



OREGON WATER RESOURCES DEPARTMENT WATER SUPPLY DEVELOPMENT ACCOUNT LOAN AND GRANT APPLICATION

I. Project Information

Project Name: SWA Aquifer Storage and Recovery Well

Type of Project: Provide new or expanded water storage Check box if project type includes storage

Funding Request Type: Loan Grant

Funding Amount Requested: \$ \$1,500,000 Total cost of project: \$ \$2,000,000

Note: Grant funding requests must demonstrate cost match of at least 25% of total project cost. This may include in-kind.

II. Applicant Information

Principal Contact: <i>Shelley Matthews</i>		Fiscal Officer: <i>Carol Bryck</i>	
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<i>Clackamas, Oregon</i>		<i>Happy Valley, OR. 97086</i>	
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Involved Landowner 1:		Involved Landowner 2:	
Address:		Address:	
Phone:	Fax:	Phone:	Fax:
Email:		Email:	

**Please include a supplementary document that lists all additional involved landowners if applicable.*

Certification:

I certify that this application is a true and accurate representation of the proposed project work and that I am authorized to sign as the Applicant or Co-Applicant. By the following signature, the Applicant certifies that they are aware of the requirements of an Oregon Water Resources Department funding award and are prepared to implement the project if awarded.

Applicant Signature: *Tim Jannsen* Date: January 19, 2016

Print Name: Tim Jannsen Title/Organization: Engineering Manager; Sunrise Water Authority

III. Project Summary

Please provide a description of the need, purpose and nature of the project. Include what the applicant intends to complete and how the applicant intends to proceed.

Sunrise Water Authority (SWA) provides drinking water to nearly 50,000 people across a 22-square-mile service area encompassing the cities of Happy Valley and Damascus, along with surrounding areas of unincorporated Clackamas County. Within that service area, Sunrise maintains about 16,000 connections. Because of continued growth in the area, Sunrise currently adds about 400 new connections each year. Those numbers are expected to increase with projections showing some 600-900 new connections each year for several years to come.

Sunrise serves its customers almost entirely from waters diverted from the Clackamas River, then treated prior to delivery. SWA purchases an average of 5 million gallons of water a day (MGD), approximately 50% annually from Clackamas River Water (CRW) and 50% from the North Clackamas County Water Commission (NCCWC) in which it owns a 48% interest. Emergency water supplies can be purchased from the South Fork Water Board. In addition, SWA has groundwater production capacities of about 3.5 MGD, which supplement surface water sources during high demand and are also used in emergencies.

Recognizing its future need for water and its obvious vulnerability to one source, Sunrise began a strategic option several years ago to seek economic alternative supplies through local aquifer storage and recovery (ASR). Sunrise applied and was granted a limited license (permit) for up to 5 wells storing 600 million gallons at a peak use rate of just under 8 MGD (or about 1.6 MGD for each well). Currently Sunrise has one well installed that can store about 70 million gallons, but is looking to expand that system to add another well that could store an additional 70-80 million gallons of storage. Expansion of the ASR system would provide an important means for alleviating the agency's sole reliance on the Clackamas River.

SWA proposes hiring a consultant to design and drill an ASR well to facilitate capture, treatment and storage of water in winter and spring when surface water is abundant. CRW will provide treated water for the ASR, which will be pumped into the distribution system during periods of high demand and drought (summer and early fall) reducing the amount of water diverted from the river during low streamflows. The new ASR well will also serve as a back-up system to address a variety of anticipated and unexpected natural and human-induced incidents that could impact the system: damage & destruction to the WTP and/or distribution system, loss of supply, contamination and other hazards. ASR is an innovative and cost effective way to capture and store water when it is more readily available, while conserving water instream during the summer. It provides vital reserves for the dry season and emergency response efforts, which promotes public and ecosystem health and safety and builds a resilient water system. ASR is an important tool for helping with water supply, an increasing issue for our state, and it brings needed momentum and direction for additional projects of the same kind.

IV. Project Specifics

Instructions: Answer all questions in this section by typing the answer below the question, using additional space as needed.

