General Information

Project Title	Sacheen Lake Phase II Collection System Extension for Mountain View
Project Short Description	This project will construct a low presssure collection system for the connection of the Mountain View subdivisions to the Sacheen Lake Wastewater System. The wastewater from this area is accomodated in the design for the transmission line to the treatment site and in the design for the treatment/disposal facility.
Project Long Description	The Sacheen Lake wastewater collection and treatment system is currently under construction and about 316 of the the 350-365 ERU's currently using on-site systems will be removed as bacteriological and nutrient sources. The Mountain View subdivisions were not included in the initial phase due in part to the large number of property owners resistance to the project. Additionally, the cost to access these homes was estimated to be high relative to the rest of the Lake because they are situated on rock and access for the collection system and the on-site grinders was more costly. However, as construction has commenced on the rest of the Lake, many of the residents have come forward and petitioned the District to connect their area. The construction to this area will benefit from the planning and construction already completed for the main transmission lines around the Lake and the work currently underway at the treatment and disposal site. This subdivisions currently have about 20 residences with another 20 or so undeveloped lots which could connect in the future, at their own cost. The discussion in the 2014 funding application for the original phase of the sewer project indicated that a number of the excluded lots were primarily secondary lots which did not have the contamination potential of the proposed sewered lots. The Mountain View subdivisions represent the majority of those excluded lots which have the most potential for Lake contamination. The homes and septic tanks are constructed in rock, high above and immediately on the Lake shore. They have great opportunity for providing access to the Lake for their septic tank (or worse) effluent. The majority of these homes in the Mountain View area and their septic systems were constructed early in the development of the lake (60's and 70's) and they all have individual drinking water wells. This project will protect both the Lake water quality as well as the individual water wells in the Mountain View areas. The residents of Sacheen Lake reside primarily along the edge of the Lake, and have always only had on-site sewage systems to handle their wastewater and the majority have individual wells fro

drinking water. The majority of these on-site sewage treatment systems were installed at a time when disposal of wastewater away from the residences were their primary purpose. The vast majority of systems which predate 1964 and it is feared are primarily cesspools, (underground tanks with holes in the sides or bottoms), or drywells (similar tanks with designed holes on the sides) or septic tanks followed by seepage pits are contaminating the Lake.

The first phase work was projected to remove about 85-90% of the sources of the existing problems. This project should remove much of the remainder of the sources of contamination. The immediate benefit to these residents will include protection of their drinking water supply.

The entire collection and treatment system will be fairly reasonable to maintain and operate. The system being constructed is relatively “low-tech”, and an operation and maintenance manual will be developed for this new system and the District will provide all necessary staff to insure that the system is operated and maintained to meet all regulatory and environmental requirements. The individual pump systems to be installed in the Mountain View area will be similar and compatible with the other pump systems currently being installed.

Total Cost	$891,000.00* Total Eligible Cost $891,000.00*
Effective Date	7/1/2015 Expiration Date 12/7/2016
Project Category*	Nonpoint Source Activity On-Site Sewage System Stormwater Activity Stormwater Facility ✔ Wastewater Facility
Will Environmental Monitoring Data be collected?	Yes
Ecology Program	Water Quality
Overall Goal	The overall goal of the project is to stop contamination of the Lake and endangerment of the existing individual drinking water systems by inadequate on-site sewage treatment and disposal systems currently in place. This phase II project will get us closer to having a comprehensive whole lake system that exports the wastewater out of the Lake basin. Previous studies recommended

a sewer system for Sacheen, this gets us closer to having all residences served.

For this phase II project to be affordable for the residents, we will need assistance from Ecology. We feel that with the right assistance from Ecology, it can be affordable.

Recipient Contacts

Project Manager	Sheila Pearman Sheila Pearman District Manager 8272 Fertile Valley Road Sacheen Lake Newport, Washington 99156 (509) 447-4641 spearman@ifiber.tv
Authorized Signatory	Sheila Pearman Sheila Pearman District Manager 8272 Fertile Valley Road Sacheen Lake Newport, Washington 99156 (509) 447-4641 spearman@ifiber.tv
Billing Contact	Sheila Pearman Sheila Pearman District Manager 8272 Fertile Valley Road Sacheen Lake Newport, Washington 99156 (509) 447-4641 spearman@ifiber.tv

Other recipient signatures on printed agreement

To Add a Row
Enter a name and title

To Delete a Row
In the row you want to delete, remove the information in the

Recipient Contacts

When done, click the **SAVE** button
After SAVE, a new row will appear

Name
Peggy Johnsen

Name and Title textboxes
When done, click the **SAVE** button
After SAVE, the row will be deleted
Title
Boar Chair

Organization: Sacheen Lake Water and Sewer District **WQC-2016-SacWSD-00369**

Location Information

Statewide * Yes ✔ No

Ecology Region *	Eastern	100%
Click here to view map:		
County *	PEND OREILLE	100%
Click here to view map:		
Congressional District *	District 05	100%
Click here to view map:		
Legislative District *	District 07	100%
Click here to view map:		
WRIA *	55 - Little Spokane	100%
Click here to view map:		
Ecology Region	Statewide	100%
County	Statewide	100%
Congressional District	Statewide	100%
Legislative District	Statewide	100%
WRIA	Statewide	100%

Latitude (expressed in decimals)	48.180058
Longitude (expressed in decimals)	-117.304786
Facility Site ID	
Facility Site Link	

Task Number	1
Task Title	Project Administration/Management
Task Cost	$5,000.00

Task Description

A. The RECIPIENT will administer the project. Responsibilities will include, but not be limited to: maintenance of project records; submittal of requests for reimbursement and corresponding backup documentation, progress reports and recipient closeout report (including photos); compliance with applicable procurement, contracting, and interlocal agreement requirements; application for, receipt of, and compliance with all required permits, licenses, easements, or property rights necessary for the project; and submittal of required performance items.

