

WRIA 9 2020 Funding Package

Suzanna Smith, Habitat Projects Coordinator

Thursday, May 14th | Watershed Ecosystem Forum Meeting

- **To view submitted application materials, please visit:**
<https://app.box.com/s/vjwgy94wdf1g0qskh9p9piw0g8trhju9>
- **To provide comments on any project application, please visit:**
<https://app.smartsheet.com/b/form/dd0ea832516a499e99a1fbfacef7ae2c>

Decision Item: To consider for approval the 2020 WRIA 9 project list as presented for Flood Control District Cooperative Watershed Management (CWM), Salmon Recovery Funding Board (SRFB), and Puget Sound Acquisition and Restoration (PSAR) funding.

EXPENDITURES	Flood Control District CWM	2020 and 2021 SRFB	2021-23 PSAR	PROJECT TOTALS
TOTAL FUNDING AVAILABLE	\$3,629,073	\$591,789	\$1,100,987	\$5,321,849
<i>ReGreen the Green</i>				
Revegetation Grant Round	\$500,000			\$500,000
SUBCATEGORY SUBTOTAL	\$500,000			
<i>Project Support and Implementation Fund</i>				
WRIA 9 Capital Projects Implementation	\$137,900			\$137,900
SUBCATEGORY SUBTOTAL	\$137,900			
<i>High Priority Project Implementation Fund</i>				
Downey Farmstead	\$1,398,422	\$295,895	\$400,987	\$2,095,304
Lones Levee Setback - Construction	\$690,704	Alternate	\$200,000	\$890,704
McSorley Creek Final Design		\$295,895 (2021)	\$500,000	\$795,895
Gilliam Creek Feasibility – Match Funds	\$100,000		Alternate	\$100,000
Flaming Geyser Design Match	\$150,000			\$150,000
NE Auburn Creek (LG- 5) Feasibility	\$200,000			\$200,000
Dockton Beach Preservation & Restoration	\$95,000			\$95,000
Midway Creek Culvert Removal	\$25,047			\$25,047
SUBCATEGORY SUBTOTAL	\$2,659,173	\$591,789	\$1,100,987	
<i>Education/Stewardship Fund</i>				
Environmental Science Center	\$40,000			\$40,000
Seattle Aquarium Beach Naturalist Program	\$30,000			\$30,000
SUBCATEGORY SUBTOTAL	\$70,000			
<i>Monitoring Fund</i>				
Middle Green River Smolt Trap	\$80,000			\$80,000
King County Shoreline Armoring Survey	\$42,000			\$42,000
Lower Green PIT Tag* Array	\$100,000			\$100,000
Puget Sound Economic Study Phase 2	\$40,000			\$40,000
SUBCATEGORY SUBTOTAL	\$262,000			
EXPENDITURES TOTAL	\$3,629,073	\$591,789	\$1,100,987	
TOTAL FUNDING AVAILABLE	\$3,629,073	\$591,789	\$1,100,987	
REMAINING AVAILABLE AMOUNT	\$0	\$0	\$0	

*Passive Integrated Transponder (PIT) Tags

2020 WRIA 9 Regreen the Green Small Grants Program

Project Name	Project Sponsor	<i>Funding Request</i>	<i>Total Project Cost</i>	Suggested Amount	Running Total
Lower Green River Riparian Revegetation Phase II	DirtCorps, NicoTerra, Green River Coalition	<i>\$144,835</i>	<i>\$158,835</i>	\$95,000	\$95,000
Auburn Community Riparian Restoration	Midsound Fisheries Enhancement Group	<i>\$139,953</i>	<i>\$169,953</i>	\$70,000	\$165,000
2020 Green-Duwamish King County Revegetation Coordination Project – Phase One	King County	<i>\$80,020</i>	<i>\$157,520</i>	\$80,000	\$245,000
Duwamish River Re-Greening Maintenance and Restoration	Earth Corps	<i>\$99,538</i>	<i>\$104,388</i>	\$80,000	\$325,000
Lower Green Basin-Wide Stewardship Expansion Project	Forterra	<i>\$63,118</i>	<i>\$63,118</i>	\$55,000	\$380,000
Tukwila’s “Green the Green” Shoreline Revegetation Project, Phase 3	City of Tukwila	<i>\$50,000</i>	<i>\$70,000</i>	\$50,000	\$430,000
Riverton Creek Flapgate Removal Project	City of Tukwila	<i>\$50,000</i>	<i>\$174,219</i>	\$50,000	\$480,000
Soos Creek Basin Community Building, City of Kent/Green River Collaboration	Green River Coalition, City of Kent	<i>\$77,000</i>	<i>\$88,250</i>	\$20,000	\$500,000

Projects not awarded funding this year:

Green Duwamish Student Stewards Phase II	Midsound Fisheries Enhancement Group	<i>\$70,000</i>	<i>\$120,000</i>	\$0	\$500,000
Upper Green River Tree Planting	City of Tacoma Water	<i>\$25,887</i>	<i>\$33,869</i>	\$0	\$500,000

“ReGreen the Green” Revegetation Projects

Total number of grant applications: Ten

Total funding request: \$800,351 (Total available CWM funding = \$500,000)

Lower Green River Riparian Revegetation Phase II River Mile 13

Sponsor: Michael Taton, Operations Manager, Green River Coalition

This continued restoration project in Tukwila will expand the geographic scope of the 2019 CWM Lower Green River Riparian Revegetation (Phase I) grant by including high priority sites on both sides of the Green River. Work will remove invasive plants and replace them with native four-season shade trees (typically conifers) and a diverse riparian tree and shrub layer. This will be accomplished by additional planning and development actions on public and private access lands within RM 13. Work will include staff, professional crews, training crews, and volunteers with educational opportunities.

Grant Request: \$144,835 | **Total Project Cost:** \$158,835 | **Suggested Amount:** \$95,000

Auburn Community Riparian Restoration

Sponsor: Jeanette Dorner, Executive Director, Mid Sound Fisheries Enhancement Group

Mid Sound Fisheries will continue comprehensive riparian revegetation throughout Auburn along the Lower Green River in Auburn utilizing professional restoration crews, Green River Coalition Interns, and community volunteers. Invasive species control, planting native trees and shrubs, and critical maintenance of recent plantings including mulching, weeding, and watering of multiple sites will ensure plant survival and increase critical shade along the Lower Green River with public and private landowners.

Grant Request: \$139,953 | **Total Project Cost:** \$169,953 | **Suggested Amount:** \$70,000

2020 Green-Duwamish King County Revegetation Coordination Project – Phase One

Sponsor: Margaret Wagner, Noxious Weed Control Specialist, King County Noxious Weed Control Program

With this grant, we propose the initial phase of a five-year plan to continue landscape-scale high-priority noxious weed control, stewardship and restoration work in the riparian buffer on the Green-Duwamish River, implement planting projects, and facilitate integration of multiple partners and funders into more effective corridor-scale ecological restoration.

Grant Request: \$80,020 | **Total Project Cost:** \$157,520 | **Suggested Amount:** \$80,000

Duwamish River Re-Greening Maintenance and Restoration

Sponsor: Whitney Bowman, Project Manager, EarthCorps

The 2020 Re-Green the Green restoration activities cover 2 acres (85,000sqft) across three sites of high priority and critical areas along the Duwamish River. Two of the proposed sites, River mile 8 (adjacent the BECU sites) and the Tukwila Community Center will have continued

stewardship and maintenance through crew and volunteer work. The third site, the Duwamish 2020 revegetation, builds upon previous restoration efforts implemented in 2012, by continuing invasive removal and native plant installations.

Grant Request: \$99,538 | **Total Project Cost:** \$104,388 | **Suggested Amount:** \$80,000

Lower Green Basin-Wide Stewardship Expansion Project

Sponsor: Christine Stephens, Riparian Restoration Stewardship Coordinator, Forterra

Forterra proposes to expand its habitat enhancement work on the Green and Duwamish Rivers through 3 new planting projects and continued maintenance of previous, successful revegetation projects funded through past iterations of this grant program. In addition, we intend to use funding from this grant to prioritize and recruit stakeholders for future restoration and habitat enhancement work of the Green and Duwamish Rivers and the Springbrook Creek tributary.

Grant Request: \$63,118 | **Total Project Cost:** \$63,118 | **Suggested Amount:** \$55,000

Tukwila's "Green the Green" Shoreline Revegetation Project, Phase 3

Sponsor: Mike Perfetti, Habitat Project Manager, City of Tukwila

This funding will provide two years of maintenance for two in-progress restoration sites along the Green River in Tukwila. Both project sites are within the Lower Green River sub-watershed, which is within the WRIA 9 planning and action area. The JSH property is located along the left bank of the Green River at RM 11.5 in Tukwila; and the Harnish Group (NC Machinery) property is located along the left bank of the Green River at RM 13.6 in Tukwila. Together, the restoration sites are shown as a combination of "critical", "high" and "medium" need areas in the Riparian Aspects Map.

Grant Request: \$50,000 | **Total Project Cost:** \$70,000 | **Suggested Amount:** \$50,000

Riverton Creek Flapgate Removal Project

Sponsor: Mike Perfetti, Habitat Project Manager, City of Tukwila

This grant request is for the revegetation portion of the project will improve habitat conditions along the lower 1,200 lineal feet of Riverton Creek and along the adjacent Duwamish River segment to the east by restoring fish access between the creek and the Duwamish River, providing off-channel rearing habitat for five species of anadromous salmon and trout, including ESA listed Chinook and Steelhead. Overall project restoration will include a) adding large wood to the creek channel, b) removing invasive vegetation and installing native plants c) daylighting the creek and replacing two perched culverts and flapgates with a bridge for the regional Green River Trail.