- 1. Describe how the project will provide public benefits in each of the three public benefit categories.** Project applications will be scored and ranked based on the economic, environmental and social/cultural public benefits identified below. Describe the conditions prior to and after project implementation to demonstrate changes resulting from the project. Descriptions should be quantitative when possible. Information provided must be sufficient to allow evaluation of the public benefits of the project. **Please see the Public Benefit and Evaluation Guidance document for a description of how public benefits will be evaluated.** Applications that do not demonstrate public benefit in each of the three categories (economic, environmental, social/cultural) will be deemed incomplete. Leave blank any categories that are not applicable to project.

Economic Benefits ORS 541.673(2)

(a) Job creation or retention:

A consultant would be hired to manage design and construction of the ASR well. In addition, this project is the first phase of a larger strategic plan to install 5 wells storing up to 600 million gallons to meet ongoing growth and to reduce our sole reliance on Clackamas River water. With all of the testing and operational requirements for ASR systems, we may need to hire an additional person to manage and operate the 5 ASR wells.

About half of Sunrise's district is developed and urban, while the other half is untouched green land or rural land that will be developed over time. We currently add about 400 new connections each year. Those numbers are expected to increase with projections showing some 600-900 new connections each year for several years to come. The resulting development and growth in customers and consumers will not only lead to jobs related to rising water demand, but also to job creation and retention opportunities in other fields.

(b) Increases in economic activity:

Sunrise anticipates ongoing development and population growth within the service district for the next several years with projections of 600-900 new connections each year. The resulting growth will boost overall consumer /economic activity (new business and increased orders, production, gross sales and revenues) in Sunrise's service area, as well as the greater Portland-Metro area.

The project results in reduced diversion of water from the Lower Clackamas by Sunrise. Leaving water in-stream provides economic value to other interests including agriculture, industry, commercial, municipalities, tourism recreation and aesthetic enjoyment.

(c) Increases in efficiency or innovation:

This ASR project is innovative and provides multiple efficiencies as follows:

- Provides redundancy through a back-up water supply, enhancing flexibility to draw from multiple water sources to offset peak summer demand and drought or provide emergency reserves.*
- Designed with energy efficient pumps and motors, enhancing energy savings and conservation.*
- Least cost value for additional storage. One of the unique aspects of ASR is that it's a tremendously low-cost option for storage. The more traditional use of above ground (structural) storage would cost upwards of 10 times the cost for an equivalent volume.*
- Reduces issues and costs associated with the use of large surface water reservoirs and dams for capture and storage of water. A lot of water can be stored underground reducing the need to construct a large, expensive surface reservoir. An ASR can be placed where surface storage is not practical or economically possible (urban and residential areas).*

- *Defers or eliminates the need for added delivery infrastructure. Additional built storage within the service area defers or eliminates the need for expanded transmission (delivery) systems from the two primary Clackamas River sources. The ASR is filled from the river sources during low demand winter periods and then delivered absent of additional treatment and transmission during peak summer periods.*
- *More fully utilizes the production capacity of CRW's Water Treatment Plant in winter and doubles SWAs ASR water storage capacity.*

(d) Enhancement of infrastructure, farmland, public resource lands, industrial lands, commercial lands or lands having other key uses:

This project enhances municipal infrastructure and land as follows: 1) upgrades and enhances municipal water system infrastructure and land value; 2) enables Sunrise to meet rising water demand associated with ongoing development in the district over the next several years, including farm, public resource, commercial and industrial lands; and 3) keeps water in the stream during the dry season to support soils and riparian areas.

(e) Enhanced economic value associated with tourism or recreational or commercial fishing, with fisheries involving native fish of cultural significance to Indian tribes or with other economic values resulting from restoring or protecting water instream:

Installation of a new ASR well with a storage capacity of 1 MGD (1.55 CFS) results in reduced diversions from the Lower Clackamas by Sunrise and an 11% increase in the volume of water left instream during the dry season. Keeping more water instream provides economic value to other interests. The enhanced streamflow increases navigability, supports the natural hydrograph, improves floodplain function and supports riparian habitat and stream buffers important for fish, wildlife and the public. The Clackamas River supports chinook, coho and steelhead, all ESA listed anadromous fish species of historical significance to Oregon tribes. It also supports Oregon's Integrated Water Resource Plan.