B. The RECIPIENT must manage the project. Efforts will include: conducting, coordinating, and scheduling project activities and assuring quality control. Every effort will be made to maintain effective communication with the RECIPIENT's designees; ECOLOGY; all affected local, state, or federal jurisdictions; and any interested individuals or groups. The RECIPIENT must carry out this project in accordance with any completion dates outlined in this agreement.

Task Goal Statement

Properly managed project that meets agreement and Ecology administrative requirements.

Task Expected Outcomes

* Timely and complete submittal of requests for reimbursement, quarterly progress reports and recipient closeout report.
* Properly maintained project documentation

Recipient Task Coordinator

Sheila Pearman

Deliverable #	Description	Due Date	Received? (ECY Use Only)	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address
1.1	Progress Reports							
1.2	Recipient Closeout Report							
1.3	Project Outcome Summary Report							

Task Number	2
Task Title	Design Plans and Specifications
Task Cost	$75,000.00*
Task Description	Development of all design plans and specifications necessary for DEPARTMENT'S Project Engineer for review. The plans will include all required DEPARTMENT'S Bid Specification inserts. The recipient will allow the DEPARTMENT 45 days from receipt of the plans to provide comment.
Task Goal Statement	To provide a approved plans and specifications that can be used for bid purposes .
Task Expected Outcomes	Provide accurate and complete plans and specification for bidding purposes that will meet DEPARTMENT and regulatory requirements.
Recipient Task Coordinator	Kevin Koesel

Deliverables

To Add a Row
Enter a deliverable
When done, click the SAVE button
After SAVE a new row will appear
Repeat these steps for each deliverable

To Delete a Row
Delete data entered in a row
When done, click the SAVE button

Deliverable #	Description	Due Date	Received? (ECY Use Only)	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address
2.1	Re recipient will submit two hard copies and one digital copy of the plans ans specifications to the DEPARTMENT'S							

	Engineer for review.
2.2	When plans, specifications, construction contract documents and any addenda have been approved by the DEPARTMENT the RECIPIENT will advertise for contractor bids
2.3	The RECIPIENT will submit to the DEPARTMENT a current, updated construction cost estimate and project schedule with each plans and specifications submittal
2.4	The RECIPIENT will obtain easements, or property rights necessary for the project along with any legal action required to obtain said easements or property rights.
2.5	The RECIPIENT

will submit all pre-design figures and construction plans to the DEPARTMENT reduced to 11 x 17 in size. All reduced drawings will be legible.

Task Number	3		
Task Title	Construction	Task Cost	$741,000.00*
Task Description	The RECIPIENT will construct the collection system for Mountain View Estates and a portion of Mountain View Estates 1st Addition and connect it to the transmission system currently being constructed for final conveyance to the Wastewater Treatment and Disposal system. The construction for the Mountain View area will include all pumps and pump vaults, the collection lines and appurtenances into the main interceptor force main as well as the decommissioning of current septic tanks. The raw wastewater from the area will be transmitted to the wastewater treatment plant currently being constructed about a mile north of the Lake whose construction is a part of a separate project. After treatment in the first two cells, the wastewater will be sent to the aerated double lined 4.40 acre Winter Storage Cell. After polishing, the water will distributed to the 39 acre forest irrigation site for 5 months between May and September of each year after chlorination. During the other 7 months, the effluent will be retained during the non-irrigation season/winter months. Capacity currently exists for these flows.		
Task Goal Statement	To eliminate the source of water quality degradation and possible drinking water contamination caused by the aged and inadequate on-site sewage systems along the Lake's shoreline.		
Task Expected Outcomes	Contamination of the Lake and endangerment of the individual drinking water systems will be eliminated		
Recipient Task Coordinator	Kevin Koesel		

Deliverables

To Add a Row
Enter a deliverable
When done, click the SAVE button
After SAVE a new row will appear
Repeat these steps for each deliverable

To Delete a Row
Delete data entered in a row
When done, click the SAVE button

Deliverable #	Description	Due Date	Received? (ECY Use Only)	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address
3.1	Successfully complete the construction of the collection system and intermediate transmission lines to meet regulatory requirements							
3.2	Maintain all construction records and record drawings for document changes to design							
3.3	Submit all required payment requests and any other performance documents, including administrative documents for compliance with prevailing wage							

laws.

Task Number	4		
Task Title	Inspection and Project Management	Task Cost	$70,000.00*
Task Description	the RECIPIENT shall provide inspection services for the project to ensure that construction of the Mountain View Estates collection system and transmission line conforms to the approved contract documents. Inspection will include inspections and testing required of each of the project components including but not limited to; equipment testing and materials testing. The RECIPIENT shall review submittals from the contractor for conformance to the approved contract documents, including equipment and materials. The RECIPIENT shall provide any additional inspection and observations as may be required to comply with environmental, regulatory and legal requirements. The RECIPIENT shall prepare change orders to officially document changes to the approved construction documents. Changes to be documented will include changes in the scope of work, contract prices, construction methods, contract time, or any design or process changes.		
Task Goal Statement	To ensure that the project is being completed according to the approved plans and specifications within project budget and schedule.		
Task Expected Outcomes	A successful completed project within project budget and schedule.		
Recipient Task Coordinator	Kevin Koesel		

Deliverables

To Add a Row
Enter a deliverable
When done, click the SAVE button
After SAVE a new row will appear
Repeat these steps for each deliverable

To Delete a Row
Delete data entered in a row
When done, click the SAVE button

Deliverable #	Description	Due Date	Received? (ECY Use	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address

Only)

4.1	Prepare and maintain daily inspection reports.
4.2	Review of shop drawings and submittals from the contractor.
4.3	Preparation of responses to the Contractor requests for information, field changes, and change orders.
4.4	Review of monthly pay requests and submittal to Ecology for processing.
4.5	Maintenance of a central construction file site.
4.6	Compliance with relevant employee pay schedules (Davis-Bacon, Washington Prevailing Wage Rates, etc.

