



WLR ROUTING FORM For Agreements, Grants, Misc. Documents & Other Contract Documents

Check all for which you are requesting approval:

- Contract Authorization Memo
- Amendment/Change Order
- Other _____
- Other _____

- Grant Application
- Grant Agreement
- Grant Alert (RCO only)

- Interlocal Agreement
- Interagency Agreement
- Memorandum of Agreement
- Memorandum of Understanding
- Contract Agreements

Section/Program	Agency / Title of Document ("Agency" = funding source or entity signing agreement)
RRSS	RCO-PSAR grant application

If Doc is Grant Alert or Application:

Application Due Date	Grant Budget Amount	Match Amount & Source
02/23/22	\$200,000	\$210,000 CWM

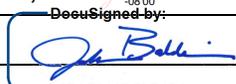
If Doc is Agreement or Amendment:

Document Start Date	Document End Date	Document Amount	Prior Total Amount

Description of Document – If applicable, explain differences in budget or scope between grant application and agreement.

Draft Grant Application (much of it is in the online PRISM application portal) and Grant Agreement for RCO-SRFB PSAR 2022 grant fund for implementation phase of the Seawest Granston Restoration Project, Bear Creek, in WRIA 8.

NOTE: If getting approval of grant application only (grant alert was previously approved), include copy of grant alert.

Internal Approval	N/A	Initials / Signature	Date
Budget Reviewer		Kristin Cline <small>Digitally signed by Kristin Cline Date: 2022.02.22 13:09:02 -08'00'</small>	
Unit Manager		Kaje, Janne <small>Digitally signed by Kaje, Janne Date: 2022.02.18 12:12:36 -08'00'</small>	
Section Manager		Lee, Joan <small>Digitally signed by Lee, Joan Date: 2022.02.22 13:24:59 -08'00'</small>	
Division Director		 <small>DocuSigned by: 207AF316BF0B4B6...</small>	2/22/2022

External Approval	N/A	Initials / Signature	Date
Other (as needed)			
Prosecuting Attorney			

**Salmon Recovery Funding Board
Application Authorization**

Organization Name **King County Department of Natural Resources and Parks, Water and Land Resources Division**

Project Name and Number (s) **22-1190 Sewest Granston Restoration Project**

This form authorizes submitting application(s) for grant funding assistance for salmon recovery project(s) to the Salmon Recovery Funding Board as provided in RCW 77.85, WAC 420 and subsequent Legislative action.

FINDINGS OF FACT:

1. Under the provisions of the Salmon Recovery Act, state grant assistance is requested to aid in financing the cost of **restoration**.
2. Our organization considers it in the best public interest to complete the project described in the application(s).
3. The details of the project are contained in the attached Grant Alert.
4. The Division Director approves the Grant Alerts and provides them to the County Office of Performance, Strategy and Budget, which in turn provides them to the King County Council, as evidenced by the attached memorandum.
5. The King County Council does not adopt resolutions to approve grant applications.
6. Authorization of grant documents, including applications, was delegated to department directors by the King County Executive in Executive Order CON 7-3-2, effective 12/28/2006 (available at <http://www.kingcounty.gov/~media/operations/policies/documents/CON732AEO.ashx?la=en>) and then subsequently from the DNRP Director to division directors.
7. The Director of the King County Department of Natural Resources and Parks, Water and Land Resources Division is authorized to make formal application to the Salmon Recovery Funding Board for grant assistance.

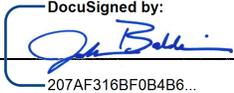
PROVISIONS:

1. Our organization has reviewed the sample project agreement on the Recreation and Conservation Office's web site at: <http://www.rco.wa.gov/documents/manuals&forms/SampleProjAgreement.pdf> and authorize **Josh Baldi** to enter into such a project agreement, if funding is awarded. We understand and acknowledge that the project agreement will contain the indemnification (applicable to any sponsor) and waiver of sovereign immunity (applicable to Tribes) and other terms and conditions that are contained in the sample project agreement.
2. Any grant assistance received will be used for direct costs associated with implementation of the project referenced above.
3. Our organization expects our matching share of project funding will be derived from **Surface Water Management (SWM) and Cooperative Watershed Management Grant funding** and meets the requirements of WAC 420-12-040. In addition, our organization understands it is responsible for supporting all non-cash commitments to this project should they not materialize.
4. We acknowledge that if the Salmon Recovery Funded Board approves grant assistance for the project(s), the Recreation and Conservation Office will pay us on only a reimbursement basis, except for a specially

approved advance payment. We understand reimbursement basis means that we will only request payment from the Recreation and Conservation Office after we incur eligible and allowable costs and pay them. The Recreation and Conservation Office may also determine an amount of retainage and hold that amount until the project is complete. The Recreation and Conservation Office may approve advance payments in limited circumstances, pursuant to WAC 420-12-060 and the policy outlined in *Manual 8, Reimbursements*.

