Decision Memo:

Muddy River Roads Project

USDA Forest Service
Gifford Pinchot National Forest
Mount St. Helens National Volcanic Monument
Skamania County, Washington
S. 15 and 23, T. 8N, R. 6E, W.M.

Purpose and Need

This project is located near the confluence of the Muddy River and Coldwater Creek on the Mount St. Helens National Volcanic Monument (to the east of the legislated Monument) within Sections 15 and 23, Township 8 North, Range 6 East, Willamette Meridian (refer to Figure 1).

This project contributes to the long term objective of improving fish habitat in the Muddy River and select tributaries. Culvert Replacement on Forest Road 8322 will provide passage for bull trout into a coldwater stream and access to approximately 1.2 miles of habitat. The objective of the culvert replacement is to 1) eliminate a fish barrier 2) eliminate the impediment of allocthonous material supporting downstream spawning habitat and 3) replace with a bottomless arch culvert or a bridge structure designed with stream simulation so that the structure has proper vertical leap distances, velocities, flow capacity and natural substrate at the 8322 road crossing.

Forest Road 8322700 is contributing significant amounts of sediment to a tributary of the Muddy River. The objective of road decommissioning is to 1) decrease the erosion and sediment delivery from a culvert failure 2) eliminate the risk of sediment delivery from culvert failures of a non-maintained road and thus prevent similar erosion/sediment delivery from 17 other culverts and 3) restore fish passage, natural stream function and riparian re-vegetation in two sections of a tributary system to the Muddy River.

Culvert Replacement

The culvert replacement addresses the fish passage barrier along an unnamed tributary (T2) to the Muddy River. Currently an undersized culvert impedes fish passage due to a 1.7 foot vertical leap distance at the culvert outlet and excessive velocity within the culvert which is narrower than stream's bankfull width. The culvert replacement will reconnect 1.0 mile of primarily rearing habitat above the culvert for historic anadromous fish (steelhead, Chinook, coho), existing resident fish (coastal cutthroat and rainbow trout), and has potential bull trout spawning habitat. A 30 foot high waterfall within a 54% gradient stream section is the upper most limit of available anadromous habitat.

T2 flows into the Muddy River at about river mile 8.5. This section of the Muddy River is Tier 3, R2, within the Upper North Fork Lewis River of the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan.

No natural barriers to fish exist below this tributary crossing, downstream through the Muddy River and Lewis River to Swift Reservoir. Therefore, the barrier removal increases available habitat for reintroduced anadromous fish in 2010, (spring Chinook, coho and winter steelhead) and possibly bull trout.

Available fish habitat within the tributary above and below the culvert barrier consists of pools typical for low gradient streams with long tail-outs. These pools were relatively long pools with good cover and residual depth for fish. Several side channels also offer some rearing habitat. The riparian area adjacent to the stream is predominately red alder with minor conifer component outside the floodplain influence.

The Gifford Pinchot National Forest Roads Analysis recommends this road to remain open to maintain access to a trailhead.

T1 and T2 maintain summer temperatures at 12^{o}C and are connected to the source of cold waters from the flanks of Mt. St. Helens, similar to the headwaters of the mainstem of the Muddy River. The tributaries provide important thermal refuge for fish in the summer when the mainstem warms. Removing the fish barriers would increase fish access to cooler waters in the Muddy River Watershed.

Road Decommissioning

The road decommissioning addresses the problem of ongoing sediment delivery from a culvert failure at milepost 1.9. Similar problems occurred at this site during the1996 floods when the culvert clogged, causing sediment and large wood to deposit above the culvert. Road decommissioning will eliminate existing sediment delivery from the culvert failure to one tributary crossing and reduce the risk of similar sediment delivery of other culvert failures from this non-maintained road.

Currently Forest Road 8322700 is not accessible to motor vehicles beyond the culvert failure. The Gifford Pinchot Roads Analysis recommends this road to be decommissioned due to discontinued access needs. The Gifford Pinchot Maintenance Plan designates this road as a Level II road which results in maintenance only when resource concerns are identified.