Task Number	5
Task Title	Start Up
Task Cost	$0*
Task Description	As construction of the project is nearing completion, RECIPIENT shall perform start-up activities for the newly modified facilities. O and M manuals for the new grinder system at the residences are provided. Each individual grinder systems is similar. The RECIPIENT will operate each grinder system, but will provide each homeowner with instructions on what lights or alarms are provided to indicate trouble and how to contact the RECIPIENT in the event of any trouble. Preparation of record drawings to document as-built conditions. Work with the Contractor to perform testing to confirm that construction has been completed in a satisfactory manner and that the constructed system is performing as expected.
Task Goal Statement	the goal of the Start-Up task is to identify all project elements as being complete and in functioning order for the proper operation of the completed system to ensure that all aspects conform to the design specifications.
Task Expected Outcomes	To have a properly functioning wastewater collection system that removes all on-site wastewater from residences.
Recipient Task Coordinator	Kevin Koesel

Deliverables

To Add a Row
Enter a deliverable
When done, click the SAVE button
After SAVE a new row will appear
Repeat these steps for each deliverable

To Delete a Row
Delete data entered in a row
When done, click the SAVE button

Deliverable #	Description	Due Date	Received? (ECY Use Only)	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address
5.1	Provide general information on grinder system to each homeowner.							
5.2	Documentation of the performance of each of the components of the new system.							
5.3	Preparation of preliminary and final punch list items prior to acceptance of teh work.							

Scope of Work Summary

Task Title	Task Cost
Project Administration/Management	$5,000.00
Design Plans and Specifications	$75,000.00
Construction	$741,000.00
Inspection and Project Management	$70,000.00
Start Up	$0
	$891,000.00

Total Eligible Costs
(from the General Information Form)
$891,000.00

***Are you applying to refinance debt for a wastewater facility project that has been completed (i.e., standard refinance)?** Yes ✔ No

Wastewater facility and stormwater facility projects with Preconstruction tasks may be eligible for up to 50 percent forgivable principal for the Preconstruction tasks.
***Is this a wastewater facility or stormwater facility project that includes Preconstruction tasks for which you are seeking funding and is the population of the community that will pay for the project less than 25,000 and is the median household income (MHI) of the community that will pay for the project less than the state MHI?** ✔ Yes No

Projects or portions of projects that meet one of EPA's criteria for Green Project Reserve (GPR) receive priority for State Revolving Fund (SRF) loans and may be eligible for 25% forgivable principal for the GPR portion of the project.
***Are you willing to accept a SRF loan to pay for part of the project and may the project or a portion of the project meet EPA's GPR criteria and do you want to be considered for GPR subsidy?** ✔ Yes No

Wastewater facility projects with Construction tasks may be eligible for grant, forgivable principal, and/or loan interest rates as low as 0% for the Construction tasks.
***Is this a wastewater facility project that includes Construction tasks for which you are seeking funding and is the population of the community that will pay for the project less than 25,000 and do you want to be considered for Financial Hardship subsidy?** ✔ Yes No

Task Cost General Questions

Describe and provide calculations on how task costs were estimated. Explain how you calculated each task cost and why it is necessary for the project. Include steps taken to ensure the accuracy of cost estimates.

Cost Estimates are based on bids received in 2014 for the phase 1 project. The components of this project are similar to those bids and the engineer's estimates made for that phase. With the level of inflation being as low as it has been, and with the apparent heavily competitive environment, we do not expect there to be much deviation from these estimates.

Sewell and Associates developed the original approximate costs in the Ecology approved Facilities Plan and these numbers were used to apply for the PWTF loan. As major site evaluations were completed in the years between the Facilities Plan and the present time, there were modifications made to the design population and initial sewering. It was decided that some areas were too problematic to include in the initial service area and the design ERU's were reduced from 425 to 316.
The original Sewell cost estimates were based on extensive cost estimating experience in other, similar past and current projects. In the current highly variable construction atmosphere we have found that it is critical to have very up to date estimates. In the past, our estimates have been close to or even a little higher than the actual construction costs.

This project and the expected bids would represent an enormous financial burden for the community. Using the County MHI of $39,200, the existing financial costs per homeowner would be in the extreme hardship category of the Ecology Hardship Guidance. The phase 1 project received a very generous $5 million centennial program grant and a $6 million -0% interest revolving fund loan. The award was based on the MHI and the financial impact of the project on the homeowners. These residents will participate in the operational costs equally as the existing connected systems. The level of any loan, any grant or foregiveable loan received will determine the final cost to these homeowners.

Describe the process used to control costs and ensure that this is a cost-effective project (e.g., value engineering for facilities projects, cost analysis for activities projects). Show the relationship between the cost of the project and the water quality benefit achieved.

We intend to go to bid at a time most conducive to ensure a very competitive bidding environment for both primary bids and subcontractors. We will ensure that potential bidders have sufficient time to provide their most competitive estimate. Finally, our engineers will review all bidding documents to ensure a competitive and honest environment is maintained.
By adding a second phase to our sewer system, more aged on-site sewer systems are taken out of service and both Lake water and drinking water are protected. This phase will piggy back on the system currently being installed.

Upload Documents
Click the browse button.
Select your file.
Click **SAVE**, your file will be listed in the uploaded files section
Repeat for each file
To Delete a file, select the Delete checkbox next to the file and click SAVE
_Upload/13360-MountainViewsewerextensioncostestimatekk-11-7-14.pdf

Additional Funding Information

Ecology Loan Funding Request

Wastewater Facilities projects are eligible for loan funding only. Subsidies (grants, forgivable principal, and reduced interest loans) are available for applicants qualifying for Hardship or Preconstruction funding.

Loan Amount Requested	$891,000.00

What loan term do you prefer? * 5 years ✔ 20 years N/A

If you've already begun work on your project, are you seeking interim refinance of the incurred costs?* Yes ✔ No

Ecology Grant Funding Request

This represents the amount Ecology may provide.

Nonpoint source activity projects may request grant funding for 75% of the total eligible project cost.

Ceiling amounts and match requirements depend on the project and source of funds (Refer to the SFY2015 Water Quality Financial Assistance Guidelines available for download on the Application Menu) Grant requests cannot exceed $500,000 (requires cash match). A 25 percent match is required for nonpoint source activity projects. A 50 percent match is required for onsite sewage system repair and replacement projects.

