Upper Grande Ronde Mine Tailings Restoration Project Phase II

I. PROJECT NAME: Upper Grande Ronde Mine Tailings Restoration Project Phase II
The project is located on the Upper Grande Ronde River on lands administered by the US Forest Service.

2. Applicant:

US Forest Service (USFS), LaGrande Ranger District; Attn: Joe Platz; 3502 HWY 30; LaGrande, OR 97850. Email: jplatz@fs.fed.us. Phone Number: 541-962-8571. Fax Number: 541-962-8580.

3. Participating Landowner(s) and Agencies:

(1) USFS; Attn: Joe Platz; 3502 HWY 30, LaGrande, OR 97850; (541) 962-8571; Fax: (541) 962-8580
(2) Confederated Tribes of Umatilla Indian Reservation (CTUIR); ATTN: Allen Childs; Ag Service Center, Rm #3; 10507 North McCalister Rd; Island City, Oregon 97850
(3) Grande Ronde Model Watershed, Lyle Kuchenbecker; 1114 J Ave., La Grande, OR 97850; 541-663-0570; Fax: 541-962-1585
(4) Bonneville Power Administration, Timmie Mandish; P.O. Box 3621; Portland, OR 97208; PH 503-230-3983; FAX 503-230-4564

4. Project Contact(s):

Technical contact(s): Joe Platz: 3502 HWY 30, LaGrande, OR 97850; jplatz@fs.fed.us; (541) 962-8571
Administrative contact(s): Kurt Wiedenmann: 3502 HWY 30, LaGrande, OR 97850; kwiedenmann@fs.fed.us; (541) 962-8571

5. Project Location:

The Upper Grande Ronde Mine Tailings Restoration Project Phase II Project is located on the Upper Grande Ronde River, a tributary to the Snake River of the LaGrande Ranger District, Wallowa-Whitman National Forest. The project is located on the Grande Ronde River from the Forest boundary to approximately the mouth of Tanner Gulch (4.7 stream miles (T 6S, R 36E, S 4, 5, 9, 10, 15). The project will also occur at the mouth of East Fork Grande Ronde River. The project is within the Upper Grande Ronde Watershed (1706010401); Meadowbrook Creek Subwatershed (170601040103) & Tanner Gulch – Grande Ronde River Subwatershed (170601040101); Reach 1 & 2; Union County; 45 degrees, 3', 12.43" N, 118 degrees, 17', 33.41" W.

6. Project Objectives:

The objective of this project is to improve spring/summer chinook, steelhead and bull trout habitat, specifically through improving or increasing the following habitat elements.

- Improve water capture, storage and safe release within the floodplain.
- Increase quality and quantity of pools within Upper Grande Ronde River.
- Increase fish cover.
- Increase habitat complexity.
- Increase forage availability.
- Increase residual pool depth.
- Lower or partially remove log weirs that prevent juvenile fish passage at low flows.
- Restore stream channel dimension, pattern and profile.
- Increase number of large and medium pieces of large woody material (LWM) in the stream.
- Increase spawning gravel recruitment.

• Increase stream shading.
• Improve riparian/wetland communities.
• Decrease potential recreation impacts.

This project is located in one of the highest priority Geographic Areas (Upper Grande Ronde) for chinook and steelhead restoration within the Grande Ronde Subbasin Plan Supplement (GRSBP) (page 15 and 16), but is not one of the highest ranked subgeographic areas delineated within the plan. The GRSBP identifies on page 15 and 16 that the Grande Ronde Geographic Area is limited by habitat diversity, key habitat quantity, sediment and temperature. This project would improve these limiting factors through large wood additions, planting, road obliteration, dispersed campground obliteration, and limiting floodplain access.

7. Project Description

Introduction

The Upper Grande Ronde River is spawning and rearing habitat for Snake River Basin summer steelhead, Snake River Basin spring chinook salmon, bull trout and redband trout. East Fork Grande Ronde River provides habitat for rearing spring/summer chinook, spawning and rearing steelhead, and redband trout. The summer steelhead, spring/summer chinook and bull trout are federally listed under ESA as threatened species. Redband trout are on the Regional Forester's Sensitive Species List.

