JASMINE WATER CONSERVATION PROJECT

TALENT IRRIGATION DISTRICT
APPLICANT

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TECHNICAL PROPOSAL and EVALUATION CRITERIA

EXECUTIVE SUMMARY

- *Date*: January 14, 2013

- *A one paragraph project summary that specifies the work proposed, including how project funds will be used to accomplish specific project activities and briefly identifies how the proposed project contributes to accomplishing the goals of this FOA(see Section III,B, "Eligible Projects").*

  The Talent Irrigation District (District) is requesting $205,643 under Funding Group I to pipe the remaining four sections of the lower end of the Talent Canal, measuring approximately 6,880' (1.3 miles). Previous Reclamation grant opportunities have allowed the District to enclose 12,000' of this canal, and this opportunity will complete the water conservation for the lower 4.9 miles of the canal. The benefits of this project include conservation of water through the reduction of evaporation and seepage and will provide stability of the canal structure to reduce the risk of canal failure that has the potential of affecting downslope properties. Projects such as this are supported by the goals of the Water for Irrigation Stream and Economy (WISE) Project[1], an Oregon Solutions Project[2].

- *State the length of time and estimated completion date for the project.*

  The project will be phased in over a two year period beginning in October 2013 with an estimated completion date of September 2015.

  The District has already incurred some costs on this project and would like to include these costs as match in this grant agreement. These costs have been incurred since October 1, 2012.

[1] WISE is supported by 19 stakeholders who represent a wide range of stakeholders including agricultural, environmental, and municipal and agency interests. The goal of the WISE Project is to improve overall water management in the region by enhancing irrigation water availability and reliability, municipal summer source water quality, and degraded water quantity and quality for native anadromous salmonids in an economically and environmentally feasible manner. See www.wiseproject.org for more information.
[2] Oregon Solutions is a program for large projects approved by the Governor's office. Oregon Solutions works with local stakeholders to help provide momentum for these specially selected projects.

BACKGROUND DATA

- *Provide a map of the area showing the geographic location (include the State, County, and direction from the nearest town).*

  See Attachment A.

- *As applicable, describe the source of water supply, the water rights involved, current water uses (i.e., agriculture, municipal, domestic, or industrial), the number of water users served, and the current and projected water demand. Also, identify potential shortfalls in water supply. If water is primarily used for irrigation, describe major crops and total acres served.*

  The District provides water for agricultural lands included in and around the cities of Medford, Phoenix, Talent and Ashland in Jackson County, Oregon. The District's boundaries encompass 90 to 100 square miles with approximately 15,823 irrigated acres serving an estimated 2,900 water users. The major crops produced by these agricultural lands are pasture, hay, orchard, vineyard, row crop and residential lawns and gardens. The District also provides municipal/domestic water to the City of Ashland for distribution through their system.

  The District's irrigation water supply comes from the flows of the following creeks: South Fork of Little Butte Creek and its tributaries; Grizzly Creek and Keene Creek above Howard Prairie, Hyatt Prairie and Keene Creek dam; Emigrant Creek and its tributaries above Emigrant Dam; Bear Creek and its tributaries below Emigrant Dam; McDonald Creek; as well as several other tributaries throughout the District area. The District has storage in four Reclamation reservoirs: Howard Prairie, Hyatt, Keene Creek and Emigrant.

  The District relies heavily on water imported from the Klamath Basin and the Little Applegate Basin to supply its lands.

  The District utilizes the following water rights for both surface and storage:

  Certificate #s: 79212
  79213
  79214
  79215
  79216
  83727

  Average annual demand is roughly 55,000 acre feet with an annual target of on-farm allotments of 2.65 acre feet per acre of land for irrigation. The

reservoirs also support recreation, power generation, flood control operations and fisheries.

Conservation projects such as this allows the District to:

- provide a more reliable supply to its patrons, especially the end users,
- better meet natural resource requirements
  - stream augmentation
  - fisheries habitat
  - water quality
- store the saved water for use during drought years
  - for District patrons
  - to augment flows to Reclamation's Green Springs Power Plant
  - improve recreational activities
- create an efficiency block within the last five miles of the Talent Main Canal by correlating total flow to acreage served.

The District is not immune to the ever increasing demand for water supplies. There are possible circumstances that could affect the District's ability to provide water to its patrons. The District is closely monitoring situations as they arise such as the Klamath Adjudication Process, ongoing ESA and TMDL issues, Clean Water Act process, etc.

- *In addition, describe the applicant's water delivery system as appropriate. For agricultural systems, please include the miles of canals, miles of laterals, and existing irrigation improvements (i.e., type, miles, and acres). For municipal systems, please include the number of connections and/or number of water users served and any other relevant information describing the system.*

Irrigation water is provided to the District's 2,900 water users by an extensive collection, diversion, storage, and conveyance system. There are approximately 130 miles in canals and 113 miles in laterals. The District is unique in that rather than a single main delivery canal, the District has five major delivery canals that are intertied.

The delivery of the District's irrigation water is primarily by canals and laterals that are open channels and are subject to water loss through leaks, seepage and evaporation and to the potential of canal failure which could impact downslope properties causing extensive damage to people and their possessions. Through opportunities such as this, the District has been able to leverage its limited financial resources to improve the delivery system. Approximately 30% of the canals are either piped or lined, and

approximately 75% of laterals are piped due, in part, to these funding opportunities.

The Talent Canal, where this project is located, is approximately 20 miles long, irrigates 3,825 acres and has 856 water users.

- *If the application includes renewable energy or energy efficiency elements, describe existing energy sources and current energy uses.*

  Not applicable to this application.

- *Identify any past working relationships with Reclamation. This should include the date(s), description of prior relationships with Reclamation, and a description of the project(s).*

  Since the late 1950s, the Talent Irrigation District and the Bureau of Reclamation have worked closely together. The District is a Reclamation district and is one of three districts located in the Rogue River Basin Project – Talent Division.

  The District has had the opportunity to receive several grants through the Bureau of Reclamation. See Attachment B for a list of joint projects.

TECHNICAL PROJECT DESCRIPTION

- *The technical project description should describe the work in detail, including specific activities that will be accomplished as a result of this project. This description shall have sufficient detail to permit a comprehensive evaluation of the proposal.*

  The Talent Irrigation District proposes to pipe 6,880' (1.3 miles) of the remaining open sections on the lower end of the Talent Canal. This opportunity completes the water conservation for the lower 4.9 miles of the canal.

  This project is divided into four segments which are defined by the canal's location to the nearest street or road, running from the first job site downstream to the last: Buena Vista to Glory C; Jasmine Avenue; S. Stage Road; and Knowles Road.

  1. BUENA VISTA TO GLORY C
     Of the four sites, this section is the longest and requires the largest diameter pipe at 2,960' of 24" pipe. We estimate that 25 concrete structures will need to be constructed to provide transition between

existing piped sections, clean outs and deliveries. Some structures could be combined or eliminated depending on alignment. The estimated cost of this site is **$200,916.60**. The estimated water savings for this section is **341** acre feet per season.

2. JASMINE AVENUE
   This site is located nearly 2 miles downstream of the Buena Vista to Glory C site. This section is the shortest of the four and requires only 560' of 18" pipe. There are 6 concrete structures that need to be constructed. The estimated cost of this site is **$31,823.08**. The estimated water savings for this section is **64** acre feet per season.

3. S. STAGE ROAD
   This site is located just 1,000' downstream of the Jasmine Avenue site. It will require 2,160' of 18" pipe with 15 concrete structures and an estimated cost of **$118,034.16**. The estimated water savings for this section is **249** acre feet per season.

4. KNOWLES ROAD
   This last section is located approximately 2,430' downstream of the S. Stage Road site and is the last open segment of the Talent Main Canal. This site requires 1,200' of 18" pipe with 6 concrete structures and a total estimated cost of **$60,513.50**. The estimated water savings for this section is **138** acre feet per season.

Benefits of this project include the following:

- Reduces leaks and seepage by enclosing the canal with water tight pipe preventing the loss of water from leaching through the canal bank, saving an estimated **792** acre foot of water per year.

- Reduces drainage and erosion by nearly eliminating the risk of canal failure or overtopping caused by seepage that can undermine the canal and moss growth that can choke the canal which has the potential of damaging downslope properties.

- Reduces system spills once the piping is complete by giving us better operational control at the end of the system, allowing us to more fully utilize the Kershaw re-regulation pond.

- Makes more water available to be held in the reservoirs for future use.

- Reduces operational costs by eliminating the need for regular canal cleanings during the off-season, mossing operations during the irrigation season, and increased monitoring of flows due to fluctuations in deliveries during irrigation season.

- Improve crop yield by minimizing the interruption in water deliveries to the tail end of the Talent Canal.

- Reduces on-farm costs by deterring moss growth and debris from entering the canal that can plug pumps and sprinkler heads and by providing a more stable flow of water during irrigation cycles.

- Improves water supply/delivery reliability by decreasing the influence of seepage and evaporation, thereby allowing for a more stable flow at the tail end of the Talent Canal.

- Improves water quality by cooling the temperature of the water as a result of piping the open sections and by better control of operational spills which reduces runoff.

- Protects/assists endangered species restoration efforts by water savings that can be used for other benefits.

- The benefits are compatible with the goals of the WISE Project. The design standards for this project are compatible with those of the WISE Project. This project has the support of a diverse group including agricultural, environmental, agency and municipal.

TECHNICAL PROPOSAL: EVALUATION CRITERIA

- *The evaluation criteria portion of your application should thoroughly address each of the following criterion and subcriterion in the order presented to assist in the complete and accurate evaluation of your proposal. (Note: it is suggested that applicants copy and paste the below criteria and subcriteria into their applications to ensure that all necessary information is adequately addressed).* ***Applications will be evaluated against the evaluation criteria (listed below), which comprise 100 points of the total evaluation weight.*** *Please note that projects may be prioritized to ensure balance among the program Task Areas and to ensure that the projects address the goals of the WaterSMART program.*

EVALUATION CRITERION A: WATER CONSERVATION (28 Points)

- *Up to* ***28 points*** *may be awarded for a proposal that will conserve water and improve efficiency. Points will be allocated to give consideration to projects that are expected to result in significant water savings.*

Subcriterion No. A.1. – Water Conservation

- *For projects with quantifiable and sustained water savings, please respond to Subcriterion No. 1(a) – Quantifiable Water Savings described in this subsection. If the project does not result in quantifiable water savings but will improve water management, please respond to Subcriterion No. 1(b) – Improved Water Management described in this subsection. If the project has separate components that will result in both quantifiable water savings and improved water management, an applicant may respond to both Subcriteria No. A.1(a) and (b). However, an applicant is limited to 20 points total under both Subcriteria No. A.1(a) and (b).*

Subcriterion No. A.1(a) – Quantifiable Water Savings

- *Up to **20 points** may be allocated based on the quantifiable water savings expected as a result of the project.*

- ***Describe the amount of water saved.** For projects that conserve water, please state the estimated amount of water expected to be conserved (in acre-feet per year) as a direct result of this project. Please provide sufficient detail supporting how the estimate was determined, including all supporting calculations. Please be sure to consider the questions associated with your project type (listed below) when determining the estimated water savings, along with the necessary support needed for a full review of your proposal (please note, the following is **not** an exclusive list of eligible project types. If your proposed project does not align with any of the projects listed below, please be sure to provide support for the estimated project benefits, including all supporting calculations and assumptions made).*

  This project is estimated to conserve 792 acre feet of water each year. This estimation is based on the System Optimization Review[3] (SOR) completed in 2010. While the SOR did not specifically target the project area, there were three sites: one on the Talent Canal and two on the West Canal that due to their proximity to the Talent Canal and having similar topography, flow and physical characteristics were used in estimating the seepage losses for the four locations of this project.

- *In addition, all applicants should be sure to address the following:*

  - *What is the applicant's average annual acre-feet of water supply?*

    The District's average annual water supply is 55,000 acre feet. This project's estimated water savings amounts to 1.7% of the District's total average annual water supply.

[3] System Optimization Review Talent Division, Rogue River Basin Project, Jackson County, Oregon dated September 21, 2010

- *Where is that water currently going (e.g., back to the stream, spilled as the end of the ditch, seeping into the ground, etc.)?*

  The estimated 792 acre feet of water loss each year is lost through deep percolation, evaporation due to aquatic weed build up, operational spills and return flows to minor receiving streams.

- *Where will the conserved water go?*

  The conserved water will be held in the reservoirs for use
  - to mitigate the effects of low water scenario years,
  - to assist current releases and operations related to fisheries' releases and habitat restoration,
  - and to create more reliable, efficient and stable canal operation.

- ***Please address the following questions according to the type of project you propose for funding.***

  1. ***Canal Lining/Piping:*** *Canal lining/piping projects can provide water savings when irrigation delivery systems experience significant losses due to canal seepage. Applicant proposing lining/piping projects should address the following:*
     - *How has the estimated average annual water savings that will result from the project been determined? Please provide all relevant calculations, assumptions, and supporting data.*

     The calculation is based on the average seepage rate in cubic feet per second per linear foot on three similar locations that were included in the SOR.