Additional benefits include enhanced recreation and tourism at parks and other sites along the Clackamas River, including Riverside Park which is owned and maintained by Clackamas River Water, Sunrise's formal (190) water district partner. The Park is used for boating, fishing, swimming, baseball, softball, T-ball, picnics and scenic/aesthetic enjoyment. In addition, the Clackamas County Sheriff's Office – Marine Patrol uses the boat ramp to launch their boats and they maintain a garage on park property for boat & equipment storage.

(f) Increases in irrigated land for agriculture:

As expansion continues in the substantial undeveloped greenland or rural areas of Sunrise's service boundaries, the ASR will help support existing and new farm operations.

There are currently two farming companies that use water from Sunrise to irrigate their crops. The companies are Siri and Son Farms and Liepold Farms. The farms get their water through six water service connections; three connections being one-inch meters and the other three connections being 1.5-inch meters. The farms irrigate an estimated 111 acres and used 26 million gallons this past year, with the peak month accounting for 12 million gallons of that total. These two farming companies accounted for 3.7% of all of Sunrise's demands during the peak month.

Environmental Benefits ORS 541.673(3)

(a) A measurable improvement in protected streamflows that accomplishes one or more of the following:

- (A) Supports the natural hydrograph;
- (B) Improves floodplain function;
- (C) Supports state- or federally-listed sensitive, threatened or endangered fish species;
- (D) Supports native fish species of cultural importance to Indian tribes; or
- (E) Supports riparian habitat important for wildlife:

This project reduces demands on Clackamas River flow and improves ecosystem resiliency during the dry season. Over the last 3 years the "average summer day" flow in July & August was 9.05 MGD (14 CFS). Installation of a new ASR well with a storage capacity of 1 MGD (1.55 CFS) results in an 11% reduction in diversions by

Sunrise during the dry season. Maintaining water in-stream during periods of peak demand and drought helps maintain streamflow and provides the following benefits:

A) Supports more natural flow regimes and patterns; restores physical processes and ecosystem functions within the landscape that will sustain chemical and biotic processes that support native biological community resilience;

B) Improves flood control; enhances connectivity and contributes to side-channels and backwater habitats for fish spawning and rearing;

C & D) Enhances flow patterns; reduces instream temperatures; protects and enhances cold-water habitats; increases dissolved oxygen levels and improves other water quality parameters; filters/dilutes pollutants; maintains aquatic ecosystem health and diversity; improves habitat and connectivity during drought and helps suppress non-native fish populations and algae, increasing the abundance and survival rate of native species; enhances movement of sediment, cobbles and gravels (creates riffles and pools and scours the channel, which improves habitat);

E) Supports vegetation growth which provides habitat, food (fish & other aquatic species, insects), aquatic vegetation, shade to cool streams (cool water for drinking, bathing, habitat), and wood debris recruitment; Decreases risk of drought, fire, plant disease, and invasive species outbreak.

(b) A measurable improvement in groundwater levels that enhances environmental conditions in groundwater restricted areas or other areas:

Roughly half of Sunrise's service area is within a groundwater limited area. Sunrise currently uses native groundwater to supplement its surface water sources during periods of high water use and for emergency use. ASR would lessen the reliance on native groundwater as a supplement to the surface water sources, since a larger portion of the system's needs would be supplied by the increased capacity available from the ASR system. A smaller reliance on native groundwater would result in improved or at least help stabilize native groundwater levels.

(c) A measurable improvement in the quality of surface water or groundwater:

Installation of an ASR well reduces Sunrise's reliance on surface water by 11% and improves available instream flows during the summer when flows are low and most vulnerable to natural and human-caused events. Elevated flows support natural flow regimes and patterns, ecosystem processes and functions (floodplain control and connectivity), and aquatic ecosystem health, diversity and resilience. Water quality is also improved by enhanced flows including dilution and filtering of pollutants, reduced stream temperature, and increased dissolved oxygen.

