April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-102**	**Project Type:**	Acquisition
Project Name:	Lostine-Wallowa Rivers Confluence Conservation Easement		
Applicant:	Wallowa Land Trust		
Basin:	GRANDE RONDE	**County:**	Wallowa
OWEB Request:	**$350,000.00**	**Total Cost:**	$631,000.00

Application Description

Wallowa Land Trust (WLT) requests $350,000 to purchase a conservation easement for ranch property at the confluence of the Wallowa and Lostine Rivers in Wallowa County. The application is a resubmission of application #207-324 submitted in October 2006 and application #211-106 submitted in April 2010. WLT withdrew application #207-324 because of persistent problems with due diligence, and withdrew application #211-106 because the Acquisitions Subcommittee recommended it for a no-fund decision by the full Board. The application proposes less acreage protected for less cost than the previous applications. The conservation easement will cover a total of 257 acres, consisting of 110 acres of wetland and riparian habitats and 147 acres of farmland.

The conservation easement is intended to complement a 197-acre conservation easement recently purchased by WLT on a separate portion of the ranch. WLT wishes for OWEB to pay the entire cost of the conservation easement ($350,000), and considers its match to be the purchase of the previous conservation easement, with the total project cost being the price of both easements. The application states, although not clearly, that the purchase of the conservation easement will catalyze wetland and riparian restoration. It's unclear why the first conservation easement did not catalyze restoration. The application does not provide clear details on the restoration, except that the landowner is not responsible for it.

The application does not explain why a conservation easement is necessary for 257 acres, when less than half of the acreage will be managed for conservation values. The draft conservation easement does not prioritize conservation uses above inconsistent agricultural uses. Instead, both agricultural uses and conservation uses are on equal footing and there is no clear mechanism in the easement for resolving any conflicts between these competing uses of the property.

The application states that the project will protect 22 acres of freshwater emergent marsh and 49 acres of lowland riparian forest and shrubland, priority ecological systems which are "extremely rare" in the central Wallowa Valley. Furthermore, the application states that the purchase of the conservation easement will catalyze the restoration of 15 acres of freshwater emergent marsh and 21 acres of lowland riparian forest and shrubland, for a total of 107 acres of priority habitats, not 110 acres as cited elsewhere in the application. The application also states that the project will protect a total of 39 acres of black cottonwood/black hawthorn, quaking aspen, and western birch-black hawthorn. The application states that the project will catalyze the restoration of 25 additional acres of these OWEB priority plant communities, for a total of 64 acres of OWEB priority plant communities.

The application also states that the ranch contains two miles of the Wallowa River and 1.5 miles of the Lostine River, although the proposed conservation easement would encompass only the Lostine River.

The application states that the project will benefit the following species, and that they are currently present on the property: Chinook salmon, steelhead, bull trout, Lewis' woodpecker, willow flycatcher, and western small-footed bat. The application states that Columbia spotted frog and bobolink, although not documented on the property, are likely to be present and to benefit from the project.

The application states that the proposed project will: protect a large intact area, secure a transition area, restore function, protect a site with exceptional biodiversity, improve connectivity of habitat, and complete or complement an existing network of sites.

The application states that this project will "generate significant discussions among Wallowa County farmers and ranchers." It also states that WLT will hold agricultural easement workshops for ranchers and farmers, focusing on this ranch as a working model, and that the property will serve as an occasional outdoor classroom for Wallowa County and Eastern Oregon University students. WLT will coordinate tours and field trips, and will sponsor general restoration and "clean-up days" on the property. The application also states that WLT will work with the Nez Perce tribe to develop a "storyboard" describing the property's importance to the tribe. WLT will also place two informational kiosks along roads that border the property.

REVIEW PROCESS

Regional Review Team Evaluation

Several members of the RRT stated that the property contains riparian resources that are rare in Wallowa Valley, and that the Lostine River is important bull trout habitat. Another member stated that the property is important because it has cultural significance to the Nez Perce tribe.

Several members of the RRT raised concerns about inconsistencies in the application. Specially, a member questioned what is meant by eliminating "commercial grazing" in the property's wetlands. Another member questioned why the conservation easement is being proposed for areas that will continue to be farmed, and whether the threats the property faces warrant a conservation easement. The member thought that the easement should cover only the riparian and wetland portions of the property.

The RRT agreed that although the property's natural resources are very important, they require restoration to achieve their full potential. The RRT pointed out that the application states that restoration will begin as soon as management plans are in place, but also states that the property will have a five-year passive recovery period. The RRT was not sure what restoration is seriously being contemplated, who would do it, and in what timeframe. Several members stated that WLT does not have a track record of managing conservation easements, and they are unsure if WLT has the capacity to raise funds and build partnerships necessary to restore the property.

The RRT agreed that many people travel by the property because it is adjacent to a highway, and therefore a roadside kiosk could be an effective educational tool. One RRT member said that the easement has generated negative discussions among community members, and therefore the application's claims of positive educational outcomes are questionable. Another RRT member stated that under previous property ownership, high school students conducted water quality monitoring at the property. The RRT member suggested that perhaps the monitoring could be restarted under the current ownership.

Regional Review Team Recommendation to Staff

High Ecological and Medium Educational value.

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5000**	**Project Type:**	Restoration
Project Name:	No Moore #2 in Clover Creek		
Applicant:	Keating SWCD		
Basin:	POWDER	**County:**	Baker
OWEB Request:	**$75,900.00**	**Total Cost:**	$132,970.00

Application Description

A feedlot located in Keating Valley near Baker is contributing adverse water quality impacts to Clover Creek. Clover Creek flows directly through a feedlot area, corrals and into the Powder River. Feedlots were historically placed directly on perennial creeks or ditches to provide livestock water during the winter. However, that practice has resulted in impaired water quality and riparian vegetation impacts. Significant amounts of nutrients are deposited in Clover Creek which flows into the Powder River. Keating SWCD is proposing to move the feedlot from the riparian area to a site above the current feedlot location and away from any drainage. The old feedlot, corral sites and riparian area will be fenced and revegetated with grass seed and willows.

Keating SWCD is proposing to construct a new feedlot 900 feet away from Clover Creek and 10 feet higher in elevation; develop a nutrient management plan with assistance from ODA; plant 600 willows along 600 feet of the creek and install 2,200 of 2-inch pipe to provide water from a spring-fed pond to 4 watering troughs. Spacing for willow clumps will be 20 feet and 5 feet for pole plantings. Woven-wire riparian fencing will be installed on 600 feet of the east side of Clover Creek. Concentrated animal wastes will be removed and applied to cropland. The current feedlot will be reseeded with a riparian grass seed mix. The riparian area will be rested while willows and herbaceous plants are being established. The area will be flash-grazed after the two-year rest period.

Watershed benefits include improved riparian vegetation, water quality and wildlife habitat. OWEB funds are requested for project management (4%), contracted services (34%), supplies/materials (56%) and administration (6%). Cost-share partners include ODA and the landowner.

The proposed project has a direct relationship with OWEB's basin priorities for the Powder Basin and addresses riparian/floodplain, altered habitat structure, inputs of bacteria and altered thermal and sediment regimes. Practices complement the goals stated in the *Powder River Agricultural Water Quality Management Plan.*

REVIEW PROCESS

Regional Review Team Evaluation

The team agreed that this project is straightforward and will address a significant water quality problem. Moving the feedlot out of Clover Creek will eliminate runoff entering the Powder River. The landowner contribution is substantial. A letter of support from ODFW indicated that the inclusion of riparian fencing with the planned restoration of the area will improve vegetative diversity.

The team also felt that the proposed feedlot will be in a much drier location 900 feet away from Clover Creek. Riparian and vegetative conditions on Clover Creek will be enhanced. In addition, the use of float valve in the watering troughs is positive as those valves are more efficient and use less water. It was

questioned if the existing feedlot would be weed infested. However, since the site will be rehabilitated and reseeded, the weed issue was addressed.

Reviewers appreciated that the application had good maps, good detail, was well written and easy to understand.

OWEB has funded several feedlot relocation projects previously. Some requested items in this budget need to be moved to the landowner's cost-share. OWEB has previously only funded those items attributable to enhanced water quality; improved riparian function; vegetation and fencing; provided alternative water and rehabilitated of the old site. Project components that enhance watershed conditions are reimbursable components and those items that are more "business" or "operational" are not considered for OWEB funding. Staff will work with the applicant to modify the budget accordingly. Overall, the team felt that the project has substantial water quality and fisheries benefits and recommends it for funding this grant cycle.

Ecosystem Process and Function

By relocating a feedlot historically located on Clover Creek, a significant amount of agricultural runoff, nutrients and bacteria will be eliminated from entering the Powder River. This project addresses altered watershed functions affecting water quality.

Regional Review Team Recommendation to Staff

Fund.

Regional Review Team Priority

2 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$75,900.00		

Staff Recommendation to the Board

Fund Reduced. Staff worked with the applicant subsequent to the review team meeting to adjust the budget to ensure that those items that are more business-oriented expenses are paid for by the landowner. The budget was modified accordingly and submitted to staff.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$71,072.00		

Total Recommended Board Award

$ 71,072.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5001**	**Project Type:**	Restoration
Project Name:	Wildlife and Wetlands Can't Dial 911		
Applicant:	Burnt River SWCD		
Basin:	POWDER	**County:**	Baker
OWEB Request:	**$56,430.00**	**Total Cost:**	$78,655.00

Application Description

Located two miles west of Unity in Baker County, this project is in the upper Burnt River valley. It is situated in an historic wetland with deep, poorly drained soil and moderate soil permeability. The South Fork of the Burnt River basin drains approximately 6,300 acres. Currently, livestock have access to wetland/spring areas and rely on these wet areas for main watering sources. The three major springs are trampled and lack adequate vegetation resulting in decreased filtering capacity, decreased downstream water and degraded habitat. Currently, livestock access the springs resulting in a problematic water source, impaired water quality and altered wetland function. These main livestock watering sources are often devegetated and trampled.

To improve conditions at this site, Burnt River SWCD proposes to create over 13 acres of wetland in three separate fenced areas; install 6,300 feet of 4-strand barbed-wire fence; install 9,950 feet of 2-inch schedule 40 pipe; install 4 troughs for alternative water sources. The water will be piped from an existing well, conveyed to a storage tank on a high point and be gravity fed to the troughs. The SWCD consulted with ODFW and ascertained it was best to leave the springs undeveloped as this will benefit terrestrial and avian species. If the springs were developed, a lot of wildlife and wetland values would be lost. ODFW also provided fencing specifications that will be wildlife friendly with a barbless bottom wire that is 16 inches from the ground. ODFW's support letter indicated that the undeveloped springs will provide wetland habitat and naturally filter water that enters the watershed. Watershed benefits include improved water quality, riparian and upland vegetation and improved filtering capability.

OWEB funds are requested for project management (4%), contracted services (87%), administration (8%) and monitoring (1%). The landowner is providing a cash match.

The proposed project implements the *Burnt River Agricultural Water Quality Plan* and *the Burnt River Subbasin Plan* since it will improve water quality, wildlife habitat and upland vegetation.

REVIEW PROCESS

Regional Review Team Evaluation

The team felt that the project will improve both upland and riparian habitat. The wetlands are degraded from trampling and the current springs are not a good source of water for livestock. At the site visit, the landowner mentioned the possibility of combining two of the units – the 7-acre and 1.5-acre units – into one larger area. The team expressed that would be beneficial. Also, the use of an existing well and pumps instead of using the springs is more beneficial to wildlife and the team agreed that component had positive environmental benefits. The springs will be a water source for terrestrial species such as amphibians as well as various avian species. The wetlands and large existing pond provide a significant benefit to migratory wildlife as large water sources in this area are limited.

The fencing specifications were developed with ODFW consultation, which is very positive. They also expressed that the project has beneficial watershed benefits. The grazing plan was included with the application that also showed the season of use, duration and amount of livestock, which was helpful in understanding the management system. Using troughs for alternative water has a very positive benefit. Overall, the team felt that this project has positive environmental benefits and should be funded this grant cycle.

Ecosystem Process and Function

This project addresses altered wetland habitat and watershed function affecting water quality and permeability. Project implementation will improve water quality, riparian and upland vegetation and enhance habitat for various avian and terrestrial species.

Regional Review Team Recommendation to Staff

Fund with Conditions. Combine the 7-acre and 1.5-acre units into one larger area, unless the applicant provides information showing why that cannot be accomplished.

Regional Review Team Priority

10 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$56,430.00		

Staff Recommendation to the Board

Fund with Conditions. The grant agreement will require fencing of one combined unit, the 7 acre and 1.5 acres together, rather than separately.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$56,430.00		

Total Recommended Board Award

$ 56,430.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5002**	**Project Type:**	Restoration
Project Name:	Cusick Creek, Bringing Back the Past		
Applicant:	Keating SWCD		
Basin:	POWDER	**County:**	Union
OWEB Request:	**$222,754.00**	**Total Cost:**	$443,661.00

Application Description

Cusick Creek, which drains approximately 9,100 acres, flows into Thief Valley reservoir in southern Union County. The project site is located six miles east of North Powder. The lower portion of Cusick Creek was channelized in the 1940s and is currently incised with moderate-to-severe erosion that deposits significant amount of sediment into the reservoir. The lower, most damaged meadow reach is the focus of this project. Keating SWCD received a technical assistance grant to develop recommendations for returning the creek to its historic channel. In addition, to the problems created by channelization, legacy grazing issues have impacted this site, altering streambank conditions and habitat. Historic stocking rates exceeded capacity, creating additional site degradation. The new landowner has decreased stocking rates significantly and wants to improve riparian conditions and watershed function.

The technical assistance grant, 210-5006, analyzed a two-mile study area delineated into three sections. Analysis by River Design Group ascertained that the reach from the meadow to the end of Cusick Creek was the highest priority for restoration. Relic hawthorn and willows sparsely populate the lower end of Cusick Creek. The project's design committee included ODFW, USFWS, Keating SWCD, Lower Powder Irrigation District and the landowner. Three alternatives were reviewed. The selected alternative included excavating a new, sinuous channel to existing ponds. Small, connecting channels would be located between the new Cusick Creek channel and the ponds to provide fish passage to spring-fed ponds. Additional fill plugs will be placed in the ponds to shorten the pond lengths and reduce the potential for fill-plug failure. The channel dimensions are based on 200 to 250 cfs bankfull discharge. The selected alternative also was chosen for price, current conditions and fish and wildlife benefit considerations. Project components include reconstruct 1,600 feet of channel; install 20 riffles; create 5 pools with 20 logs each for fish habitat; excavate 3,500 feet of channel to create 15 pools; construct 500 feet of side channel; fill 2,500 feet of existing channel and revegetate with seed; transplant 7,000 shrubs and willow cuttings; develop 2 springs; install 7,000 feet of riparian fencing and other components.

OWEB funds are requested for project management/engineering (7%), contracted services (88%), and administration (6%). The landowner, DEQ 319 grant, USFWS and Keating SWCD are providing match.