5. *[Acquisition Projects Only]* We acknowledge that any property acquired with grant assistance be dedicated for salmon recovery purposes for perpetuity unless otherwise agreed to by our organization and the Salmon Recovery Funding Board. We agree to dedicate the property in a signed "Deed of Right to Use Land for Salmon Recovery Purposes" for fee acquisitions, or an "Assignment of Rights" for conservation easement acquisitions, to be recorded on the title of the property with the county auditor.
6. *[Acquisition Projects Only]* We acknowledge that any property acquired in fee title must be accessible to the public unless the Recreation and Conservation Office Director or the Salmon Recovery Funding Board agrees to other restrictions.
7. *[Restoration Projects Only]* We acknowledge that any property restored be maintained for a period of ten years after the project is complete unless otherwise provided and agreed to by our organization and the Salmon Recovery Funding Board.
8. This application authorization becomes part of a formal application to the Salmon Recovery Funding Board for grant assistance.

Signed and approved by the following authorized representative:

Signed  Date 2/22/2022
Josh Baldi
Director, Water and Land Resources Division

King County Grant Alert

Department DNRP
Division WLRD
Program RRSS
Contact Denise Di Santo; Laird O'Rollins
Phone 206-263-0259; 206-477-4980

Seawest Granston Restoration Project

Preliminary Project Title

REVIEW/APPROVAL			
	Date Rec'vd	Date Appr'vd	Initials
Dept		2/22/2022	
Budget			
PSB Control No.			

BASIC GRANT INFORMATION

Grantor Recreation Conservation Office - Salmon Recovery Funding Board - PSAR	Application Due Date February 23, 2022	Date Award to be Announced September 22, 2022
Grantor's Statement of Intent in Letting Grant Proposal This project will restore 32 acres of wetland, floodplain and adjacent upland habitat within the Middle Bear Creek Natural Area along Bear Creek. Riparian planting will be added along 3,000 lineal feet of stream to restore stream channel complexity and improve Chinook habitat. The PSAR grant program provides funding for habitat restoration projects in the Cedar Sammamish Watershed, including Bear Creek.		
Potential King County Budget Impact		Award Maximums: \$ 200,000
		Range of Years Covered: 2022-2025
		Does this grant replace currently appropriated funds? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
		If yes, amount displaced: _____ Source of displace funds: _____

	2021	2022	2023	2024	2025
<i>Potential Award Amount:</i>		\$ 200,000			
<i>Required General Fund Match:</i>					
<i>Required Other Match:</i>		\$ 210,000			
<i>Total Potential Value:</i>	\$ -	\$ 410,000	\$ -	\$ -	\$ -
<i>% of Fund Appropriation:</i>	0.0%	21000000.0%	0.0%	0.0%	0.0%
<i>Possible FTE Additions:</i>					

PRELIMINARY DESCRIPTION OF KING COUNTY PROPOSAL

King County is proposing enhancements to the Seawest Granston Reach, including activation of off-channel habitats and revegetation of the floodplain and riparian areas. The goal of this project will be to increase the volume and availability of off-channel habitat for juvenile salmonids and to increase overall channel complexity and habitat quality. This project will plant riparian areas of the mainstem channel. It is expected that beaver activity will raise baseflow and groundwater elevations in the surrounding floodplain to more frequently inundate existing off-channel features. This project will also provide increased storage capacity and may augment streamflow and help to moderate stream temperature during critical low flow periods. A beaver management plan will be developed. This is an ERES/County-managed project. It is expected that PSAR funds will support this habitat restoration project.

Future Funding Liabilities (including sun-setting costs, if applicable - see instructions):

EXISTING POLICY/PLAN ENABLING THIS GRANT

King County Comp. Plan (KCCP) Policy E-132 says: River and stream channels, stream outlets, headwater areas, and riparian corridors should be preserved, protected and enhanced for their hydraulic, hydrologic, ecological and aesthetic functions in providing woody debris sources to salmonid-bearing streams. KCCP Policy E-150 says: The existing flood storage and conveyance functions and ecological values of floodplains, wetlands, and riparian corridors shall be protected, and should, where possible, be enhanced or restored. KCCP Policy E-151 states: King County's floodplain land use and floodplain management activities shall be carried out in accordance with the King County Flood Hazard Reduction Plan. This project is on the WRIA 8 Salmon Recovery 4 year workplan.

REQUIRED KING COUNTY COUNCIL ACTION, IF APPLICABLE

- Implementation of this grant will require execution of an Interlocal Agreement. A transmittal of proposed legislation is forthcoming.
- Either the application or implementation would benefit from King County Council pre-authorization. A transmittal of proposed legislation is forthcoming.