The aquifer that Sunrise is targeting to expand its ASR system has high iron and manganese concentrations. Injecting treated surface water into the aquifer will improve the quality of the native groundwater.

In addition, this project contributes to the ODEQs basin-scale effort to restore and protect water quality in the Willamette Basin. The Clackamas River is a major tributary to the Willamette River and ODEQ assumes the analysis of the Clackamas River downstream of RM23 influences upstream temperature in the Willamette.

(d) Water conservation:

This project diverts water during low demand winter periods, conserving 11% of historical surface water consumption instream during peak summer periods. This modified method of diverting water achieves the same outcome for Sunrise customers while reducing reliance on the Clackamas River during the summer and early fall and improving surface water conditions.

(e) Increased ecosystem resiliency to climate change impacts:

Oregon's Integrated Water Resource Strategy anticipates and seeks to understand and model coming pressures that may affect water needs and resources in future, including climate change, population growth and shifts, and economic development. The state recommends several actions in anticipation of climate change and other pressures, which include increasing water conservation, expanding built storage and strengthening the resiliency of riparian areas, wetlands, and floodplains.

Sunrise anticipates significant population growth and economic development in the future - 600-900 new connections per year for several years to come - intensifying water supply implications associated with climate change. This project addresses each of the State's proposed actions and increases ecosystem resiliency to climate change. Installing an ASR well expands built storage and conserves water instream (11%) to alleviate the effects of climate change (increasing temperatures; altered hydrology, snowpack, runoff, and availability and quality of water;) as well as peak seasonal demand. Benefits resulting from elevated flow include cooler water temperature and improvements in other water quality parameters, enhanced cold-water and backwater habitats, flood control and restored floodplain connectivity, protection of riparian habitat and stream buffers, and decreased risk of drought, fire, plant disease and invasive species outbreak.

(f) Improvements that address one or more limiting ecological factors in the project watershed:

This project addresses a limiting ecological factor in the lower Clackamas River. Winter steelhead, spring and fall chinook salmon, and wild late winter coho are listed as Clackamas River ESA under the Federal endangered Species Act. Conserving 11% of historical diversions instream during the summer will help support more natural physical processes and ecosystem functions within the landscape that sustain and support spring and fall chinook salmon.

Social/Cultural Benefits ORS 541.673(4)

(a) The promotion of public health and safety and of local food systems:

Public Health and Safety: This ASR project conserves 11% of past water usage instream during the summer (a period characterized by low flows & high water temperatures) and contributes to public health and safety for downstream users in several ways: improves water quality through cooler water temperatures and pollution filtration and dilution; protects drinking water supply for human consumption and contact (recreation); provides potable water with more protection from tampering and contamination than a surface reservoir.

In addition, an ASR system promotes public health and safety through improved emergency response. Public Water Systems in Oregon are required to have Emergency Response Plans to address a variety of natural and human-induced hazards (earthquakes, landslides, flooding, drought, storms, climate change, fires, chemical spills, terrorism, environmental damage and destruction, etc.) that could impact the system, and to annually review those hazards. These hazards can lead to damage & destruction to the water treatment plant and/or distribution system, loss of supply and water contamination. Impairment of the drinking water system could result in denial of services, illnesses and casualties, impacting public health and safety, as well as economic vitality and public confidence. Sunrise is committed to building a resilient water system as outlined in the National Infrastructure Protection Plan and the Oregon Resilience Plan and we share the services of a full time Emergency Manager as part of that commitment.

New storage capacity would also provide SWA with a back-up source of clean water to meet public need when the NCCWC's WTP is down. This system operates with membranes and slow sand filters that are limited in production capabilities in the winter due to turbidity, which periodically shuts the system down.

Local Food systems: This project also promotes local food systems. Sunrise currently provides water to agricultural customers and may experience an increase in this type of demand as the authority's services expand by an anticipated 600-900 connections per year over the next several years. The ASR well will be used to irrigate farmland during the peak of cultivation (summer & early fall), when river flows are

low, soils are dry and crops are thirsty, to maximize food production. An 11% reduction in Clackamas River diversions by Sunrise during the dry season will also preserve water instream to support fisheries and fish consumption.

