Emigration Canyon
Small Scale Water Efficiency Project

Emigration Canyon Improvement District (ECID)

PO Box 58945

Salt Lake City, UT 84158

Eric Hawkes, Project Manager

(p) 801-243-5741 (e) eric@ecid.org (w) www.ecid.org

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1. Executive Summary

April 25, 2022

Emigration Canyon Improvement District (ECID)

Salt Lake City

Salt Lake County

Utah

Category A applicant

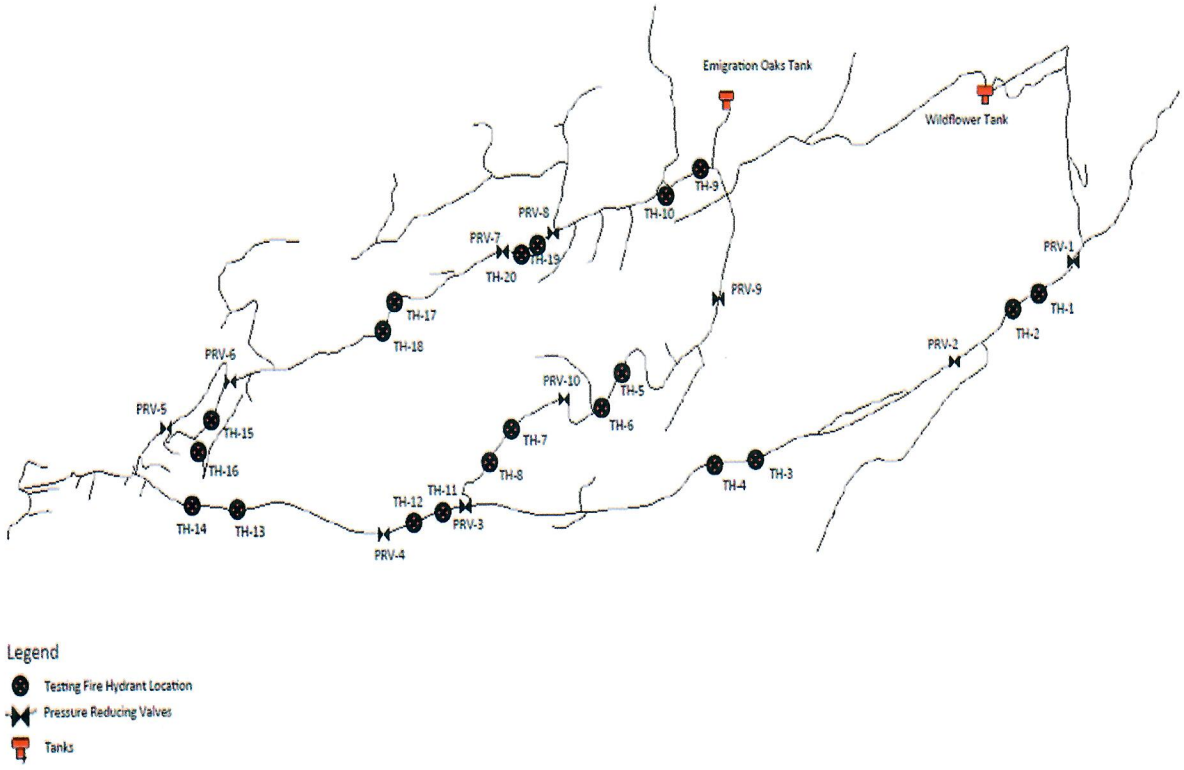
In consideration of persistent drought conditions in Utah and its effect on the environment and water resources in the canyon, Emigration Canyon Improvement District (ECID), is seeking funding to implement a project that will improve water efficiency and increase resilience against drought. The project consists of replacing existing water meters with smart water meters and pressure regulating valves with alarm notification throughout ECID's water distribution system. Implementation of these measures enables ECID to provide customers with real-time, detailed water use information throughout the year. Currently, water meters are only read once a month for 6 months of the year due to snow and ice in the canyon. The proposed project improves ability to detect and repair leaks, decreases system water loss, ensures optimal water delivery, increases water source reliability, and encourages water conservation among end users. The project meets the goals outlined in ECID's Water Management and Conservation Plan of 2013 and has been identified and prioritized in the Emigration Canyon General Plan of 2022.

ECID expects to complete the proposed project by November 2023.

The project is not located on a federal facility.

2. Project Location

Emigration Canyon Improvement District (ECID) was formed in June 1968 to provide septic and water services to residents of Emigration Canyon. Emigration Canyon is located east of Salt Lake City and winds up the foothills of the Wasatch Mountains for nine miles through at times steep and rugged terrain. The Upper Emigration Creek Sub-Watershed is part of the Jordan River Basin and drains 11,635 acres of mountainous slopes - from elevations of 5000 to 8900 feet. ECID currently operates three wells, ranging in depth from 500 to nearly 1200 feet, and uses two large water tanks with a combined water storage capacity of 1.3 million gallons. ECID's water distribution system provides water to over 300 homes, which is nearly half of all homes in the canyon. ECID fire hydrants – combined with a small number of hydrants maintained by Salt Lake City Public Utilities - provide fire protection to roughly 70% of canyon residents.



