,865	779,628	2.3928
CAT5	23,264,330	7,754,777	8	969,347		1,610,211	640,864	1.9669
CAT6	650,892,170	216,964,057	74	2,931,947		4,870,343	1,938,397	5.9491

** = Idaho Falls' commercial accounts are separated by business type into 6 billing categories; each category contains businesses with similar monthly water use characteristics.*

*** = Values taken from metered accounts within Idaho Falls between 2021 and 2023*

**** = Determined from water system comparison between Idaho Falls (non-metered) and both Rexburg and Pocatello (metered)*

Meters for the city's CAT6 (hotels, laundromats, car wash) users have been installed with CAT5 users scheduled to have their meters installed by June 2024. CAT4 and lower will require smaller meters, the size of the meter determines cost, the cost difference is in materials with similar installation costs. If funded, the project would install meters for CAT3 and CAT4 over the grant period.

<u>Step 4 – Determine annual project conservation</u>: All locations in billing classifications CAT5 and CAT6 will be converted to meters by June 2024 by the City of Idaho Falls. Conversion began in 2016 and was funded through rate revenues. The proposed project will target businesses within classifications CAT3 and CAT4, which will yield the largest amount of annual conservation. Cost estimates indicate that with $2.5 million, the City will be able to install a minimum of 250 meter boxes with meters. Assuming all 95 CAT4 accounts are metered, the remaining 155 installations would be applied to CAT3 accounts. The resultant project conservation estimate would total **<u>595 acre-feet per year</u>** (Table 4).

Table 4. Project Conservation Calculations

Billing Classification	Annual Conserved per Location (acre-ft)	Quantity of Non-Metered Locations	Qty of Project Locations	Water Conserved by Project (acre-feet)
	A	B	C	D = A x C
CAT1	1.9633	328	0	-
CAT2	1.5556	1,986	0	-
CAT3	2.3712	355	155	368
CAT4	2.3928	95	95	227
CAT5	1.9669	11	0	-
CAT6	5.9491	-	0	-
Water (acre-ft) Conserved by Project Annually				**595**

Municipal Metering Infrastructure Improvement

Since the Idaho Falls is largely unmetered, it is difficult to accurately determine the amount of water consumed by end users versus unaccounted for water lost through system leaks, fire hydrant use, etc. Figure 7 includes the production values (in blue) and estimated consumption (in red) for Idaho Falls. Consumption values were determined by subtracting the estimated leakage from the production numbers. Estimated leakage was determined based on comparable production and consumption values from neighboring, metered municipalities – Pocatello and Rexburg. We created a weighted value based on production vs consumption in Pocatello and Rexburg resulting in a 70/30 split between the two.

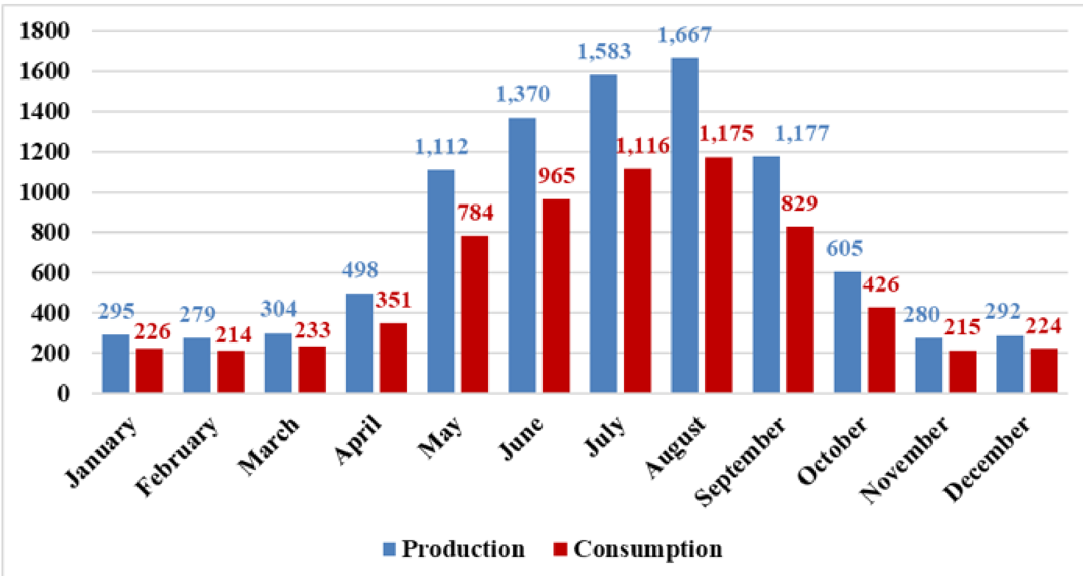

Figure 7. Production vs Consumption (estimates) for water used by customers in Idaho Falls

Per capita metered consumption values supplied by Rexburg and Pocatello were compared with per capita estimates for the Idaho Falls system consumption estimate. A resultant annual per

