

Appendix L: Riparian Funding Policies and Guidelines

Funding

RCO first received funding for the riparian grant program in the 2023-25 biennium with Climate Commitment Act associated funding. The Climate Commitment Act⁵ created a market-based program to help reduce greenhouse gas emissions in the next few decades. A portion of the revenues are directed into the Natural Climate Solutions Account and were distributed into several standing grant programs, including this riparian program. Funding comes with additional reporting, assessment, and Tribal consultation requirements. In the 2025-2027 biennium, RCO received \$20 million for the Riparian Grant Program from the State Building and Construction Account.

Funding Objective

Enhance salmon recovery through the protection and restoration of fully functioning riparian ecosystems. Riparian projects are defined as those that change riparian areas above the ordinary high-water mark and within the floodplain of streams to improve the environmental conditions necessary to sustain salmonids throughout their life cycles. This includes marine nearshore, estuaries, wetlands, and lakeshores of connected lakes.

Available Funding

In 2025, riparian funding was allocated to regional salmon recovery organizations, provided that no lead entity was allocated less than \$300,000 of this funding. Most of the riparian funding was awarded to projects in the 2025 grant round; however, some regions have riparian funding that they are carrying into the 2026 grant round. The applicant should contact the lead entity to inquire if there is riparian funding available for the 2026 grant round. If a lead entity is

⁵Revised Code of Washington 70A.65

unable to fully obligate its 2025-27 riparian funding for the 2026 grant round, its allocation must be transferred to another lead entity that can obligate those funds.

General Policies

Manual 18

Except as modified in this appendix, projects with riparian-specific funding must meet the requirements in *Manual 18: Salmon Recovery Grants*.

Project Scope

Except as limited in the “Eligible Project Types” section below, multiple project types eligible for riparian-specific funding may be combined into a single scope of work. However, riparian funding cannot be used to pay for non-eligible project elements. Eligible and non-eligible elements of a larger project must be funded as separate project agreements.

Riparian funding may not be combined with SRFB or PSAR funding unless the work proposed is eligible in both funding sources. Riparian-specific funds are not eligible to match SRFB or PSAR funding.

Tracking

RCO will track the riparian-specific funding separately from SRFB funding. RCO will create a separate program in PRISM to track and report spending.

Costs Increases

Funding may not be used for cost increases on projects previously funded by the SRFB or PSAR. However, SRFB, PSAR, or riparian-specific funds may pay for cost increases for a project initially funded in whole or in part with riparian-specific funding.

Riparian-specific funding that is returned shall follow the SRFB policies and procedures described in the “Projects Returning Funds” section of this manual, provided it is only reallocated towards project types and elements eligible for riparian-specific funding and is consistent with the limitation on cost increases stated above.

Indirect

Indirect costs are eligible only for a project with a federal nexus from RCO. This means a grant agreement that includes federal funding from the Pacific Coastal Salmon Recovery Fund or state funding that RCO is reporting to the National Oceanic and Atmospheric Administration or the Puget Sound Partnership is reporting to the Environmental Protection Agency. RCO may use a portion of the riparian-specific funding as match to a federal grant. RCO will work with the grant sponsor to identify which projects need indirect and take that into account when determining the source of funding each project will receive.

Match

A project funded solely with riparian funding does not need matching funds. However, if a project also includes funding from SRFB or PSAR, the portion of funding provided by those grant programs must meet the matching share requirements in the "Matching Share" section of manual 18.

Multisite Projects

An applicant may propose eligible riparian work on multiple properties with different landowners. If an applicant identified all the properties where work will occur and secured landowners' permissions before application, each property must be included as "properties" in the application along with a Landowner Acknowledgement Form for each.

Geographic Envelope Projects

An applicant may propose eligible riparian work on multiple properties with different landowners. If an applicant plans to work on multiple sites and has not secured all properties in advance, the project is considered a "geographic envelope" project and must follow the requirements found in "Section 2: Eligible Applicants and Projects."

After a geographic envelope project has been funded, the applicant may request additional riparian funding in the future to either increase the area restored or protected in the geographic envelope or to add funds if the initial project was partially funded. Any additional work must occur on previously identified sites in the previously approved geographic envelope (i.e., the sites already have been reviewed). The applicant must work with the grants manager to determine the appropriate pathway for such a request.