3.Technical Project Description

In 2020, ECID implemented a Smart Water Meter pilot program with 10 Badger E-Series meters and Orion receptors to test feasibility and ensure cellular reception was adequate throughout Emigration Canyon. The following year, ECID moved ahead on the first phase by replacing 100 existing mechanical meters with Badger E-Series smart water meters. This first phase has been completed and is not included in this funding request.

The second phase of the project – included this grant request – consists of replacing the 220 remaining mechanical meters with Badger E-Series G2 Ultrasonic Meters and install poly lids to accommodate the Orion endpoints or receptors. This new meter does not only transmit data on water use and leaks but is also able to monitor temperature and control water pressure. The work required to complete this project is straightforward and consists of removing the existing meter, adding the E-Series smart water meter (in some cases using adapters), replacing the metal meter lid with a poly lid to accommodate the Orion endpoint and making the necessary connections. In some cases, additional digging may be required for accessing meters that are too low and need to be raised.

After installation of the new E-Series G2 smart water meters and receptors, ECID will be able to collect real-time water use data, establish leak detection notifications, track system pressure changes, and move towards a regular monthly billing cycle. End-users will be able to monitor

real-time water use and set up alerts for water leaks, backflow incidents, and water pressure changes through the online portal or Eye-on-Water mobile app.

4. Evaluation Criteria

A. Project Benefits

Benefits of the project to ECID's Water Delivery System.

Clearly explain the anticipated water management benefits of the project to ECID's water supply delivery system and water customers:

Smart Water Meters: Smart water meters will enable ECID and its customers to monitor water use in real time, throughout the year, which is a huge improvement. Water meters currently in use are only read once a month – manually - for six months of the year. Due to challenging terrain in the canyon and snow and ice on the ground it is not feasible to read existing water meters during the winter months. Since water-use cannot be monitored and reported to costumers during that time, water leaks have gone undetected and have resulted in loss of thousands of gallons of water – as much as 500,000 gallons due to just one leak in one recent case. ECID has treated these leaks as a system water loss and has not billed end-users. After installation of smart water meters, however, ECID will be able to keep residents informed of their water use throughout the year and defer responsibility and cost of water leaks to customers. The new water meters will eliminate the need for manually reading water meters – saving time and labor. An important benefit to customers is that these meters provide them with the ability to lower their water bills and conserve water by monitoring their water usage and set up alerts on their phone when leaks or other problems occur. Real-time water use information will increase awareness about water use, provide customers with the ability to track results of water saving measures, and stimulate continued participation in water conservation efforts.

Pressure Monitoring Feature of the E-Series G2: Due to elevation changes in the canyon, certain areas within ECID's water delivery system have been prone to problems related to fluctuating water pressure. High water pressure has resulted in leaks and appliance failure within the homes of customers and has culminated in a significant cost to ECID. Installation of smart water meters with a pressure monitoring feature will enable ECID to monitor water pressure in a timely manner and prevent property damage and expensive repairs. Pressure monitoring meters will also provide ECID with a fast and efficient way to detect and locate leaks within its distribution system. Currently, system leaks may go undetected for long periods of time due to winter snow and the natural terrain of the canyon. Early leak detection results in early repair, decreases water loss within the system, and reduces excessive wear and tear on system components.

Explain the significance of the anticipated water management benefits for ECID's water delivery system and customers. Consider:

Are customers currently not getting their full water right at certain times of the year? Customers connected to the public wells of ECID have been able to get their full water right, throughout the year. ECID has come close to implementing water restrictions in late summer but has been able to avoid these measures since customers responded well to requests for voluntary water reductions.

Does this project have the potential to prevent lawsuits or water calls? Water use and water rights has been a source of conflict between ECID and homeowners along Emigration Creek who rely on private wells for their drinking water. Private well owners have complained of reduced drinking water quality and productivity of wells during periods of drought in late summer. Streamflow is important to these homeowners since their wells divert water from the superficial aquifer below the stream. The US Geological Survey has long warned superficial aquifers are part of the groundwater system most sensitive to climate change.

Conflict over water can be avoided if all water users in the canyon work together and support goals that help protect the watershed: conserve water, improve resilience against drought, and implement measures that ensure sustainable use of water resources. The project proposed in this application is an effort by ECID to reduce conflict over water and decrease the chance of lawsuits or water calls in the future.

What are the consequences of not making the improvement? If ECID is not able to proceed with the planned improvements, drought related problems affecting water supply and water source reliability in the canyon will likely get worse over time. Conflict over water may increase. Efficiency of ECID's water distribution system and related billing accuracy will decline. ECID currently replaces a dozen or more mechanical meters that slow down or stop working due to the age of the meters. Water passes through these malfunctioning meters and is unaccounted for in the billing process resulting in missed income.

