### FULL PROPOSAL FORM

### Lewis River Aquatic Fund

Form Intent:

To provide a venue for an applicant to clearly indicate the technical basis and support for proposed project. Specifically, the project's consistency with recovery plans, Settlement Agreement Fund objectives and priorities, technical studies and assessments which support the proposed action and approach.

### Full Proposal format:

Please complete the following form for your Full Proposal. Maps, design drawings and other supporting materials may be attached.

The deadline for a Draft Full Proposal Form submission is **October 22, 2022**. Please submit materials to:

Erik Lesko PacifiCorp 825 NE Multnomah Street, Suite 1800 Portland, OR 97232 <u>Erik.lesko@pacificorp.com</u>

### 1. Project Title

### **Clear Creek and Clearwater Creek Restoration Implementation**

- 2. <u>Requested Funding Amount</u> \$3,126,667; total cost of implementation including Inkind funds \$3,986,667
- 3. <u>Project Manager</u> Greg Robertson, <u>greg.robertson2@usda.gov</u>, (509) 395-3366

### 4. Identification of problem or opportunity to be addressed

### **Problem:**

Sections of Clear Creek and Clearwater Creek contain essential habitat for species listed under the Endangered Species Act (ESA) and include Coho and Chinook salmon, and Steelhead trout. Effects to aquatic habitat in these creeks include the 1980 eruption of Mt. St Helens and past land management activities such as logging, road building, stream wood removal, and development of hydro-resources, which until recently has blocked all anadromous species access to the Upper North Fork Lewis River watershed. To ensure reintroduction efforts of salmon and steelhead into the Lewis River and its tributaries above the dams are successful, the Forest Service in partnership with the Aquatic Coordination Committee has implemented a variety of aquatic habitat improvement projects including; construction of acclimation ponds for juvenile spring Chinook salmon, road decommissioning, replacement of migration blocking culverts with bridges, and numerous streambank and instream fish habitat restoration projects. However, additional work remains to improve habitat for Chinook, Coho, and Winter Steelhead. Past instream restoration projects in Clear and Clearwater Creeks were limited in scope and scale with project objectives focusing on bank protection and log scour rather than process-based restoration. Previous projects were not designed with 2D hydraulic model and were not designed or stamped by a certified hydraulic engineer. Many of the log jams and acclimation ponds washed out during floods in 2016. Lessons learned from past aquatic restoration projects in these creeks have highlighted the need for a broader-scale processbased restoration planning and design effort to improve aquatic habitat, build stream habitat resiliency, and improve floodplain and side channel connectivity. Hydraulic and geomorphic analysis and alternative design analysis was completed in summer 2022.

### **Opportunity:**

The Clear Creek and Clearwater Creek project is in alignment with Lewis River goals by benefiting federal ESA-listed species, through enhancing fish in habitat in the Lewis River Basin that will help support the reintroduction of anadromous fish throughout the basin. Clear Creek and Clearwater are above the Lewis River hydropower system, which has blocked upstream adult migration from the mid-1930s until eight years ago. As part of the most recent FERC license, PacifiCorp and Cowlitz PUD (utilities) are implementing salmon and steelhead reintroduction in the upper basin. Adult Coho, Steelhead, and spring Chinook are transported and released to the upper basin to spawn naturally. Coho are currently using the site in sufficient numbers to populate off-channel areas, and we anticipate greater numbers of upstream-bound adults as populations grow above the hydropower system. This project is well-timed to take advantage of increasing numbers of adults we expect to be using the reach in future years.

The 2010 Lower Columbia Salmon Recovery and Fish & Wildlife Subbasin Plan's EDT analysis predicts high potential for Coho production throughout the project area, and medium to low production potential for spring Chinook and winter steelhead. Spring Chinook is the only Primary population in the upper Lewis subbasin, and must be recovered to a high level of viability to meet regional recovery goals. Coho and winter steelhead are contributing populations and must be recovered to a medium level of viability to meet regional salmon recovery goals; the Tier-2 reach designation of Clear Creek and Clearwater Creek reflects the lower priority of Coho recovery. Surveyors have documented bull trout in the area, but their level and pattern of use is unknown.

The Gifford Pinchot National Forest, propose to complete habitat restoration implementation for Clear Creek and Clearwater Creek with a focus on process-based geomorphic restoration to improve aquatic function and habitat, and build resiliency to the potential impacts of climate change. Clear Creek and Clearwater Creek Restoration implementation will focus on restoring broader stream function to encourage resilient aquatic ecosystems that will respond to climate change stressors.

