

WASHOE COUNTY COMMUNITY SERVICES DEPARTMENT

NEVADA CLEAN WATER STATE REVOLVING FUND - APPLICATION LETTER

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1. Executive Summary

This report serves as an executive summary in support of the Draft FY2019 Clean Water State Revolving Fund (SRF) loan application to the Nevada Division of Environmental Protection (NDEP). The Washoe County Community Services Department (CSD) – Utility is applying for SRF funding for the following three projects (See Attachment 1 – *Project Location Map*):

1. South Truckee Meadows Water Reclamation Facility (STMWRF) 2020 Expansion Project (Phase 1)
2. Huffaker Hills Reservoir Lining Improvements Project
3. Pleasant Valley Reach 3 Sanitary Sewer Interceptor Project

As the Utility will complete all requirements of SRF funding during our upcoming design and construction phases, it is Washoe County's intention that this Executive Letter attachment to the initial SRF application summarizes our plans and approach to comply with all requirements for the SRF Loan funding.

The Utility also recognizes the importance of effluent management for STMWRF and the South Truckee Meadows. To that end we will be preparing an Effluent Management Plan, separate from these expansion project efforts, that is vital to address the quantity and quality of our permitted effluent for the benefit of both current and future customers and to provide sustainability and resiliency for this vital resource.

The project team will also be developing a Project Management Plan to capture and delineate the tasks, schedules, and interactions needed to successfully manage, fund, and deliver these projects.

2. Project Description and Scope

2.1. STMWRF 2020 Expansion Project -Phase 1

This STMWRF 2020 Expansion Project - Phase 1 (STMWRF Expansion Project) expands sewage treatment capacity to the existing treatment facility as it is approaching its permitted capacity and additional population growth is anticipated. This expected growth is based upon a recently updated facility plan, trends in increased tentative and final residential subdivisions and commercial maps, and corresponding increases in building permits.

The current sanitary sewer service area for the South Truckee Meadows is shown in Attachment 2 – *STM Area of Service Map*. No legal description was included.

STMWRF's current discharge permit requirements are 4.1 million gallons per day (MGD), primarily based upon limited existing activated-sludge capacity. Although the total treatment capacity will be determined with the Basis of Design, it is anticipated to be greater than the Facility Plan estimate of 6.0 MGD and will be achieved through the addition of two new oxidation ditches and one anaerobic selector. Influent and effluent pumping will also be increased to manage peak hour flows. The project enables Washoe County to meet several critical objectives for the South Truckee Meadows Water Reclamation Facility:

- Meet current and future regulatory requirements for hydraulic capacity by increasing permitted secondary and tertiary wastewater treatment capacity from 4.1 MGD to greater than 6.0 MGD
- Increase operational reliability through rehabilitation and repair projects
- Reliably achieve existing effluent water quality goals for non-potable water reuse
- Establish the technological foundation to move the facility to produce reclaimed water suitable for indirect potable reuse through a future project planned for 2023 (Phase 2)

The project may include the following major components:

- Increase peak pumping with an additional screw pump at the headworks
- Add an anaerobic selector to the activated sludge process
- Add at least two oxidation ditches
- Add Dissolved Air Flotation (DAF) capability
- Increase filter capacity
- Complete a suite of rehabilitation projects for effluent pumping, in-plant water systems, instrumentation and controls, electrical, and security systems

Although the Phase 1 improvements do not specifically include advanced water treatment technologies to achieve potable reuse, the improvements under this phase of work create the foundational work to achieve a planned transition to produce State of Nevada Category A+ reclaimed water for planned indirect potable reuse. At the time of this submittal (December 2018), the Utility is commissioning a preliminary engineering study to implement Category A+ at STMWRF by 2023. Should this study yield favorable results this work would become Phase 2 of the STMWRF Expansion.

Attachment 04c - *South Truckee Meadows Water Reclamation Facility, Facility Plan Update Report*, prepared by Carollo Engineers and dated January 2016, provides additional project detail.

2.2. Huffaker Hills Reservoir Lining Improvements Project

Washoe County's Huffaker Hills Reservoir serves as a reservoir for treated effluent from STMWRF, which serves the South Truckee Meadows. The reservoir stores treated effluent over the winter months and the water is then used primarily for irrigation during the irrigation seasons. This project increases operational flexibility and effluent management capabilities.