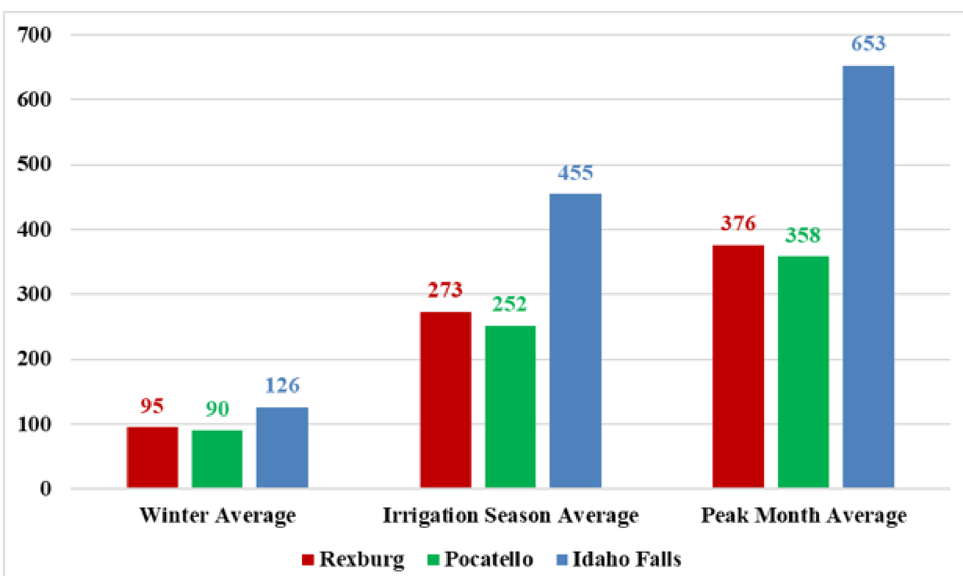

Figure 8. Comparison of Per Capita Water Use (gallons per capita day).

capita reduction of 39.8% was witnessed between non-metered values from Idaho Falls and metered values from Rexburg and Pocatello (Figure 8). Based on this information, switching from a non-metered system to water meters would yield a water savings of approximately 40% in annual water consumed.
Commercial accounts have been divided into six billing classifications (Table 2). Accounts are designated a classification based on similar business types (i.e., restaurant, office, retail, etc.) and similar water consumption values. The proposed project will target businesses within classifications CAT3 and CAT4, which will yield the largest amount of annual conservation. Cost estimates indicate that with $2.5 million, the City will be able to install a minimum of 250 meter boxes with meters. Assuming all 95 CAT4 accounts are metered, the remaining 155 installations would be applied to CAT3 accounts. The resultant project conservation estimate would total 595 acre-feet per year (Table 4).

Since the development of the first commercial mechanical water meter in the 1850s[10], water-metering technology has steadily improved in precision, accuracy, and reliability. However, only recently have communications technologies improved and become cost-effective enough to change how the data generated by these meters are collected. Traditionally, customer-level metering requires water utility employees to physically visit individual customer sites on a semiannual or monthly schedule to read the water meter's logger, which only provides the total volume of water that has been used since the last reading and must be manually entered into a central database for billing purposes. Recent advancements in metering and communications technologies have resulted in drastically improved, more integrated methods of metering, communication, data storage, and analytics. Water conservation can be achieved when municipalities implement advanced water metering systems and provide users with much more granular, real-time data on water consumption[11]. For example, in the figure below (Figure 9) leaks can be detected in real time. Based on water use, colored dots are used to signify no identified leak (blue), small leak (yellow), or large leak (red). In the example below the red dot is attached to an industrial user and therefore consumption is higher and is not due to a leak. Real time information allows for interventions to occur swiftly thus saving the customer money, the city resources, and leads to better conservation of water.

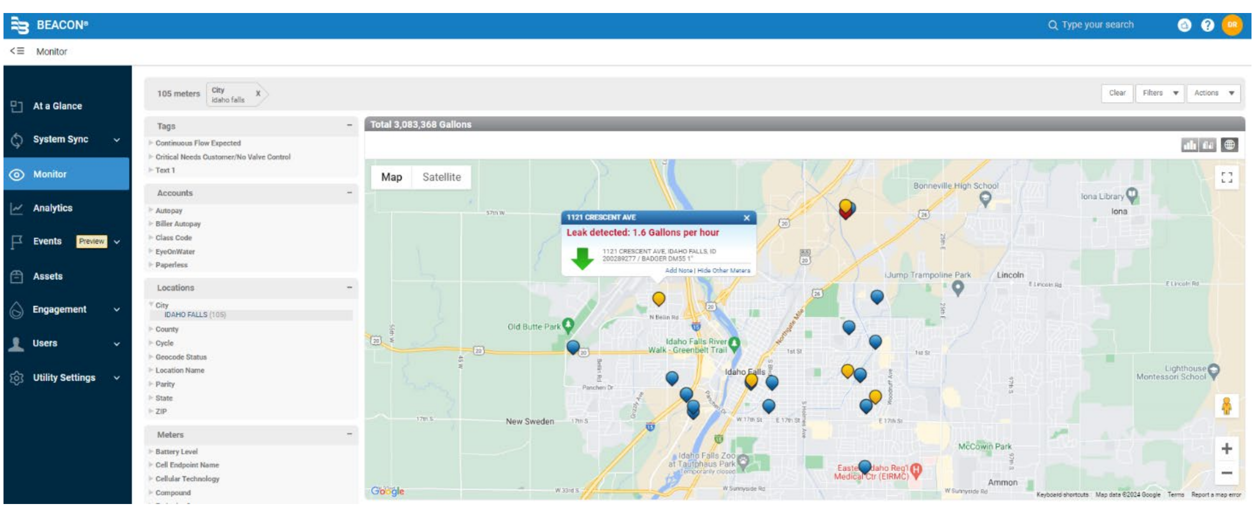

Figure 9. Leak Detection Dashboard

Badger “E Series” ultrasonic water meters utilizing Orion cellular endpoints will be installed with the project. Ultrasonic water meters were selected due to their high accuracy for both low- and high-water flow rates along with the fact that they contain no moving parts like traditional meters that wear down over time. Badger Meter was selected due to its easy-to-use customer “Eye-on-Water” portal and mobile application (app) that allows customers to log in and see their real time water use data. The portal and app can also be configured to notify the customer electronically when leaks are detected by the meter. Based on projected project costs, approximately 250 water meters will be installed with awarded funds, each anticipated to be within the 1-1/2” to 2” range based on targeted business types and billing classifications.