Aquatic Funds would be used to implement project with excavator work in lower Clear Creek and helicopter in both Clear and Clearwater Creeks.

### 5. Background

Provide information related to how this project fits into greater watershed objectives and any previously collected information at the project site (e.g. fish surveys, habitat delineation, etc.)

The proposed Clear Creek and Clearwater Creek implementation project are above Swift Reservoir and North Fork Lewis River, WA, Skamania County. Each begin at the confluence with the Muddy River and end further up each stream to the upstream extent of anadromous habitat (Figure 1). Approximate restoration implementation river miles (RM) for Lower Clear Creek RM 0-6.2, Upper Clear Creek RM 6.2-8.7, and Clearwater Creek RM 0-5.2 (Table 1). The restoration implementation will focus on where excavator access is feasible and where the stream it is not accessible by excavator, to helicopter wood into those areas. This incorporates the strategy of implementing the excavator reaches first to capture mobilized wood that has been helicoptered or recruited naturally at a later date and to retain the wood in the system. Both Clear and Clearwater Creeks have a disrupted wood recruitment cycle through past land management and the eruption of Mt St Helens.



Figure 1. Clear Creek and Clearwater Creek stream restoration locations.

Table 1. Fish resources present at the site and targeted by this project.

Reach Name	LCFRB Tier	Length Tier Length		Strategy Excavator (Length)	Strategy Helicopter (Length)	
	Ranking	Feet	Miles	Tier II	Tier II	Tier II
Lower Clear Creek	2	32646	6.2	6.2	3.8	2.4
Upper Clear Creek	2	13200	2.5	2.5	0	2.5
Clearwater Creek	2	27451	5.2	5.2	2.2	3.0

Focal fish species of both reintroduced anadromous and of resident life histories use Clear and Clearwater Creeks for spawning, incubation, rearing, and foraging as adults and would benefit from implementing the proposed design (Table 2). Recent data on the spatial distribution of spring Chinook and Coho from redd surveys collected by PacifiCorp in 2017 indicate that spring Chinook utilize both Clear and Clearwater Creeks for spawning, in addition to the mainstem North Fork Lewis below the Lower Lewis River falls and the confluence of Swift Reservoir, the Muddy River near the confluence of Clear Creek, and at Drift Creek near the confluence of Swift Reservoir (Figure 2). Coho have also used Clear and Clearwater Creeks and have distributed their presence within the Upper North Fork Lewis River at greater levels in both release from trap and haul and in numbers of redds (Figure 3).

Species	Life History Present (egg, juvenile, adult)	Current Population Trend (decline, stable, rising)	ESA Coverage (Y/N)	Life History Target (egg, juvenile, adult)
Coho	Egg, juvenile, adult	Rising (reintroduction)	Y	Egg, juvenile, adult
Spring Chinook	Egg, juvenile, adult	Rising (reintroduction)	Y	Egg, juvenile, adult
Winter Steelhead	Egg, juvenile, adult	Rising (reintroduction)	Y	Egg, juvenile, adult
Bull trout	Adult	Decline or stable	Y	Egg, juvenile, adult

#### Table 2. Fish resources present at the site and targeted by this project.

Recent data on the spatial distribution of spring Chinook and Coho redd surveys (2017) shared by PacifiCorp indicate that spring Chinook have used both Clear and Clearwater Creeks for spawning. Other areas of spawning are focused in the mainstem North Fork Lewis below the Lower Lewis River falls and the confluence of Swift Reservoir, the Muddy River near the confluence of Clear Creek, and at Drift Creek near the confluence of Swift Reservoir (Figure 3, Figure 4).



Figure 3. 2017 spring Chinook redd distribution within the Upper North Fork Lewis River. Source: PacifiCorp.



Figure 4. 2012-2017 Coho redd distribution within the Upper North Fork Lewis River. Source: PacifiCorp.