In addition to the active sediment delivery and risk of additional sediment delivery from culvert failures, fish passage problem exists at two culverts along Forest Road 8322700. The failed culvert is blocked with substrate resulting in 0.4 miles of inaccessible, intermittent, habitat. Another culvert has a 2 foot outfall jump resulting in a complete fish barrier to 0.1 miles of perennial habitat.

The multiple tributaries crossing this road forms into a single tributary (T1) below the road which runs parallel to the Muddy River within its floodplain for about a mile before joining the Muddy River at river mile 7.5. The tributary flows into the Muddy River R1A reach, a Tier 2 reach within the Upper North Fork Lewis River of the Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan.

Proposed Action

Culvert Replacement

The proposed project includes replacing the undersized culvert along Forest Road 8322 at milepost 4.5 with a bottomless arch culvert or a bridge structure. The structure will be designed to pass all fish during all life stages, year-round. The appropriate size and type of structure will be determined by an interdisciplinary Forest Service Team comprised of a hydrologist, fish biologist and engineer.

An excavator will remove the culvert and road fill from the existing crossing and replaced with the appropriate structure.

Road Decommissioning

The road decommissioning will remove all the culverts along the last 1.8 miles of Forest Road 8322700. At each culvert removal site, a channel will be reconstructed to bankfull width and stream banks contoured to 1.5:1, or to match the natural stream banks slopes. The project file lists the recommended bankfull widths at each crossing and approximates the quantity of road fill that will be removed and place in a stable configuration outside the bankfull area. Water bars will be constructed to break up the surface flow of water flowing directly towards the newly contoured stream banks and on a few limited, high grade road sections.

A temporary road crossing will be constructed at the failed site, in order for an excavator to access the road sections beyond the failed culvert.

The right stream bank at one culvert site is steep due to the natural topography. Excavation for the removal of this culvert will be accomplished primarily from the left stream bank (looking downstream), minimizing the disturbance to the existing, oversteepended right stream bank. The newly created channel will be positioned so it delivers flow away from the base of the oversteepend stream bank.

An excavator will remove the culvert and road fill from the stream crossings and then reconstruct the bankfull width and re-contour the stream banks. The road fill material will be placed on the existing road outside the floodable area.

Decision

I have decided to implement the project as described above. The areas indicated in Figure 1 define the location and extent of the activities covered by this decision. This decision includes the following required design criteria and Best Management Practices, which are described in detail in the project file:

1. Where work necessitates the operation of heavy equipment within the bankfull width of stream crossings, the timing and extent of this work will be conducted to minimize negative impacts to fish. Accumulations of soil or debris will be removed from drive mechanisms and undercarriage of all heavy equipment prior to its working within the bankfull width. Every effort will be made to avoid stream crossing with heavy equipment.
2. Fish bearing stream crossings will be de-watered or isolated from flowing waters prior to removal of the culvert, to prevent generation of excessive sediment and minimize turbidity.
3. A waterbar will be constructed across the road with an outlet onto the forest floor on any upgrade side of the stream crossing to prevent the existing road ditch flow to access the newly established stream banks.
4. Large wood and/or appropriately sized rock, where available on-site, may be placed within the reestablished streambed to mimic the natural streambed characteristics and/or prevent erosion of the new streambed and banks.
5. Erosion control measures will be implemented and at a minimum include a heavy application of mulch immediately after work is completed. Seeding may also occur and may be delayed until September when cooler, moister weather conditions would aid growth following seed germination. Seeding would be accomplished by the end of September.
6. Riparian vegetation such as willow, alder, and cedar trees will be planted at the three crossings where bankfull width is 20 feet or wider to provide shade and future sources of large woody debris. Planting may be delayed until the following spring, to aid survival of the young trees.
7. Save topsoil on site from areas to be disturbed and replace over disturbed soil before replanting.
8. To prevent the introduction of invasive weeds into the project area, all heavy equipment, or other off- road equipment used in the project is to be cleaned to remove soil, seeds, vegetative matter or other debris that could contain seeds. Cleaning should be done before entering national forest lands, and when equipment moves from or between project sites or areas known to be infested into other areas, infested or otherwise. Cleaning of the equipment may include pressure washing. An inspection will be required to ensure that equipment is clean before work can begin.
9. Revegetate disturbed areas with site appropriate, locally collected native seed or native plants; when these are not available, use noninvasive and nonpersistent non-native species. When seed is used it should be either certified noxious weed free or from Forest Service native seed supplies.

