Decision Memo

Twin Barrel Fish Passage Culvert Project
42 Road MP 21.1

USDA Forest Service
Mount St. Helens National Volcanic Monument,
Gifford Pinchot National Forest
Skamania County, Washington

Section 19, T 4 N, R 5 E, W.M.

Background

The purpose of this action is to approve a proposal to replace a culvert with a fish passage crossing on a tributary to the East Fork Lewis River. The project is located on the Mount. St. Helens National Volcanic Monument, Gifford Pinchot National Forest, Skamania County, Washington (Figure 1). The legal description of the project area is the NE ¼ of Section 19, T. 4 N., R. 5 E., Willamette Meridian. The proposed project is scheduled for funding through Title II funds during 2005.

The proposed project is located within the East Fork Lewis River Watershed, approximately 25 miles northeast of Battleground, Clark County, Washington, which may be reached via Highway 503, the Rock Creek Road and the Lucia Falls Road. The project is located approximately one mile east of Sunset Falls campground at approximately MP 21.1 (Figures 1 and 2).

The primary purpose of this action is to replace an undersized double culvert crossing that is a fish passage barrier on a tributary to the East Fork Lewis River with a bridge or arch, stream simulation design. The project would also allow the passage of sediment and eliminate the risk of road failure. The proposed action is designed to meet Northwest Forest Plan standards and guidelines. The need for this action is to restore aquatic connectivity, provide fish passage and allow the flow of sediment and debris that is typically trapped upstream of the culvert. The East Fork Lewis River serves as habitat for summer and winter steelhead (*Onchorynchus mykiss*), listed as threatened in 1998. These species spawn in the East Fork Lewis River and tributaries.

The 42 Road crosses a tributary approximately one mile east of Sunset Falls campground. In surveys conducted during 2003 and 2004 this crossing was verified as a partial fish passage barrier and recommended for replacement. The tributary supports resident and potentially anadromous fish, and contains rearing habitat. The culvert is considered a partial barrier and only able to provide passage during certain flow levels. Cutthroat trout have been observed in several pools upstream of the crossing. A bridge or arch would add approximately 0.8 miles of high quality rearing and potential spawning habitat upstream of the 42 Road crossing.