Eligible Project Types

Only the project types and specific elements described below are eligible to receive riparian-specific funding. These types and elements may be combined as described below.

Acquisition

An acquisition project may be proposed as a sole, primary, or secondary project type. Only an acquisition project with 50 percent or less uplands is eligible for riparian-specific funding. The area proposed for riparian funding may be part of a larger acquisition that includes more uplands; however, the area purchased with riparian-specific funding may include only 50 percent uplands. For this purpose, uplands are areas that fall outside of riparian, lake, tideland, or wetland habitat, as more specifically defined in manual 18, appendix K.

An acquisition project with more than 50 percent uplands continues to be eligible for regular SRFB or PSAR funds and follows the matching share requirements described in the "Matching Share" section. All acquisition projects are subject to the policies and eligible costs in *Manual 3: Acquisition Projects*.

Restoration: Riparian Habitat

Restoration of riparian habitat may be proposed as a sole, primary, or secondary project type. A riparian habitat project includes activities above the ordinary high-water mark and within the floodplain of a stream to improve the environmental conditions necessary to sustain salmonids throughout their life cycles. This includes marine nearshore, estuaries, wetlands, and lakeshores of connected lakes. Activities may include planting native vegetation, managing invasive species, managing livestock grazing, watering, thinning the overstory, and installing fences to control livestock, vehicles, and foot traffic in protected areas.

Eligible Costs

Information about eligible elements and costs may be found in *Manual 5: Restoration Projects*. In addition, riparian habitat projects may request funding for temporary, on-site nursery development or off-site nursery operations to provide plant materials for the requested restoration work.

Deliverables

To promote restoration best practices and likelihood of success, RCO strongly recommends that the sponsor complete a full riparian enhancement plan (see

“Riparian Enhancement Plan” section below) or comparable planning documentation before an application site visit. At a minimum before an application site visit, the applicant must provide information about site conditions and restoration objectives, conceptual site preparation and restoration treatment methods, and maps for priority sites or identified sites. Exceptions may be made on a case-by-case basis by RCO staff in collaboration with the SRFB Review Panel. Note that preparation of a riparian enhancement plan is an eligible pre-agreement cost (see “Planning: Design” section below).

Riparian Planting Projects

Buffer Width Standard

RCO developed buffer width standards for forested and dryland ecoregions for projects where riparian planting is the primary purpose; see appendix I for a full description. For forested ecoregions, the standard is one, two-hundred-year Site Potential Tree Height measured from the edge of the active channel or active floodplain. For dryland ecoregions, the standard is the greater of a two-hundred-year Site Potential Tree Height (if available), the width of the riparian vegetation community, or one hundred feet. These buffer standards are synonymous with the riparian management zone or the area with potential to provide full riparian functions.

Some projects may not be able to meet these buffer width standards due to landowner willingness or site constraints. The applicant is strongly encouraged to apply even if the project does not meet these standards. If a project does not meet the standards, the SRFB Review Panel will evaluate it based on the site-specific conditions and determine whether the proposed buffer width will provide riparian function, provide a benefit to salmon recovery, and achieve goals as articulated in the regional recovery plan. Furthermore, a sponsor who cannot meet the buffer widths for streams listed for temperature on the 303(d) list must provide (1) adequate justification as to why the project still restores riparian function and (2) a letter of evaluation or consideration from a technical expert as further described in appendix I.

Riparian planting projects that receive a combination of funds from riparian and SRFB/PSAR and do not meet the above buffer criteria must supply 15 percent match for the portion of SRFB/PSAR funds.

Agreement Periods

Upon request, restoration projects that include riparian planting and stewardship activities are eligible for a grant agreement period of up to five years when

justified by a project's Riparian Establishment Plan. Monitoring, maintenance, and adaptive management elements will be reimbursable after completion of planting activities and RCO review of proposed monitoring, maintenance, and adaptive management approaches included in the riparian enhancement plan or other comparable document.

Invasive Plant Removal and Control

Invasive species control must directly contribute to establishment, survival, or protection of established native riparian vegetation to benefit salmonid recovery. If invasive species control is being proposed for riparian funding as the sole activity, the applicant must clearly demonstrate how salmonid recovery represents the primary management objective and why invasive species control alone represents the best way to achieve or improve native plant establishment and riparian function at the site. Invasive species projects can include one site, multiple sites, or a geographic envelope.