B. Renewable Energy

A number of studies have suggested that environmental goals can be met more efficiently and economically by approaching energy conservation through water usage; for example, in 2005, the CEC reported that California’s state energy efficiency goals could be met by focusing solely on water use, at half the cost of traditional energy efficiency targets, as the energy savings associated with water efficiency are, on average, less expensive to achieve[12]. However, there is still considerable uncertainty about how to accurately measure the embedded energy in water, quantify cost savings, allocate energy reductions, and develop a transparent metric for joint water- energy programs[13,14]. The wealth of data generated by water and energy AMI systems could provide crucial evidence, and not only improve our understanding of water and energy consumption, but also identify areas with the greatest potential for improved strategic resource management.

Energy savings from metering water is significant. In fiscal year 2022-23, the Water Division used 14,526,340 kilowatt hours (KWH) in electricity to pump 25,814.17 acre-feet of water for a total expense of $1,002,718.00. This equates to 562.73 KWH per acre-foot pumped at a cost of $38.85. The energy savings attributed to the 595 acre-feet conserved each year by this project equals **334,825 KWH** and an annual system electrical cost savings of **$23,115.75**. This value is based on reduced pumping resulting from conserved water. The measuring point for energy savings is at the City’s points of diversion, which are its combined well sites. Water treatment and vehicle mileage are negligible when considering energy savings.

C. Other Project Benefits

Resilience and Sustainability Benefits

The earlier timing of snowmelt and subsequent earlier drawdown of soil moisture result in decreased soil moisture and increased climatic water deficit[1]. Reduced snowpack levels stress surface water supplies. Since groundwater rights are conjunctively managed with surface water rights, surface and spring water users with senior priority water rights can issue a water call against groundwater pumpers with junior priority rights, requiring them to reduce pumping for mitigation.

Increased moisture deficits during summer are also expected to increase drought stress and associated disturbances in Idaho forests. Paradoxically, increased winter rainfall (rather than snow) in lower elevations of Idaho during periods of low water demand and unfrozen soil allows water to percolate to deeper soil moisture pools, leading to increased soil moisture in winter and spring for deeper soils while surface soil moisture declines[15]. Meanwhile, increased temperature and evaporative demand increase water demand for irrigated agricultural systems in Idaho.

Warming, associated increased evaporative demand (i.e., evapotranspiration without surface water limitations), and reduced mountain snowpack all favor a future of increased summer drought, particularly in the mountainous parts of the state where snowmelt is projected to occur earlier in the year. The combination of warmer temperatures and changes in seasonal precipitation, superposed with naturally occurring megadrought conditions similar to those seen in the 12th century, would substantially impact water resources in Idaho[16].

Projected changes to Idaho's climate suggest very high confidence in warming trends, limited changes in total annual precipitation albeit a significant reduction in the proportion of precipitation falling as snow, and high potential for increased frequency of certain types of droughts[1]. The fusion of natural climate variability with shifting baselines imposed by climate change is likely to yield significant changes in certain climate and meteorological extremes. These changes pose serious challenges for the state's economic and cultural dependence on snow, water resources, forests, agriculture, and outdoor recreation. Warmer weather during summers has also led farmers to stretch their growing season to include an additional cut on crops such as alfalfa, requiring additional water for irrigation that was not traditionally needed.

Energy provided to the City of Idaho Falls is provided by Idaho Falls Power, a municipally owned utility. Idaho Falls Power is largely reliant upon hydropower (86%), with lesser sources from nuclear (7%) and wind (2%) with approximately 5% purchased on the open market. Although not a problem in the past, hydropower is reliant upon surface water stream flows which can be impacted in the future by climate change or by threats to remove hydropower generation facilities in river channels.

Conservation of groundwater supplements surface water shortages by increasing river reach gains (where groundwater naturally reenters the river channel) and spring flows, which in turn will ease surface water shortages for senior priority surface and spring water users, as well as supplement stream flows for hydropower generation facilities.

As the City does not currently have meters it is not possible for us to determine the quantity of conserved water that will be used for the intended purposes. Conserved water through this project is directly linked to reduced groundwater pumping from the aquifer. Reduced reliance on groundwater pumping generates larger reach gains to the river and increased spring flows to downstream users. Therefore, the City's reduction of groundwater pumping yields direct benefits to other ground water users and surface water users through increased spring flows and river reach gains. Additional benefits from the augmentation of surface and spring water include uses such as increased hydropower sustainability, increased spring flows for the aquaculture industry, and increased river flows for recreation purposes.

