Application Name: Longley Meadows Planting project

Application Number: 220-8205-19172

By: Grande Ronde Model WS Foundation

Offering Type: Upper Grande Ronde Initiative

Application Type: Restoration

OWEB Region: Eastern Oregon
County: Union
Coordinates: 45.314846,-118.2756

Applicant:
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Budget Summary:
OWEB Amount Requested: $135,150
Total Project Amount: $2,098,635

Administrative Information

Abstract

Provide an abstract statement for the project. Include the following information: 1) Identify the project location; 2) Briefly state the project need; 3) Describe the proposed work; 4) Identify project partners.

The Longley Meadows Planting Project will be the final restorative action to the larger fish habitat enhancement project located in the Upper Grande Ronde Subbasin along the Grande Ronde River between RM 143.5 and RM 142.1, 10 miles SW of La Grande, Oregon.

The Grande Ronde River provides critical habitat for Snake River ESA-listed Chinook salmon, steelhead, and Bull trout. Anthropogenic alteration of the watershed has affected channel morphology, instream diversity/complexity, riparian/wetland communities, and habitat quality, quantity, and fish habitat suitability and productivity.

Core habitat suitability limiting factors affecting juvenile summer and winter rearing and adult holding and migration include: water quality, channel and bed form and complexity (limited low velocity and large pool habitat), riparian conditions, large wood recruitment, and sediment. Restoration objectives under construction currently for salmonids include increasing habitat complexity and diversity, improving water temperature conditions, and reconnecting the floodplain. This planting project will address improving riparian vegetation diversity.

The restoration plan includes promoting an island braided channel and floodplain system through channel, floodplain, and large pool construction, development of riparian and wetland habitat, and promoting groundwater and hyporheic functions that moderate and improve water quality. A fundamental premise is that self-sustaining, high quality, and diverse habitat provides habitat suitability for all life stages of target fishery resources.

This project would consist of planting all disturbed areas (~ 20 acres). Species planted would consist of native conifer and deciduous seedlings. There would be a total of 25,000 seedlings planted at the site. Partners include: CTUIR, OWEB, GRMW, and BPA.

Location Information

What is the ownership of the project site(s)?

✓ *Public land (any lands owned by the Federal government, the State of Oregon, a city, county, district or municipal or public corporation in Oregon)*

What agency(ies) are involved?

USFS, CTUIR, OWEB, BPA , GRMW, USBR

✓ *Private (land owned by non-governmental entities)*

Please select one of the following Landowner Contact Certification statements:

● I certify that I have informed all participating private landowners involved in the project of the existence of the application, and I have advised all of them that all monitoring information obtained on their property is public record.

❍ I certify that contact with all participating private landowners was not possible at the time of application for the following reasons: Furthermore, I understand that should this project be awarded, I will be required by the terms of the OWEB grant agreement to secure cooperative landowner agreements with all participating private landowners prior to expending Board funds on a property.

Please include a complete list of participating private landowners

- LaGrande Gun Club
- USFS

❑*Not applicable to this project*

❑*This grant will take place in more than one county.*

Permits

Other than the land-use form, do you need a permit, license or other regulatory approval of any of the proposed project activities?

● Yes
❍ No

For Details Go to Permit Page

I acknowledge that I am responsible for verifying applicable permits, licenses, and General Authorizations required for the project, and can update information at grant agreement execution.

✓*Yes*

Racial and Ethnic Impact Statement

Racial and Ethnic Impact Statement

● The proposed grant project policies or programs could have a disproportionate or unique POSITIVE impact on the following minority persons. (indicate all that apply)

❍ The proposed grant project policies or programs could have a disproportionate or unique NEGATIVE impact on the following minority persons. (indicate all that apply)

❍ The proposed grant project policies or programs WILL HAVE NO disproportionate or unique impact on minority persons.

❑*Women*
❑*Persons with Disabilities*
❑*African-Americans*
❑*Hispanics*
❑*Asians or Pacific Islanders*
✓*American Indians*
❑*Alaskan Natives*

Please provide the rationale for the existence of policies or programs having a disproportionate or unique impact on minority persons.

The Longley Meadows Fish Habitat Enhancement Project is located within traditional hunting and gathering territory of the Confederated Tribes of the Umatilla Indian Reservation.

In January of 2007, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Department of Natural Resources (DNR) adopted the following mission:

To protect, restore, and enhance the First Foods - water, salmon, deer, cous, and huckleberry - for the perpetual cultural, economic, and sovereign benefit of the CTUIR. We will accomplish this utilizing traditional ecological and cultural knowledge and science to inform: 1) population and habitat management goals and actions; and 2) natural resource policies and regulatory mechanisms.

The First Foods are considered by the CTUIR DNR to constitute the minimum ecological products necessary to sustain CTUIR culture. The CTUIR DNR has a mission to protect First Foods and a long-term goal of restoring related foods in the order to provide a diverse table setting of native foods for the Tribal community. The mission was developed in response to long-standing and continuing community expressions of First Foods traditions, and community member requests that all First Foods be protected and restored for their respectful use now and in the future.

The River Vision outlines physical and biological processes encompassing 5 touchstones: Hydrology, Geomorphology, Connectivity, Riparian Vegetation, and Aquatic biota which together with the First Foods, provide an overall framework for guiding tribal programs in regards to protecting and restoring ecological processes and functions. Healthy watershed processes and functions are the fundamental elements that create diversity, resiliency, and the ability of our river systems to provide sustenance and natural resources to support the Tribe's culture and heritage.

Please provide evidence of consultation with representative(s) of affected minority persons.

CTUIR is sponsor of Longley Meadows Fish Habitat Enhancement Project.

Insurance Information

If applicable, select all the activities that are part of your project - These require a risk assessment tool unless otherwise noted (check all that apply).

❑*Working with hazardous materials (not including materials used in the normal operation of equipment such as hydraulic fluid)*

❑*Earth moving work around the footprint of a drinking water well*

❑*Removal or alteration of structures that hold back water on land or instream including dams, levees, dikes, tidegates and other water control devices (this does not include temporary diversion dams used solely to divert water for irrigation)*

❑*Applicant's staff or volunteers are working with kids related to this project (DAS Risk assessment tool not required, additional insurance is required)*

❑*Applicant's staff are applying herbicides or pesticides (DAS Risk assessment tool not required, additional insurance is required)*

✓*Insurance not applicable to this project*

Additional Information

❑ *This project affects Sage-Grouse.*

Problem Statement

Describe the watershed problem(s) that this restoration project seeks to address.

