



United States Department of Agriculture

Shelikof Creek Restoration Project

Environmental Assessment

August 2015



SHELIKOF CREEK NEAR SITKA, ALASKA



Forest Service
Alaska Region

Tongass National Forest
Sitka Ranger District

R10-MB-798

August 2015

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Location

The Shelikof Creek Restoration Project area is located in the central portion of Kruzof Island and is located approximately 20 miles northwest of Sitka, Alaska (Figure 1). Restoration work will be implemented on the lower 2.5 miles of Shelikof Creek and are generally located in Township 54 South, Range 61 East, Sections 21-23, of the Copper River Meridian. Shelikof Creek flows westward across the island and drains into Shelikof Bay and the Pacific Ocean. The entire project area is administered by the Tongass National Forest and fall within the Modified Landscape and Semi-Remote Recreation Land Use Designations (LUDs)

FIGURE 1. VICINITY MAP



Need for the Proposal

There is a need to improve stream habitat conditions for anadromous salmon and trout in Shelikof Creek. Shelikof Creek is currently degraded because of past land management activities which include previous timber harvest without stream buffers and stream cleaning (removal of Large Wood from the stream channel); this has reduced the quality and quantity of spawning and rearing habitat for anadromous salmon and trout. Specifically, there is a lack of pool habitat, a lack of stream habitat complexity and a lack of high and low water refugia (resting areas for fish).

This project is a key component of the Iris-Shelikof Watershed Action Plan. This project, in combination with other restoration activities included in the 2014 Kruzof Island Restoration Project Environmental Assessment will provide for a holistic watershed restoration effort within the watershed to provide new habitat as well as enhancement of existing habitat for aquatic and riparian wildlife species.

Description of Alternatives

Two alternatives were considered for this analysis, No Action and the Proposed Action.

No Action

The No Action alternative would not result in any modification of existing condition in Shelikof Creek. Shelikof Creek would remain devoid of stable large wood and pool habitat for decades until such time as natural recruitment occurs. No ground disturbing activities or vegetation alteration would occur. No compensatory benefits of effects to wildlife species would occur.

Proposed Action:

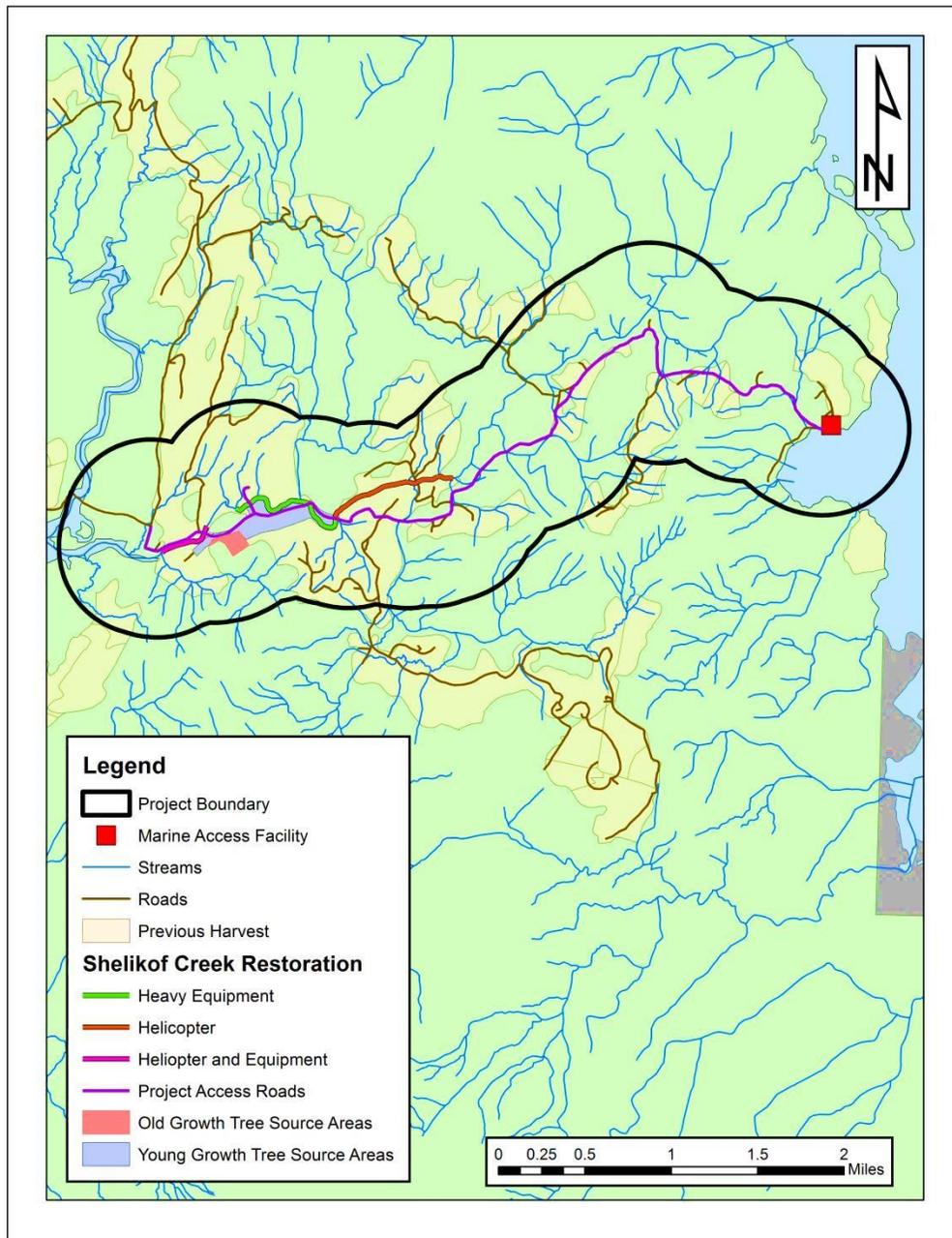
The Proposed Action is to:

- Use of the Mud Bay Marine Access Facility (MAF) and Forest Road 7590 to facilitate equipment access to Kruzof Island and the Project Area.
- Clearing of trees along the margin of the Mud Bay MAF to provide room for equipment storage, contractor camp and possible helicopter landing.
- Young Growth Trees: Mechanically harvest approximately 150 trees with rootwads attached and another 50 trees from roadside stands for mechanical construction of approximately 15 large wood (LW) structures.
- Old Growth Trees: Hand harvest approximately 75 live and windblown trees for placement by helicopter to construct approximately 25 single and multiple tree LW structures.
- Used Bridge Stringer Logs: Mechanically place 16 stockpiled logs from a replaced bridge to create LW structures.
- Reopen up to 1000 feet of decommissioned road to access the stream channel to facilitate restoration activities. Reopened roads would be decommissioned upon completion of project;
- Replace two existing culverts that are currently blocking fish passage. Culverts are located at Milepost 2.936 and 3.316 of Forest Road 7590.

Heavy equipment such as helicopters, excavators and dump trucks would be utilized in addition to hand labor to implement the proposed actions. Heavy equipment would be procured through contracting. The amount and extent of implementation would be dependent on budget allocated to this project.

Time and Duration of Activity—the work is anticipated to occur over a two year period, mainly during summer months, beginning as early as 2016.

FIGURE 2. SHELIKOF CREEK RESTORATION PROJECT – RESTORATION FEATURE LOCATIONS.



Design Criteria

Design criteria have been specifically developed for this project to reduce the amount of impact this project will have on the environment. Additionally, National and Forest level Best Management Practices (BMPs) will be implemented to ensure the least amount of impact occurs. BMPs are a set of standardized measures or practices that describe the least impactful methods or operating procedures to ensure environmental compliance.

