



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

I. Project Information

Project Name: City of Chiloquin Water Supply and Metering Improvements

Type of Project: Rehabilitation of the City's main water source (Well #1), the addition of a new ground water source and meter replacement. Check box if project type includes storage

Funding Request Type: Loan Grant

Funding Amount Requested: \$ \$900,000 Total cost of project: \$ \$1,200,000

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: Adkins Consulting Engineering, LLP (City of Chiloquin Engineer)	Fiscal Officer: Teresa Foreman
Address: <u>2950 Shasta Way</u> <u>Klamath Falls, Or 97603</u>	Address: <u>122 South 2nd Avenue</u> <u>Chiloquin, Or 97624</u>
Phone: <u>541-884-4666</u> Fax: <u>541-884-5335</u>	Phone: <u>541-783-2717</u> Fax:
Email: <u>adkins@adkinsengineering.com</u>	Email: <u>chiloquin@centurylink.net</u>

Involved Landowner 1: Oregon Department of Aviation (Attn: Matthew Maass)	Involved Landowner 2:
Address: <u>3040 25th Street SE</u> <u>Salem, Or 97302</u>	Address:
Phone: <u>503-378-2523</u> Fax:	Phone: Fax:
Email: <u>matthew.d.maass@aviation.state.or.us</u>	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: Joe Hobbs Date: 1-19-16

Print Name: Joe Hobbs Title/Organization: Mayor, City of Chiloquin

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.

The Water Master Plan for the City of Chiloquin (currently in draft, final plan is expect March, 2016) has identified three major capital improvements:

- 1) Increase water supply reliability through the replacement of the City's main water supply well infrastructure (Well #1).*
- 2) Increase system redundancy by the addition of a new water supply well (Airport Well).*
- 3) Replace all the meters in order to accurately account for water use.*

The City of Chiloquin (City) currently has one reliable and available water supply well (Well #1) that includes a pump, well house and controls that are beyond their service life. In order to replace this infrastructure the City must have an additional water source that they can utilize during construction, therefore the need for the additional well.

Furthermore, the City is separated in half by the Williamson River (see attached map) where the west half is supplied by a single 10-inch water line that spans the river. If for some reason this water line were to become compromised the entire west half of the City would be without water. This lack of redundancy has been identified in the Draft Water Master Plan as a high priority improvement. Additionally, the water meters within the City are beyond their service life, do not meter accurately and thus, require replacement.

The City plans to complete three parts to this project, as listed below:

- 1) Rehabilitate the Airport Well, install state of the art equipment and connect to the main distribution system.*
- 2) Replace pump, motor, controls, well house and all appurtenances for Well #1 with state of the art equipment.*
- 3) Replace all water meters in the City with state of the art ultrasonic automatic reading meters.*

The City has secured \$265,000 of in-kind match to replace Well #1 infrascture through a partnership with The Klamath Tribes. Additionally, the City will provide \$28,500 of cash match and \$6,000 of in-kind match for a total of 25% match. The City request \$900,000 from the Oregon Department of Water Resources for the remaining 75% of total project costs.

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:

The long term increased capacity and reliability in municipal water supply as a result of this project will give the City of Chiloquin the ability to attract and retain businesses, in turn, creating and retaining jobs. Additionally, Klamath Tribal (as well as U.S. Forest Service) facilities receive City water, therefore this project is a necessity for The Klamath Tribes to support and expand their facilities that support local jobs. In the short term, the project will create \$1,200,000 worth of contracts for local contractors.

- (b) Increases in economic activity:

As mentioned in the answer above, this project is necessary to support existing local businesses and attract more businesses to the City. Economic activity will not be allowed to expand without a reliable water supply to support the City's businesses, residents and Tribal facilities.

- (c) Increases in efficiency or innovation:

The project will use innovative techniques by using ultra sonic water meters with bluetooth capability, utilizing a smart phone to collect meter readings instead of a specialized device. This will greatly increase efficiency by saving time for City staff: the director of public works will save time in the meter reading process, and the City Recorder will save time in the billing process. Additionally, the proposed Supervisory, Control and Data Acquisition (SCADA) system will automate communication between the existing well, proposed well and reservoir. In turn this will increase efficiency of operations and utilize innovation over manual operations. Lastly, Well #1 will be equipped with a new Variable Frequency Drive (VFD) that will optimize pumping operations, in turn saving energy and reducing wear and tare on pumping equipment.