### Lower Columbia River Salmon Recovery Board, Ecosystem Diagnosis and Treatment Analysis, and Aquatic Coordination Group Synthesis Rankings

### Clear Creek

The 2009 Lower Columbia Salmon Recovery Board (LCFRB) identifies Clear Creek (Reach 23) as a Tier 2 medium priority reach. Ecosystem Diagnosis and Treatment (EDT) analysis identifies medium production potential for spring Chinook, high for winter Steelhead, and low potential for Coho. The ACC Synthesis Matrix rated this section of the river as having low restoration potential and as a Primary Coho population area, and a low rating for Coho reach potential. Habitat needs in this reach were identified as low for instream LWM, and high for competition and predation. It has a Primary population designation for Chinook, a Contributing population designation for Coho, and a Contributing population designation for winter Steelhead.

Species	Reach Potential
Coho	Н
Spring Chinook	М
Winter Steelhead	L
Restoration Needs	Multiple Species Priority
Floodplain function and channel migration Process	Н
Instream flows	Н
Off channel & side channel habitat	Н
Riparian conditions & functions	Н
Stream channel habitat structure and bank stability	Н
Watershed conditions & hillslope processes	Н
Access to blocked habitats	L
Regulated stream management for habitat functions	L
Water quality	L

### **Clearwater Creek**

The Lower Columbia Salmon Recovery Board identifies this as a Tier 2 reach. For Coho salmon it has an Overall Preservation rank of 4 of 100, and Overall Restoration rank of 21 of 103, this means it is highly valued and should respond very well to restoration efforts. An EDT analysis concludes there are high concerns from lack of habitat diversity and quantity and altered thermal regimes as well as excessive sediment load and lack of food. Moderate concerns were identified for channel stability, hatchery fish competition, and water flow (EDT). This reach is also designated as a Contributing Population for Coho and has Coho reach potential rating of High. It is designated a Primary Population for Chinook and has Chinook reach potential rating of Medium. It is also designated as a Stabilizing Population for Steelhead and has a steelhead reach potential rating of Medium. Bull trout are not officially documented in Clearwater Creek, although presence is noted in several anecdotal accounts.

able 4. Clear water Creek (Ther 2) KW 0-3.2 reach and multiple species	priority LCFKD raiking.
Species	Reach potential
Coho	Н
Spring Chinook	М
Winter Steelhead	М
Restoration Needs	Multiple Species Priority
Floodplain function and channel migration Process	Н
Instream flows	Н
Off channel & side channel habitat	Н
Riparian conditions & functions	Н
Stream channel habitat structure and bank stability	Н
Watershed conditions & hillslope processes	Н
Access to blocked habitats	L
Regulated stream management for habitat functions	L
Water quality	L

Table 4. Clearwater Creek (Tier 2) RM 0-5.2 reach and multiple species priority LCFRB ranking.

### Climate Change Resiliency

The Gifford Pinchot National Forest completed a climate change vulnerability assessment in October 2019. With respect to watershed stewardship, this analysis focused on potential thermal impacts to anadromous fish species, emphasizing the need to build aquatic habitat resiliency and connectivity. Key themes from this analysis include strategic prioritization and restoration of natural thermal, hydrologic, and wood regimes, and management of fluvial connectivity and assisted migration.

### Previous Restoration Efforts

Previous instream projects have occurred on both Clear and Clearwater Creeks in 2010 and 2013 respectively. The Clear Creek restoration effort added approximately 950 trees from river mile 0-1.3 in 36 structure sites and the Clearwater Creek restoration effort added 900 trees from river mile 0-1.7 in 62 structure sites. Both projects structure implementation and construction mainly focused on bank protection and channel margin work and (Figure 5).



Figure 5. Example of a bank protection structure constructed on Clear Creek, 2010. Approximately 50 trees were used in this structure.

After an approximate 50-year recurrence flood event in December of 2016 there were many waterways within the Upper North Fork Lewis River that experienced significant channel change. This flood induced movement of placed wood in Clear and Clearwater Creeks, failures at the acclimation ponds on the Muddy River and Clear Creek also impacted several additional projects funded through the Aquatic Fund.

### 6. Project Objective(s)

This project aims to restore hydrologic function and aquatic/riparian ecological function of Clear and Clearwater Creeks to benefit aquatic species and riparian dependent species. The objectives of the project are:

- Restore instream fish habitat for all accessible miles of fish habitat for native fish species;
- Improve water storage and hyporheic exchange by restoring floodplain connectivity;
- Establish reconnection with floodplain terraces to help restore riparian areas and decrease erosive power. Riparian/Instream restoration will strengthen ecosystem resistance against extreme floods and altered surface flows anticipated from climate change;
- Strengthen linkages between aquatic and terrestrial systems, making both more resilient and resistant to the stresses imposed by climate change.