1. An erosion/sediment control plan would be created prior to project construction.(BMP 14.5).

2. Contractor should coordinate with District Special Uses Permit Administrator concerning the timing of on-the-ground activities, as well as, permitted outfitter and guides in the area on work schedule for possible delays to minimize impacts to their operations (preferably the winter before).
3. Contractor will notify public of project timing to reduce interruptions in use in this popular recreation area.
4. Limit clearing along road that will create openings that would allow/entice off-road motorized use or open views to unnatural features (e.g. rock pits).
5. Align access roads to minimize their presence.
6. Contractor(s) shall not use the Mud Bay Shelter or Mud Bay Mooring Buoy.
7. In-channel construction activities are subject to timing windows and would be determined per the Title 16 Memorandum of Understanding with the Alaska Department of Fish and Game—Habitat Division. (BMPs 14.6, 18.3)
8. The culvert construction sites should be isolated, and fish must be removed. Sites should be partially dewatered to aid removal effort. Fish must be handled in accordance with the Fish Resource Permit guidelines and returned to the stream downstream of the work area unless otherwise specified in the permit. (BMPs 14.15, 18.3)
9. All access route punchcons shall be fluffed to reduce soil compaction and aid in revegetation.
10. Areas disturbed by mechanical means will be seeded and fertilized using the Tongass National Forest approved seed mixture. (BMP 12.17)
11. If activities are interrupted by seasonal or extended shutdowns (greater than 1 month) erosion control measures should be completed prior to suspension or shutdown. (BMP 14.11)
12. A Forest Service fisheries biologist, fisheries technician or hydrologist should be on-site during construction activities to monitor the project.
13. Vegetable-based hydraulic oils will be used in equipment operating in or near water.
14. Fueling of equipment shall be a minimum of 100 feet from stream channel.
15. All equipment and materials must be cleaned prior to arrival on Kruzof Island to reduce the potential for invasive plants.
16. Areas suitable for staging construction materials and equipment will be identified on-site.
17. If any heritage resources are discovered during construction, all construction must cease and Forest Service archeologist must be notified.

Environmental Impacts of the No Action and Proposed Action Alternative

The environmental impacts of the No Action and Proposed Action are described below. The discussion focuses on resources most likely to be affected by the alternatives.

Botany

No Action – The No Action Alternative would not affect botanical resources. No ground disturbance would occur and there would be no risk of introducing invasive species, or disturbing rare or sensitive species. The invasive species presently established would remain.

Proposed Action – The proposed activities have the potential to affect botanical resources. No rare or sensitive species were found in past surveys. Should a rare or sensitive species be found, mitigation measures would be developed to reduce or minimize impacts to that species. Design criteria should reduce, but not fully eliminate the potential for introduction and spread of invasive species to places they currently are not located. The invasive species presently established would remain.

Fisheries

No Action – The No Action Alternative would not affect the current condition of fisheries resources. Shallow, cold water with instances of freezing in winter, lack of complex instream habitat, poor quality riparian vegetation and undesirable levels of fine sediments entering the stream would continue to contribute to low utilization and therefore, decreased levels of spawning and rearing success.

Proposed Action – The Proposed Action may result in some short-term (during actual construction) adverse effects to Essential Fish Habitat, anadromous and resident fish through sedimentation and disturbance. These effects are minimized through the implementation of design criteria such as erosion control plans. The effects are not expected to result in long-term degradation of water quality, alter water quantity, nor affect any beneficial use of the water. However, a long-term beneficial effect (occurring after 1 to 3 years and lasting greater than 5 years) is expected for the following reasons:

1. Increased water depth in existing pools along with creation of new pools should increase rearing success for Coho salmon and steelhead trout during low flow periods;
2. Increased habitat complexity offering different habitats for different species and life stages should increase rearing and survival of fish;
3. Decreased fine sediments from bank erosion should result in increased spawning and rearing success;
4. Establishment large wood structures should provide some overhead cover for fish and may contribute to an increase in utilization and survival;
5. Stabilization of habitat features (pools, riffles, gravel bars), as will flows will aid in overwintering survival of eggs from all species of anadromous fish (pinks, chums and Coho)

A General Concurrence with National Marine Fisheries Service covers the proposed activities affecting Essential Fish Habitat.