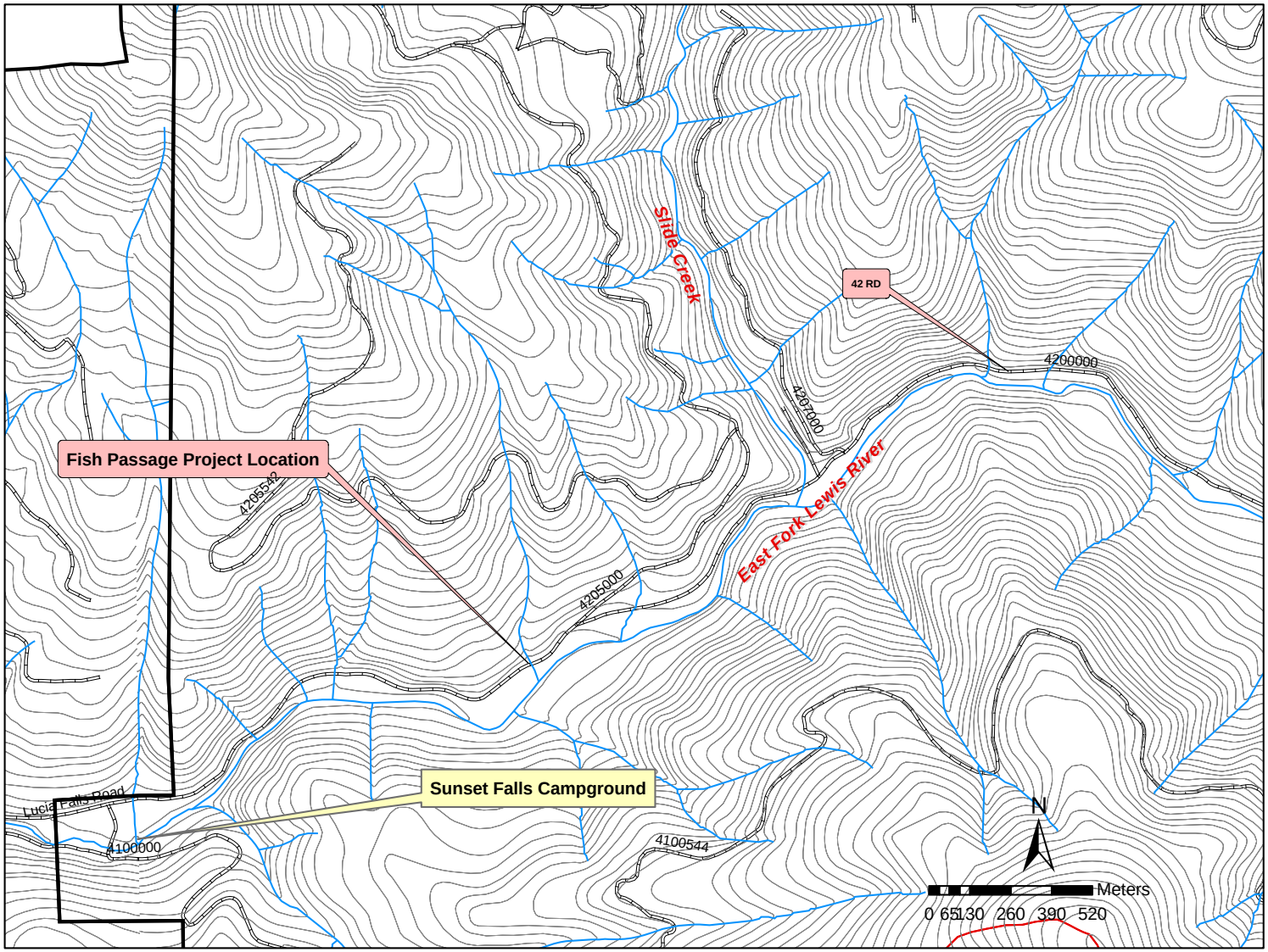

Figure 1. Twin Barrel Fish Passage Project located in Section 19 of T. 4 N., R. 5 E., Willamette Meridian.

Figure 2. Outlet of double barrel culvert at milepost 21.1.

Spawning currently occurs in the small stream at MP 21.1. Young of the year (cutthroat trout or steelhead) were abundant above and below the barrier during late fall, 2003. The small tributary appears to provide limited spawning habitat and has the potential to provide over-wintering habitat and potential refuge for juveniles (cutthroat trout and steelhead) from mainstem hazards including high temperatures, flood events, and predators. Providing access to small tributaries in the East Fork not only fulfills the restoration objectives as outlined in Watershed Analysis, but addresses at least three of four key habitat components that are considered at risk in the watershed, including lack of quality gravels and few adult spawning areas, low frequency off-channel habitat or refugia, and refuge from high mainstem water temperatures.

A bridge or bottomless arch would replace the crossing, which currently consists of a pair of side-by-side culverts (Figure 2). Both culverts are 24 inches in diameter. There is a 12 inch drop at the outlet of the culverts, which is considered a partial fish barrier. The current configuration traps sediment upstream of the 42 road. The new crossing would be designed to at least span bankfull width, approximately 10 feet upstream of the crossing. If an arch is selected, additional width would be added to facilitate a stream simulation design. The minimum crossing width would be 14 feet. Instream structures may be placed upstream of the crossing, which will be designed to retain and "meter out" sediment that has been trapped by the existing culvert.

The project would include the following activities: Exploratory drilling or excavation to determine the location of bedrock, excavation and disposal of fill material and culverts, bridge or arch abutment construction, placement of instream structures upstream of the crossing, streambank restoration including plantings. Direct impacts would occur to the existing road surface and fill slopes, and within the stream channel approximately 50 feet upstream and 50 feet downstream of the existing crossing, and along the stream banks adjacent to the work listed above. Disposal of the fill material would also be a direct impact. Indirect effects would occur downstream of the project.