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

The project will enhance the water supply and metering infrastructure for the City of Chiloquin by increasing the reliability, redundancy and utilizing current technology for operations. The increase in water supply and reliability will greatly enhance home and property values; as a good water supply is a priority for home buyers.

- (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:

According to the USGS study, Ground-Water Hydrology of the Upper Klamath Basin, Oregon and California, the conservation ground water supply will increase downstream flows. The increase in downstream flows will positively affect the Short Nose Sucker, a species of cultural significance to the Klamath Tribes, as described in the Revised Recovery plan for the Lost River Sucker and Shortnose Sucker, revised 2013. Additional recreational fish species, such as the native Redband trout, will benefit from the increase in stream flows to the downstream

Williamson River, Upper Klamath Lake and Klamath River (including the Wild and Scenic section of the Klamath River).

(f) Increases in irrigated land for agriculture:

The project will not result in an increase in irrigated land for agriculture.

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:

The project will only utilize "Green Light" water as specified in the City's water right permit time extension, allowing approximately 320gpm of ground water withdrawal to remain in the natural system. Additionally, conservation based rate structures have historically resulted in approximately 15% reduction in water use. In Chiloquin this will result in a savings of approximately 11,000,000 gallons per year. This will positively affect ground water and consequently downstream flows according to the USGS study, Ground-Water Hydrology of the Upper Klamath Basin, Oregon and California.

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

The conservation rate structure that will proceed the new meter installation will produce improvements to groundwater levels. According to Oregon Water Law, 390.385 number 6, no new water rights shall be granted that exceed 0.005 CFS per household or exceed 0.1 CFS per 1000 head of livestock. This protects all ground water in the Klamath Basin by means of the Klamath Scenic Water Way as listed in section 2f of this document. USGS states that "the effects of large-scale ground-water pumping can spread beyond the pumping centers to other parts of the regional ground-water system" (USGS, pg 2). Therefore the conservation of water use in Chiloquin will reduce pumping from the ground water.

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

As presented in the USGS study, Ground-Water Hydrology of the Upper Klamath Basin, Oregon and California, ground water pumping can negatively affect surface water within the Klamath Basin. This project will promote water conservation, and thus the reduction of ground water pumping that will increase downstream flows. Increased downstream flows will positively impact surface water quality, in particular, temperature reduction through increased flows.

(d) Water conservation:

The project will result in water conservation., after the installation of the new ultrasonic meters and AMR equipment, the City of Chiloquin will be able to collect water use data which will enable the City to implement a conservation based rate structure.

(e) Increased ecosystem resiliency to climate change impacts:

The project will increase ground water levels by reducing ground water withdrawals. In turn, positively affecting the sustainability of ground water resources in the Klamath Basin. This will increase system resiliency during times of drought.

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

The conservation based rate structure that will proceed the new meter installation will produce improvements to the Klamath Scenic Waterway, which is protected under the Oregon Water Law 390.835 number 6. According to the USGS study, Ground-Water Hydrology of the Upper Klamath Basin, Oregon and

California, ground water in Klamath Basin generally flows either to the Klamath River canyon, or the Tule Lake Subbbasin. It is assumed that the ground water in Chiloquin is hydraulically connected to the Klamath Scenic Water way by means of aquifers and streams. Therefore, a conservation based rate system of Chiloquin water will help to preserve flows in the Klamath Scenic Waterway.

Social/Cultural Benefits ORS 541.673(4)

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

This project will increase public safety by improving the existing water supply and adding resiliency and redundancy to the water supply system. If this project is not funded the City faces continued high risk of a complete well failure that will result in no water for the City's residences and businesses.

(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 City of Chiloquin is approximately 50% Native American and the median household income is approximately \$34,000 (where the States median household income is at \$51,000). This project will provide an increase in water supply reliability and capacity for these economically distressed rural communities, and tribal communities. In turn, providing businesses and Tribal facilities with the ability to expand and grow.

(c) The promotion of recreation and scenic values:

The conservation rate structure that will proceed the new meter installation will produce improvements to the Klamath Scenic Waterway, which is protected under the Oregon Water Law 390.835 number 6. According to the USGS study, Ground-Water Hydrology of the Upper Klamath Basin, Oregon and California, ground water in Klamath Basin generally flows either to the Klamath River canyon, or the Tule Lake Subbbasin. It is assumed that the ground water near Chiloquin is hydraulically connected to the Klamath Scenic Water way by means of aquifers and streams. Therefore, a conservation based rate structure will decrease ground water pumping and ultimately preserve flows in the Klamath Scenic Waterway, increasing recreational opportunities such as fishing and rafting.