Invasive species projects require a design deliverable that follows the same general outline as described in the "Riparian Enhancement Plan" section below.

Restoration: Site Stewardship

Restoration through site stewardship may be proposed as a sole, primary, or secondary project type. An applicant may propose stewardship for previously installed riparian habitat site(s). If a previous riparian project is failing significantly to meet objectives (e.g., more than 50 percent mortality), technical reviewers will determine whether stewardship is warranted instead of a new riparian habitat project.

Eligible activities in stewardship projects may include managing invasive species, replacing unsuccessful plantings, supplementing the site with water, and installing fences or other browse-protection methods. RCO encourages the sponsor to follow the guidance for riparian buffer widths in appendix I.

Deliverables

If an applicant requesting funding for stewardship of previous sites has a site-specific plan that meets the riparian enhancement plan expectations (see "Riparian Enhancement Plan" section below), please include this past work as part of the application. If not, use the Riparian Enhancement Plan guidance in this appendix. Note the preparation of elements of a riparian enhancement plan for stewardship is an eligible administrative pre-agreement cost (see "Planning: Design" section below).

Restoration: In-stream Habitat

Some work types may be proposed as a sole, primary, or secondary project type if the primary goal of the project is to restore riparian function. Riparian planting is eligible if it is in the active channel above baseflow to support restoration objectives. Additional eligible in-stream work types are limited to the following:

- Beaver dam analogs
- Channel structure placement (anchored or unanchored log placement, post-assisted log structures, engineered logjams, large woody materials, root wads, anchored or unanchored rocks or boulders, weirs, gabions, flood fencing, deflectors or barbs)
- Streambank stabilization (see the “Restoration Projects” section of manual 18 for additional criteria associated with streambank stabilization projects)
- Floodplain re-grading or side channel reconnection

These additional work types are eligible for funding only under the following circumstances:

- The primary goal of the in-stream and floodplain elements directly supports and is necessary to attain riparian function, native plant survival and/or natural generation.
- Application and existing designs clearly demonstrate why current conditions or site constraints are not suitable for a planting-only project, why in-stream and floodplain work are necessary for the success of the riparian habitat elements of a project, and, if applicable, how natural regeneration represents a more efficient and effective approach to meeting plant establishment goals.
- The in-stream elements meet current appendix D design deliverable thresholds based on the amount requested for restoration and design, and construction will be completed by project closing. RCO requires preliminary designs at application if the in-stream elements are \$350,000 or more.

An applicant planning to submit a project for riparian funding that involves in-stream or floodplain work types is highly encouraged to connect with the grants manager to ensure the project meets the eligibility requirements for this funding.

The applicant must provide the required design deliverables associated with the in-stream elements as part of a final application and before site visits.

Planning: Design

A design-only project as a standalone project type is not eligible.

Costs for designing the eligible in-stream elements in the project or developing riparian enhancement plans may be included in the administrative, architectural, and engineering budget.

The riparian enhancement plan serves as the design deliverable associated with riparian restoration and stewardship projects (see “Riparian Enhancement Plan” section below). Costs associated with preparing elements of this plan are eligible for reimbursement as part of a restoration project’s allowable administrative, architecture, and engineering budget and are allowable pre-agreement costs that may be reimbursed upon execution of the grant agreement. The applicant should track those pre-agreement costs accordingly.

If the project includes eligible in-stream or floodplain elements, design and outreach costs are eligible within the administrative, architecture, and engineering costs. The applicant should work with the grants manager to determine what additional design deliverables would be required before construction of in-stream elements.

Planning: Assessment and Inventory

An assessment or inventory may be proposed as a sole project type or as a combination project if an assessment is required as a necessary precursor to a site-specific restoration or acquisition project.

Assessment and inventory projects must be riparian-specific and lead directly to the identification of high-priority, actionable projects. In general, these projects are larger scale (reach or watershed level), standalone projects that provide the foundational plan for implementation work. For example, assessment and inventory projects may document and evaluate habitat quality and use, identify the extent and nature of problems and habitat deficiencies, identify and prioritize riparian habitat restoration and protection activities to address these issues, or evaluate landowner willingness to participate in riparian restoration and protection activities. An applicant should demonstrate clearly the coordination with local, regional, and statewide riparian prioritization initiatives.