The proposed project implements the *Powder River Agricultural Water Quality Plan* and *the Powder River Subbasin Plan* since it will improve water quality, wildlife habitat and upland vegetation. Implementation follows OWEB's basin priorities for Powder/Wolf Creek Watershed since it considers habitat fragmentation and connectivity as having high impact to watershed values.

REVIEW PROCESS

Regional Review Team Evaluation

The team agreed that having a technical assistance grant to provide good designs and detail is positive. The applicant provided detailed maps, assessment information and support letters from ODFW and USFWS. It is apparent that Cusick Creek is contributing to adverse water quality in Thief Valley reservoir, which flows

into the Powder River and there is poor water quality below the reservoir. In addition, this reach of Cusick Creek is the most impaired, with very poor riparian conditions and adverse fish habitat. Reconnecting to the floodplain, remeandering the stream and restoring riparian vegetation will provide fish and wildlife benefits. In addition, improving natural stream function should improve water retention in the stream.

The project cost is rather high for a small stream, but this stretch of Cusick Creek is the most critical to treat and will provide the most benefit to fish and wildlife. Water is currently flowing through previously constructed ponds resulting in adverse fish passage. It was noted that the south side pond is fed with spring water and will most likely require a reservoir permit. If awarded, the applicant will need to check with OWRD to ascertain which permits are required. Overall, the team expressed that this is an excellent project with significant watershed benefits. Implementation will improve both wildlife habitat and water quality. They requested that a grazing plan be submitted with the final report. The team felt that there is substantial ecological merit to warrant funding this grant cycle.

Ecosystem Process and Function

This project addresses altered fisheries habitat and watershed function affecting water quality and fisheries habitat. Project implementation will improve water quality, fisheries, riparian and aquatic habitat in Cusick Creek for redband trout as well as other wildlife.

Regional Review Team Recommendation to Staff

Fund with Conditions. Include a grazing plan with the final report. Check with OWRD concerning required reservoir permits for ponds and other possible permits.

Regional Review Team Priority

9 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$222,754.00		

Staff Follow-up to Review Team Comment

Subsequent to the review team meeting, Staff ascertained that the riparian fencing will be to NRCS and ODFW specifications and will be wildlife friendly.

Staff Recommendation to the Board

Fund with Conditions. The grant agreement will require a grazing plan to be submitted as part of the final project completion report.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$222,754.00		

Total Recommended Board Award

$ $222,754.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5003**	**Project Type:**	Restoration
Project Name:	Big Creek Watershed Restoration Project		
Applicant:	Union SWCD		
Basin:	POWDER	**County:**	Union
OWEB Request:	**$32,235.00**	**Total Cost:**	$66,235.00

Application Description

Located in the upper Powder Basin, this project addresses riparian and watershed function on 100 acres of USFS land in the Big Creek watershed near Medical Springs. Historic livestock grazing and past management practices have altered the riparian conditions and watershed function. The USFS is partnering with the Union SWCD to address riparian concerns within the allotment. Big Creek watershed was selected for treatment because of its ecological importance, its integration of multiple resource areas and need for restoration. The Big Creek watershed supports sensitive redband trout and Columbia spotted frogs.

The USFS is proposing to treat 50 acres of noxious weeds and improve riparian conditions by providing additional water for livestock and reducing livestock access. Project components include developing three springs at different locations in the Alder Creek, Thorn Creek and Beagle Creek drainages. A trough will be installed at each spring and exclosure fencing constructed to protect the wet areas surrounding the spring. Other project components include replacing a culvert with a rock ford; installing one-quarter mile of exclosure fencing on both sides of Thorn Creek; placing large woody debris (LWD) with an excavator on one mile of Lick Creek to prevent livestock access to Lick Creek and improving riparian vegetative conditions. Native seed will be planted within the Thorn Creek exclosure and in the noxious weed treatment areas. In addition, 750 native deciduous and 750 conifer seedlings will be planted. Watershed benefits include improved water quality, upland and riparian vegetation, stream complexity, fish habitat and floodplain connectivity.

OWEB funds are requested for in-house personnel (37%), contracted services (37%), supplies/materials (17%) and administration (9%). USFS and Title II are contributing cost-share.

The project will help to meet the goals of the *Frazier Mountain* and *Big Creek Allotment Management Plan* (AMP). These AMP's identify goals and objectives to restore riparian and streambank conditions and function, improve livestock distribution, decrease fine sediment loads; and control weed infestations.

REVIEW PROCESS

Regional Review Team Evaluation

The project appears to be multi-faceted with several project components. There are potential watershed benefits and the proposed project will treat 100 acres in an area of the forest where historic management practices created adverse conditions. The team felt that the project has good potential but essential detail was lacking. The overall current conditions at the various sites is unclear. More detailed maps with the project components clearly labeled would have been beneficial. The team questioned if redband trout are present in these particular creeks or in the Big Creek watershed in general.

There were several questions regarding the budget. The in-house personnel costs were high. The fencing cost seemed low at $.94/foot. There was concern that NEPA costs were shown as match but OWEB funds

were also requested for NEPA, and the team questioned that. It was unclear why an excavator and trackhoe would be needed for this project.

The planned herbicide for weed treatment was not stated nor was the targeted weed species. No mobilization cost was listed for the excavator. The project is within an allotment, but it is not clear if the permittees are providing any in-kind or cash contribution to the project. Also, are they part of the project and willing to maintain the improvements in the future?

While some of the planned restoration had good detail, other project element detail was lacking. The large wood appears to be more of a debris exclosure fence, but it is unclear if any will be placed within the streambed. If large wood is proposed for placement in Lick Creek, the application needs to provide more explanation of the proposed location of the wood, e.g., in the stream or on the banks, and address the potential for scouring. Removing the culvert will require a design and proof of fish passage. While the proposed effort will treat several different areas and has the potential to provide high ecological merit, the team felt that the application lacked essential detail and design information to warrant funding this grant cycle and did not recommend it for funding. A future application needs to address concerns raised by the team.

Regional Review Team Recommendation to Staff

Do Not Fund.

Staff Recommendation to the Board

Do Not Fund.

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5004**	**Project Type:**	Restoration
Project Name:	Kay Young: Working Toward a Fish Friendly Future		
Applicant:	Eagle Valley SWCD		
Basin:	POWDER	**County:**	Baker
OWEB Request:	**$288,705.00**	**Total Cost:**	$410,121.00

Application Description

The project is located at river mile 4.2 on Eagle Creek near Richland. The Kay Young diversion has 36 users on 1,580 acres and diverts 40 cfs during the irrigation season. The previous diversion lacked fish passage for redband and ESA-listed bull trout. Replacing the diversion was previously awarded, OWEB project 208-5115, in March 2008. After securing the required permits, the project was installed in the low-flow season of 2009. In June 2010, a 100-year event occurred during a rain-on-snow event, causing a 5,000 cfs flow on Eagle Creek, cutting a swathe through the new diversion and creating 4-foot headcut that blocked all upstream aquatic connectivity and obliterated the structure. The scour hole beneath the structure dredged down to 7 feet, 2 feet below the structure causing it to fall into the hole that was created.

The original design was planned for a 25-year event or a maximum stream velocity of 2,500 cfs. With twice the cfs the structure was designed to withstand, the diversion failed. A new diversion is needed and designs were completed in 2011 by Quadrant Engineering in Boise with input from USFWS. The existing damaged structure will be replaced with one that has improved elements. The proposed diversion structure will be reinforced with a concrete sill. The channel grade will be raised to the previous level before the flood event and maintained by two channel-spanning weirs and a roughened channel immediately below the weirs.

The project addresses water quality, irrigation efficiency, fish and wildlife habitat enhancement. Water quality will be addressed by reducing stream channel disturbance and associated mobilization of sediment caused by push-up dams. The new diversion structure will simplify and improve the process of diverting water into the irrigation ditches. Fish habitat will be improved by installing a diversion structure that better facilitates fish passage and reduced channel disturbance will also improve instream fisheries habitat. Fish passage for both adult and juvenile salmonids will be provided.

OWEB funds are requested for engineering and final design (7%), project management (1%), contracted services - mobilization, weir structures, rock and placement, dewatering (89%) and administration (3%). The landowners, USFWS and Eagle Valley SWCD are cost-share partners.

The proposed project implements the *Powder River Agricultural Water Quality Plan* and the *Powder River Subbasin Plan* since it will improve water quality, fisheries habitat and connectivity. Implementation follows the *Bull Trout Recovery Plan* since Eagle Creek is considered an area that can support a local population.

REVIEW PROCESS

Regional Review Team Evaluation

The project is a high priority because of the fisheries habitat benefit. Eagle Creek's headwaters are in the Eagle Cap Wilderness with high quality, cool water that provides excellent conditions for bull trout. There is a high potential for fish use including bull trout and redband. It was noted that this is the biggest fish passage

barrier in the valley and others are also being worked on. Structural integrity will be improved to withstand extreme water flow.

Significant erosion occurred during that flood as well as movement of large rock and boulders. If the structure is not correctly fixed, an improper repair may be made to accommodate irrigation withdrawal requirements most likely detrimental to fisheries. The project is needed despite the high cost. However, the team noted that the contribution from the landowners is small. It was also questioned if fish screens are required. Fish screens should be part of this project, but one landowner will not agree to it. The project partners will continue to pursue fish screens in the future and the review team agreed that this project is important even without fish screens.

The team agreed that modifying the diversion is a high priority as there are significant fisheries benefits and there is potential for greater degradation if no repairs are done. The team felt that this project was essential to provide positive fisheries benefits and recommended it for funding this grant cycle.

Ecosystem Process and Function

Replacing push-up dams with a more fish-friendly diversion addresses altered watershed function affecting water quality and fish-passage capabilities. The project will improve fish habitat for ESA-listed bull trout and water quality in the Powder River.

Regional Review Team Recommendation to Staff

Fund.

Regional Review Team Priority

3 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$288,705.00		

Staff Recommendation to the Board

Fund with Conditions. The grant agreement will require the post-implementation status reports to include information on the status of pursuing fish screens for this site.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$288,705.00		

Total Recommended Board Award

$ 288,705.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5005**	**Project Type:**	Restoration
Project Name:	Giving Keating Sage Grouse a New Home		
Applicant:	Keating SWCD		
Basin:	POWDER	**County:**	Baker
OWEB Request:	**$264,866.00**	**Total Cost:**	$1,189,717.00

Application Description

Located in the Keating Valley in Baker County, this project addresses declining greater sage-grouse habitat in the sagebrush-steppe. The project area encompasses 60,000 acres of both public and private land in ODFW's Core Habitat area. The Keating area has the highest number of sage-grouse leks – strutting and breeding areas – in Baker County. There are 24 leks in Keating area, 10 in the Burnt River area and 6 in other locations in Baker County. This sage-grouse population is at risk because of habitat fragmentation mostly caused by the Medusahead rye infestation. Medusahead is an exotic annual grass that invades rangeland. It is especially problematic because it reduces available forage, has a very high silica content and when cured creates a thatch (heavy mat) layer impenetrable to herbicide application or other treatment making containment problematic. Medusahead will replace desirable perennial bunchgrasses whose seed is needed for the sage-grouse diet. Invasion by Medusahead substantially reduces forage quality and amount; alters time of forage availability and reduces nesting habitat.

Within the project boundary, 30,000 acres are owned by 21 landowners. The SWCD plans to work with these landowners to begin restoration activities. The first phase of the project will work with five landowners. Long-range goals of the SWCD are to enhance sage-grouse habitat by dovetailing the Cooperative Conservation Partnership Initiative (CCPI), the Grassbank Program and OWEB funds to treat the resource concerns in a cooperative manner on a landscape-scale. The Grassbank program will help landowners acquire alternative forage during time of restoration work or after a catastrophic wildfire.

Project components are to inventory Medusahead on 60,000 acres by Tri-County CWMA; install 24,500 feet of four-strand, barbed-wire cross fencing; apply herbicide to 500 acres; develop one spring and provide effectiveness monitoring on the project. In addition, CCPI funds will provide prescribed burning on 1,343 acres; seed 1,339 acres; install 80,040 feet of fencing and improve wildlife habitat on 2,046 acres. After treatment, alternative forage on 3,489 acres will provide rest from grazing and allow the treated sites to recover. Anti-strikes markers will be placed as needed on installed fencing in areas designated by ODFW. Seed mix will include wheatgrasses, Great Basin wildrye, alfalfa, clover, fescue and big bluegrass.

In addition, effectiveness monitoring is planned in cooperation with USFWS and ODFW. Sage-grouse pellet counts and relative abundance will be measured on 500 acres. The applicant proposes to quantify the vegetative response at treatment areas over three years including pre- and post-treatment sampling periods and quantify the use of sage-grouse with seasonal sampling and control-site sampling. Monitoring will include an evaluation of treatment response by vegetation and sage-grouse. Permanent pellet count transects will be randomly established to quantify sage-grouse use. Two transects per 100-acre treatment area will be randomly established to quantify sage-grouse within treated areas. Vegetative composition, including cover and frequency of shrubs, grass and forbs, will be quantified along the permanent transects in treated sites. Data collected from treated sites on relative use will augment data collected from ongoing monitoring activities of radio-marked sage-grouse in the Keating area. The objectives of the effectiveness monitoring are to ascertain how vegetation and sage-grouse respond to Medusahead treatment and quantify the vegetative response and sage-grouse use in those treatment areas over a three-year period. These data will

demonstrate sage-grouse use of Medusahead treated areas while radio-telemetry data may capture the specific area used by individual radio-marked birds.

OWEB funds are requested for Medusahead inventory (54%), project management (2%), contracted services – fencing and herbicides (20%), administration (4%) and effectiveness monitoring (20%). Keating SWCD and CCPI (NRCS) are cost-share partners. The effectiveness monitoring budget is technicians (75%), mileage (15%), transect supplies (1%) and administration (9%).

The proposed project implements the *Powder River Agricultural Water Quality Plan* and the *Powder River Subbasin Plan* since it will improve water quality, wildlife habitat and upland vegetation. The project addresses preserving sagegrouse and wildlife habitat and the health and vigor of the native bunchgrass community. The project follows the *Oregon Conservation Strategy* by treating noxious weeds in a sage-brush-steppe and shrubland ecosystem and providing enhanced rangeland health.

REVIEW PROCESS

Regional Review Team Evaluation

Reviewers noted that the inventory is very important for the project's success. Inventorying the Medusahead first will help the entities prioritize planned and future restoration efforts. There are several large infestations but it will be most effective to treat the smaller areas first. Effectiveness monitoring will be beneficial in determining the results. Also, the USFWS employee designated to do the inventory has spent a significant amount of time on sage-grouse efforts in the area already. The project will also integrate with the on-going ODFW telemetry effort, which is beneficial. The travel in the budget needs to be expressed as mileage since OWEB cannot pay for vehicle rental.