These objectives will lead to improved habitat complexity and diversity increasing the number, area, and depth of pools, increase stable wood accumulations, increase the extent and age of riparian and island vegetation, and increase the amount of suitable spawning

and rearing habitat (i.e., species-appropriate depth, velocity, substrate, and cover) for coho, spring Chinook, and winter steelhead. Providing refugia during winter flows for juvenile salmonids, rearing opportunities for juvenile salmonids during summer months and increased spawning opportunities for adult salmonids.

The project fits well with regional recovery plan and habitat strategy guidance. This project is proposed in reaches identified in the Priority Reaches document and high priority reaches in the LCFRB habitat strategy (Each Stream is designated as Tier 2). EDT analysis that underpins the Lower Columbia's habitat strategy indicates that the reaches identified will benefit from restoration efforts, with off-channel & side channel habitat, riparian conditions & functions, and stream channel habitat structure and bank stability all meriting high multi-species priorities.

This project addresses the following Aquatic Fund priorities:

## Priority 1: Benefit fish recovery throughout the North Fork Lewis River, with priority to federal ESA-listed species.

Lower Columbia ESU Chinook, Coho, and Steelhead trout are listed as a threatened species under the ESA. This project will contribute to the recovery of these species by increasing the amount and quality of water and pools. In addition, constructed log complexes will increase spawning habitat.

### Priority 2: Support the reintroduction of anadromous fish throughout the basin.

This proposal will complete the design for enhancement of over 13 miles of rearing and refugia habitat for juvenile anadromous salmonids. Once implemented, the project will improve the habitat characteristics that will promote survival and promotion of reintroduced anadromous fish.

### Priority 3: Enhance fish habitat in the Lewis River Basin-, with priority given to the North Fork Lewis River.

This project is located in the North Fork Lewis River basin and will restore and enhance habitat in Clear Creek and Clearwater Creek, which are tributaries to the North fork Lewis River. This project will improve aquatic function and increase instream habitat diversity and is expected to contribute toward increasing fish production in the North Fork Lewis River and its tributaries.

- 7. <u>Tasks</u>
  - 1) **Wood sourcing** (during winter, spring, summer of 2023)- The Forest Service will initiate the planning phases and secure nearby wood for the sourcing and storage of wood. The Forest Service will be looking at nearby stands to evaluate where wood can come from to implement the project successfully.
  - 2) **Project NEPA** (Forest Service will ensure all requirements are met) Forest Service staff will initiate NEPA documentation for the project and work with the

design team to ensure proposed treatments comply with recent revisions in Forest Service programmatic biological opinion coverage.

- 3) Contracting- Contract out for implementation
- 4) **Project Implementation** Wood placement by both Helicopter and Excavator.

### 8. <u>Methods</u>

This proposal is an implementation project. A geomorphic and hydraulic analysis and alternative analysis with design was completed summer 2022. Alternative 1 for both Clear Creek and Clearwater Creek were chosen. Designs include bankfull width, plan view drawing overlaid with proposed actions of specific dimensions, and project profile and cross sections at important project locations showing water surface elevations relevant to the design including design flows. Design took into account implementation and cost and looked for the most effective and cost-efficient instream work that is possible. See attached geomorphic and hydraulic assessment, and final alternative analysis, and alternative analysis design set.



Figure 6. Clear Creek wood placement with helicopter and excavator. Alternative 1 was chosen.



Figure 7. Clearwater Creek wood placement by helicopter. Alternative 1 was chosen.

### 9. Specific Work Products

Deliverables on Clear Creek and Clearwater Creek:

- Wood Sourcing
- NEPA completion
- Contracting
- Large Wood Structure placement
- Project Monitoring
- 0
- 10. Project Duration
  - Initiation of project- As soon as funding is available (Spring 2023-Fall 2023)
  - Completion date for each milestone or major task
    - Wood Acquisition (Winter 2023)
    - NEPA (2022-2023)
    - Large Wood Structure placement (Summer 2024-Summer 2027)
    - Project Monitoring (2024 2029)
  - Project close-out site visit (with PacifiCorp, Cowlitz PUD, and ACC representatives) (Summer/Fall 2027)
- 11. Permits and Authorizations

Identify any applicable permits and resource surveys required for project. Please include timeline for obtaining and any action taken to-date. Applicant will be responsible for securing all such necessary permits. Obtain permission of all owners of

# land used for access to and completion of the project. Landowner(s) must sign PacifiCorp's Release Agreement prior to finalization of a Funding Agreement with PacifiCorp.