No region may use more than 10 percent of its riparian allocation to fund riparian-specific assessment or inventory projects. This limit does not apply to combination projects that involve assessment and/or inventory elements *and* site-specific riparian restoration or acquisition work. However, the inventory or assessment elements must be a minority of the project and an essential precursor to the proposed site-specific work (e.g., prioritizing parcels for planting or acquisition in a geographic envelope project). Otherwise, site-specific restoration or acquisition projects should include budget elements like landowner outreach and feasibility into administration or architecture and engineering costs.

The applicant must contact the grants manager when planning to propose a combination project that includes riparian-specific assessment and/or inventory elements.

Riparian Enhancement Plan

The riparian enhancement plan serves as a standard design report and visual design plan tailored to the short- and long-term methods used to restore riparian areas and establish functional riparian habitat. The plan serves as an adaptable, long-term planning and tracking document developed at the initial implementation phase and resubmitted for future phases of stewardship funding until a project site is fully established.

Though a sponsor may use similar techniques and approaches across project sites and watersheds, the plan is site-specific and created for all separate sites (typically at the landowner level) in a funded project. An applicant with a geographic envelope project will produce plans for top priority properties and subsequently for properties incorporated during the project.

RCO provides a list of several [resources for riparian projects](#) online, including a [riparian enhancement plan example](#), and guidance for adaptive management. The use of planting plan templates from other agencies and similar grant programs may be used to meet the objectives of the RCO riparian enhancement plan if it contains all plan elements as described below.

Plan Elements

RCO strongly encourages an applicant to submit a plan with as many of the required elements as possible two weeks before the application site visit to allow technical reviewers to effectively evaluate a project's impact and likelihood of success. At a minimum, the applicant must provide conceptual drafts of elements described below for the type of project by the site visit deadline. Additional

details may be requested through the technical review by the final application deadline. The information below lists the key elements of a plan including when, at a minimum, each element should be submitted to RCO.

Plan Element Deadlines

Riparian Habitat Projects (Initial Implementation)

- **Existing Conditions Assessment**—Draft due two weeks before site visit. Final due before funded restoration activities begin.
- **Restoration Objectives**—Draft due by application site visit. Final due before funded restoration activities begin.
- **Plan Map**—Draft due by application site visit. Final due before funded restoration activities begin.
- **Site Preparation Methods**—Draft due by application site visit. Final due before funded restoration activities begin.
- **Riparian Planting Methods**—Draft by application site visit. Final before funded restoration activities begin.
- **Implementation Monitoring**—Draft after completion of restoration. Final by funded project closing.
- **Post-Implementation Maintenance**—Draft after completion of restoration. Final by funded project closing.
- **Adaptive Management**—Draft due after completion of restoration. Final due by funded project closing.
- **As-Built Documentation**—Due by funded project closing.
- **Stewardship Activity Report**—Not applicable.

Riparian Stewardship Projects

- **Existing Conditions Assessment**—Due by application site visit.
- **Restoration Objectives**—Due by application site visit, including an update if objectives have changed.
- **Plan Map**—Original implementation project maps (as-builts) showing where stewardship activities will occur due by application site visit.

- **Site Preparation Methods**—Due by application site visit. If not available, focus on post-implementation maintenance below.
- **Riparian Planting Methods**—Attach original treatment methods by application site visit. If not available, focus on post-implementation maintenance below.
- **Implementation Monitoring**—Attach original monitoring plan by application site visit including available monitoring results. If not available, development of implementation monitoring approach due by funded project closing.
- **Post-Implementation Maintenance**—Due by application site visit. If not available, a plan for post-implementation maintenance activities due before stewardship activities begin.
- **Adaptive Management**—Due by application site visit. If not available, the adaptive management approach is due before funded project closing.
- **As-Built Documentation**—Attach original as-built documentation by application site visit. This can serve as the plan map listed above.
- **Stewardship Activity Report**—Description of final stewardship activities due before funded project closing.

Invasive Species Control Projects

- **Existing Conditions Assessment**—Original conditions assessment due by application site visit, including an update of current conditions if available.
- **Restoration Objectives**—Draft due by application site visit. Final due before restoration activities begin.
- **Plan Map**—Draft due by application site visit. Final due before restoration activities begin.
- **Invasive Species Management Methods and Treatment Schedule**—Draft by application site visit. Final before restoration activities begin. Updated before funded project closing, as necessary.
- **Implementation Monitoring**—Draft due by application site visit. Final by funded project closing.