KING COUNTY FLOOD CONTROL ZONE DISTRICT NOTIFICATION

A copy of this grant alert has been provided to the King County Flood Control Zone District's Executive Committee and Executive Director.



PROJECT: 22-1190 REST, SEAWEST GRANSTON (MIDDLE BEAR) NATURAL AREA REST.

Sponsor: King Co Water & Land Res Program: Salmon State Projects Status: Preapplication

Parties to the Agreement

PRIMARY SPONSOR

King County Water & Land Resources

Address 201 S Jackson St Ste 600

City Seattle State WA Zip 98104

Org Type County-Open Space/Nat Resources

Vendor # SWV0000320-12

UBI

Date Org created

Org Notes

[Empty text box for Org Notes]

[link to Organization profile](#)

Org data updated

SECONDARY SPONSORS

No records to display

LEAD ENTITY

WRIA 8 LE

QUESTIONS

#1: List project partners and their role and contribution to the project.

Project Team
King County Parks - project footprint in designated Natural Area
in Open Space Inventory

External Systems

SPONSOR ASSIGNED INFO

Sponsor-Assigned Project Number BCLC-R9-2-INS

Sponsor-Assigned Regions Bear Creek

EXTERNAL SYSTEM REFERENCE

Source	Project Number	Submitter
HWS	22-1190	CarrieByron

Project Application Report - 22-1190

Project Contacts

Contact Name Primary Org	Project Role	Work Phone	Work Email
<u>Sandy Dotts</u> Rec. and Conserv. Office	Project Manager	(360) 628-9487	sandra.dotts@rco.wa.gov
<u>Laird O'Rollins</u> King Co Water & Land Res	Project Contact	(206) 296-8014	Laird.ORollins@kingcounty.gov
<u>Denise Di Santo</u> King Co Water & Land Res	Alt Project Contact		ddisanto@kingcounty.gov
<u>Carrie Byron</u> WRIA 8 LE	Lead Entity Contact	(206) 573-6056	cbyron@kingcounty.gov

Worksites & Properties

Worksite Name

#1 Middle Bear Creek Natural Area, adjacent easement

Restoration	Property Name
✓	Seawest Granston-Middle Bear Nat Area
✓	Awad parcel Conservation Easement

Project Application Report - 22-1190

Worksite Map & Description

Worksite #1: Middle Bear Creek Natural Area, adjacent easement

WORKSITE ADDRESS

Street Address Bear Creek Road NE and 144 Pl NE cro
City, State, Zip Woodinville WA 98077

Worksite Details

Worksite #1: Middle Bear Creek Natural Area, adjacent easement

SITE ACCESS DIRECTIONS

Heading north on Bear Creek Road NE, park on short, side access road with signage for King County's Middle Bear Creek Natural Area, on right.

TARGETED ESU SPECIES

Species by ESU	Egg Present	Juvenile Present	Adult Present	Population Trend
Chinook-Puget Sound, Sammamish River, Threatened	✓	✓	✓	Stable
Coho-Puget Sound/Strait of Georgia, Species of Concern	✓	✓	✓	Stable
Steelhead-Puget Sound, North Lake Washington and Lake Sammamish, Threatened				Unknown

Reference or source used

Source: SWIFD database; James Bower, Science Section, King County

TARGETED NON-ESU SPECIES

Species by Non-ESU	Notes
Kokanee	Lake Washington Kokanee/Bear Creek Sockeye (WDFW genetic panels) Source: 2021 genetic analyses by WDFW Molecular Genetics Lab
Searun Cutthroat	aka Coastal Cutthroat Trout Source: SWIFD database
Rainbow	
Lamprey	River and Brook Lamprey

Questions

#1: Give street address or road name and mile post for this worksite if available.

Bear Creek Road NE and 144 Place NE as nearest cross street

Project Application Report - 22-1190

Project Location

RELATED PROJECTS

Projects in PRISM

PRISM Number	Project Name	Current Status	Relationship Type	Notes
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No related project selected

Related Project Notes

Questions

#1: Project location. Describe the geographic location, water bodies, and the location of the project in the watershed, i.e. nearshore, tributary, main-stem, off-channel, etc.

The Seawest Granston site is located on Bear Creek, roughly 8 miles upstream of its confluence with the Sammamish River. This location is also upstream of Bear Creek's confluence with Evans Creek, Cold Creek and Cottage Lake Creek, which add considerable flow and colder water to the creek. The proposed project site lies east of residences located along Bear Creek Road NE between roughly 141st Street and 144th Street. The site encompasses approximately 3,000 linear feet of Bear Creek and potentially over 60 acres of riparian area, though efforts will be concentrated on those areas closer to the channel. The project is situated along the Bear Creek main stem, middle of this watershed.