Project implementation will be consistent with provisions in the Forest Service's MOU with WDFW, the Aquatic Restoration Biological Opinion II, Regional General Permit 8 with the US Army Corps of Engineers, and the WA Department of Ecology Water Quality Certification, an Appendix of RGP-8. Permits will be obtained Winter 2023-Spring 2024 for implementation.

### 12. Matching Funds and In-kind Contributions

The Forest Service will provide project contract and implementation oversite and provide resources necessary (Table 5)

USFS In-Kind Funds	Quantity	Cost
NEPA, Contracting, and	300 days, 3 people @	\$360,000
implementation oversite	\$400/day	
Trees	6,500 @ \$77 a tree from	500,000
	FS Land	
	Total In-Kind	\$860,000

### Table 5. USFS in-Kind funds for the Clear and Clearwater Creek implementation.

### 13. Peer Review of Proposed Project

Proposed Project has been reviewed by FS employees, DJ&A and Interfluve.

### 14. Budget

#### Table 6. Budget for the Clear and Clearwater Creeks Implmentation.

<b>For Project Implementation</b> – estimated 1 miles of excavator access and 7.4 miles of		
Item	Clear Creek	Clearwater Creek
Tree acquisition, push over, full tree	\$250,000	\$50,000
Excavator placement	\$170,000	\$0
Helicopter placement	\$2,100,000	\$466,667
Equipment mobilization	\$80,000	\$10,000
Creek Total Cost	\$2,600,000	\$526,667
	Project Request	\$3,126,667

### \*Total Project Cost with request and in-kind contribution: \$3,986,667

### 15. Photo Documentation (*Per National Marine Fisheries Service's Biological Opinion* for Relicensing of the Lewis River Hydroelectric Projects – August 27, 2007):

Photos will be collected during pre, during, and post implementation.

16. Insurance. All qualifying applicants shall comply with PacifiCorp's insurance requirements set forth in Appendix A. The policy limits are deemed sufficient by PacifiCorp for project activities involving significant risk, including placement of large woody debris in navigable waterways, and are presumed to be sufficient for all activities likely to be funded under this Full Proposal Form. Should applicant's insurance program not meet these requirements, bid pricing should include any additional costs applicant would incur to comply with these requirements

### Appendix A Insurance Requirements (Risk Mgmt to evaluate risk by project and report needed insurance limits to Lewis River Project Coordinator)

### 1. INSURANCE

Without limiting any liabilities or any other obligations of [CONTRACTOR], [CONTRACTOR] shall, prior to commencing the Project, secure and continuously carry with insurers having an A.M. Best Insurance Reports rating of A-:VII or better the following insurance coverage:

1.1 <u>Workers' Compensation</u>. [CONTRACTOR] shall comply with all applicable Workers' Compensation Laws and shall furnish proof thereof satisfactory to PacifiCorp prior to commencing the Project.

All Workers' Compensation policies shall contain provisions that the insurance companies will have no right of recovery or subrogation against PacifiCorp, its parent, divisions, affiliates, subsidiary companies, co-lessees, or co-venturers, agents, directors, officers, employees, servants, and insurers, it being the intention of the parties that the insurance as effected shall protect all parties.

1.2 <u>Employers' Liability</u>. Insurance with a minimum single limit of \$1,000,000 each accident, \$1,000,000 disease each employee, and \$1,000,000 disease policy limit.

1.3 <u>Commercial General Liability.</u> The most recently approved ISO policy, or its equivalent, written on an occurrence basis, with limits not less than \$1,000,000 per occurrence/ \$2,000,000 general aggregate (on a per location and/or per job basis) bodily injury (with no exclusions applicable to injuries sustained by volunteers working or participating in the Project) and property damage, including the following coverages:

- a. Premises and operations coverage
- b. Independent contractor's coverage
- c. Contractual liability
- d. Products and completed operations coverage
- e. Coverage for explosion, collapse, and underground property damage
- f. Broad form property damage liability

- g. Personal and advertising injury liability, with the contractual exclusion removed
- h. Sudden and accidental pollution liability, if appropriate
- i. Watercraft liability, either included or insured under a separate policy

1.4 <u>Business Automobile Liability</u>. The most recently approved ISO policy, or its equivalent, with a minimum single limit of \$1,000,000 each accident for bodily injury and property damage including sudden and accidental pollution liability, with respect to [CONTRACTOR]'s vehicles whether owned, hired or non-owned, assigned to or used in the performance of the Project.