Are customer water restrictions currently required? ECID currently does not require customer water restrictions, but requests customers voluntarily decrease water use. ECID recommends customers delay outside watering to the end of May/early June and discontinue watering in mid-September. ECID plans to increase its water rates this summer to cover increased maintenance cost and add a financial incentive to water conservation.

Other significant concerns that support the need for the project: N/A

Broader Benefits: Will the project improve broader water supply reliability at the sub-basin or basin scale?

The project proposed for funding will improve supply reliability for all customers of ECID, which means it will improve conditions for almost half of all homeowners in the canyon. Homeowners not connected to ECID's water distribution system will benefit as well. Since the project is expected to decrease water diversions by ECID, there will be more surface and groundwater flow available to support other water users and wildlife in the canyon. Implementation of the project may also persuade homeowners with private wells along the creek, who rely on a water source vulnerable to drought conditions, to connect to ECID, further improving water supply reliability at the sub-basin scale.

Computer simulation studies demonstrate wells close to a creek have a direct effect on streamflow and divert nearly 100% of their water from that source. The Utah Department of Natural Resources estimates unmetered water connections like those used by private well owners consume 50% more water than those with water meters. These findings indicate a reduction in the number of private wells will likely increase streamflow in Emigration Creek.

A decrease in private wells, in combination with improvements in water efficiency and water conservation within ECID's water distribution system, may also increase water supply reliability for water right holders below Emigration Canyon - at the basin scale - who have complained of inability to divert their full surface water right in late summer.

Will the proposed project increase collaboration and information-sharing among water managers in the region?

Increased collaboration and information sharing among water managers in the region is already happening. The 2021 Emigration Canyon Watershed Celebration, funded by ECID, brought regulators, environmental organizations, Emigration Canyon Metro Township, ECID and other water managers in the area together to focus attention on water related problems in the canyon. The proposed project will improve relations with other water managers since a coordinated approach to water efficiency and conservation has the greatest chance of success.

Will the proposed project positively impact/benefit various sectors and economics within the applicable geographic area?

Due to Emigration Canyon's proximity to Salt Lake City and exceptional recreational value, it has been a popular hiking and biking destination. In the last 10 years, recognition of the value of open space and preservation of bird and wildlife habitat has culminated in protection of over 1000 acres of land through conservation easements managed by Utah Open Lands. However, poor water quality – Upper Emigration Creek has been listed as impaired for high levels of coliform since 2002 - and decreased streamflow in late summer threatens survival of aquatic species and has a negative effect on wildlife habitat and the recreational value of the canyon. The project proposed in this application will improve efficiency of ECID's water system, reduce water loss, and decrease water diversions.

Together with other strategies to improve the health of the watershed, the proposed project will help improve streamflow in the creek, preserve wildlife habitat, and protect the recreational value of the canyon.

Will the project complement work being done in coordination with NRCS in the area?

N/A

Will the project help address drought conditions at the sub-basin or basin scale?

The last twenty plus years of unrelenting drought has taken its toll in Utah. Reservoirs are at record lows, snowpack is decreasing, and lakes are shrinking. Runoff is predicted to be – again – well below normal this year. The Great Salt Lake, a terminal lake west of Salt Lake City where all surface and ground water running through Emigration Canyon and the Jordan River Basin flows into, has decreased to 56% of its normal size. In Emigration Canyon, drought has reduced streamflow in the creek, increased water demand, decreased water levels in wells, and threatened water supply reliability. The proposed project is an attempt by ECID to address these issues at the sub-basin level. Implementing water efficiency measures will increase resilience to drought by reducing system water loss. It will also decrease water demand by providing ECID customers with the tools to find and repair leaks and participate in water conservation. By decreasing ECID water diversions, the project will help increase groundwater and surface flow, which helps improve drought conditions at the basin scale.

B. Planning Efforts

Plan Development: Describe how the project is supported by existing planning efforts. Identify the planning effort and who developed it. If the planning effort was not developed by ECID, describe ECID's involvement in developing the planning effort.

Emigration Improvement District Water Management and Conservation Plan: This planning document was developed by ECID and updated in 2013 to guide decisions on water infrastructure needs to meet current and future drinking water demand. It describes issues affecting streamflow and the health of the watershed and includes specific goals and objectives to protect water resources in the canyon.

Emigration Canyon General Plan: This plan was developed by Emigration Canyon Metro Township with input from residents and was adopted in March 2022. ECID provided feedback during the creation of this plan and is expected to assist with implementation of objectives related to water source protection, septic management, water quality, watershed protection, water conservation, and demand for culinary water supply. Land planning objectives affect future water needs. The capacity of water resources and ECID's infrastructure will play a role in determining future growth in Emigration Canyon.

<u>Support for the Project</u>: Describe to what extend the proposed project is supported by the identified plan. Address the following: Is the project identified specifically in the planning effort? Explain whether the proposed project implements a goal or address a need or problem identified in the existing planning effort. Explain how priority for this particular project was determined as opposed to other measures.