The Project reach is located in the lower reaches of the Upper Grande Ronde River Basin at an elevation of 3,100 feet with contributing watershed area of 475 sq. mi., which is predominantly snowmelt-driven, Most of the basin is forested (over 73 percent) and has very little development (less than 0.1 percent estimated impervious area) (USGS 2014). The Project reach includes Wallowa-Whitman National forest and private lands along State Highway 244 within the Grande Ronde recovery plan assessment units UGC3A and UGS16. The Upper Grande Ronde River Tributary Assessment (Appendix A; Reclamation 2014) identifies the Project reach as an unconfined geomorphic reach with a high potential to improve physical and ecological processes and functions that support native salmonids in the basin.

Fish habitat suitability has been significantly affected by physical alterations to the river and its associated floodplain that have contributed to severely degraded habitat conditions. Problems include homogenous, high energy, plane bed riffle-run channel types with a lack of channel plan form diversity and sinuosity, simplified hydraulic geometry, channel over-widening and bed armoring, alteration of sediment sorting and coarsening of streambed gravel, altered groundwater and hyporheic function, extensive loss of large pool and side channel habitat, and degradation of riparian and wetland plant communities. Physical alterations to the river and floodplain environment have contributed to poor habitat suitability that lacks velocity refuge, cover habitat, large pools, presents lethal summer high water temperatures, and winter low water temperatures with extensive frazil and anchor ice formation.

Natural habitat recovery is limited by current environmental conditions that suppress development of diverse hydrologic and geomorphic processes, including an armored streambed, lack of mature riparian vegetation and associated complexity, and anchor and raft ice that continues to influence bedform, streambank lines, and establishment of mature riparian cover.

In the Project reach, the upper Grande Ronde River would have had an unconfined, forced alluvial channel with alternating pool-riffle and run bedforms and multithreaded, anastomosing channels that occupied nearly the entire valley floor. Beechie et al. (2006) empirically determined based on regional data that intermediate sized unconfined channels, similar to the upper Grande Ronde River, that transport their sediment primarily as bedload and retain wood long enough to establish erosion-resistant points were transitional, and generally favored island-braided patterns in forested mountain systems.

Beechie et al. (2006) data also shows that island-braided channels are continually adjusting to intermittent perturbations which sustains a high degree of successional states, resiliency, and habitat diversity. In general, island-braided riverine systems provide abundant peripheral and transitional habitats, and complex channel structure and bedforms resulting in the highest degree of biological diversity that supports both aquatic and terrestrial species during varying life stages.

Channel degradation has occurred in response to floodplain constriction from constructed levees and railroads, as well as historical log transport operations by splash damming through the project reach. The quantity and force of logs moving along the channel are known regionally to have coarsened stream beds and severely truncated pool-riffle sequences.
Railroad grades, road grades, and levees through the floodplain create artificial channel constrictions and disconnected floodplains that have resulted in a single-thread, enlarged, and incised channels. Constriction increases flow depths, flow velocities, and shear stresses during high water events. The outcome is a wider, more uniform plane-bed channel.

Existing riparian vegetation conditions include scattered patches of woody shrubs and immature trees, and large areas of herbaceous vegetation with shallow rooting depths where the floodplain has been cleared and drained for ranching. Beavers are uncommon and no longer play a major role in wood delivery to the channel or maintaining diverse off-channel habitats and riparian conditions.

Icing has been a significant process during winter low flows, and has likely been exacerbated by the wider, shallower channel geometry. Surface ice accumulation can also be significant during winter months to the point of creating large ice dams. The formation of ice dams and their subsequent failure reinforces bed armoring and the wide-plane bed conditions that have been in place since splash damming at the turn of the century.

Eroding banks within the project reach actively supply sediment to the Grande Ronde River. Major and minor sources of sediment along actively eroding banks were mapped in the field. Minor sources are classified as any eroding banks mapped along floodplain geomorphic units, whereas major sediment sources were classified as eroding banks along alluvial fans, river terraces, and valley walls.

The Oregon Department of Environmental Quality (ODEQ) has identified many stream segments within the Upper Grande Ronde Subbasin as water quality limited (ODEQ 2010). Oregon's 1998 303(d) List of Water Quality Limited Waterbodies identifies nine parameters of concern: algae, bacteria, dissolved oxygen, flow modification, habitat modification, nutrients, pH, sedimentation, and temperature. Water quality parameters (and standards) of temperature (64°F/55°F, rearing/spawning), dissolved oxygen (98% sat), habitat modification (pool frequency), and flow modification (flows) directly relate to the beneficial use for fish life (NPCC 2004).

How have past or current land management practices contributed to the problem?

Fish habitat has been adversely affected by historic land uses, including livestock overgrazing, road construction, logging, channelization, and utility right of ways. Riparian conditions throughout the project are poor with lack of floodplain connectivity and altered hydrology which, coupled with historic livestock grazing, is limiting recovery of riparian and wetland vegetation and associated beaver colonization. Current channel conditions are out of balance with the sediment supply and disconnected from the historic floodplain, resulting in channels with high stream energy, little to no spawning gravel, limited velocity refugia, and lack of pool habitat.

Prior to Euro-American settlement and associated disturbances, the upper Grande Ronde River developed under an intermittent disturbance regime where flows, sediment inputs, and large wood dynamically interacted to create successional states. Riparian vegetation likely included woody species such as cottonwood (Populus), willow (Salix), river birch (Betula nigra) and alder (Alnus) of varying ages (seral stages). The upland areas adjacent to the active flooplain likely supported mature Ponderosa pine (Pinus ponderosa) and Douglas fir (Pseudotsuga menziesii) trees readily delivered to the channel through lateral channel migration and avulsion.

Beaver were common and played a vital role in the local delivery of wood to the channel and maintaining and diversifying the off-channel habitats and riparian conditions. Necessary wood sizes and quantities would have accumulated during high-water events to form transient logjams (i.e., bar apex jams and flow deflection jams). These logjams could have persisted long enough to create erosion-resistant hard points capable of forcing flow divergence that result in split-flow channels and floodplain-type side channels.