Table 1. Excerpt from *Table 1. 2009 Seepage Data Summary, System Optimization Review, Rogue River Basin Project, Jackson County, Oregon*

Site Description	Site Length (ft)	Number of Measurements	Average Measured Canal Inflow (cfs)	Average Seepage (cfs)	Average Seepage Per Irrigation Season	Average Seepage Rate (cfs/linear ft)
TMC at Oak Street	1113	6	28.41	0.9	320	0.00081
WMC at Carmen Road	754	6	12.73	0.10	36	0.00013
WMC at Burrell Road	887	6	2.15	0.17	62	0.00020
AVERAGE SEEPAGE RATE						0.00038

After several measurements were taken throughout the irrigation season, the average seepage rates were calculated as 0.00081 cfs/linear foot for the Talent Canal at Oak Street, 0.00013 cfs/linear foot for the West Canal at

Carmen Road and 0.00020 cfs/linear foot for the West Canal at Burrell Road. Taking the average between the three sites, we used 0.00038 cfs/linear foot as the seepage rate in our calculations.

To apply this seepage rate to the four locations in our project, we have calculated estimated seepage losses using the following formula:

Acre Feet (af) Per Year = Canal Feet x Seepage Rate x # of Days of Irrigation Season x Conversion Rate of cfs to af

Where the canal feet is specific to the project, the seepage rate is .00038, the number of days of peak irrigation flow is 153 (May 1st through September 30th), and the conversion rate of cfs to af is 1.98.

1. BUENA VISTA TO GLORY C – 2,960'
   Calculation: 2960 x .00038 x 153 x 1.98 = 341 af estimated losses

2. JASMINE AVENUE – 560'
   Calculation: 560 x .00038 x 153 x 1.98 = 64 af estimated losses

3. S. STAGE ROAD – 2,160'
   Calculation: 2160 x .00038 x 153 x 1.98 = 249 af estimated losses

4. KNOWLES ROAD – 1,200'
   Calculation: 1200 x .00038 x 153 x 1.98 = 138 af estimated losses

The calculation for the total project is:
6,880 x .00038 x 153 x 1.98 = **792 af annual estimated loss**

- *How have average annual canal seepage losses been determined? Have ponding and/or inflow/outflow tests been conducted to determine seepage rates under varying conditions? If so, please provide detailed descriptions of testing methods and all results. If not, please provide an explanation of the method(s) used to calculate seepage losses. All estimates should be supported with multiple sets of data/measurements from representative sections of canals.*

  The methodology used in calculating the SOR seepage rate was as follows:
  "Seepage rates were calculated using an inflow-outflow method, where downstream flow measurements were subtracted from upstream flow measurements along the canal segment of interest. Canal seepage can be estimated by comparing multiple flow measurements along a section of canal, using the following equation:

$L = Q_{us} - Q_{ds} + Q_r - Q_d$ (Adapted from USGS, 2004)

Where L is canal seepage, Q_{us} is discharge at the upstream point of the segment of interest, Q_{ds} is discharge at the downstream point, Q_r is discharge of any return flows along the segment of interest during the flow measurement period, and Q_d is discharge of any diverted flows along the segment of interest during the flow measurement period."

- *What are the anticipated annual transit loss reductions in terms of acre-feet per mile for the overall project and for each section of canal included in the project?*

The anticipated annual transit loss reduction per mile is 609 acre feet, calculated as: 6,880 feet of canal = 1.3 miles

792 af ÷ 1.3 miles = **608 af/mile**

BUENA VISTA TO GLORY C
Calculation: 2960' = .561 miles
.561 miles x 608 af/mile = 341 af savings

JASMINE AVENUE
Calculation: 560' = .106 miles
.106 miles x 608 af/mile = 64 af savings

S. STAGE ROAD
Calculation: 2160' = .409 miles
.409 miles x 608 af/mile = 249 af savings

KNOWLES ROAD
Calculation: 1200' = .227 miles
.227 miles x 608 af/mile = 138 af savings

- *How will actual canal loss seepage reductions be verified?*

Once the canal is enclosed in pipe, vaults or cleanouts installed as part of the project will be fitted with rectangular weirs, not only to help quantify gains in efficiency but to create efficiency blocks for irrigation deliveries.

- *Include a detailed description of the materials being used.*

The District proposes to install 3,920' of 18" and 2,960' of 24" of water-tight, high density polyethylene (HDPE) pipe and approximately 52 concrete structures with various sizes of headgates. The pipe will be placed in the existing canal prism and installed to

manufacturer specifications. On-site material will serve as backfill and bedding will be placed as needed.

2. ***Municipal Metering***
   Not applying under this category.
3. ***Irrigation Flow Measurement***
   Not applying under this category.
   SCADA and Automation
   Not applying under this category.
4. ***Groundwater Recharge***
   Not applying under this category.
5. ***Landscape Irrigation Measures***
   Not applying under this category.
6. ***High-Efficiency Indoor Appliances and Fixtures***
   Not applying under this category.

Subcriterion No. A.1(b) – Improved Water Management

- *Up to **5 points** may be awarded if the proposal will improve water management through measurement, automation, advanced water measurement systems, or through implementation of a renewable energy project, or through other approaches where water savings are not quantifiable.*

- ***Describe the amount of water better managed.** For projects that improve water management but which may not result in measurable water savings, **state the amount of water expected to be better managed, in acre-feet per year and as a percentage of the average annual water supply.** (The average annual water supply is the amount actually diverted, pumped, or released from storage, on average, each year. This does not refer to the applicant's total water right or potential water supply.) Please use the following formula:*

$$\frac{\text{Estimated Amount of Water Better Managed}}{\text{Average Annual Water Supply}}$$

The Talent Canal is one of five major delivery canals of the District. The average annual diversion for the Talent Canal based on a 5 year average is 9,508 acre feet. The average annual diversion for the entire system is 55,000 acre feet. The estimated amount of water that is better managed for the entire system due to this project is **17.29%** calculated as follows:

$$\frac{9{,}508 \text{ af}}{55{,}000 \text{ af}}$$

The amount of water better managed specifically to this project on the Talent Canal is **8.33%** calculated as follows:

$$\frac{792 \text{ af in water savings}}{9{,}508 \text{ af avg annual diversion Talent Canal}}$$

Subcriterion No. A.2. – Percentage of Total Supply

- *Up to **4 additional points** may be allocated based on the percentage of the applicant's total average water supply (i.e., including all facilities managed by the applicant) that will be conserved directly as a result of the project.*

- ***Provide the percentage of total water supply conserved:** State the applicant's total average annual water supply in acre-feet. Please use the following formula:*

$$\frac{\text{Estimated Amount of Water Conserved}}{\text{Average Annual Water Supply}}$$

The estimated percentage of total water supply conserved is calculated as **1.44%**

$$\frac{\text{792 af in estimated water conserved}}{\text{55,000 af average annual water supply}}$$

Subcriterion No. A.3. – Reasonableness of Costs

- *Up to **4 additional points** may be awarded based on the reasonableness of the cost for the benefits gained.*

- *Please include information related to the total project cost, annual acre-feet conserved (or better managed), and the expected life of the improvement. Use the following calculation:*

$$\frac{\text{Total Project Cost}}{\text{(Acre-Feet Conserved, or Better Managed x Improvement Life)}}$$

$$\frac{\text{\$411,287 Project Cost}}{\text{79,200 (792af x 100yrs)}} = \textbf{\$5.19}$$

Failure to include this required calculation will result in no score for this section.

- *For all projects involving physical improvements, specify the expected life of the improvement in number of years and provide support for the expectation (e.g., manufacturer's guarantee, industry accepted life-expectancy, description of corrosion mitigation for ferrous pipe and fittings, etc.). Failure to provide this information may result in a reduced score for this section.*

The District consulted the website of the Plastic Pipe Institute to determine the estimated life expectancy for HDPE pipe. According to the document entitled *Service Life of HDPE Corrugated Pipe,* Attachment C of this application, "the latest research suggests the service life of corrugated HDPE pipe is well in excess of 100 years, ..."

For our purpose, deterioration should occur at a slow rate since the location of the installation provides low pressure and low sediment

reducing inner-wall wear and tear. The pipe will be buried to a depth according to the manufacturer's specifications which will reduce deterioration by the elements.

EVALUATION CRITERION B: ENERGY-WATER NEXUS (16 Points)

This criterion is not applicable to this project.

EVALUATION CRITERION C: BENEFITS TO ENDANGERED SPECIES (12 Points)

- *Up to **12 points** may be awarded for projects that will benefit federally-recognized candidate species or up to **12 points** may be awarded for projects expected to accelerate the recovery of threatened or endangered species, or addressing designated critical habitat.*

- *For projects that will directly benefit federally-recognized candidate species, please include the following elements:*

  - *What is the relationship of the species to water supply?*

    This project will improve water supply for the entire reach of Bear Creek below Emigrant Dam to the mouth. The federally listed species for this reach includes the SONC coho and Pacific Eulachon (Pacific Lamprey).

    Both species rely on flows for migration, spawning, and rearing. Any improvements to stream flows will enhance life history conditions.

  - *What is the extent to which the proposed project would reduce the likelihood of listing or would otherwise improve the status of the species?*

    The 792 acre feet conserved through this project allows for improved management of water releases for endangered species based on the Biological Opinion for the Rogue River Basin Project, Talent Division[4]. These releases have been determined in order to help the recovery of the species listed above. The implementation of this project represents progress in meeting the requirements of the Biological Opinion.

[4] Endangered Species Act Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Future Operation and Maintenance of the Rogue River Basin Project (2012-2022), Rogue and Klamath River Basins (HUCs:18010206, 17100308, 17100307), Oregon and California

- *For projects that will directly accelerate the recovery of threatened or endangered species or address designated critical habitats, please include the following elements:*
  - *How is the species adversely affected by a Reclamation project?*

    Talent Irrigation District diverts an annual average of 55,000 acre feet for the entire project. The Talent Canal is one of five delivery canals in the District's system. Annual diversions from this canal total 9,508 acre feet (five year average). Diversions of these flows could affect fish habitat quality including water quality and quantity for the listed species above for the entire reach of Bear Creek below Emigrant Dam. Additionally Talent Irrigation District operates on a return flow system which further reduces water quality within the Bear Creek Basin.

    Bear Creek is listed on the Oregon Department of Environmental Quality's list of water quality impaired streams (303(d) list). This project will improve water quality throughout Bear Creek. This will be beneficial to spawning, rearing and migration for SONC coho and Pacific Lamprey.

  - *Is the species subject to a recovery plan or conservation plan under the Endangered Species Act?*

    Yes. NOAA's recovery plan for the SONC coho is called *The Southern Oregon Northern California Coho Salmon Recovery Plan.*

  - *What is the extent to which the proposed project would reduce the likelihood of listing or would otherwise improve the status of the species?*

    The current NOAA Biological Opinion (Bi-Op) requires fine adjustments on reservoir releases such as instream flow needs, ramping rates, habitat needs as well as diversion releases. The project will help meet those requirements as well as future fisheries' needs.

    The Bi-Op spoke to the possibility of adverse effect on SONC coho and their habitat. Providing more water to the system and better management of water would improve the status.

- *Projects that benefit both federally-recognized candidate species and federally-listed threatened or endangered species or designated critical habitat will receive additional consideration under this criterion. Please see <www.fws.gov/endangered/index.html> for a complete listing of federally-recognized candidate species and federally-listed threatened or endangered species in your area.*

EVALUATION CRITERION D: WATER MARKETING (12 Points)

- *Up to **12 points** may be awarded for projects that propose water marketing elements, with maximum points for projects that establish a new water market. Note: Water marketing does **not** include an entity selling conserved water to an existing customer. This criterion is intended for the situation where an entity that is conserving water uses water marketing to make the conserved water available to meet other existing water supply needs or uses.*

Not applicable to this project.

EVALUATION CRITERION E: OTHER CONTRIBUTIONS TO WATER SUPPLY SUSTAINABILITY (14 Points)

- *Up to **14 points** may be awarded for projects expected to contribute to a more sustainable water supply. This criterion is intended to provide an opportunity for the applicant to explain how the project relates to a **WaterSMART Basin Study**, how the project could expedite future **on-farm improvements**, or how the project will provide **other benefits to water supply sustainability** within the basin. An applicant may receive the maximum 14 points under this criterion based on discussion of one or more of the numbered sections below.*

1. *Points may be awarded for projects that address an adaptation strategy identified in a **WaterSMART Basin Study**.*

Not applicable to this project.

2. *Points may be awarded for projects that will help to expedite future **on-farm irrigation improvements**, including future on farm improvements that may be eligible for NRCS funding. Please address the following:*

This project will significantly reduce aquatic weed growth thus reducing screening requirements for on-farm improvements. Additionally this project improves water reliability, availability and reduces canal flow fluctuations, which in turn, improves the effectiveness of on-farm improvements.

3. *Points may be awarded for projects that include **other benefits** to water supply sustainability.*

    - *Projects that do not address a need/adaptation strategy identified in a Basin Study or do not help expedite future on-farm irrigation improvements, may receive maximum points under this criterion by thoroughly explaining additional project benefits. Please provide sufficient explanation of the additional expected project benefits and their*

significance. Additional project benefits may include, but are not limited to, the following:

- *Will the project make water available to address a specific concern? For example:*

  i. Will the project address water supply shortages due to climate variability and/or heightened competition for finite water supplies (e.g., population growth or drought)? Is the river, aquifer or other source of supply over-allocated?

  According to the State of Oregon Water Resource Department, the water in the Rogue Basin has been fully allocated.

  This water conservation project will assist in meeting water supply shortages due to climate variability by conserving water with reduction in losses, thereby improving reservoir carryover and water management practices District wide.

  ii. Will the project market water to other users? If so, what is the significance of this (e.g., does this help stretch water supplies in a water-short basin)?

  No, this project will allow the water that is lost to seepage and other losses to be more appropriately and effectively used by our current land owners. This helps reduce water shortages, an ongoing issue throughout the District.

  Additionally this project helps meet instream flow requirements while helping to make more water available for instream leases.

  iii. Will the project make additional water available for Indian tribes?

