



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

I. Project Information

Project Name: Painted Hills Reservoir Expansion

Type of Project: Expanded water storage and enhanced distribution Check box if project type includes storage

Funding Request Type: Loan Grant

Funding Amount Requested: \$ \$530,965 Total cost of project: \$ \$801,079

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

II. Applicant Information

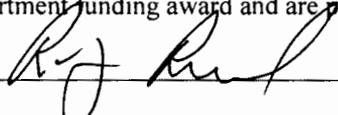
Principal Contact: Gabe Williams (RSI)	Fiscal Officer: Judy Potter (Wheeler SWCD)
Address: <u>1180 SW Lake Rd Ste. 202</u>	Address: <u>40535 Highway 19</u>
<u>Redmond, OR 97756</u>	<u>Fossil OR, 97830</u>
Phone: <u>541-771-6911</u> Fax: _____	Phone: <u>541-468-3265</u> Fax: <u>541-468-2108</u>
Email: <u>gabe@rsiengr.com</u>	Email: <u>judy.potter403@gmail.com</u>

Involved Landowner 1: Robert J. Riecke	Involved Landowner 2:
Address: <u>355 Goodpasture Island Road</u>	Address: _____
<u>Eugene, OR 97401</u>	
Phone: <u>541-341-3341</u> Fax: <u>541-633-7532</u>	Phone: _____ Fax: _____
Email: <u>briecke@pape.com</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:  Date: 1/19/10

Print Name: Robert J. Riecke Title/Organization: President, Pape Properties, Inc. Sole Member, Bridge Creek Ranch LLC

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 purpose of the project is to enlarge the storage capacity of an existing off-channel reservoir in order to provide additional storage for the landowner while providing increased mid/late summer flows to the neighboring stream system.

The project will consist of the following Work Elements:

- 1) Raise the existing dam to increase the storage capacity of the reservoir by 500 acre-ft and pool elevation by 6.2 feet.*
- 2) Install a frequency drive pump, mainline, and pivot to reduce power usage and increase production. The infrastructure will also allow water to be released into Bear and Bridge creeks for fish and wildlife habitat improvements.*
- 3) Install measuring devices and conveyance pipelines to fill and meter flows into the reservoir.*
- 4) Improve the adjacent road infrastructure to allow for the reservoir pool level increase.*

These work elements will facilitate the following Outcome Objectives:

- 1) Improve irrigation efficiency and agricultural productivity on the Bridge Creek Ranch.*
- 2) Improve the steelhead and Chinook productivity in the Bridge Creek Watershed.*
- 3) Improve tourism and public benefit within the Bridge Creek Watershed.*
- 4) Improve the economy of Wheeler County, specifically Mitchell area businesses.*

*The reservoir lies in the saddle near the confluence of Bridge Creek and Bear Creek, adjacent to the Painted Hills National Monument approximately 9 miles NE of the town of Mitchell, OR in Wheeler County. Bridge and Bear Creeks both support strong runs of native steelhead (*O. mykiss*) with Bridge Creek seeing some Chinook returns as well. According to Oregon Department of Fish and Wildlife (ODFW), the Bridge Creek Watershed is one of the largest steelhead producing sub-basins in the Lower John Day River. The John Day Subbasin Plan (NPCC 2005) also lists the Bridge Creek Watershed as a Level 1 priority for restoration. Bridge Creek is part of National Oceanic and Atmospheric Administration's (NOAA) Intensively Monitored Watersheds (IMW) program with a large amount of restoration dollars being spent towards improving habitat for adult spawning and juvenile rearing. Two of the primary limiting factors for steelhead recovery are flow and temperature. This project will positively impact 7.9 miles of Bridge Creek downstream of the reservoir.*

Farming and ranching has a strong history in the area with a large amount of water consumption being directed towards grass and hay production. The water rights exceed the capacity of the system resulting in a hierarchical water distribution based upon priority date. High spring flows from snowmelt in the Ochocos provides the opportunity to capture and store water for later release, but only for a short period of time. The existing reservoir serves as a capacitor in the system allowing water from the high spring flows to be stored and used throughout the dry summer months. The existing reservoir has served its purpose well and has allowed the landowner to continue agricultural production throughout the majority of the summer. However, the pump and delivery system for the agricultural production is deficient in some respects. The two key deficient areas are the constant-speed 100 horsepower pump which supplies water to 407.9 acres of sprinkler irrigation and the flood irrigation of a 45 acre field along Bear Creek. Both of these deficiencies will be corrected as the landowner's in-kind as a portion of this project.