(b) A measurable improvement in conditions for members of minority or low-income communities, economically distressed rural communities, tribal communities or other communities traditionally underrepresented in public processes:

The project does not provide this benefit.

(c) The promotion of recreation and scenic values:

This project promotes recreation and scenic values through an 11% reduction in diversions by Sunrise during the dry season. Maintaining adequate river flows during summer and early fall promotes these values all along the lower Clackamas River including Riverside Park, which is owned and operated by CRW (SWA and CRW have a formal ORS 190 partnership to share resources). The District purchased the site on which its water treatment plant operates in 1962, reserving a portion of the land for expansion. The entire site was fenced to secure infrastructure. However, people cut the fence to gain river access, thereby compromising plant safety and security. The Board determined it was in the District's best interest to upgrade the plant's security system, move the fence line closer to the plant, and open the extraneous land as a public park.

The Park is comprised of the following amenities for public recreation: single lane boat ramp; 2 baseball diamonds with bleachers & concession stand; 2 portable T-ball fields; picnic pavilion; and restrooms. The park is used for boating (motorized and non-motorized boats, personal watercraft and paddle craft), recreational fishing, swimming, hiking, baseball, softball, T-ball, picnics and aesthetic/scenic enjoyment. In addition, the Clackamas County Sheriff's Office – Marine Patrol uses the boat ramp to launch their boats and they maintain a garage on park property for boat & equipment storage. We do not charge park fees.

(d) Contribution to the body of scientific data publicly available in this state:

This ASR project generates scientific data and information on the aquifers in this area, which benefits the scientific community and is available to the public upon request. Both the quantity and quality of injected, stored, and recovered water will be monitored and reported. Water will be tested by certified labs for water quality parameters: temperature, pH, dissolved oxygen, electrical conductivity/salinity, turbidity, nitrogen, phosphate, synthetic organic compounds (SOC), inorganic compounds (IOC) and volatile organic compounds (VOC). If the project is funded, we anticipate implementation would begin in Fall 2016. Water would be injected into the system in Jan 2017 with extensive testing commencing at that time. Customer withdrawals would begin during Summer 2017.

Sunrise's existing ASR well has already provided a good amount of data regarding the aquifer's ability to store and recover the injected water. Data has been captured that shows the aquifer is able to create a mounding of water that remains in place until the water is ready to be recovered. Water quality data has shown that the native groundwater is pushed away from the injection well when injecting the treated surface water, but at the same time, there is mixing of the poorer quality, native groundwater with the better quality injected, treated surface water within the aquifer.

(e) The promotion of state or local priorities, including but not limited to the restoration and protection of native fish species of cultural significance to Indian tribes:

This ASR project supports Oregon's Integrated Water Resource Strategy (Strategy). The Strategy places an emphasis on groundwater data, which represents one of Oregon's largest data gaps today in understanding water supplies and systems. Information derived from installation and ongoing maintenance of the well will be used to inform future ASR projects implemented by Sunrise and will be shared with the public and other partners in order to develop a broader understanding of the groundwater system. It will help ensure sound water resources management by assisting state and local planning efforts for future economic development.

The state has also placed a priority on economical supply options that look to better balance instream and out of stream demands. Installation of an ASR well by Sunrise directly addresses this issue through its smaller

environmental footprint, lower cost, benefits to water quality and reduced withdrawals from the Clackamas River (11%) during periods of peak seasonal demand. It also promotes key instream health and a broader approach to integrated water resource management among available alternatives.

In addition, this project promotes state and local priorities to restore and protect native fish species of cultural significance to Indian Tribes. The Clackamas River provides necessary habitat for several ESA listed anadromous fish species of historical significance to Oregon tribes for ceremonial, cultural, and commercial purposes, as well as sustenance: winter steelhead; last significant run of wild late winter coho in the Columbia Basin; fall and spring chinook (one of only two remaining runs of spring chinook in the Willamette Basin). The watershed also supports significant populations of cutthroat trout and native lamprey.