It seemed that some of the fencing would be boundary fencing, which OWEB has not historically funded. Staff will need to check with the applicant to ascertain that none of the fencing installed will be boundary and that it meets NRCS specifications for wildlife. The effectiveness monitoring (EM) is well thought out and should provide good data to determine the overall project success. There was a math error in the EM budget that needs to be corrected. Also, it was not clear if the 500 acres planned for herbicide treatment was already determined. If so, it should have been marked on the map. While the grass seed selected seemed appropriate, it was stated that sagebrush seed needs to be added to the mix in order to return sagebrush to the sites. The controlled burn of Medusahead to remove the thatch layer needs to be carefully implemented in order to avoid burning sage brush. Overall, the team felt that the project is very comprehensive and will treat sage-grouse habitat enhancement on a landscape scale. There is significant ecological merit to warrant funding this grant cycle.

Ecosystem Process and Function

The proposed action will help to reverse degradation of sagebrush habitat. Protecting sagebrush-obligate wildlife, including greater sage-grouse, in the sagebrush-steppe habitat is a goal identified in the *Oregon Conservation Strategy.*

Regional Review Team Recommendation to Staff

Fund Reduced with Conditions. Fencing needs to meet NRCS' wildlife-friendly specifications. Also, include with the final report the plan for establishing sagebrush where it is needed for improved habitat; explain how they have kept/will keep fire out of existing sage brush and what they are doing to work with local entities to address land management practice to address invasive weed problems.

Regional Review Team Priority

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$216,909.00	$40,279.00	

Staff Follow-up to Review Team Comment

Subsequent to the review team meeting, Staff confirmed with the applicant that the fencing would installed to NRCS' wildlife friendly specifications and the OWEB-funded fencing would be interior or cross-fencing and that no boundary fencing would be requested from OWEB. The applicant will work with landowners to develop specific cross-fencing locations. A math error was corrected in the effectiveness monitoring budget.

Staff Recommendation to the Board

Fund Reduced with Conditions. The grant agreement will require the final project completion report to describe the plan for establishing sagebrush in the treated areas, including how they have kept/will keep fire out of existing sage brush and what they are doing to work with local entities to address land management practice to address invasive weed problems. The grant agreement special conditions will reflect Effectiveness Monitoring question 1 (Objectives) and Effectiveness Monitoring question 2 (Methods).

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$ 216,909.00	$40,279.00	

Total Recommended Board Award

$ 216,909.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5007**	**Project Type:**	Restoration
Project Name:	Jordan Valley Weed Restoraton		
Applicant:	Owyhee WC		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$82,950.00**	**Total Cost:**	$331,450.00

Application Description

The Jordan Valley Coordinated Weed Management Area (CWMA) has been working in the upper Owyhee watershed to address noxious weeds. This area encompasses over 4.5 million acres of rangeland. Sagebrush habitat, threatened by non-native weed encroachment, is important habitat for sage-grouse, sage thrasher, Brewers' sparrow and other sagebrush-obligates. Noxious weeds decrease water quality and damage the overall watershed health and function. Water quality and long-term production potential of land are reduced when tap-rooted species such as knapweed invade rangelands replacing deep, fibrous-rooted perennial native grasses. Invasive species alter hydrologic cycles, increase sediment deposition, erosion and adversely affect other ecosystem processes. Studies have demonstrated that surface runoff is 56 percent higher and sediment yield 192 percent higher on knapweed infested sites compared to sites dominated by native bunchgrass. In addition, the fire regime is altered resulting in higher intensity fires on the rangeland, adversely affecting native vegetation. Noxious weeds of concern in the Owyhee basin include Russian knapweed, perennial pepperweed (tall whitetop), leafy spurge, Scotch thistle, yellow starthistle and Medusahead rye.

Project components include treating 100 acres of leafy spurge, releasing 500,000 leafy spurge (*Apthona*) beetles on 400 acres of Boulder Creek in the Jordan Basin; inventory and mapping 100,000 acres over the next two years; treating 500 acres of Medusahead; seeding 2,000 acres with native and/or desirable non-native species and initiate an integrated weed management program to manage invasive species within the CWMA. A coordinator is required to facilitate this diverse group responsible for local weed management, develop common weed management objectives; facilitate effective treatment methods and coordinate weed management activities. Watershed benefits include improved water quality, upland vegetation and wildlife habitat.

OWEB funds are requested for in-house personnel (65%), contracted services (12%), travel/mileage (6%), seed (5%), outreach (1%) and administration (9%) and monitoring (1%). Cost-share partners include basin landowners, Malheur County Weed Control, BLM, ODA, ODOT, Oregon Department of State Lands, ODA and the local Sage-Grouse Working Group.

Implementation addresses the *Owyhee Subbasin Plan* (2004) by reducing sediment and improving water quality; the *Owyhee Agricultural Water Quality Management Plan* (2003) which suggests treating noxious weeds to address water quality issues; the Mid-Snake-Succor Creek TMDL and the *Jordan Creek/ Middle Owyhee Assessment* (2007).

REVIEW PROCESS

Regional Review Team Evaluation

This is the third time that this project has been submitted. The CWMA has successfully treated noxious weeds in the upper Owyhee watershed for the last four years with several basin partners. The area covered by this effort is quite large and sparsely populated, making coordination problematic. There are very few agency offices in the entire area.

While the team agrees that this effort is needed and seems to be doing a good job, the application was weak in describing past accomplishments and success. It should have provided more detail with past treatment areas located on the map, weeds treated and specific herbicides used. The work is successful and needed in this treatment area, but the application does not reflect past success. There are benefits to the riparian waterway, wildlife habitat and also some sage-grouse benefits. While the general area of the CWMA is defined, the specific treatment area *Apthona* beetles varied greatly between the text and the budget. The application was very general in nature and very similar to a previous submission. However, the team did not want the CWMA's effort to be greatly reduced since building these partnerships has taken several years. They suggested that the project be funded at a reduced percent and the applicant provide more essential detail and clearly articulate accomplishments in a future application. The project has significant ecological merit to warrant funding this grant cycle.

Ecosystem Process and Function

Treating noxious weeds and reestablishing the sites with native grasses will significantly reduce soil erosion that annually contributes tons of sediment into the Owyhee River. In addition, improved vegetation will enhance habitat for a variety of wildlife.

Regional Review Team Recommendation to Staff

Fund Reduced with Conditions. Fund for 1 year @ 50 percent of request. Final report needs to include an explanation of any coordination with other organizations to address land management practices to address invasive weed problems, and provide a table of accomplishments of treated acres, herbicide applied, targeted species and effectiveness of treatment.

Regional Review Team Priority

16 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$41,475.00		

Staff Recommendation to the Board

Do Not Fund; falls below staff-recommended funding line.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$ 0.00		

Total Recommended Board Award

$ 0.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5008**	**Project Type:**	Restoration
Project Name:	Newell Water Quality Improvement Phase I		
Applicant:	Owyhee WC		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$702,020.00**	**Total Cost:**	$1,141,789.00

Application Description

Located five miles northwest of Adrian in the Lower Owyhee Subbasin, the Owyhee Watershed Council (OWC) is proposing to pipe an irrigation lateral to provide pressurized water to 1,250 acres of farmland. The lateral functions as a delivery system and it is also a drain. Irrigation-induced erosion from 360 acres or at least 3,600 tons of sediment is annually deposited into the lateral as it delivers water to downstream users. When the water reached the end users, they must install sediment ponds at the turnouts to collect the sediment before irrigation can begin. Large amounts of sediment in the delivery system are very corrosive to existing systems resulting in plugged filters, nozzles and pipes. Irrigation-induced erosion from the remaining 890 acres, 8,900 tons of sediment produced annually, flows into the Overstreet Drain and the lower Owyhee River. By piping this lateral, 635 acres will be converted to sprinkler irrigation or drip tape. Converting from flood to sprinkler on the 625 acres will save 762 acre-feet of water, a savings of 30 percent.

The project will play a significant role in OWC's attempt to address the 303(d) listing of the Overstreet Drain, which has been monitored by Malheur SWCD for the past two years. Water analysis shows that water quality improved as furrow irrigation is converted to sprinkler irrigation and as best management practices (BMP's) were implemented. Total suspended solids (TSS) declined from 3,955 tons in 2008 to 2,925 tons in 2009 in the Overstreet Drain. In addition to helping landowners convert from furrow-flood irrigation to sprinkler, OWC encourages landowners to use filter strips, straw mulching and polyacrylamide (PAM). Crops such as onions and sugar beets are not conducive to sprinkler irrigation due to mold and mildew problems that can destroy an entire crop and therefore need to have BMP's used with their irrigation methods.

Project components include installing 23,660 feet of 100-pound psi pipe to replace an earthen lateral. Designs include 7,540 feet of 30-inch pipe, which is 49 percent of the materials budget. The remainder of the pipe and fittings are from 6-inch to 27-inch in diameter. Twenty (20) flow meters will be installed at various locations. Landowners will install four pivots and five drip irrigation systems. Design for the project was provided by a previous OWEB-funded technical assistance grant which determined pipe diameter and length, size and number of fittings required for the various sections and turnouts. In addition, the pressurized pipeline with solar-powered automation and conversion from flood to sprinkler irrigation will save 200.556 kilowatt hours of electricity adding to the environmental benefits.

Agricultural laterals and drains in Malheur Country contribute to impaired water quality through increased erosion, sediment and bacterial inputs. Earthen ditches also contribute to water loss through evaporation and seepage. Malheur SWCD has been sampling 35 agricultural drains and irrigation laterals that flow into the Snake River. Information collected from these sites indicates that because of the irrigation and farming practices, significant amounts of sediment and agricultural contaminates flow from these laterals and drains. Data also shows where past watershed enhancement projects are contributing to improved water quality. In many instances, this effort is in conjunction with NRCS' Environmental Quality Incentive Program (EQIP) program. Watershed benefits include reducing sediment, phosphorous, nutrients, bacteria, turbidity and water usage.

OWEB funds are requested for materials (99%) and administration (1%). The landowners, Owyhee Irrigation District (OID) and DEQ are cost-share partners. The landowner is the cost-share partner. Letters of support were provided by OID, Bureau of Reclamation (BOR), DEQ, Malheur SWCD and several landowners.

Implementation addresses the *Owyhee Subbasin Plan* (2004) by reducing sediment and improving water quality; the *Owyhee Agricultural Water Quality Management Plan* (2003) which suggests practices that include irrigation water management and conversion from furrow irrigation to sprinklers; the Mid-Snake-Succor Creek TMDL that also addresses converting from furrow irrigation to sprinklers to reduce sediment, nutrient and phosphorous and it addresses the *Lower Owyhee Assessment* (2007).

REVIEW PROCESS

Regional Review Team Evaluation

The Owyhee Watershed Council received a technical assistance grant two years ago to complete the engineering for this pipeline. Some of the landowners are ready to convert to pivots. The soils are highly erodible and very alkaline. By converting to pivots and installing the laterals, sediment transport will almost be eliminated. Evaporative ditch loss will be eliminated and irrigation delivery and efficiency will be improved. The project has very positive water quality benefits. The area is identified by DEQ as one of the highest priorities for converting from flood to sprinkler irrigation.

The team agreed that this continues the on-going effort in Malheur County by the OWC, Malheur Watershed Council and the Malheur SWCD to improve water quality and implement best management practices. The Owyhee basin is the largest source of agricultural-related sediment. Also, the team felt that one of the strong points of the project is the data collected by the Malheur SWCD through their agricultural drain monitoring effort. That data shows not only the location of some of the highest sources of sediment, but also demonstrates where sprinklers, earthen lateral to pipe conversions and BMP implementation are making a measureable difference in water quality parameters.

It was questioned if the irrigation district has the capacity to install the project. OID in cooperation with the OWC will be seeking funds from DEQ 319 and BOR. The lack of design for the sediment pond was questioned. However, that is not an item requested for OWEB cost-share.

While the total cost of the project is high, the project is installing approximately 4.5 miles of pipe. The actual budget is very minimal with 99 percent of the funds going to pipe, fittings and flow meters. The administration requested is 1 percent. There are no extraneous charges. Installation will be provided by OID, which is substantial. Engineering will be overseen by OID and BOR. Overall, the team felt that this project has excellent water quality benefits and has significant ecological merit. It should be funded this grant cycle.

Ecosystem Process and Function

Implementation of efficient irrigation systems will minimize erosion, reduce transport of farm chemicals to the Owyhee River, improve water quality and address limited water availability. The project addresses irrigation-induced erosion caused by furrow irrigation and earthen laterals.

Regional Review Team Recommendation to Staff

Fund with Conditions. The review team thought that collecting information about how the project affects water use would be beneficial. The district measures actual water use, however, it was discussed that there are different water needs in different years depending on type of crops grown, precipitation, and other factors; therefore, it would be very difficult to provide exact data on water savings. Staff will develop language for the grant agreement recognizing this situation.

Regional Review Team Priority
13 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$351,010.00		

Staff Follow-up to Review Team Comment
Staff worked with the applicant to determine whether a staged award is feasible for this project, in order to allow funding further down the line in Region 5. The applicant has indicated that an OWEB funding commitment is critical, but a staged award is feasible. Staff's funding recommendation reflects the timing needs communicated by the applicant.

Staff Recommendation to the Board
Fund Reduced with Conditions. Staff recommend full funding, with an award of $351,010 at this time, with $351,010 reserved from 2011-2013 biennium funds for the Board to award in March 2012. Staff will request the applicant report to the Board on the progress made to implement the project before Board action on awarding the reserved and committed funding. In addition, final and post-implementation reports must address the following: The preliminary engineering estimated a 28-30 percent water savings. The final project completion report and the post implementation status reports (PISR) will include descriptions of whether the system was constructed as designed and is functioning and performing as predicted, including installation (e.g., was it installed as designed, or were there changes that may affect the water savings), number of acres converted to sprinklers to-date, and other factors considered in the original estimate of the water savings. The reports should also include any calculations done by the Owyhee Irrigation District regarding water savings as a result of this project. The report may also include, if applicable, whether there have been any changes in irrigation practices including the timing and duration of irrigation. In addition, include water quality monitoring data collected – if any – in the PISR.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$351,010.00		

Total Recommended Board Award
$ 351,010.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5009**	**Project Type:**	Restoration
Project Name:	East Cow Hollow Water Quality Improvement		
Applicant:	Owyhee WC		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$48,320.00**	**Total Cost:**	$61,376.00

Application Description

Located 11 miles northwest of Adrian, Owyhee Watershed Council (OWC) is proposing to convert 25 acres from furrow-flood irrigation to sprinkler pivot. The field is planted to various crops including alfalfa, corn, sorghum and other row crops. The open-ditch delivery system results in water loss of 30 percent from evaporation and seepage. Currently, excess runoff flows into East Cow Hollow Creek that reaches the lower Owyhee River. Based on the 5-8 percent slopes of the fields, soil loss is estimated at approximately 10 to 15 tons per-acre per year or over 375 tons of sediment annually from this farm. Water quality standards for phosphorus in the Mid-Snake TMDL are set at 0.07mg/L

The project proposes to install 2,800 feet of 8-inch mainline to convert an open delivery ditch to pipeline; 10,880 feet of 4-inch for permanent big guns; 4 full-circle big guns and 2 part-circle big guns to irrigate 25 acres. Using the big guns in lieu of furrow irrigation will improve both water quantity and water quality and significantly reduce irrigation-induced erosion. This particular field is not suited for a pivot or wheel lines because of topographic constraints, delivery system and obstacles. Tailwater from the fields is collected in a ditch and then flows through drain pipes into East Cow Hollow Creek. Converting 25 acres of row-cropped farmland with steeper slopes and highly erodible soils from furrow to sprinkler will minimize irrigation-induced erosion from flowing into the Lower Owyhee River.