10. In coordination with # 9 (above), during road decommissioning, prepare soil for revegetation by following recommendations in the Gifford Pinchot Native Seed Mix Recommendations (refer to project file). Consider planting red alder or other quick growing trees/tall shrubs (vine maple, hazel) in areas from which scotch broom was removed (road bed), or where canopy cover was reduced (culvert replacements) in order to increase shading. Effective revegetation of disturbed areas with desirable species should contain the spread of cat's ear and oxeye daisy, in this generally shady area.
11. Protect soil from compaction by applying bark chips or straw mulch. If straw mulch is incorporated, use certified weed free straw mulch. Mulch species will preferably be from native seed sources or annual rye or cereal grain fields.
12. If gravel or soil is imported from outside of the project area, consult with the Forest Service Botanist to ensure that weeds are not introduced from the supply source.
13. Before the ground disturbing phase of project implementation begins, scotch broom found along Forest Roads 8322 and 8322700 (and the adjacent clearcut) will be hand pulled or stem clipped below ground level, and if reproductive, bagged and disposed of outside of national forest boundaries. In addition, foxglove and bull thistle will be hand pulled – if plants are hand pulled before seed set, plants may be left on site, but if plants are hand pulled after seed set, plants will be bagged and disposed of outside of national forest boundaries.
14. For two field seasons following project completion, the project proponent will arrange for the control of weed re-occurrences as specified above. After two years, a Forest Service Botanist will re-evaluate the weed control needs within the project area and determine whether further treatment is needed.

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", provided there are no extraordinary circumstances that could potentially be significantly impacted by this action (FSH 1909.15, Sec. 30.3 (2)). This category of actions does not normally require documentation in a Decision Memo or maintenance of a project file, however due to the public interest in road activities in this area, I have directed that public scoping be conducted and this decision be documented in a Decision Memo.

No significant issues were identified with this project. Supportive comments were received from one organization as a result of public scoping. There were no significant issues identified for this project, thus no alternative actions were developed. Road decommissioning actions normally require analysis in an environmental assessment (EA), subject to formal comment, and documentation in a decision notice (DN), subject to appeal. This action is essentially road maintenance and correction of drainage problems by removal of culverts and reshaping the streambanks and restoring the channel on a road that is already closed. Correction of these problems perpetuates the closure, as opposed to restoring access.

Decommissioning this road is consistent with recommendations in the 2004 Gifford Pinchot National Forest Roads Analysis and in the Muddy River Watershed Analysis. It is a continuation of road decommissioning previously undertaken along Forest Road 8322700. This road was previously been determined not to be required for access and public scoping did not reveal any public interest in maintaining it for access. Thus I have determined that this action may appropriately be categorically excluded from documentation in an EA or an environmental impact statement. There are no extraordinary circumstances potentially significantly affected by this action. I considered the potential effects to water quality, listed fish and wildlife species, botanical and cultural resources.

Public Involvement

Public comment was solicited for this proposal in a formal scoping letter dated March 2, 2006 and sent to a list of 40 interested public and agency contacts. The proposal was also provided to resource specialists for their review and analysis. Resource specialist comments and recommendations are documented in the project file along with one comment received from external scoping efforts.

Finding of Consistency with National Forest Management Act

The project contributes to the attainment of Late Successional Reserve and Aquatic Conservation Strategy objectives and desired future conditions in the *Gifford Pinchot National Forest Land and Resource Management Plan* (1990), as amended by the *Record of Decision for Management of Habitat for Late Successional and Old Growth Forest Related Species with the Range of the Northern Spotted Owl* [(1994) hereinafter referred to as the "Forest Plan"] and recommendations in the 2nd Iteration Muddy River Watershed Analysis (in progress). This action complies with management objectives and Standards and Guidelines for Late-Successional Reserves and Riparian Reserves from the Forest Plan. The project was designed in conformance with Forest Plan standards and incorporates appropriate Forest Plan guidelines for activities in Riparian Reserves (Amendment 11, pages 2-59 through 2-62). Therefore, I find that this action is consistent with the National Forest Management Act of 1976.