Grant Amount Requested	$0

If Ecology is not able to offer you grant funds, will you accept loan funds for part or all of the eligible project costs? * ✔ Yes No

If yes, what is the loan amount you will accept? $891,000.00

If yes, what loan term do you prefer? 5 years ✔ 20 years

Include secured matching funds in the "Secured Funds" table. If you have any questions about what's required for match, please see the current Water Quality Financial Assistance Guidelines available for download on the Application Menu.

Do you have any other funds committed to this project? * Yes ✔ No
If yes, provide the following information: *

Secured Funds

Source	Type	Amount Committed
State/Federal agency:		
State/Federal agency:		
State/Federal agency:		
Interlocal contributions:		
Interlocal contributions:		

Additional Funding Information

Local agency:
In-kind contributions:
Other:

Project Information

What is the population served by the Project? 80

What is the population served by the System? 965

What is the population served by the Applicant?

Project Length in months: 17
(The difference between the effective date and the expiration date on the General Information Page)

Estimated Initiation of Operation Date 12/7/2016

Project Start Date 7/1/2015
(The date the actual work will start, or if interim refinance, the date the work started)

Please identify all 12 digit HUCs in which the project work will be done.
Click here for a map.

HUC Code	Percentage
HUC817010216	100%

Water Body and Water Quality Needs Addressed

Check all type(s) of water bodies that this project targets: *

- ✔ Freshwater rivers
- ✔ Freshwater lakes
- Freshwater wetlands
- ✔ Ground water
- Direct marine water
- Saltwater estuary
- Other (specify)

Check all the resource protection and regulatory requirements that this project addresses: *

- Endangered or threatened salmonids
- Other Endangered Species Act protected species (specify)
- Protection of shellfish habitat Click Here
- National Pollutant Discharge Elimination System (NPDES) permit requirements
- ✔ State Waste Discharge Permit
- ✔ Other (specify) Protection of domestic water supply, TMDL requirements

Check all the water quality parameters that this project targets: *

- ✔ Dissolved oxygen
- Sediment
- Nitrogen
- ✔ Fecal coliform
- ✔ Phosphorus
- Temperature
- pH
- Other (specify)

Identify the water bodies, any impairments (Category 4A, 4B, and 5 waters), and listing parameters that your project will address. Click Here for more information on Shellfish growing areas.

Enter a Water Body Name and Listing Detail ID
When done, click the **SAVE** button
After SAVE a new row will appear
Repeat these steps for each Listing Detail ID

Water Body Name	Listing Detail ID	Map Link
Sacheen Lake	DO and pH TMDL	

Are you addressing a TMDL? * ✔ Yes No

If Yes, List the TMDL(s) your project is addressing

To select multiple TMDLs, hold down the control key as you select

To deselect a TMDL, hold down the control key as you select

TMDL Name
Little Spokane River DO and pH TMDL

Check all the type(s) of wastewater facility project that apply:*

Wastewater treatment system
Large Onsite System (LOSS)
Water reclamation and reuse
Combined Sewer Overflow (CSO) correction
✔ Wastewater collection system
Infiltration and Inflow (I/I) correction
✔ Septic system elimination and conversion to sewer
Other (specify)

Permits:
Do you have a discharge permit for this project? * Yes ✔ No

If yes, provide the following
Permit Number *
BOD (mg/l) *
TSS (mg/l) *

Planning/design stage completed

Check only one of the four options below that represents the present proposal *
Identify all prerequisite planning documents
Include attachments as necessary

Project Type:	**Prerequisites to Apply for Funding - Upload Copies of Ecology's Approval/Concurrence Letters**
Planning (Step 1)	No Prerequisites
Design (Step 2)	Ecology's letter approving the site specific planning for the project (Engineering Report or General Sewer Plan). Ecology concurrence of SERP Click here to see SERP Guidelines
Construction (Step 3)	Ecology's letter approving the site specific planning for the project (Engineering Report or General Sewer Plan). Ecology concurrence of SERP Ecology's letter approving the plans and specifications for the project.
✔ Design and construction (Step 4)	Ecology's letter approving the site specific planning for the project (Engineering Report or General Sewer Plan). Ecology concurrence of SERP

Upload Documents
Click the browse button
Select your file
Click SAVE, your file will appear in the List of uploaded documents
Repeat for each file

To Delete a file, select the Delete checkbox next to the file and click SAVE
_Upload/13420-DOEEngineeringReportApproval.pdf
_Upload/13420_2-DOEPlansSpecsApproval25Nov13.pdf

Green Project Reserve (GPR)

GPR Category: Check all that apply	**List the GPR designation (e.g., Section 3.2-1a) and describe how your project meets the designation.** Click Here or see Appendix E of the current Water Quality Financial Assistance Guidelines available for download on the Application Menu	Dollar Amount of the Project Related to GPR Category
✔ Green Infrastructure	This project should be considered a green infrastructure project as it will remove septic tanks, dry wells, and cess pools that lie within feet of Sacheen Lake's shoreline	$891,000.00
Energy Efficiency		
Water Efficiency		
Environmental Innovative		

Upload any applicable documentation to support your GPR claim

Upload Documents
Click the browse button.
Select your file
Click **SAVE**, your file will be listed in the uploaded files section
Repeat for each file
To Delete a file, select the Delete checkbox next to the file and click **SAVE**

INTERNAL USE ONLY

Does the applicant meet the criteria for green project reserve? Undetermined

GPR Category	**GPR Designation**	**Dollar Amount**	**Comment**
Green Infrastructure			
Energy Efficiency			
Water Efficiency			
Environmental Innovative			

Comment

Green Project Reserve (GPR)

Define the water quality and public health problems the project will address.

The residents of Sacheen Lake reside primarily along the edge of the Lake, and have always only had on-site sewage systems to handle their wastewater. The majority of these on-site sewage treatment systems were installed at a time when disposal of wastewater away from the residences were their primary purpose. The vast majority of systems which predate 1964 and it is feared are primarily cesspools (underground tanks with holes in the sides or bottoms), or drywells (similar tanks with designed holes on the sides) or septic tanks followed by seepage pits are contaminating the Lake.