In order to increase the pool elevation of the existing reservoir, two adjoining roads must be improved. The first road is the only vehicle access point to the dam. The road and the bridge over Bridge Creek will not support the equipment required for the proposed dam work and subsequent operation and maintenance. The primary consideration on this road is the failing bridge which will need to be replaced. The second road is on the opposite end of the reservoir from the dam and is the only access for the neighboring landowner. A portion of this road will be raised to avoid inundation.

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:

This project will have a positive impact on job creation and retention in Wheeler County through direct as well as indirect methods. The long term increased productivity of the ranch will not only ensure it's continued success, but also will increase agricultural capacity thus ensuring the retention of existing jobs as well as provide economic pathways for increased employment at the ranch. The indirect effects of increased ranch productivity will serve to increase economic activity that will bolster or at least ensure retention of jobs in a variety of supporting industries including hay producers, truckers, butchers, and beef distributors.

Mah Hah Outfitters uses the reservoir on a pay by use basis. The local owner Steve Fleming has stated that although the reservoir is a popular destination for his clientele, the water level becomes too low in July/August for him to utilize. He feels that the 6.2 feet increase in pool height will provide an additional month of usage which will result in 5-10 additional trips. These guided trips provide stimulus not just to the Mah Hah Outfitters, but also to the neighboring town of Mitchell and the Bridge Creek Ranch.

The long-term benefit of the project will be that the improved production on the landowner's property will improve profitability and will allow the ranch to either increase or maintain the labor force required to manage the ranch. The project will also provide short-term job creation/retention during the construction phase of the project. It is estimated that the project will require 3-5 positions for a minimum of 4 months. Materials will be purchased through local vendors, which will promote the Central Oregon economy and encourage retention.

(b) Increases in economic activity:

This project will provide increased economic activity through a multitude of pathways. The installation of the pivot will enhance the productivity and profitability of the ranch through more efficient application of water. The system is expected to have a useable lifespan of at least 30 years.

The elevated reservoir will serve to attract additional visitors to the Painted Hills National Monument. 57,621 people visited the Painted Hills between January 2015 and August 2015 (Statesman Journal) which was a 61% increase from 2013 for the same time period. Many of these visitors are amateur or professional photographers who are attracted by unique features such as a large body of water in a desert landscape. It is the Applicant's belief that the greater size and visibility of the reservoir will be a key element that will continue this trend of increased tourism. Additional visitors will serve to increase economic activity at the nearby towns for many years to come.

Additional long term economic activity increases will be felt due to the increased summertime flows in Bridge Creek enhancing the fishing and hunting opportunities. The improved flows and riparian conditions on the 7.9 miles of stream flow through BLM lands. The increased flow will provide improved fish and wildlife habitat and numbers. An abundance of wildlife invites visits from both wildlife enthusiasts and hunters.

The Wheeler hunting unit has less than 10% public lands available for hunting. The Bureau of Land Management (BLM) land which Bridge Creek flows through is one of the largest continuous sections of public lands within the county and as such is a draw for tourism.

(c) Increases in efficiency or innovation:

The project will directly reduce the energy consumption of the ranch. The 2015 electrical bill for the 100 horse power pump was \$11,471 for the operational period. It is estimated that the addition of the frequency drive unit and the restructuring of the pump set-up will reduce power consumption by 20-25% which will yield an annual savings of \$2,290 - \$2,860.

The pivot being installed will increase the efficiency of water application to the 45 acre field, while reducing labor requirements. Currently the field is used for marginal flood irrigated pasture, which requires that the water in the ditch be monitored and "changed" multiple times per day. Each changing of the water requires a visit and 0.5-1 hr of manual work. The pivot system will be activated by pushing a button to start the irrigation process. Once the field has been covered by the pivot, the system would automatically shutdown. This irrigation method would require a 15 minute visit to the field every one to two days. The increase in labor efficiency will free-up hours for the ranch employees to work productively elsewhere on the ranch. The improvement will also increase ranch profitability through improved production. Currently the field has an estimated production total of less than 1 ton per acre used exclusively for livestock grazing. The post project pivot irrigated pasture will have a production level of 2.5-3.5 tons per acre of hay with 0.5 -0.75 ton per acre of fall grazing. The flood irrigation efficiency rate based on United States Department of Agriculture/National Resource Conservation Service (USDA/NRCS) standards is estimated to be 50% and the proposed pivot will have an efficiency rate of 90-95%.