Decision

I have decided to approve the Twin Barrel Fish Passage Project, including mitigation measures described below. This action falls within a set of actions that may be categorically excluded from documentation in an environmental impact statement or an environmental assessment under FSH 1909.15, Sec. 31.12, para. 4: "Repair and maintenance of roads, trails, and landline boundaries", and under FSH 1909.15, Sec. 31.2, para. 6: "Timber stand and/or wildlife habitat improvement activities which do not include the use of herbicides or do not require more than one mile of low standard road construction (Service level D, FSH 7709.56)."

I have determined that there are no extraordinary circumstances potentially having effects that could significantly affect the environment. I considered the potential effects to water quality, listed fish and wildlife species, botanical and cultural resources. The resource specialists' findings are documented in the project file.

Required Mitigation

As a part of this decision, the following required mitigation measures were developed. All applicable state and federal requirements associated with the Clean Water Act (CWA) will be met through planning, application, and monitoring of BMP's in conformance with the CWA and Federal guidance

and management direction. Activities will comply with provisions described in the Memorandum of Agreement with the Washington State Department of Ecology (MOA), and the Memorandum of Understanding with the Washington State Department of Fish and Wildlife (MOU). Washington Dept. of Fish and Wildlife guidelines for timing of in-water work will be followed, except where the potential for greater damage to water quality and fish habitat exists. Additional measures as outlined in the Biological Assessment for USDA Forest Service Fish Passage Restoration Activities Affecting ESA-listed Animal and Plant Species found in eastern Oregon and the whole of Washington (April 24, 2003), and the Biological Opinion for Programmatic Culvert Replacement Activities in Washington and Eastern Oregon prepared by the NOAA Fisheries (NOAA September 2, 2003) will also be applied to this project.

1. The district hydrologist will approve erosion control measures prior to project implementation, including review of the contract prior to advertisement and/or project work plan to ensure appropriate mitigation measures are specified. Erosion control measures will be consistent with the USFWS Programmatic BO Project Design Criteria and all WDFW MOU provisions.

2. All stream culvert work described in this document will occur between July 15 – October 31 to protect fish populations and to minimize erosion and sediment delivery to streams. Instream structure (including culverts) placement, riparian re-vegetation, and stream bank armoring will occur during low flow periods.

3. Erosion control measures will be kept current as practicable with ongoing operations. Disturbed sites adjacent to streams will be protected from erosion within seven days of project completion by the application of seed and mulch, and other erosion control devices. Following October 17, all erosion control measures will be kept current (on a daily basis). An aquatic specialist will periodically assess erosion control measures for adequacy. If the aquatic specialist determines that erosion control measures are not implemented correctly or the specified erosion control measures are not adequate to control erosion, modifications to the erosion control plan will be developed and implemented as soon as possible. Within one year of project completion, stream banks shall be revegetated with native grasses or woody species that have been approved by the district hydrologist.

4. Ditches and exposed soils will be seeded with native grasses and covered with weed-free straw mulch. Grass seed native to the Upper Wind River area is the preferred erosion control mix. It can be procured through the Forest Service with advanced notification. The seed to be applied contains a mix of *Elymus glaucus* (wild blue rye) and *Deschampsia longata* (slender hairgrass), and may include others as specified. The objective is to provide immediate, short-term soil protection, and to accelerate development of ground cover to protect soils in the longer term. An example of a seed mix is provided in the Appendix. The native seed coordinator is Andrea Ruchty, Zone Botanist, who can be reached at 360-395-3414.

5. If 24-hour rainfall accumulation exceeds 0.5 inches at the nearest precipitation gauging station, instream work and other sediment-generating activities will cease until precipitation stops and soils drain. The district hydrologist will be responsible for notifying the COR when this rainfall accumulation threshold is reached.