#2: How does this project fit within your regional recovery plan and/or local lead entity's strategy to restore or protect salmonid habitat? Cite section and page number.

This project is noted within the WRIA 8 Chinook Salmon Conservation Plan (WRIA 8 Plan). Bear Creek is a Tier 1 sub-basin of WRIA 8; Habitat Goals found in Appendix D calls for increased riparian cover in Tier 1 streams by 2025 (page D-2). The project supports two priority WRIA 8 Plan recovery strategies, to: 1) Protect and restore functional riparian vegetation, and 2) Protect and restore channel complexity. The WRIA 8 Plan's habitat project list specifically lists this project as the "Middle Bear Creek Natural Area Restoration (NE 141st to Struve Creek)" (BCLC-R9-2-INS) (Appendix F, page F-44) and as "Bear Creek Seawest Granston Restoration" project (BCLC-R9-3-BB) in the WRIA 8 Four Year Work Plan on page 4.

#3: Is this project part of a larger overall project?

Yes

#3a: How does this project fit into the sequencing of the larger project?

~~~Add more context based on work completed planning and design phases.~~~ This project is the first of what may be two or three phases of implementation on this site. The stream's response to the treatments applied during this phase of the project will be evaluated and the need for further in-channel structures will be assessed at a later date.

#4: Is the project on State Owned Aquatic Lands? Please contact the Washington State Department of Natural Resources to make a determination. [Aquatic Districts and Managers](#)

No

### Property Details

**Property: Seawest Granston-Middle Bear Nat Area (Worksite #1: Middle Bear Creek Natural Area, adjacent easement)**

✓ Restoration

## Project Application Report - 22-1190

### LANDOWNER

Name King County Department of Natural Resou  
Address 201 S Jackson St Ste 700  
City Seattle  
State WA Zip 98104-3855  
Type Local

### CONTROL & TENURE

Instrument Type Sponsor owned property (deed)  
Timing Existing  
Term Length Perpetuity  
# Yrs  
Expiration Date  
Note

**Property: Awad parcel Conservation Easement (Worksite #1: Middle Bear Creek Natural Area, adjacent easement)**

✓ Restoration

### LANDOWNER

Name Ash Awad  
Address  
City  
State Zip  
Type Private

### CONTROL & TENURE

Instrument Type Easement - Permanent  
Timing Existing  
Term Length Perpetuity  
# Yrs  
Expiration Date  
Note

## Project Proposal

### Project Description

This project will restore critical salmon habitat within the Middle Bear Creek Natural Area along Bear Creek. These funds will be used for implementation of the riparian restoration phase.

The overall goal of the Seawest Granston project is to raise the elevation of baseflow water levels within the reach to create off-channel aquatic habitat, lower (or at least maintain) water temperatures, and raise groundwater elevations in the adjacent riparian areas. Phase 1 of the Seawest Granston Habitat Restoration Project will focus on creating functional riparian plant communities that, in turn, will help to shade out invasive reed canary grass and provide food and dam-making materials for resident beaver. Beaver already occupy the site and have created several small dams within the project area, but they are severely limited by the paucity of woody vegetation in the riparian areas. This initial planting phase will be very aggressive, while acknowledging the likelihood (and desirability) of significant beaver predation. Some plantings will be protected from beaver predations, while others will not. Some plant species that beaver seem to avoid (Pacific ninebark, for instance) will be installed to ensure riparian function is increased. Habitat posts may be installed instream to wrack debris and support potential beaver dams. Subsequent phases of work may entail addition of large wood and/or beaver dam analogues (BDA's) to the reach.

### Project Questions

## Project Application Report - 22-1190

- #1: Problem statement. What are the problems your project seeks to address? Include the source and scale of each problem. Describe the site, reach, and watershed conditions. Describe how those conditions impact salmon populations. Include current and historic factors important to understand the problems.

Bear Creek begins in southern Snohomish County and flows about 12.4 miles south to its confluence with the Sammamish River in the City of Redmond. Along this course it absorbs several major tributaries that provide cold water to the system. The project site is located about 8 miles upstream of the confluence with the Sammamish River and also upstream of these cold-water inputs. The channel, which retains a relatively sinuous plan form, has become incised and disconnected from its floodplain and riparian areas. This is generally because most of the woody riparian vegetation has been removed from the project site, stripping a critical source of instream structure and large wood and allowing the establishment of dense reed canary grass throughout the site, especially near the channel. Additionally, the project reach is listed as temperature impaired on the EPA's 303 (d) list of impaired waters. As the channel incises it the adjacent groundwater table also lowers, reducing the groundwater supply of cool water for the channel and removing the water supply for the remaining native floodplain trees and shrubs. However, LiDAR analysis of the site shows numerous remnant channel scars and other features that could supply valuable off-channel habitat, if they were flooded more frequently via beaver dams or instream wood, providing juvenile salmon rearing habitat.

Raising baseflow water elevations will inundate additional habitats valuable for rearing juvenile salmon, more frequently inundate floodplains and riparian areas, raise groundwater levels in riparian areas, and should also help to moderate water temperatures by increasing groundwater interchange.

- #2: Describe the limiting factors, and/or ecological concerns, and limiting life stages (by fish species) that your project expects to address.