  No. This project will not directly address making additional water available for Indian tribes.

  iv. Will the project help to address an issue that could potentially result in an interruption to the water supply if unresolved? (e.g., will the project benefit an endangered species by maintaining an adequate water supply)? Are there endangered species within the basin or other factors

that may lead to heightened competition for available water supplies among multiple water uses?

Yes. This project is necessary to reduce the risk of interruptions to the water users. The earth lined canals and ditches have high water losses and access to the canals and ditches over the years has become more difficult with smaller parcels and many more landowners. The maintenance of the open canals and ditches is very challenging due to the access issues.

This project will improve water supply for the entire reach of Bear Creek below Emigrant Dam to the mouth. The federally listed species for this reach includes the SONC coho and Pacific Lamprey. The current Bi-Op requires fine adjustments on reservoir releases such as instream flow needs, ramping rates, habitat needs as well as diversion releases. The water conservation aspect of this project will help meet those requirements by providing more water to the system and allowing for better management of water.

This project is part of the larger Water for Irrigation, Stream and Economy (WISE) Project, which will improve water availability and reliability throughout the entire Rogue River Basin Project.

The WISE Project (www.wiseproject.org) takes into account current on-going issues to water supply including long term urban development, climate change and natural resource regulatory concerns.

v. Will the project generally make more water available in the water basin where the proposed work is located?

Yes, the conserved water will be retained in reservoir storage and be made available to improve water management activities.

- *Does the project promote and encourage collaboration among parties?*
  i. Is there widespread support for the project?
  ii. What is the significance of the collaboration/support?
  iii. Will the project help to prevent a water-related crisis or conflict?
  iv. Is there frequently tension or litigation over water in the basin?

v. Is the possibility of future water conservation improvements by other water users enhanced by completion of this project?

This project, as part of the larger WISE Project, relies on the regional collaborative and cooperative efforts of environmental, agricultural and municipal groups as well as state and federal agencies. This allows for the most effective and cost effective approach to resolving water resource issues.

This project will help ensure the long term viability and sustainability of agriculture in the Rogue Valley and has the ability to help firm up relations between the following agencies: NOAA, ODF&W, USF&W, nongovernmental organizations, watershed councils, and environmental groups such as Waterwatch, Rogue Fly Fishers, Rogue River Keepers, etc.

Letters of support for this project can be found in Attachment E.

In addition, a large portion of the water is transported from the Klamath Basin, Little Applegate and Little Butte sub-basins.

- *Will the project increase awareness of water and/or energy conservation and efficiency efforts?*
  - *i. Will the project serve as an example of water and/or energy conservation and efficiency within a community?*
  - *ii. Will the project increase the capability of future water conservation or energy efficiency efforts for use by others?*
  - *iii. Does the project integrate water and energy components?*

This project, as part of the larger WISE Project (www.wiseproject.org), promotes stakeholder awareness including improving irrigation management and stream habitat conditions and the value of water conservation.

This project is assisting the WISE Project in a system wide implementation of accelerating long-term water conservation projects.

Reliability and improved water quality make users more likely to switch to more conservative application methods and crops.

EVALUATION CRITERION F: IMPLEMENTATION AND RESULTS (10 Points)

- *Up to **10 points** may be awarded for the following:*

Subcriterion No. F.1.—Project Planning

- *Points may be awarded for proposals with planning efforts that provide support for the proposed project.*

- ***Does the project have a Water Conservation Plan, System Optimization Review (SOR), and/or district or geographic area drought contingency plans in place? Does the project relate/have a nexus to an adaptation strategy developed as part of a WaterSMART Basin Study)?** Please self-certify, or provide copies of these plans where appropriate, to verify that such a plan is in place.*

- *Provide the following information regarding project planning:*

    - *Identify any district-wide, or system-wide, planning that provides support for the proposed project. This could include a Water Conservation Plan, SOR, Basin Study, or other planning efforts done to determine the priority of this project in relation to other potential projects.*

    - *Identify and describe any engineering or design work performed specifically in support of the proposed project.*

    - *Describe how the project conforms to and meets the goals of any applicable planning efforts, and identify any aspect of the project that implements a feature of an existing water plan(s).*

      This project, although not specifically stated in the District's Water Conservation and Management Plan[5] or in the District's System Optimization Review, promotes the same water conservation measures as outlined in each of these reports.

      The benefits are compatible with the goals of the WISE Project. The design standards for this project are compatible with those of the WISE Project.[6]

      As required by the TMDL Implementation Program[7], the District, as a Designated Management Agency, reports annually to the State of Oregon Department of Environmental Quality (DEQ) all of the water quality

[5] Talent Irrigation District Water Management/Conservation Plan dated June 15,2001 (update on extension)
[6] WISE Project Prefeasibility Study 2010
[7] Bear Creek Watershed Implementation Program, State of Oregon Department of Environmental Quality

improvement projects completed during the year. This project, once completed, will be reported to DEQ as a water quality project.

This project ties in with the goals of the Bear Creek Watershed Assessment[8].

This project is consistent with Reclamation's Canals in Urban Areas Program. Reclamation completed an inspection report[9] on December 13, 2010.

The design has been done in-house and meets the design criteria of projects previously funded by Reclamation. The project meets the District's design standards.

This is an on-going project with the landowners, Bureau of Reclamation and the District to install water efficient pipe. The project will completely enclose the last 4.9 miles of the Talent Canal.

Subcriterion No. F.2.—Readiness to Proceed

- *Points may be awarded based upon the extent to which the proposed project is capable of proceeding upon entering into a financial assistance agreement.*

- *Describe the implementation plan of the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.* ***(Please note, under no circumstances may an applicant begin any ground-disturbing activities—including grading, clearing, and other preliminary activities—on a project before environmental compliance is complete and Reclamation explicitly authorizes work to proceed).***

It is proposed that the project be constructed over a two year period commencing in the fall of 2013. Work will need to be done during the non-irrigation season, as the pipe will be installed in the existing ditch alignment.

[8] Bear Creek Watershed Assessment prepared for the Bear Creek Watershed Council and the Rogue Valley Council of Governments in December 2001

[9] INSPECTION REPORT, Talent Canal, Controlled Reach 09 CRID #174, Rogue River Basin Project, Pacific Northwest Region, Bureau of Reclamation, Inspection Date August 18, 2010, Report Date December 13, 2010

Table 2. Timeline

DESCRIPTION	2013/2014 OCT	NOV	DEC	JAN	FEB	MAR	APR-SEPT	2014/2015 OCT	NOV	DEC	JAN	FEB	MAR
BUENA VISTA & JASMINE													
Regulatory Compliance, Planning & Procurement							No construction during irrigation season						
Construction													
Testing & Site Restoration													
S. STAGE & KNOWLES RD													
Planning & Procurement							No construction during irrigation season						
Construction													
Testing & Site Restoration													

- *Please explain any permits that will be required, along with the process for obtaining such permits.*

  There are no permits required for this project. Environmental and historical regulatory requirements will be met before ground breaking activities will commence.

Subcriterion No. F.3.—Performance Measures

- *Points may be awarded based on the description and development of performance measures to quantify actual project benefits upon completion of the project.*

- *Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (e.g., water saved, marketed, or better managed, or energy saved). For more information calculating performance measure, see Section VIII.A.1. "FY2013 WaterSMART Water and Energy Efficiency Grants: Performance Measures".*

  Piping conserves 100 percent of water diverted through the pipe reach. A water measurement structure will be placed where the water enters the pipeline which will enclose the last 4.9 miles of the Talent Canal.

Note: All WaterSMART Grant applicants are required to propose a "performance measure" (a method of quantifying the actual benefits of their project once it is completed). A provision will be included in all assistance agreements with WaterSMART Grant recipients describing the performance measure, and requiring the recipient to quantify the actual project benefits in Section V. Application Review Information 53 their final report to Reclamation upon completion of the project. If information regarding project benefits is not available immediately upon completion of the project, the financial assistance agreement may be modified to remain open until such information is available and until a Final Report is submitted. Quantification of project benefits is an important

means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of WaterSMART Grants.

EVALUATION CRITERION G: ADDITIONAL NON-FEDERAL FUNDING (4 Points)

- *Up to **4 points** may be awarded to proposals that provide non-Federal funding in excess of 50 percent of the project costs. State the percentage of non-Federal funding provided.*

$$\frac{\text{Non-Federal Funding}}{\text{Total Project Cost}}$$

The District is requesting funding for **50%** of the cost of this project as calculated below:

$$\frac{\$205{,}644 \text{ of Non-Federal Funding}}{\$411{,}287 \text{ Total Project Cost}}$$

EVALUATION CRITERION H: CONNECTION TO RECLAMATION PROJECT ACTIVITIES (4 Points)

- *Up to **4 points** may be awarded if the proposed project is in a basin with connections to Reclamation project activities. No points will be awarded for proposals without connection to a Reclamation project or Reclamation activity.*

  - *How is the proposed project connected to Reclamation project activities?*

    The Talent Irrigation District is a Reclamation Project – Rogue River Basin Project – Talent Division. The Jasmine Project is a component of the lower 4.9 miles of the Talent Canal.

  - *Does the applicant receive Reclamation project water?*

    Yes, through three Reclamation reservoirs – Hyatt, Howard Prairie and Emigrant. The water conserved through the Jasmine Project will be stored in these reservoirs to be available for District water management activities.

  - *Is the project on Reclamation project lands or involving Reclamation facilities?*

    Yes, the District quitclaimed the project facilities to the Bureau of Reclamation in 1960. The entirety of the Jasmine Project is within the Bureau of Reclamation infrastructure.

- *Is the project in the same basin as a Reclamation project or activity?*

  Yes. Talent Irrigation District is part of the Rogue River Basin Talent Division Project and is the operating entity.

- *Will the proposed work contribute water to a basin where a Reclamation project is located?*

  Yes, the water saved will remain in this basin and will be managed through the above listed reservoirs.

ENVIRONMENTAL and CULTURAL RESOURCES COMPLIANCE

- *To allow Reclamation to assess the probable environmental and cultural resources impacts and costs associated with each application, all applicants must respond to the following list of questions focusing on the NEPA, ESA, and NHPA requirements. Please answer the following questions to the best of your knowledge. If any question is not applicable to the project, please explain why. Additional information about environmental compliance is provided in Section IV.D.4. "Project Budget," under the discussion of "Environmental and Regulatory Compliance Costs," and in Section VIII.B., "Overview of Environmental and Cultural Resources Compliance Requirements."*

- ***Note: applicants proposing a Funding Group II project must address the environmental and cultural resources compliance questions for their entire project, not just the first one-year phase.***

- *If you have any questions, please contact your regional or area Reclamation office (see <www.usbr.gov/main/regions.html>) with questions regarding ESA compliance issues. You may also contact Mr. Dean Marrone, WaterSMART Program Coordinator, at 303-445-3577, for further information.*

    - *Will the project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.*

        Impacts will be those associated with piping the canals, canal turnouts and installing valves. Similar projects in the past have had minimal impacts. The work will be done within the existing easements and canal prisms. Disturbance of soils should be minimal. The project should not have any adverse impact to the environment.

    - *Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?*

        There are two federally listed species within the entire project area including SONC coho and Pacific Lamprey. The entirety of Bear Creek below Emigrant Dam has been designated as critical habitat. This piping project will not negatively impact any listed species.

        This piping project should have no adverse impacts to the environment.

- *Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "waters of the United States?" If so, please describe and estimate any impacts the project may have.*

  Talent Irrigation District is not aware of any issues concerning wetland or other surface water in the area. Complete regulatory compliance of all state and federally permitted processes will be met. This will include any wetland delineation. Construction of the pipeline project will occur within the existing canal prism. There should be no negative environmental impacts.

- *When was the water delivery system constructed?*

  The system was originally built around 1922 and was rehabilitated, extended and enlarged in the early 1960's. Previous piping projects within the Talent Irrigation District exist both upstream and downstream of this project. Some of which were installed as recently as last year.

- *Will the project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.*

  The District proposes to pipe the remaining four open segments of the existing canal measuring 1.3 miles. All of the pipe will be placed within the current ditch and canal alignments. Routine maintenance occurs regularly such as several demossing operations during the summer months and excavation of the canal prism annually to remove vegetation growth and soil buildup. Headgates are routinely replaced as needed. No flumes are located in the project area.

- *Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.*

  Some of the infrastructure within the proposed project area is potentially eligible to be listed on the National Register of Historic Places. This includes the four reaches of the Talent Canal that are proposed to be piped. The Bureau of Reclamation will consult the State Historical Preservation Office (SHPO) as part of meeting the regulatory requirements.

- *Are there any known archeological sites in the proposed project area?*

  The District is not aware of any archeological sites in the project area. Reclamation is responsible for archeological review of this project.

- *Will the project have a disproportionately high and adverse effect on low income or minority populations?*

  No. This project has no adverse economic impacts to water users.

- *Will the project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?*

  No. There are no tribal lands within the project area.

- *Will the project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?*

  No. This project will reduce the growth of aquatic weeds within the project area. Due to elimination of seepage within the project area, noxious weed introduction will be dramatically reduced.

Note, if mitigation is required to lessen environmental impacts, the applicant may, at Reclamation's discretion, be required to report on progress and completion of these commitments. Reclamation will coordinate with the applicant to establish reporting requirements and intervals accordingly.

Under no circumstances may an applicant begin any ground-disturbing activities (including grading, clearing, and other preliminary activities) on a project before environmental compliance is complete and Reclamation explicitly authorizes work to proceed. This pertains to all components of the proposed project, including those that are part of the applicant's non-Federal cost share. Reclamation will provide a successful applicant with information once environmental compliance is complete. An applicant that proceeds before environmental compliance is complete may risk forfeiting Reclamation funding under this FOA.