6. Disposal of excess material will be at designated areas, outside of Riparian Reserves.

7. Service and refueling areas will be located 100 ft. away from stream courses or wet areas (including chainsaws and other hand powered tools). A Forest Service approved spill containment plan that includes requirements for on-site spill containment materials will be in place before operations begin. A spill containment kit will be located where equipment is stored. Equipment will be scrubbed so it is free of external petroleum-based products and invasive plant seeds or biomass. Hydraulic/oil/fuel leaks will be repaired prior to operating on National Forest System lands. Equipment will be checked daily for leaks and any necessary repairs shall be completed prior to commencing work activities along the stream. Equipment storage locations will be approved by the project administrator. Equipment will not be stored adjacent to or in stream channels when not in use, which will avoid potential effects of vandals, accidents, or natural disasters.

8. Vehicle or equipment wheels, tracks, or tires shall not operate within the wetted perimeter of streams, although the equipment appendages may operate within the wetted perimeter. Equipment will not cross any streams, unless approved by an individual HPA.

9. Minimize disturbance of existing vegetation in ditches and at stream crossings to the extent necessary to restore the hydrologic function of the road.

10. Culverts and crossings at intermittent or perennial streams will be installed to maintain structural integrity to the 100-year peak flow with consideration of the debris likely to be encountered, as required by the NWFP ROD standards and guidelines and the MOU with the WDFW. Rock will be used for culvert protection within the road prism, while bioengineering measures should be applied to the stream bank where possible without compromising the rock protection of the infrastructure.

11. All culvert work will be done in the dry or at the lowest flow of the year. A bypass culvert or pumping of flow around the culvert work area will be necessary. This determination will be made in consultation with the district aquatic specialist. Design criteria as described in the MOU with the WDFW will be followed.

12. Accumulation of soils or debris shall be removed from the drive mechanisms and undercarriage of equipment prior to its working below the ordinary high water line of stream courses. Stream crossings in general are not allowed except as specified in the HPA (limited to one pass, including "across and back").

13. Prevent off-site sediment movement through use of filter materials or catchments. Turbidity levels will be maintained below state standards by routing sediment toward sediment traps consisting of silt fencing and/or straw bales. A monitoring plan will be developed to monitor sedimentation, turbidity and bedload movement and consist of measurements taken prior to, during and following the activity.

14. To control known weed occurrences within the vicinity of the project, weeds will be removed by hand-pulling, or other appropriate means prior to beginning the project. The South Zone Botanist will provide technical assistance regarding species to treat and appropriate means of treatment.

15. Monitoring visits are to be made for two years subsequent to project completion to control new infestations of noxious weeds in the project area. After two years the project proponent and South Zone Botanist should determine if further visits to the project area to control weeds is needed.

16. Noxious Weeds. All off-road (operating off of existing open and maintained roads) equipment and vehicles must be cleaned prior to entering the easement to remove all soil, seeds, vegetation, or other debris that could contain seeds or reproductive portions of plants. Equipment operator may employ whatever cleaning methods are necessary to ensure that off-road equipment is free of the above material prior to entering the easement portion of the access road. The equipment will be inspected prior to off-loading.

Scoping

An interdisciplinary team was formed for this project, with core members including an engineer, a hydrologist and a fisheries biologist. A wildlife biologist, archeologist and botanist also participated and provided project reports. The decision was published in the quarterly schedule of proposed actions for the Gifford Pinchot National Forest *("Pinchot Projects")*. In addition, a scoping letter dated August 14, 2003 was sent to the Mount St. Helens National Volcanic Monument public contact list, including interested individuals, special interest groups, government agencies, and eight tribes. Two responses were received, from the City of White Salmon and Northwest Ecosystem Alliance. There was no opposition to the proposed project.