As is often the case with operational savings and production increases in isolated rural communities, it is anticipated that this will translate into direct ranch improvements which will provide increased short-term and long term economic activity.

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

The project will at a minimum directly affect the resale value of the Bridge Creek Ranch by increasing the real value proportionately to the cost of the improvements. Additionally, real property transactions in the area over the last six years have shown that properties with large bodies of water such as reservoirs are more esthetically pleasing and command a higher sales price. By improving the hunting and fishing on the BLM and increasing the instream flows in Bridge Creek, other neighboring property values will be positively influenced. The improved road along the back side of the reservoir will have better access to the neighboring Norton property during adverse weather conditions. This improved access will increase the resale value of the Norton property.

(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:

Steelhead and Chinook salmon are present in Bridge and Bear creeks and are a fish of cultural significance to native tribes. Steelhead fishing (catch and release) has long been a draw to the John Day River. As the number of adult steelhead have increased, so has the number of fishermen. This increase in recreation has had a positive impact on the local economics of the county. In 2012, in response to increasing fish numbers, the John Day River was opened for Chinook fishing for the first time in 36 years. This new opportunity created a large influx of fishermen to the area which also positively impacted the local economy. The opening of the Chinook season and increasing steelhead numbers has been attributed to restoration work being done through-out the John Day Basin. This project is a key part of that restoration as it will serve to increase the quantity and quality of water available to salmonids in the lower portions of Bridge and Bear Creeks and the John Day River. The project will also allow Mah Hah Outfitters to use the reservoir for fishing longer into the summer months.

(f) Increases in irrigated land for agriculture:

The project will improve irrigation on 45 acres of the existing 407.9 acres, which will result in an 11% increase in efficiently irrigation acreage. The field where the pivot is to be installed is currently only irrigated through a series of ditches in the springtime due to a lack of water and the inefficiency of flood irrigation. Although this project will not bring new lands into production it will greatly increase the production levels of a field that is currently marginal.

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:

As part of this project 25% of the additional stored water will be released back in-stream. This will serve multiple purposes:

A) The released water will support the natural hydrograph by partially replenishing the stream flow lost to upstream water withdrawals for irrigation.

B) The released water will be returned to Bear Creek subsurface in a manner that will serve to create a marsh/wetland area in the floodplain.

C) Bridge and Bear creeks are spawning and rearing habitat for threatened steelhead. The total amount of water to be released will be up to 125 acre-ft; this translates to 0.685 cfs over a 92 day period. Base summer flows near the mouth of Bridge Creek have averaged near 2 cfs for five of the last eight years. The released flows will provide an increase of 34% compared to current discharge.

D) Steelhead and Chinook salmon are present in Bridge Creek. The increased flows and reduced water temperatures will improve rearing conditions for the juveniles. Bridge Creek below the project influence contains 0.193 juvenile steelhead/meter (NOAA Fisheries, ISEMP program Sept 2014 survey). Based on this information the project will positively influence approximately 2,500 juvenile steelhead.

E) The created wetland will have a positive impact on the amount of riparian area available for wildlife. This project will enhance the restoration efforts being conducted by the Wheeler SWCD, Confederated Tribes of the Warm Springs, BLM, USFWS, OWEB, and NOAA along Bridge Creek.

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

The method of release into Bear Creek will improve the shallow aquifer conditions along that section of Bear Creek and Bridge Creek. This recharge of the shallow aquifer will be very noticeable as cool springs below the confluence of Bear and Bridge Creek. This cold water refugia is key to salmonid survival and water quality.

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

This project will have a large impact on the water quality of Bridge Creek by providing a much needed cold water influx during the summer months. Many streams in the John Day Basin (Bridge and Bear creeks included) are listed on DEQ's 303(d) list for temperature. Elevated temperatures in the system are a primary threat to maintaining a healthy survivable environment for fish, particularly juvenile steelhead. The water being returned to the stream will come from near the bottom of the reservoir and will be substantially cooler than the stream. Base summer flows in Bridge Creek are typically near 2 cfs. The water being supplied from the reservoir will constitute a 34% increase from base flow and will provide a cooling effect on the order of 2.3 - 3.3° C (4.1 - 5.9°

F). This decreased temperature should make a substantial difference just 7.9 miles downstream at the confluence with the John Day River and serve as cool attractant flow to juveniles in the system during the summer months. A memorandum was prepared by a local professional hydrologist (Joseph Eilers from MaxDepth Aquatics) detailing the timing and water quality ramifications of releasing the reservoir water in-stream. The memorandum is attached as part of this application.

