DECISION RECORD

EA LOG No. OR-010-2004-04

Project Name: Silver Creek Large Wood Enhancement

Applicant: Lakeview BLM

Address: 1301 South G St
Lakeview, OR 97630

County: Lake

BLM Office: Lakeview District

Phone: 541/947-2177

Decision Record

Decision: The following is the decision of the Bureau:

To achieve stream habitat objectives, approximately 120 dead trees would be directionally felled into the stream to form accumulations and jams of up to five pieces together or as single pieces. Some trees may be cabled to prevent movement. All access will be by foot or ATV off existing roads and trails.

Rationale:

The BLM reach of Silver Creek runs from the Fremont National Forest boundary down stream to the upper end of the ZX Detention Reservoir. By eliminating channel forming flood events, upstream flow control from Thompson Reservoir has resulted in poor fish habitat conditions, as indicated by a lack of pool habitat and complex channel characteristics. Additionally, on the BLM's reach of the creek within the canyon, the Tool Box Fire Complex burned most of the vegetation in 2002, killing nearly all the Ponderosa pine and leaving many standing snags. A stream survey completed in 2003 showed that rffles and glides accounted for 1.4 miles, or 88 percent, of the stream reach. Riffle/glide habitats extended continuously up to 3,120 feet with no interruption. There were six pool habitats formed by lateral scour and only one pool was formed by a dam. There were 33 pieces of large wood in the stream, with 10, or 6.5 pieces per mile, meeting criteria for size. Incorporation of large woody debris in the form of logs fallen into the active channel and floodplain of Silver Creek will improve fish habitat diversity thru more stream channel complexity and pool formation. To optimize stream habitat over what could occur naturally by relying on wind fall of the trees, directional falling is needed.

Thomas E. Rasmussen, Field Manager
Lakeview Field Office

4/26/04
Date

FINDING OF NO SIGNIFICANT IMPACT

Silver Creek Large Wood Enhancement

EA# OR-010-2004-04

The Bureau of Land Management, Lakeview District, Lakeview Resource Area, has analyzed a proposal and two alternatives to improve channel condition on Silver Creek. The objectives of the proposal are to improve stream channel stability and structure and fish habitat. The BLM reach of Silver Creek runs from the Fremont National Forest boundary down stream to the upper end of the ZX Detention Reservoir. By eliminating channel forming flood events, upstream flow control from Thompson Reservoir has resulted in poor fish habitat conditions indicated by lack of pool habitat and complex channel characteristics. Additionally, on the BLM Silver Creek reach in the canyon, the Tool Box Fire Complex burned most of the vegetation killing nearly all the pine, leaving many standing snags. To optimize stream habitat over what could occur with relying on wind fall alone, directional falling of approximately 200 dead trees into the active channel and flood plain of Silver Creek is proposed.

This project is in conformance with the Lakeview Resource Management Plan/Record of Decision (2003) and Integrated Noxious Weed Control Program EA. There are no, wilderness, wild and scenic rivers, known hazardous waste areas, areas of religious concern, or prime or unique farmlands in the immediate project areas. No significant or disproportionate impacts would occur to low income or minority populations. The risk of noxious weed infestation would be low. There are water, fisheries, wetlands and floodplain resources in the project area that will be beneficially affected by the project, but not on a regionally significant scale. Neither adverse nor beneficial impact is anticipated to air quality, lands, minerals and energy resources. Surveys found no threatened or endangered plants or animals and lack of ground disturbance will cause no impact to potential cultural or paleontological resources in the proposed project area.

On the basis of the analysis contained in the attached EA and all other available information, my determination is that none of the alternatives analyzed would constitute a major federal action which would adversely impact the quality of the human environment. Therefore, an Environmental Impact Statement (EIS) is unnecessary and will not be prepared.

Thomas E. Rasmussen, Manager
Lakeview Resource Area

3/17/04
Date

PROJECT TITLE/TYPE:
Silver Creek Large Wood enhancement

PROJECT LOCATION: (see attached map).
Silver Creek, 4.5 miles SSW of the town of Silver Lake, Lake County, Oregon.