The role of beaver in riverine ecosystems has been well documented along with the benefits they provide for fish and wildlife species. Much of the Grande Ronde River and tributaries have been subject to extensive anthropogenic alterations which have contributed to degraded instream and riparian conditions and decreased habitat suitability for beaver. The current beaver population in the basin is thought to be extremely low, though no formal population census has been completed. Currently, beaver colonies within the system are geographically limited with isolated colonies found in suitable locations, and sporadic small populations that appear to be transient groups which typically dwell in bank lodges. Loss of floodplain and wetland habitat from historic conditions and associated loss of hydrophytic shrubs and trees (a primary food source) results in local beaver selecting poor locations for dam construction.

Project History

Continuation - Are you requesting funds to continue work on a project previously funded by OWEB where that work did not result in a completed project?

● Yes
❍ No

Provide OWEB Grant #(s)

218-8205-16884

What was completed with previous OWEB grants?

All components of the original project are being completed currently except for the riparian planting. Under the prior grant all new channels are being constructed, floodplain enhancements, large wood additions, pools and riffles constructed, willow brush bank treatments, side channel constructed, etc.

Why is additional OWEB funding needed?

The lowest construction bids were more than expected. In order to award the construction contract the planting portion was removed and additional funds were added from Bonneville Power Administration. These addtional OWEB funds will allow the USFS to contract the planting and complete that final project component.

Resubmit - Have you submitted, but were not awarded an OWEB application for this project before?

❍ Yes
● No

Phased - Is proposed work in this application a phase of a comprehensive watershed restoration plan or project?

❍ Yes
● No

Plans and Salmon

Is the proposed restoration activity(ies) identified in a local assessment or other plan?

● Yes
❍ No

Provide name of local plan, Watershed assessment or other locally relevant document.

The project is located in the Upper Grande Ronde Restoration Atlas planning area. The Upper Grande Ronde Atlas is a geo-spatial restoration prioritization plan developed in coordination with BPA by local fish biologists, researchers, engineers, hydrologists, practitioners, and stakeholders. The plan divides the subbasin into biologically significant reaches (BSR) and prioritizes those reaches for restoration based on fish species, fish use, fish life stages, limiting factors, and floodplain availability. Restoration action were identified during the planning process to address limiting factors in each BSR. Each reach is assigned a Tier with 1 being the highest priority and Tier 3 being the lowest priority. This project on the Upper Grande Ronde River is in UGR 11, which is a Tier 2 BSR.

Bureau of Reclamation (Reclamation). 2014.
Upper Grande Ronde River Tributary Assessment, Grande Ronde River Basin, Tributary Habitat Program, Oregon: Department of Interior, Bureau of Reclamation, Pacific Northwest Region, Boise, Idaho, 74 p.

Grande Ronde Model Watershed Program (GRMWP), et., al., 2016. Upper Grande Ronde Basin Atlas Strategic Planning.

ODFW, CTUIR, NPT, Washington Department of Fisheries, and Washington Department of Wildlife. 1990. Grande Ronde River Subbasin Salmon and Steelhead Production Plan. Columbia Basin System Planning. Northwest Power Planning Council. Columbia Basin Fish and Wildlife Authority.

Federal Columbia River Power System (FCRPS Biological Opinion (BiOp) (U.S. Bureau of Reclamation, Bonneville Power Association, US Army Corps of Engineers, 2004).

Northeast Oregon Snake River Recovery Plan (National Marine Fisheries Service, 2010); see p. 261 Re: increased sediment quantity; p. 258, riparian condition; p. 262, LWD recruitment and temperature; p. 260. Side channel &wetland conditions, floodplain connection, anthropological barriers, in-stream structural complexity; p. 263. Decreased water quantity.

NMFS [National Marine Fisheries Service]. 2014. Endangered Species Act Section 7(a) (2) Supplemental Biological Opinion. Consultation on Remand for Operation of the Federal Columbia River Power System. National Oceanic and Atmospheric Administration. NWR-2013-9562. Re: basin appropriate passage and limiting factors.

NMFS [National Marine Fisheries Service]. 2013. Draft Proposed ESA Recovery Plan for Snake River Spring/Summer Chinook salmon and Snake River Steelhead. National Marine Fisheries Service, Northwest Region. National Oceanic and Atmospheric Administration. Predecisional document, Accessed March 28, 2014. Re: limiting factors by species.

Will this project benefit salmon or steelhead?

● Yes
❍ No

✓Snake River Basin - Steelhead
✓Snake River Spring/Summer-run - Chinook Salmon

How will the resulting restoration project benefit salmon or steelhead or their habitat?

The project will promote the revegetation of the Longley Meadows Restoration Project, which will contribute to an improved floodplain, increased stream shade, and improved riparian vegetation growth and vigor.

Implementation of this project will improve instream habitat for ESA-listed and non-ESA-listed native fish species by improving natural channel morphology, increasing connectivity and complexity, and enhancing channel and floodplain process and function. Summer and winter rearing habitat will increase in the main channel and side channels through:

(1) addition of large wood to provide cover and create pools,
(2) creation of natural pool-riffle sequences and enhanced riparian vegetation to increase foraging opportunities for juvenile salmonids,
(3) creation of additional side channel habitat by using historic side channel relic features within the reach that are currently disconnected,
(4) creation of multiple locations of increased hyporheic exchange through increases in floodplain connectivity and the water table, construction of bar features, and alcove features providing thermal refugia with cooler temperatures in summer and warmer in the winter. As a whole, the design will increase the occurrence of low velocity refugia, increase the availability of open water habitat during the winter, and moderate winter temperatures to reduce anchor ice formation.

Juvenile emigration habitat will increase by adding the number and area of pools, creating additional side channels, alcoves, and off-channel habitat, and creating slow-water edge and cover habitat through the addition of large wood structures. Habitat for immigrating and holding adults will improve by decreasing summer temperatures and

enhancing the availability of thermal refugia, creating new pool habitat, enhancing main channel passage during low-flow conditions by restoring natural width to depth ratios, and increasing complexity through the addition of large wood. Spawning habitat will increase by decreasing temperatures and creating thermal refugia for adults (reducing pre-spawn mortality). Conditions for spawning, incubation, and emergence will improve by natural gravel sorting through large wood placement.

Does the project address a restoration action identified in a regional assessment or recovery plan?

● Yes
❍ No

Regional Assessments or Recovery Plans
Northwest Power and Conservation Council Grande Ronde Subbasin Plan

For each plan chosen above, describe how your project is consistent with specific recovery/restoration actions cited in that plan.

This planting project will address poor riparian condition that is noted as a key limiting factor throughout the Grande Ronde Subbasin Plan and specifically for this reach of river. In addtion the restoration project underway currently will address floodplain connection which will improve natural regeneration of riparian plants as well.

