

Biological Evaluation for Slinky

Proposed, Endangered, Threatened, and Sensitive Fish Species

Slinky Timber Sale
Clackamas River Ranger District
Oak Grove and Upper Clackamas River Watersheds

Background

This Biological Evaluation (BE) replaces the original version due to changes in the proposed action, removal of associated projects from the original analysis, and the addition of new alternatives.

Summary of Changes

- The proposed action will include only the regeneration harvest units. Thinning units 36 and 38 have been deleted.
- Alternatives have been adjusted and new ones added.
- The associated projects that had been part of the proposed action (close and obliterate parts of Rd 5730-120 and rehabilitation of the Kink Creek and K2 rock pits) have been separated from this analysis and are not considered connected actions.
- Design criteria and effects discussion related to the eliminated projects have been adjusted accordingly.

Alternative A - No Action

Under the No-action alternative, current management plans would continue to guide management of the project area. No timber harvest or other associated actions would be implemented.

Alternative B - The Proposed Action

The action proposed is to harvest trees from approximately 184 acres using the reserve shelterwood regeneration method. Northwest Forest Plan standards for green tree retention and coarse woody debris in regeneration harvest would be applied. Approximately 10% of the harvest area would be retained in patches. Scattered trees would be retained to meet the green tree retention standard and to achieve silvicultural and wildlife objectives. The scattered leave trees would be retained at the rate of 10 to 12 per acre and would primarily be selected from the largest component of trees present in the unit except where smaller trees are retained for spacing and species diversity. Snags and large logs would also be retained. The harvesting operation would generally remove most of the small trees as well as some of the large trees. Several temporary roads would be constructed to access landings, (approximately 0.4 mile total, of this distance 650 feet would be new construction and 1400 feet would be built on existing skidtrails). These temporary roads would be obliterated and revegetated by the timber sale purchaser after completion of the project. Several miles of road reconstruction along haul roads would also occur including spot rocking and brushing on 5710, addition of aggregate surfacing on 5720190, and deep patch repairs to 5720. Logging methods used would include

ground-based tractor and loader skidding and skyline yarding. Fuels reduction and site preparation would be accomplished through manual and machine piling and burning of logging slash prior to planting.

Alternative C

Alternative C is similar to Alternative B except it would not construct any new temporary roads. Portions of proposed harvest units that are not accessed by existing roads would be harvested by helicopter or (on flatter ground) longer skidding distances would be used to transport logs from the harvest units to log landings on exiting roads. Unit 31 and part of unit 5 would be helicopter logged for a total of 63 acres. Part of Unit 5 would be tractor logged but with long skidding distances.

Alternative D

Alternative D has the same unit boundaries as Alternative B but instead of the 10 -12 leave trees per acre with Alternative B, it would leave approximately 30 of the largest and oldest trees per acre. Stands harvested using this alternative would retain more of the older forest stand components needed for certain animal and plant species. As in Alternative B, leave trees would primarily be selected from the largest component of trees present in the unit except where smaller trees are retained for spacing and species diversity. The units would still be considered regeneration harvests and would include site preparation and planting. As with alternative C, portions of proposed harvest units that are not accessed by existing roads would be harvested by helicopter or (on flatter ground) longer skidding distances would be used to transport logs from the harvest units to log landings on exiting roads.

Effects of Project Implementation

The effects of the implementation of the Slinky Project on any threatened, proposed, candidate, or sensitive fish stock will be based on local populations of resident cutthroat trout and populations of listed fish species downstream of the project area in the Oak Grove Fork and Clackamas River. No listed fish species occur in any of the streams within the project area. The migration of listed fish species in the Oak Grove Fork is blocked by Lake Harriet Dam located approximately two miles downstream from the closest proposed unit. The nearest proposed unit to listed fish species or habitat in the Upper Clackamas River is 1.7 miles. The presence of Lake Harriet dam will negate impacts from any sediment that may be produced by project implementation on any fish species that occur below the project area in the Oak Grove Fork. At Harriet Dam, the entire flow of the river is diverted through a pipeline to the Oak Grove Powerhouse. The dam acts as a sediment barrier, to the lower Oak Grove Fork below the dam.

The no-action alternative would have ratings of “No Effect” for all of the fish stocks of concern. The following effects determinations apply to the action alternatives, all of the action alternatives will have the same effects to fishery resources.