OWEB funds are requested for project management (3%), contracted services (15%), materials - pipe, bubblers, pumps (72%) and administration (9%). The landowner is the cost-share partner.

Implementation addresses the *Owyhee Subbasin Plan* (2004) by reducing sediment and improving water quality; the *Owyhee Agricultural Water Quality Management Plan* (2003) which suggests practices that include irrigation water management and conversion from furrow irrigation to sprinklers; the Mid-Snake-Succor Creek TMDL that also addresses converting from furrow irrigation to sprinklers to reduce sediment, nutrient and phosphorous and it addresses the *Lower Owyhee Assessment* (2007).

REVIEW PROCESS

Regional Review Team Evaluation

The project continues the on-going effort of the OWC to improve water quality to the Owyhee River. Antiquated irrigation delivery systems and a series of drains contribute to excess runoff and high levels of sediment in the Owyhee and Snake Rivers. The data collected by the agricultural drain monitoring shows improvements to water quality as a result of BMP's and conversion from flood irrigation to sprinkler. In addition, the Cow Hollow project that replaced five miles of an irrigation delivery system for several landowners on 450 acres was completed in 2008. Data collected in 2009 showed significant reductions in the Cow Hollow drainage in nitrogen, phosphorous and total suspended solids. These reductions can be attributed to landowners converting from flood to sprinkler irrigation as a result of a new delivery system and improved best management practices.

However, the design for this project is not clear. The acreage is relatively small, but there is a considerable amount of 4-inch mainlines for the big guns. While the application stated that there are topographic constraints with the property using wheellines, the team felt that the excessive amount of mainline was unnecessary and more of a convenience for the landowner and an unnecessary cost. They also noted that designing a system of permanent sprinklers on small acres was not cost effective and portable sprinklers would be a more cost effective option. A future application would need to provide a better design and clearly articulate exactly what the topographic constraints are and show how the main lines feed to the pivots. Also, a better map of the proposed area and site is needed. While there are water quality benefits to this project, it is not ready for funding this grant cycle.

Regional Review Team Recommendation to Staff

Do Not Fund.

Staff Recommendation to the Board

Do Not Fund.

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5010**	**Project Type:**	Restoration
Project Name:	Keeney Water Quality Improvement		
Applicant:	Owyhee WC		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$22,270.00**	**Total Cost:**	$69,422.00

Application Description

The Keeney Water Quality project is located adjacent to the East Cow Hollow project and 11 miles northwest of Adrian. Owyhee Watershed Council (OWC) proposes to convert 36 acres of furrow-flood irrigation to sprinkler-pivot. The field is rotated with corn, sugar beets and other row-crops with the rows running perpendicular to East Cow Hollow Creek. The accelerated runoff flows into Cow Hollow and then into the lower Owyhee. Based on the 5 to 8 percent slopes of the field, soil loss is estimated at approximately 10 to 15 tons per-acre per year or over 540 tons of sediment annually from this farm. Open-ditch delivery systems result in water loss of 30 percent from evaporation and seepage. Water quality standards for phosphorus in the Mid-Snake TMDL are set at 0.07mg/L.

The project proposes to install 2,300 feet of 8-inch mainline; 940 feet of 6-inch mainline to provide pressurized gravity flow; one 652-foot pivot to irrigate 36 acres and solid set sprinklers in the corners.

OWEB funds are requested for project management/mileage (6%), materials - pipe, bubbler and permanent pumps (81%), administration (9%) and monitoring (4%). The landowner is the cost-share partner.

Implementation addresses the *Owyhee Subbasin Plan* (2004) by reducing sediment and improving water quality; the *Owyhee Agricultural Water Quality Management Plan* (2003) which suggests practices that include irrigation water management and conversion from furrow irrigation to sprinklers; the *Mid-Snake-Succor Creek TMDL* that also addresses converting from furrow irrigation to sprinklers to reduce sediment, nutrient and phosphorous and it also addresses the *Lower Owyhee Assessment* (2007).

REVIEW PROCESS

Regional Review Team Evaluation

The team agreed that this project would provide significant water quality benefits as it continues the effort in the Owyhee basin to address irrigation-induced erosion and sediment loss. Growing corn on steeper slopes creates significant excess runoff. The request from OWEB is 32 percent of the overall budget and the landowner cost-share is significant for the pivot.

The application provided data that showed improved water quality as a result of the OWEB-funded project on Cow Hollow, completed in 2009 which replaced a mainline lateral for several landowners, enabling them to convert from flood to sprinkler irrigation.

The team felt that the budget is feasible and there is significant landowner cash match, which is positive. The project is also identified as being needed by on-going monitoring. Project implementation continues the water quality improvement work in the Malheur and Owyhee basins. There is significant ecological merit to warrant funding this grant cycle.

Ecosystem Process and Function

Implementation of efficient irrigation systems will minimize erosion, reduce transport of farm chemicals to the Owyhee River, improve water quality and address limited water availability. The project addresses irrigation-induced erosion caused by furrow irrigation.

Regional Review Team Recommendation to Staff

Fund.

Regional Review Team Priority

8 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$22,270.00		

Staff Recommendation to the Board

Fund Increased with Conditions. The grant agreement will require the installation of a flow meter, increasing the OWEB budget by $1,000. The application estimated that each pivot will utilize 28 percent less water (40 acre feet). The final project completion report and the post implementation status reports (PISR) will include descriptions of whether the system was constructed as designed and is functioning and performing as predicted, including installation (e.g., was it installed as designed, or were there changes that may affect the water savings) and number of acres converted to sprinklers. The report may also include, if applicable, whether there have been any changes in irrigation practices including the timing and duration of irrigation.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$23,270.00		

Total Recommended Board Award

$ 23,270.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5011**	**Project Type:**	Restoration
Project Name:	Borge Water Quality Improvement		
Applicant:	Owyhee WC		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$21,357.00**	**Total Cost:**	$79,760.00

Application Description

Located 4.5 miles northwest of Adrian, Owyhee Watershed Council (OWC) is proposing to convert a 40-acre field from furrow-flood irrigation to sprinkler-pivot. The field is planted to a crop rotation of potatoes, sugar beets, onions, wheat, corn and other. Open-ditch delivery systems result in 10 to 30 percent evaporative and seepage loss. Topographic characteristics include 5 to 12 percent sloped, alkaline soil. The field is divided into three to four sections with earthen and cement ditches that are 18 to 24 inches below the edge of the ditch, indicating significant soil loss. Based on the 5 to 12 percent slopes of the fields, furrow irrigation and slope length, soil loss is estimated at approximately 10 to 15 tons per-acre per year or over 600 tons of sediment annually from this farm.

Monitoring from the Overstreet Drain has shown a significant reduction in nitrogen, phosphorous and total suspended soils between the 2008 and 2009 measurement. Water quality is improving as conversion from furrow irrigation to sprinklers is being implemented. Monitoring from 2008 of this drain indicated that 4.5 tons of nitrogen, 1.0 tons of phosphorous and 3,955 tons of total suspended solids flow from it to the Overstreet Drain. In 2009, monitoring data indicated that 3.8 tons of nitrogen, .5 tons of phosphorous and 2,925 tons of total suspended solids were measured. Water quality standards for phosphorus in the Mid-Snake TMDL are set at 0.07mg/L.

The project proposes to install 4,980 feet of 6-inch mainline replacing gated pipe and a cement ditch and install a 650-foot Zimmatic pivot. Pivots will use 25 percent less water than the current furrow irrigation. The remaining acres not covered by the pivot will be irrigated with permanent sets in the corner.

OWEB funds are requested for project management (6%), materials - pipe, electrical, fitting (81%), administration (9%) and monitoring (4%). The landowner is the cost-share partner.

Implementation addresses the *Owyhee Subbasin Plan* (2004) by reducing sediment and improving water quality; the *Owyhee Agricultural Water Quality Management Plan* (2003) which suggests practices that include irrigation water management and conversion from furrow irrigation to sprinklers; the *Mid-Snake-Succor Creek TMDL* that also addresses converting from furrow irrigation to sprinklers to reduce sediment, nutrient and phosphorous and it also addresses the *Lower Owyhee Assessment* (2007).

REVIEW PROCESS

Regional Review Team Evaluation

This project is very similar to the other applications submitted from the Owyhee basin with slope and water quality challenges. The team agreed that this project would provide significant water quality benefits as it continues the effort in the Owyhee basin to address irrigation-induced erosion and sediment loss. Growing corn on steeper slopes creates significant excess runoff. Currently, corrugate rows run perpendicular to the slope which increases the erosion rate. Converting from flood to sprinkler will significantly help to ameliorate the runoff and will facilitate contour plowing.

Requested funding from OWEB was modest and there was significant cost share from the landowner. The overall cost per-acre was reasonable. Agri-lines of Parma designed this project as well as several others for the OWC. Implementation continues the water quality improvement work in the Malheur and Owyhee basins. Providing the monitoring data from the Malheur SWCD's Ag Drain monitoring effort was positive as it shows improving water quality as a result of past project implementation. Replacing the gated pipe will improve water quality. This type of project is a high priority in the lower Owyhee basin. The team also feels that these smaller projects help to influence other landowners and there can be a cascading effect from increased participation. There is significant ecological merit to warrant funding this grant cycle.

Ecosystem Process and Function

Implementation of efficient irrigation systems will minimize erosion, reduce transport of farm chemicals to the Owyhee River, improve water quality and address limited water availability. The project addresses irrigation-induced erosion caused by furrow irrigation.

Regional Review Team Recommendation to Staff

Fund.

Regional Review Team Priority

4 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$22,357.00		

Staff Recommendation to the Board

Fund Increased with Conditions. The grant agreement will require the project to include installation of a flow meter, increasing the OWEB budget by $1,000. The application estimated that sprinklers will save approximately 25-33 percent water and piping open ditches will save 40 percent of water. The final project completion report and the post implementation status reports (PISR) will include descriptions of whether the system was constructed as designed and is functioning and performing as predicted, including installation (e.g., was it installed as designed, or were there changes that may affect the water savings) and number of acres converted to sprinklers. The report may also include, if applicable, whether there have been any changes in irrigation practices including the timing and duration of irrigation.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$22,357.00		

Total Recommended Board Award

$ 22,357.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5012**	**Project Type:**	Restoration
Project Name:	Homestead Water Quality Improvement Phase II		
Applicant:	Owyhee WC		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$208,785.00**	**Total Cost:**	$307,181.00

Application Description

This project is located west of Jordan Valley. The applicant is proposing to convert 180 acres from flood irrigation to sprinkler. Tailwater flows into a slough that flows into Jordan Creek, which flows into the Owyhee above the dam. Mosquitoes are drawn to the field because of the ponding. In addition, the project will help to address sage-grouse mortality caused by the West Nile virus. Because of the uneven nature of the field with many high and low spots, water ponds throughout the irrigation season creating an optimal environment for breeding mosquitoes. In 2006, a significant die-off of sage-grouse occurred in the area from West Nile virus. In addition, there are four fields covering 190 acres that are also flood irrigated. Under the current system, the first field is flooded with large amounts of water, when the water gets to the ends of the field, it is captured by a lateral and used to irrigate the next field. This stair-stepping method continues until all four fields are irrigated. However, this is very inefficient and harmful to vegetation as well as providing ponded water for mosquito breeding. The applicant is proposing to pipe the field laterals and deliver water from the main pipeline for each individual field. This will control the amount of water used through risers and shut-off valves located along the field laterals, eliminating pooling and irrigation-induced erosion.

Project components include installing 1,500 feet of 24-inch 80 lb PVC pipe to replace an earthen delivery ditch; install 8,680 feet of mainline (10 to 18 inch 80 lb PVC- various lengths) to replace earthen field laterals; install 2,760 feet of 10-inch 100 lb PVC to supply water to the pivot and install a 1,169-foot pivot to irrigate 108 acres. Watershed benefits include improving water quality in Jordan Creek through irrigation efficiency and minimizing the potential for West Nile virus infecting sage-grouse.

OWEB funds are requested for project management (1%), contracted services - engineering (2%), materials – pipe, fittings, bubbler, pumps, flowmeter (92%) and administration (4%). The landowner is the cost-share partner.

Implementation addresses the *Owyhee Subbasin Plan* (2004) by reducing sediment and improving water quality; the *Owyhee Agricultural Water Quality Management Plan* (2003) which suggests practices that include irrigation water management and conversion from furrow irrigation to sprinklers and the *Mid-Snake-Succor Creek TMDL* that also addresses converting from furrow irrigation to sprinklers to reduce sediment, nutrient and phosphorous.

REVIEW PROCESS

Regional Review Team Evaluation

The project will address water quality and irrigation efficiency. In addition to the negative impacts to water quality from the current irrigation system, the ponding resulting from irrigation is detrimental to Greater Sage-Grouse because it provides optimal breeding habitat for mosquitoes that may carry the West Nile virus. This project has a more direct connection to wildlife habitat improvement than other similar water quality improvement projects. The project complements a nearly completed project on this ownership that converted 180 acres to sprinkler irrigation and piped a mile-long earthen delivery ditch.

This application, however, was more confusing than the previous project. The application states that the fields will be leveled as part of the project to avoid future ponding, but the budget does not show costs for field leveling. There is an issue with the water rights and the location of the pivot that needs to be addressed since some of the acreage does not have a water right. The map and design were confusing, especially for the 190 acres having four fields. A better description and map of how that irrigation functions is needed. The pivot acreage listed was confusing. The team also wondered why there would be any continued flood irrigation. If West Nile virus is a problem wouldn't it be better to eliminated all flood irrigation? The team also noted that the application lacks detail on how the system is designed to work. If they have to move it, can they move it to pivots that don't hit each other; and why are there so many risers for flood irrigation? Due to the confusion, questions raised, and lack of detail, this application is not ready for funding this grant cycle.

Regional Review Team Recommendation to Staff

Do Not Fund.

Staff Recommendation to the Board

Do Not Fund.