Does this project address one or both of the following:

✓ *Habitat needs for one or more Endangered Species Act-listed species and/or species of concern*
❑ *Concerns identified on 303(d) listed streams*
❑ *No*

Proposed Solution

Goal, Objectives, and Activities

State your project goal. A goal statement should articulate desired outcomes (the vision for desired future conditions) and the watershed benefit.

The long-term goal is to improve physical and ecological processes by rehabilitating and restoring the project area to achieve immediate and long-term benefits to spring-summer Chinook salmon, summer steelhead, bull trout, and resident fishery resources at all life stages.

Targeting of present and specific limiting factors such as temperature will achieve immediate benefits to salmon. Long term benefits will be realized through a focus on restoring fluvial and habitat-forming processes, floodplain, groundwater benefits to salmonids will be achieved through restoration and rehabilitation of the whole floodplain system, and hyporheic connectivity, riparian and wetland plant communities, and instream complexity and diversity commensurate with the reach's natural potential.

List specific and measurable objectives. Objectives support and refine the goal by breaking it down into steps for achieving the goal. (NOTE: If you quantify your objectives, ensure all numbers match the metrics listed in your selected habitat types.) Provide up to 7 objectives.

Objective #1

Objective

The Project seeks to facilitate the development of a diversity of native plant communities and seral stages that contribute to floodplain process and function. In conjunction with natural channel and floodplain objectives, a combination of riparian/wetland habitat protection, planting and seeding, and natural recruitment will result in increased tree, shrub, food web, streambank stability, and future large wood recruitment.

• Floodplain Connectivity - Maximize floodplain connectivity within the geomorphic and stakeholder confines of the project area. Activate the floodplain on an annual basis during the spring freshet at project completion.
• Woody Riparian Vegetation – Enhance native woody vegetation including dominant cottonwood, alder, and willows within the limitations of soil structure and hydrology within the project reach to maximize shade on water surfaces 10-years following project completion.
• Suspended Sediment Retention – Improve suspended sediment retention on floodplain surfaces within the project area through greater extent, frequency, and duration of floodplain inundation during spring runoff conditions at completion of project.
• Prevent the establishment of non-native weeds within the project boundary for first 5-years after construction through active weed management.

Objectives include achieving 75% survival of gallon potted seedlings planted and 60% survival of plug seedlings planted, three years post implementation.

Describe the project activities. Activities explain how the objective will be implemented.

The project reach contains various levels of riparian health with native cottonwood, willow, wild rose, hawthorn, and ponderosa pine at various densities, widths, and seral stages. Current impacts to the health of native vegetation likely include some ungulate browse, invasive weeds, lack of annual flooding, and lack of sediment deposition for native riparian propagation. Specific causes for poor riparian health will be investigated further as the project progresses. Treatments will include re-establishment of river-floodplain interaction, promotion of sediment

deposition on floodplains and active planting. Active irrigation of plantings is not expected as there are no known water rights available for irrigation at the project site.

Fencing and deterrents such as Plant-Skydd will be further investigated if ungulate browse appears to be a critical factor for revegetating the project area. Plantings will be designed based upon water surface elevations and frequencies of occurrence from hydraulic modeling. Areas of disturbance, swales, channel banks, and floodplains areas will receive restoration planting treatments ranging from seed and mulch to live plants to encourage and promote colonization of native plants to improve riparian conditions and succession. Limits of disturbance will be minimized and strictly enforced to protect existing plants. Existing vegetation in areas of disturbance will be salvaged and repurposed whenever feasible.

The planting will occur on all disturbed areas within the project. There will be 10,000 deciduous gallon potted seedlings, 10,000 conifer plug seedlings planted and 5,000 deciduous plug seedlings planted within these areas. All species planted will be native. Species planted will consist of willow (misc. species)(6,000), cottonwood (3,000), aspen (1,000), alder (1,000), hawthorne (1,000), red osier dogwood (1,000), golden current (500), serviceberry (1,000), choke cherry (500) and ponderosa pine (10,000).

The gallon potted seedlings will have the holes predrilled with augers. The gallon-potted seedlings will be planted by contract crews. The plugs will be hand planted by USFS crews.

Seedlings will be planted at appropriate locations within the project. Species that require wetter or drier conditions will be planted according to the plant's ecological needs.

Upland areas, access roads, and disturbed areas will be planted with locally-adapted grass species which include Idaho fescue, Bluebunch wheatgrass, Basin wildrye, and Tufted hairgrass. Swale complexes and side channels will be planted with sedges which include Nebraska sedge and Beaked sedge. Areas within swale and channel excavation limits will first be grubbed to salvage sedge mats and quality topsoil for use during planting activities.

Planting details:

Wetland – Bankfull to 2 Year Inundation – 12.615 Acres
8,600: 1 gallon pots, 8’ spacing (6,000 willows, 1,600 cottonwood, 500 alder, 500 dogwood)
3,500: 15 cubic inch plugs, fill in adjacent to river and side channels (willow and cottonwood seedlings)

Riparian and Floodplain – 2 Year to 10 Year Inundation – 6.851 Acres
2500: 1 gallon pots, 8’ spacing (cottonwood, ocean spray, elderberry, current, chokecherry)
2500: 10 cubic inch plugs, 8’ spacing (ponderosa pine seedlings)

Upland – Greater than 10 Year Inundation – 3.322 Acres
2500: 10 cubic inch plugs, 8’ spacing (ponderosa pine seedlings)

Approximately 23 acres within project area will be seeded with native grass seed mixes (Mix A – Wetland, Mix B – Riparian/Floodplain, and Mix C – Upland). Seeding at a density of 20 lbs./acre will require a total of 460 lbs. of seed to rehabilitate disturbed ground after construction activities demobilize. Planting and seeding re-vegetation efforts will take place in November 2021.

The majority of the plantings will be high quality rooted stock from local nurseries. Plants will be installed in autumn after dormancy to alleviate stressing. Containerized plants will be installed using hand-held or track-mounted augers to ensure proper planting depths. Willow cuttings will be installed using hand-held augers along stream banks or by trenching using a mini-excavator on gravel bars and point bars, and cuttings will be conditioned in water for 10+ days prior to planting.

Wetland, Riparian/Floodplain, and Upland plantings target threshold will be 80% survival in the course of the 3-5 years following planting. Planting areas falling below the 80% survival threshold will be replanted. If planting areas are determined to be falling below the threshold due to deer and elk herbivory, ungulate enclosures will be constructed around damaged units. Additional fencing and deterrents such as Plant-Skydd will be further investigated if ungulate browse appears to be a critical factor for revegetating the project area.