- **Adaptive Management**–Draft due by application site visit. Final due by funded project closing.
- **Post-Implementation Outcomes**–Final by funded project closing.

Element Descriptions

Existing Conditions Assessment (Riparian and Stewardship Projects)

Describe the conditions of the project area. Include the following details as appropriate:

- The current level of conservation protection of the project site (e.g., publicly owned, nonprofit fee ownership, conservation easements) or future conservation protection plans in process.
- The current use of the riparian area.
- Climate: precipitation and aridity zone.
- Water quality concerns, including 303(d) listed impairments or total maximum daily load directives.
- If temperature is a limiting factor, describe the stream reach's aspect (cardinal direction), channel width, location in the watershed, surrounding topography, and how, if feasible, the riparian area at the project site addresses the impacts of temperature.
- Condition of native plant community and its successional stage.
- Overview of soil types and their conditions from current or previous land use.
- Overview of site ground and surface hydrology and condition. Discuss potential irrigation demand, including climate change considerations. Anticipated flood frequency or inundation zones.
- Local and surrounding topography and channel migration zone as it influences riparian function.
- Access for equipment and crews.
- Other local constraints to achieving riparian establishment and long-term restoration such as onsite or adjacent land use or natural processes.

Existing Conditions Assessment (Invasive Species Control Projects)

Invasive species control projects may involve watershed-scale project areas and require repeated treatment over multiple grant-funded phases to effectively control invasive species. It is important to ensure the riparian enhancement plans adequately illustrate where the infestations are located, where there are multiple funded projects in the same project area, and the effect of past treatments. An Existing Conditions Assessment should include the following:

- A visual of the invasive species distribution (project area) proposed for treatment. This can include base maps with aerial and/or LiDAR (Light Detection and Ranging) imagery with drawn polygons or Geographic Information System-surveyed features or points of the infested area to be treated. Include written summaries to explain visual data as necessary. Use standard units of measure (e.g., square feet, acres, stream miles) when summarizing data. Include treatment timeframes.
- If the project previously treated the project area, provide visuals, tables, or other information illustrating how the original infestation area has responded to past treatments. Use standard units of measure (e.g., square feet, acres, stream miles) when summarizing reduction of infestations. Include written summaries to explain past treatments. Clearly indicate treatment timeframes.
- Because landowner permission to treat invasive species is a critical component of success for invasive species that spread via aquatic environments, provide visual and quantitative descriptions of established and non-established control and tenure throughout the project area. Describe how and where a lack of control and tenure may affect project objectives and what steps are being taken to acquire participation or contain infestation from spreading.

Include a description of any conditions and/or issues unique to the site or watershed that affect invasives species spread, containment, and treatment (pro or con). Explain the tools and/or procedures being used to manage the conditions and/or issues.

Restoration Objectives

Use SMART objectives (Site-specific, Measurable, Achievable, Relevant, Timebound) to define the riparian ecosystem functions to be restored and tie them to site-specific limiting factors for salmon that use the site. Define the

performance measures used to determine successful establishment outcomes via implementation monitoring. The examples below help illustrate objectives and how to link them to performance measures.

Enhancement Method: Control of invasive plants (site preparation), ten acres planted, mixed deciduous and conifer

Primary Objective: Future large woody material recruitment to support in-stream habitat complexity for rearing and gravel sorting for salmon spawning

Secondary Objective: Invasive weed suppression to promote native riparian plant diversity

Time-Based Performance Measures

- X percent planting survival at five years
- X percent ground cover at fifteen years
- Dominant conifers measure at least X feet Diameter at Breast Height at fifteen years
- Less than X percent invasive species cover suppression at twenty years
- Dominant conifer species thinned to number/acre with established native understory at twenty-five years

Enhancement Method: Two hundred acres alder thinned, planted conifer understory

Primary Objective: Provide thermal protection of stream to reduce summer rearing mortality

Secondary Objective: None

Time-Based Performance Measures

- Alder density reduced to number/acres at five years
- X percent planting survival at five years (i.e., trees, shrubs, herbaceous ground cover, grasses, sedges, rushes)
- Number acre density and X percent cover of conifer at fifteen years
- Dominant conifer species thinned to number/acre at twenty-five years