(d) Water conservation:

The installation of the improved irrigation system as the landowner's in-kind will result in a 44% reduction in water use to achieve an outcome that is more productive than current conditions. The irrigation of the 45 acre field will be improved from an estimated efficiency of 50% to 90-95%, which will lead to a direct conservation of water. In this region, most hay crops require approximately 24" of irrigation to the root-zone through-out the growing season. To apply that water, flood irrigation requires a total application of 48", whereas a pivot would require no more than 27".

(e) Increased ecosystem resiliency to climate change impacts:

Resiliency of an ecosystem is its ability to absorb change without a reduction in function. The major anticipated impacts of climate change in the Bridge Creek ecosystem are variances in flow and temperature from historic levels. Increases in frequency or magnitude of high water events are being mitigated through current work involving beaver habitat enhancement leading to increased floodplain interaction and greatly reducing the previous entrenchment that was being seen throughout the system. The project proposed in this grant will further expand the ecosystem's resiliency by buffering the effects of reduced flows and increased temperatures. As stated above in Section IV(1)(3c), the water being supplied from the reservoir will constitute a 34% increase from base flow and will provide a cooling effect on the order of 2.3 - 3.3° C (4.1 - 5.9° F). This will provided a large buffer from the deliterious effects of increased atmospheric temperatures and reduced snowpack conditions. More details regarding the anticipated flow and temperature changes are provided in the attached memorandum.

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

This project will address two high priority limiting factors for the Bridge Creek Watershed; flow and temperature. The John Day Subbasin Plan (NPCC, 2005) lists the Bridge Creek Watershed as the top restoration priority for the Lower/Middle John Day River with Flow Restoration ranking as a Very High restoration strategy (Table 70, Pg 249).

Bridge Creek is also listed by DEQ on 303(d) list for temperature violations. Although the proposed project won't fully bring the temperatures into compliance (<17.8° C), it will constitute a positive step in the right direction.

The John Day Basin TMDL (2010) examines the temperature, bacteria, and dissolved oxygen levels throughout the basin. The primary water quality concern for Bridge Creek is temperature. Models used in the TMDL show that temperature influences were modeled for scenarios with restored flow, a 30% channel width reduction, and restored vegetation and shading conditions. In most scenarios the temperature decrease between current conditions and restored conditions (representing best case with flow, width, and vegetation) was on the order of 2° C for the seven day average daily maximum (7DADM) temperature. This project has the potential to reduce 7DADM temperatures by 3.3° C.

Social/Cultural Benefits ORS 541.673(4)

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

Agriculture, and cattle ranching in particular, are staples of the Wheeler County economy. Local cattle ranches contribute heavily towards a large portion of the regional food production. Taking measures to bolster this industry and ensure its continued success will provide stability for the county as a whole.

Additionally, increased flows in Bridge Creek will support larger populations of game birds and wildlife. In these small rural communities, wildlife is a cornerstone of the local food system because many individuals rely on deer, elk, and other wild game as a source of inexpensive, natural protein.

The increased reservoir capacity will also provide a benefit to public safety by being a source for emergency fire suppression for both aerial and terrestrial efforts. The area has seen two catastrophic wildfires in the last two years. In this arid area large sources of water are critical for the suppression of fires. With the limitations of mechanical suppression methods on the adjoining Sutton Mountain Wilderness Study Area, sources for indirect suppression through helicopter bucket drops are highly valued.

(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:

Wheeler County is the least populous county in the state (<1,400 residents). The population of the county has been declining steadily, the current population is less than half of what was seen in the 1950's. Part of the reason for the declining population is the lack of jobs in the area. According to the 2010 US Census data, Wheeler County ranked last in Oregon for median household income with a value of \$33,400; compared to the Oregon average of \$49,260. Small increases in employment opportunities can make a large difference overall in such a sparsely populated county.

This project will provide an avenue for maintaining and possibly expanding the workforce of the ranch and local contractors while at the same time bolstering tourism which has a direct effect on the economy of this rural community.