REQUIRED PERMITS or APPROVALS

- *Applicants must state in the application whether any permits or approvals are required and explain the plan for obtaining such permits or approvals.*

  No permits are required for this project. Environmental and historical regulatory compliance will be completed before any ground breaking activities are commenced.

- *Applicants proposing renewable energy components to Federal facilities should note that some power projects may require FERC permitting or a Reclamation Lease of Power Privilege. To complete a renewable energy project within the time frame required of this FOA, it is recommended that an applicant has commenced the necessary permitting process prior to applying. To discuss questions related to projects that propose renewable energy development, please contact Mr. Dean Marrone at 303-445-3577.*

  Not applicable to this application.

Note that improvements to Federal facilities that are implemented through any project awarded funding through this FOA must comply with additional requirements. The Federal government will continue to hold title to the Federal facility and any improvement that is integral to the existing operations of that facility. Please see Section III.H.1. Reclamation may also require additional approvals prior to award to ensure that any necessary easements, land use authorizations, or special permits can be approved consistent with the requirements of 43 Code of Federal Regulations (CFR) §429, and that the development will not impact or impair project operations or efficiency.

OFFICIAL RESOLUTION

OFFICIAL RESOLUTION NO. 2013-02

OF THE BOARD OF DIRECTORS OF

TALENT IRRIGATION DISTRICT

WHEREAS, the Bureau of Reclamation requests an official resolution to commit applicants of WaterSMART: Water and Energy Efficiency Grant Funding Program R13SF80003 to the financial and legal obligations associated with receipt of WaterSMART grant financial assistance,

WHEREAS, the Talent Irrigation District must maintain, provide for, and service our existing irrigation water delivery system,

WHEREAS, the District desires to conserve water and manage its water supply more efficiently and is in need of canal piping,

WHEREAS, the District desires to obtain grant funding from the Bureau of Reclamation through the WaterSMART: Water and Energy Efficiency Grant Funding Program R13SF80003 for fiscal year 2013,

NOW THEREFORE, BE IT RESOLVED that the **Board of Directors** of the Talent Irrigation District agrees and authorizes that:

1. The WaterSMART: Water and Energy Efficiency Grant Funding Program R13SF80003 for the **Jasmine Water Conservation Project** prepared by the Talent Irrigation District has been reviewed by the Board of Directors and they support the contents therein;

2. The Talent Irrigation District is capable of providing the amount of funding specified in the funding plan; and

3. If awarded WaterSMART: Water and Energy Efficiency Grant Program R13SF80003, the District will work with the Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement.

DATED: January 8, 2013

ATTEST:

Jim Pendleton, Secretary-Manager

Bob Morris, President

Richard Fujas, Vice-President

Director Position is Currently Vacant
Constituting the Board of Directors of
Talent Irrigation District

Jasmine Water Conservation Project Resolution.doc

PROJECT BUDGET

Funding Plan

Describe how the non-Reclamation share of project costs will be obtained. Reclamation will use this information in making a determination of financial capability.

The funding plan must include all project costs, as follows:

(1) How you will make your contribution to the cost share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant (e.g., reserve account, tax revenue, and/or assessments).

The District will provide in-kind services for their 50% match.

(2) Describe any in-kind costs incurred before the anticipated project start date that you seek to include as project costs. Include:

(a) What project expenses have been incurred

The District has incurred costs with the installation of 240' of 24" HDPE pipe on the Buena Vista segment of the project.

(b) How they benefitted the project

This location experienced significant losses this last irrigation season and benefits this project in that water savings have already been realized. It also signifies how committed and eager the District is in completing this project.

(c) The amount of the expense

Although this small segment is not yet fully completed, the District has incurred $15,550 at the time of this application.

(d) The date of cost incurrence

The cost has been incurred since October 1, 2012.

(3) Provide the identity and amount of funding to be provided by funding partners, as well as the required letters of commitment.

The District intends to provide the 50% match to this grant. There are no other funding partners.

(4) Describe any funding requested or received from other Federal partners. Note: other sources of Federal funding may not be counted towards your 50 percent cost share unless otherwise allowed by statute.

There are no other funding requests.

(5) Describe any pending funding requests that have not yet been approved, and explain how the project will be affected if such funding is denied.

There are no other funding requests.

Please include the following chart to summarize your non-Federal and other Federal funding sources. Denote in-kind contributions with an asterisk (*). Please ensure that the total Federal funding (Reclamation and all other Federal sources) does not exceed 50 percent of the total estimated project cost.

Table 3. Summary of non-Federal and Federal funding sources.

Funding Sources	Funding Amount
Non-Federal Entities	
1. Talent Irrigation District	$205,644*
2.	
3.	
Non-Federal Subtotal:	$205,643
Other Federal Entities	
1.	
2.	
3.	
Other Federal Subtotal:	$ 0
Requested Reclamation Funding	$205,643
Total Project Funding;	$411,287

For applicants submitting a proposal under Funding Group II, please include the following chart to summarize your Federal funding request by year.

Table. Funding Group II Funding Request

Funding Group II Request			
	Year 1 (FY 2013)	Year 2 (FY 2014)	Year 3 (FY 2015)
Funding Requested			

This table is not applicable to this application. The District is requesting funding through Funding Group I.

Budget Proposal

The project budget shall include detailed information on the categories listed below and must clearly identify all project costs. Unit costs shall be provided for all budget items including the cost of work to be provided by contractors. Additionally, applicants shall include a narrative description of the items included in the project budget, including the value of in-kind contributions of goods and services provided to complete the project. It is strongly advised that applicants use the budget proposal format shown below on tables 3 and 4 or a similar format that provides this information.

Table 4. Funding Sources.

Funding Sources	Percent of Total Project Cost	Total Cost by Source
Recipient Funding	50%	$205,644
Reclamation Funding	50%	$205,643
Other Federal Funding	0%	$ 0
Totals	**100%**	**$411,287**

See Attachment D for the Jasmine Water Conservation Project Proposed Budget.

Budget Narrative

Submission of a budget narrative is mandatory. An award will not be made to any applicant who fails to fully disclose this information. The budget narrative provides a discussion of, or explanation for, items included in the budget proposal. Include the value of in-kind contributions of goods and services and sources of funds provided to complete the project. The types of information to describe in the narrative include, but are not limited, to those listed in the following subsections.

Salaries and Wages

Indicate program manager and other key personnel by name and title. Other personnel may be indicated by title alone. For all positions, indicate salaries and wages, estimated hours or percent of time, and rate of compensation proposed. The labor rates should identify the direct labor rate separate from the fringe rate or fringe cost for each category. All labor estimates, including any proposed subcontractors, shall be allocated to specific tasks as outlined in the recipient's technical project description. Labor rates and proposed hours shall be displayed for each task.

Clearly identify any proposed salary increases and the effective date.

Generally, salaries of administrative and/or clerical personnel will be included as a portion of the stated indirect costs. If these salaries can be adequately documented as direct costs, they should be included in this section; however, a justification should be included in the budget narrative.

Below is a list of all of the employees of the District. Project management and administrative employees are listed separately from general labor. The District does not have an indirect cost approved by the Bureau of Reclamation; therefore we have chosen to include project management and administrative employees as direct costs listed under "Administrative & Project Management" on Attachment D.

Our general laborers have varying degrees of skill, and each will be working on the proposed activity. It would be inaccurate to specify hours for each individual to a particular site, since it is such a small crew and there are many factors that can affect which employee works where on any given day. Such factors can include vacations, illness or other necessary maintenance work.

When determining a job cost, the District bases labor costs on the number of man hours required for each activity based on previous, similar activities. That number is then multiplied by the average hourly rate of all general laborers.

Increases to wages and salaries are determined annually by the Board of Directors during the budget process. If given, they become effective on October 1st of each year. For this grant application a 2% wage increase was built into the rates for each of the fiscal years spanning this project. The tables below define the hourly rates for each year.

Table 5. Projected Hourly Rates for FY 2013/2014

Position	Hourly Rate	Hourly Benefits Rate	Total Hourly Rate
Project Management and Administrative Labor			
Position	**Hourly Rate**	**Fringe Benefit Hourly Rate**	**Total Hourly Rate**
Manager	$43.73	$18.91	$62.64
Office Manager	$27.52	$14.27	$41.79
Bookkeeper	$22.99	$12.08	$35.07
Office Assistant	$14.13	$11.29	$25.42
GIS Coordinator	$13.26	$1.09	$14.35
Foreman	$18.55	$13.57	$32.12

Table 5. Projected Hourly Rates for FY 2013/2014 Continued			
General Laborers			
Position	**Hourly Rate**	**Fringe Benefit Hourly Rate**	**Total Hourly Rate**
Laborer 1	$25.36	$13.98	$39.34
Laborer 2	$20.91	$12.63	$33.54
Laborer 3	$17.60	$13.61	$31.21
Laborer 4	$15.56	$11.41	$26.97
Laborer 5	$15.20	$11.29	$26.49
Laborer 6	$14.65	$9.68	$24.33
Laborer 7	$14.13	$12.08	$26.21
Laborer Average	$17.63	$12.10	$29.73

Table 6. Projected Hourly Rates for FY 2014/2015

Position	Hourly Rate	Hourly Benefits Rate	Total Hourly Rate
Project Management and Administrative Labor			
Position	**Hourly Rate**	**Fringe Benefit Hourly Rate**	**Total Hourly Rate**
Manager	$44.63	$19.92	$64.55
Office Manager	$28.10	$15.14	$43.24
Bookkeeper	$23.45	$12.83	$36.28
Office Assistant	$14.42	$12.14	$26.56
GIS Coordinator	$13.53	$1.11	$14.64
Foreman	$18.94	$14.47	$33.41
General Laborers			
Position	**Hourly Rate**	**Fringe Benefit Hourly Rate**	**Total Hourly Rate**
Laborer 1	$25.88	$14.76	$40.64
Laborer 2	$21.33	$13.38	$34.71
Laborer 3	$17.95	$14.50	$32.45
Laborer 4	$15.87	$12.14	$28.01
Laborer 5	$15.50	$12.02	$27.52
Laborer 6	$14.94	$10.29	$25.23
Laborer 7	$14.41	$12.94	$27.35
Laborer Average	$17.98	$12.86	$30.84

Fringe Benefits

Indicate rates/amounts, what costs are included in this category, and the basis of the rate computations. Indicate whether these rates are used for application purposes only or whether they are fixed or provisional rates for billing purposes. Federally approved rate agreements are acceptable for compliance with this item.

The fringe benefit costs used in calculating the Fringe Benefit Hourly Rate for each employee are specific to each individual and their circumstances. For instance, an employee's health insurance cost may include their spouse and dependents if they have them, and the retirement calculation depends on the individual's date of hire. The fringe benefits used in calculating the rates in Tables 5 and 6 above include the following:

- The Board of Directors annually reviews the medical and dental insurance benefits prior to the June 1st renewal period of each year. It is unknown at this time how much the Patient Protection and Affordable Care Act will influence the rates for the years spanning this project; therefore, for purposes of this grant application, a 10% rate increase for each of the two years spanning this project has been calculated in the employee benefits' rates.

Table 7. Estimated Monthly Medical/Dental Insurance Rates

Description	June 2013	June 2014	June 2015
Employee & Dependents	$873.37	$960.71	$1,056.78
Employee & Spouse	$1,048.80	$1,153.68	$1,269.05
Employee & Family	$1,303.52	$1,433.87	$1,577.26

- Public Employees Retirement System (PERS) and Oregon Public Service Retirement Plan (OPSRP). The following rates are effective July 1, 2013 through June 30, 2015.

Table 8. Retirement Plan Rates

Description	Rate (Percentage of Payroll)
PERS	17.35%
OPSRP – hire date after 8/28/2003	16.86%

- Federal Insurance Contribution Act (FICA) and Medicare Rate. This rate is currently 7.65% of payroll.

- Oregon Employment Insurance. The District's rate is currently .1% of payroll.

- Workers Compensation Insurance. These rates are adjusted annually; however, current rates were used in determining costs for this project. The rates are based on the following worker classification codes and extrapolated to include all additional charges and deductions allowed:

Table 9. Workers Compensation Insurance Rates

Class	Description	Rate
0251	Irrigation Works	5.32%
8742	Director/Sales/Collections (Manager)	.343%
8810	Clerical Office Employees	.204%

Travel

Include purpose of trip, destination, number of persons traveling, length of stay, and all travel costs including airfare (basis for rate used), per diem, lodging, and miscellaneous travel expenses. For local travel, include mileage and rate of compensation.

There are no expected travel expenses for this project.

Equipment

Itemize costs of all equipment having a value of over $5,000 and include information as to the need for this equipment, as well as how the equipment was priced if being purchased for the agreement. If equipment is being rented, specify the number of hours and the hourly rate. Local rental rates are only accepted for equipment actually being rented or leased for the project. If equipment currently owned by the applicant is proposed for use under the proposed project, and the cost to use that equipment is being included in the budget as in-kind cost share, provide the rates and hours for each piece of equipment owned and budgeted. These should be ownership rates developed by the recipient for each piece of equipment. If these rates are not available, the U.S. Army Corp of Engineer's recommended equipment rates for the region are acceptable. Blue book, Federal Emergency Management Agency (FEMA), and other data bases should not be used.

No new equipment purchases are expected for this project. The District proposes to use District owned equipment as in-kind match. The following table shows the hourly rates as determined based on the U.S. Army Corp of Engineer's ownership rates.