Of the 367 owners currently on the lake, only 120 have permits (all since issued after 1964). According to Health District records, a number of these newer 120 systems include 26 drywells which the Health District must continue to allow to operate unless there is a documented condition which threatens public health or creates a potential for public contact. The remaining 247 have no permits, since they were installed prior to 1964 and likely have cesspools, drywells, or worse. Two studies done in the 90's cite these systems as contributing both bacteriological and nutrient contamination to the Lake. Attached is a letter from the NE Tri-County Health District discussing the nature of the on-site systems.

Besides the bacteriological contamination much of which can be attributed to the inadequacy of the local sewer system, there are the accompanying nutrient contributions from raw wastewater. In 1995, Eastern Washington University's Biology Department completed a Water Quality Assessment and Restoration Alternatives Report for Sacheen Lake. That study concluded that a combination of "Best Management Practices" in the tributary sub-basins, macrophyte control, and the installation of a sewer system would cause a significant decline in phosphorus levels, and as a consequence, "in-lake TP concentration would regress to a level characteristic of a mesotrophic lake" versus the preliminary present classification as eutrophic. That report also stated specifically that "installation of a sewer collection and treatment facilities will also help improve Sacheen Lake water quality."

In 1995, District contracted with Gonzaga University's School of Engineering for a student project to evaluate a lake-wide water and sewer system. The report assessed the impacts of the existing on-site systems this way: "Faulty septic tanks/drainfields and the pit privies are potential sources for bacterial contamination of the lake." These are also suspected of providing an entry for phosphorus and other nutrients into the lake. Many of the lots are 40 years or older, and number of them are metal septic tanks which over the years are falling apart. Many residents don't even know where their tanks are located, much less provide any inspection for their structural or hydraulic integrity.

Describe the expected project results, including how the project will help achieve water quality and public health improvements and protection. For activity projects, describe the proximity of the proposed project area to specific water bodies.

It is anticipated that with removal of faulty septic tanks, dry wells and cess pools located lakeside, nutrient loading into Sacheen lake will be greatly lessened. The District has been collecting water quality samples during the summer season and will continue to do so. These samples are tested for nitrates/nitrites, phosphorus, as well as ammonia. Readings are also taken for clarity, dissolved oxygen, and temperature. This data collected after installation of the sewer system will be compared to that already collected.

The Little Spokane Water Basin TMDL has identified dissolved oxygen as a parameter of concern. Sacheen lake is part of the Little Spokane Basin and as discussed earlier, there is a proliferation of on-site

systems that include many cesspools and drywells along the Lake. Since these on-site systems have an almost direct conduit to the Lake in the rocky and steep area of the phase II project it is a concern that these residences are a source of nutrients which then contribute to the depressing DO in the Basin. Eliminating the sources immediately would of benefit to the TMDL.

With removal of these additional on-site sewer systems, those residences served by lake water draw will likely be able to install properly drilled wells to serve their homes. The removal of these on-site systems will also serve to protect the many shallow wells that serve the homes in the project service area.

Describe how much of the problem will be addressed by the project.

This project is the second phase of a project that will abandon the existing on-site systems, collect the wastewater from around the Lake, and export it to a system of lined aerated treatment lagoons, a winter storage lagoon and dispose of the treated effluent, at agronomic rates, onto forested land. By removing another 20 on-site systems we will be increasing the improvements to the Lake and protection of drinking water.

Describe how you will measure and document success of the project.

Documentation of Lake water quality will be done through comparison of post construction water quality numbers with those the District has been collecting for several years. Unfortunately, there is no requirement to monitor drinking water quality of wells, except for individual initiative, so a comprehensive documentation of drinking water improvement is not achievable. However, due to the inadequacies of the existing on-site septic systems and their proximity to often shallow, hand dug wells, it is easily assumed that this will result in significant protection of drinking water sources.

Describe how you will sustain the water quality and public health improvements for the long-term. As appropriate, include information on how you will address long term operations and maintenance (O&M). Include information on any effort to implement green infrastructure, or energy or water efficiency elements into the project.

The system as envisioned will be very reasonable to maintain and operate. the system is relatively "low tech", and an operation and maintenance manual will be developed for the system. The District will provide all necessary staff to insure that the system is operated and maintained to meet all regulatory and environmental requirements.

The very nature of the system which will eliminate the current on-site systems and export the raw sewage outside the Sacheen Lake Drainage Basin will 'sustain the water quality and public health improvements for the long term". the operators manual will address monitoring both the collection system and the treatment system to ensure the long-term health of both. Additionally, the budget includes a replacement fund to ensure monies are available for repair and replacement, again to ensure longevity of the system, and protection of the environment and drinking water.

Answer whichever questions apply to your project

Describe how this project is specifically required by a state or federal agency. Provide reference or documentation including permit conditions, Ecology orders, court orders, or other correspondence.

OR

Describe how this project implements specific actions in a TMDL Water Quality Improvement Report, Water Quality Implementation plan, or Watershed-Based Plan that includes the Environmental Protection Agency's "Nine Minimum Elements" See Section I of this document

The Little Spokane, W.B. TMDL has identified dissolved oxygen as a parameter of concern. Sacheen Lake is a part of the Little Spokane Basin and as discussed earlier, there is a proliferation of on-site systems that include many cesspools and drywells, along the Lake. Since these on-site systems have an almost direct conduit to the Lake, there is great concern that the 350+ residences are a source of nutrients which then contribute to depressing DO in the Basin. Eliminating all the sources, starting with the elimination of ¾ of the sources immediately would be of benefit to the TMDL. “DO listing as likely a result of elevated nutrients which could be a result of failing septic systems in that area. The implementation plan will likely call for reductions of nutrients from septic systems”: Elaine Snouwaert, the Eastern Regional Office TMDL Lead for the Little Spokane Basin. She was contacted initially in August, 2013.