Currently, 20 operational wells are constructed, which produce culinary water for the City. Although the City can continue adding wells to existing water rights to accommodate future growth, it requires strategic planning, water right transfers, and revenue to fund capital expenditures. The Idaho Falls Metropolitan Statistical Area's (MSA's) overall population growth was 149.3% over 1969-2022, which topped the United States' increase of 65.6%[17]. Since 2020, Idaho Falls has seen a 4.8% population increase, more than 2,905 new residents. The 2023 Milken Institute Best-Performing Cities Index objectively ranks cities on their economic performance[18]. According to the study, Idaho Falls' strong job and wage growth pushed the city to the top of the list for the second time since 2021. The unemployment rate is lower than the national rate (4.6%) at 2.7% with 18.8% job growth over the past 5 years (compared to the U.S. job growth rate of 4.9%)[17]. Between 2018 – 2024 the City of Idaho Falls issued more than 275 building commercial building permits. The reduction of groundwater the City pumps is directly associated with conservation of water in the aquifer. All water conserved yields direct benefits to aquifer levels, in turn benefiting surface and spring water flows. The conservation of water will allow for continued growth throughout the City of Idaho Falls and Bonneville County.

A moratorium on the issuance of new water rights in the Eastern Snake Plain Aquifer was established in May 1992, limiting cities to existing water rights. Litigation often occurs between senior and junior water right holders with threats of groundwater curtailment, particularly during seasons of drought where senior users claim to be negatively impacted by the pumping of junior groundwater users. Litigation and threats of curtailment lead to escalated tensions between the parties as well as increased legal fees. Junior users often utilize other costly measures to mitigate tensions such as purchasing additional surface water for either supplementing senior users' needs or for groundwater recharge. Mitigation plans have been entered into between conflicting parties, but longevity of the plans is tenuous at best, contingent upon the efficacy of their mitigation measures and whether identified milestones are reached. Water savings is 595 acre-feet per year that will remain in the aquifer for intended purposes.

Ecological Benefits.

Conserved groundwater benefits the surface and spring water systems. These water systems are critical for the benefit of endangered sockeye salmon and steelhead trout runs identified in the Endangered Species Act. Fish hatcheries are reliant upon spring flows supplied by aquifer to mitigate at-risk fish populations. Also benefitting from groundwater conservation is the Snake River physa snail, listed as endangered since 1992. The Snake River physa snail is a freshwater mollusk found in the middle Snake River of southern Idaho[19]. Very little is known about the biology or ecology of this species. It is believed to be confined to the Snake River, inhabiting areas of swift current on sand to boulder-sized substrate. While the species current range is estimated to be over 300 river miles, the snail has been recorded in only 5% of over 1,000 samples collected within this area, and it has never been found in high densities[20]. The species status is uncertain within the current known range, but portions of the middle Snake River are of questionable habitat value given current water quality and water use issues[21]. Ongoing threats to the Snake River phsya include operations of existing dams, water quality degradation, climate change, pollution control regulations, and a lack of State invertebrate species regulations[22].

All conserved water that is left in the aquifer can be preserved in the system for years to come until it either enters the surface water system through reach gains to the river or spring discharges. The timing of these flows often supplements surface water flow during times of drought when there is a surface water shortage. Groundwater conserved because of this project will benefit endangered species such as Snake River physa snail, sockeye salmon, and steelhead trout by supplementing surface water during times of shortage that would otherwise negatively impact their status.

Climate Change

Global air temperatures have warmed by 1.8ᵖF over the past 200 years, a vast majority of which occurred during the past 50 years[23]. Twenty of the warmest 21 years in the instrumental record from 1880 to 2020 have occurred since 2000[24]. The northwestern U.S. and western U.S. have experienced warming trends similar to those seen globally over the past 125 years (1895-

2020)[25,27]. From 1895 to 2020, the northwestern U.S., including Idaho, Washington, and Oregon, experienced an increase in temperature of approximately 2°F[24].

From 1919 to 2011, Idaho has experienced an increase in maximum daily precipitation accumulation in spring (March-May) whereas observed warming has contributed to declines in April 1 snowpack since the 1950s, particularly in areas that lie close to the rain-snow transition[28,29]. Climate projections from climate models participating in CMIP5 show continued and substantial warming through the 21st century. The magnitude of change in climate through 2050 is largely independent of climate action due to committed warming and inertia in the climate system. Projected changes in temperature in Idaho largely mirror project changes in the northwestern U.S.[27,30]. By 2100 the annual mean temperature average for Idaho is projected to warm from 6°F to 11°F[1].

This project will increase the City's resiliency by reducing its water footprint through more efficient use of its groundwater supply. This augments the City's ability to supply water for consumption during times of drought. Additionally, water conserved in the aquifer will eventually return to the surface water system, supplementing surface water flows when surface water supplies would otherwise be scarcer.

Groundwater conserved from the proposed project will benefit the Shoshone and Bannock Tribes, which are also reliant upon the Eastern Snake Plain Aquifer as their source water to supply their tribal community in Fort Hall, which resides down gradient from the City. Spring flow augmentations by this project will benefit fish hatcheries that supplement fish populations, a historic food supply for local tribes. Thousand Springs, a geologic feature near Hagerman where water from the Eastern Snake Plain Aquifer discharges back into the Snake River, is a location where local tribes would historically trap buffalo and now serves as a state park.

D. Disadvantaged Communities, Insular Areas, and Tribal Benefits

This project will impact disadvantaged communities, as defined by the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool. Four Census tracts are listed as "disadvantaged communities" and they are tract numbers 16019970601, 16019970800, 16019971100, and 16019971200 (Figure 10). Many of the businesses that will benefit from this metering project are in one of these four Census tracts. This project will help those businesses protect against water system losses by having access to real-time data that would flag leakage and deter over-usage of interior and exterior water uses.