(f) The promotion of collaborative basin planning efforts, including but not limited to efforts under Oregon's Integrated Water Resources Strategy:

The project also identifies and promotes local planning efforts through inclusive and collaborative partnerships between two water providers, SWA and CRW, and the public. SWA and CRW share resources under a formal ORS 190 partnership, Clackamas Regional Water Supply Commission (CRWSC). Each organization's operations, including grant related activities are overseen by a Board of Commissioners and our operations are transparent and inclusive. Board members reside within the water service areas and are elected by voters within the geographic boundaries of the organization. Regular Board meetings and work sessions are open to the public and are posted on our websites, in local newspapers of general circulation and on bulletin boards at our administrative offices. Contact information on the Board members and meeting agendas, minutes and videos are posted on our websites and updated regularly for public review and we also provide public records upon request. Both providers and their customers will benefit from a new ASR well through clean, safe water and a redundant water supply.

It may also encourage cooperation with other governmental agencies depending on where future wells are sited. SWA's existing ASR well is located in a County Park.

2. Identify Project Location.

(a) Attach map of project implementation area if appropriate. List map(s) in this space and attach to application. *See the attached map of the location for a new ASR well.*

(b) Township Range Section Quarter-Quarter Section
2S 2E 12 SE1/4 of the NW1/4

(c) Tax Lot Number(s)
3607

(d) Latitude/Longitude
7686063/ 642955

(e) County
Clackamas

(f) Watershed
Clackamas

(g) River/Stream Mile (where applicable)
N/A

3. (a) Will the project result in a physical change on private land? Yes No

If yes, attach evidence that landowners are aware of and agree to the proposal. List attachments below.

(b) Will the project result in monitoring on private land? Yes No

If yes, attach evidence that landowners agree to the proposal and are aware that monitoring information is public record. List attachments below.

4. Provide a project schedule, including beginning and completion dates. Use the following table as a guide. Attach a separate sheet to application if needed.

Estimated Project Duration: July 1, 2016 to October 1, 2017

Place an "X" in the appropriate column to indicate when each Key Task of the project will take place.

Project Key Tasks	2016				2017				2018 & Beyond
	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	
<i>Well Construction Engineering Design</i>			X						
<i>Well Construction Contract Documents and Bidding</i>			X						
<i>Well Drilling</i>				X					
<i>Well Development and Testing</i>				X					
<i>Pump Station Engineering Design</i>				X					
<i>Pump Station Contract Documents and Bidding</i>				X					
<i>Pump Station Construction</i>					X				
<i>Pump Station Startup and Testing</i>					X	X			
<i>ASR Testing Injection Phase</i>					X	X			
<i>ASR Testing Storage Phase</i>						X	X		
<i>ASR Testing Recovery Phase</i>							X		

5. Describe any conditions that may affect the completion of the project.

None that Sunrise is aware of.

6. Attach a completed feasibility analysis if one has been completed.

One has not yet been completed. GSI Water Solutions, Inc., a private consultant firm, is currently working on a feasibility analysis of ASR locations and costs for expanding Sunrise's existing ASR system.

7. Provide suggestions for interim and long-term project performance benchmarks.

Set timeline benchmarks based on the project key tasks above. This projected timeline would enable Sunrise to begin ASR operations for the new well by late first quarter of 2017.

8. Provide letters of support for the proposed project (list in this space and attach to application).

Attached are letters of support from the Sunrise Board (SWA), Clackamas River Water (CRW), and the Clackamas River Water Providers (CRWP).

9. Describe partnerships and collaborative efforts associated with the project.

This project promotes collaborative efforts between two water providers, SWA and CRW, and the public. SWA and CRW share resources under a formal ORS 190 partnership, Clackamas Regional Water Supply Commission (CRWSC). Both providers and their customers will share in this new resource and benefit from clean, safe water and a redundant water supply. Each organization's operations, including grant related activities are overseen by a Board of Commissioners and our operations are transparent and inclusive. Board members reside within the water service areas and are elected by voters within the geographic boundaries of the organization. Regular Board meetings and work sessions are open to the public and are posted on our websites, in local newspapers of general circulation and on bulletin boards at our administrative offices. Contact information on the Board members and meeting agendas, minutes and videos are posted on our websites and updated regularly for public review and we also provide public records upon request.