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5013**	**Project Type:**	Restoration
Project Name:	Big Bend Spur Ditch Elimination		
Applicant:	Wallowa SWCD		
Basin:	GRANDE RONDE	**County:**	Wallowa
OWEB Request:	**$139,525.00**	**Total Cost:**	$447,616.00

Application Description

Prairie Creek watershed is approximately 15,000 acres of irrigated cropland and pasture. Irrigation water is stored in Wallowa Lake and distributed by five main supply ditches throughout the valley. Spur ditches are used to convey water from the main ditches to pumps that pressurize the water for sprinkler irrigation. Sprinklers are used on over 90 percent of the irrigated lands in the valley. Excess water is diverted to provide a steady stream of water to the pumps, causing excess water tailwater return to Prairie Creek. Improvements were made to reduce the water quality impacts of winter-feeding operations in the area. Prairie Creek continues to be a significant sediment source. Significant amounts of tailwater return to Prairie Creek

Located four miles southeast of Enterprise, this project proposes to remove 15,727 feet of open-earthen ditch providing irrigation water to 700 acres of cropland on seven ownerships and replace it with 11,071 feet of mainline. By installing a pipe in lieu of a ditch, consistent water volume can be supplied to the pumps and evaporative and seepage loss eliminated. Project components includes installing one diversion box for the pipeline; 5,300 feet of 24-inch mainline; 4,550 feet of 18-inch mainline and 1,350 feet of 12-inch mainline. In addition, four flow meters and two pumps will be installed.

OWEB funds are requested for project management (1%), contracted services installing pipe and diversion structure (18%), materials - pipe, pumps , flow meters (78%) and administration (3%). The landowners, NRCS EQIP and Wallowa SWCD are cost-share partners.

Implementation follows the *Wallowa County Salmon Habitat Recovery Plan* as it states that high levels of sediment and nutrients are a high concern in Prairie Creek; the *Wallowa County Agricultural Water Quality Management Plan* as it addresses water quality and improved riparian vegetation and conditions and the *Grande Ronde Subbasin Plan* as it indicates that improve water quality will improve fisheries habitat.

REVIEW PROCESS

Regional Review Team Evaluation

Prairie Creek was a high priority for many restoration and water quality improvement efforts in the mid 1990s, due to the high amount of nutrients, runoff and *E. coli* concentrations. Significant amounts of tailwater return to Prairie Creek. Eliminating three miles of ditch has very significant water quality benefits. There is significant sediment and bacterial contaminations in Prairie Creek. While sprinkler irrigation is fairly common is this area, the conveyance is still primarily earthen ditch which increases evaporative and seepage loss. The pipeline will divert significantly less water than the current earthen ditch. Many existing ditches are incised and contribute high sediment loads to the system. This project will help to solve water quality, flow issues and is a meaningful contribution to the sediment problem. It addresses high-priority limiting factors in a water quality-limited stream and has significant water quality benefits.

The project involves five landowners. Installing a flow meter on each pump is also positive as it will assist landowners with better water management. The project addresses priority issues including reducing water use and improving habitat for ESA-listed spring Chinook salmon. Salmon can currently get trapped returning up tailwater discharge. Eliminating tailwater will be positive for the salmon. The budget is detailed and the amount of request for overhead including project management and administration is low, especially considered there are multiple landowners. There is a high likelihood that these types of projects will continue in the Prairie Creek area and have significant water quality benefits. The team agrees there is very significant ecological merit to warrant funding this grant cycle.

Ecosystem Process and Function

Eliminating earthen conveyance ditches will reduce soil erosion runoff that annually contributes significant sediment and other pollutants to Prairie Creek and the Wallowa River. This project addresses altered watershed functions affecting water quality.

Regional Review Team Recommendation to Staff

Fund.

Regional Review Team Priority

5 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$139,525.00		

Staff Recommendation to the Board

Fund with Conditions. The application explained that currently, excess water is diverted due to the type of system and pumps used. In addition to eliminating irrigation tailwater from Prairie Creek, the project should result in water conservation. The application notes that this is the second project to pipe a spur ditch off of Big Bend Creek, and it will act as a representative site since there are many similar situations that could be addressed. The application includes a project objective under Question R4, to "look at daily flows as well as record overall irrigation water use for the season." In order to help review teams and OWEB evaluate the benefits of future similar applications, the final project completion report and the post implementation status reports (PISR) will include descriptions of daily flows and overall irrigation use for the season, or, if that information is not available, explain why.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$139,525.00		

Total Recommended Board Award

$ 139,525.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5014**	**Project Type:**	Restoration
Project Name:	Little Divide Spring Development		
Applicant:	Malheur SWCD		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$25,380.00**	**Total Cost:**	$63,617.00

Application Description

Located seven miles south of Ironside, this project will address the lack of available water for livestock and wildlife. The project lies partly in the Middle Willow Creek watershed, which flows into Willow Creek and the Malheur Reservoir on the north side. The south side of the project drains into the Little Malheur and onto the mainstem Malheur. The landowner is participating in the Sage Grouse Initiative (SGI) to remove juniper on 237 acres. Developing four springs will dovetail into the upland improvement project.

The property was lightly grazed in 2009 and not grazed in 2010 with the intention of resting the area for the next two years to enhance upland vegetation. Four springs will be developed with troughs for offstream watering. The water troughs will entice livestock and wildlife to drink away from the stream and improve both the riparian and upland vegetation. Lack of water is a problem in the summer and fall – limiting sage-grouse lek construction.

Project components include developing four spring sites; bury 400 feet of 1.5-inch PVC at each site; install 600 feet of fencing at each spring site; plant a seed variety at each spring site conducive to sage-grouse' dietary requirements and install a wildlife escape ramp at each trough. Watershed benefits are improved water quality, riparian and upland vegetation after the juniper removal and improved livestock distribution.

OWEB funds are requested for project management (15%), contracted services (25%), materials - fencing, troughs, spring box (46%), mileage (2%) and administration (9%), monitoring (3%). The landowners, ODFW and NRCS are cost-share partners.

Implementation follows the *Malheur Basin Agricultural Water Quality Plan* as it addresses water quality and improved riparian vegetation and conditions and the *Malheur Basin Action Plan*, goal 4 which is to improve or maintain rangeland conditions.

REVIEW PROCESS

Regional Review Team Evaluation

The project seems to be a beneficial upland enhancement project and potentially can help to improve upland vegetation especially when the juniper is removed with the SGI. Once the 237 acres of juniper is removed, the potential to improve upland bunchgrass community is increased. However, the application overstated the benefits to sage-grouse. Spring developments are not improvements for sage grouse habitat.

The reviewers discussed that it was unclear from the application what the watershed benefits are. While there could be livestock distribution enhancement, no information about current grazing use (where, when and how many) was included. Also, while riparian conditions can be improved by pulling livestock away from the creek, the application did not describe the current condition of the creek and whether there are significant riparian condition issues. Fencing around the spring enclosures needs to be wildlife accessible. Also, there was no mention of valves or overflow. While the project has potential, the application needs to

better explain the problem being addressed by the proposed project; provide information on how the property is grazed including season of use, duration and stocking rates; and should explain the watershed benefits to the uplands. It is not ready for funding this grant cycle.

Regional Review Team Recommendation to Staff
Do Not Fund.

Staff Recommendation to the Board
Do Not Fund.

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5015**	**Project Type:**	Restoration
Project Name:	Little Alps Spring Development		
Applicant:	Malheur SWCD		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$20,721.00**	**Total Cost:**	$75,321.00

Application Description

Located in the upper Malheur basin in eastern Grant County south of Ironside, where there are a number of sage-grouse leks, this project will address the lack of available water for livestock and wildlife. The project is in the Little Malheur basin which flows into the Malheur River. The landowner is removing juniper on 400 acres participating with OWEB and the Sage Grouse Initiative (SGI) project. In order to further improve upland vegetation, three spring sites will be developed. The water developments will benefit many wildlife species. In addition, the juniper removal will help to recharge the spring sites as well as the Little Malheur River. Juniper has displaced the fescue, bunchgrasses, ryegrasses and other important native perennial species. It has reduced preferred sage-grouse habitat since juniper can serve as perch habitat for raptors that prey on sage-grouse. This project is in close proximity to known sage-grouse leks.

Another watershed problem associated with the current site conditions is the decreased water quality resulting from livestock and wildlife congregating in the riparian waterways, adversely affecting both water quality and vegetative conditions. By providing alternative developed water sources, there will be better distribution for livestock and wildlife. Springs are located in the high-density juniper and not supplying water after the late spring period, hindering use by sage-grouse, wildlife and livestock.

Project components include developing three sites; bury 400 to 600 feet of 1.5-inch PVC at each site; install 600 feet of fencing at each spring site; install a tire or metal trough equipped with a wildlife-escape ramp and plant seed varieties in the spring enclosure conducive to sage-grouse chick diet. Access to the spring sites is problematic. One site is only accessible by foot and situated on very steep terrain. All materials and equipment will be need to be hauled in and the site hand dug. The other sites may be accessible by machine. ODFW will provide advice on the seed mix with the spring enclosure as well as reseeding of the area after juniper removal. Watershed benefits are improved water quality, riparian and upland vegetation after the juniper removal and improved livestock distribution.

OWEB funds are requested for project management (16%), contracted services (27%), materials - fencing, troughs, spring box (45%), mileage (3%) and administration (9%). The landowners, ODFW and NRCS are cost-share partners.

Implementation follows the *Malheur Basin Agricultural Water Quality Plan* as it addresses water quality and improved riparian vegetation and conditions and the *Malheur Basin Action Plan*, goal 4 which is to improve or maintain rangeland conditions.

REVIEW PROCESS

Regional Review Team Evaluation

The team had the same concerns with the proposal as with the previous application (212-5014). The project might be a beneficial upland enhancement project and potentially can help to improve upland vegetation especially after the juniper is removed with the SGI and OWEB funding. Once the juniper is removed, the

potential to improve upland bunchgrass community is increased. However, the benefits to sage-grouse are overstated. Spring developments are not improvements for sage-grouse habitat. Also, the benefit to other upland wildlife needed to be more clearly articulated. Reviewers also noted that a lot of the project site is very steep, and sage-grouse will not use hillsides.

The Little Malheur basin has had significant juniper removal over the last several years. Anecdotally more flow has been observed in the river. However, for this project it is not clear what the watershed benefits are. While there is livestock distribution enhancement, no grazing plan was included. Also, while there will be benefits to the riparian area by pulling livestock away from the creek, there is no statement regarding the current condition of the riparian area. Fencing around the springs needs to be wildlife accessible. Also, there was no mention of valves or overflow. The project needed better maps that show the location of the juniper removal in relation to the spring developments, property boundaries, cross fencing and upland management. A grazing scheme or plan needs to be included. While the project has potential as an upland improvement project, the application did not provide information to allow the review team to understand the problems on the site that the proposal would address, and they could not evaluate the merits of the project without that information. The project is not ready for funding this grant cycle.

Regional Review Team Recommendation to Staff

Do Not Fund.

Staff Recommendation to the Board

Do Not Fund.

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5016**	**Project Type:**	Restoration
Project Name:	Silvies River Restoration Fence		
Applicant:	Harney SWCD		
Basin:	LAKES	**County:**	Harney
OWEB Request:	**$35,025.00**	**Total Cost:**	$45,070.00

Application Description

A proposed project three miles north of Burns will improve riparian condition and function along the Silvies River. Two landowners on opposite sides of the Silvies propose to address streambank erosion, bank instability and insufficient riparian vegetation. One landowner has multiple pastures. Livestock access to the Silvies is not restrained along the southern and western pastures of one landowner. Grazing is dependent upon the availability of water from the Silvies with limited access concentrated in a few locations, resulting in trampling. Livestock access to the Silvies on the adjacent landowner's property is also concentrated in a few areas and results in trampling and higher erosion. A collaborative effort will restore riparian vegetation and stabilize streambanks by installing riparian fencing to control livestock access to the streambanks. Permanent solar-powered watering systems, a spring development and a hardened water gap will provide livestock water.

For the landowner with 162 acres, project components include installing 4,285 feet of four-strand, barbed-wire riparian fence along the east bank; 300 feet of cross fence to create a middle pasture; solar-powered pump with a fish screen and a 12-foot trough. On the 35-acre parcel, project components include installing 3,069 feet of riparian fencing, along the west bank; three metal gates; develop one spring and pipe to an 8-foot trough and construct a hardened water gap. Implementation would reduce sediment loads, improve water quality, increase channel complexity and improve fish habitat. In addition, both riparian and upland vegetation will be enhanced. Grazing plans will be developed for both properties.

OWEB funds are requested for layout and project management (5%), contracted services (12%), materials (74%), administration (9%) and monitoring (1%). The two landowners will provide cash and in-kind as cost-share.

Implementation follows the *Greater Harney Basin Agricultural Water Quality Management Plan* (March 2003) encourages practices that help to achieve water quality standards and enhance streamside vegetation.

REVIEW PROCESS

Regional Review Team Evaluation

The current grazing system along the Silvies River creates a lot of erosion and riparian vegetation cannot get established along som sections. In order to provide off-stream water, a spring needs to be developed on one property and a solar pump on the other. Water will then be pumped to troughs either by solar pumps or gravity. The water quality benefits are very substantial and this project is a good step forward. There are many project components and the collaborative effort between two landowners is positive. In addition, the fisheries benefits are high. Reviewers commented that the fencing should meet ODFW specifications for wildlife access.

The applicant provided good maps, photos and budget detail. OSU Extension will assist the landowners with each of their grazing plans. The plans need to be included with the final report. The site visit confirmed that

there are several places along the streambanks were vegetation is well established. It did not appear to need any excavator work to shape the banks. Those on the site visit agreed that with the riparian fencing, vegetation should become well established along the entire banks. Overall, the team felt that this project had very high water quality and riparian benefits and should be funded this grant cycle. The project has substantial ecological merit.

Ecosystem Process and Function

Protecting the streambank by limiting livestock access and grazing management will significantly improve riparian vegetation and wildlife habitat in the Silvies River. This project addresses altered watershed functions affecting water quality and riparian vegetation.

Regional Review Team Recommendation to Staff

Fund with Conditions. Include a grazing plan with final report and install fencing to ODFW guidelines

Regional Review Team Priority

6 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$35,025.00		

Staff Recommendation to the Board

Fund with Conditions. The grant agreement will require fencing to be installed to ODFW guidelines, and a grazing plan to be submitted as part of the final project completion report. The grant agreement will require installation of a fish screen as shown on the application budget as project match. Grantee will provide OWEB's Project Manager with written documentation confirming installation of the fish screen and include a photograph of the screen in the final project completion report.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$35,025.00		

Total Recommended Board Award

$ 35,025.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5017**	**Project Type:**	Restoration
Project Name:	West Sandhills Allotment Stockwater Restoration Project		
Applicant:	Harney SWCD		
Basin:	LAKES	**County:**	Harney
OWEB Request:	**$33,638.00**	**Total Cost:**	$49,698.00

Application Description

The Pueblo Valley in southern Harney County is the location of the West Sandhills BLM allotment, four miles northeast of Denio Nevada in the Cottonwood Creek watershed. The allotment has three livestock wells, a few water holes and lacks perennial water for both livestock and wildlife. Deer, antelope and sage-grouse in addition to livestock will all benefit from having dependable water sources. There are five management units with approximately 17,976 acres of grazing land. The three wells have old windmills to pump water and have not functioned for several years. The wells are situated adjacent to high-priority sage-grouse habitat sites. There is a loss of winter and summer habitat for mule deer and pronghorn antelope caused by the expansion of noxious weeds such as knapweed, whitetop and Scotch thistle.