The Huffaker Hills Reservoir was completed in 1991 and included a soil liner system. This original liner proved ineffective and resulted in water loss. Consequently, the Utility undertook the rehabilitation of the reservoir liner system in 2007 and constructed the first phase of a more robust reservoir lining. In 2016, the Utility installed a second phase of lining to raise the reservoir elevation to 4525 FT, approximately 43 FT above the elevation of the existing Phase 1 lining. The third and final phase will install an additional reservoir liner to raise the storage elevation to about 4552 FT, approximately 27 FT above the existing second phase lining. This liner increase will be the last one the reservoir can accept and will add an additional 2,000 ACRE-FEET of reservoir storage capacity.

2.3. Pleasant Valley Reach 3 Sanitary Sewer Interceptor Project

The Pleasant Valley Reach 3 Sanitary Sewer Interceptor (PVI) project had been envisioned to serve the southern portions of Washoe County for the last 30 years. The PVI was planned in four Reaches, or segments, (Reaches 1-4). To date, only the first two reaches have been constructed. Reach 1 originates at STMWRF and Reach 2 terminates at Damonte Ranch Parkway, just south of Steamboat Parkway. In the mid 2000s, work intensified to plan, design, and acquire land for Reaches 3 and 4. The great recession in the late 2000s halted work on Reach 3 and Reach 4 of the PVI.

An alignment alternatives study was completed by Carollo in early 2018 and it recommended that a new alignment be adopted for Reach 3 that, in addition to a force main and gravity sewer main, should include a new lift station to replace the existing Dorothy Towne Lift station. Carollo was contracted to prepare a 30% design for this alternative and from that approved 30% design they are in the process of finalizing the design.

A future Reach 4 project will be the responsibility of a private developer. Preliminary discussions have already occurred and UTILITY will co-ordinate Reach 3 final design efforts with the developer.

A private developer will be funding and constructing the future Reach 4 project. The Reach 3 conceptual designs are already being coordinated with the Reach 4 developer and final design will work with this developer as a stakeholder.

Reference *Attachment 04d - Pleasant Valley Interceptor Reach 3 and 4 Alternative Alignment Study*, prepared by Carollo Engineers and dated January 2018, provides additional project detail.

3. Real Property

Both the STMWRF Expansion and Huffaker Hills Lining Projects are being constructed within existing Washoe County parcels and do not require additional easements or property acquisitions. Refer to Attachment 3a - *Proof of Ownership Map*. The referenced documents are located in the appendices

The County is currently acquiring additional easements for the PVI Project, along with a parcel map application for the lift station. The easements and parcel will be acquired and recorded prior to bidding the project and will adhere to all SRF requirements. Some easements were acquired in 2006-2007 and are part of the planned alignment. Refer to Attachments 3b - *Proof of Ownership Map*.

4. Zoning and Land Use Planning

Zoning for both the both the STMWRF Expansion, Huffaker Liner and the PVI projects are located in Attachment 4a and 4b.

Refer to Attachment 4a - *Zoning and Land Use for STMWRF*

Refer to Attachment 4b - *Zoning and Land Use for Pleasant Valley Reach 3 Sanitary Sewer Interceptor Project*

5. Contracts and Procurements

5.1. STMWRF 2020 Expansion Project Procurement Plan

The STMWRF 2020 Expansion Project will use a Construction Manager At Risk (CMAR) delivery method where a Construction Manager/Contractor is procured soon after, or concurrently with, the designer procurement. Both procurement of Designer and CMAR will be selected through a Request for Qualifications (RFQ) process, in alignment with SRF requirements. The CMAR will provide a Guaranteed Maximum Price (GMP) before design is finalized, giving the UTILITY some assurance of construction costs. A separate selection process will be used to procure the Owner's Representative (Owner's Rep) consultant to assist the County through pre-construction services. SRF funds will not be applied to costs for the initial Owner's Rep pre-construction activities.

5.2. Huffaker Hills Reservoir Lining Improvements Project Procurement Plan

The Huffaker Hills Lining Improvements Project intends to use a Design-Build (DB) delivery method. The DB Contractor will be procured in accordance with Nevada law through an RFQ process. A separate selection process will be used to procure the Owner's Representative (Owner's Rep) consultant which will continue throughout the life of the project. SRF funds will not be applied for the initial Owner's Rep costs.

5.3. Pleasant Valley Reach 3 Sanitary Sewer Interceptor Project Procurement Plan

The PVI Project will most likely be performed using a conventional Design-Bid-Build (DBB) delivery method. In accordance with NRS, the contractor who submits the lowest responsive, responsible bid will be awarded the contract for the construction of this project.