Salmon populations in Bear Creek have declined precipitously in recent years. Partial causes for this include lack of quality rearing habitat for juvenile salmon, elevated water temperatures, flashy stormflows and numerous other smaller effects deriving from degraded riparian conditions. In addition, invasive plant species such as reed canary grass have infested degraded riparian areas and made these areas resistant to establishment of woody vegetation that could improve riparian function. The lack of instream structure results in channel incision and simplification that further reduces rearing habitat availability, groundwater interchange and food supplies/nutrients derived from riparian floodplains. These effects also diminish the ability of fish to thrive during more frequent flood events by depriving them of refuge habitat.

- #3: What are the project goals? The goal of the project should be to solve identified problems by addressing the root causes. Then clearly state the desired future condition. Include which species and life stages will benefit from the outcome, and the time of year the benefits will be realized. **Example Goals and Objectives**

The project goals are to enhance the quantity and quality of accessible juvenile salmon rearing habitat within a 3,000-foot reach of Bear Creek by leveraging existing beaver populations to raise baseflow water elevations. Establishment of woody vegetation communities in riparian areas will allow the existing beaver community to thrive, create and maintain more dams, and thereby provide channel structure and elevated water tables. These effects will, in turn, will improve rearing habitat quantity and quality for juvenile coho and Chinook salmon, as well as steelhead and cutthroat trout.

- #4: What are the project objectives? Objectives support and refine biological goals, breaking them down into smaller steps. Objectives are specific, quantifiable actions the project will complete to achieve the stated goal. Each objective should be SMART (Specific, Measurable, Achievable, Relevant, and Time-bound). **Example Goals and Objectives**

### Project Objectives:

1. Increase connection with the floodplain to create at least 2 acres of wetted edge habitat during 2-year flow events by the end of 2026.
2. Maintain or decrease instream, 7-day average, water temperatures longitudinally within the reach in July and August through the end of 2028.
3. Achieve a beaver dam density of at least 5 dams per 1,000 feet by the end of 2026.
4. Avoid flooding NE 141st St at a 50-year flow or lower within 10 years of implementation.
5. Establish 17 acres of native trees, shrubs, and emergent plants within adjacent wetlands, uplands, and riparian buffers by the end of 2024.
6. Provide a long-term source of riparian native large wood supply by 2050.

## Project Application Report - 22-1190

#5: Scope of work and deliverables. Provide a detailed description of each project task/element. With each task/element, identify who will be responsible for each, what the deliverables will be, and the schedule for completion.

Grant deliverables include:

- Project management;
- Preliminary and final design of planting plan for 17 acres of riparian and wetland areas and limited instream structures;
- Permitting;
- Creation of a Beaver Management Plan;
- Purchase of plant and other materials;
- Planning and logistics for project implementation;
- Procurement and supervision of planting crews;
- Supplementary planting and maintenance for at least one additional year;
- Design and installation of monitoring equipment, such as staff gauges, shallow groundwater wells, thermistors and other equipment to document project effects and maintenance needs.
- Collection and interpretation of initial monitoring results (one year).

#6: What are the assumptions and physical constraints that could impact whether you achieve your objectives?

Assumptions and constraints are external conditions that are not under the direct control of the project, but directly impact the outcome of the project. These may include ecological and geomorphic factors, land use constraints, public acceptance of the project, delays, or other factors. How will you address these issues if they arise?

Project Assumptions:

- Beaver presently occupy the site (confirmed) and will persist long enough to take advantage of plantings and additional food sources;
- Beaver will use the availability of additional woody material to build and maintain dams within the reach;
- Natural beaver dams are usually fish-passable;
- Reed canary grass will not be eradicated but woody vegetation can be established within it and the resultant shade will reduce grass density;
- Elevated water levels and water tables will result in greater groundwater interchange and, in combination with an enhanced riparian canopy, reduce the severity of hot water spikes in the summer.

Project Constraints:

- Avoid flooding of private driveway at downstream limit of the project area. (It is remarkable that this is the only piece of anthropogenic infrastructure that could be threatened by beaver dams/ponds in this long reach.)
- Project design/permitting will avoid activities that could trigger FEMA review.

#7: How have lessons learned from completed projects or monitoring studies informed this project?

The project team has extensive experience in implementing successful, large-scale plantings on difficult, reed-canary grass-dominated sites.

The project team also has experience in beaver management on several sites, and has used remotely-accessible staff gauges and cameras to monitor beaver activity. The project team will also be consulting with Beavers Northwest, a consulting firm specializing in beaver management and project design to encourage beavers.

The project team has examined numerous sites with beaver activity and has consulted with experts to determine the suitability of this site for beaver population expansion.

## Project Application Report - 22-1190

#8: Describe the alternatives considered and why the preferred was chosen.

Two additional project design alternatives were considered (and some may yet be implemented). These include:

- Addition of woody debris to the channel to form log jams and other structures. Additions of in-channel wood would form pools, promote bottom and bank scour, provide cover, and elevate water levels. (This alternative may still be implemented as a second phase of the project if results of the initial phase are not satisfactory.)
- Addition of woody debris, per above, with excavated side channels and off-channel habitats.

#9: How were stakeholders consulted in the development of this project? Identify the stakeholders, their concerns or feedback, and how those concerns were addressed.

All stakeholders engaged in this project are supportive of ecological restoration of this site. Stakeholders include King County Parks, who manage this natural area as part of their land inventory. The WRIA 8 Lead Entity supports this project under the Chinook Salmon Conservation Plan. The WRIA 8 grant review committee has been engaged by the project team throughout project design and have chosen to support this project through local grant funding under the Cooperative Watershed Management grant program. Presentations to the Lead Entity's Technical Committee have been received favorably. Other stakeholders include nearby and adjacent landowners. The project team has engaged onsite and in person with these stakeholders for several years now and all are supportive of the restoration at this site.

#10: Does your project address or accommodate the anticipated effects of climate change?

Yes

#10a: How will your project be climate resilient given future conditions?

A dense riparian community of woody vegetation will buffer this reach and those downstream from the effects of rising temperatures. The added structure provided by beaver dams will also dampen the effects of altered stormflows resulting from changing precipitation patterns. Elevated groundwater tables in the riparian areas will store floodwaters and act as a cold-water reservoir to combat rising water temperatures. Beaver dams have also been shown to improve the resilience of surrounding areas in the event of fires.

#10b: How will your project increase habitat and species adaptability?

By providing refugia during flood events, fish will be better able to adapt to altered flow regimes, rising water temperatures, and diminished juvenile rearing habitat in Bear Creek.

#11: Describe the sponsor's experience managing this type of project. Describe other projects where the sponsor has successfully used a similar approach.

The Ecological Restoration and Engineering Services Unit (ERES) has been designing, permitting, implementing and monitoring habitat restoration projects on King County rivers, creeks and shorelines for almost 30 years. This project team has extensive experience in successful, large-scale plantings on difficult, reed-canary grass-infested sites. Most recently, members of this project team implemented a 22-acre planting on a reed-canary grass-dominated site on Patterson Creek, in the Snoqualmie River Basin. This recent experience gives us excellent resources in terms of planning and cost-estimating. The team also includes regional beaver expert Jen Vanderhoof.

The Big Springs Creek projects, implemented by ERES several years ago, has provided a wealth of knowledge and techniques for dealing with beaver problems in a problematic area. Problems with that site have informed the selection of this site which is expected to be much more accommodating to beavers without associated flooding.

## Project Application Report - 22-1190

#12: Will veterans (including the veterans conservation corps) be involved in the project? If yes, please describe.

No

## Project Application Report - 22-1190

### Restoration Supplemental

#1: What level of design (per Appendix D) have you completed? Please attach.  
Conceptual

#1a: What level of design will be produced prior to construction?  
Final

#2: Will (or did) a licensed professional engineer design the project?  
Yes

#3: Does the project include measures to stabilize an eroding stream bank?  
No

#4: Is the primary activity of the project invasive species removal?  
No

#5: Is the primary activity of the project riparian planting?  
Yes

#5a: Will the width of your riparian planting meet or exceed the **site potential tree height** at 200-years for your site?  
Yes

#6: Describe the steps you will take to minimize the introduction of invasive species during construction and restoration. Consider how you will use un-infested materials and clean equipment entering and leaving the project area.

The project team will work with King County Noxious Weeds to ensure that best practices are followed to prevent additional invasive species from becoming established in the project footprint. King County and non-profit partners have contributed to invasive species removal in this reach and will continue these programmatic efforts here and throughout the Bear Creek watershed. Plantings installed will be purchased from reputable local native plant nurseries.

#7: Describe the long-term stewardship and maintenance obligations for the project.

The project budget will fund at least one year of intensive monitoring and maintenance after installation. The project will then be turned over to the Ecological Restoration and Engineering Services' Monitoring and Maintenance Program. The project will be monitored for effectiveness and assessed for future needs to further improve salmon habitat. The site will be turned over to King County Parks, the entity with management of this Natural Area, once project objectives have been achieved.

**Other future considerations:**

The necessity of subsequent phases of work to add large wood and or beaver dam analogues (BDA's) to the reach will be determined based on monitoring response of the channel to the initial treatment. However, these measures will likely involve lengthy permitting timelines to comply with FEMA and County flood regulations.

### Restoration Metrics

**Worksite: Middle Bear Creek Natural Area, adjacent easement (#1)**

|                                                               |                                                    |
|---------------------------------------------------------------|----------------------------------------------------|
| Miles of Stream and/or Shoreline Treated or Protected (C.0.b) | 0.63                                               |