(c) The promotion of recreation and scenic values:

The expansion of the reservoir will bring the inundation area near a portion of the Painted Hills National Monument. The nearby area is known as the "Boardwalk" with an elevated walkway winding through several multicolored hills. See the attached map entitled "Painted Hills National Monument - Scenic Opportunities" for further details. Enlarging the reservoir as background will enhance the scenic value of the area.

The flow and temperature augmentation to Bridge Creek will improve the ecological conditions in the lower 7.9 miles that flows through the public lands in the Sutton Mountain Wilderness Study Area and proposed Sutton Mountain Wilderness. These improved conditions will support greater bird and wildlife numbers, which provide increased public activity in the area. Bridge Creek and the John Day River are both listed as scenic waterways. The improved flows will directly benefit both bodies of water and improve their scenic values. Base summer flows in Bridge Creek are typically near 2 cfs. The water being supplied from the reservoir will constitute a 34% increase from base flow, which is significant both ecologically and visually.

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

The project is located within one of NOAA's Intensely Monitored Watersheds (IMW) which monitors temperature and salmonid usage in the Bridge Creek Watershed. Bridge Creek Ranch will work with NOAA personnel and provide them with any information needed.

(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:

The project addresses several priorities which are directly related to water quantity and quality. In the area water quantity and quality are the primary limiting factors for restoration and protection of steelhead and Chinook populations.

Bridge Creek is listed within the Mid-Columbia Steelhead Recovery Plan (NOAA) as a high priority watershed for the spawning and rearing of steelhead. One of the key limiting factors for steelhead recovery as listed in that plan are water quality (flow and temperature).

The OWEB Basin Priorities for the Bridge Creek Watershed list Altered Thermal Regime as a High Impact priority.

This project specifically address three objectives of Oregon's Integrated Water Resource Strategy.

Objective 2B - Improve water-use measurement and reporting

-This project will replace one failed measuring device on the diversion from Bridge Creek and install a flow measuring device on the diversion from Bear Creek to allow for reporting of water use.

Objective 5B - Assist with climate change adaptation and resiliency strategies

-As demonstrated in the attached "Thermal effects of cold water discharge from Painted Hills Reservoir into Bridge Creek" memo, this project will increase flows and reduce temperatures during the critical summer months. This will assist in off-setting some of the negative effects of climate change.

Objective 10A - Improve water-use efficiency and water conservation

-This project will convert 45 acres of flood irrigation with 50% efficiency to a 90-95% efficient pivot system. The frequency drive and pump replacement will reduce power consumption 20-25%.

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

In addition to the plans and Oregon's Integrated Water Resources Strategy (OIWRS) objectives listed above, this project will complement other larger collaborative planning and implementation efforts.

Restoration of the steelhead and Chinook salmon population in the John Day Basin is a priority of the Wheeler SWCD, NOAA, CTWS, ODF&W, and many other public and private groups that comprise the John Day Coordination Group and the John Day Partnership.

The Confederated Tribes of the Warm Springs Watershed Restoration Strategy also identifies the Bridge Creek Watershed as a priority for restoration work with water quality and quantity being a key limiting factor.

Wheeler SWCD recently submitted a project for funding through the Regional Conservation Partnership Program (RCPP) entitled North Slope Ochoco Holistic Restoration Project and was approved for \$4.1 million dollars of funding by the NRCS within the Columbia River Basin Critical Conservation Area.

This project focuses on the holistic restoration of the Mountain Creek, Bridge Creek, and Cherry Creek watersheds and will address the NRCS priorities in this region of insufficient water, water quality degradation, and inadequate habitat for fish. The Bear Creek conveyance pipeline in this application is being partially funding by this RCPP funding pool.

2. Identify Project Location.

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

Location Map

Project Overview Map

(b) Township Range Section Quarter-Quarter Section
10 S 20 E 25 Entire SW Quarter

(c) Tax Lot Number(s)

1700, 1704

(d) Latitude/Longitude
44.668/ -120.277

(e) County
Wheeler

(f) Watershed
Bridge Creek > John Day

(g) River/Stream Mile (where applicable)
RM 7.9 of Bridge Creek - enters John Day River at RM 135

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.
A letter from the landowner's representative (Robert Riecke) is attached demonstrating that they are aware of, and agree to, the project detailed in this proposal.

- (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.

Storage and flow release will be monitored as part of this project. The NOAA IMW has temperature monitoring stations downstream of the project location. The Bridge Creek Ranch will actively work with NOAA and provide flow release data to support their monitoring efforts.