Summary of Effects to listed, proposed, candidate, and sensitive species occurring within the Clackamas River Basin.

ESU Species/Status	Habitat Present	Species Present	Effects of Action By Alternative			
			A	B	C	D
<u>Threatened</u>						
**Lower Columbia River steelhead <i>(Oncorhynchus mykiss)</i>	Yes	Yes	NE	NE	NE	NE
Columbia River Bull trout <i>(Salvelinus confluentus)</i>	Yes	No	NE	NE	NE	NE
**Upper Willamette River chinook <i>(Oncorhynchus tshawytscha)</i>	Yes	Yes	NE	NE	NE	NE
Lower Columbia River chinook <i>(Oncorhynchus tshawytscha)</i>	Yes	No	NE	NE	NE	NE
Lower Columbia River chum <i>(Oncorhynchus keta)</i>	Yes	No	NE	NE	NE	NE
<u>Candidate</u>						
**Lower Columbia River/Southwest WA coho <i>(Oncorhynchus kisutch)</i>	Yes	Yes	NE	NE	NE	NE
<u>Sensitive</u>						
**Southwestern WA/Columbia River coastal cutthroat trout <i>(Oncorhynchus clarki clarki)</i>	Yes	Yes	NI	MII-NLFL	MII-NLFL	MII-NLFL

NE – No Effect

NLAA – May affect not likely to adversely affect

LAA – May affect likely to adversely affect

NI - No Impact

MII-NLFL - May Impact Individuals but not likely to cause a trend to federal listing or loss of viability

** Species known to occur on Clackamas River Ranger District

Columbia River Bull Trout (*Salvelinus confluentus*) - (Threatened) Bull trout were once prolific in the Clackamas River system. At present, they are believed to be extinct. Adult bull trout that occurred in the Clackamas River exhibited a fluvial life history character, maintaining residence in the main river and larger tributaries. It is quite likely that adult bull trout in the Clackamas River migrated to the Willamette and Columbia rivers prior to construction of River Mill Dam. Adult bull trout would reside in the mainstem and larger tributaries until their spawning period during mid-August through September, at which time they would migrate upstream to smaller tributaries to spawn.

U.S. Forest Service fisheries biologists conduct fisheries sampling on an annual basis on many streams throughout the Clackamas River watershed upstream of North Fork Reservoir. To date, these sampling efforts have never yielded capture of bull trout. After several years of intensive sampling, U.S. Forest Service fisheries biologists believe that bull trout in the Clackamas River are considered to be "functionally extinct." Since bull

trout are not present in the Clackamas River system the effects determination for this species is "No Effect" for this project.

Lower Columbia River Steelhead (*Oncorhynchus mykiss*) - (Threatened) Adult steelhead migrate into the waters of the Clackamas River drainage above North Fork Dam primarily during April through June with peak migration occurring in May. Spawning occurs during the months of April thru June in the Upper Clackamas River and during the months of March thru June in the Oak Grove Fork. Steelhead use the majority of the mainstem Clackamas and the lower 3.7 miles of the Oak Grove Fork as spawning and rearing habitat. Winter steelhead fry emerge between late June and late July and rear in freshwater habitat for one to three years. Smolt emigration takes place March thru June during spring freshets. Steelhead occur more than two miles downstream from any proposed unit within the Oak Grove Fork watershed and approximately 1.7 miles downstream from any unit within the Upper Clackamas River. Because of the distance of the project area to any presence of Lower Columbia River steelhead or its habitat the effects determination for this species for the Slinky Project is "No Effect".

Upper Willamette River Spring Chinook (*Oncorhynchus tshawytscha*) - (Threatened) - Upper Willamette River spring chinook salmon occur in the Clackamas River. The ESU consists of both naturally spawning and hatchery produced fish. These spring chinook enter the Clackamas basin from April through August and spawn from September through early October with peak spawning occurring the 3rd week in September. These fish primarily spawn and rear in the mainstem Clackamas River and larger tributaries.