The following ranks the proposed activities in order beneficial effects to fisheries:

1. Increased habitat complexity through addition of large wood structures
2. Create deep water habitat;
3. Reduction of fine sediment in spawning gravels;

Hydrology

No Action – The No Action Alternative would not affect hydrological resources. Existing conditions would remain. Stream would remain degraded from past management activities. Lack of large wood within the system would continue to allow higher stream velocity during high flow events leading to continued stream bank erosion and channel widening. During low water periods, channel drying and/or freezing could lead to aquatic species stress or decrease survival.

Proposed Action – The Proposed Action would result in short-term (during actual construction) adverse effects to water resources in the form of sedimentation and substrate disturbance. These effects are minimized through the implementation of design criteria such as erosion control plans. The effects are not expected to result in long-term degradation of water quality, alter water quantity, nor affect any beneficial use of the water. From past experiences with similar restoration projects, this reduction in water quality will be limited to within a couple hundred feet downstream of work area and last only within the timeframe of active work.

Lands, Special Use

No Action – No work to improve instream habitat and riparian function is proposed under Alternative 1; therefore, this Alternative would have no direct or indirect effects on lands or minerals.

Proposed Action – The Action Alternative does not propose to acquire or dispose of any property or terminate any special use authorizations. The proposed Shelikof Creek stream restoration project would not interfere with the issuance of any easement or any State issued permits and would have no direct or indirect effects under the action alternative. There are no current mineral operations.

The reasons noted above demonstrate there are no direct or indirect effects to lands/minerals from either alternative. Use of the Mud Bay MAF to access the project area, stage equipment and supplies, and possibly house contractors the contractor will require a Alaska DNR land use permit from the Division of Minerals, Land and Water since the Forest Service does not have a current easement for the Mud Bay MAF.

Recreation

No Action – No work to improve instream habitat and riparian function is proposed under this action; therefore, this Alternative would have no direct or indirect effects on the existing recreation resource.

Proposed Action – During project implementation, expect the activities to detract from the recreation experience for both the guided and unguided user during construction (approximately 3-4 weeks). Helicopter operations and equipment mobilization/demobilization would result in temporary closures of both the Mud Bay MAF and FDR 7590. Trail access and current private OHV parking would be affected. These impacts would be short term in duration. Visual impacts at the Mud Bay MAF and along FDR 7590 would be fairly short term in nature as Red Alder would quickly reestablish at the sites.

A contractor camp and possible helicopter landing area located at the Mud Bay trailhead would affect Greenling Enterprises permitted operation. Greenling Enterprises has an assigned site at the trailhead where they stage their OHVs and associated parts/equipment and it is where they start and conclude their OHV tours. Other outfitter/guides and the non-guided public may be impacted to a lesser extent by the presence of a temporary camp or landing zone. The contractor camp will only be setup during actual construction (approximately 3-4 weeks) and will be located apart from Greenling assigned site and should only impact them in a visual sense. The helicopter landing area, if used, will encompass a large portion of the Mud Bay MAF, due to safety considerations. If needed, this use will be of a short duration (2-3 days) and will require temporary closure (during takeoff, landing and refueling) of the entire MAF for safety. Additionally, clearing of some trees and stored OHVs may also be necessary to provide a safe landing zone. Contract specifications will require the equipment and helicopter contractors to provide adequate notice to the public and outfitter/guides using the area of closure times to minimize impacts to those user groups.