Elaine also stated that: “The TMDL indicated the sites on the West Branch of the Little Spokane met bacteria standards so a reduction is not needed below Sacheen lake. TMDL also indicated no TSS reductions were needed for the West Branch. I suspect the lake is acting as a sink for these pollutants.” The construction of the initial phase of this project (which is currently underway) will enhance the water quality of Sacheen Lake, as well as what appears to be an obvious bacteriological contamination which the Lake is containing before it reaches the downstream reaches of the Little Spokane. The new facility was identified in the Ecology approved Comprehensive Plan and Facilities Plan. The project is the second phase of the complete sewering of the Lake.

While many of the remaining 40-50 residences are secondary properties, not along the Lake, this phase, the Mountain View Estates phase are residences that exist immediately along the Lake whose on-site systems were constructed on high rock outcroppings and whose wastewater have an immediate conduit to the Lake. This project includes collection lines and grinder pumps that will connect to the new interceptor to eliminate these contamination sources. In the initial evaluation, it was deemed uneconomical to include these units in the project due to difficulty of access. Additionally, there was no initial interest expressed by these homeowers for inclusion. Since that time, and with the progress on construction of the collection system and treatment system, these owners have petitioned the District for inclusion. This application is based on that desire expressed by many of the homeowners.

These houses can be accomodated in the phase 1 treatment and disposal system. The design is one that the community can economically operate and from which Ecology, through the permitting process, leak detection, effluent monitoring and downstream groundwater monitoring will be able to verify environmental compliance.

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If applicable, provide the name of the Ecology TMDL Lead or Stormwater permit manager and the last date of contact.

Elaine Snouwaert, the Eastern Regional Office TMDL Lead for the Little Spokane Basin. She was contacted initially in August, 2013.

If in the Puget Sound basin (WRIAs 1-19), describe how the project meets the goals of the Puget Sound Partnership Action Agenda.

N/A

If you are a local government entity, in accordance with RCW 70.235.070, describe what policies or measures you have put in place to reduce greenhouse gas emissions apart from this project

As part of the District's Policies and Procedures, there is a Greenhouse Gas Reduction Policy. Doc# SWP-PO1 attached.

If the project is a facility construction project, describe the design or construction elements that will result in reduced greenhouse emissions in accordance with RCW 70.235.070

The project has been designed with energy efficiency as a top priority. The facility that this project will connect to is designed with premium efficiency motors for all process and continuous duty applications where they are available. The plant control system is set up to reduce run time on motors and only operate treatment aerators when required. these steps are being implemented by the district to reduce their overall energy consumption and still provide adequate wastewater treatment.

Project Team

Describe roles and responsibilities of each team member. Include contractors and partner agency roles, as applicable Include the estimated amount of time each team member will devote to the project. (For example, what percent of each team member's work week will be devoted to this project?) *

As with the phase 1 project the project team will be comprised of the following:

James A. Sewell and Associates is the lead engineering firm for the project. The project engineer is Kevin Koesel, P.E. Kevin who has almost 20 years of experience in water and wastewater projects completed the plans and contract documents and will be the lead for the construction inspection and contract management team. Andrew Tom, P.E., who is a retired Ecology Engineer with almost 40 years experience wrote the Comprehensive Plan and the Facilities Plan. He has been responsible for co-ordinating the sub-consultants and will be the assisting in project managing and will write the Operations Manual. Kevin will spend perhaps 70% of his time on this project. Andy will spend perhaps 10% of his time on the project. Inspection will be done by one of three inspectors with over 10 years of inspection experience in water and wastewater facilities. There will be full time inspection during construction.

Cascadia Technical Services is a wholly woman-owned consulting engineering firm who will be doing the hydro-geologic evaluations for this project. Sheila Pachernegg, P.E. is the principal and is a registered engineer and hydro-geologist. She has over 25 years of experience in many aspects of hydro-geologic analysis for wastewater and solid waste facilities. It is projected that she will spend about 10% of her time, or less, for her portion of the project.

Land Profile, Inc. is the agronomic firm that provides the crop management plan. It is owned by Philip Small, Registered Professional Soil Scientist who is very experienced in land application systems throughout Eastern Washington. It is anticipated that he will provide about 5-10% of their time, or less, on his portion of the work.

The Sacheen Lake Water and Sewer District will assist the consultants with all aspects of the work and will provide input and complete the district’s administrative duties with regard to the project. Sheila Pearman will represent Sacheen Lake. She will spend perhaps 35 % of her time on the project. District Board member, Perry Pearman will also provide oversight.

Describe the relevant skills and qualifications of each team member (do not submit resumes) *

Kevin Koesel, P.E. has nearly 20 years of experience in water and wastewater projects, completed the plans and contract documents and will be the lead for the construction inspection and contract management team.

Andrew Tom, P.E., who is a retired Ecology Engineer with almost 40 years engineering experience authored the Comprehensive Plan and Facilities Plan. He has been responsible for coordinating the sub-consultants and will be assisting in project management and will write the Operations Manual.

Sheila Pachernegg, P.E. is a registered engineer and hydro-geologist. She has over 25 years of experience in many aspects of hydro-geologic analysis for wastewater and solid waste facilities.

Philip Small, Registered Professional Soil Scientist, is very experienced in land application systems throughout Eastern Washington. He will provide guidelines for land application of effluent at the proper

agronomic rates.

Sheila Pearman has worked for the Sacheen Lake Water & Sewer District for nearly 20 years and has administered several grants and loans for the District.

Perry Pearman has over 30 years experience in construction from cost engineering, project managment, start-up management, reliability engineering, and hazardous materials handling.

Other staff from Sewell and Associates will be included as needed. They include a licensed Electrical Engineer, a licensed Mechanical Engineer, a licensed Structural Engineer, 4 survey crews and a very experienced team of inspectors.

Sewell has provided grant administration assistance and grant construction management experience for a number of government assisted grant/loan projects, including Public Works Trust Fund, Department of Health, Ecology, and ARRA. Sewell also has experience with a number of private and commercial utility projects.