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

The project will enable the City of Chiloquin to collect accurate water use data which will be available to the Water Resource Department.

(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:

Based on the USGS study cited previously it is assumed that a decrease in groundwater withdrawals from the Chiloquin Well will increase downstream flows. The increase in downstream flows will positively affect the Short Nose Sucker, a species of cultural significance to the Klamath Tribes, as described in the Revised Recovery plan for the Lost River Sucker and Shortnose Sucker, revised 2013.

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

This project will help the Integrated Water Resource Strategy by helping the City understand its current and future water use by enabling Chiloquin to gather water use data from the meters. Oregon's Integrated Water Resource Strategy states that, "Oregon needs a better grasp of its current and future water needs and demands, both instream and out-of-stream. Without a better characterization of water use today, the State cannot adequately plan to meet these needs sufficiently and sustainably in the future" (OWRD, pg 35). The new meters will give Chiloquin the ability to determine non-revenue water in their distribution system, therefore enabling Chiloquin to eliminate the losses and determine the actual amount of water used.

2. Identify Project Location.

(a) Attach map of project implementation area if appropriate. List map(s) in this space and attach to application.

(b) Township Range Section Quarter-Quarter Section
 34S 7E 33&34
 35S 7E 3&4

(c) Tax Lot Number(s)
N/A

(d) Latitude/Longitude
N/A

(e) County
Klamath County

(f) Watershed
Klamath River Basin (6-digit HUC: 180102)

(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.
Letter of Support from Oregon Department of Aviation

(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.
Letter of Support from Oregon Department of Aviation

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				20 & 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	
Receive project funding		X							
Commence project design			X						
Complete 30% design			X						
Submit applications for permits			X						
Complete 60% design				X					
Complete 90% design					X				
Complete final design and contract documents						X			
Recieve final permits						X			
Commence construction						X			
Complete construction and project close out								X	

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

Cultural resources that may be present in the project area could delay or modify construction. Adjusting the route of the interconnecting pipeline, with the guidance of archeologist, should remedy any cultural resource issues.

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

Attached is the 60% draft of the Water Master Plan for the City of Chiloquin. Final draft is expected in March 2016. Chapter 3 dicusses the water supply recommendations.

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

30%, 60% and 90% design submittals will be used to gauge project status. Once meters are installed the City will utilize measurements to audit the water system for conservation and water savings.

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

- Letter of support from City of Chiloquin*
- Letter of support from The Klamath Tribes*
- Letter of support from Oregon Department of Aviation*

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

The Klamath Tribes and the City of Chiloquin have created a partnership to implement the reahabilitation of Well #1, consequently \$265,000 of in-kind match has been secured through U.S. Indian Health Services funding.

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.

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.

Chiloquin City Public Works and Adkins Consulting Engineering, LLP have conversed with The Klamath Tribes planning department on multiple occasions through email, phone calls, infrastructure work sessions and City Council meetings. Additionally, a representative of The Klamath Tribes participated in the pre-application conference for this grant.

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.

The U.S. Indian Health Services has completed a cultural resource survey of the Well #1 construction. For confidentiality reason, the survey is not attached.

(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.

An environmental review will be conducted and potentially a subsequent cultural resource survey (for portions of the project not already completed) and on-site monitoring may occur. Additionally, county building permits will be applied for once complete funding is secured and 30% design is complete.

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.

*Airport Well water quality results
60% Draft of Water Master Plan*

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.

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 #

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.

%

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

%

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.
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* “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>Klamath Tribes: In-kind engineering, construction and contract administration of the rehabilitation of Well #1 through U.S. Indian Health Services Funding</i>	<input type="checkbox"/> cash <input checked="" type="checkbox"/> in-kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> pending	\$265,000	August 16
<i>City of Chiloquin cash match</i>	<input checked="" type="checkbox"/> cash <input type="checkbox"/> in-kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> pending	\$28,500	January 16
<i>City of Chiloquin: In-kind grant administration</i>	<input type="checkbox"/> cash <input checked="" type="checkbox"/> in-kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> pending	\$6,000	January 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		
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	<input type="checkbox"/> cash <input type="checkbox"/> in-kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		