10. Consultations/communications with affected Indian tribes and with the Legislative Commission on Indian Services regarding the project.

Has the Legislative Commission on Indian Services been contacted to identify tribes affected by the project?

Yes No

Please provide correspondence as an attachment to this application.

We contacted Karen Quigley by e-mail (attached) at the LCIS and she indicated that the Warm Springs, Grand Ronde and Siletz Tribes may have an interest in this water supply project. E-mail correspondence is attached.

Has there been consultation/communications with affected Indian tribes?

Yes No

Please provide a description of consultation/communication that occurred and attach documents to this application if applicable.

We contacted the 3 tribes as follows: 1) Kathleen Sloan, Cultural Resource Department Manager at the Warm Springs Tribe; 2) David Harrelson, Tribal Historic Preservation Officer (Cultural Protection) at the Grand Ronde Tribe; and 3) Robert Kentta, Cultural Resources Director at the Siletz Tribe. We provided a brief description of the project, a map of Sunrise's service area, and inquired about their interest in the project. We requested that they respond and let us know if the Tribe would like any further data or information on the project at this time, or in the future if funding is received and we proceed with implementation.

We received a response from Robert Kentta, Siletz Tribe, but not from the Warm Springs or Grand Ronde. We followed-up our e-mails with phone calls to Kathleen Sloan and David Harrelson on 1/14/16 and left voicemails, but still have not heard back from them. Robert Kentta forwarded our e-mail to SHPO and Dennis Griffin, their State Archaeologist, contacted me for more information, which we provided. E-mail communicatios are attached.

11. Provide a description of:

(a) Required local, state and/or federal [permits](#) and/or authorizations for project implementation that have been secured to date. Please attach secured permits/authorizations to the application.

Sunrise applied and was granted a limited license for up to 5 wells storing 600 million gallons at a peak use rate of just under 8 MGD (or about 1.6 MGD for each well). Currently, Sunrise has one well installed that can store about 70 million gallons, but is looking to expand that system to add another well that could store an additional 70-80 million gallons of storage. Attached are the original limited license and limited license renewal for Sunrise's ASR system.

(b) Required local, state and/or federal permits and/or authorizations that will be secured in the future to implement the project. Describe efforts to date in securing these permits and/or authorizations.

Sunrise has a groundwater permit for the existing well (pre-existing production well converted to ASR in 2007), and would anticipate applying for groundwater permits for subsequent wells so that Sunrise could use the native groundwater if needed. Sunrise would need to obtain a building permit and an electrical permit to construct an injection and pumping facility for the ASR well. The groundwater, building, and electrical permit applications would be submitted during well construction and prior to pump station construction.

12. Provide any additional supplemental materials to demonstrate ability to implement the project. Examples include project plans and specifications, engineering details and [water availability analysis](#). List documents in this space and attach to application.

There are no additional supplemental materials.

V. Storage Project Requirements (if not a storage project continue to Section VI)

For any storage project please contact Water Resources Grant Administrator, Jon Unger, at (503) 986-0869 prior to completing the application.

13. Storage Project Type: Above Ground Below Ground

14. If above-ground storage, would the proposed storage project be located in-channel?

Yes No N/A

15. Identify the capacity in acre-feet of the proposed storage project.

245.5 acre-feet (equivalent to 80 million gallons)

16. Has a water right application been filed for the proposed storage project?

Application not yet made.

Water right application made; permit not yet issued Application #ASR Limited License #012

Permit issued. Application # Permit #

For Questions 17 & 18 answer the following:

(a) Does the proposed storage project impound surface water on a perennial stream?

Yes No Uncertain

(b) Does the proposed storage project divert water from a stream that supports state- or federally-listed sensitive, threatened or endangered fish species?

Yes No Uncertain

(c) Does the proposed storage project divert more than 500 acre-feet of water annually?