Table 10. Equipment Hourly Ownership Rates

Equip #	Description	Hourly Rate	Standby Hrly Rate
1	1982 Military Cement Truck	$36.19	$4.78
3	1981 International Dump Trk – 5 yd	$20.59	$2.64
4	1980 Kenworth Dump Trk – 10 yd	$54.75	$5.75
8	1988 Peterbuilt Lowboy	$49.77	$5.68
10	1978 Military Boom Truck	$26.53	$1.03
Various	Passenger Trucks	IRS SMR	
83	1999 Zieman Trailer	$3.31	$0.89
91	2008 Kubota Excavator	$9.81	$2.23
101	2007 Honda Pump	$2.73	$0.11
101	2007 Stihl Chainsaw	$2.74	$0.17
101	2007 Stihl Cutoff Saw	$1.84	$0.17
121	2004 Kubota Excavator 121	$11.24	$2.11
130	2002 Case Excavator	$32.52	$5.43
135	Cement Mixer	$2.09	$.21
185	Air Compressor	$13.52	$1.24
200	Welder	$.99	$0.13
204	1985 Thomsen Concrete Pump	$24.06	$3.34
207	Chipper	$13.89	$1.53
312	1997 Cat Excavator	$32.52	$5.65
313	2009 312DL Cat Excavator	$35.34	$8.78
550	1995 JD Crawler/Dozer	$37.35	$5.77
580	1990 Case Backhoe	$25.56	$1.60

Not all of the equipment listed above is expected to be used on this project. Please see Attachment D for the equipment, the expected hours of use and the hourly rate that will be used to meet the District's in-kind match.

Materials and Supplies

Itemize supplies by major category, unit price, quantity, and purpose, such as whether the items are needed for office use, research, or construction. Identify how these costs were estimated (i.e., quotes, past experience, engineering estimates or other methodology).

Please see Attachment D for the list of material expected to be used on this project. All material listed is for construction.

Contractual

Identify all work that will be accomplished by subrecipients, consultants, or contractors, including a breakdown of all tasks to be completed, and a detailed budget estimate of time, rates, supplies, and materials that will be required for each task. If a subrecipient, consultant, or contractor is proposed and approved at time of award, no other approvals will be required. Any changes or additions will require a request for approval. Identify how the

budgeted costs for subrecipients, consultants, or contractors were determined to be fair and reasonable.

No contractors are expected for this project. The District will be providing all of the work related to this project.

Environmental and Regulatory Compliance Costs

Applicants must include a line item in their budget to cover environmental compliance costs. "Environmental compliance costs" refer to costs incurred by Reclamation or the recipient in complying with environmental regulations applicable to a WaterSMART Grant, including costs associated with any required documentation of environmental compliance, analyses, permits, or approvals. Applicable Federal environmental laws could include NEPA, ESA, NHPA, and the CWA, and other regulations depending on the project. Such costs may include, but are not limited to:

- *The cost incurred by Reclamation to determine the level of environmental compliance required for the project*

- *The cost incurred by Reclamation, the recipient, or a consultant to prepare any necessary environmental compliance documents or reports*

- *The cost incurred by Reclamation to review any environmental compliance documents prepared by a consultant*

- *The cost incurred by the recipient in acquiring any required approvals or permits, or in implementing any required mitigation measures*

- *The cost incurred by the recipient in acquiring any required approvals or permits, or in implementing any required mitigation measures*

Reclamation will perform the environmental compliance documents for this project. The District has received the following cost estimate[10] and has included this figure in the budget total.

[10] Submitted by Elizabeth Heether, Environmental Protection Specialist, Bureau of Reclamation, Columbia-Cascades Area Office, Yakima, Washington

Talent Irrigation District

Jasmine Water Conservation Project NEPA Estimate

ESA

Consultation is not anticipated as the project is off stream.

NHPA

Archaeological: no impact, all work will be in canal invert

Historical: Talent Main Canal is eligible to the National Register of Historic Places. The project will have an adverse effect on the canal which will require mitigation. Reclamation will not know what mitigation is required until we have completed the Section 106 Consultation with the OR SHPO. However, Reclamation will propose completing the Rogue Basin Historical Context Study as mitigation. On other projects, the OR SHPO has been proposing multiple projects as mitigation; this has included historical documentation and additional items, such as a public display. If the OR SHPO requires additional mitigation beyond Reclamation's preferred completion of the Historical Context Study, the actual costs incurred may be higher than the provided estimate.

NEPA

Reclamation anticipates completing a CEC for the piping project.

BUDGET (includes NEPA and NHPA mitigation estimates):

Specialty	Labor rate/day	Estimated Staff Days	Total
Archaeologist	622	7	4,354
Historian	500	36	18,000
Environmental Protection Specialist	413	5	2,065
Environmental Manager	713	3	2,139
Secretary	304	.75	228
Travel (hotel, vehicle fees, and per diem)			2,000
			28,786

The District does not expect to incur any additional costs for approvals or permits, or implementing any mitigation measures and have not included any figures in the budget for this project.

The amount of the line item should be based on the actual expected environmental compliance costs for the project. However, the minimum amount budgeted for environmental compliance should be equal to at least 1-2 percent of the total project costs. If the amount budgeted is less than 1-2 percent of the total project costs, you must include a compelling explanation of why less than 1-2 percent was budgeted.

How environmental compliance activities will be performed (e.g., by Reclamation, the applicant, or a consultant) and how the environmental compliance funds will be spent, will

be determined pursuant to subsequent agreement between Reclamation and the applicant. If any portion of the funds budgeted for environmental compliance is not required for compliance activities, such funds may be reallocated to the project, if appropriate.

Reporting

Recipients are required to report on the status of their project on a regular basis. Failure to comply with reporting requirements may result in the recipient being removed from consideration for funding under future funding opportunities. Include a line item for reporting costs (including final project and evaluation costs). Please see Section VI.C. for information on types and frequency of reports required.

The projected costs for the reporting requirements are not specifically stated in the Project Budget, Attachment D, but are included in the estimated hours listed under **Administration & Project Management** for each employee involved in the grant reporting.

Other Expenses

Any other expenses not included in the above categories shall be listed in this category, along with a description of the item and what it will be used for. No profit or fee will be allowed.

There are no other expenses expected other than what has already been indicated.

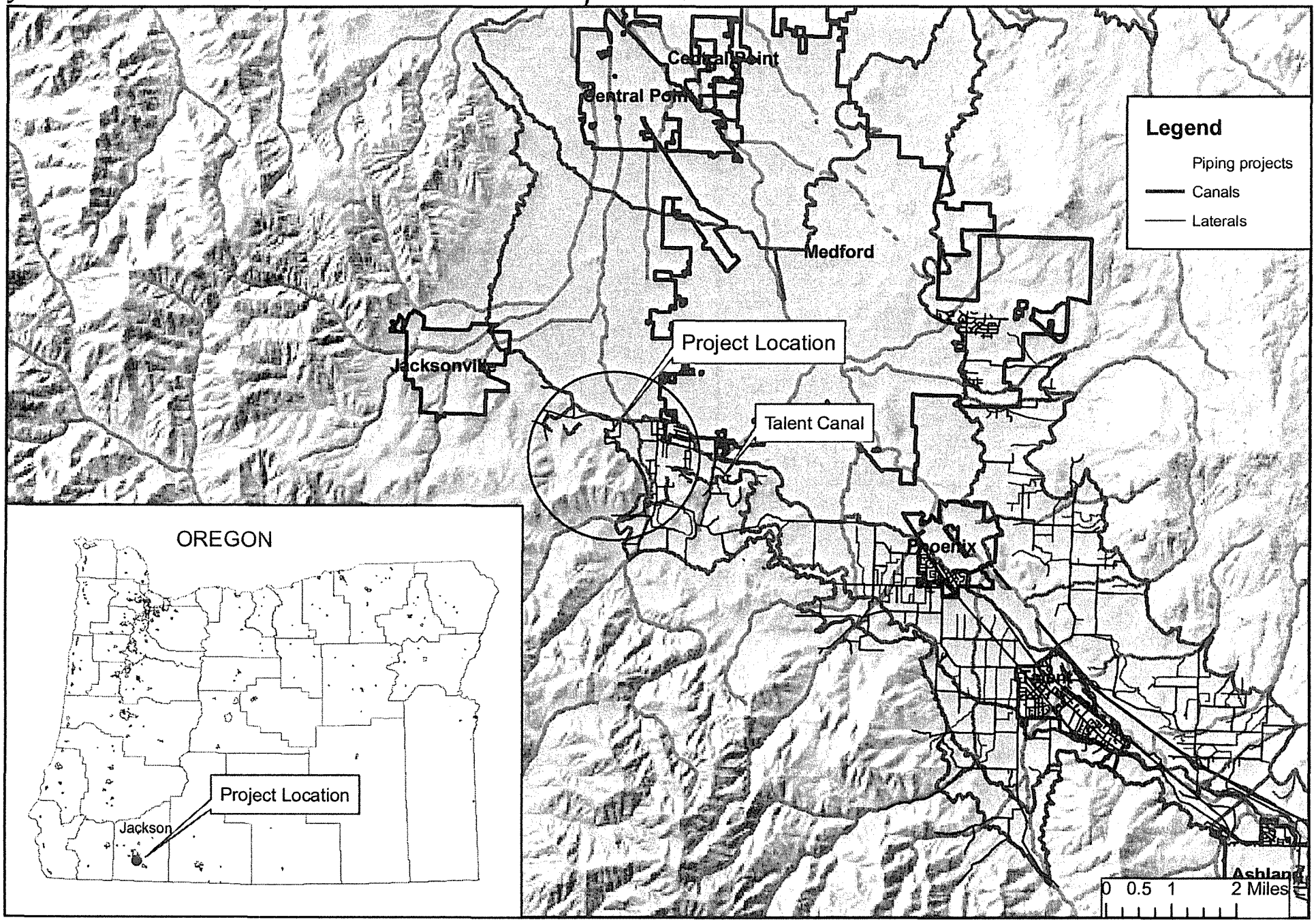
Indirect Costs

Show the proposed rate, cost base, and proposed amount for allowable indirect costs based on the applicable OMB circular cost principles (see Section III.E., "Cost Sharing Requirement") for the recipient's organization. It is not acceptable to simply incorporate indirect rates within other direct cost line items.
If the recipient has separate rates for recovery of labor overhead and general and administrative costs, each rate shall be shown. The applicant should propose rates for evaluation purposes, which will be used as fixed or ceiling rates in any resulting award. Include a copy of any federally approved indirect cost rate agreement. If a federally approved indirect rate agreement is not available, provide supporting documentation for the rate. This can include a recent recommendation by a qualified certified public accountant (CPA) along with support for the rate calculation.
If you do not have a federally approved indirect cost rate agreement, or if unapproved rates are used, explain why, and include the computational basis for the indirect expense pool and corresponding allocation base for each rate. Information on "Preparing and Submitting Indirect Cost Proposals" is available from Interior, the National Business Center, and Indirect Cost Services, at
<http://www.doi.gov/ibc/services/Indirect_Cost_Services/index.cfm>.

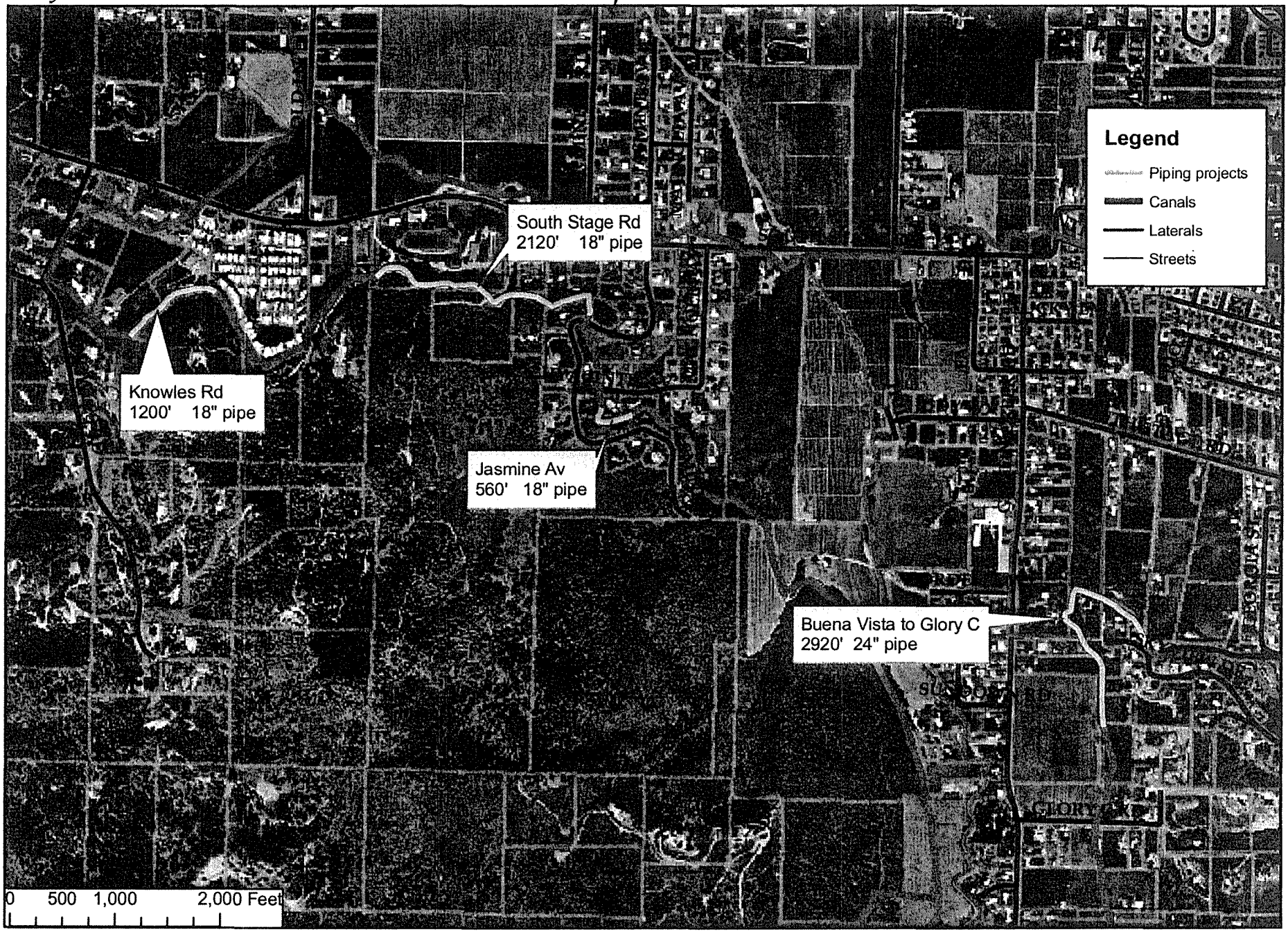
The District does not have a federally approved indirect cost rate and does not wish to use one for this project. The District has budgeted expected direct costs for this project