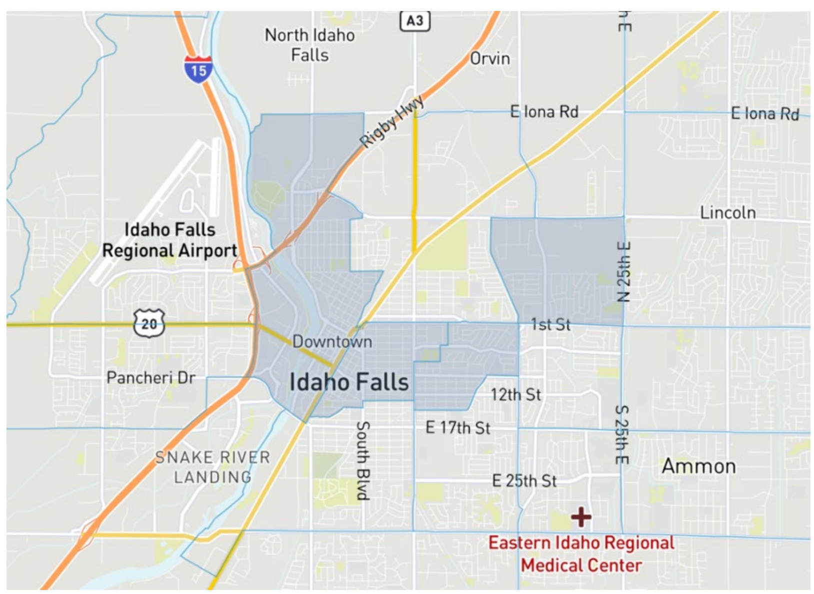

Figure 10. Idaho Falls Screening Tool Results

F. Readiness to Proceed

The proposed project is a continuation of a project we began in 2016. All locations in billing classifications CAT5 and CAT6 will be converted to meters by June 2024 by the City of Idaho Falls. Conversion began in 2016 and was funded through rate revenues. To speed up the process of conversion we are requesting funding to support the metering of 95 CAT4 accounts, the remaining funds will be applied to metering CAT3 accounts. Without this funding the timeline for the project would be longer as we would have to rely on rate revenues to pay for the meters and associated costs. A benefit of the project being a continuation of previous work is that we have a better understanding of what is needed to complete the project and the length of time it will take to complete the work. We anticipate two construction seasons, defined as spring-fall, to install 250 meters. The following workplan (Table 5) outlines pre-design and project design efforts - to be completed prior to receiving funding. The City's commitment to the project demonstrates our readiness to proceed once funds are received. Once funding is received, we would be ready to proceed with project bidding, award efforts, and project construction. The total duration of the project would be from July 2024 through September 2026.

Table 5. Installing Commercial Water Meters in Idaho Falls Workplan

	2024			2025				2026		
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Pre-design efforts										
Identification of commercial water services to receive water meter installation										
Notification/coordination with water customers and building owners										
Determination of meter location with required installation and restoration efforts										
Project design efforts										
Construction generation of meter installation locations										
Identification of all required service line fitting to be supplied including material & size										
Compilation of project specifications and special provisions										
Project bidding and award efforts										
Advertising, pre-bid meeting, addenda issuance (if required), bid open meeting										
Bid review and tabulation, recommendation for award										
Project award in Council meeting										
Project construction										
Contractor bonding and signing										
Preconstruction meeting										
Project construction										

Project Evaluation										
Conduct performance measures										
Dissemination										
Prepare required reports										
Report success of program to City Council										
Report success of program to residents of Idaho Falls										

G. Collaboration

The project would garner widespread support from local (see letter of support from Dr. Rebecca Casper, Mayor of Idaho Falls), state leaders (see letter of support from Senator Mike Crapo, Senator James Risch, and Congressman Mike Simpson), and local coalitions (see letter of support from Keith Esplin, Executive Director of the Eastern Idaho Water Rights Coalition). When water rights or water availability issues are discussed at the local and state level the City of Idaho Falls has often been the target of criticism for its lack of water meters. This project not only conserves water, but it also serves as a statement of good will that Idaho Falls is serious about water-related issues and is willing to be a solution to water supply problems.

H. Nexus to Reclamation

No known direct contracts through Reclamation. The City of Idaho Falls maintains 1,180 shares of storage water within Palisades Reservoir by contractual means through the Palisades Water Users Association. Groundwater conserved benefits American Falls reservoir as it will be augmented by river reach gains in the near Blackfoot to Neely reach of the Snake River upstream from the reservoir.

Performance Measures

Measuring Devices: A.2.a Municipal Metering
To determine the success of our program we will measure the following:

1. The number of new meters installed where none existed previously.
2. A description of both pre- and post-project rate structuring.
3. Accurate measurement of demand assessments (e.g. re-examine comparison of per capita water use (gallons per capita day) between Pocatello, Rexburg, and Idaho Falls), customer billing, diagnostic testing, locating and quantifying leakage, and other management needs.