List the major project activities and time schedule for each, including post project implementation.

Element	Description	Start Date	End Date
Planting gallon potted seedlings	Drilling and planting 10,000 gallon potted seedlings.	10/2022	11/2022
Planting conifer and deciduous plug seedlings	Planting 10,000 conifer and 5,000 deciduous plug seedlings.	10/2022	4/2023

Element	Q4 2022	Q1 2023	Q2 2023
Planting gallon potted seedlings			
Planting conifer and deciduous plug seedlings			

Habitat Types

In which habitat type(s) are you proposing to work?

❑*Instream Habitat: below the ordinary high water mark (includes in-channel habitat restoration, bank stabilization, flow, fish screening, and fish passage)*

✓*Riparian Habitat: above the ordinary high-water mark of the stream and within the stream's floodplain. -- Details will follow.*

❑*Upland Habitat: above the floodplain and improves native habitat and watershed function.*

❑*Wetland Habitat: land or areas covered, often intermittently, with shallow water or have soil saturated with moisture.*

❑*Estuarine Habitat: tidally influenced areas.*

Riparian Habitat

Select all applicable Riparian categories.

❑**Riparian road activities**

❑**Fencing and other materials for habitat protection**

✓**Vegetation establishment or management**

Select all the actions you propose to implement to address the problem.

✓*Planting*

For Details Go to Plant Page

❑*Non-native plant control*

❑*Prescribed burnings, stand thinning, stand conversions, silviculture*

❑*Juniper treatment*

❑**Livestock management**

❑**Debris and Structure Removal**

Is an objective of the riparian treatment(s) to address water quality limiting factors?

● Yes

❍ No

✓Sediment

✓High Temperature

Total linear stream miles to be treated.
1.5

Total riparian acres to be treated.
20

Left streambank miles to be treated.
1.5

Right streambank miles to be treated.
1.5

Wrap-Up

Watershed Benefit

Describe the watershed or ecosystem function(s) that the project will address through the proposed restoration actions and the resulting benefits to water quality, native fish and wildlife habitat, and/or watershed health. Explain why the project is a priority for investment at this time.

Fish habitat suitability has been significantly affected by physical alterations to the river and its associated floodplain that have contributed to severely degraded habitat conditions. Problems include homogenous, high energy, plane bed riffle-run channel types with a lack of channel plan form diversity and sinuosity, simplified hydraulic geometry, channel over-widening and bed armoring, alteration of sediment sorting and coarsening of streambed gravel, altered groundwater and hyporheic function, extensive loss of large pool and side channel habitat, and degradation of riparian and wetland plant communities. Physical alterations to the river and floodplain environment have contributed to poor habitat suitability that lacks velocity refuge, cover habitat, large pools, presents lethal summer high water temperatures, and winter low water temperatures with extensive frazil and anchor ice formation.

Natural habitat recovery is limited by current environmental conditions that suppress development of diverse hydrologic and geomorphic processes, including an armored streambed, lack of mature riparian vegetation and associated complexity, and anchor and raft ice that continues to influence bedform, streambank lines, and establishment of mature riparian cover.

Riparian conditions throughout the project are poor with lack of floodplain connectivity and altered hydrology which, coupled with historic livestock grazing, is limiting recovery of riparian and wetland vegetation and associated beaver colonization. Current channel conditions are out of balance with the sediment supply and disconnected from the historic floodplain, resulting in channels with high stream energy, little to no spawning gravel, limited velocity refugia, and lack of pool habitat.

Channel degradation has occurred in response to floodplain constriction from constructed levees and railroads, as well as historical log transport operations by splash damming through the project reach. The quantity and force of logs moving along the channel are known regionally to have coarsened stream beds and severely truncated pool-riffle sequences.
Railroad grades, road grades, and levees through the floodplain create artificial channel constrictions and disconnected floodplains that have resulted in a single-thread, enlarged, and incised channels. Constriction increases flow depths, flow velocities, and shear stresses during high water events. The outcome is a wider, more uniform plane-bed channel.

Beaver were common and played a vital role in the local delivery of wood to the channel and maintaining and diversifying the off-channel habitats and riparian conditions. Necessary wood sizes and quantities would have accumulated during high-water events to form transient logjams (i.e., bar apex jams and flow deflection jams). These logjams could have persisted long enough to create erosion-resistant hard points capable of forcing flow divergence that result in split-flow channels and floodplain-type side channels.

Implementation of the current restoration project in conjunction with this planting project will improve instream habitat for ESA-listed and non-ESA-listed native fish species by improving natural channel morphology, increasing connectivity and complexity, and enhancing channel and floodplain process and function, improving riparian condition, riparian shade and cover, and future large wood recruitement to the stream channel.

Public Awareness

Does this proposed project include public awareness activities?

❍ Yes
● No

Design

Were design alternatives considered?

❍ Yes
● No

Select the appropriate level of design for your project.

● No design is required.
❍ 10-30%: Conceptual design (evaluation of alternatives, concept-level plans, design criteria for project elements, rough cost estimates).
❍ 30-85%: Preliminary design (selection of the preferred alternative, draft plans, draft design report, preliminary cost estimates).
❍ 85-100%: Final design (final design report, plans, and specifications, contracting and bidding documents, monitoring plan, final cost estimate).

If work remains on the project's design, describe the work that remains to be done and when you expect to have it completed. If no design is required put "N/A"

N/A

Describe the steps you will take to minimize adverse impacts to the site and adjacent lands during and after project implementation.

General Aquatic Conservation Measures Applicable to all Actions - BPA HIP III guidelines

1) Contaminants. The project sponsor will complete a site assessment with the following elements to identify the type, quantity, and extent of any potential contamination for any action that involves excavation of more than 20 cubic yards of material:
a) A review of available records, such as former site use, building plans, and records of any prior contamination events;
b) A site visit to inspect the areas used for various industrial processes and the condition of the property;
c) Interviews with knowledgeable people, such as site owners, operators, and occupants, neighbors, or local government officials; and
d) A summary, stored with the project file that includes an assessment of the likelihood that contaminants are present at the site, based on items 3(a) through 3(c).