In the long term, expect improved fishing and bear viewing opportunities for the guided and unguided user as fish populations improve. Visuals along the trail system adjacent to treated areas would likely improve provided user created OHV routes are not established.

Soils, Wetlands, Floodplains

No Action – The No Action Alternative would not affect soil, wetland, or floodplain resources because no ground disturbance would occur.

Proposed Action – The Proposed Action would result in short-term (1-3 months) adverse effects to floodplains and riparian soils in the form of exposing bare soils due to tree tipping and access road construction until these areas revegetate. These effects are minimized through the implementation of design criteria such as erosion control plans, use of puncheon to minimize soil compaction and post construction seeding. The effects are not expected to result in long-term degradation of soils, wetlands or floodplains.

Timber

No Action – The No Action Alternative would not affect the vegetation/timber resources because no management activities would take place.

Proposed Action – The Proposed Action would result in a number of trees being removed from an area that will likely not see timber management or removal due to the proximity to streams.

The direct effect would be thinning operations in a riparian area and the presence of machinery to remove/place the thinned trees into the project area. A number of trees would be removed to aid in access to the project area. The stands from which trees will be taken have previously been thinned to a 14 by 14 foot spacing. Removal of trees for restoration will widen this spacing closer to a 20 by 20 foot spacing which more closely mimics natural riparian tree spacing. These areas will respond with successional understory vegetative growth and increased tree diameter growth which will provide a better quality tree for future wood recruitment to the stream.

The indirect effect would be creation of gaps in the overstory vegetation from removal of co-dominant trees. Preference would be to take trees with defects and existing blown down trees, further minimizing the effects on vegetation and stand health. Presence of machinery would not produce any long term negative effects to the spread of invasive species since mitigation standards are in all contracts to reduce the potential spread of species via heavy machinery.

The minimal direct and indirect effects result in a minimal negative cumulative effect to forest health. The vegetation would see beneficial effects from the eventual restoration/stabilization of the stream and the thinning of the surrounding riparian vegetation.

Wildlife

No Action – The No Action Alternative would maintain existing levels and use of wildlife habitat. Current riparian conditions where source trees will be removed consist of tightly spaced conifer trees (14' x 14'), which allows little light for understory vegetation and wildlife habitat.

Proposed Action – The Proposed Action may result in some short-term (1year) adverse effects to wildlife species via disturbance and displacement of a few individuals during project implementation. However, a long-term beneficial effect (occurring after 1 year) is expected through improved understory and riparian vegetative conditions, as well as, improved instream habitat conditions, which should lead to greater species richness across the landscape.

Compliance with Other Laws and Regulations

National Forest Management Act – The Proposed Action is consistent with the 2008 Forest Plan standards and guidelines, and all proposed activities are allowed under the Modified Landscape and Semi-Remote Recreation Land Use Designations 1.

The Proposed Action is consistent with the Forest-wide Standards and Guidelines for Wetlands². The Proposed Action is consistent with the principles and criteria of the State of Alaska's Policy for the Management of Sustainable Salmon Fisheries (5AAC.39.222). Specifically, section (c)(1) which identifies the importance of maintaining wild salmon habitat at levels of resource productivity that assures sustained yields, and calls for the restoration of degraded salmon spawning, incubating, and rearing habitats.

¹ 2008 Tongass Land and Resource Management Plan. Pages 3-63 through 3-38 and 3-109 through 3-115.

² 2008 Tongass Land and Resource Management Plan. Page 4-88.

The design of the Proposed Action was guided by standards, guidelines and direction in the Forest Plan and applicable Forest Service Manuals and Handbooks.

Endangered Species Act – Biological evaluations were completed for threatened, endangered, proposed and sensitive species. No effect to threatened, endangered or proposed species would occur under either alternative.

Bald Eagle Protection Act – Management activities within bald eagle habitat will be in accordance to a Memorandum of Understanding between the Forest Service and the U.S. Fish and Wildlife Service.