Harney SWCD is partnering with the permittee/landowner to install three solar units and a pump on the existing wells. The wells are approximately 2.4 miles apart which would provide water at a reasonable travel distance for livestock and wildlife. BLM proposes to develop an existing spring on Maggie Creek in conjunction with this project. They will collect data on the well sites by measuring static-water levels, review well logs and test the pumps. The solar units will include panels, a tracking system, submersible pump and a float valve.

Watershed benefits include improved upland vegetation through enhanced distribution by providing better water and water source locations. Wildlife will benefit by having a dependable source of water throughout the year.

OWEB funds are requested for design, travel, inspection, project management (16%), materials (72%), administration (9%) and monitoring (3%). The landowners and BLM will provide cash and in-kind as cost share.

Implementation follows the *Greater Harney Basin Agricultural Water Quality Management Plan* (March 2003) encourages practices that help to achieve water quality standards that will result in the improvement of rangeland condition, rangeland trend wildlife habitat and enhanced environmental quality. It also follows the *Sandhills Allotment Management Plan* (AMP) (2003) and enhances streamside vegetation.

REVIEW PROCESS

Regional Review Team Evaluation

The project is located on BLM land which has an AMP that was provided with the application. Existing windmills have not functioned for several years and cannot be repaired since parts are no longer available. The windmills were installed many years ago. The BLM supports installing the solar-powered generators and provided a letter supporting the project stating that it follows the management objectives to improve ecological conditions of upland vegetation communities and will help to improve the condition of riparian areas.

The applications had good detail, photos and maps. Trend data from the BLM was helpful. Data was from the 2003 AMP showing the vegetative conditions were static or upward. However, it is not clear what the current conditions are and that information would have been beneficial for reviewers to better understand the relative resource benefit of this project to other projects, and better understand wildlife needs. It also was not evident if the water sources were functioning when the data was collected in 2003 which would have been helpful. There is definitely a lack of perennial water at these sites. Having dispersed water will improve upland vegetation as it will avoid livestock concentration and therefore excessive trampling. In addition, upland water will be beneficial to wildlife especially in this part of southern Harney County. The project is adjacent to high-priority sage-grouse habitat. Overall, the team thought that the application could have made a more clear case for resource benefit, but felt there is sufficient ecological merit to warrant funding this grant cycle.

Ecosystem Process and Function

Providing dispersed water in the uplands will help to improve upland vegetation and provide consistent water source for wildlife in a desert environment.

Regional Review Team Recommendation to Staff

Fund.

Regional Review Team Priority

18 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$33,638.00	**$40,279.00**	

Staff Recommendation to the Board

Do Not Fund; falls below staff-recommended funding line.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$ 0.00		

Total Recommended Board Award

$ 0.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5018**	**Project Type:**	Restoration
Project Name:	Baker/Union County Underproductive Forest Land Reforestation/Restoration Project		
Applicant:	Grande Ronde Model WS Program		
Basin:	GRANDE RONDE & POWDER	**County:**	Union
OWEB Request:	**$113,000.00**	**Total Cost:**	$174,068.00

Application Description

Union and Baker counties contain unhealthy forest conditions including inappropriate species mixes and understocked stands resulting from insect and disease outbreaks over the past two decades. There were several outbreaks of insects including the western spruce budworm, mountain pine beetles, Douglas-fir bark beetle, mountain pine beetle and tussock moth. Mortality resulting from these outbreaks left many openings that do not provide optimal watershed function. Additionally, the openings provide opportunities for noxious weeds, annual grasses to be established. These unhealthy forest conditions negatively impact watershed function by reducing the capture, storage and safe release of precipitation in the forested uplands.

The applicant is proposing to treat 400 acres on 18 different landowners' properties to improve long-term forest health and vigor by planting site-specific species to improve upland forest health. Individual site-specific project prescriptions will be written by ODF to optimize long-term forest health benefits and define the scope of work for each landowner. Vegetative competition reduction/release methods such as mulch mats will be applied as needed to reduce mortality. Browse protection such as PlantSkydd, Continuum Buckmaster or Vexar tubes will be used if needed to limit the adverse effect of big game. Site-specific planting guidelines will provided to each landowners. ODF Stewardship Foresters will design, approve and inspect project work.

OWEB funds are requested for contracted services - planting costs/related expenses (93%) and administration (7%). Cost-share partners include ODF and Oregon State University Extension.

Implementation follows the *Grande Ronde Model Watershed Operations/Action Plan* (1993) that identifies forested upland conditions having concerns with insects and diseases as having a high potential for catastrophic wildfire. This project addresses those issues by implementing actions to plant private forested uplands into healthy long-term sustainable components of watershed function.

REVIEW PROCESS

Regional Review Team Evaluation

This part of the region experienced several insect outbreaks over the last 20 years leaving stands understocked or stocked with an inappropriate species composition. There is very high potential for catastrophic wildfire in the area. ODF frequently has landowner inquiries for assistance on planting, thinning, or for wildlife improvement projects. However, there are limited resources available to meet long-term land stewardship needs.

Planting the understocked areas will have water quality and wildlife benefits as the most appropriate species will be planted on a site-specific basis. Planting will not occur in areas that have a reforestation obligation. Re-planting needs are mostly the result of fire and insect damage. Objectives of the 18 property owners vary, but generally include improving overall forest health and watershed function. Some of the landowners

are new and trying to improve forest land that is in less-than-optimal conditions. ODF has done assessments verifying that project properties have compatible and suitable sites for planting. Stocking surveys will also be done to ensure adequate survival rates. Overall, the team felt that there is sufficient ecological merit to warrant funding this grant cycle and recommended it for funding.

Ecosystem Process and Function

Improving upland vegetative conditions will help to reduce the threat of wildfire and enhance wildlife habitat. Properly functioning upland vegetation with healthy forest stands increases water storage capacity while safely releasing it.

Regional Review Team Recommendation to Staff

Fund

Regional Review Team Priority

17 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$113,000.00		

Staff Recommendation to the Board

Do Not Fund; falls below staff-recommended funding line.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$ 0.00		

Total Recommended Board Award

$ 0.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5019**	**Project Type:**	Restoration
Project Name:	Joseph Creek Noxious Weed Project		
Applicant:	Wallowa Resources		
Basin:	GRANDE RONDE	**County:**	Wallowa
OWEB Request:	**$50,000.00**	**Total Cost:**	$118,000.00

Application Description

The Wallowa Canyonlands partnership (WCP) is a cooperative weed management area formed to protect and restore both private and public canyon grasslands of the Lower Snake Basin watershed from the invasion and degradation by noxious weeds. This project will focus on weed management activities in the upper and lower Joseph Creek and Chesnimnus Creek. ESA-listed species in the basin include Chinook salmon, steelhead, bull trout, McFarland's four-o-clock and Spalding's catchfly. WCP will continue to concentrate on high-priority noxious weeds such as orange hawkweed, plumeless thistle, Mediterranean sage, Medusahead rye, sulfur cinquefoil, whitetop, meadow hawkweed and rush skeletonweed, allowing the native vegetation to thrive and support critical habitat. Noxious weeds adversely affect water quality, increase sediment and erosion and displace native vegetation.

Project components include inventory of approximately 4,000 acres in high-risk areas to identify infestation and treatment areas; conducting ground surveys using hand-held GPS units to identify and update existing sites; landowner meetings to identify weed species and areas of concern; apply species-specific herbicides to high-priority noxious weeds on approximately 330 acres; revegetate 180 acres dominated by annual grasses; record site population characteristics such as species, size and density for every site and track population trends for every rush skeletonweed site. Herbicides will be applied using backpacks, ATV's, horse-mounted sprayers. Seed will be applied by helicopter, ATV (broadcast) or using a rangeland drill.

OWEB funds are requested for project management (5%), in-house personnel (9%), contracted services (58%), travel (2%), materials (10%), education/outreach (1%), administration (9%). Cost-share partners include various landowners, Nez Perce Tribe, Rocky Mountain Elk Foundation, Weed Board, ODFW Access & Habitat and USFS.

The *Grande Ronde Subbasin Plan* (2004) lists as a management strategy a coordinated weed control effort on both public and private lands and also identifies noxious weeds as contributors to increased sedimentation as a high priority in the Upper and Lower Grande Ronde watershed. The *Imnaha Subbasin Plan* (2004) suggests implementing an integrated noxious weed management program including survey, prevention practices, education, treatment and revegetation. The *Wallowa County/Nez Perce Tribe Salmon Habitat Recovery Plan* (1993) states as a high priority goal to "identify, map and monitor noxious weeds on an ongoing basis and to use whatever combination of herbicides, biological and mechanical control necessary to control or eradicate noxious weeds.

REVIEW PROCESS

Regional Review Team Evaluation

The project involves multiple landowners, both private and public, located in very steep canyonlands with difficult access. Some of the area is extremely remote requiring significant effort and expense on a per-acre basis to successfully locate and treat. Access in some areas is by horse, foot or boat, taking considerable time. This is the fifth application from Wallowa Resources and continues an on-going effort to target and

treat noxious weeds in a remote landscape. This effort has been ongoing for almost ten years. Wallowa Resources has done a good job of leveraging funds from other sources.

The application provided some information on the location of the targeted weed acres and its general location. However, there was a discrepancy between the text and the budget page on the amount of acres to be inventoried. It was questioned if the applicant is producing reports that demonstrate long-term effectiveness at reducing infestations. Recent final and annual reports from Wallowa Resources are demonstrating significant improvements to the treated areas. That information needs to be captured in future applications. Also, future applications need to provide more detail on what was accomplished previously, including survey results or other documentation would be helpful in future applications.

Focusing efforts on certain locations and providing data gathered from those areas would be helpful since this is an extensive area with excessive weeds. It was questioned if land management practices are being addressed and if WCP is working with entities to help address the root cause of infestations. Also, developing a comprehensive plan would be very beneficial. However, the team wants to see more information on previous results and felt it best to fund this project at a reduced amount. WCP can provide more essential detail in a future application that indicates the success of previous projects. Specifically, the review team would like more detailed maps showing treated areas; areas that were inventoried; what the inventory found; provide "before-and-after" results of treatment – best on a map and a photo(s); explain whether the funding request is to treat new areas or re-treat areas previously treated – or both and describe any coordination with other organizations to address land management practices that are addressing invasive weed problems. Overall, the team felt the project has significant ecological merits to warrant funding this grant cycle.

Ecosystem Process and Function

Noxious weeds, especially in remote hard-to-reach areas, represent a significant threat to native upland vegetation, wildlife habitat and water quality. This project has substantial benefits to ecosystem function as there are no other ways to treat invasive vegetation effectively. Noxious weeds reduce biodiversity, increase soil erosion and decrease water quality.

Regional Review Team Recommendation to Staff

Fund Reduced with Conditions. Reduce to 50 percent award for a one-year project. Final report needs to include explanation of what is being done to work with other organizations to address land management practices to address invasive weed problems, and provide a table of accomplishments of treated acres, herbicide applied, targeted species and effectiveness of treatment. In addition, future applications need detail explaining of the results from past OWEB grants to allow the review teams to evaluate whether continued funding is a good investment. Applications should include detailed maps showing areas that have been inventoried and what the inventory found; areas that have been treated and the "before-and-after" results of treatment; and explain whether the funding request is to treat new areas or re-treat areas previously treated. Applications should explain work occurring with other organizations to address land management practices that address invasive weed problems.

Regional Review Team Priority

14 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$25,000.00		

Staff Recommendation to the Board

Do Not Fund; falls below staff-recommended funding line.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$ 0.00		

Total Recommended Board Award

$ 0.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5021**	**Project Type:**	Restoration
Project Name:	Harper Water Quality System		
Applicant:	Malheur SWCD		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$16,015.00**	**Total Cost:**	$30,314.00

Application Description

Located 37 miles southwest of Ontario near Harper, a 117-acre flood-irrigated field is adjacent to the Malheur River along Highway 20. The property is bisected by Highway 20. The current crop rotation is corn, alfalfa and pasture hay. Tailwater flows directly into the Malheur River. The fields are pastured during the winter and when flood irrigation begins in the spring, runoff containing large quantities of animal waste is deposited directly in the Malheur. Soil losses are estimated at 10 to 15 tons per-acre per year or approximately 1,170 to 1,755 tons annually for the entire field.

High phosphorous levels are documented in the Malheur. Flood irrigation contributes to eroding topsoil, total suspended solids and *E. coli* entering the river. In order to contain the runoff, the applicant proposes to install a pumpback system. An existing dike runs along the bottom portion of the pasture that is 10 to 12 feet high and located between the proposed pumpback pond and the river.

Project components include construct a 1,110 yd3 pond; install a 10-HP permanent pump and wiring; bury 1,200 of 8-inch mainline and 2 control boxes. An engineered design will be followed. The project will pump excess irrigation runoff back onto the farm and reduce soil loss. The field will be irrigated with water returned to the pond.

OWEB funds are requested for project management (3%), contracted services – pipe installation and pond construction (15%), travel (1%), materials (65%), administration (9%) and monitoring (3%). The landowner is the cost-share partner.

Implementation addresses the *Malheur Subbasin Plan* (2004) by reducing sediment and improving water quality; the *Malheur Basin Agricultural Water Quality Management Plan* (2001) which suggests practices that include irrigation water management and conversion from furrow irrigation to sprinklers and the *Mid-Snake-Succor Creek TMDL* that also addresses reducing inputs into the waterways from furrow irrigation including sediment, nutrient and phosphorous.

REVIEW PROCESS

Regional Review Team Evaluation

The project is straightforward and a fairly modest cost. Given the close proximity to the Malheur River, there are excellent environmental benefits. Water quality will improve as a result of less sediment, phosphorous and other contaminants from entering the Malheur River. Implementation will follows the *Malheur Action Plan*.

The team felt that there are excellent water quality benefits. The application could have had more detail, but overall is a simple, lower-cost project with significant watershed improvement potential. The cost per-acre was low at $136 per-acre. Similar projects are proven to be very successful.

The applicant requested $700 for a tour and to have an article written for Malheur SWCD. The team discussed whether that project component should be allowed. The team felt that the Malheur SWCD is well organized and that the public interaction was very positive and worth the cost. This is an excellent way to get information out to the public. The team concluded that there is excellent ecological merit to this project and it should be funded this grant cycle.

Ecosystem Process and Function

Reducing flood irrigation will significantly decrease soil erosion runoff that annually contributes tons of sediment and other pollutants to the Malheur and Snake Rivers. This project addresses altered watershed functions affecting water quality.

Regional Review Team Recommendation to Staff

Fund.