Findings Required by Other Laws

This action is consistent with the Endangered Species Act of 1973. The project may affect, and is likely to adversely affect, Columbia River bull trout (*Salvelinus confluentus*) and may affect designated Essential Fish Habitat for Coho and Chinook Salmon. It is covered under 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, Region 6 USDA Forest Service* (USFS and BLM), April 24, 2003). Biological Opinions received for fish passage actions were: *Endangered Species Act Section 7 Formal Consultation and Magnusun-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for USDA Forest Service Programmatic Culvert Replacement Activities in Washington and Eastern Oregon,* (NOAA Fisheries September 2, 2003) and *USDI Fish and Wildlife Service*

Biological Opinion for USDA Forest Service Fish Passage Restoration Activities in Eastern Oregon and Washington 2004-2008 (March 1, 2004)

The project falls under the category of Road Decommissioning, Obliteration, Stabilization and Inactivation, and is consistent with Project Design Criteria (PDC's) and Terms and Conditions of the Biological Opinion.

There will be no effects to federally listed wildlife species. This project may impact the following Region 6 Regional Forester's Sensitive animal species: Cope's Giant Salamander (*Dicampton copei*) and Cascade Torrent Salamander (*Rhyacotriton cascadae*). The project Wildlife Biologist has determined that the proposed project may impact individual salamanders or habitat, but will not likely contribute to a trend towards federal listing, or cause a loss of viability to the population or species.

The project Wildlife Biologist has determined that this project may impact the following Survey and Manage mollusk species: VanDyke's Salamander (*Plethodon vandyke*i), Burrington's Jumping Slug (*Hemphillia burringtoni*), Warty Jumping Slug (*Hemphillia glandulosa*), and Malone's Jumping Slug (*Hemphillia malonei*). Formal surveys for mollusks were not done for this project. The survey protocol for mollusks states that projects within existing road prisms are exempt from the need to survey. While mollusks may be found along roadsides, habitat adjacent to the work sites would not be affected, and populations in that adjacent habitat are expected to persist. Road decommissioning of the Forest Road 8322700 will help to reconnect habitat above and below the road in the long-term. For these reasons, 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.

The project area was surveyed for listed plant species. A single site for the Region 6 Regional Forester's Sensitive plant species *Pseudocyphellaria rainierensis* was located within the project area. Because the project scope and area is small, there will be very limited impact upon suitable overstory habitat. As a result the project Botanist determined that the project will have no impact to individuals or habitat, but will not likely contribute to a trend towards federal listing, or cause a loss of viability to the population or species.

The Weed Risk Ranking for this project was determined to be high. Project design and mitigation will ensure compliance with the *Record of Decision for the Invasive Plant Environmental Impact Statement* (2005), in particular with standards: 2, 3, 7, and 13.

There are no impacts to resources of cultural or historical significance; therefore this action is consistent with the National Historic Preservation Act.

This action complies with standards of the federal Clean Water Act (1948, amended 1972) and the federal Clean Air Act (1955, amended 1970, 1977, 1990).

This action does not violate other federal, state, or local laws designed for the protection of the environment.

Other Findings

Public health and safety will not be affected by this action.

This action does not affect prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The effects of this action are not highly controversial and do not involve highly uncertain, unique, or unknown risks.

This decision does not establish a precedent for future actions with significant effects, nor does it represent a decision in principle about a future consideration.

This action is not related to any other actions that would have significant cumulative impacts.

Implementation Date

This project will be implemented in the summer of 2007.

Administrative Review or Appeal Opportunities

This decision is not subject to administrative appeal.

Contact Person

For additional information concerning this decision or the Forest Service appeal process, contact Adam Haspiel, Fisheries Biologist, Mount St. Helens National Volcanic Monument: ahaspiel@fs.fed.us or ph: (360) 449-7833.