Historic timber harvest and dredge mining has removed larger conifers from the valley bottom, reducing the future recruitment of large wood to the stream. Gold mining, utilizing a dredge, was conducted in 1940 and 1941, leaving large mine tailings within the floodplain. Phase 1 of this project (completed in 2009) removed or recontoured these mine tailings away from the Upper Grande Ronde River's floodplain. This project (Phase II) will continue to rehabilitate the floodplain and instream habitat through planting, large wood additions, streambottom road obliteration, and dispersed campground obliteration/rehabilitation.

Existing condition

The Upper Grande Ronde River Project is broken into 2 reaches. The reach break is located at the mouth of the Clear Creek tributary. The valley bottom is forested, and riparian vegetation consists of shrub species, primarily alder, with grasses and scattered sedges. Conifers consist of lodgepole pine, Douglas-fir, western larch, and some ponderosa pine. Historic timber harvest and dredge mining has removed larger conifers from the valley bottom, reducing the future recruitment of large wood debris to the stream. Gold mining, utilizing a dredge, was conducted in 1940 and 1941. The dredge turned the riparian area and floodplain over and created tailing piles that in many cases cross the valley floor and extend toe slope to toe slope. Some riparian vegetation, primarily lodgepole pine, has reestablished, but the tailing piles constricted the river channel, pushed it to one side of the valley floor and simplified the channel disconnecting the river from its floodplain.

In the early 1990's the Wallowa-Whitman cooperated with Bonneville Power Administration to add structural complexity to the Upper Grande Ronde from Clear Creek to the E.F. Grande Ronde River. Large wood structural elements were added to the river channel creating large, deep pools. In July and August of 2009, the mine tailing piles were recontoured or removed from the floodplain of the Upper Grande Ronde River. Wood was dispersed on the floodplain and seeding/mulching will occur in the fall of 2009. The mine tailing piles that were removed were stockpiled and recontoured on the other side of the 5125 and 5138 roads.

A stream survey of the Upper Grande Ronde was conducted in 2001. Stream survey results indicate good numbers of pools per mile and large wood within the medium size class (see Table 1 below for stream survey results). However in 2008, the entire stretch of stream was surveyed for the mine tailings removal, channel structure, fish cover, and effectiveness of the old structures that were constructed in the 1990s. The survey indicated that many of the pieces are

rotting away, many of the old structures are failing and lack fish cover, jump heights for juveniles are compromised, and the stream channel has been widened in places, due to the presence of old structures.

Table 1. Results of stream habitat survey for Upper Grande Ronde River.

Stream/Year Surveyed	Pools Per Mile	W/D Ratio	% Stable Banks	%Pool Habitat	%Riffle Habitat	*LWD Large (pieces/mile)	**LWD Medium (pieces/mile)	Stream Gradient	Rosgen Class
Upper Grande Ronde River/ 2001 Reach 1	24	19	99	21	78	14	38	2.2%	B
Upper Grande Ronde River/ 2001 Reach 2	25	12	98	21	75	11	78	1.7%	C

*Large LWD: Pieces >20 inches dbh and >35 feet in length.

**Medium LWD: Pieces >12 inches dbh and >35 feet in length.

An additional stream survey (similar to the one above) was completed in August of 2009. In addition, CTUIR completed a longitudinal profile and channel crossections in the fall of 2009. However, none of this data is available at this time.

There are no grazing allotments in this reach of the Upper Grande Ronde River. FS Road 5125 and 5138 parallel the Upper Grande Ronde River. FS Road 5125 constricts the channel only in limited areas. FS Road 5138 is within the floodplain for most of its length. There are several active mining claims in this reach of the Upper Grande Ronde.