Regional Review Team Priority

7 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$16,015.00		

Staff Recommendation to the Board

Fund.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$16,015.00		

Total Recommended Board Award

$ 16,015.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5022**	**Project Type:**	Restoration
Project Name:	3 P's Phase II		
Applicant:	Malheur SWCD		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$202,843.00**	**Total Cost:**	$279,843.00

Application Description

Malheur SWCD proposes to increase the size of a constructed wetland in the Big Bend area south of Adrian on the east side of the Snake River. A previously funded OWEB project, installed approximately 10 years ago, constructed a three cell, 13-acre wetland to filter a portion of the Allen Drain before it enters the Snake River. The current wetland has insufficient capacity to handle all the discharge from the Allen Drain. Allen Drain flows approximately 60 cfs maximum and as low as 10 cfs during irrigation season. It is tailwater from approximately 5,000 acres. The existing wetland diverts 200 to 400 gpm (gallons per minutes) using a paddlewheel. With that amount of water coming into the wetland, the pond was filled with sediment in less than five years. This segment of the Snake River is on the 303(d) list for bacteria, dissolved oxygen, mercury, nutrients, pH, sediment and temperature. The project has water quality benefits as well as wildlife habitat enhancement. Migratory bird populations currently use the constructed wetland and by increasing the size of the wetland, additional wildlife habitat will be created.

The project proposes to add five acres with a 1,200-foot meander to drain the excess water from Allen Drain that is not currently being diverted. The proposed five-acre meander will be constructed directly across the drain from the first phase of wetland ponds. The project is located near the Idaho border. While the wetland is located in Oregon, most of the tailwater originates in Idaho, making coordination with the Riverside Irrigation somewhat problematic. However, the irrigation district is supportive of this project.

Project components include constructing a 1200-foot meander with a 2:1 slope and an average width of 55 feet and install a check structure, solid set irrigation system on banks to establish vegetation to control noxious weeds and plant wetland plants.

OWEB funds are requested for project management (1%), contracted services - excavation, engineering, earthwork (77%), materials - bubbler, plants, check structures (17%) and administration (5%). The landowner is the cost-share partner.

Implementation addresses the *Owyhee Subbasin Plan* (2004) by reducing sediment and improving water quality; the *Owyhee Agricultural Water Quality Management Plan* (2003) which suggests practices that include irrigation water management and conversion from furrow irrigation to sprinklers; the *Mid-Snake-Succor Creek TMDL* that also addresses converting from furrow irrigation to sprinklers to reduce sediment, nutrient and phosphorous and it also addresses the *Lower Owyhee Assessment* (2007).

REVIEW PROCESS

Regional Review Team Evaluation

The previously funded wetland functions well and this project will enhance both the capacity for catching sediment and wildlife habitat benefits by enlarging the size by almost 40 percent.

This project was previously submitted but the application lacked essential detail and was not recommended for funding. Some of the questions that the team had from the previous submission were answered. While the team agreed that there is excellent potential for this project to have significant water quality and wildlife benefits, they noted that the application was very poorly written and still lacked critical details that were important to evaluate the proposal.

The team discussed that the application does not clearly describe the cfs to be treated by the project. However, at the site visit it was discussed that the entire 60 cfs will be filtered through both the existing and proposed wetland. The team then wondered how they would slow down 60 cfs to treat and settle the sand and sediment. It was discussed that water would go through the existing wetland first, and that some of the high flow could bypass the wetland in order to not blow it out or compromise its integrity.

After much discussion, reviewers concluded that the application is not ready for funding due to the failure to provide sufficient information on how the project would function and work, and the lack of a third party design that is needed to develop a sound budget and determine if it was engineered adequately. It was noted that a previous OWEB technical assistance grant awarded in 2010 did not request sufficient funds and was limited in terms of descriptions and designs. An engineer originally contracted to design the wetland moved out of state, so there were questions whether more design is needed to develop an appropriate budget. The first wetland was funded with $81,000 and installed 14 acres. This request is for a five-acre single wetland and requests $202,000. While the team recognizes that costs have increased significantly since the first wetland was constructed, the difference was questioned. While the team agrees that the project potentially has significant watershed benefits, but it is not ready for funding this grant cycle.

Regional Review Team Recommendation to Staff

Do Not Fund.

Staff Recommendation to the Board

Do Not Fund.

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5023**	**Project Type:**	Restoration
Project Name:	Phase II Vale WQ Improvement Project		
Applicant:	Malheur SWCD		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$38,856.00**	**Total Cost:**	$49,706.00

Application Description

Malheur SWCD and the Vale Oregon Irrigation District (VOID) are proposing to replace an earthen lateral measuring 31,700 feet located 2 miles west of Vale. Malheur SWCD received OWEB funding for two laterals, 227 and 230, in March 2010. VOID successfully installed lateral 230 during the fall of 2010 and winter of 2011. Lateral 227 was scheduled for implementation during the winter of 2011 and 2012. However, since receiving the OWEB grants, the price of pipe and fittings has increased significantly making project completion problematic for VOID. There is no margin in the current OWEB budget, 210-5050 and the only request from OWEB was for materials and 3 percent administration.

The current lateral is approximately 4 to 5-feet wide and flows approximately 14 cfs. Lateral 227 delivers water to 1,143 irrigated acres comprising alfalfa, corn, wheat and permanent pasture. Malheur SWCD is proposing to install and bed 10,900 feet of 18 to 27 inch pipe and 20,800 feet of 6-inch to 15-inch pipe. This project focuses on one specific component, which approximates the anticipated shortfall that will enable VOID to meet its financial requirement for project implementation. Project components include installing 24 "Z"- pipe assemblies for flow meters.

By converting to sprinklers, the amount of runoff is minimized, thus reducing the nitrates, *E. coli*, excess sediments, chemicals and other pesticides to drainages ditches and the Malheur River. Water will also be more efficiently applied to the fields and will be metered. OWEB funds are requested for project management (5%), materials (85%) and administration (9%). VOID will install and bed the "Z" pipe at a cash value of $10,850.

Implementation addresses the *Malheur Subbasin Plan* (2004) by reducing sediment and improving water quality; the *Malheur Basin Agricultural Water Quality Management Plan* (2003) which suggests practices that include irrigation water management and conversion from furrow irrigation to sprinklers; the *Mid-Snake-Succor Creek TMDL* that also addresses converting from furrow irrigation to sprinklers to reduce sediment, nutrient and phosphorous and it addresses the *Malheur Action Plan*.

REVIEW PROCESS

Regional Review Team Evaluation

Malheur SWCD obtained a technical assistance grant four years ago to complete the engineering. The project continues an on-going effort by VOID who has made significant improvements to their irrigation delivery thereby increasing the number of sprinklers installed. Over time, these projects will make a substantial improvement to water quality through reduced erosion and sediment runoff. Implementation does address the TMDL as there is impaired water quality. Runoff from this area flows directly to the Malheur River and then onto the Snake River.

This application was submitted because the price of petroleum-based products has increased significantly since its original approval. The original budget was not miscalculated and this is an unanticipated shortfall.

If it is not funded, locating alternative funding will be very difficult. Also, the proposals from VOID all have had minimal requested amounts from OWEB, mostly for materials. VOID is doing 100 percent of the installation, which is a very significant cost-share. The team felt that their match is very significant. Due to the excellent water quality benefits, the team felt that there are significant ecological merits to warrant funding this grant cycle.

Ecosystem Process and Function

Replacing earthen laterals with pipe eliminates evaporative and seepage water loss. By providing a pressurized pipe, landowners can more readily convert to sprinkler irrigation from flood irrigation. Previous piping of laterals has resulted in conversion or planned conversion of 50 to 80 percent of the irrigated acres from flood irrigation to sprinklers or pumpbacks. Eliminating flood irrigation will significantly reduce soil erosion runoff that annually contributes tons of sediment and other pollutants to the Malheur River. This project addresses altered watershed functions affecting water quality.

Regional Review Team Recommendation to Staff

Fund.

Regional Review Team Priority

1 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$38,856.00		

Staff Recommendation to the Board

Fund with Conditions. The final project completion report and the post implementation status reports (PISR) will include any information or calculations done by the Vale Oregon Irrigation District regarding water savings from completion of this project, whether from stopping evaporative loss and/or conversion from flood irrigation to a more efficient irrigation system. The report may also include, if applicable, whether there have been any changes in irrigation practices including the timing and duration of irrigation. In addition, include water quality monitoring data collected – if any – in the PISR.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$38,856.00		

Total Recommended Board Award

$ 38,856.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5024**	**Project Type:**	Restoration
Project Name:	Willow Creek Bench Tailwater Recovery		
Applicant:	Malheur SWCD		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$19,898.00**	**Total Cost:**	$34,100.00

Application Description

Located in the Willow Creek area west of Vale in Malheur County, this project addresses irrigation-induced erosion from furrow irrigation and excess sediment and nutrient transport to Willow Creek. Water quality is the primary limiting factor for the Malheur Basin with the Malheur River having the second worst water quality in the State. The current furrow-irrigation system produces runoff contaminated with sediment, nutrients and *E. coli*. Tailwater flows into Willow Creek and then into the Malheur River. The Malheur SWCD is proposing to develop a pumpback system to improve water quality.

Runoff water from 114 acres will be collected in a pond and then "pumped back" to the top of the field to be used again, eliminating tailwater entering Willow Creek. Water will then be reused on different fields of this farm. Project components include constructing a 9-foot deep, 60-feet by 90-feet holding pond; installing 1,200 feet of 8-inch mainline to the existing mainline in the field, installing a 10-HP floating pump with screen and electrical controls. Watershed benefits include improved water quality and conservation of topsoil.

OWEB funds are requested for project management (2%), contracted services – pipe installation and pond construction (15%), materials (67%), education/outreach (3%), administration (9%) and monitoring (3%). The landowner, NRCS and Malheur SWCD are cost-share partners.

Implementation addresses the *Malheur Subbasin Plan* (2004) by reducing sediment and improving water quality; the *Malheur Basin Agricultural Water Quality Management Plan* (2001) which suggests practices that include irrigation water management and conversion from furrow irrigation to sprinklers and the *Mid-Snake-Succor Creek TMDL* that also addresses converting from furrow irrigation to sprinklers to reduce sediment, nutrient and phosphorous.

REVIEW PROCESS

Regional Review Team Evaluation

This application was previously submitted two other times, but not recommended for funding because it lacked essential detail. It is very similar to many other projects recently implemented in the Willow Creek drainage and will improve water quality and eliminate excess runoff. It continues the positive effort in the Malheur basin, especially in the Willow Creek drainage, and to date 15 pumpback systems have been installed. The landowner also installed two pumpbacks on other fields a few years ago which have been successful in reducing sediment inputs into Willow Creek.

The application was improved from the last submission and the previous questions were answered. The water rights concern was addressed. The landowner will be installing a wheel line on 20 acres using NRCS funds. Water from the pumpback pond not used by the wheel line can be used to irrigate the remaining 94 acres. The map was improved since the last submission but could have had more clarifying detail. There are positive benefits from zero runoff. While the team felt overall that the application could have provided more

detail, they felt that the project was straightforward and a fairly modest request. The team felt that there is sufficient ecological merit to warrant funding this grant cycle and recommended it for funding.

Ecosystem Process and Function

Reducing soil erosion runoff from flood irrigation that annually contributes tons of sediment and other pollutants to the Malheur and Snake Rivers has a positive impact to ecosystem function. This project addresses altered watershed functions affecting water quality.

Regional Review Team Recommendation to Staff

Fund.

Regional Review Team Priority

12 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$19,898.00		

Staff Recommendation to the Board

Fund Reduced. The award will not include $500 for a newsletter.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$19,398.00		

Total Recommended Board Award

$ 19,398.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5025**	**Project Type:**	Restoration
Project Name:	Beulah Juniper Control		
Applicant:	Malheur SWCD		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$102,325.00**	**Total Cost:**	$131,175.00

Application Description

Butler Ranches, north of Beulah Reservoir near Juntura in northwestern Malheur County has significant juniper encroachment. This project proposes to treat 760 acres of juniper now occupying historic sagebrush-steppe rangelands. Sage-grouse leks are identified in this watershed and it is a targeted area for NRCS' Sage-Grouse Initiative (SGI) funds.

Project components include juniper removal using a chainsaw - on slopes greater than 15 percent - on 290 acres with the slash lopped and scattered. Slopes less than 15 percent will be mechanically treated with a dozer and the slash machine piled on 470 acres. Native grasses and forbs should naturally reseed. Reseeding is planned on 250 acres where revegetation is sparse. Proposed seed mix includes bluebunch wheatgrass, Sherman's big bluegrass, Sandberg's bluegrass, intermediate wheatgrass, small burnett and alfalfa. In addition, one spring will be developed and piped to a 1,000-gallon trough; a weed management plan will be implemented and 300 acres aerially sprayed for Medusahead rye.

NRCS will assist with a grazing plan and the certified native plant and vegetation selection mix for areas where reseeding is slow. A grazing plan, including temporary rest and deferment, will be implemented. ODFW will provide advice on best management practices for upland wildlife species concentrating on sage grouse. Watershed benefits include will improved upland vegetation, decreased soil erosion and stream sedimentation and improved sage-grouse habitat, water quality, infiltration and wildlife habitat. Riparian vegetation along the Little Malheur River will improve.

OWEB funds are requested for project management (3%), in-house personnel (3%), mileage (2%), contracted services - juniper removal (60%), materials - seed (24%) and administration (9%). Cost-share partners are the landowner, ODFW, NRCS and Malheur SWCD. The landowner will provide juniper cutting and seed the area.

Project objectives follow goals outlined in the *Malheur Basin Action Plan*, goal 1 to achieve properly functioning conditions in streams and waterways, the *Malheur Basin Agricultural Water Quality Management Plan* and the *Snake Basin TMDL*. Limiting factors include sediment, riparian conditions and shade. Project implementation will address these factors.

REVIEW PROCESS

Regional Review Team Evaluation

The application was previously submitted but due to concerns over the high amounts of Medusahead in the area was not recommended for funding. The previous application included plans for a prescribed burn which the team felt may increase the spread of Medusahead. The team needed assurance that a weed management plan was detailed and also treatment for Medusahead. This project complements several previous juniper-removal projects located in the upper Malheur watershed from the Ironside area to the Beulah Reservoir and continues that effort. Spread over a large geographic area and interspersed with the

48,000-acre Irish Spring fire, many thousands of acres were treated to date. Positive effects in terms of flow to the Malheur River are noted anecdotally by local landowners.

Previous concerns were raised that mechanical piling would create islands more susceptible to further weed spread. The team agreed that lop-and-scatter treatment methods should be used in Phase I and II juniper to reduce the threat Medusahead spread. The team felt that there should be no mechanical removal or piling of juniper. Howver, the landowner had planned on mechanically harvesting Phase III during winter months when the ground is snow-covered or frozen. This will greatly reduce any chance of soil disturbance as well as the threat of additional Medusahead spread. The team agreed that a winter removal with equipment would not adversely affect the Medusahead concern.

A better map with the treatment locations was submitted this time. The team recommends that the fencing surrounding the spring development be wildlife friendly and meet ODFW standards, Also, a debris fence should be constructed around the aspen sites to protect it from overbrowsing by ungulates. Post-implementation status reports needs to include information regarding success of Medusahead treatment and status of the infestation. The team felt that there is significant ecological merit to warrant funding this grant cycle.