BLM OFFICE: Lakeview Resource Area, Lakeview District

LEASE/SERIAL/CASE FILE #: N/A

APPLICANT (if any): N/A

PURPOSE and NEED FOR ACTION:
The BLM reach of Silver Creek runs from the Fremont National Forest boundary down stream to the upper end of the ZX Detention Reservoir. By eliminating channel forming flood events, upstream flow control from Thompson Reservoir has resulted in poor fish habitat conditions indicated by lack of pool habitat and complex channel characteristics. Additionally, on BLM's Silver Creek reach in the canyon, the Tool Box Fire Complex burned most of the vegetation killing nearly all the pine, leaving many standing snags. Incorporation of large woody debris in the form of logs fallen into the active channel and floodplain of Silver Creek will increase fish habitat thru more stream channel complexity and pool formation. To optimize stream habitat over what could occur with relying on wind fall of the trees, directional falling is proposed.

Silver Creek showing the fire killed snags. Note the tree on the right middle of the photo has fallen, but away from the stream.

DESCRIPTION OF PROPOSED ACTION:
To improve fish habitat and channel conditions on the BLM's reach of Silver Creek

ALTERNATIVES:

#1) NO ACTION –
No directional falling of snags would occur. Large wood incorporation into Silver Creek would

only occur as the dead trees fell into the stream by chance.

#2) ATERNATIVE 1 –
Some lower percentage of trees would be dropped into the stream.

#3 PROPOSED ACTION –
In coordination with ODFW and BLM state office specialists, we determined that optimum wood in this stream would be about 80 pieces per mile. To achieve stream habitat objectives, 120 trees could be directionally felled into the stream to form accumulations and jams of up to five pieces together or as single pieces. Target tree size to use in this project would be a minimum of 12 inches in diameter and at least 35 feet long. However, if a smaller tree could be added as part of a jam or accumulation it could be considered. Where the floodplain is so wide that trees placed for instream structure have no floodplain influence, additional trees may be dropped to improve floodplain function.

To help prevent trees from entering the ZX diversion pool and so interfering with the release of irrigation water, the individual pieces of wood in the lower two accumulations will be cabled together and to either stream bank stumps or to the stream bed if sufficient rock is available. No live trees would be cut.

Some of the trees killed by the Toolbox fire would enter the stream naturally over time. However, if positioned by directional falling, the trees could be placed to optimize fish habitat and bank protection. The proposal is to fall the trees this spring. No heavy equipment would be used to accomplish this project, only chain saws to fall the trees and ATVs to access the project site.

AFFECTED ENVIRONMENT:
The water right to store 19,000 acre feet of water in Thompson Reservoir was established in 1915, with an additional 2,040 acre feet added in 1964. Normal high flow irrigation release is 40 cubic feet per second (CFS) and in years when water flows over Thompson dam the release could spike to 120cfs for short periods (Tom O'Leery, personal communication). The project area watershed should produce a two year, normal channel forming event, of 230 CFS and a 50 year flood event of about 1,172 CFS (USGS 1983).

A stream survey completed in 2003 showed that the BLM Silver Creek reach of stream was 1.54 miles long. Riffles and glides accounted for 1.4 miles, or 88 percent, of the stream reach. Riffle/glide habitats extended continuously up to 3,120 feet with no interruption. There were six pool habitats formed by lateral scour and only one pool was formed by a dam. There were 33 pieces of large wood in the stream, with 10, or 6.5 pieces per mile, meeting INFISH (USFS 1995) criteria for size. INFISH criteria for large wood in eastern Oregon calls for a minimum of 20 pieces per mile that are more than 12 inches in diameter and greater than 35 feet long. While the BLM Lakeview Resource Area is not legally bound by INFISH, it does serve as a guide for fish habitat conditions.

Vegetation in the canyon of the BLM reach of Silver Creek was nearly all consumed in the Toolbox fire in July of 2002. By the end of September some of the riparian shrubs, especially spiria and alder had started to resprout. As a part of the fire rehab plan (BLM 2002) the uplands in the canyon were seeded with a mix of grasses and sagebrush and pine seedlings will be

planted. The plan also proposed planting pine in the canyon to replace the trees killed in the fire. The pine planting should be completed in 2005 when the seedlings become available.

ENVIRONMENTAL IMPACTS:
PROPOSED ACTION:
Impacts from the proposed action would depend on the method used to achieve habitat improvement.