References

1. Abatzoglou, J. T., Marshall, A. M., Harley, G. L. 2021. Observed and Projected Changes in Idaho's Climate. Idaho Climate-Economy Impacts Assessment. James A. & Louise McClure Center for Public Policy Research, University of Idaho. Boise, ID.
2. Li, D., Wrzesien, M. L., Durand, M., Adam, J., Lettenmaier, D. P. 2017. How Much Runoff Originates as Snow in the Western United States, and How Will That Change in the Future? Geophysical Research Letters, 44(12): 6163–72.
3. East Bay Municipal Utility District. "Advanced Metering Infrastructure (AMI) Pilot Studies Update." November 25, 2014
4. City of Idaho Falls, Water Facility Plan, Water Conservation Plan Update January 2022
5. Laughlin, J. "Survey Reveals Trends in Water Industry Construction." Water World, Vol. 19. No. 12. December 2003.
6. Turner, J. "Industry Trends Drive Need for Increased Automation, Information Technology." WaterWorld, Vol. 21, No. 12. December 2005.
7. Britton, T., R.A. Stewart, K. O'Halloran. "Smart metering: enabler for rapid and effective post meter leakage identification and water loss management." Journal of Cleaner Production, Vol. 54, pp. 166-176. 2013.
8. Beal, C.D., J. Flynn. "Toward the digital water age: Survey and case studies of Australian water utility smart-metering programs." Utilities Policy, Vol. 32, pp. 29-37. March 2015.
9. Borisova, T., S. Asci, B. Unel, C. Rawls. "Conservation Pricing for Residential Water Supply." University of Florida
10. Walski, T.M. "A history of water distribution." Journal AWWA, Vol. 98, No. 3, pp. 110-121. March 2006.
11. Berger, MA., Hans, L, Pisopo, K, Sohn, MD. 2016. Exploring the Energy Benefits of Advanced Water Metering. Ernest Orlando Lawrence Berkeley National Laboratory. Energy Analysis and Environmental Impacts Division Energy Technologies Area. https://www.energy.gov/policy/articles/exploring-energy-benefits-advanced-water-metering
12. California Energy Commission. "California's Water-Energy Relationship." California Energy Commission Report #700-2005-011-SF. November 2005.
13. Cooley, H., K. Donnelly. "Water-Energy Synergies: Coordinating Efficiency Programs in California." Pacific Institute. September 2013.
14. Young, R., E. Mackres. "Tackling the Nexus: Exemplary Programs that Save Both Energy and Water." American Council for an Energy-Efficiency Economy Report #E131. January 2013.

15. Berg, A., Sheffield, J., Milly, P. C. D. 2017. Divergent Surface and Total Soil Moisture Projections under Global Warming. Geophysical Research Letters, 44(1): 236–44. https://doi.org/10.1002/2016GL071921.
16. Overpeck, J. and B. Udall. 2010. Dry Times Ahead. Science, 328(5986): 1642–43. https://doi.org/10.1126/science.1186591.
17. Regional Economic Analysis Project. 2023. Idaho Falls MSA vs. Idaho Compaarative Trends Analysis: Population Growth and Change, 1969-2022. https://idaho.reaproject.org/analysis/comparative-trends-analysis/population/tools/82250000/160000/#:~:text=The%20Idaho%20Falls%20MSA's%20overall,States'%20increase%20of%2065.57%25.
18. City of Idaho Falls News. 2023. Idaho Falls ranked America's Best Performing Small City for the second time in three years. https://www.idahofallsidaho.gov/CivicAlerts.aspx?AID=2377
19. US Fish & Wildlife Service. 2022. Snake River physa snail (Physella natricina). Environmental Conservation Online System. https://ecos.fws.gov/ecp/species/305#:~:text=The%20Snake%20River%20physa%20snail,length%20of%20about%206.5%20millimeters.
20. City of New Plymouth Wastewater Treatment Facility. N.d. Fact Sheet. The US Environmental Protection Agency. https://www2.deq.idaho.gov/admin/LEIA/api/document/download/15431
21. Idaho Transportation Department. 2014. US 95 Central Environmental Scan. https://apps.itd.idaho.gov/apps/d3/95_Corridor/US-95_Central_ES%20Report_June2014.pdf
22. Idaho Governor's Office of Species Conservation. 2021. Snake River Physa Snail. EPA Status: Endangered. https://species.idaho.gov/aquatic-species/snake-river-physa-snail/
23. Hawkins, E., Ortega, P., Suckling, E., Schurer, A., Hegerl, G., Jones, P., Joshi, M. et al. 2017. Estimating Changes in Global Temperature since the Preindustrial Period. Bulletin of the American Meteorological Society, 98 (9): 1841–56. https://doi.org/10.1175/BAMS-D-16-0007.1.
24. NOAA. 2021. Climate at a Glance. https://www.ncdc.noaa.gov/cag/statewide/time-series/10/
25. Abatzoglou, J. T., Rupp, D. E., Mote, P. W. 2014. Seasonal Climate Variability and Change in the Pacific Northwest of the United States. Journal of Climate, 27(5): 2125-2142. https//doi.org/10.1175/JCLI-D-13-00218.1
26. Melillo, J. M., Richmond, T., Yohe, G. 2014. Climate Change Impacts in the United States: Great Plains. Climate Change Impacts in the United States: The Third National Climate Assessment.

27. USGCRP. 2018. Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, II: 1470. https://nca2018.globalchange.gov/downloads/NCA2018_FullReport.pdf

28. Klos, Z. P., Abatzoglou, J. T., Bean, A., Blades, J., Clark, M. A., Dodd, M., Hall, T. E., et al. 2015. Indicators of Climate Change in Idaho: An Assessment Framework for Coupling Biophysical Change and Social Perception. Weather, Climate, and Society, 7(3): 238–54. https://doi.org/10.1175/WCAS-D-13-00070.1.

29. Mote, P. W., Li, S., Lettenmaier, D. P., Xiao, M., Engel, R. 2018. Dramatic Declines in Snowpack in the Western US. Climate and Atmospheric Science, 1(2). https://doi.org/10.1038/s41612-018-0012-1.