ATTACHMENTS

Talent Irrigation District
Jasmine Water Conservation Project



Talent Irrigation District
Jasmine Water Conservation Project



TALENT IRRIGATION DISTRICT
Prior Reclamation (BOR) Funded Projects

Project Name Date	Cost		Project Definition	Benefits	Results of Project
Conveyance Systems Technology #1425-4-FC-10-00910 1996	$11,439 $10,000	TID BOR	CST Software, setup and training	Develops databases of physical parameters for definable studies and for use in watershed hydrologic modeling and other computer models for water conservation and improved efficiencies in the Bear Creek drainage area. Developed into the Efficiency Block, which we are currently using.	Water conservation
Ashland Canal Flow Measurement #1425-7-FG-10-03080 1997	$12,000	BOR	Acquisition and installation of measurement devices.	Assess seepage losses from the Ashland Canal.	Water conservation
Meters and Automated Gates #1425-7-FG-10-02940 1997-1998	$12,795 $11,000	TID BOR	Measure flows on piped laterals. Gate automation on Talent Canal at Oak Street and Ashland Canal at Greensprings.	Better control of water by monitoring use on piped laterals. Allows users to be conscious of their own use. Off site monitor and control of head gates on two canals by direct dial up.	Water conservation, flood control, public awareness
Oak Street Fish Screen #6-07-10-W1127 #8-07-10-W1197 1997-1998	$15,426 $236,672	TID BOR	Install a self-cleaning fish screen at the Talent Canal Diversion at Bear Creek	Prevents fish from entering canal and keeps screen clear of debris with a mechanical brush system	Fish protection
Integrated Pest Management Study #1425-7-FC-10-02960 1997-2001	$215,339 $215,000	TID BOR	Evaluate aquatic vegetation canal management techniques, including mechanical/manual, chemical, cultural, operational, structural and biological control measures and provide a management and implementation guide for other irrigation districts.	Identified and monitored noxious weeds. Demonstrated various aquatic vegetation management methods including the use of grass carp. Constructed modifications to system to prevent grass carp from entering natural water ways. Constructed and modified equipment for the use of flails.	Identified poor methods of aquatic vegetation control. Developed protocol for aquatic management. Identified problem areas in the system and corrected. Increased public awareness. Fish passage enhancement. Shared information with other districts.
Oak Street Fish Ladder 1425-98-SI-10-07540 1998	$320,000	BOR	Install a fish ladder at the Talent Canal diversion at Bear Creek.	Allows fish passage around diversion in Bear Creek.	Fish passage enhancement
Water Conservation Coordinator and Computer Upgrade #1425-9-FC-10-05260 1999-2000	$42,976 $37,621	TID BOR	Fill WCC/GIS position and upgrade computers	Develop a GIS program for the district to support planning, water conservation, operation and maintenance, and other program needs.	Water management and conservation planning.

TALENT IRRIGATION DISTRICT
Prior Reclamation (BOR) Funded Projects

Project Name Date	Cost		Project Definition	Benefits	Results of Project
Seepage Enhancement #1425-01-MA-10-3150 2001	$13,400	BOR	Instrumentation Enhancement at Hyatt and Keene Creek Dams	Measure sediment and seepage from the toe drain system on both dams.	Dam safety
Canal Lining #1425-00-FC-10-7040 2000-2002	$41,146 $40,000	TID BOR	Demonstration of various types of canal lining on an estimated 1,900' of canal.	Install several types of canal lining material throughout the system to determine which product is best.	Water conservation, soil erosion, water quality, public safety
GIS Coordinator #1425-01-FC-107310 2000-2002	$22,807 $39,003	TID BOR	Technical assistance under BOR's Water Conservation Field Services Program	Develop accurate maps of the distribution system and associated easements, inventory and map water rights and existing system structures, improve organizational planning with emphasis on management efficiency.	Water conservation, sharing of information
Re-regulation Ponds #1425-00-FC-10-6280 2000-2003	$35,828 $35,828	TID BOR	Install a re-regulation pond and piping on the Talent Canal	The installation of the re-regulation pond reduced releases from the reservoir. The excess water in the canal at night is stored and used during high use, generally in the afternoons. It is estimated that 500 acre feet of water is saved during each season.	Water conservation. Increased water delivery efficiency.
Greenmeadows #1425-01-FC-10-7590 2001-2002	$41,332 $40,000	TID BOR	Demonstration of the feasibility of low-head plastic pipeline materials in lined canals that are still leaking.	Install 1880' of 30" ADS Pipe in canal prism to reduce seepage.	Water conservation, soil erosion, water quality, public safety
Moss Cutter #1425-01-FC-10-7660 2001-2004	$99,330 $15,000 $62,800	TID TID Head-waters joint acct BOR	Construct a prototype machine to remove aquatic vegetation from irrigation district canals	The moss cutter uses high pressure water to break up moss that grows in the canals during the irrigation season.	Water conservation, soil erosion, water quality, public safety, decrease dependence on chemical control of aquatic weed growth.
Flow Meters #1425-01-FC-10-7240 2001-2005	$17,330 $17,330	TID BOR	Test several sizes of magnetic flow meters to measure water flow in several gravity pressure lines.	Magnetic meters did not function well in the District's system. Propeller meters were found to be the most effective. The District installed 7 meters on pressurized laterals.	Water conservation, water theft

TALENT IRRIGATION DISTRICT
Prior Reclamation (BOR) Funded Projects

Project Name Date	Cost		Project Definition	Benefits	Results of Project
Ramp Flumes, Telemetry, Guaging Stations #1425-01-FC-10-7200 2001-2005	$23,285 $6,000 $20,000	TID OWRD BOR	Construct ramp flumes and install telemetry and guaging station equipment at various locations throughout the District's system	Five telemetry stations, six ramp flumes and four guaging stations were installed.	Water conservation. Create system efficiency block to better evaluate high use/high loss areas within the canal system.
Automated Trash Racks #1425-02-FC-10-8200 2002-2004	$20,000 $20,000	TID BOR	Installation of automated Trash Racks at headgates of major laterals	Self cleaning screens were installed to aid in removing the excess debris caused from mechanical cleaning. The debris would accumulate too quickly for crews to keep the canals open.	Soil erosion, water quality, public safety
Fern Valley Pipeline Phase I, II & III #1425-02-FC-10-8120 2002-2006	$79,899 $76,670 $2,424	TID BOR LAND-OWNER	Gravity pressurize the Fern Valley Pipeline, a pipeline of approximately 5 miles.	The District has installed 9,880' of various sized pipe, allowing for waterusers to convert approximately 200 acres from flood irrigation to sprinkler. This lateral will eventually tie into the Hughes Lateral.	Water conservation, soil erosion, water quality, fish passage enhancement, public safety, water right management.
Pipe Study #1425-02-FC-10-8130 2002-2005	$5,000 $5,000	TID BOR	Study options for putting the District's entire system into pipe and/or canal lining.	This study became part of a larger project called the WISE Project. Several stakeholders have come together to improve the Bear Creek and Little Butte Creek watersheds. The WISE Project is ongoing. The feasibility study is being completed at this time.	Water conservation, water quality, improve fish habitat
Canal Lining #1425-03-FC-10-9480 2003-2005	$36,675 $30,000	TID BOR	Line an estimated 1,970' of various locations on the canals.	Conserve water through reducing seepage from unlined canals.	Water conservation, soil erosion, water quality, public safety
Talent Canal Pipelines #1425-03-FC-10-9460 2003-2004	$50,925 $17,250	TID BOR	Pipe laterals T7, T14 and T16. District installed 8,270' of pipe.	Control and prevent soil erosion by replacing open canals with buried pipelines and allowing waterusers to convert from flood irrigation to sprinkler.	Water conservation, soil erosion
Larson Creek Project #1425-03-FC-1L-9800 2003-2008	$26,744 $62,244	TID BOR	The District installed 4,408' of various sizes of pipe as part of an overall project to separate the irrigation delivery system from Larson Creek.	Project removes three stop-log diversions, provides a new stream channel and restores Larson Creek to a natural flow regime.	Water conservation, fish passage enhancement, water quality, increase water delivery efficiency

TALENT IRRIGATION DISTRICT
Prior Reclamation (BOR) Funded Projects

Project Name Date	Cost		Project Definition	Benefits	Results of Project
Delivery Canal Flume Replacement 2004	$13,792 $10,344 $3,066 $1,531	TID BOR MID RRVID	Install 180' of 60" ADS pipe in the Joint Works Delivery Canal	Replace existing wooden flume that was showing signs of failure	Water conservation, prevent soil erosion
Computers 1425-04-FC-1L-1050 2004	$5,300 $5,300	TID BOR	Upgrade computer systems for GIS	Provide hardware to aid efforts in managing the District's irrigation system by using GIS software, automation and telemetry equipment.	Water conservation, increase water delivery efficiency
Talent Canal Near Buena Vista 1425-04-FC-1L-1050 2004-2008	$40,043 $40,000	TID BOR	Install 1820' of 24" ADS pipe in the canal near the Buena Vista subdivision.	Piping reduced seepage and decrease the risk of canal failure through this section.	Water conservation, prevent soil erosion, water quality, public safety
Talent Canal Lining 1425-04-FG-1L-1065 2004-2006	$10,932 $8,425	TID BOR	Line section of approximated 500' of canal on Carpenter Hill and Frink Orchard	Prevent excessive saturation of canal bank which could cause canal failure.	Water conservation, prevent soil erosion, water quality, public safety
West Canal piping on Argraves East Canal piping on Quinowski 1425-04-FG-1L-1057 2004-2005	$57,209 $57,209	TID BOR	Repair and pipe areas where slides have damaged the canal integrity. 260' of pipe was installed on the Argraves' property and 320' of pipe was installed on the Quinowski property along with 400' of slotted pipe.	Prevents further canal damage in areas where slides have occurred.	Water conservation, prevent soil erosion, water quality, public safety
Joint Works Delivery Canal Ramp Flume 2005	$4,410 $3,310 $980 $490	TID GSPP MID RRVID	Install ramp flume at the discharge gate at Howard Prairie Dam	To more accurately measure releases and give more precise measurements with better operational controls at Howard Prairie Lake.	Water conservation
Delivery Canal Repair Wall @ Keene Creek Reservoir 2005	$3,412 $2,559 $758 $378	TID GSPP MID RRVID	Repair the wall of the Delivery Canal at the Keene Creek Reservoir.	The repair prevented further damage to the Delivery Canal wall, which if left alone, could have failed and caused a failure to Keene Creek Dam.	Prevent soil erosion, water quality, public safety
Water Measurement #1425-06-FG-1L-1223 2006-2008	$9,482 $9,482	TID BOR	Install measuring devices on the Talent Canal @ Crooked Creek, on the East Canal near Billings Siphon and on the West Canal @ Coleman Creek.	The purchase and installation of water measurement devices to accurately measure flows in the canals at the different locations and to create efficiency blocks within the delivery system.	Water conservation, prevent soil erosion, water quality, public safety

TALENT IRRIGATION DISTRICT
Prior Reclamation (BOR) Funded Projects

Project Name Date	Cost		Project Definition	Benefits	Results of Project
Pipe sections of the Talent Canal #1425-05-FG-1L-1125 2006-2009	$58,981 $57,500	TID BOR	Install 1,960' of 24" and 517' of 18" ADS pipe in the canal near the Sundown Vineyard.	Control and prevent soil erosion by replacing the open canal with buried pipe.	Water conservation, prevent soil erosion, water quality, public safety
Automated Traveling Screens #1425-06-FG-1L-1203 2007	$79,831 $79,831	TID BOR	Install two automated traveling screens on the Talent Canal: one at Wagner Creek and one at Crooked Creek	Self cleaning screens were installed to aid in removing the excess debris caused from mechanical cleaning. The debris would accumulate too quickly for crews to keep the canals open.	Soil erosion, water quality, public safety
Hughes Lateral #1425-06-FG-1L-1213 2007-2010	$90,604 $90,604	TID BOR	Replace approximately 6200' of concrete tile with pressure pipe, and to tie into the Fern Valley Pipeline.	Prevent loss of water through leaks in old pipe, also provides for adequate pressure to encourage waterusers to convert to more efficient methods of irrigation.	Water conservation, prevent soil erosion, water quality, public safety
Water Conservation Improvements 1425-08-FG-1L-1353 2008-2011	$94,702 $94,702	TID BOR	Purchase of computer and installation of water resource management software; re-line 850' of canal and new lining on 450' of canal; pipe 600' of the West Canal near Burrell Road with 18" HDPE water tight pipe; convert 3,770' of the T13 Lateral from concrete tile to pressure pipe, and in conjuction with Agreement #R09AP1C423, install 2,090' of 24" ADS pipe in the Talent Main Canal downstream of the Dark Hollow Siphon on Crooked Creek.	More efficient water resource management and water right tracking with GIS and water management software; prevent loss of water through seepage from canals and leaks in old pipes, control and prevent soil erosion by lining or piping open sections of canal, provides pressure to encourage waterusers to convert to more efficient methods of irrigation.	Efficient water resource management, better control of water right, water conservation, prevent soil erosion, improve water quality & public safety.