The potential environmental effects resulting from the alternatives relative to the following critical resource values were evaluated. The following is a summary of the results:

Critical Element/ Resource Value	**Affected** Yes	No	**Critical Element/ Resource Value**	**Affected** Yes	No
Air Quality		X	T & E Species		X
ACEC/RNAs		X	Wilderness		X
Cultural Resources		X	Wild & Scenic Rivers		X
Farmlands, Prime/Unique		X	Hazardous Wastes		X
Floodplains	X		Water Quality		X
Native American Cultural/ Religious Concerns		X	Wetlands/Riparian Zones	X	
Low Income/ Minority Populations		X	Noxious Weeds		X

NO ACTION:
Impacts from no action would be similar to the proposed action but benefits to habitat would be reduced relative to the amount of large wood that entered the stream. Some natural large wood incorporation would occur but to a greatly reduced degree and with unpredictable placement pool formation would not be optimized.

ALTERNATIVE 1:
Effects would depend on the portion and extent of the action implemented. These effects could be interpreted from the discussion for the preferred and no action alternatives.

PREFERRED ALTERNATIVE:
Incorporation of large wood into the stream will form pool habitats capable of supporting larger fish and numbers of fish. The wood will further stabilize stream banks and should result in a narrower, but deeper channel.

There is a slight risk that some of the placed trees could move downstream and interfere with operation of the ZX detention reservoir. By directional falling and creating jams and accumulations the risk would be minimized. Should a problem occur, the BLM would remove

the offending wood.

DESCRIPTION of OTHER IMPACTS:
Cumulative effects:
This project should have no long term negative effects. The Silver Lake Watershed Council has implemented watershed improvement projects in the surrounding area. No similar instream projects are anticipated in the near future in the watershed. Other project occurring or planned in the general area include: wildfire rehabilitation (BLM 2000) and timber salvage sales (BLM 1003a, Forest Service 2003). The cumulative negative effects of the proposed project would be minimal in comparison to the effect of these other projects.

DESCRIPTION of MITIGATION MEASURES and RESIDUAL IMPACTS:
Gas and oil for saws would be stored and saws will be refueled a minimum of 100 feet from the stream. As described in the proposed action, the lower two accumulations will be cabled into place to help prevent wood movement into the ZX detention pool. If a cut tree enters the ZX detention reservoir and causes interference with water diversion, the tree would be removed to a location that would prevent interference.

No live trees would be cut.

NOXIOUS WEED CONSIDERATIONS:
Equipment would be cleaned before and after entry to sites. The project area would be monitored and treated for weed invasion for three years after work is completed. Prior to work, known weed sites would be treated to minimize spread potential. All weed control work would be conducted in accordance with the current programmatic weed plans (BLM 1994, 2003b)

PERSONS/AGENCIES CONSULTED:

Curtis Edwards	Fisheries Biologist	ODFW
Craig Foster	Wildlife Biologist	ODFW
Dick Mecham	Ranch Manager	ZX Ranch
Tom O'Leary	Irrigation Manager	Silver Lake Irrigation District
Al Doelker	OSO Fisheries Biologist	BLM

PREPARER(S):

Alan Munhall	Fish Biologist, Team Lead
Elizabeth Berger	Hydrologist

REFERENCES:
BLM. 1994. Integrated Noxious Weed Control Program. Environmental Assessment EA# OR-013-03-01

BLM. 2002. Toolbox Complex Fire (M262) Burned Area Emergency Stabilization and Rehabilitation (ESR) Plan. Environmental Assessment (Toolbox, Silver and Winter Fires) EA# OR-0140-2002-28.

BLM. 2003a. Toolbox Fire Salvage CX# OR-010-2003-07

BLM. 2003b. Lakeview Resource Management Plan and Record of Decision.

USDA Forest Service. 1995. Inland Native Fish Strategy Environmental Assessment, Decision

Notice and Finding of No Significant Impact.

USDA, Forest Service. 2003. Tool box Fire Recovery Project. Draft Environmental Iimpact Statement. 2 Vol.

USGS. 1983. Magnitude and Frequency of Floods in Eastern Oregon, USGS Water Resources Investigations Report 82-4078