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 Nov 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	
CONSTRUCTION TASKS									
<i>improve Norton access road and parking area</i>				X	X				
<i>install frequency drive and pump upgrade</i>				X	X				
<i>install irrigation pipeline and pivot</i>				X	X				
<i>install measuring devices</i>				X	X				
<i>install conveyance pipeline on Bear Creek</i>						X	X		
<i>install bridge and improve access road to dam</i>						X			
<i>increase dam height at reservoir</i>						X	X		
<i>rock dam face, install headgate and install spillway</i>							X	X	
ADMINISTRATIVE TASKS									
<i>cultural survey and concurrence</i>			X	X					
<i>state and local permits (DSL, ODFW, county, electrical)</i>			X	X					
<i>finalize irrigation/pump/conveyance design</i>			X						
<i>construction stake-out/contractor site-visit</i>				X					
<i>solicit bids for materials and construction</i>				X					
<i>dam construction oversight and report</i>						X	X	X	
<i>claim of beneficial use, 25% release certificate</i>									X

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

The water rights application (R-84459) has been submitted and OWRD has been issued a final order approving the permit, contingent on approval of the engineering plans to raise the reservoir. The plans have been submitted and a permit is anticipated by August 2016.

The in-stream release of 25% of the additional stored water will need to be incorporated into the permit. The time and resources required to accomplish this are unknown, but no delays are currently anticipated.

The bridge will need to be installed within the in-water work window of July 15th-August 31st. The work on the dam is contingent on upgrading this roadway to accommodate the necessary equipment. The Oregon Department of Fish and Wildlife is generally open to extensions to the middle or end of September, depending on the flows, but in-stream work after the end of September is unlikely. This is one of the main limiting factors for project completion. Should the bridge be installed in 2016, the time-frame will be expedited.

The proposed time-frame takes into account several considerations which may cause project delays. These considerations include; permit delays, contract signing delays, and abnormal weather.

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

All documents pertaining to the feasibility of the project are attached.

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

Interim performance benchmarks can be directly tied to the Key Tasks outlined in Section IV (4).

The key benchmark for the project will be the claim of beneficial use which is expected to be finalized in 2019.

Long term performance benchmarks could include the examination of flows and temperatures at the USGS gauging station along Bridge Creek (14046778) located seven miles downstream of the project site. A noticeable difference in the quality (lower temperature) and quantity of water should be apparent during the water release period. Water

releases will occur after the OWRD issues a secondary permit containing the terms associated with the 25% release to augment summer flows.

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

Wheeler County Government
Wheeler County Soil and Water Conservation District
Freshwater Trust
Confederated Tribes of the Warm Springs

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

This project is a joint effort between Bridge Creek Ranch and the Wheeler Soil and Water Conservation District (SWCD). The Wheeler SWCD has been conducting in-stream and upland restoration projects in the Bridge Creek Watershed for over 15 years. A recent multi-phase project on the same ranch included the installation of over 200 pieces of wood, 30 in-stream habitat structures, bank stabilization at multiple sites, installation of riparian fencing for cattle exclusion along over 2.5 miles of stream, a bridge, 3,000+ trees, and a concerted effort towards the elimination of invasive Russian olive trees along the riparian corridor. This multi-phase project was a joint effort between Bridge Creek Ranch, Wheeler SWCD, Oregon Watershed Enhancement Board (OWEB), United States Fish and Wildlife Service (USFWS), Ecotrust, Confederated Tribes of the Warm Springs (CTWS), and ODFW and has invested over \$750,000 into the restoration of Bridge and Bear Creeks on the ranch.

Bridge Creek is one of NOAA's Intensively Monitored Watersheds (IMWs) and the agency has been working extensively in Bridge Creek on the public portions located upstream and downstream of the ranch property. Their work includes the creation of beaver dam analog structures which serve to promote beaver dam creation and result in increased floodplain interaction. A project overview is available online (<http://www.nwfsc.noaa.gov/research/divisions/fe/wpg/beaver-assist-stld.cfm>).

This project will serve to increase the quality and quantity of water present in the lower portion of Bridge Creek greatly enhancing the already completed restoration projects.

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.

The correspondence to date 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.

The correspondence to date is attached. A recent cultural survey was conducted for restoration work in close proximity to this project and no culturally significant features were discovered. The previous survey will be expanded to include the work area and submitted to the Oregon State Historic Preservation Office (SHPO).

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.