__/s/ Tom Mulder_____ _9/11/2006_____

for MARGARET DOWD Date
Deputy Monument Manager

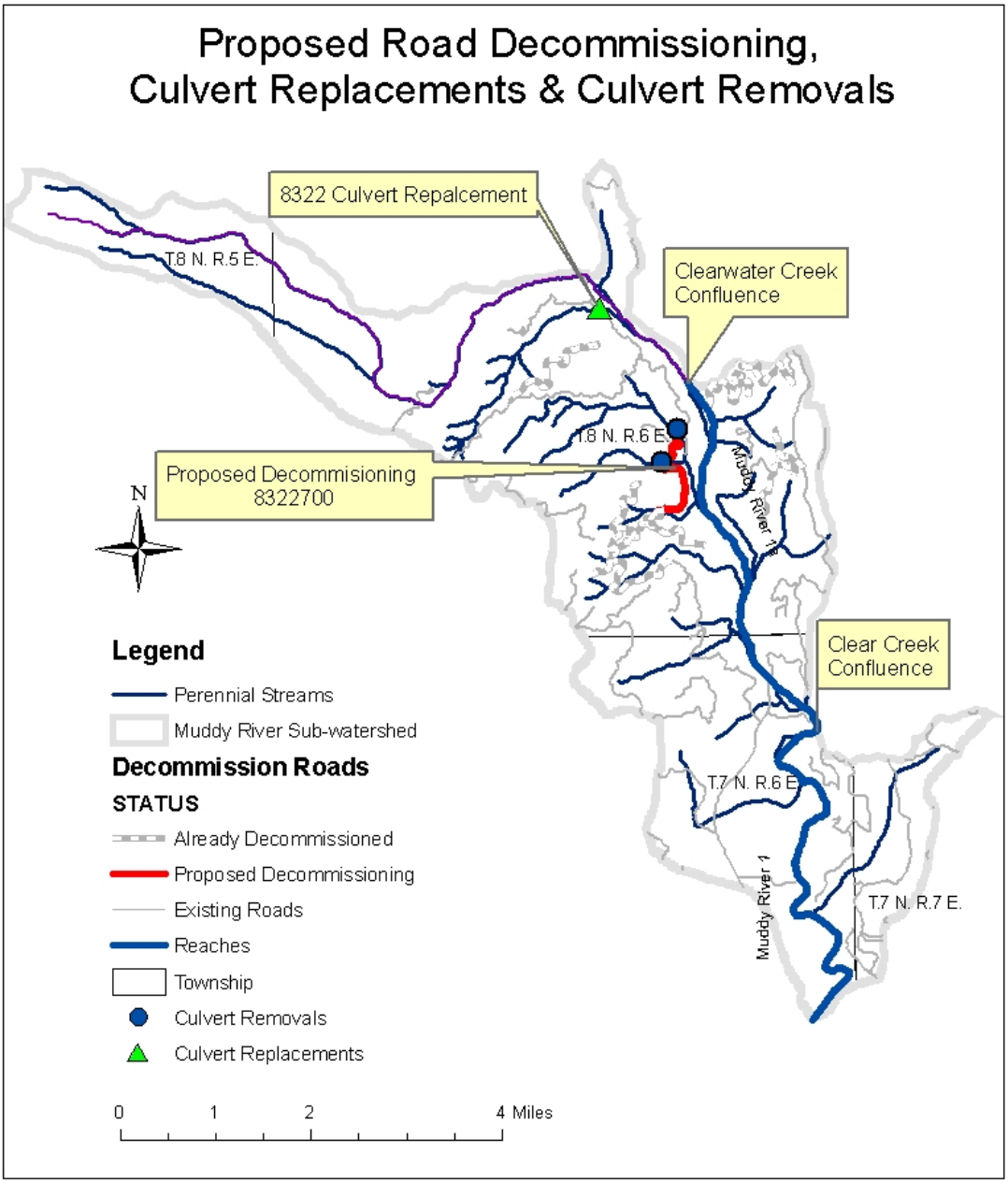

Figure 1. Muddy River Roads project location.