Summary of Resource Conditions

Botany. The Regional Forester currently lists 51 species of sensitive plants as potentially occurring on the Gifford Pinchot National Forest. At this time there are no federally listed (proposed, endangered, threatened = TES) plant species known to occur on the Forest, however, one federally *threatened* species (*Howellia aquatilis*) is suspected.

Based upon the pre-field analysis sensitive plant species including *Corydalis aquae-gelidae* and *Chrysolepis chrysophylla* have known locations within a few miles from the project area and may have habitat within the project area. However, no individuals of these species were found during field surveys. Based upon the above information, the implementation of the proposed project will have ***no effect*** on TES plant species (Plant, Lichen and Bryophyte Biological Evaluation, November 8, 2003).

Wildife. The proposed activities would have no effect on any Forest Plan Management Indicator Species including spotted owl, pine martin, pileated woodpecker, cavity excavators, wood duck, goldeneye, deer and elk, and mountain goats. The proposed project would not affect habitat for neotropical migratory birds. There would be no effect to these species.

Species listed by the Regional Forester as Sensitive species, including Van Dyke's salamander, Cope's giant salamander and Cascade torrent salamander may be affected by the project. Cascade torrent salamander has been documented in the watershed, along the 42 Road at stream crossings. The project may impact individuals of these species, but would not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species. Mitigation measures that are designed to protect aquatic habitat will minimize potential effects to these species. The proposed activities would improve aquatic habitat and these species in the long-term.

This project ***may affect, is likely to adversely affect (LAA)*** federally Threatened Columbia River steelhead. Mitigation measures listed above are designed to minimize risk to the aquatic environment. Project objectives that include the reduction of sedimentation due to roads, and the restoration of patterns of runoff and stream flow are designed to improve the aquatic environment in the long-term. The project will have immediate and long term benefits to the fish by improving habitat through the crossing and making available additional high quality habitat upstream of the crossing. (Fisheries Biological Assessment for the 42 Road Project, Phase I, July 7, 2003). The project would have ***no effect*** on bull trout or other listed salmon species. The project is outside of bull trout consultation watersheds.

Replacing the 42 Road twin-barrel culverts at MP 21.1 with a bridge or bottomless arch is consistent with the Biological Assessment for USDA Forest Service Fish Passage Restoration Activities Affecting ESA-listed Animal and Plant Species found in eastern Oregon and the whole of Washington (April 24, 2003), and the September 2nd, 2003 biological opinion (Opinion) prepared by the National Marine Fisheries Service (NOAA Fisheries) pursuant to section 7 of the Endangered Species Act (ESA) on the effects of culvert replacement to improve fish passage by the U.S. Forest Service in the State of Washington and in Eastern Oregon (pages 3 -10). In this Opinion, NOAA Fisheries concludes that the proposed action is not likely to jeopardize the continued existence of ESA-listed Lower Columbia River steelhead or adversely modify designated critical habitat. As required by section 7 of the ESA, NOAA Fisheries has included reasonable and prudent measures with non-discretionary terms and conditions that NOAA Fisheries believes are necessary to minimize incidental take associated with this action.

The East Fork Lewis River lies within the Lewis River sub-basin which has been designated as essential fish habitat (EFH) for coho salmon (*O. kisutch*) and chinook salmon (*O. tshawytscha*). Chinook and coho salmon occupy aquatic habitat up to Lucia Falls, approximately 19 miles downstream of the project site. Because EFH is present, this document serves as consultation pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and implementing regulations at 50 CFR Part 600 (pages 45 -47). In this consultation, NOAA Fisheries concludes that the proposed action has the potential to adversely affect designated EFH for Pacific salmon species. NOAA Fisheries has included conservation recommendations to avoid, minimize, or otherwise offset effects to designated EFH produced by this project. Conservation recommendations, terms and conditions from the NOAA Opinion will be applied to the administration of the Twin Barrel Fish Passage Improvement project (pages 33-44). Because of this, and because EFH is located several miles downstream of the project, I have determined there would be no effect to EFH.