30. Rupp, D. E., Abatzoglou, J. T., Mote, P. W. 2017. Projections of 21st Century Climate of the Columbia River Basin. Climate Dynamics, 49(5–6): 1783–99. https://doi.org/10.1007/s00382-016-3418-7.

RESOLUTION NO. 2024 - 01

A RESOLUTION OF THE CITY OF IDAHO FALLS, IDAHO, A MUNICIPAL CORPORATION OF THE STATE OF IDAHO, AUTHORIZING THE SUBMITTAL OF A FINACNCIAL ASSISTANCE APPLICATION TO THE BUREAU OF RECLAMANTION FOR INSTALLING COMMERCIAL WATER METERS AND AUTHORIZING THE PUBLIC WORKS DEPARTMENT TO EXECUTE ALL NECESSARY APPLICATION DOCUMENTS AND SUBMIT THE APPLICATION

WHEREAS, the City of Idaho Falls plans to convert all non-metered commercial water customers to metered water billing; and

WHEREAS, the project involves installation of approximately 250 commercial water meters in the City; and

WHEREAS, City officials recognize the need for monitoring water use and using water efficiently; and

WHEREAS, the U.S. Bureau of Reclamation (USBR) has announced the availability of funds for water efficiency projects through the WaterSMART Grants: Water and Energy Efficiency Projects for Fiscal Year 2024 and Fiscal Year 2025; and

WHEREAS, said funding is intended to conserve and use water more efficiently; and accomplish other benefits contributing to water supply reliability in the western United States; and

WHEREAS, said funding includes grants at reasonable terms; and

WHEREAS, the City of Idaho Falls will comply with all applicable laws and regulations relating to the project; and

WHEREAS, various documents are required to be filed with the USBR related to WaterSMART Grants: Water and Energy Efficiency Projects for Fiscal Year 2024 and Fiscal Year 2025 application.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF IDAHO FALLS, IDAHO, AS FOLLOWS:

1. That the Idaho Falls City Council authorizes the submittal of a financial assistance application with the USBR for installation of commercial water meters.
2. That the Idaho Falls Public Works Department is authorized to sign and submit all necessary project application documents.
3. That the Idaho Falls City Council supports the grant application.

ADOPTED and effective this 11 day of January 2024.

CITY OF IDAHO FALLS, IDAHO

Rebecca [signature]

Rebecca L. Noah Casper, Mayor

ATTEST:

By ____________________
Corrin Wilde, City Clerk (SEAL)

STATE OF IDAHO)
) ss:
County of Bonneville)

I, CORRIN WILDE, CITY CLERK OF THE CITY OF IDAHO FALLS, IDAHO, DO HEREBY CERTIFY:

That the above and foregoing is a full, true and correct copy of the Resolution entitled, " A RESOLUTION OF THE CITY OF IDAHO FALLS, IDAHO, A MUNICIPAL CORPORATION OF THE STATE OF IDAHO, AUTHORIZING THE SUBMITTAL OF A FINACNCIAL ASSISTANCE APPLICATION TO THE BUREAU OF RECLAMANTION FOR INSTALLING COMMERCIAL WATER METERS AND AUTHORIZING THE PUBLIC WORKS DEPARTMENT TO EXECUTE ALL NECESSARY APPLICATION DOCUMENTS AND SUBMIT THE APPLICATION."

____
Corrin Wilde, City Clerk

(SEAL)

OFFICE OF THE MAYOR

Rebecca L. Noah Casper | *Mayor*
Office (208) 612-8235
Fax (208) 612-8560

IDAHO FALLS

January 12, 2024

Bureau of Reclamation
Financial Assistance Operations Section
P.O. Box 25007
Denver, CO 80225

RE: Idaho Falls, Idaho's WaterSMART, Water and Energy Efficiency Grant Application for Municipal Metering

To Whom It May Concern:

As mayor of the City of Idaho Falls, please accept my support for the City of Idaho Falls' request for funding to expand our implementation of water meters to commercial water usage accounts. Further implementation of meters for our community will move Idaho Falls forward in doing our part to protect and conserve water for all Eastern Idahoans and the Western United States.

As you are aware, our region faces looming conditions, and we must do everything in our power to preserve one of our most valuable natural resources. As the area's largest city and the fourth largest in Idaho, we must position ourselves as leaders to conserve water to preserve Idaho's way of life and our economy.

As a city, we have already begun establishing landscaping that uses less water and upgraded irrigation systems that water only when necessary. As a city, we have also sent representatives to workshops to find ways as a community we can promote and implement water-saving measures. As we use less water, while it may seem small, every drop we save will add up in preserving this vital resource.

We have begun shaping our community's future in water conservation through the use of water metering, with over 67,000 residents and over 26,000 water accounts. Of these accounts, roughly 600 are currently metered and metering the rest through rates and local property tax dollars is not fiscally feasible or responsible.

Studies show that if Idaho Falls were to get everyone on meters, the city would see a 30 to 40 percent savings in water usage. We have chosen to establish a plan to implement water metering on these commercial properties because many are among the largest users of water. These often-large properties also utilize many traditional landscaping methods and irrigating lawns play a large role in increased usage in our community. Implementing these meters would allow Idaho Falls to encourage the smart usage of water to conserve and protect our economy.

Rebecca L. Noah Casper | *Mayor*
Office (208) 612-8235
Fax (208) 612-8560

If you have any further questions, please don't hesitate to reach out to my office at (208) 612-8235.