Ecosystem Process and Function

Removing juniper will lead to decreased erosion and overland flow by increasing infiltration and water storage. Upland and riparian vegetation and water quality will improve to the Malheur basin drainage. This project addresses altered watershed function affecting water quality and wildlife habitat. The aspen component is critical to many wildlife species.

Regional Review Team Recommendation to Staff

Fund with Conditions. The team stipulates that no bulldozer should be used to treat the juniper and Stage I and II juniper needs to be lopped and scattered; construct a debris fence around aspen stands; the fencing around the spring needs to be wildlife friendly and provide data on Medusahead treatment and the status of the infestation in the post-implementation reports.

Regional Review Team Priority

15 of 18

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$102,325.00		

Staff Follow-up to Review Team Comment

Subsequent to the review team meeting, Staff concurs with some review team members who concurred that mechanical harvesting in the winter would not adversely affect ground disturbance or further spread Medusahead.

Staff Recommendation to the Board

Do Not Fund; falls below staff-recommended funding line.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$ 0.00		

Total Recommended Board Award

$ 0.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5026**	**Project Type:**	Restoration
Project Name:	Malheur Basin Restoration		
Applicant:	Malheur SWCD		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$225,547.00**	**Total Cost:**	$322,371.00

Application Description

Legacy placer mining in Mormon Basin above Malheur Reservoir is the site for a proposed riparian restoration effort. Historic placer mining in the upper end of the Willow Creek basin left large piles of tailings. A mining firm from Boise is proposing to re-mine these tailings and after mining, put the stream channel back to its historic location. Historic tailings were left along streambanks changing the stream course, altering its function and causing the stream to flow subsurface in areas. Historic willows, shrubs and other vegetation were removed during the mining process adversely affecting riparian conditions.

The applicant is proposing to return the creek to properly functioning condition; stabilize the riparian area with desirable vegetation; excavate 8 to 10 feet of the creek; slope the banks to a 3:1 ratio; plant the upland with native grass and plant 78,000 plants along the streambank. Approximately 34,580 wetland yards and the riparian area encompassing 211,000 square feet are proposed for treatment.

OWEB funds are requested for project management (1%), surveying and design of the affected section of streambanks (6%), mileage (2%), contracted services - grade and shape uplands, creek and riparian area and finish work (90%), materials - willow plantings (3%) and administration (4%). Miller Mining Inc. is the cost-share partner.

Project objectives follow goals outlined in the *Malheur Basin Action Plan*, goal 1 to achieve properly functioning conditions in streams and waterways, the *Malheur Basin Agricultural Water Quality Management Plan* and the *Snake Basin TMDL*. Limiting factors include sediment, riparian conditions and shade. Project implementation will address these factors.

REVIEW PROCESS

Regional Review Team Evaluation

The team was confused by the application as it seemed premature and lacked essential detail. The mining company does not have the required DSL and/or DOGAMI (Department of Geology and Mineral Industries) permits. Without those permits, it is uncertain what is required for restoration after the tailings are mined. OWEB cannot fund any activity that is required by a permit or other regulatory action. Any proposed restoration funded by OWEB needs to occur after those actions required by the regulatory agency are completed and the proposed action exceeds all previous mandates.

The number of affected acres is unclear as is the total length of stream to be treated. The width of the proposed treatment for the riparian area is not clear. A map of Mormon Basin should have been included as well as where it flows into Willow Creek and placing it into the overall context of the Malheur Basin. The application indicated that this was on private land, but it was not clear who the landowner is and if there is concurrence for this action. The amount of willows seemed excessive especially not knowing the size of the treatment area. The application did indicate that 211,000 square feet would be treated which equates to less than five acres. However, placing over 78,000 trees in that size of an area seems irrational. Overall, the

team felt that this application was very poorly written and premature, and inappropriately asking for OWEB funding for mining reclamation activity.

Regional Review Team Recommendation to Staff
Do Not Fund.

Staff Recommendation to the Board
Do Not Fund.

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5027**	**Project Type:**	Restoration
Project Name:	Nyssa Bench Water Quality Improvement		
Applicant:	Malheur SWCD		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$25,473.00**	**Total Cost:**	$106,841.00

Application Description

Located southwest of Nyssa, the Malheur SWCD is proposing to convert 74 acres from gated-pipe irrigation to sprinkler-pivot and solid-set irrigation. The various fields are planted to hay, grain and pasture. Currently, excess runoff flows into Drain 301, one of the five major drains in the Owyhee River basin. The fields vary from 0 to 12 percent slope. Converting the 74 acres from furrow to sprinkler and a solid set on the ends will eliminate irrigation-induced erosion from entering the canal that eventually reaches the Snake River. Reducing erosion runoff will help to achieve the water quality standards for phosphorus in the Mid-Snake TMDL's set at 0.07mg/L.

The project proposes to install 740 feet of 8-inch mainline to replace gated pipe; attach Berkeley pump to the pivot pad; install 1,000 feet of 10-inch pipe for the overflow drain; install 1,281-foot pivot, 6 pivot bridges, 40 pivot gates and a bubbler with screen.

OWEB funds are requested for project management (2%), materials - pipe, bubbler, pump - (87%), administration (9%) and monitoring (2%). The landowner and NRCS are cost-share partners.

Implementation addresses the *Owyhee Subbasin Plan* (2004) by reducing sediment and improving water quality; the *Owyhee Agricultural Water Quality Management Plan* (2003) which suggests practices that include irrigation water management and conversion from furrow irrigation to sprinklers; the *Mid-Snake-Succor Creek TMDL* that also addresses converting from furrow irrigation to sprinklers to reduce sediment, nutrient and phosphorous and it addresses the *Lower Owyhee Assessment* (2007).

REVIEW PROCESS

Regional Review Team Evaluation

Part of the property has slopes of 12 percent and converting to sprinkler-pivot irrigation will potentially have significant water quality benefits. In addition, the project has good outreach potential for other landowners nearby who are considering switching from flood irrigation.

While the team overall felt that project has excellent potential, the application was lacking in essential detail. Solid-set sprinklers were mentioned but were not depicted on the map or included in the budget. It was not clear where these would be located. Also, there are 40 pivot gates in the budget but no description of where they are located, their function or why they are needed. The map was missing detail of the fencing and overflow gap. Better maps with more detailed description of project component locations, solid sets and diagram are needed. The team agrees that the conversion from gated pipe to sprinkler is highly supported and that this is potentially a very good project. A future application needs additional detail and description to warrant funding. The project is not recommended for funding this grant cycle.

Regional Review Team Recommendation to Staff

Do Not Fund.

Staff Recommendation to the Board

Do Not Fund.

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5006**	**Project Type:**	Technical Assistance
Project Name:	Keating Sage-Grouse Habitat Enhancement Planning		
Applicant:	Baker Valley SWCD		
Basin:	POWDER	**County:**	Baker
OWEB Request:	**$45,500.00**	**Total Cost:**	$282,438.00

Application Description

Baker County SWCD's are working closely with ODFW and USFWS to craft a comprehensive sage-grouse strategy. If successful, implementing the strategy will help restore sage-grouse habitat and populations without adversely affecting the County's livestock industry. The strategy is geographic and site-specific, prescribing treatments known to effectively restore rangeland health and improve sage-grouse habitat. The Keating area has the highest number of sage-grouse leks – strutting and breeding grounds – in Baker County. There are 24 leks in Keating area, 10 in Burnt River and 6 in other Baker County locations. This sage-grouse population is at-risk because of habitat fragmentation mostly caused by the Medusahead rye infestation.

Medusahead is an exotic annual grass that invades rangeland. It is especially problematic because it reduces available forage, has a very high silica content and when cured creates a thatch (heavy mat) layer impenetrable to herbicide application or other treatment. Medusahead will replace desirable perennial bunchgrass whose seed is needed for the sage-grouse diet. Invasion by Medusahead substantially reduces forage quality and amount; alters time of forage availability and reduces nesting habitat.

Keating SWCD is seeking funds from NRCS' Cooperative Conservation Partnership Initiative (CCPI) to assist landowners to treat large expanses of Medusahead. In order to improve sage-grouse habitat, Medusahead need to be contained, treated and eventually eradicated. NRCS also has funding through the Sage-Grouse Initiative (SGI) that is targeted for juniper removal in the Burnt and Malheur Basins. CCPI, if awarded, will provide funding for Medusahead treatment, upland grazing management enhancement and prescribed burning where appropriate. However, in order to implement the CCPI, Keating SWCD needs technical assistance to provide sage-grouse habitat enhancement plans. The CCPI Agreement, however, will not provide for full ranch unit planning to ensure integration of effective conservation practices. This TA Grant would fill the planning gap, help ensure habitat and rangeland improvement, and potentially expand and enhance benefits gained from weed control.

This project will provide conservation planning that will also complement the on-going Grassbank effort by finding alternate forage when treating Medusahead. Planning for conservation practices includes recommendations for Medusahead treatment practices; required rest after project implementation, e.g., spraying and seeding; grazing management plans and others. Deliverable products planned are providing Medusahead control on 10,000 to 12,000 acres; Medusahead control on three or four ranches; planning on 5,000 to 6,000 acres to add to the Grassbank; and inventory to address other conservation resource concerns. Monitoring of implemented practices is also planned.

OWEB funds are sought for certified conservation planner (92%) and administration (8%). The landowner is providing cost-share. Cost-share partners include the NRCS, Baker County SWCD's, CIG and ODA.

REVIEW PROCESS

Regional Review Team Evaluation

The team agreed that having this technical assistance will enable the SWCD to implement additional projects focusing on sage-grouse habitat restoration. This effort will be very complementary to CCPI, if awarded. The technical assistance is an essential element of the sage-grouse strategy since CCPI will be targeted to the on-the-ground restoration. Having expertise to focus on projects to enhance upland habitat for sage-grouse will provide positive upland benefits. That would be a high priority especially for projects that would be able to utilize funds from SGI and CCPI.

The project will also be complementary to the Grassbank Program. If restoration projects such as a prescribed burn, seeding or other element that needs a rest-rotation period, alternative forage will be needed or perhaps alternative feed can be purchased. The project has significant partners and is a cooperative effort between several agencies. This is a high priority area for sage-grouse restoration due to the high number of leks in the area. The team did note that the project management cost-share seemed exaggerated. However, there is very high match without that budget element. Overall, the team felt that this is an excellent project which has the potential to result in positive restoration efforts. It is ready for funding this grant cycle.

Regional Review Team Recommendation to Staff

Fund.

Regional Review Team Priority

1 of 2

Distribution of Recommended Award Amounts

Recommended Amount	EM Portion	PE Portion
$45,500.00		

Staff Follow-up to Review Team Comment

Subsequent to the Review Team meeting, Keating SWCD was awarded the CCPI in late June.

Staff Recommendation to the Board

Fund.

Staff Recommended Award

Recommended Amount	EM Portion	PE Portion
$45,500.00		

Total Recommended Board Award

$ 45,500.00

April 18, 2011 OWEB Grant Cycle
Eastern Oregon Review Team (Region 5)

Application No.:	**212-5020**	**Project Type:**	Technical Assistance
Project Name:	Sparks Wetland		
Applicant:	Malheur SWCD		
Basin:	OWYHEE-MALHEUR	**County:**	Malheur
OWEB Request:	**$29,725.00**	**Total Cost:**	$37,190.00

Application Description

Design is sought for a sediment pond/meander to be constructed along the Snake River between Nyssa and Ontario. The meander will capture water from the Nyssa-Arcadia and the Emerson Drains that will remove the sediment loads from both of these drains before the water goes back to the drain and then the Snake River. This area has been the site of water quality monitoring sampling by the Malheur SWCD for several years and was selected based on high concentrations of pollutants and a landowner willing to donate sufficient land for the project.

Water will be captured from the two drains and then flow through a constructed wetland to decrease the sediment loads before water enters the Snake River. The meander/wetland will be designed to treat phosphorus, sediment, bacteria, nitrates and *E. coli*. The wetland functions to decompose residual chemical runoff of pesticides and herbicides and effluent transport. The future restoration project will address significant water quality issues and help to achieve goals in the TMDL's, *Malheur Basin Action Plan* and the *Malheur River Agricultural Water Quality Management Plan*.

The Malheur SWCD is seeking the design expertise of an engineer with constructed wetland experience. The proposed site will need to be surveyed. Data to be collected will include elevation, slope, soil analysis, an assessment of the water flow, velocity, drainage area size and evaluation of the current streambank conditions. Engineered designs and drawings will be required. The SWCD has considerable constructed wetland experience and has successfully implemented four major constructed wetlands. They will be able to provide the needed experience on planting and vegetative aspects of the project.

OWEB funds are sought for project management (2%), engineering (91%) and administration (7%). The landowner is providing cash cost-share to be used for the engineer. The landowner is providing considerable cash. NRCS will review the project and Malheur SWCD will provide some in-kind assistance.

REVIEW PROCESS

Regional Review Team Evaluation

Malheur SWCD has considerable experience with constructed wetlands. The wetlands are proven to provide significant water quality benefits and successfully reduced the amount of pollutants entering the Snake River. In addition, there are considerable benefits for avian and upland habitat and other aquatic species.

The team discussed if the upland issues creating this runoff should be addressed rather than treating the symptoms. However, that effort is already occurring with the projects that the Malheur Experiment Station, Malheur and Owyhee Watershed Councils and Malheur SWCD are implementing including converting earthen ditches and laterals to pressurized pipe; changing from flood to sprinkler irrigation and implementing best management practices (BMP's). Those projects are beginning to show positive water quality results and are already reducing pollutants to the drains where they were implemented. The team felt it best to complete this project and then move upstream to ascertain what restoration efforts could occur.

The team questioned how long it takes the wetland to fill with sediment before it needs to be cleaned. It seems that some of the wetlands need to be cleaned after five years of operation. However, some of the wetlands have several ponds with the first pond being a "settling" pond and that needs more frequent cleaning. Wetland ponds capture water primarily during the irrigation season. The team agreed with the need for the technical design. The SWCD also requested sufficient funds to complete this project as two previous wetlands did not have adequate funding to provide a complete design. Also, data collected over the last four years has been the main driver for the project, which is very positive. The team needs to know that drainage capacity of the wetland and that information needs to be part of the final report. Overall, the team felt that the project is essential to provide good design and data for a restoration project and should be funded this grant cycle.

Regional Review Team Recommendation to Staff

Fund. Provide clear information and detail on the drainage capacity with the final report.

Regional Review Team Priority

2 of 2

Distribution of Recommended Award Amounts

Recommended Amount
$29,725.00

Staff Recommendation to the Board

Fund with Conditions. The grant agreement will require the final project completion report to provide clear information and detail on the drainage capacity of the wetland as designed.

Staff Recommended Award

Recommended Amount
$29,795.00

Total Recommended Board Award

$ 29,725.00