Plan Map

The plan map serves as the project's restoration design drawings. Individual plan maps illustrate site preparation and enhancement activities in detail (e.g., plant removal, soil preparation, beaver dam analogs, large woody materials, bank shaping, planting, overstory thinning). However, at a minimum, a plan map illustrates the expected post-restoration implementation condition. Important elements of a plan map include the following:

- Property boundaries
- Labeled surface water features and floodplain extent
- Site elevations relative to the channel (e.g. LiDAR, topographic map)
- Prominent existing functional vegetation that will remain as part of the activities
- Recent aerial imagery
- Map scale and delineated Site Potential Tree Height, if applicable
- Polygons or other visual representation of restoration activities (e.g., planting, in-stream elements, stewardship, fencing)
- Delineate different habitat zones (e.g., gravel bar, shoreline, riparian, terrace, wetland, upland)
- Monitoring information if applicable (e.g., photo points, transects)
- Legends as necessary

Site Preparation Methods

Describe the site preparation needed as part of the overall riparian establishment objectives, including preparation type, methods used, frequency, and expected duration. In some cases, these elements may be the only necessary actions before moving into a maintenance phase (e.g., alder thinning with adequate conifer understory). In other cases, initial preparation can take years before an activity such as planting is possible (e.g., knotweed monoculture). Provide a plan map and/or design-level plans (appendix D) of significant site preparation elements as necessary. Examples include the following:

- Invasive plant control (e.g., mechanical, chemical, hand)
- Soil preparation (e.g., ripping, disking), amendments (mulching, etc.)
- Overstory species thinning (e.g., alder conversion, pre-commercial thinning)
- Other project elements, such as in-stream work (e.g., beaver dam analogs for better site hydrology) or agricultural best management practices (e.g., fencing, off-stream water) that must be implemented initially to support effective riparian establishment

Riparian Planting Methods

If riparian planting is a component of the project, provide the following detail:

- Species list, separated by plant community zones if more than one on site. For each zone provide the following information:
 - Describe if using seed and stock sourced from across the species' geographic and elevational ranges
 - Stock type (seed, bareroot, potted plus age or size class)
 - Quantity and planting density for each species and/or planting zone
- Planting methods
- Planting seasons
- Herbivory protection or exclusion
- Sun and wind protection (e.g., shade cloth)
- Irrigation and watering installation
- Other methods as appropriate

Invasive Species Management Methods and Treatment Schedule

- Species list, separated by plant community zones if more than one on site. If multiple treatment sites, provide one document that contains as much site-level details as possible.
- Treatment methods/protocol

- Treatment schedule
- Monitoring/photo points
- Other methods as appropriate

Implementation Monitoring

Implementation monitoring, or the process of tracking performance of riparian establishment activities, is an eligible expense as part of a restoration or stewardship project. Describe the methods and metrics used to track how the project's SMART restoration objectives are performing. Consider how the performance measures may change as a riparian project matures with time and stewardship and maintenance activities. RCO compiled resources of standard techniques on its website. Examples include the following:

- Annual counts on set transects to estimate percent survival and invasive species cover
- Densimeter or drone imagery to assess canopy cover and light penetration
- Photograph points to illustrate native growth and invasives suppression
- LiDAR imagery showing native canopy cover

Post-Implementation Maintenance

Post-implementation maintenance (referred to as "stewardship" in manual 18, for planting projects) is the long-term strategy that starts after completing initial restoration treatments. Regardless of who takes long-term responsibility, it is important for the sponsor to illustrate an understanding of the steps to establish functioning and self-sustaining riparian conditions over time. This element will include a detailed schedule of maintenance activities chronologically appropriate to the different stages of riparian establishment and who is responsible for funding, planning, and completing maintenance actions.

List and describe proposed management practices. Consider organizing information into a table or other visual (e.g., Gantt chart). At a minimum, describe the practice, its planned frequency (e.g., three times in spring and summer seasons), the likely duration (e.g., five years), and the expected timeframe (e.g., years five through twenty). Consider the entire establishment period for the site, how the management may change as the site matures, and potential changes

due to climate change as it is currently understood. For example, a list of methods for maintaining a young dense planting (years zero to five); then a list of intermediary methods (years five through fifteen) such as continued competitive invasive plant removal or replanting significant mortality or removing irrigation; and late stage (years fifteen through thirty) techniques such as overstory thinning for health and diversity or herbivory protection removal.