<u>Emigration Improvement District Water Management and Conservation Plan</u>: The 2013 version of ECID's Water Management and Conservation Plan outlines the importance of conserving water to protect the watershed and water resources in the canyon. It also recognizes the importance of streamflow in Emigration Creek to residents who live along the creek and rely on private wells to support their culinary water needs. Groundwater and surface flow feed the superficial aquifer below the creek that provides these homeowners with a water source.

Since adoption of this plan, it has become increasingly clear to ECID board members that water resources are under threat both at the sub-basin and the basin level. Persistent drought conditions decreased runoff and streamflow in the creek, increased water demand, affected water levels in wells, reduced well capacity during times of drought, and increased the risk of private wells running dry, causing conflict among water users. ECID board members decided to step up efforts to improve management of its water delivery system, decrease system water loss, and encourage more water conservation among its customers. Replacing existing water meters with smart water meters was the logical and most affordable option. After a successful pilot program, 100 smart water meters were installed in the fall of 2021. In January of 2022, Badger meter launched a newer version of their E-Series ultrasonic meter to enable pressure and temperature monitoring. While this project has not been specifically identified in ECID's Water Management and Conservation Plan, it is a sound and logical response to persistent drought conditions and is based on the same – but more urgent – need described in the plan to protect streamflow in the creek and improve water supply reliability of residents in the canyon.

<u>Emigration Canyon General Plan</u>: This 2022 planning document includes a chapter on the environment, which discusses the importance of careful management of the watershed to protect ecosystems, preserve wildlife habitat, and protect culinary water supplies. The chapter identifies climate change and related changes in weather patterns resulting in periods of extreme drought and heatwaves, increased risk of wildfires, decreased snowpack, runoff, and recharge of aquifers, and decreased streamflow in the creek as threats to the environment and water resources in the canyon. It includes the following goal: "Preserve and enhance the health of the watershed to ensure it has adequate quality and capacity to fulfill the needs of those who depend on it for life and well-being, both human and non-human." Action items to meet this goal include: "Encourage watershed management efforts across scales", which demonstrates support of improving water management of ECID's water distribution system and coordination of efforts with other water managers in the Jordan River Basin. Another applicable action item states: "Develop incentive programs to improve septic maintenance and reduce water use." It specifically

mentions support for water meters, water conservation, and use of systems that help detect leaks.

C. Implementation and Results

Describe the implementation plan for the proposed project. Please include estimated project schedule that show the stages and duration of the proposed work, including major tasks, milestones, and dates.

September 2022 – after grant approval: Order E-Series G-2 smart water meters, Orion receptors, lids, and adapters. Contact the local DNR office in Provo and make sure the project schedule allows for required supervisory tasks and other grant compliance issues.

April 2023: Begin installation of smart water meters, poly lids and receptors to the remaining 200 plus mechanical meters.

August 2023: Complete exchange of mechanical meters throughout ECID's water distribution system.

October 2023: Test system and billing software in coordination with Badger Meter and address any remaining issues

November 2023: Project completed.

Describe any permits that will be required, along with the process for obtaining such permits.

No permits are required. Cellular data is collected and processed by Badger Meter and will be made available to ECID, Aqua Environmental Services (system operators), and residents in the canyon with use of email and a password.

Identify and describe any engineering or design work performed specifically in support of the proposed project.

No engineering or design work is required. Education on installation of smart water meters was gained during the pilot program in 2020 and while installing 100 smart water meters in 2021.

Describe any new policies or administrative actions required to implement the project.

ECID is in the process of implementing automated meter reading procedures for the first 100 smart water meters that have been installed. After completion of the project –

scheduled for November 2023, ECID will switch over to a monthly billing cycle and provide hands-on training to customers on set-up of alerts on the Eye on-Water mobile app and distribute educational materials on use of the online portal.

Describe the timeline for completion of environmental and cultural resource compliance.

N/A

D. Nexus to Reclamation

Is the proposed project connected to a Reclamation project or activity?

No

E. Presidential and Department of the Interior Priorities

Climate Change: Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis. Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above5

Because of its location, environment, wildlife, and watershed characteristics, Emigration Canyon is more susceptible to impacts of climate change than many other areas.

Drought: Climate Change is arguably the greatest environmental challenge of our time and is predicted to affect Utah - the second driest state in the nation - by continuing to increase average temperatures across the state, causing more frequent and severe heatwaves and drought. Average temperatures have already increased nearly 2 degrees over the past 100 years. According to the US Drought Monitor, 99.4% of Utah currently suffers from severe drought conditions and over one third of this area is in extreme drought. The mountainous area in and above Emigration Canyon – headwaters of Emigration Creek - fall solidly into the area considered to be in extreme drought. Runoff is predicted to be 50% of normal this year.

Impact of Drought on Fish and Wildlife: The threat of drought and reduced streamflow on water resources and water supply resilience in Emigration Canyon has already been discussed, but it is worth mentioning that it has also affected fish and wildlife in the canyon. During extended periods of drought in the past few years, Emigration Creek - a perennial creek - dried up in several places, eliminating fish habitat. Last year, large herds of elk, which normally stay up in the higher elevations, came down to drink water from the creek, causing unexpected hazards on the road. These are signs of worsening drought conditions in the canyon that can be attributed to climate change.