Finding of Consistency with the National Forest Management Act

As required by the National Forest Management Act, this decision is consistent with the *Gifford Pinchot National Forest Land and Resource Management Plan* (LRMP, 1990) as amended by the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (1994, amended 2004). This project is located within the Matrix allocation. The Management Area defined by the LRMP is designated as General Forest. This project is located within Riparian Reserves and Matrix allocations and within the East Fork Lewis River Watershed, Tier 1 Key Watershed.

I find that, as mitigated, this action is consistent with standards and guidelines for both Matrix and Riparian Reserve allocations within a Tier 1 Key Watershed. This action is necessary to create conditions that are closer to the desired future condition for this allocation.

Findings Required by Other Laws

As mitigated, this action would improve aquatic habitat. Essential and critical habitat will be protected. I find the action, as mitigated, will be conducted in accordance with the Endangered Species act of 1973 (16 U.S.C. 1536) and the Magnuson-Stevens Fishery Conservation and Management Act (MSA) as amended by the Sustainable Fisheries Act of 1966 (16 U.S.C. 1855).

I find that all applicable state and federal requirements associated with the Clean Water Act (CWA) will be met through planning, application, and monitoring of BMP's in conformance with the CWA and Federal guidance and management direction. Activities will comply with provisions described in the Memorandum of Agreement with the Washington State Department of Ecology (MOA), and the Memorandum of Understanding with the Washington State Department of Fish and Wildlife (MOU). The project will require an individual HPA (WDFW MOU, revised 2003).

I find that this project is consistent with the National Historic Preservation Act. The project area was surveyed and there will be no effect to culturally or historically significant sites. All sites will be protected.

Implementation Date

This project will be implemented immediately.

Administrative Review or Appeal Opportunities

This decision is not subject to administrative appeal.

Contact

For additional information concerning this decision or the Forest Service appeal process, contact Karen Thompson, Monument Watershed Resources Manager (phone: (360) 449-7826, or Cynthia Henchell, South Zone Planning Team Leader (phone: (509) 395-3411 or email: chenchell@fs.fed.us).

Recommended:

/s/ Clifford D. Ligons — December 22, 2004

Clifford D. Ligons, Monument Manager — Date
Mount St. Helens National Volcanic Monument

Approved:

/s/ Claire Lavendel — February 9, 2005

Claire Lavendel, Forest Supervisor — Date
Gifford Pinchot National Forest

ATTACHEMENT A
Internal Scoping – Resource Checklist

SZ Planning Team Leader Cynthia Henchell Date: 14 Dec 04
Reviewed and provided comments to draft via email dated 14 December 2004

NA: ☒ No effect: ☐ Comments/mitigation attached: ☐

Archaeologist: Cheryl Mack (report on file) Date: 7 July 03

NA: ☐ No effect: ☒ Comments/mitigation attached: ☐

Botanist: Andrea Ruchty (report on file) Date: 7 July 03

NA: ☐ No effect: ☒ Comments/mitigation attached: ☐

Engineer: Robin DeJong, Fred Netzel (design on file) Date: _____

NA: ☒ No effect: ☐ Comments/mitigation attached: ☐

Fisheries Biologist: Daryl C. Hodges (BA on file) Date: 7 July 03

NA: ☒ No effect: ☐ Comments/mitigation attached: ☐

Hydrologist: Karen Thompson (report on file/BA) Date: 7 July 03

NA: ☐ No effect: ☒ Comments/mitigation attached: ☐

Recreation Specialist: _____ Date: _____

NA: ☒ No effect: ☐ Comments/mitigation attached: ☐

Soil Scientist: _____ Date: _____

NA: ☒ No effect: ☐ Comments/mitigation attached: ☐

Wildlife Biologist: Mitch Wainwright (BE on file) Date: 7 July 03

NA: ☐ No effect: ☒ Comments/mitigation attached: ☐

Silviculture Specialist: _____ Date: _____

NA: ☒ No effect: ☐ Comments/mitigation attached: ☐