TALENT IRRIGATION DISTRICT
Prior Reclamation (BOR) Funded Projects

Project Name Date	Cost		Project Definition	Benefits	Results of Project
System Optimitation Review (SOR) 1425-08-FG-1L-1377 2008-2010	$20,517 $48,604 $17,656 $10,431	TID BOR MID RRVID	Joint project to 1)quantify water losses; 2)determine feasibility of adding re-regulating basins; 3)evaluate modifications to storage & operations; 4)evaluate modifications to water deliveries; 5)deploy data gathered by incorporating results in regional water & land use planning.	Identify opportunities to conserve & manage water more efficiently: identify specific areas of water loss and evaluate the following: installation of re-regulating basins; operational and storage changes; and changes to water deliveries.	Promote rapid inclusion of results into regional water & land use planning, Water Management & Conservation Plans, ESA consultations, TMDL determinations, and related efforts, and ultimately a more rapid adjustment to the overall system.
2009 Canal Lining & Piping Projects 2009-In Progress	$119,884 $119,884	TID BOR	Re-line 1,445' of canal; new lining on 1,536' of canal; install 3,500' of 18" ADS pipe in the Talent Canal near Griffin Creek & installation of an underdrain to redirect upslope water to its natural course; and in conjunction with Agreement #1425-08-FG-1L-1353, install 2,090' of 24" ADS pipe in the Talent Main Canal downstream from the Dark Hollow Siphon on Crooked Creek.	Reduce leaks and seepage; provide adequate & uninterrupted water deliveries; increase storage by water savings; reduce the potential for personal & property damage; reduce erosion; increase operational efficiency; enhance aquatic/riparian habitat by redirecting flow from an upslope source to its natural drainage way.	Water conservation, prevent soil erosion, water quality, public safety
Pipe E12 Lateral 2010 - 2011	$98,489 $98,489	TID BOR	Install 7,600' of various pipe sizes to enclose the open ditches and replace the old concrete tile.	Prevents loss of water through leaks and seepage from open ditches and old concrete tile, provides pressure to encourage waterusers to convert to more efficient methods of irrigation	Water conservation, prevent soil erosion, water quality, public safety
Delivery Canal - Joint Works System Replace Trapezoid Panels October 2010	$2,514 $1,855 $559 $279	TID GSPP MID RRVID	Remove and replace damaged trapezoid panels on the Delivery Canal	Prevents loss of water through leaks and seepage from damaged panels.	Water conservation, prevent soil erosion, water quality, public safety

TALENT IRRIGATION DISTRICT
Prior Reclamation (BOR) Funded Projects

Project Name Date	Cost		Project Definition	Benefits	Results of Project	
2011 Water Conservation Improvements R11AP1C010 2011 - In Progress	$35,310 $35,310	TID BOR	Pipe 600' of the West Main Canal with 24" ADS pipe; pipe 3,100' of the McDonald Canal from the headworks downstream with 24" ADS pipe; line 640' of the Talent and West Main Canals.	These improvements will conserve water and provide increased water efficiencies, prevent canal failures and protect water quality in Project creeks and rivers.	Water conservation, prevent soil erosion, improve water quality, provide for public safety.	
TOTALS	$1,558,688	**TID**	$728,139	PIPED LATERALS	40,128'	7.6 miles
	$2,085,226	**BOR**	$693,184	PIPED CANALS	13,727'	2.6 miles
	$44,552	**OTHER**	$331,794	LINED CANALS	7,410'	1.4 miles
	$3,688,466	**TOTAL**	$572,098	FISH PASSAGE		
			$147,894	MEASURING DEVICES		
			$537,547	STUDIES		
			$677,810	OTHER		

SERVICE LIFE OF HDPE CORRUGATED PIPE

The design service life of corrugated high density polyethylene (HDPE) drainage pipe has been a subject of considerable research over the past several years. While significant long-term performance data is available for smooth-walled polyethylene pipe, the data for corrugated drainage pipes has been somewhat limited until now. The long-term results shown in the corrugated pipe service life ad are based on the utilization of some of the current widely-accepted methods employed by the plastic pipe industry, while modifying them somewhat to take into account the unique geometry and installation conditions of buried corrugated pipe.

The process for long-term service life prediction is two-fold: First, the anticipated service conditions of the drainage pipe must be assessed, including such factors as environmental conditions, soil and traffic loads, and the resulting long-term stresses and strains evident in the pipe. Second, the capacity of the material and the manufactured pipe product must be assessed.

The service conditions of the pipe will vary by geographic location, based on temperature and soil and traffic loads. While deep installations may result in large compressive stresses on the pipe, shallow installation are more subject to bending and tensile stresses. Although these stress levels are typically lower in magnitude than the compressive stresses associated with deep burial conditions, they are considered a limiting condition as the material is more prone to failure in tension rather than compression.

The capacity of the material to resist failure is the second factor that must be addressed. Based on its wide use as a piping material (i.e. gas, water, industrial, oil field, etc.) polyethylene is a highly scrutinized material and its mechanisms of failure are well known. For corrugated drainage pipe, the primary mechanisms of material failure are slow crack growth and oxidation or chemical failure.

Taking into account the service loads on the pipe and capacity of the HDPE material given its known mechanisms of failure, the latest research suggests the service life of corrugated HDPE pipe is well in excess of 100 years, even at deflections greater than 5%. For more information, please see the below published papers from independent studies presented at Plastics Pipes XIII in Washington, DC, as well as the Pluimer paper published at the ASCE Pipelines Conference in Chicago in 2006.

Evaluate The Long-Term Stress Crack Resistance of Corrugated HDPE Pipes

Y. Grace Hsuan, J-Y Zhang and W-K Wong
Department of Civil, Architectural and Environmental Engineering,
Drexel University, Philadelphia, USA

Establishing 100-Year Service Life for HDPE Drainage Pipe

Michael Pluimer
Technical and Engineering Manager, Plastics Pipe Institute,
105 Decker Court, Suite 825, Irving, TX 75062; email: mpluimer@plasticpipe.org

New Test Method to Determine Effect of Recycled Materials on Corrugated HDPE Pipe Performance as Projected by the Rate Process Method

Dr. Gene Palermo
Palermo Plastics Pipe Consulting - Friendsville, TN
Patrick Vibien, Dr. Ken Oliphant, Tony Kosari
Jana Laboratories - Aurora, Ontario, CANADA

TALENT IRRIGATION DISTRICT
JASMINE WATER CONSERVATION PROJECT
PROPOSED BUDGET

JOB DESCRIPTION: / PROJECTED COMPLETION	TMC BUENA VISTA TO GLORY C FY 2013/2014			TMC JASMINE AVENUE FY 2013/2014			TMC S. STAGE RD FY 2014/2015			TMC KNOWLES RD FY 2014/2015			TOTALS	
Salaries & Wages	Rate	Hours	Total	Rate	Hours	Total	Rate	Hours	Total	Rate	Hours	Total	Hours	Total
ADMINISTRATIVE & PROJECT MANAGEMENT														
Manager	$ 62.64	25.0	$1,566.00	$ 62.64	5.0	$313.20	$ 64.54	20.0	$1,290.80	$ 64.54	15.0	$968.10	65.0	$4,138.10
Office Manager	$ 41.79	12.5	$522.38	$ 41.79	2.5	$104.48	$ 43.24	10.0	$432.40	$ 43.24	7.5	$324.30	32.5	$1,383.55
Bookkeeper	$ 35.07	25.0	$876.75	$ 35.07	5.0	$175.35	$ 36.28	20.0	$725.60	$ 36.28	15.0	$544.20	65.0	$2,321.90
Office Assistant	$ 25.43	5.0	$127.15	$ 25.43	1.0	$25.43	$ 26.56	2.5	$66.40	$ 26.56	1.5	$39.84	10.0	$258.82
Foreman	$ 32.11	115.0	$3,692.65	$ 32.11	25.0	$802.75	$ 33.41	85.0	$2,839.85	$ 33.41	40.0	$1,336.40	265.0	$8,671.65
Total Admin/Proj Mngmnt		182.5	$6,784.93		38.5	$1,421.21		137.5	$5,355.05		79.0	$3,212.84	437.5	**$16,774.02**
CONSTRUCTION														
Hourly Rate (Average)	$ 29.73	2,275.0	$ 67,635.75	$ 29.73	430.0	$ 12,783.90	$ 30.84	1,645.0	$ 50,731.80	$ 30.84	755.0	$ 23,284.20	5,105.0	$ 154,435.65
Equipment	Rate	Hours/ Miles	Total	Rate	Hours/ Miles	Total	Rate	Hours/ Miles	Total	Rate	Hours/ Miles	Total	Hours/ Miles	Total
Various Pickups (mls)	$ 0.565	3,000.0	$ 1,695.00	$ 0.565	560.0	$ 316.40	$ 0.565	2,150.0	$ 1,214.75	$ 0.565	1,200.0	$ 678.00	6,910.0	$ 3,904.15
#1 Cement Trk (hrs)	$ 36.19	10.0	$ 361.90	$ 36.19	3.0	$ 108.57	$ 36.19	8.0	$ 289.52	$ 36.19	3.0	$ 108.57	24.0	$ 868.56
Standby	$ 4.78	90.0	$ 430.20	$ 4.78	21.0	$ 100.38	$ 4.78	56.0	$ 267.68	$ 4.78	21.0	$ 100.38	188.0	$ 898.64
#8 Equip Hauler (hrs)	$ 49.77	8.0	$ 398.16	$ 49.77	8.0	$ 398.16	$ 49.77	8.0	$ 398.16	$ 49.77	8.0	$ 398.16	32.0	$ 1,592.64
Standby	$ 5.68	8.0	$ 45.44	$ 5.68	8.0	$ 45.44	$ 5.68	8.0	$ 45.44	$ 5.68	8.0	$ 45.44	32.0	$ 181.76
#121 Kubota Exc (hrs)	$ 11.24	70.0	$ 786.80	$ 11.24	15.0	$ 168.60	$ 11.24	50.0	$ 562.00	$ 11.24	30.0	$ 337.20	165.0	$ 1,854.60
Standby	$ 2.11	90.0	$ 189.90	$ 2.11	25.0	$ 52.75	$ 2.11	70.0	$ 147.70	$ 2.11	50.0	$ 105.50	235.0	$ 495.85
#130 Case Excavator (hrs)	$ 32.52	45.0	$ 1,463.40	$ 32.52	9.0	$ 292.68	$ 32.52	35.0	$ 1,138.20	$ 32.52	20.0	$ 650.40	109.0	$ 3,544.68
Standby	$ 5.43	75.0	$ 407.25	$ 5.43	31.0	$ 168.33	$ 5.43	45.0	$ 244.35	$ 5.43	36.0	$ 195.48	187.0	$ 1,015.41
#135 Cement Mixer (hrs)	$ 2.09	50.0	$ 104.50	$ 2.09	16.0	$ 33.44	$ 2.09	40.0	$ 83.60	$ 2.09	16.0	$ 33.44	122.0	$ 254.98
Standby	$ 0.21	30.0	$ 6.30	$ 0.21	8.0	$ 1.68	$ 0.21	24.0	$ 5.04	$ 0.21	8.0	$ 1.68	70.0	$ 14.70
#313 Excavator (hrs)	$ 35.34	195.0	$ 6,891.30	$ 35.34	25.0	$ 883.50	$ 35.34	100.0	$ 3,534.00	$ 35.34	60.0	$ 2,120.40	380.0	$ 13,429.20
Standby	$ 8.78	125.0	$ 1,097.50	$ 8.78	15.0	$ 131.70	$ 8.78	60.0	$ 526.80	$ 8.78	40.0	$ 351.20	240.0	$ 2,107.20
#550 Dozer (hrs)	$ 37.35	80.0	$ 2,988.00	$ 37.35	15.0	$ 560.25	$ 37.35	60.0	$ 2,241.00	$ 37.35	30.0	$ 1,120.50	185.0	$ 6,909.75
Standby	$ 5.77	80.0	$ 461.60	$ 5.77	25.0	$ 144.25	$ 5.77	80.0	$ 461.60	$ 5.77	50.0	$ 288.50	235.0	$ 1,355.95
Total Equipment Use			$ 17,327.25			$ 3,406.13			$ 11,159.84			$ 6,534.85		$ 38,428.07