Risk of Fire: Drought does not only affect runoff and decreases streamflow, but also increases risk of fire, which is of particular concern in Emigration Canyon. Fires have been on the rise in Utah and many fear the state is heading for an ever-worsening fire season. What fuels those fears is an increase in dry, desiccated vegetation and the rise in unusual wind events. Like other changes in weather patterns, these abnormal wind events have been attributed to climate change. Wildfires are a natural phenomenon in areas like Emigration Canyon and the canyon has experienced several fires in the past. However, changes in weather patterns related to climate change has increased the chance of severe fires, which threatens life and property and has a devastating effect on the watershed.

Decreased Lake Effect: Persistent drought conditions and increased water demand has affected lake level of the Great Salt Lake, a huge, terminal lake west of Salt Lake City where all water from the Jordan River Basin and other watersheds flow into. During the last several years the lake has shrunk to 56% of its former size. Meteorologists have long pointed to the importance of the Great Salt Lake on weather patterns nearby. Water from the lake evaporates and forms clouds that, when rising against the Wasatch Mountains on the east side of Salt Lake City, results in precipitation in the foothills and lower elevations of the Wasatch Mountains, including Emigration Canyon. Any decrease in the lake effect increases drought conditions in the canyon.

Dust storms: Over the last several years a total of 750 square miles of lakebed from the Great Salt Lake, contaminated with metals from the nearby copper mine, has been exposed to the elements. Studies show that increased wind events - related to climate change - cause dust storms that decrease air quality and darkens the snow surface in the Wasatch Mountains, which results in early runoff and a shorter water season in Emigration Canyon and other affected areas.

Resilience to Climate Change: To address the various impacts of Climate Change on Emigration Canyon, a comprehensive plan is needed.

Local authorities and regulatory agencies are currently reviewing a plan (draft) that includes installing Beaver Dam Analog's (BDA's), which create and expand wetlands and improve the ability of the watershed to hold water. In addition, the Utah Division of Water Resources is considering a pilot program in Emigration Canyon to evaluate feasibility of smart water monitors for homeowners with private wells. Much like smart water meters, these devices keep track of real-time water use, and can detect water leaks.

The proposed project is an important part of a strategic plan to improve resilience to climate change. While the first two options are still in the planning phase and will take years to complete, the proposed project is in the final stage of implementation. It can be used as an example of a successful method to address climate change and encourage residents to participate. By implementing water efficiency measures, encouraging water conservation, improving leak detection and repair, and decreasing water loss within the distribution system, the proposed project decreases EID water diversions, which improves the health of the watershed, increases water source reliability of residents in the canyon, and strengthens water supply sustainability.

***Disadvantaged or Underserved Communities*: Will the proposed project serve or benefit a disadvantaged or historically underserved community?**

N/A

***Tribal Benefits*: Does the proposed project directly serve and/or benefit a Tribe?**

N/A

Overlap or Duplication of Effort Statement

There is no overlap between the proposed project and any other active or anticipated proposals or projects in terms of activities, cost, or commitment of key personnel.

The proposal submitted for consideration does not in any way duplicate any proposal or project that has been or will be submitted for funding consideration to any other potential funding source - whether it be Federal or non-Federal.

Project Budget

1. Funding Plan and letters of funding commitment

Describe how the non-Federal share of project cost will be obtained.

In the approved budget for 2022, ECID board members have designated up to $80,000 for capital improvements to implementing water efficiency measures within its water distribution system.

Provide letters of funding commitment of third-party funding sources.

N/A

2. Budget Proposal

The total project cost is the sum of all allowable items of cost, including all required cost sharing and voluntary committed cost sharing, including third-party contributions that are necessary to complete the project.

Table1 – Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCES	**AMOUNT**
Non-Federal Entities	
1. ECID	$ 75,000
Non-Federal Subtotal	$ 75,000

REQUESTED RECLAMATION FUNDING	$ 70,000

Table 2 – Total Project Cost Table

SOURCE	**AMOUNT**
Cost to be reimbursed with the requested Federal funding	$ 70,000
Cost to be paid by ECID	$ 75,000
Value of third-party contributions	$ 0
TOTAL PROJECT COST	$ 145,000

Table 3 – Budget Proposal

BUDGET ITEM DESCRIPTION	**COMPUTATION**		**Quantity**	**TOTAL COST**
	$/unit	**Quantity**	**Type**	
Salaries and Wages				
Employee 1	N/A	N/A	N/A	$0
Employee 2	N/A	N/A	N/A	$0
Employee 3	N/A	N/A	N/A	$0
Fringe Benefits				
Full-time Employees	N/A	N/A	N/A	$0
Part-time Employees	N/A	N/A	N/A	$0
Equipment				
Smart Water Meters	$ 360 /unit	220	N/A	$ 79,200
Lids	$ 40 /unit	220	N/A	$ 8,800
Supplies and Materials	$ 86 /unit	220	N/A	$ 19,000
Contractual/Construction				
Installation & Excavation Labor				$ 33,000
Third-Party in-kind Contributions				$0
Other				$0
TOTAL DIRECT COSTS				**$ 140,000**
Indirect Costs				
Trainings & Public Out-Reach program to ECID Customers				$5,000
TOTAL ESTIMATED PROJECT COSTS				**$ 145,000**