Yes No

17. Water Dedicated Instream N/A

For above ground storage projects seeking grant funding: If you answered “yes” to any of the questions posed in a-c above a minimum volume of water equal to at least 25% of the stored water must be dedicated to instream use.

Identify percentage of stored water to be dedicated to instream use.

0 %

Note: Any storage project dedicating 25% of stored water to instream use will automatically receive a median score in the environmental public benefit category with the opportunity to demonstrate additional environmental benefit to increase the score.

18. Seasonally Varying Flow Prescription

For all storage projects: If you answered “yes” to any of the questions posed in a-c above the project will need a **Seasonally Varying Flow (SVF) Prescription**, determining the duration, timing, frequency and volume of flows (including ecological baseflow), necessary for protection and maintenance of biological, ecological, and physical functions outside of the official irrigation season. The initial step in defining the SVF for the project is to schedule an SVF meeting with OWRD. For assistance and more information please contact Water Resources Grant Administrator Jon Unger at (503) 986-0869.

Identify whether the storage project will need a Seasonally Varying Flow Prescription.

Yes No Uncertain

VI. Environmental Public Benefit for Conservation Projects Dedicating Water Instream (if not a conservation project continue to Section VII)

19. Identify percentage of conserved water to be dedicated to instream use. N/A

0 %

Note: Any project that conserves water and dedicates at least 25% of the conserved water quantity to instream use will automatically receive a median score in the environmental public benefit category with the opportunity to demonstrate additional environmental benefit to increase the score. Water dedicated to instream use must be permanently placed instream and protected by the Oregon Water Resources Department.

VII. Financial Information

For Loan Applicants – Since loan applications do not require cost match, loan applicants who do not offer a cost match need not complete Section A and can disregard the match funding columns in Sections B and C. Budget and costs of key tasks must be identified in sections B & C. Loan applicants will be required to provide additional financial information related to their ability to repay the loan. This request for information will take place after the scoring and ranking process for those projects that are recommended for funding.

For Grant Applicants – Complete Sections A, B and C.

Section A – Cost Match Information

Applicants must demonstrate a minimum 25% funding match based on the total project cost. The match may include: a) applicant funds or secured funding commitment from other sources; b) pending funding commitment from other sources; and/or c) the value of in-kind labor, equipment rental, and materials essential to the project. For secured funding, the applicant must attach a funding award letter from the match funding source that specifically mentions the dollar amount shown in the “Amount/Dollar Value” column. For pending resources, documentation showing a request for the matching funds must accompany the application. Funds expended prior to grant agreement are not reimbursable nor do they qualify for cost match without prior authorization by the Department.

In the Type column below matching funds may include:	In the Status column below matching funds may have the following status:
<ul style="list-style-type: none"> • Cash - Cash is direct expenditures made in support of the feasibility study by the applicant or partner*. 	<ul style="list-style-type: none"> • Secured - Funding commitments already secured from other sources.
<ul style="list-style-type: none"> • In-Kind - The value of in-kind labor, equipment rental and materials essential to the feasibility study provided by the applicant or partner. 	<ul style="list-style-type: none"> • Pending - Pending commitments of funding from other sources. In such instances, Department funding will not be released prior to securing a commitment of the funds from other sources. Pending commitments of the funding must be secured within 12 months from the date of the award.

* “Partner” means a non-governmental or governmental person or entity that has committed funding, expertise, materials, labor, or other assistance to a proposed project planning study. OAR 690-600-0010.

Match Funding Source (if in-kind, briefly describe the nature of the contribution)	Type (✓ One)	Status (✓ One)	Amount/ Dollar Value	Date Match Funds Available (Month/Year)
<i>SWA will provide cash contribution.</i>	<input checked="" type="checkbox"/> cash <input type="checkbox"/> in-kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> pending	\$300,000	July 16
<i>SWA will provide in-kind contributions of engineering and construction management services</i>	<input type="checkbox"/> cash <input checked="" type="checkbox"/> in-kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> pending	\$200,000	July 16
	<input type="checkbox"/> cash <input type="checkbox"/> in-kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in-kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in-kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in-kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in-kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in-kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in-kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		