Discuss your commitment to maintain staff competencies and responsibilities over the life of the project *

This project has been 30 years in the making and it is imperative that it be run and maintained to properly serve this community. The district has already made contact with nearby Diamond Lake for mentoring opportunities.

A qualified licensed operator will be employed to make sure all regulatory standards are met and that we are in full compliance with State and Federal Water Quality requirements.

Describe the decision making process used to select this project. Describe efforts to include the community in the decision making process. Why was this project chosen as the best solution over other projects? If the project is described in a local plan, list and discuss the plan. *

While there had been some organized resistance in the early years of this effort, with the initiation of construction, there has been mounting support expressed by homeowners. The District has had innumerable public meetings to keep the residents informed about the project, to guage support and to allow both supportive and adverse input. In fact, the Mountain View subdivisions were not included in the original scope, partly because the homeowners had not expressed an interest in inclusion in that first phase. The District decided that because of this and because the costs were high that Mountain View would not be included. Since that time, Mountain View residents who have been attending the many informational meetings requested that the District include them into the project. This application is a result of that request.

The District is committed to including the Mountain View homes in the same or similar (depending on financing) financial structure as the rest of the District, and operating the system in a manner that will meet all regulatory requirements. The cost for the additional work will be equally borne by all residents. The District will be responsible for the collection and treatment system from the pump vault to the final treatment and disposal. This manner of management was determined to be best to insure that homeowner related problems are minimized.

The immediate construction, which is currently underway is the installation of the collection system and elimination of 316 ERU's of inadequate on-site systems that are contaminating the lake. This phase is the connection of an additional 20 homes and providing interceptor access for 20 vacant lots in the Mountain View Estates area located on the southern part of the Lake. This area was the most problematic of the areas because of the amount of rock that will be encountered. The wastewater from this area probably has the most direct conduit to the Lake for septic tank (or worse) effluent. However, in the initial evaluation, the cost for accessing the area, the cost of installing the individual pump systems and the initial reluctance of these homeowners to connect was determined to be too problematic. This has changed with the observed progress on the project.

Describe how you plan to sustain the long-term water quality benefits of this project. *

The raw wastewater from this area will, like the other residences in phase I be sent to lined lagoons for treatment. There will be continuous verification through the double membrane liner and the leak detection layer between the two liners of containment of wastewater that inadequately treated wastewater is not being allowed to contaminate the underlying groundwater. The treated wastewater will be stored in the Winter and sent to the forest for disposal at agronomic rates. The continued water quality improvements will be verified. Ecology will have a very intimate knowledge of the status of the improvement in water quality through the permitting and monitoring and reporting process.

We will sustain the long-term water quality benefits by properly maintaining the system. The District will own and maintain the system, including the pump unit that is installed at each home. This maintenance also insures protection of the on-site drinking water wells.

Describe how you have developed and fostered local, regional and statewide partnerships that will contribute to the succcess of the project. Describe tangible contributions made by these partners. For nonpoint activity projects implementing BMPs, upload landowner agreements or letters of commitment. *

This project has come about by the rallying of property owners in the Mountain View area. When our Phase I project got going, several of the property owners got together and started networking. They came to the district board and requested inclusion in our current project. The recent election resulted in 71% support for District activities. Information and updates of District activities and current project updates are included in the Sacheen Scope that is published by the 50+ year old Sacheen Lake Association. The Sacheen Lake Association Board has unanimously supported the sewering of Sacheen Lake.
The District has also worked closely with NE Tri-County Health and Pend Oreille County in developing the sewer system for Sacheen. NE Tri-County Health District has been an advocate of our project for many years knowing that the soils and topography around the Lake are less than optimum for supporting on-site septic and drainfield systems.

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Describe past project performance on similar water quality projects. Include overall management of project, meeting project timelines and deliverables, water quality benefits achieved, fiscal accountability, and water quality benefits achieved compared to project cost. *

The only project of this magnitude or scope in the District is the current phase I project. That project is progressing well.
Past projects that have been undertaken have had to do with Lake water quality assessment, milfoil eradication and preliminary work toward the sewer project.
Our water quality efforts have been supported by several Ecology grants. the largest of these have been a whole lake treatment for Eurasian Water Milfoil. The District's 25% share of cost were met through in-kind service M&O levy funds and a General Obligation Bond. The bond was paid off early. the District continues it's milfoil control efforts through voter funded M&O levies.
Public Works Trust Fund has been supportive in funding preparation of our Comprehensive Plan as well as Facility Plan. these tasks were completed on time and paid off per schedule.
Public Works has also funded our Phase I project's land purchase for the treatment plant as well as the cost of project design. They continue to act as bridge financing while our ECY contract is completed.

Readiness to Proceed

Describe the steps you have taken to be ready to proceed immediately with the project. Provide detailed information and documentation on project elements such as status of designs, permits, interlocal agreements, landowner agreements, easements, other secured funding, staff, or agency approvals. If applicable, describe the environmental review completed such as: *

* National Environmental Policy Act (NEPA)
* Environmental Review Process (SERP) - (Click Here)
* State Environmental Policy Act (SEPA) - (Click Here)
* Cultural Resource Assessment - (Click Here)

The first phase of the Sacheen Lake project received a $5 million centennial program grant and a $6 million -0% interest revolving fund loan. The benefits for the project and the severe hardship it would place on the community were the rationale for this generous funding. We are applying for Ecology assistance for this phase because similar to the first phase, this project is unaffordable without it. The level of any loan, any grant or foregiveable loan received will along with their fair share of the operation and maintenance costs determine the final cost to these homeowners.

The project construction for the first phase is underway. This project will utilize much of the infrastructure being constructed and will be integrated into it. The collection system will enter the interceptor system being installed. This work will insure that the areas currently compromising the water quality of the Lake due to entry of inadequately treated wastewater will be eliminated, and that the contamination of the existing individual water systems around the Lake will be eliminated.

The environmental clearances for this project have been completed. The NEPA/SEPA processes have been completed, and the biological assessment letter, cultural resource letter from the Kalispel tribe, DAHP letter from Dr. Whitlam and the Archaelogical Survey has also been completed.