ANILCA Section 810, Subsistence Evaluation and Finding – There is no documented or reported subsistence use that would be restricted because of this proposed action. For this reason, this action would not result in a significant possibility of a significant restriction of subsistence use of wildlife, fish, or other foods.

Clean Water Act (1977, as amended) – Proposed activities meet all applicable State of Alaska Water Quality Standards. The Forest Service must apply BMPs that are consistent with the Alaska Forest Resources and Practices Act (AFRPA) to achieve Alaska Water Quality Standards. The site-specific application of BMPs, with a monitoring and feedback mechanism, is the approved strategy for controlling nonpoint source pollution as defined by Alaska's Nonpoint Source Pollution Control Strategy (2007). In 1997, the State approved the BMPs in the Forest Service Soil and Water Conservation Handbook (FSH 2509.22, October 1996) as consistent with AFRPA. This handbook is incorporated into the Forest Plan.

Magnuson-Stevens Fishery Conservation and Management Act – This project is a fish enhancement project, therefore there will be a beneficial impact to Essential Fish Habitat (EFH).

National Historic Preservation Act of 1966 – A Forest Service archeologist has reviewed this project and has made a determination of No Historic Properties Affected in the area of potential effect for the proposed project.

Tongass Timber Reform Act (TTRA) of 1990 – Forest Plan riparian Standards and Guidelines apply to the project and no commercial timber harvest will occur. The design and implementation direction incorporates best management practices (BMPs), Forest Plan Standards, and Guidelines for the protection of all stream classes.

E.O. 11988 (Floodplains), E.O. 11990 (Wetlands) – The project is located within the floodplain of Shelikof Creek but will not impact the functional value of any floodplain as defined by Executive Order 11988 and will not have negative impacts on wetlands as defined by Executive Order 11990.

E.O. 12962 (Recreational Fisheries) – The project is consistent with Executive Order 12962, in that it improves the quantity, function, sustainable productivity, and distribution of United States aquatic resources for increased recreational fishing opportunities.

E.O. 12898 (Environmental Justice) – Implementation of this project is not anticipated to cause disproportionately high and adverse human health or environmental effects on minority populations and low income populations because the proposed activities are not expected to cause any affects to human health or result in meaningful adverse environmental consequences.

E.O. 12962 (Aquatic Systems, Recreational Fisheries) – The project minimizes the effects on aquatic systems through project design, application of standards and guidelines, BMPs, and site-specific mitigation measures. Recreational fishing opportunities would be enhanced and protected as well.

E.O. 13175 (Consultation and Coordination with Indian Tribal Governments) – The following federally recognized tribal governments and organizations were contacted via the scoping letter and briefed by the District Ranger during monthly coordination meetings:

- Sitka Tribe of Alaska
- Shee Atika, Inc.
- Sealaska Corporation
- Central Council Tlingit and Haida Indian Tribes of Alaska

E.O. 13186 (Migratory Birds) – The project is not anticipated to negatively affect migratory bird species in the long-term (> 5 years) utilizing the project area.

Agencies and Persons Contacted

An interdisciplinary team of Forest Service of resource specialists was consulted in the development of this environmental analysis.

The Forest Service mailed out a scoping letter requesting scoping comments on February 20, 2015. One comment from the State of Alaska was received.

This EA will be provided to all who commented on this project as well as to all those who remained on the electronic mailing list. A legal notice offering a 30-day comment period on the proposed action will be posted in the Daily Sitka Sentinel, the newspaper of record, August 2015. The new regulations at 36 CFR 218 now provide for a pre-decision administrative review rather than a post-decision appeal process.

After the comment period on the EA, we will release a draft decision and will publish a legal notice initiating a 45-day objection period in the Daily Sitka Sentinel. At that point, members of the public may file an objection seeking a pre-decisional administrative review of the proposed project and activities. No appeal period will be provided after the final decision is made.