A water rights application has been made (R-84459), and OWRD has issued a final order approving the permit contingent on approval of the engineering plans to raise the reservoir. The plans have been submitted and a permit is anticipated by August 2016.

(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 electrical permit for the pump and pivot work will be required

An Oregon Department of State Lands and Army Corp of Engineers permit will be required for the entirety of the project. The local DSL coordinator has been contacted and made aware of the project for a future permit application.

An ODFW fish passage permit will be required for the bridge replacement. The process is a local short turn-around process.

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.

Site Suitability Evaluation Report

Painted Hills Reservoir Design Set

Painted Hills Reservoir Breach Evaluation Report

Painted Hills Reservoir Geotechnical Analysis

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.

The existing capacity of the reservoir is 800 Acre-ft. The final capacity after the project is complete will be 1,300 Acre-ft, representing an increase of 500 Acre-ft of storage.

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 #R-84459

Permit issued. Application # Permit #(See 11a on previous page)

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.

25 %

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.

<p>In the Type column below matching funds may include:</p>	<p>In the Status column below matching funds may have the following status:</p>
<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.

<p>Match Funding Source (if in-kind, briefly describe the nature of the contribution)</p>	<p>Type (✓ One)</p>	<p>Status (✓ One)</p>	<p>Amount/ Dollar Value</p>	<p>Date Match Funds Available (Month/Year)</p>
<p><i>Bridge Creek Ranch LLC</i></p>	<input checked="" type="checkbox"/> cash <input checked="" type="checkbox"/> in-kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> pending	<p>\$138,864</p>	<p>May 16</p>
<p><i>USDA/NRCS (RCPP)</i></p>	<input checked="" type="checkbox"/> cash <input type="checkbox"/> in-kind	<input type="checkbox"/> secured <input checked="" type="checkbox"/> pending	<p>\$131,250</p>	<p>January 17</p>
	<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		

Section B – Project Budget

Please provide a line item budget for the project; see example below. If significant additional detail is needed please complete separately and attach to completed application.

Line Items	Number of Units* <i>(e.g. # of Hours)</i>	Unit Cost <i>(e.g. hourly rate)</i>	In-Kind Match	Cash Match Funds	OWRD Funds	Total Cost
Materials	<i>see attached</i>			\$121,564	\$149,995	\$271,559
Contractual/Services	<i>see attached</i>		\$24,800	\$123,750	\$380,970	\$529,520
Staff Salary/Benefits						
Equipment (must be approved)						
Supplies						
<i>Other:</i>						
<i>See Attached Budget for further breakout</i>						
Total for Section B			\$24,800	\$245,314	\$530,965	\$801,079
Percentage for Section B			3	31%	66%	100%

* Note: "Unit" should be per "hour" or "day" not per "project" or "contract." $\text{Number of Units} \times \text{Unit Costs} = \text{Total Cost}$

Section C – Key Task Cost

Complete Section C below. Key Tasks identified in Section C should be the same as the Key Tasks in Section IV(4) above.

Project Key Tasks	In-Kind Match	Cash Match Funds	OWRD Funds	Total Cost
CONSTRUCTION TASKS				
<i>improve Norton access road and parking area</i>			\$94,625	\$94,625
<i>install frequency drive and pump upgrade</i>		\$29,500		\$29,500
<i>install irrigation pipeline and pivot</i>	\$24,800	\$84,564		\$109,364
<i>install measuring devices</i>			\$35,750	\$35,750
<i>install conveyance pipeline on Bear Creek</i>		\$131,250		\$131,250
<i>install bridge and improve access road to dam</i>			\$46,200	\$46,200
<i>increase dam height at reservoir</i>			\$190,000	\$190,000
<i>rock dam face, install headgate and install spillway</i>			\$103,040	\$103,040
ADMINISTRATIVE TASKS				
<i>cultural survey and concurrence</i>			\$5,500	\$5,500
<i>state and local permits (DSL, ODFW, county, electrical)</i>			\$8,350	\$8,350
<i>finalize irrigation/pump/conveyance/road design</i>			\$15,000	\$15,000
<i>construction stake-out/contractor site-visit</i>			\$8,000	\$8,000
<i>solicit bids for materials and construction</i>			\$4,500	\$4,500
<i>dam construction oversight and report</i>			\$12,000	\$12,000
<i>claim of beneficial use, 25% release certificate</i>			\$6,500	\$6,500
Total for Section C	\$24,800	\$245,314	\$530,965	\$801,079