Specific Actions

The Upper Grande Ronde Mine Tailings Restoration Project would place wood within the entire 4.7 miles of the upper Grande Ronde River. Strategic boulder placement will occur on those portions of the floodplain that are easily accessible to motorized travel. Three roads and five dispersed sites will be obliterated. One other road will be closed. Six other dispersed sites, adjacent to the Grande Ronde River and Clear Creek will continue to provide recreation, but will have defined access points. Eight of the areas used for stock piles in Phase I will be rehabilitated and have defined access points through strategic boulder placement for dispersed camping. One of the stock pile areas will be rehabilitated with no dispersed camping allowed. There will be 50 logs/rootwads and 425: 3x3’ to 5’x5’ sized boulders hauled to the project area for the above rehabilitation. Seeding and planting will occur through out the entire project area.

Structure Construction

A total of 69 structure sites will have wood input within the project. Each structure site will average 4 pieces of large woody debris. Limited pinning with rebar will occur where logs cross. Logs will only be pinned if increased stability is needed to create improved habitat diversity. Most of the structures are a combination of cut logs, root wads and boulders. All boulders will be taken from on site. An excavator will be used for structure construction. A total of 252 pieces of large woody debris are needed for structure construction. Eight logs and 175 logs with rootwads attached were generated by the Phase I part of this project. An additional 50 large diameter logs (50’ long) and logs (50’ long) with rootwads attached are needed for the project. Thirty-seven pieces of large woody debris will be hauled from ODOT right-of-ways. The other 13 pieces will be hauled from USFS road systems close to the project area. The remaining large wood (19 pieces) will be thinned from dense stands adjacent to the Grande Ronde River. None of the these trees or snags will be over 21 inches dbh. All of the logs taken within or adjacent to the upper Grande Ronde River will be imported into the creek with the use of a skidder, excavator and chokers, where needed.

Forty-four (44) of the above 69 structures are old sill log structures that will be restructured through deepening/widening the notch, removing the notch completely, or removing the entire structure. This will involve

using a chainsaw (with vegetable oil in exchange for bar oil) and pulaski. These 44 structures will also have cut logs and root wads placed within, to decrease width to depth ratios, maintain pool depth, and add fish cover.

Road Obliteration

Three road obliterations will occur within the project area. They are located beyond the weir site for the chinook acclimation site (.3 mile), between stock piles 7-10 (.25 mile), and at the very end of the 5138 road (.25 mile). Obliteration of all three roads will require subsoiling, seeding, planting, wood placement across the road, and rock placement to deter travel. An additional road that parallels East Fork Grande Ronde River will be closed from all motorized travel. This road has a large amount of vegetation growing within the road prism, but continues to provide ATV access adjacent to the stream. Approximately of 75 boulders will be hauled in for road obliteration.

Dispersed Recreation Sites

Five dispersed recreation sites will be obliterated within the floodplain of the Upper Grande Ronde River. Campsites and associated roads will be ripped, seeded and planted. Six other dispersed sites, adjacent to the Grande Ronde River and Clear Creek will continue to provide recreation, but will have defined access points through strategic boulder placement, seeding and planting. Four of these sites are elevated off of the floodplain and will not be flooded, except for extreme flood events. Two of these sites are within the floodplain of the Grande Ronde River and Clear Creek, however, strategic boulder placement, plantings and existing vegetation will significantly reduce recreation impacts. Approximately 50 boulders will be hauled in for dispersed recreation site rehabilitation.

Stockpile Rehabilitation

Eight of the areas used for stock piles in Phase I will be rehabilitated and have defined access points through strategic boulder placement for dispersed camping. One of the stock pile areas will be rehabilitated with no dispersed camping allowed. Rehabilitation will consist of hauling and strategically placing 35 ten yard dump truck loads of cut trees (6 inches average diameter) from areas adjacent to the 5125, 5130, and 5140 roads. Approximately 200 boulders will placed on the stock piles to define camping areas and access. Planting and seeding will occur after the boulders and woody debris are placed.

Floodplain access

Tailing berms were created adjacent to the floodplain in Phase I to discourage motorized access. Approximately 100 additional boulders will be strategically placed adjacent to the floodplain to limit motorized access.

Seeding

All areas disturbed by equipment will be seeded with a native grass/forb seed mix after project completion. In addition, areas that have poor germination will be reseeded as part of Phase II.