6. Facility Planning

6.1. STMWRF Expansion and Huffaker Hills Reservoir Lining Improvements Project Planning

Planning efforts for the STMWRF Expansion include further development of an Effluent Management Strategy and Plan for the South Truckee Meadows. Although not directly part of the expansion project, this effort will help inform the Project's Basis Of Design Report (BODR) as well as provide direction and certainty for regional effluent management and the UTILITY's partners and stakeholders.

Project specific planning for both the STMWRF Expansion and Huffaker Hills Lining Improvements Projects stems from the existing Facility Plan, last updated in 2016 by Carollo Engineering. The Facility Plan developed growth projects and anticipated facility improvements to meet that growth.

Subsequently, the South Truckee Meadows has grown faster than anticipated. To ensure sizing of the facility expansion is done with the highest value, additional planning and basis of design efforts will be implemented as part of the pre-design efforts.

6.2. Pleasant Valley Reach 3 Sanitary Sewer Interceptor Project Planning

Planning efforts for the PVI Project include an alignment alternatives study, which was completed by Carollo in January 2018. The study recommended that a new alignment be adopted for Reach 3 that included a new lift station to replace the existing Dorthey Town Lift station, a force main and gravity sewer main.

7. Design Review & Oversight

7.1. Value Engineering

A value-engineering task is scoped for post 30-percent design for the STMWRF Expansion Project and the Pleasant Valley Reach 3 Sanitary Sewer Interceptor Project. The Design-Builder will be required to self-perform a value engineering analysis for the Huffaker Hills Lining Improvements Project.

7.2. External Oversight

For the STMWRF Expansion Project, technical support and oversight will be conducted with the assistance from two independent committees, both managed by the University of Nevada, Reno's Nevada Water Innovation Institute (NWII) and under contract through Washoe County. The Technical Advisory Committee (TAC) will be tasked with providing specific input on the project's more technical challenges relating to treatment process considerations and effectively meeting the overall water quality objectives. It's envisioned the TAC will convene at key project milestones, such as preliminary design report (10-percent design), 30, 60, 90, and 100 percent design, etc., and also be tasked with reviewing technical data throughout the project and providing guidance to the project team.

Also managed by the NWII will be an Independent Expert Panel (IEP). The IEP is needed to evaluate if the current STMWRF phase of work is in alignment with current and future water quality objectives, specifically, assuring that the current planned treatment unit processes are appropriate to meet State of Nevada category A+ reclaimed water, which is being planned for in the next phase of STMWRF improvements. This IEP will report directly to CSD leadership and be independent of the project team.

8. Environmental Review

An Environmental Assessment (EA) for the STMWRF and Huffaker Hills Reservoir sites was performed concurrently as part of the original Facility Plan in 1991 and subsequently updated in 2000. The Utility, as part of its due diligence, will be reviewing and potentially updating the EA. This update will examine the adequacy of the cultural and environmental reviews to ensure these existing assessments meet current regulatory standards. Additional studies may be performed where they are warranted.

This is anticipated for three reasons:

- To address any potential changes to State or Federal laws that the previous assessments did not address
- To review impacts specific to air quality due to the anticipated addition of a third bio-solids digester that will increase the volume of foul air discharged from the Bio-Solids building stacks
- To assess any new impacts that the expansion of the facility may generate to traffic, development, wildlife, etc.

A new EA will be performed for the Pleasant Valley Reach 3 Sanitary Sewer Interceptor Project.

9. Asset Management

In 2017, CSD developed and implemented a new Enterprise Asset Management System (EAMS) to provide Asset Management program across all divisions. This EAMS role is to develop a program that enables users to manage the whole life performance of assets through least cost acquisition, use, maintenance and disposal in a manner which is consistent with Washoe County's policies, priorities and objectives.

Asset Essentials was selected as the EAMS software platform and improving asset registries was identified as the highest priority initiative. Horizontal assets in the utility have been updated and stored in the County's Geographic Information Systems (GIS) database, and are now reliable, accurate, and complete. Vertical assets existed in multiple sources and a project was performed to extract, ground-truth, transform, and load them into Asset Essentials. Transforming included collecting and attributing available the asset's condition, performance, date placed in service, name plate photos, preventative maintenance schedules, and estimated useful life values.

In July 2018, Asset Essentials went live and Washoe County is now able to better assign and track the progress of all maintenance activities, manage equipment reliability, increase productivity, and streamline operations. Continual improvement is built into Washoe County's EAMS program. Gaps are continually identified and initiatives are created to improve data, software, processes, and people.