The land involved in the project treatment/disposal site is owned by the District, all the necessary Rights-of-Ways between the Lake and the treatment site have been acquired, and all Rights-of-Ways needed for the collection system will be acquired in the design phase of this project.

The engineering firm currently implementing the first phase will also complete this design and provide construction oversight. An agronomist and a hydro-geologic firm, both with extensive land design expertise are also on-board. The Sacheen Lake Water and Sewer District is very anxious to proceed with this additional work.

Does any other agency or jurisdiction share ownership of the project with the applicant?* Yes ✔ No

If yes, please explain and list the other agencies or jurisdictions:

Does any other entity operate or maintain the project with, or for the applicant? * Yes ✔ No

If yes, please explain how responsibility for operation is shared.

Is any other agency or jurisdiction responsible for financing part of the project, or for paying for some of the costs associated with the facility? * ✔ Yes No

If yes, please explain

Public Works Trust Fund has financed $1.2 million of the cost of our Phase I project, including the main lines and treatment plant that this project will connect to.

Are other grant funds committed to this Project? * Yes ✔ No

If yes, provide details on the amounts of secured/committed grant funding for your project from the "Cost estimate and project funding table"

Source	Amount of Grant
Total	$0

Are other loan funds committed to this Project? * Yes ✔ No

If yes, provide details on the amounts of secured/committed loan funding for your project from the "Cost estimate and project funding table"

Year	Source	Amount Borrowed	Interest Rate %	Years until Maturity	Annual Debt Service
	Total	$0			$0

Estimated Annual Facility Costs

Provide information on the annual costs for the facility paid by the ratepayers responsible for paying for the project.

The costs provided in the table are the costs that will be paid by the ratepayers responsible for paying for

the project. Usually this will be the ratepayers of the entire facility. However, some projects are only for a specific area, and only ratepayers in the specific area will be responsible for paying the costs of the project. An example is a project supported through Local Improvement District assessments or similar special rate districts. For such projects, include only the portion of the costs that will be paid by the affected ratepayers.

Costs = existing facility cost + proposed facility costs - any cost savings from the proposed facility.

Do not include depreciation on equipment or buildings.

Attach additional documentation or explanation as necessary.

Cost Item	Annual Cost
Personnel (operations and administration)	$26,000.00
Utilities	$9,500.00
Materials and Supplies	$10,000.00
Outside Services	$3,000.00
Miscellaneous Expenses	$2,000.00
Equipment Replacement (e.g., pumps, vehicles)	$1,000.00
Existing Debt Service	$0
Other (e.g., City and State taxes, permits	$6,200.00
Total	$57,700.00

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Population of Area Served by Project

Provide an estimate of the population for the area served by the project at the time of application and the population the project is designed to serve according to the current Facility Plan.

Current population of the area served by the project 80

Design population of the area served by the project 80

Existing Ratepayers

Provide information on the number of existing ratepayers responsible for paying for the project.

Financial Hardship

The information provided in the table is for the ratepayers responsible for paying for the project. Usually this will be the ratepayers of the entire facility. However, some projects are only for a specified area, and only ratepayers in the specified area will be responsible for the paying for the project. An example is a project supported through Local Improvement District assessments or similar special rate districts. For such projects, include only information for the affected ratepayers.

Generally, one single family residential sewer account is one equivalent residential unit (ERU). Calculating ERUs for non-single family residences can be done in many ways, including by costs. For example, multi-family residences, local public facilities, commercial customers, and industrial customers may pay more for sewer service than a typical residential ratepayer. In such cases, you can calculate the number of ERUs based on the typical sewer bill. For example, an industrial customer who pays 5 times the sewer bill of a typical residential ratepayer would be reported as 5 ERUs.

Attach additional documentation or explanation as necessary.

Existing Ratepayers	Sewer Accounts	ERUs
Residential	40	40
Commercial, Industrial & Institutional	0	0
Total	40	40

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Monthly Sewer Fees

What is the current basic monthly sewer fee for a single family household?	$1.00

Median Household Income (MHI)

What is the current estimated MHI for Project Area?	$38,922.00
Source	American Community Survey (ACS)*

See Appendix G of the current Water Quality Financial Assistance Guidelines available for download on the Application Menu

If Income survey, please attach

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Comments or Additional Information

This project is a second phase of the Sacheen Lake Water and Sewer District Wastewater Collection and Treatment System Project which is currently under construction. This phase will bring into the system those remaining residences with the most potentially adverse impact on the water quality of Sacheen Lake. These homes and their inadequate on-site systems are located on rock directly on the shoreline, overlooking the Lake and a most direct conduit of wastewater constituents into the water. While there are only about 20 residences to be connected in this phase, there are about an equal number of platted lots which will someday connected at their individual expense.

Currently residents around the lake do not pay a monthly sewer bill. With the assistance of PWTF loan and ECY loan and grant, our Phase I project value is approximately $140 per month. Without grant/forgivable loan money, the cost to the residents of the Mountain View area will likely be out of reach.

IN THE ABOVE QUESTION FOR CURRENT MONTHLY SEWER FEE, THE SYSTEM REQUIRED A NUMBER. WE CURRENTLY HAVE NO BASIC MONTHLY SEWER FEES SO $1.00 WAS ENTERED

INTERNAL USE ONLY

Does the applicant meet the criteria for financial hardship Yes

Degree of hardship

- Moderate
- Severe
- ✔ Elevated

Population of the applicant

Provide an estimate of the population of applicant

Current population of the applicant * 650

Median Household Income (MHI)

What is the current estimated MHI for the applicant?* $38,922.00

Source* American Community Survey (ACS)

See Appendix G of the current Water Quality Financial Assistance Guidelines available for download on the Application Menu

If Income survey, please attach *

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Comments or Additional Information

INTERNAL USE ONLY

Does the applicant meet the criteria for preconstruction Yes

Does the applicant meet the criteria for preconstruction principal forgiveness Yes