Sincerely,

Rebecca L. Noah Casper, Ph.D.
Mayor, City of Idaho Falls

City of Idaho Falls

CATHERINE SMITH
ECONOMIC DEVELOPMENT ADMINISTRATOR
208.612.8101 | casmith@idahofalls.gov

January 11, 2024

WaterSMART Water and Energy Efficiency Grants
Bureau of Reclamation
Financial Assistance Operations Section
Denver, CO 80225

Subject: ***Letter of Support for Idaho Falls, Idaho's WaterSMART, Water and Energy Efficiency Grant Application for Municipal Metering***

To Whom It May Concern,

I am writing this letter on behalf of the Economic Development Office at the City of Idaho Falls. I am expressing our enthusiastic support for the WaterSMart grant application submitted by the City of Idaho Falls' Public Works department to fund the installation of water meters for commercial businesses in our community.

The proposed project to convert commercial businesses from a flat rate to a metered system aligns perfectly with our commitment to sustainable water management and responsible resource usage. We recognize the importance of accurate water measurement in promoting conservation efforts, identifying potential leaks, and encouraging businesses to adopt water-efficient practices.

The installation of water meters is a crucial step towards creating a more water-efficient community. It not only empowers businesses with the tools to monitor and manage their water consumption effectively but also contributes to the overall conservation goals of our region. By implementing this project, we believe that we can make a significant impact on reducing water wastage and promoting a more sustainable future for our community.

Furthermore, the WaterSMart grant's support for this initiative will undoubtedly alleviate the financial burden on local businesses and encourage widespread participation in this environmentally responsible endeavor.

We firmly believe that this initiative will not only benefit individual businesses but will also contribute to the long-term environmental and economic well-being of our community.

Thank you for your consideration of this important project, and we look forward to the positive impact it will have on our community's water conservation efforts.

Sincerely,

Catherine Smith
Economic Development Administrator

Eastern Idaho Water Rights Coalition

EASTERN IDAHO
WATER RIGHTS COALITION

Bureau of Reclamation
Financial Assistance Operations Section
Denver, CO 80225

January 13, 2024

Re: Letter of Support for Idaho Falls, Idaho's WaterSMART, Water and Energy Efficiency Grant Application for Municipal Metering

To Whom It May Concern:

The Eastern Idaho Water Rights Coalition represents water users across Eastern Idaho, including cities, canals, irrigation districts, groundwater districts, and businesses. We are actively involved trying to help resolve disputes regarding over-drafting of water from the Eastern Snake Plain Aquifer (ESPA).

Some of the active water calls have resulted in groundwater irrigators being required to meter all of their wells, in order to know how much they pump.

The City of Idaho Falls does meter the wells supplying the city, and they are in compliance with a settlement agreement to mitigate for their groundwater pumping. However, Idaho Falls does not meter their delivery to individual users. In fact, if I am correct, they are the largest city in the west that does not yet meter its water delivery.

It has been shown the merely metering water, without any change in cost, will reduce water usage. Water entities in Utah claim that use along the Wasatch Front drops 30 percent when metered, without any rate change. Additionally, metering water can aid greatly in locating where there are leaks in a delivery system and allow them to be fixed.

Because of these reasons the Eastern Idaho Water Rights Coalition strongly supports this grant application by the City of Idaho Falls. Metering the water use of commercial entities in the city is an important first step for the City to get better knowledge of the water they deliver, educate businesses on the amount of water they use, and take steps to conserve water where possible.

With a declining aquifer it is incumbent on all water users to do their part to conserve our valuable water resources. We strongly favor this effort by the city and this grant application to help make it happen.

Sincerely,

Keith Esplin

Executive Director
Eastern Idaho Water Rights Coalition
2008.243.1824

Mike Crapo
United States Senator
239 Dirksen Senate Office Building
Washington, DC 20510

James E. Risch
United States Senator
483 Russell Senate Office Building
Washington, DC 20510

Mike Simpson
Member of Congress
2084 Rayburn House Office Building
Washington, DC 20515

February 21, 2024

Commissioner Camille Calimlim Touton
Bureau of Reclamation
1849 C St NW
Washington, DC 20240-0001

Dear Commissioner Touton:

We are writing to express our strong support for the WaterSMART Water and Energy Efficiency grant application submitted by the city of Idaho Falls, Idaho. The city's request for $1.25 million to convert 250 non-metered commercial water customers to metered water billing is a crucial step towards achieving water conservation and improving water security in Idaho Falls.

Installing water meters and ensuring that customers pay for the water they consume is an effective way to promote water conservation. By implementing smart water meters, the city can also detect leaks early, resulting in measurable water savings. Currently, residential metering is not available in the city, and only approximately 12% of commercial customers are being metered. This grant funding would greatly assist in the city's plan to implement a citywide metering system, starting with commercial customers who are the highest water users in the area.

Numerous studies have shown that the installation of water meters can lead to significant water reductions of approximately 30-40%. In addition, it can result in reduced wastewater treatment costs due to lower flows and reduced energy costs through less groundwater pumping and treatment. We commend the city for its commitment to water conservation and believe this grant will provide a jumpstart to their efforts.

We strongly believe that supporting Idaho Falls in their endeavor to implement a citywide metering system will have a positive impact on water conservation, environmental sustainability, and the overall well-being of the community. We urge you to give this grant application your full and fair consideration.

Sincerely,

MIKE CRAPO
United States Senator

JAMES E. RISCH
United States Senator

MIKE SIMPSON
Member of Congress