10. Public Participation

Public participation in initial project development is greatly valued by the CSD as part of its strategic goal of community stewardship. Keeping the Board of County Commissioners informed of the goals and progress of these projects allows for public review and inquiry of the impacts and provides transparency. In addition to regular board meetings, the project team plans on periodic community outreach meetings and notices.

Special use permits may be required for the STMWRF Expansion and for the Huffaker Hills Reservoir. As the project moves through the planning, design, construction, and commissioning phases, a number of public meetings will provide additional public participation. In addition to the periodic community outreach meetings public engagement will occur, at a minimum, at these public forums:

- Nevada Division of Environmental Protection
- State of Nevada Department of Conservation and Natural Resources
- Nevada State Historic Preservation Office
- Washoe County Health District
- Western Regional Water Commission
- Northern Nevada Water Planning Commission
- Washoe County Board of County Commissions
- Washoe County Planning Commission
- Washoe County Board of Adjustment
- Washoe County Debt Management Commission

11. Permitting and Scheduling

11.1. Permitting

To facilitate the projects, a permitting and compliance matrix is being created that will assign all anticipated permits to specific tasks, timelines, and accountable parties. The draft list of regulatory stakeholders currently includes:

Construction Permits

- Washoe County Health Department for Air Quality and Water (2020)
- Washoe County Community Services Department Planning and Building Construction General Permit and Stormwater Pollution Prevention Plan (SWPPP), if more than 1 acre of land is disturbed – needed prior to construction (2019-2020)
- Washoe County Planning Commission or Board of Adjustment Special-Use Permit – may be needed prior to construction (2019-2020)

Consultations/Approvals

- Washoe County Board of County Commission approval to consulting engineering services – multiple approvals anticipated throughout project (2018 -2022)
- Nevada Dam Safety (2018-2019)
- NDEP Environmental Assessment Update (2018)
- NV Energy (2019-2020)
- TMWA (2018-2019)

Operating Permits

- Nevada Division of Environmental Protection (2019-2022)

11.2. Compliance

Compliance reporting will be tracked and performed based on a Project Communications Plan being developed which will help populate the abovementioned permitting and compliance matrix. Western Regional Water Commission and NDEP are key stakeholders in compliance reporting.

11.3. Baseline STMWRF 2020 Expansion Project Schedule

This tentative STMWRF Expansion Schedule includes optimal durations for pre-design and integration of Phase 2 design (not shown).

Task Name	Duration	Start	Finish
Schedule and plan for CMAR	71 days	8/2018	11/2018
Owner's Representative Procurement	46 days	10/2018	12/2018
CMAR Contracting	389 days	11/2018	5/2020
SRF Loan Process	116 days	10/2018	4/2019
Designer Procurement	82 days	10/2018	2/2019
Develop Design Docs	280 days	2/2019	5/2020
<IPR Development-Innovations Campus Phase 2>	280 days	7/2019	8/2020
Construction - STMWRF	600 days	6/2020	9/2022

11.4. Baseline Huffaker Hills Lining Improvements Project Schedule

Task Name	Duration	Start	Finish
Reservoir Design	80 days	8/2018	1/2019
SRF Loan Process	116 days	10/2018	4/2019
Award and NTP Spring 19	40 days	1/2019	3/2019
Liner Construct	100 days	3/2019	8/2019
Construction Completion	20 days	8/2019	9/2019

11.5. Baseline Pleasant Valley Reach 3 Sanitary Sewer Interceptor Project Schedule

Task Name	Duration	Start	Finish
Final Design	115 days	11/2018	2/2019
NDOT Encroachment Permit	90 days	2/2019	5/2019
Environmental Assessment	60 days	11/2018	1/2019
SRF Loan Process	116 days	11/2018	5/2019
Bid Project	60 days	5/2019	7/2019
Construction Completion	180 days	7/2019	12/2019

12. Financial Information

12.1. Fiscal Impact

The Utility understands that the Clean Water State Revolving Fund provides loans for wastewater infrastructure construction to publicly-owned systems in Nevada. This loan application from the Washoe County Utility totals \$50 million and would fund approximately 78 percent of the estimated total \$64 million cost to complete the projects, as shown in the table below.