| Project Identified In a Plan or Watershed Assessment (C.0.c)  | WRIA 8 Chinook Salmon Conservation Plan            |
| Priority in Recovery Plan                                     | Tier 1 subbasin of WRIA 8 Salmon Conservation Plan |

## Project Application Report - 22-1190

|                                                    |                                                                                                                                                                     |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type Of Monitoring (C.0.d.1)                       | Implementation Monitoring                                                                                                                                           |
| Monitoring Location (C.0.d.2)                      | Onsite                                                                                                                                                              |
| <b>RIPARIAN HABITAT PROJECT</b>                    |                                                                                                                                                                     |
| Total Riparian Miles Streambank Treated (C.5.b.1)  | 0.63                                                                                                                                                                |
| Total Riparian Acres Treated (C.5.b.2)             | 18.5                                                                                                                                                                |
| <b>Planting (C.5.c.1)</b>                          |                                                                                                                                                                     |
| Total cost for Planting                            | \$410,000                                                                                                                                                           |
| Species Of Plants planted in riparian (C.5.c.2)    | Salix spp., Populus balsimifera,<br>Physocarpus capitatus, Thuja plicata,<br>Pseudotsuga menziesii, Lonicera<br>involucrata, Acer circinata, Fraxinus<br>latifolia. |
| Acres Planted in riparian (C.5.c.3)                | 18.5                                                                                                                                                                |
| Miles of streambank planted (C.5.c.4)              | 0.60                                                                                                                                                                |
| Average Riparian Width                             | 300                                                                                                                                                                 |
| Site Potential Tree Height at 200 years (SPTH-200) | 105                                                                                                                                                                 |

## Project Application Report - 22-1190

### Overall Project Metrics

**COMPLETION DATE**

Projected date of completion

06/30/2024

**Note:** June 2023

### Restoration Cost Estimates

**Worksite #1: Middle Bear Creek Natural Area, adjacent easement**

| Category                 | Work Type                    | Estimated Cost | Note |
|--------------------------|------------------------------|----------------|------|
| Riparian Habitat Project | Planting (C.5.c.1)           | \$410,000      |      |
|                          | Subtotal:                    | \$410,000      |      |
|                          | Total Estimate For Worksite: | \$410,000      |      |

**Summary**

|                                    |           |
|------------------------------------|-----------|
| Total Estimated Costs:             | \$410,000 |
| Total Estimated Restoration Costs: | \$410,000 |

### Cost Summary

|                          | Estimated Cost | Project % | Admin/AA&E % |
|--------------------------|----------------|-----------|--------------|
| <u>Restoration Costs</u> |                |           |              |
| Restoration              | \$410,000      |           |              |
| SUBTOTAL                 | \$410,000      | 100.00 %  |              |
| Total Cost Estimate      | \$410,000      | 100.00 %  |              |

### Funding Request and Match

**FUNDING PROGRAM**

|                       |           |         |
|-----------------------|-----------|---------|
| Salmon State Projects | \$200,000 | 48.78 % |
|-----------------------|-----------|---------|

**SPONSOR MATCH**

Other Monetary Funding                      Grant - Local

Amount \$210,000.00

Funding Organization King County Flood Control District

Grant Program Cooperative Watershed Management

Match Total:                      \$210,000    51.22 %

Total Funding Request (Funding + Match):                      \$410,000    100.00 %

### Questions

#1: Explain how you determined the cost estimates

The cost estimate was derived by analyzing the expenses and spending patterns associated with a very similar project recently implemented on Patterson Creek. This project was of similar size (though a bit larger) and with similar conditions (wide, flat riparian areas dominated by dense reed canary grass). ERES has implemented many similar projects over the last two decades.

## Project Application Report - 22-1190

### Cultural Resources

#### Worksite #1: Middle Bear Creek Natural Area, adjacent easement

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

Planting, installation of habitat poles in channel.

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

Cottonwood poles may be installed to depths of up to 4 feet. Other plantings will likely only disturb 1-2 feet of soil. This level of disturbance will occur throughout the project area.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

None.

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