3. Budget Narrative

The type of information included in the budget narrative should include, but is not limited to, those listed in the following sub-sections. Cost, including the valuation of third-party in-kind contribution, must comply with applicable cost principles contained in 2 CFR Part 200, available at the Electronic Code of Federal Regulations.

Salaries and Wages:

N/A

Fringe Benefits:

N/A

Travel:

Not eligible for reimbursement.

Equipment:

Cost for 220 E-Series G2 smart water meters & Orion Receptors is $360.00/unit. This is an average per unit price as meter sizes range from ¾" to 2" meters. The cost for 220 poly lids is $40/unit. Additional miscellaneous adapters, meter risers and some meter box replacement will be needed. Estimated cost for miscellaneous supplies is $86/unit. When ECID started to investigate feasibility of replacing mechanical water meters with an automated read system, the inhibiting factor was the cost for infrastructure or special software and reading equipment. The district received several proposals from various distributors and invited a few companies to come and present their equipment to board members of ECID. Badger meter was one of them and presented their AMI or cellular based network and software integration system, which does not require expensive network infrastructure or software set-up costs. This more recent technology allows a small water provider to implement automated read meters with integration of an online software portal or app that provides critical water use information to water managers and customers. Badger meter clearly became the most efficient and effective option for ECID to achieve its goals without major infrastructure and equipment costs.

Materials and Supplies:

To complete the installation of the E-Series meters, most of the meters will require an additional adapter to fit in the current meter saddles. In addition, some meters will need to be raised for access requiring additional excavation and meter risers. An estimated cost of $86 per unit is used to cover the cost of additional risers and adapters.

Contractual:

Cost for labor and installation of 220 smart water meters & registers including manual or machine excavation - where needed - is estimated to be $33,000. This work will be

performed by Aqua Environmental (ECID's system operators), responsible for maintenance, repairs, and water testing.

Third-Party in-kind contribution:

N/A

Environmental and Regulatory Compliance Cost:

N/A

Other Expenses:

N/A

Indirect Cost:

To maximize the water conservation benefit of the smart water meters it will be necessary to educate customers on use of the online software portal to review water use to prior months and set-up alerts for things like leaks, back-water flow, freezing temperatures, and excessive water pressure. Since not all end-users may be able to complete installation of the Eye-on-Water mobile app and alerts on their phone on their own, the budget includes cost for hands-on training and development of educational materials on use of the online portal and water conservation practices.

Environmental and Cultural Resource Compliance

Will the proposed project impact the surrounding environment?

Impact of the project will be limited to the area where water meters were previously installed. In most cases ground disturbance will not be necessary and existing water meters and valves can simply be replaced with new smart water meters, registers, and poly lids. There will be a few cases where ground disturbance will be required to move meters higher or make more room to allow for replacement and protection of the new monitoring equipment. ECID will take all necessary precautions to minimize ground disturbance and protect the surrounding environment.

Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area?

Emigration Canyon has a 5-acre preservation area, called Owl Meadow, which provides nesting habitat for Great Horned Owls and is managed by Utah Open Lands. Owl Meadow is considered an area of concern by the Division of Wildlife Resources but has not been designated as critical habitat. There are 42 threatened/endangered species listed under the Endangered Species Act in Utah. Of particular concern in Emigration Canyon is habitat loss of the Bonneville Cutthroat Trout which has been affected by decreased streamflow in the creek. However, work related to the proposed project will NOT affect the Emigration Creek and is Not located within the Owl Meadow area.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States"?

There are a few, small wetland areas along Emigration Creek and its tributary drainages. Part of Emigration Creek and associated wetland areas fall within the boundaries of ECID's distribution system, but none are close to work that needs to be done to complete the proposed project. Both Emigration Creek and associated wetland areas fall under CWA jurisdiction as "Waters of the United States".

When was the water delivery system constructed?

The water system was originally started by the Boyer Development company in 1985 to provide water to the Emigration Oaks development and was later turned over to the Emigration Canyon Improvement District in 1996. The district has since expanded the system once in 2003 and then again in 2007 providing water to nearly 70% of Emigration Canyon.

Will the proposed project result in any modification of or effects to, individual features of an irrigation system?

No.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places?

There are several historic markers in Emigration Canyon designating places where the Mormon Pioneers passed through while on their way to the Salt Lake Valley. The proposed project will not impact any of these markers.

Are there any known archeological sites in the proposed project area?

No.

Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?

No.