Project Name	SRF Cost	Washoe County Cost	Total Estimated Cost
STMWRF 2020 Expansion Project (Phase 1)	\$38,580,000	\$10,960,000	\$49,540,000
Huffaker Hills Reservoir Lining Improvements Project	\$5,080,000	\$1,320,000	\$6,400,000
Pleasant Valley Reach 3 Sanitary Sewer Interceptor Project	\$6,340,000	\$1,635,000	\$7,975,000
Total	\$50,000,000	\$13,915,000	\$63,915,000
% of Total	78%	22%	100%

Based on previous discussions with NDEP staff, the Utility expects the \$50 million loan to be in the form of three separate bonds. The first bond is anticipated to be issued for an amount between \$18 - \$22 million in late spring or early summer of 2019. The second bond would be issued as needed in an anticipated amount of \$13 - \$17 million. The third bond is expected to be issued sometime in fiscal year 2022 for approximately \$15 million. Requested payback periods for all bonds would be 30 years and would be general obligation (limited tax) sewer bonds secured primarily by pledged revenues from the Utilities Fund.

It is our understanding that as of October 12, 2018, the 30-year SRF interest rate on general obligation debt was 2.81 percent. Using the aforementioned rate, total annual debt service payments for the three bonds would be approximately \$2.5 million; however, the County understands this figure could be higher if interest rates rise prior to bond issuance.

The capital projects to be funded by the loan benefit current and future sewer utility customers, so debt payments would be funded by cash accumulated from both sewer operating charges and sewer connection fees. As of October 31, 2018, the Utilities Fund had \$44 million in its sewer operating cash fund and \$35 million in its South Truckee Meadows connection fee cash fund. These cash reserves combined with future cash anticipated from sewer operating charges and connection fees should provide sufficient resources to accommodate the loan's debt service and to cash finance project costs in excess of SRF program funding.

12.2. Pledged Revenues

The Utility owns and operates recharge water, reclaimed water, wastewater, and flood control utilities. The financial structure of the utilities is a consolidation into one Enterprise Fund. Each utility is tracked separately, with its own unique rates and fees; however, the intent is for all revenues – from all utilities – to be considered “pledged revenue” (as allowed by law) for purposes of this loan. This structure mirrors the pledged revenue structure for all currently held bonds in the Utilities Fund.

12.3. Credit Ratings and Financial Health

Washoe County's current credit ratings are strong. Washoe County's most recent Comprehensive Annual Financial Report states “The Board of County Commissioners continues to collaborate with regional partners, citizens, management, and the County's employees and their respective associations to enable Washoe County to continue to be one of the most fiscally responsible local governments in the State. Washoe County adheres, without exception, to the practice of adopting a final balanced budget with no deficit spending. For more than a decade, Washoe County has not increased the General Fund budget by more than the combined increase in population and the Consumer Price Index, even during the economic downturn. As a result of careful management of reserves and proactive fiscal management, Washoe County has maintained favorable general obligation bond ratings from Standard & Poor's and Moody's of 'AA' and 'Aa2', respectively, with a stable outlook.”

Within the Utility Fund specifically, financial position is solid. As of October 31, 2018, the fund had \$94.4 million of cash with only \$17.7 million of liabilities. Debt service payments are current, and there is no risk of long-term default. Operating revenue is expected to grow with annual rate increases from the consumer price index per ordinance. Connection fee revenue is also trending to increase as Northern Nevada is experiencing high growth. Connection fees totaled \$10 million in FY18 and are looking to exceed that in FY19. Base rates and connection fees will also likely increase because of upcoming studies, as discussed in the next section.

12.4. Rate and Connection Fee Studies

Although the Utility believes it can sustain the addition of \$50 million of debt under its current financial structure, the Utility intends to initiate studies within the next two years to examine sewer operating rates and sewer connection fees. This will further ensure a sufficient revenue stream to finance utility needs.

12.5. Supporting Documentation Provided

The Utility has previously provided NDEP staff with the following financial application items:

- Application Item 12: financial statements for the previous three years
- Application Item 15: debt management policy
- Application Item 16: capital improvement plans

This application therefore includes attachments for the following:

- Attachment 13: Current Utility Rates 2018
- Attachment 18: Board approval for application to the SRF program

Two requirements cannot be provided at this time:

- Application Item 14: plans, review, studies for rate changes in the future currently being conducted – As noted in section 12.4, the Utility has not yet initiated rate and connection fee studies but plans to in the near future. The Utility will relay information to NDEP once the studies begin and as they progress.
- Application Item 17: ordinances or resolutions authorizing the issuance of debt – the Board has not yet adopted a Resolution of Intent or a Sale Resolution. These steps will happen after the loan application is submitted and the official bond process starts. The Utility will provide proof of Board approval to NDEP once it is obtained.