Adults in the Lower Clackamas drainage spawn in Eagle Creek, below River Mill Dam and between River Mill and Faraday diversion dams. Spawning in the upper Clackamas drainage has been observed in the mainstem Clackamas from the head of North Fork Reservoir upstream to Big Bottom, the Collawash River, Hot Springs Fork of the Collawash River, lower Fish Creek, South Fork Clackamas River and Roaring River. Spring chinook occur in the lower Oak Grove Fork more than two miles downstream from any proposed unit and approximately 1.7 miles downstream from any unit within the Upper Clackamas River. Because of the distance of the project area to any presence of Upper Willamette River chinook or its habitat, the effects determination for this species for the Slinky Project is "No Effect".

Lower Columbia River Fall Chinook (*Oncorhynchus tshawytscha*) (Threatened)
The fall chinook within the Clackamas Subbasin are thought to originate from "tule" stock which was first released into the subbasin in 1952 and continued until 1981. Since 1981 no fall chinook have been released into the Clackamas River. However some adult fall chinook released as juveniles above Willamette Falls may have strayed into the Clackamas River.

Historically fall chinook spawned in the mainstem Clackamas River above the present site of the North Fork Dam before its construction. Currently the "tule" stock of fall chinook spawn below River Mill Dam and in the lower reaches of Clear Creek. Fall Chinook spawn late August through September. These fish primarily spawn and rear in

the mainstem Clackamas River and larger tributaries and are not found on the Clackamas River Ranger District. Because of the distance of the occurrence of fall chinook from the project area (greater than 20 miles) the effects determination for this species is “No Effect”.

Lower Columbia River Fall Chum (*Oncorhynchus keta*) (Threatened)

Fall chum historically have inhabited the lower portion of the Clackamas River but no current records are available to confirm any chum presence within the Clackamas River. The effects determination for this species is “No Effect”.

Lower Columbia River/Southwest Washington Coho Salmon (*Oncorhynchus kisutch*)

(Candidate for listing) The Clackamas River contains the last important run of wild late-run winter coho in the Columbia Basin. Coho salmon occupy the Clackamas River and the lower reaches of streams in the Upper Clackamas watershed including the lower two miles of the Oak Grove Fork. Adult late-run winter coho enter the Clackamas River from November through February. Spawning occurs mid-January to the end of April with the peak in mid-February. Peak smolt migration takes place in April and May. Coho occur more than two miles downstream from any proposed unit within the Oak Grove Fork watershed and approximately 1.7 miles downstream from any unit within the Upper Clackamas River. Because of the distance of the project area to any presence of Lower Columbia River/Southwest Washington coho salmon or its habitat, the effects determination for this species for the Slinky Project is "No Effect".

Southwestern Washington/Columbia River Cutthroat Trout (*Oncorhynchus clarki clarki*) - (Sensitive). Searun cutthroat have historically existed in the Clackamas River below River Mill Dam. Cutthroat have been observed going downstream over the dam complex by PGE biologists, but never observed migrating upstream. It is not known whether the Clackamas River above the hydro-complex was part of their historic range.

Coastal cutthroat trout exhibit diverse patterns in life history and migration behaviors. Populations of coastal cutthroat trout show marked differences in their preferred rearing environments (river, lake, estuary, or ocean); size and age at migration; timing of migrations; age at maturity; and frequency of repeat spawning. Resident coastal cutthroat trout inhabit the upper Clackamas River and its tributaries including the Oak Grove Fork. Because of the presence of resident coastal cutthroat trout in the streams within and downstream of the project area the effects determination for Southwestern Washington/Columbia River cutthroat trout is “May impact individuals but is not likely to cause a trend to federal listing or loss of viability.”

Essential Fish Habitat

Essential Fish Habitat (EFH) established under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) includes those waters and substrate necessary to ensure the production needed to support a long-term sustainable fishery (i.e., properly functioning habitat conditions necessary for the long-term survival of the species through the full range of environmental variation). EFH includes all streams, lakes, ponds, wetlands, and other water bodies currently, or historically, accessible to salmon in

Washington, Oregon, Idaho, and California. Three salmonid species are identified under the MSA, chinook salmon, coho salmon and Puget Sound pink salmon. Chinook and coho salmon occur on the Mt. Hood National Forest in the Clackamas River, Hood River, and Sandy River basins. Implementation of the projects covered in this BE will not adversely effect essential fish habitat. These projects will not have any negative long-term effect on water or substrate essential to the life history of coho, chinook, or chum salmon that occur within the watersheds where projects will take place.

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