Will the proposed project limit access to, and ceremonial use of, Indian sacred sites or result in other impacts in tribal land?

No.

Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native species known to occur in the area?

No.

Required Permits or Approvals

No permits are required. All work will be conducted in areas where existing water meters were previously installed. ECID has the right to service, replace, and repair water lines, pressure monitoring valves and water meters under an existing utility easement.

Letters of Support

See Appendix B

Official Resolution ECID

See Appendix A

Conflict of Interest Disclosure

No actual or potential conflicts of interest exist at the time of submission of this application.

Uniform Audit Reporting Statement

ECID participates in an "Agreed Upon Procedures" that is performed by an independent auditing firm, Osborne, Robbins & Buhler P.L.L.C. annually. This information is submitted to the Utah State Auditor's Office and is available through their website.

Certification Regarding Lobbying

N/A

Entity Identifier and System Award for Management

SAM # - LFDMRLDLMCM1 / 99P72 and DUNS number – 079831094

Resolution No. 2022 -1

A RESOLUTION OF THE BOARD OF EMIGRATION CANYON IMPROVEMENT DISTRICT (ECID), TO APPROVE APPLICATION FOR A GRANT OFFERED BY THE BUREAU OF RECLAMATION: WATERSMART SMALL-SCALE WATER EFFICIENCY PROJECTS, FOR FISCAL YEAR 2022. THE PROJECT PROPOSED FOR FUNDING - ECID WATER EFFICIENCY PROJECT - CONSISTS OF INSTALLATION OF SMART WATER METERS AND PRESSURE REDUCING VALVES .

WHEREAS, ECID has prepared an application for federal funding from the United States Department of the Interior, Bureau of Reclamation, to assist in the funding of the ECID Water Efficiency Project.

WHEREAS, the funding opportunity provided by the Bureau of Reclamation through their WaterSMART grants is called: Small Scale Water Efficiency Projects. Funding Opportunity number R22AS00195.

WHEREAS, the proposed project will increase resilience to drought, improve ECID' ability to manage its water distribution system, and benefit ECID customers by decreasing water loss, improving leak detection, and promoting water conservation.

WHERAS, ECID intends to enter into an agreement with the Bureau of Reclamation to carry out the proposed water efficiency project if the WaterSMART grant is awarded to ECID.

NOW, THEREFORE, BE IT RESOLVED, that the board of ECID does hereby finds, determines and declares, as follows:

SECTION 1. Approves the filing of an application to the Bureau of Reclamation for the ECID Water Efficiency Project;
SECTION 2. Certifies that ECID understands they will work with the Bureau of Reclamation to meet established deadlines for entering into a grant or cooperative agreement;
SECTION 3. Certifies that ECID can provide the amount of funding specified in the application; and,
SECTION 4. Appoints the Project Manager, Eric Hawkes, as agent to conduct all negotiations, execute, and submit all documents including, but not limited to, applications, agreements, payment requests and so on, which may be necessary for the completion of the aforementioned project.

PASSED, APPROVED, and **ADOPTED** this 20th day of April, 2022.

Emigration Canyon Improvement District

Michael Hughes, Chair

Signature: Mike Hughes
Mike Hughes (Apr 26, 2022 12:09 MDT)

Email: mike@ecid.org

State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

Department of Natural Resources

BRIAN C. STEED
Executive Director

Division of Water Resources

CANDICE A. HASENYAGER
Division Director

April 18, 2022

US Bureau of Reclamation
Attn: NOFO Team
Denver Federal Center
Bldg. 67, Rm. 152
6th Avenue and Kipling Street
Denver, CO 80225

RE: R22AS00163 - Letter of Support for Emigration Canyon Improvement District

To Whom It May Concern:

The Utah Division of Water Resources understands that Emigration Canyon Improvement District (ECID) is seeking federal funds for a project to improve water efficiency in their service area. The project consists of replacing existing water meters with SMART water meters and installing pressure regulating valves with alarm notification throughout the distribution system. Winter snow and ice in the canyon make reading meters in the winter challenging. SMART meters will provide water users with real-time water use information throughout the year. Small-Scale Water Efficiency Project grant funds will be used for meter installation on the remaining ~200 connections.

As an agency, our mission is to plan, conserve, develop and protect Utah's water resources. Through revolving funds overseen by the Utah Board of Water Resources, the division provides financial assistance to help construct projects that further this mission. The board is actively supporting water meter improvement projects, and has funds available for additional projects.

Therefore, the Utah Division of Water Resources wishes to express its strong support of this project, and encourage the Bureau to provide WaterSMART funds to ensure its success. Please contact me at 801-214-5771 if you have any questions.