TALENT IRRIGATION DISTRICT
JASMINE WATER CONSERVATION PROJECT
PROPOSED BUDGET

JOB DESCRIPTION:	TMC BUENA VISTA TO GLORY C			TMC JASMINE AVENUE			TMC S. STAGE RD			TMC KNOWLES RD			TOTALS	
PROJECTED COMPLETION	FY 2013/2014			FY 2013/2014			FY 2014/2015			FY 2014/2015				
Material	Rate	Qty	Total	Rate	Qty	Total	Rate	Qty	Total	Rate	Qty	Total	Qty	Total
24" HDPE Pipe (ft)	$ 30.050	2,960.0	$ 88,948.00	$ -	-	$ -	$ -	-	$ -	$ -	-	$ -	2,960.0	$ 88,948.00
18" HDPE Pipe (ft)	$ -	-	$ -	$ 16.550	560.0	$ 9,268.00	$ 16.550	2,160.0	$ 35,748.00	$ 16.550	1,200.0	$ 19,860.00	3,920.0	$ 64,876.00
Plywood (shts)	$ 19.250	80.0	$ 1,540.00	$ 19.250	24.0	$ 462.00	$ 19.250	60.0	$ 1,155.00	$ 19.250	24.0	$ 462.00	188.0	$ 3,619.00
2x6 Lumber (ft)	$ 0.450	320.0	$ 144.00	$ 0.450	96.0	$ 43.20	$ 0.450	240.0	$ 108.00	$ 0.450	96.0	$ 43.20	752.0	$ 338.40
Rebar (ft)	$ 0.350	2,000.0	$ 700.00	$ 0.350	600.0	$ 210.00	$ 0.350	1,500.0	$ 525.00	$ 0.350	600.0	$ 210.00	4,700.0	$ 1,645.00
Cement (bags)	$ 8.750	160.0	$ 1,400.00	$ 8.750	48.0	$ 420.00	$ 8.750	120.0	$ 1,050.00	$ 8.750	48.0	$ 420.00	376.0	$ 3,290.00
Sand & Gravel (cy)	$ 48.500	32.0	$ 1,552.00	$ 48.500	9.6	$ 465.60	$ 48.500	24.0	$ 1,164.00	$ 48.500	9.6	$ 465.60	75.2	$ 3,647.20
Headgates, etc			$ 2,500.00			$ 1,000.00			$ 2,000.00			$ 1,000.00	-	$ 6,500.00
Total Material			$ 96,784.00			$ 11,868.80			$ 41,750.00			$ 22,460.80		$ 172,863.60
Total Construction			$ 181,747.00			$ 28,058.83			$ 103,641.64			$ 52,279.85		**$ 365,727.32**
Regulator Compliance			$ 12,384.67			$ 2,343.05			$ 9,037.47			$ 5,020.81		**$ 28,786.00**
Budget Subtotals			$200,916.60			$31,823.08			$118,034.16			$60,513.50		
TOTAL BUDGET														**$ 411,287.34**

CITY OF
ASHLAND

December 24, 2012

Bureau of Reclamation
Acquisition Operations Group
Attn: Ms. Michelle Maher
Mail Code: 84-27810
PO Box 25007
Denver, Colorado 80225

Subject: Letter of Support
Talent Irrigation District's application (PWE # 2010-18)
WaterSMART: Water and Energy Efficiency Grants for 2013
Funding Opportunity Number R13SF80003

Dear Ms. Maher;

The City of Ashland would like to offer support for the Talent Irrigation District's proposed Jasmine Water Conservation Project which will pipe the remaining four sections of the lower end of the Talent Canal, measuring approximately 6,880'. With this project nearly all of the last 4.9 miles of the canal will be enclosed with pipe. The benefits of this project include the deterrence of moss growth and conservation of water through the reduction of evaporation and seepage.

The City promotes water conservation and efficiency measures and feels this project is deserving of grant funding.

Sincerely,

Pieter Smeenk PE SE
Public Works Engineering
City of Ashland, Oregon

CC: Michael Faught
Dave Kanner

Oregon
John A. Kitzhaber, M.D., Governor

Water Resources Department
10 S Oakdale
Medford, OR 97501
(541) 774-6880
FAX (541) 774-6187

January 11, 2013

Bureau of Reclamation
Acquisition Operations Group
ATT: Ms. Michelle Maher
Mail Code: 84-27810
PO Box 25007
Denver, Colorado 80225

Subject: Letter of Support
Talent Irrigation District's Application
WaterSMART: Water and Energy Efficiency Grants for 2013
Funding Opportunity #R13SF80003

Dear Ms. Maher;

The Oregon Water Resource Department (OWRD) would like to offer our support of the Talent Irrigation District's proposed Jasmine Water Conservation Project which will pipe the remaining four sections of the lower end of the Talent Canal, measuring approximately 6,880'. With this project, nearly all of the last 4.9 miles of the canal will be enclosed with pipe. The benefits of this project include the deterrence of moss growth and conservation of water through the reduction of evaporation and seepage.

The OWRD promotes water conservation and efficiency measures and feels this project is deserving of grant funding.

Sincerely,

Larry Menteer
Deputy Region Manager Dist. 13

January 11, 2013

Bureau of Reclamation Acquisition Operations Group

Attn: Ms. Michelle Maher

Mail Code: 84-27810

PO Box 25007 Denver, Colorado 80225

SUBJECT: Letter of Support – Talent Irrigation District's Application

WaterSMART: Water and Energy Efficiency Grants for 2013

Funding Opportunity Number R13SF80003

Dear Ms. Maher:

The Southern Oregon Fly Fishers would like to offer our support of the Talent Irrigation District's proposed Jasmine Water Conservation Project, which would pipe the remaining four sections of the lower end of the Talent Canal measuring approximately 6,880 feet. We are a non-profit fishing club of 250 members, based in Grants Pass, Oregon along the Rogue River.

One of the stated purposes of our club is to support efforts to protect and enhance fish populations and their habitats in the Rogue Basin. This project will result in more efficient use of irrigation water from the Rogue River, and leave more water in the river for fish at critical stages of their life cycles. The benefits of this project also include the deterrence of moss growth and a reduction of evaporation and seepage from the open canal.

Our organization believes that water conservation and efficiency are extremely important goals in the Rogue Basin going into the future. We feel that this project is very deserving of grant funding and offer our complete support for it.

Sincerely,

Dave Grosjacques

Habitat Chair and Past President

Southern Oregon Fly Fishers

P.O. Box 467
Talent, Oregon
97540

Ph: (541) 951-0854
smason@wiseproject.org

January 10th, 2013

Bureau of Reclamation
Acquisition Operations Group
Attn: Ms. Michelle Maher
Mail Code: 84-27810
PO Box 25007
Denver, Colorado 80225

Subject: Letter of Support
Talent Irrigation District's application
WaterSMART: Water and Energy Efficiency Grants for 2013
Funding Opportunity Number R13SF80003

Dear Ms. Maher:

The WISE Project would like to offer our support of the Talent Irrigation District's proposed Jasmine Water Conservation Project which will pipe the remaining four sections of the lower end of the Talent Canal, measuring approximately 6,880'. With this project nearly all of the last 4.9 miles of the canal will be enclosed with pipe. The benefits of this project include the deterrence of moss growth and conservation of water through the reduction of evaporation and seepage.

The WISE Project promotes water conservation and efficiency measures and feels this project is deserving of grant funding.

Sincerely,

Robert C. Jones

MEDFORD IRRIGATION DISTRICT

P.O. Box 70
5045 Jacksonville Hwy.
Jacksonville, Oregon 97530
Office (541) 899-9913
Fax (541) 899-9968

Bureau of Reclamation
Acquisition Operations Group
Attn: Ms. Michelle Maher
Mail Code: 84-27810
P.O. Box 25007
Denver, Colorado 80225

January 9, 2013

Subject: Letter of Support
Water SMART: Water and energy Efficiency Grants for 2013
Funding Opportunity Number R13SF80003

Dear Ms. Maher:

Medford Irrigation District supports the proposed the Jasmine Water Conservation Project by Talent Irrigation District. The District has worked closely in partnership with the Talent Irrigation District to help improve water quality, protect habit as well as protecting the regional agricultural economy. The proposed project submitted by Talent Irrigation District will pipe the remaining four sections of the lower end of the Talent Canal, measuring approximately 6,880'. With this project include the deterrence of moss growth and conservation of water through the reduction of evaporation and seepage.The District fully supports Talent Irrigation District's application for seeking funding that is required for Project Improvements for further improving fish passage and habitat, water quality and quantity, and stream temperatures within the project area.

Medford Irrigation District very strongly promotes water conservation and efficiency. The Jasmine Street Water Conservation Project is a significant project that should be funded so that it can be implemented as soon as possible and thus improving the water quality and fish habitat within the Ashland and Bear Creeks.

Sincerely,

Carol Bradford
District Manager

Rogue River Valley Irrigation District

3139 Merriman Road
Medford, OR 97501

Phone: (541) 773-6127
Fax: (541) 773-5420
Email: rrvid@rrvid.org
www.rrvid.org

January 2,2013

Bureau of Reclamation
Acquisition Operations Group
Attn: Ms. Michelle Maher
Mail Code: 84-27810
PO Box 25007
Denver, Colorado 80225

Subject: Letter of Support
Talent Irrigation District's application
WaterSMART: Water and Energy Efficiency Grants for 2013
Funding Opportunity Number R13SF80003

Dear Ms. Maher;

Rogue River Valley Irrigation Distinct would like to offer our support of the Talent Irrigation District's proposed Jasmine Water Conservation Project which will pipe the remaining four sections of the lower end of the Talent Canal, measuring approximately 6,880'. With this project nearly all of the last 4.9 miles of the canal will be enclosed with pipe. The benefits of this project include the deterrence of moss growth and conservation of water through the reduction of evaporation and seepage.

Rogue River Valley Irrigation District promotes water conservation and efficiency measures and feels this project is deserving of grant funding.

Sincerely,

Brian Hampson

Secretary/Manager

Oregon
John A. Kitzhaber, MD, Governor

Department of Fish and Wildlife
Rogue Watershed District Office
1495 East Gregory Road
Central Point OR 97502
(541) 826-8774
(541) 826-8776
dfw.state.or.us

January 7, 2013

Bureau of Reclamation
Acquisition Operations Group
Attn: Ms. Michelle Maher
Mail Code: 84-27810
PO Box 25007
Denver, Colorado 80225

Subject: Letter of Support
Talent Irrigation District's application
WaterSMART: Water and Energy Efficiency Grants for 2013
Funding Opportunity Number R13SF80003

Dear Ms. Maher;

The Oregon Department of Fish and Wildlife supports the Talent Irrigation District's proposed Jasmine Water Conservation Project. The proposed project would pipe the remaining four sections of the lower end of the Talent Canal, measuring approximately 6,880 feet. Completing this project would result in piping nearly all of the last 4.9 miles of the canal. The benefits of this project will result in conservation of water through a reduction in evaporation and seepage. ODFW hopes that this project will result in more live stream flow being left in streams for fish and aquatic life and that this project will lead to future similar projects providing additional instream benefits.

Sincerely,

Jay Doino
Oregon Department of Fish and Wildlife

Oregon
John A. Kitzhaber, MD Governor

Department of Environmental Quality
Western Region
221 Stewart Ave., Suite 201
Medford, OR 97501
541-776-6010
FAX 541-776-6262

January 8, 2013

Bureau of Reclamation
Acquisition Operations Group
Attn: Ms. Michelle Maher
Mail Code: 84-27810
PO Box 25007
Denver, Colorado 80225

Subject: Letter of Support
Talent Irrigation District's application, Jasmine Water Conservation Project
WaterSMART: Water and Energy Efficiency Grants for 2013
Funding Opportunity Number R13SF80003

Dear Ms. Maher,

The Oregon Department of Environmental Quality (DEQ) wishes to express support for Talent Irrigation District's proposed Jasmine Water Conservation Project. This project pipes the remaining four sections of the lower end of the Talent Canal, measuring approximately 6,880 feet. With this project nearly all of the last 4.9 miles of the canal will be enclosed with pipe. Benefits to water quality will be achieved through deterrence of moss growth and water conservation through the reduction of evaporation and seepage.

The DEQ promotes water conservation and efficiency measures and feels this project is deserving of grant funding. Thank you for your consideration of this proposal. If you have any questions about our support, please feel free to contact me at 541-776-6091.

Sincerely,

Heather Tugaw
Rogue Basin Specialist

WATERWATCH

PROTECTING NATURAL FLOWS IN OREGON RIVERS

January 8, 2013

Bureau of Reclamation
Acquisition Operations Group
Attn: Ms. Michelle Maher
Mail Code: 84-27810
PO Box 25007
Denver, Colorado 80225

Subject: Letter of Support
Talent Irrigation District's Jasmine Water Conservation Project Application
WaterSMART: Water and Energy Efficiency Grants for 2013
Funding Opportunity Number R13SF80003

Dear Ms. Maher:

WaterWatch is a statewide river conservation organization dedicated to protecting and restoring streamflows in Oregon's rivers. WaterWatch is a strong proponent of water conservation and increasing water use efficiency. WaterWatch supports funding the Talent Irrigation District's proposed Jasmine Water Conservation Project, because it promotes water conservation and efficiency measures, and should improve water quality and streamflow in the Bear Creek Basin.

This project will improve and modernize a portion of the irrigation water delivery system that is part of the Bureau of Reclamation's Rogue Basin Project in the Bear Creek and Little Butte Creek basins. This project fits in nicely with a larger effort to modernize the delivery systems of the three irrigation districts within the Rogue Basin Project. This larger effort is known as the WISE Project, which is now endorsed by thirty-two organizations and municipal entities who have signed a Declaration of Cooperation.

WaterWatch hopes the Bureau of Reclamation will fund the Talent Irrigation District's Jasmine Water Conservation Project grant request.

Sincerely,

John DeVoe
Executive Director
WaterWatch