2) Site layout and flagging. Prior to construction, the action area will be clearly flagged to identify the following:
a) Sensitive resource areas, such as areas below ordinary high water, spawning areas, springs, and wetlands;
b) Equipment entry and exit points;
c) Road and stream crossing alignments;
d) Staging, storage, and stockpile areas; and
e) No-spray areas and buffers.

3) Temporary access roads and paths.
a) Existing access roads and paths will be preferentially used whenever reasonable, and the number and length of temporary access roads and paths through riparian areas and floodplains will be minimized to lessen soil disturbance and compaction, and impacts to vegetation.
b) No new roads will be built as part of this project.
c) At project completion all roads and paths will be re-seeded with a native grass mix.

4) Temporary stream crossings.
a) Existing stream crossings will be preferentially used whenever reasonable, and the number of temporary stream crossings will be minimized.
b) Temporary bridges and culverts will be installed to allow for equipment and vehicle crossing over perennial streams during construction. Treated wood shall not be used on temporary bridge crossings or in locations in contact with or over water.
c) Vehicles and machinery will cross streams at right angles to the main channel wherever possible.
d) The location of the temporary crossing will avoid areas that may increase the risk of channel re-routing or avulsion.
e) Potential spawning habitat (i.e., pool tailouts) and pools will be avoided to the maximum extent possible.
f) No stream crossings will occur at active spawning sites, when holding adult listed fish are present, or when eggs or alevins are in the gravel. .
g) After project completion, temporary stream crossings will be obliterated and the stream channel and banks restored.

5) Staging, storage, and stockpile areas.
a) Staging areas (used for construction equipment storage, vehicle storage, fueling, servicing, and hazardous material storage) will be 150-feet or more from any natural water body or wetland, or on an adjacent, established road area in a location and manner that will preclude erosion into or contamination of the stream or floodplain.
b) Natural materials used for implementation of aquatic restoration, such as large wood, gravel, and boulders, may be staged within the 100-year floodplain.
c) Any large wood, topsoil, and native channel material displaced by construction will be stockpiled for use during site restoration at a specifically identified and flagged area.
d) Any material not used in restoration, and not native to the floodplain, will be removed to a location outside of the 100-year floodplain for disposal.

6) Equipment. Mechanized equipment and vehicles will be selected, operated, and maintained in a manner that minimizes adverse effects on the environment. Gas-powered equipment with tanks larger than 5 gallons will be refueled in a vehicle staging area placed 150-feet or more from a natural waterbody or wetland, or in an isolated hard zone, such as a paved parking lot or adjacent, established road. All vehicles and other mechanized equipment will be:
a) Stored, fueled, and maintained in a vehicle staging area placed 150-feet or more from any natural water body or wetland or on an adjacent, established road area;
b) Inspected daily for fluid leaks before leaving the vehicle staging area for operation within 150-feet of any natural water body or wetland; and
c) Thoroughly cleaned before operation below ordinary high water, and as often as necessary during operation, to remain grease free.
d) Synthetic hydraulics - hydraulic oil in the track-mounted excavators that are utilized during project construction must meet or exceed stringent acute aquatic toxicity (L-50), which is inherently biodegradable. Example: Chevron Clarity or equivalent.
e) Spill Kits (including rag pads and booms) will be required on site at all times.
f) Equipment will be free of leaks and in good operating condition.

7) Erosion control.

a) If there is a potential for eroded sediment to enter the stream, sediment barriers will be installed and maintained for the duration of project implementation.
b) Temporary erosion control measures may include fiber wattles, silt fences, jute matting, wood fiber mulch and soil binder, or geotextiles and geosynthetic fabric.
c) Soil stabilization utilizing wood fiber mulch and tackifier (hydro-applied) may be used to reduce erosion of bare soil if the materials are noxious weed free and nontoxic to aquatic and terrestrial animals, soil microorganisms, and vegetation.
d) Sediment will be removed from erosion controls once it has reached 1/3 of the exposed height of the control.
e) Once the site is stabilized after construction, temporary erosion control measures must be removed.

8) Emergency erosion controls.
a) A supply of sediment control materials; and
b) An oil-absorbing floating boom whenever surface water is present.
c) Turbidity will be monitored a minimum of 100 ft downstream of all ground disturbing activities.
d) Disturbed areas within the riparian buffer or areas likely to experience run-off will be seeded with a native grass mix and mulched with weed free straw following the end of disturbance activities. Jute/coconut fiber matting or seeded coir fiber logs may also be used as a post disturbance erosion control measure.

9) Dust abatement. The project sponsor will determine the appropriate dust control measures (if necessary) by considering soil type, equipment usage, prevailing wind direction, and the effects caused by other erosion and sediment control measures.

10) Spill prevention, control, and countermeasures.
a) A description of hazardous materials that will be used, including inventory, storage, and handling procedures will be available on-site.
b) Written procedures for notifying environmental response agencies will be posted at the work site.
c) Spill containment kits (including instructions for cleanup and disposal) adequate for the types and quantity of hazardous materials used at the site will be available at the work site.
d) Workers will be trained in spill containment procedures and will be informed of the location of spill containment kits.
e) Any waste liquids generated at the staging areas will be temporarily stored under an impervious cover, such as a tarpaulin, until they can be properly transported and disposed of.

11) Invasive species control. The following measures will be followed to avoid introduction of invasive plants and noxious weeds into project areas:
a) Prior to entering the site, all vehicles and equipment will be power washed, allowed to fully dry, and inspected to make sure no plants, soil, or other organic material adheres to the surface.
b) Watercraft, waders, boots, and any other gear to be used in or near water will be inspected for aquatic invasive species.

Project Management

List the key individuals, their roles, and qualifications relevant to project and post project implementation. At a minimum include the following: project management, project design, project implementation, and project inspection.

Role	Name	Affiliation	Qualifications	Email	Phone
Project design and implementer	Joe Platz	USFS	Joe Platz is a biological technician for the US Forest Service. He has a Bachelor of Science degree from OSU in Fisheries Science. He has been involved in designing/implementing restoration projects since 1989.	joe.platz@usda.gov	(541) 962-8571

Optional Monitoring

OPTIONAL: Restoration Project Monitoring

❑*Salmonid Monitoring*
❑*Non-salmonid biological monitoring*
❑*Water (quantity) flow monitoring*
❑*Water quality monitoring*
❑*Rangeland monitoring*
✓*Onsite*
❑*Downstream*
❑*Upstream*
❑*Upslope*

Will effectiveness monitoring be conducted for this project?

● Yes
❍ No

Please describe the monitoring activities and any additional sources of funding (amount and source) to support this effort.