Sincerely,

Rachel Shilton

Rachel Shilton, P.E.
River Basin Planning Manager

cc: Willy Stokman, Emigration Canyon Sustainability Alliance

1594 West North Temple, Suite 310, PO Box 146201, Salt Lake City, UT 84114-6201
telephone (801) 538-7230 • facsimile (801) 538-7279 • TTY (801) 538-7458 • *www.water.utah.gov*

SALT LAKE COUNTY

Jenny Wilson
Mayor

Catherine Kanter
Deputy Mayor of Regional Operations

Scott R. Baird, P.E.
Director, Public Works Department

Kade D. Moncur, P.E., CFM
Director, Flood Control Engineering Division

FLOOD CONTROL ENGINEERING DIVISION

Government Center
2001 South State Street
Suite N3-120
Salt Lake City, Utah 84190

T 385-468-6600
F 385-468-6603

slco.org/flood-control

April 12, 2022

To whom it may concern,

Salt Lake County Watershed Planning and Restoration fully supports the Emigration Canyon Improvement District's (EICD) efforts to conserve water usage through the implementation of SMART water meters.

The proposed project consists of replacing existing water meters with SMART water meters and installing pressure regulating valves with alarm notification throughout ECID's water distribution system. Implementation of these measures enables ECID to provide customers with real-time, detailed water use information throughout the year. Currently, water meters are only read once a month for 6 months of the year due snow and ice in the canyon. The proposed project improves ability to detect and repair leaks, decreases system water loss, ensures optimal water delivery, increases water source reliability, and encourages water conservation among end users. The project meets the goals outlined in ECID's Water Management and Conservation Plan of 2013 and has been identified and prioritized in the Emigration Canyon General Plan of 2022.

These improvements will ideally be implemented alongside a pilot project funded by the Utah Division of Water Resources. The pilot project will fund a study in Emigration Canyon to evaluate feasibility of SMART water monitors. These devices could be useful for around 300 homeowners with private wells in the canyon - who do not have water meters. The Utah Department of Natural Resources estimates unmetered connections use 50% more water than those with water meters. Much like smart water meters, they keep track of real-time water use and can detect water leaks.

Thank you for your consideration of this worthy project for grant funding.
Sincerely,

Robert B. Thompson

Robert Thompson, P.G.
Watershed Planning and Restoration Section Manager,
Salt Lake County Public Works

EMIGRATION CANYON
METRO TOWNSHIP

April 26, 2002

To Whom it may concern:

The Emigration Metro Township Council (ECMT) is pleased to offer this letter of support on behalf of the Emigration Canyon Improvement District (ECID), regarding their grant application with the Bureau of Reclamation, for funding for improved water meters and pressure regulating valves throughout the water distribution system in Emigration Canyon.

If implemented, this project will make significant improvements in the ECID's and individual residents' ability to make observable differences in water conservation, and will also allow earlier, almost immediate detection of leaks within their water distribution system.

Water conservation has long been a priority within Emigration Canyon and Emigration Metro Township, where over 90% of the water used comes from wells in the canyon, both individual wells and deeper wells which provide shared distribution to residents. This goal is even more critical during the persistent and critical drought conditions we currently face. The recently adopted Emigration Township General Plan (adopted March, 2022) emphasizes this situation, and the goal of improved water conservation measures. We fully support the ECID efforts to enhance resident awareness of water use, as well as measures which will improve detection of leaks on a system wide level.

Respectfully,

Mayor Joe Smolka, on behalf of the Emigration Metro Township Council

Members
Deputy Mayor Jennifer Hawkes
Council Member David Brems
Council Member Catherine Harris
Council Member Robert Pinon

ERIN MENDENHALL
Mayor

DEPARTMENT OF PUBLIC UTILITIES

April 12, 2022

Department of the Interior
Bureau of Reclamation
Attn. NOVO Team

Re. Grant application for ECID Small-Scale Water Efficiency Project

Dear Sir/Madam,

Salt Lake City Department of Public Utilities (SLCDPU) would like to express support for Emigration Canyon Improvement District (ECID) Small-Scale Water Efficiency Project, which is being considered for funding by the Burau of Reclamation. The proposed project consists of replacing existing water meters with SMART water meters and installing pressure-reducing valves with alarm notifications throughout ECID's water distribution system. Implementation of these measures will improve water efficiency, decrease system water loss, enable customers to detect and repair leaks, improve water source reliability, encourage water conservation, and reduce required water diversions.

Implementation of good management practices in Emigration Canyon protects the watershed and is of benefit to SLCDPU and other water managers operating in the Jordan River Watershed. Our water district boundary begins right below Emigration Canyon, in the Jordan River Basin, and we have a diversion point - the Tunnel Springs - at the mouth of the canyon. The upper part of Emigration Canyon and the mountainous areas above - headwaters of Emigration Creek - are part of a large, protected watershed for Salt Lake City for which we have management responsibility, together with the United States Forest Service (USFS). Emigration Canyon also functions as an important recreational area for residents of Salt Lake County.

We are well aware of the effects of persistent drought conditions on the environment and water resources within the Jordan River Watershed and commend ECID for taking steps to improve resilience against drought in Emigration Canyon. Thank you for considering funding for this important project.

Sincerely,

Laura Briefer, MPA
Director
Salt Lake City
Department of Public Utilities
Office: 801 483-6741
Cell: 385 252-9379