Planting

A total of 10,000 deciduous seedlings, 14,000 conifer seedlings, and 1000 cuttings will be planted in the project area. Native species will be used. Cuttings will be obtained from dense stands adjacent to the Grande Ronde River (within the project area), East Fork Grande Ronde River and Clear Creek, or local nurseries. Stands will not prune more than 25% of the existing vegetation. All of the planting will be completed by hand, except that a portion of the cuttings will be planted using a backhoe excavator or tracked skid steer with auger. The conifer seedlings, cuttings and most of the deciduous seedlings will not be fenced. However, vexar tubing will be installed around all of the seedlings not fenced. Some of the deciduous seedlings (particularly in the area of Woodley Campground) will be fenced with small exclosures. In addition, existing shrubs that have a high evidence of browse will be protected by small exclosure fences, primarily, within the meadow associated with the old Woodley Campground.

Benefits

Benefits include: Improved floodplain connectivity; improved water capture, storage and safe release within the floodplain; increased quantity and quality of pools; increased fish cover; increased habitat complexity; increased forage availability; improved riparian/wetland communities; increased number of large and medium pieces of large woody debris in the stream; and increased spawning gravel recruitment.

Project Maintenance

Maintenance of the small exclosure fences, defined access points, vexar tubing, information signs and structures would be completed by the USFS (Joe Platz). Maintenance would involve ensuring the small exclosures and vexar tubing are up after spring flows every year (June). Once the trees/shrubs are above browse height or exhibit sufficient growth to withstand grazing pressure, the small exclosures and vexar tubing will be removed or used in additional areas on the stream. Maintenance on the structures will involve removing rebar that is exposed from the stream. This will occur at the same time as the exclosure fences.

Permits

NEPA, ESA consultation with NMFS and USFWS, and permits from the US Army Corps of Engineers/Department of State Lands have been obtained for this project. All instream work will be performed in the instream work window, which is July 1 – July 31.

Monitoring Plan

Monitoring specific to project activities would be accomplished to assure that activities conform to objectives of the Forest Plan. Project level monitoring is a component of Forest Plan monitoring. The following types of monitoring would be accomplished:

Implementation Monitoring - Are the project design being implemented as planned?

A fisheries biologist/hydrologist would be on site during project operations to ensure that the project design and mitigation measures would be implemented as planned.

Effectiveness Monitoring - Were the desired results acheived?

- Structure construction: Monitoring of structures would involve photo points of before and after operations occur. Follow up photo points would occur at year 1, year 3, and year 5 after project completion**.** This monitoring will be completed by the USFS.
- Stream Survey: Region 6 Level II Stream Habitat Inventory would be conducted prior to (completed) and @ year 1 and year 5 after completion. This monitoring will be completed by the USFS.
- A longitudinal profile and established crossections will be conducted prior to and at year 1and year 5 after project completion. This monitoring will be completed by CTUIR.
- Plant/seed survival: Native plantings and seeded areas would be evaluated for survival on a yearly basis for three years after project completion through photo points and determining plant survival. If plant/seed survival is poor, then subsequent planting and/or seeding would occur. This monitoring will be completed by the USFS.
- Noxious weeds: Noxious weeds would be monitored, yearly, for five years after project operations. This monitoring will be completed by the USFS.

Reports -

- Reports: A preliminary final report that describes the actual implementation of this project and associated monitoring would be completed in the winter of 2011. A final report would be completed in the winter of 2012. After final report completion, monitoring reports would be completed the following winter after monitoring is completed.

Work Dates

Structure construction would occur from July 1, 2010 through July 31, 2010. The work window for the Upper Grande Ronde River is July 1 – July 31.

Log, root wad, boulder, and woody debris hauling will occur in May and June of 2010.

Road obliteration, dispersed recreation site rehabilitation, stockpile rehabilitation, and limiting floodplain access would occur in June and July of 2010.

Seeding will occur in the Spring of 2010 and 2011.

Planting will occur from April 2010 to June of 2010 and April 2010 to June 2010.

8. Project Budget

The project budget is attached.

9. Attachments

Attachments include: (1) Project Budget, (2) Vicinity Map, (3) Two Project Description Maps, (4) One Design (5) Photos.