The project encompasses 67 acres in the unincorporated community of Cottage Lake. Bear Creek flows south near the western edge of the project. The reach of Bear Creek at the project location is situated on an aggradational landform within a proglacial drainage that emerged as a result of glacial retreat during the Pleistocene-Holocene transition. The project site is situated near the northern boundary of an extensive wetland encompassing Bear Creek downstream. Vegetation communities consist of wetland and low elevation maritime forest taxa (Kopperl et al. 2016:36). The project area is dominated by tall reed canary grass (*Phalaris arundinacea*), with scattered shrubs, deciduous trees, and stands of bracken fern (*Pteridium aquilinum*), red alder (*Alnus rubra*), and hardhack (*Spiraea douglasii*) present throughout. The project slopes northeast to southwest, from approximately 180 to 140 feet above sea level. The site has no evident history of development or use other than agricultural (in the distant past), and a concrete bridge that crosses Bear Creek, likely installed by a previous owner who hoped to develop the property. The only other structure on the site is a small dilapidated storage shed.

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

No

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

No

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

Yes

#7a: Summarize the previous cultural resource review; including lead agency and date of review, reference name and numbers, etc. If RCO, include the prior phase grant number. NOTE: Do not provide any site-specific information considered confidential. Attach previous surveys or other reference documents.

Bear Creek – Seawest Granston Project, Cultural Resources Risk Assessment, King County, Washington.  
Lead agency: King County. 11/25/2020.  
DAHPP Project Tracking #: 2020-11-07264  
KCHPP Request Number: 20-120

A 7.5 acre portion of the site was surveyed by King County Parks Archaeologist Brandy Rink in 2018, prior to a small planting in that area.

#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

Yes

## Project Application Report - 22-1190

#8a: Please name the area and specify when the site was established.

Middle Bear Creek Natural Area, King County Parks;  
acquired and established 2011.

#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

Yes

#9a: List the structure(s) and the properties that they are located within the project area. Identify which structures will be removed or altered as part of this proposal. Attach at least one photo of each structure. The photo must be labeled so that the structure may be geographically located within your project area.

Shed - no structures will be altered or removed under this project.

### Project Permits

| Permits and Reviews        | Issuing Organization | Applied Date | Received Date | Expiration Date | Permit # |
|----------------------------|----------------------|--------------|---------------|-----------------|----------|
| None - No permits Required |                      |              |               |                 |          |

### Permit Questions

#1: Are you planning on using the federal permit streamlining process? [Limit 8](#)

No

N/A

## Project Application Report - 22-1190

### Attachments

#### Required Attachments

3 out of 6 done

|                                     |   |
|-------------------------------------|---|
| Applicant Resolution/Authorizations | ✓ |
| Cost Estimate                       |   |
| Landowner acknowledgement form      |   |
| Map: Restoration Worksite           |   |
| Photo                               | ✓ |
| RCO Fiscal Data Collection Sheet    | ✓ |

#### PHOTOS (JPG, GIF)

Photos (JPG, GIF)



# 500165

#### PROJECT DOCUMENTS AND PHOTOS

Project Documents and Photos

| File Type | Attach Date | Attachment Type                               | Title                                                       | Person   | File Name, Number Associations                                                        | Shared |
|-----------|-------------|-----------------------------------------------|-------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|--------|
|           | 02/22/2022  | RCO Fiscal Data Collection Sheet              | FiscalDataCollectionSheet 2.22.22.pdf                       | DeniseD  | FiscalDataCollectionSheet 2.22.22.pdf, 501353                                         |        |
|           | 02/22/2022  | Applicant Resolution/Authorizations           | RCO SRFB Grant Application Authorization_KCWLR Form_Seawest | DeniseD  | RCO SRFB Grant Application Authorization_KCWLR Form_Seawest Granston 2022.pdf, 501346 | ✓      |
|           | 02/10/2022  | Cultural Resource Screening Report            | SG HPP review.pdf                                           | WilliamO | SG HPP review.pdf, 500166                                                             | ✓      |
|           | 02/10/2022  | Photo                                         | Rinck 2018 ProbesMap.jpg                                    | WilliamO | Rinck 2018 ProbesMap.jpg, 500165                                                      | ✓      |
|           | 02/10/2022  | Cultural Resources: Cultural Resources Survey | CRC Tech Memo #2008H-1 Seawest Granston Project.pdf         | WilliamO | CRC Tech Memo #2008H-1 Seawest Granston Project.pdf, 500164                           |        |

### Application Status

Application Due Date: 06/27/2022

| Status Name    | Status Date | Submitted By | Submission Notes |
|----------------|-------------|--------------|------------------|
| Preapplication | 02/04/2022  |              |                  |

I certify that to the best of my knowledge, the information in this application is true and correct. Further, all application requirements due on the application due date have been fully completed to the best of my ability. I understand that if this application is found to be incomplete, it will be rejected by RCO. I understand that I may be required to submit additional documents before evaluation or approval of this project and I agree to provide them.

Date of last change: 02/22/2022