1.5 <u>Umbrella Liability</u>. Insurance with a minimum limit of \$4,000,000 each occurrence/aggregate where applicable to be provided on a following form basis in excess of the coverages and limits required in Employers' Liability insurance, Commercial General Liability insurance and Business Automobile Liability insurance above. [CONTRACTOR] shall notify PacifiCorp, if at any time their minimum umbrella limit is not available during the term of this Agreement, and will purchase additional limits, if requested by PacifiCorp.

In addition to the requirements stated above any and all parties providing underground locate, engineering, design, or soil sample testing services including [CONTRACTOR], subcontractor and all other independent contractors shall be required to provide the followings insurance:

<u>Professional Liability</u>: [CONTRACTOR] (or its contractors) shall maintain Professional Liability insurance covering damages arising out of negligent acts, errors or omissions committed by [CONTRACTOR] (or its contractors) in the performance of this Agreement, with a liability limit of not less than \$1,000,000 each claim. [CONTRACTOR] (or its subcontractors of any tier) shall maintain this policy for a minimum of two (2) years after completion of the work or shall arrange for a two (2) year extended discovery (tail) provision if the policy is not renewed. The intent of this policy is to provide coverage for claims arising out of the performance of work or services contracted or permitted under this Agreement and caused by any error, omission for which the [CONTRACTOR] its subcontractor or other independent contractor is held liable.

Except for Workers' Compensation insurance, the policies required herein shall include provisions or endorsements naming PacifiCorp, its affiliates, officers, directors, agents, and employees as additional insureds.

To the extent of [CONTRACTOR]'s negligent acts or omission, all policies required by this Agreement shall include provisions that such insurance is primary insurance with respect to the interests of PacifiCorp and that any other insurance maintained by PacifiCorp is excess and not contributory insurance with the insurance required hereunder, provisions that the policy contain a cross liability or severability of interest clause or endorsement, and that [CONTRACTOR] shall notify PacifiCorp immediately upon receipt of notice of cancellation, and shall provide proof of replacement insurance prior to the effective date of cancellation. No required insurance policies, except Workers' Compensation, shall contain any provisions prohibiting waivers of subrogation. Unless prohibited by applicable law, all required insurance policies shall contain provisions that the insurer will have no right of recovery or subrogation against PacifiCorp, its parent, affiliates, subsidiary companies, colessees, agents, directors, officers, employees, servants, and insurers, it being the intention of the Parties that the insurance as effected shall protect all parties.

A certificate in a form satisfactory to PacifiCorp certifying to the issuance of such insurance shall be furnished to PacifiCorp prior to commencement of the Project by [CONTRACTOR] or its volunteers or contractors. If requested, [CONTRACTOR] shall provide a copy of each insurance policy, certified as a true copy by an authorized representative of the issuing insurance company, to PacifiCorp.

[CONTRACTOR] shall require subcontractors who perform work at the Project to carry liability insurance (auto, commercial general liability and excess) workers' compensation/ employers' or stop gap liability and professional liability (as required) insurance commensurate with their respective scopes of work. [CONTRACTOR] shall remain responsible for any claims, lawsuits, losses and expenses including defense costs that exceed any of its subcontractors' insurance limits or for uninsured claims or losses.

PacifiCorp does not represent that the insurance coverage's specified herein (whether in scope of coverage or amounts of coverage) are adequate to protect the obligations [CONTRACTOR], and [CONTRACTOR] shall be solely responsible for any deficiencies thereof.

### Appendix B

### **Response to ACC Requests for Clarification**

### Request: Is project occurring in a mapped floodway, per FEMA?

The project is in an area where floodways have not been mapped by FEMA. However, the project is located within the channel and floodplain of Clear and Clearwater creeks. Project activities are designed to restore natural channel and floodplain function, and will likely raise water levels in areas where channel incision has resulted in altered flood elevations. The risk to Forest Service or private infrastructure from the project is minimal. The project is located entirely on National Forest System Lands, with no private lands on Clear or Clearwater Creeks downstream of the project area. In addition, there are no roads or other infrastructure adjacent to or downstream of the project.