Examples of long-term maintenance and establishment practices are as follows:

- Weed control and mulching
- Replacing or removing herbivory protection (tubes, fencing)
- Removing irrigation infrastructure no longer needed
- Adaptive re-planting such as changing species in areas of high mortality due to changes in climate, localized soil hydrology, or bad stock
- Adaptive under-planting such as incorporating species that better establish under canopy previously planted (e.g., cedar, hemlock)
- Thinning dominant overstory species to allow release and facilitate understory development
- Beaver dam management (pond levelers, temporary relocation)
- Adapting planting, removal, or rescue planting due to planned or adaptive restoration techniques on site (e.g., planned channel reconfiguration through an establishing riparian forest)

Invasive Species Post-Implementation Outcomes

This deliverable is an overall update of an invasive species riparian enhancement plan following project activity. It includes, as necessary, updating maps of treatment area, final project treatment metrics (acres, streamside miles treated), discussion of qualitative results of treatment if data is available, changes of protocol due to adaptive management, and an updated treatment schedule if control or removal was not completed during this phase. This updated riparian enhancement plan provides the basis of future project phase applications.

Adaptive Management

Describe how the sponsor will adapt site management as part of the post-implementation maintenance discussion or in a separate section, if the site does

not achieve restoration objectives as determined by implementation monitoring. List typical or known site-specific challenges to riparian establishment and propose adaptive management approaches or contingencies.

Examples of adaptive management are as follows:

- Due to the low gradient of the stream and presence of beavers in the watershed, beaver colonization is highly probable. Although beaver pond levers will be considered, in the case of wetland formation and loss of dry-site type riparian species, replanting with wetland-type vegetation or allowing natural recruitment will be considered. High-value trees on site will be protected from beaver browse by wire mesh.
- In the case of heavy mortality of a single species, replanting with a different seed source of that species or planting a different species altogether will be considered.

As-Built Documentations

Update the riparian enhancement plan if implementation resulted in significant changes from what was proposed. Update design drawings, maps, site preparation, treatment method, and monitoring elements of the plan as necessary.

Stewardship Activity Report

This is a written report that documents activities implemented as part of the stewardship project. If adaptive management was a significant factor, document the changes implemented on site. Provide implementation monitoring results to show how the site is achieving restoration objectives.

Definitions

Riparian area:⁶ A defined area encompassing both sides of a water body, composed of aquatic ecosystems (i.e., the river or stream), riparian ecosystem, and riverine wetlands. Riparian areas are three dimensional: longitudinal up and down streams, lateral to the width of the riparian ecosystem, and vertical from below the water table to above the canopy of mature site-potential trees.

⁶NRC (National Research Council). 2002. Riparian areas: functions and strategies for management. The National Academies Press, Washington, D.C. <https://doi.org/10.17226/10327>.

Riparian ecosystem:⁷ Riparian ecosystems are transitional between terrestrial and aquatic ecosystems and are distinguished by gradients in biophysical conditions, ecological processes, and biota. They are areas through which surface and subsurface hydrology connect waterbodies with their adjacent uplands. They include those portions of terrestrial ecosystems that significantly influence exchanges of energy and matter with aquatic ecosystems (i.e., a zone of influence). This definition of riparian ecosystem does not include adjacent waters (i.e., river or streams, but does include riverine wetlands) and recognizes the riparian zone as a distinctive area within riparian ecosystems.

Riparian Management Zone:⁸ A delineable area defined in a land-use regulation; often synonymous with riparian buffer. For the purposes of this document, the riparian management zone is defined as the area that has the potential to provide full riparian functions. In many forested regions of the state this area occurs within one, two-hundred-year Site Potential Tree Height measured from the edge of the stream channel. In situations where a channel migration zone is present, this occurs within one Site Potential Tree Height measured from the edges of the channel migration zone. In non-forest zones the riparian management zone is defined by the greater of the outermost point of the riparian vegetative community or the pollution removal function, at one hundred feet.

⁷Quinn, T., G.F. Wilhere, and K.L. Krueger, technical editors. 2020. Riparian Ecosystems, Volume 1: Science Synthesis and Management Implications. Habitat Program, Washington Department of Fish and Wildlife, Olympia. p.292

⁸NRC (National Research Council). 2002. Riparian areas: functions and strategies for management. The National Academies Press, Washington, D.C. <https://doi.org/10.17226/10327>.

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