The USFS will be conducting plant survival surveys, yearly, for three years following project activities.

The USFS will be monitoring noxious weeds, yearly, for three years following project activities.

The current restoration project will have many monitoring components as well that were described in that application (218-8205-16884)

Budget

Item	Unit Type	Unit Number	Unit Cost	OWEB Funds	External Cash	External In-Kind	Total Costs
Salaries, Wages and Benefits							
			$0	$0	$0	$0	$0
			Category Sub-total	$0	$0	$0	$0
Contracted Services							
Gallon potted plants	Each	10000	$5.00	$50,000	$0	$0	$50,000
Conifer seedlings	Each	10000	$1.00	$10,000	$0	$0	$10,000
Deciduous seedlings	Each	5000	$2.00	$10,000	$0	$0	$10,000
Drilling holes	Each	10000	$3.25	$32,500	$0	$0	$32,500
Planting contract for gallon potted seedlings	Each	10000	$3.00	$30,000	$0	$0	$30,000
Restoration Contract for Longley Meadows (BPA only)	Each	1	$1,925,556.00	$0	$1,925,556	$0	$1,925,556
Biological Technician	Hours	320	$31.25	$0	$0	$10,000	$10,000
Biological Technician	Hours	240	$45.00	$0	$0	$10,800	$10,800
USFS Administration	Each	1	$15,900.00	$0	$0	$15,900	$15,900
			Category Sub-total	$132,500	$1,925,556	$36,700	$2,094,756
Travel and Training							
mileage	Miles	2000	$0.55	$0	$0	$1,100	$1,100
Vehicle rate	Days	30	$4.30	$0	$0	$129	$129
			Category Sub-total	$0	$0	$1,229	$1,229
Materials and Supplies							
			$0	$0	$0	$0	$0
			Category Sub-total	$0	$0	$0	$0
Equipment							
			$0	$0	$0	$0	$0
			Category Sub-total	$0	$0	$0	$0
Other							
			$0	$0	$0	$0	$0
			Category Sub-total	$0	$0	$0	$0
			Modified Total Direct Cost Amounts	$132,500	$1,925,556	$37,929	$2,095,985
Indirect Costs							
Federally Accepted 'de minimis' Indirect Cost Rate (up to 10%)	2%			$2,650	$0		$2,650
			Total	$135,150	$1,925,556	$37,929	$2,098,635

* = OWEB funds excluded from indirect.

Provide context and justification for how your budget was developed. Explain how project costs and/or rates were determined.

Project costs were developed from comparing 11 years of similar project work that was contracted. This project was very similar to the planting completed at Bird Track Springs.

Does the budget identify a contingency amount for specific line item(s) within the Contracted Services and/or Material and Supplies budget category?

❍Yes

●No

Funding and Match

Fund Sources and Amounts

Organization Type	Name	Source Note	Contribution Type	Amount	Description	Status
Federal	USFS	Vehicle, Travel, Salary	In-Kind - Labor	$37,929	Labor and Materials	Pending
Federal	BPA	Restoration Project	Cash	$1,925,556	Funding for the restoration project (218-8205-16884)	Secured
Fund Source Cash Total	**$1,925,556**		**Fund Source In-Kind Total**	**$37,929**		

Match

Contribution Source-Type: Description	Amount
USFS-In-Kind - Labor: Labor and Materials	$37,929
BPA-Cash: Funding for the restoration project (218-8205-16884)	$0
Match Total	**$37,929**

Do match funding sources have any restrictions on how funds are used, timelines or other limitations that would impact the portion of the project proposed for OWEB funding?

❍ Yes
● No

Do you need state OWEB dollars (not Federal) to match the requirements of any other federal funding you will be using to complete this project?

❍ Yes
● No

Does the non-OWEB cash funding include Pacific Coast Salmon Recovery Funds?

❍ Yes
● No

Uploads

Map: Longley Meadows Planting Areas.pdf -

Secured Match Forms: Match-Form.pdf -

Plant Page

Planting Questions

Relationship to other conservation programs

❑*This project will use OWEB funds to increase the planting density on CREP acres.*

Planting Activities

Describe the current condition of the site(s) to be planted.

The areas planted will have been disturbed by new channel creation, instream wood placement, and side channel construction through the Longley Meadows Restoration Project. The area involved will be approximately 20 acres adjacent to the Grande Ronde River.

Describe how you will prepare the site(s) prior to planting and how those activities are appropriate considering the site conditions described in the previous question.

After the channels are constructed, approximately 8" of top soil will be placed on top of the streambanks and areas where excavation has occurred. In areas where soil disturbance occurs outside of channel excavation, the soils will be ripped to break up compaction.

Fill out the table below. Identify the vegetation communities you plan on planting in, the acres each vegetation community encompasses, and the density of your planting.

Vegetation Community	Acres	Density
Riparian	20	1250

Fill out the table below for each vegetation community listed in the table above, provide the common and scientific names of up to five plants that will be planted, the form(tree, shrub, grass), type of plant (bare root, cutting, etc) and the planting timing.

Vegetation Community	Plants: Common Name	Plants: Scientific Name	Form	Type	Year	Month
Riparian	Ponderosa pine	Pinus ponderosa	Tree	Plugs	2022-2023	October, November, March
Riparian	Cottonwood	Populus trichocarpa	Tree	Plugs	2022-2023	October, November, March
Riparian	Willow (mix)	Salix species	Shrub	Plugs	2022-2023	October, November, March
Riparian	Quaking aspen	Populus Tremuloides	Tree	Plugs	2022 - 2023	October, November, March
Riparian	Golden current	Ribes odoratorm	Shrub	Plugs	2022 - 2023	October, November, March
Riparian	Choke cherry	Prunus virginian	Shrub	Plugs	2022 - 2023	October, November, March
Riparian	Hawthorne	Crataegus monogyna	Shrub	Plugs	2022 - 2023	October, November, March
Riparian	Red Osier Dogwood	Cornus sericea	Shrub	Plugs	2022 - 2023	October, November, March
Riparian	Mtn. Alder	Alnus incana	Shrub	Plugs	2022-2023	October, November, March

Plant Stewardship

After the plantings are installed, will you conduct plant stewardship ("free to grow")?

- ● Yes
- ❍ No

Are you requesting OWEB funds for plant stewardship activities?

- ❍ Yes
- ● No

Explain how you plan to carry out activities to help the plantings survive and grow over time.

Monitoring plant survival for 3 years after planting will occur to determine if we need to replant.

Planting is occurring where there is little to no competition with existing vegetation.

Planting is occurring at the times of year that give them time to establish root systems capable of withstanding drought.

Measures of Planting Success

Use the table below to explain how you will document and determine success for the plantings.

Vegetation Community	Parameter	Percentages
Riparian	Percent Survival	60 - 75%

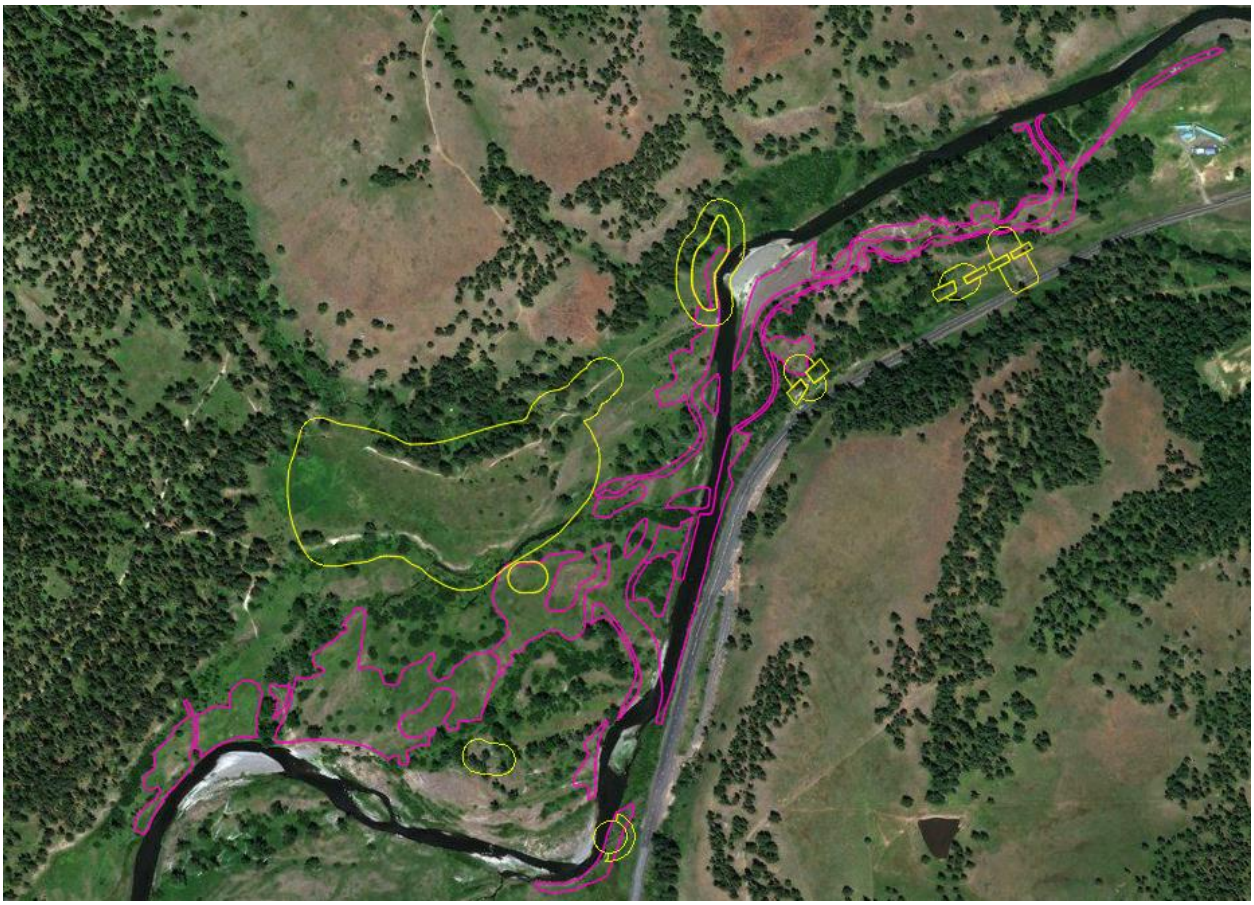
If, in the course of the 3-5 years following planting, the success rate falls below your standard, what is your plan?

Our plan will be to replant to meet or exceed standards.

Permit Page

Project Activity Requiring a Permit or License	Name of Permit or License	Entity Issuing Permit or License	Status
Planting	NEPA/Decision Memo	USFS	Complete.
Planting	ESA consultation	NOAA fisheries	Complete.
Planting	ESA consultation	USFWS	Complete.

Longley Meadows Planting Project



Planting areas are in pink. Total of 20 acres.

Match Funding Form

Document the match funding shown on the budget page of your grant application.

OWEB accepts all non-OWEB funds as match. An applicant may NOT use another OWEB grant to match an OWEB grant; this includes ODA Weed Board projects because they are funded through OWEB grants. However, an applicant who benefits from a pass-through OWEB agreement with another state agency, by receiving either staff expertise or a grant from that state agency, may use those benefits as match for an OWEB grant. (Example: A grantee **MAY** use as match the effort provided by ODFW restoration biologists because OWEB funding for those positions is the result of a pass-through agreement).

At the time of application, match funding for OWEB funds requested does not have to be secured, but you must show that **at least 25% of match funding has been sought**. On this form, you do not necessarily need to show authorized signatures ("secured match"), but the more match that is secured, the stronger the application. Identify the type of match (cash or in-kind), the status of the match (secured or pending), and either a dollar amount or a dollar value (based on local market rates) of the in-kind contribution.

If you have questions about whether your proposed match is eligible or not, see Allowable Match document in OGMS https://apps.wrd.state.or.us/apps/oweb/fiscal/nologin.aspx under Technical Assistance application or contact your local OWEB regional program representative (contact information available in the instructions to this application).

Project Name: Longley Meadows Planting Project

Applicant: Grande Ronde Model Watershed Foundation

Match Funding Source	Type	Status*	Dollar Value	Match Funding Source Signature/Date*
USFS	in-kind	pending	37,929.00	
	(select)	(select)		
	(select)	(select)		
	(select)	(select)		
	(select)	(select)		
	(select)	(select)		
	(select)	(select)		

*** IMPORTANT:** If you selected "secured" in the Status column for any match funding source, you must provide either the signature of an authorized representative of the match source in the Match Funding Source Signature/Date column, or attach a letter of support from the match funding source that specifically mentions the dollar amount you show in the Dollar Value column.