Grant Request: \$50,000 | **Total Project Cost:** \$174,219 | **Suggested Amount:** \$50,000

Soos Creek Basin Community Building, City of Kent/Green River Collaboration

Sponsor: Michael Taton, Operations Manager, Green River Coalition

Continued restoration within the Soos Creek Basin by adding additional sites and expanding project areas in the city of Covington, and King County. We will expand our partnership with the city of Kent through work on Riverview Park (main stem, lower Green River), as well as an initial site in Kent's lower section of the Mill/Springbrook Creek tributary to the Duwamish River (we are working with Kent to identify additional sites).

Grant Request: \$77,000 | **Total Project Cost:** \$88,250 | **Suggested Amount:** \$20,000

Upper Green River Tree Planting

Sponsor: Natalie Jones, Restoration Biologist, Tacoma Water

Tacoma Water is proposing a project to enhance habitat on the south side of the upper Green River. The bulk of the project is planting trees on a 1.53-acre plot adjacent to the river. The purpose of this project is to add riparian buffer to a section of the upper Green River in order to improve habitat for future salmon populations. The timing of the project is such that we can plant younger (more cost-effective) trees and shrubs in the near-term, giving them time to grow into a more mature buffer zone by the time fish are added to the system. Our goal is to create shade, and provide bank stabilization, sediment control, and organic litter to this stretch of the river. To do this, we will plant a diversity of tree and shrub species, including both deciduous and evergreen species, along the upper Green River.

Grant Request: \$25,877 | **Total Project Cost:** \$33,869 | **Suggested Amount:** \$0

Green Duwamish Student Stewards Phase 2

Sponsor: Jeanette Dorner, Executive Director, Mid Sound Fisheries Enhancement Group

Mid Sound Fisheries will partner with Sustainability Ambassadors and the Green River Coalition to expand the Green Duwamish Student Stewards program connecting three to five middle and high school classes with priority riparian restoration sites in the watershed. With training and help students will design and implement restoration plantings on 3 to 5 acres, planting up to 4,000 native trees and shrubs.

Grant Request: \$70,000 | **Total Project Cost:** \$120,000 | **Suggested Amount:** \$0

High Priority Capital Projects

Downey Farmstead

Location/River Mile: City of Kent; river mile (RM) 21.5 and 22.3 along the inside meander bend

2005 Salmon Recovery Plan Project Number: LG – 7; Suite of projects to restore habitat along the mainstem and lower sections of the Lower Green.

Sponsor: Melissa Dahl, Environmental Engineer, City of Kent

Capital budget Request: CWM = \$1,398,422; SRFB = \$295,895; PSAR = \$400,987; Total project cost \$6.8M

Overview of Project: This final phase of the Downey Farmstead restoration project will restore salmonid habitat on the Lower Green River by creating 1875 linear feet of side channel habitat that will be available at a range of flows during the juvenile outmigration period, reconnect 16 acres of floodplain, and revegetate one-half mile of riparian corridor in an area that has been greatly altered from historical conditions.

Impact: Overall project goals, as identified in the WRIA 9 Salmon Habitat Plan, are to restore habitat along the Lower Green River by:

- Creating rearing and flood refuge habitat for juvenile salmon;
- Reconnecting mainstem and tributaries with portions of the floodplain;
- Installing anchored large woody debris; and
- Controlling invasive plant species and planting with native plants.

While the project is focused on juvenile Chinook salmon needs, the project also addresses the limiting factors and habitat needs of steelhead and coho. It will also provide over one-half mile of south bank shade over an extremely temperature-impaired river segment. These goals will be met once the restoration phase of the project is constructed.

Lones Levee Setback – Final Construction

Location/River Mile: RM 38; Near Auburn

2005 Salmon Recovery Plan Project Number: MG - 9

Sponsor: Josh Kahan, Middle Green Basin Steward, King County Water and Land Resources Division

Capital budget Request: CWM = \$690,704; SRFB = \$200,000; Total cost \$7M

Overview of Project: King County Department of Natural Resources and Parks proposes to restore a dynamic mosaic of riverine and floodplain habitats along 0.3 mile of the Middle Green River (River Mile 38) off Green Valley Road about six miles east of the City of Auburn. With this grant, the County will have secured the balance of funding necessary to construct the project in 2020. This grant will be used for channel reconfiguration and connectivity work. Overall, the larger restoration project will:

- Remove 1,600-foot-long levee to enhance channel migration, channel splitting, sediment dynamics, floodplain connectivity, and wood recruitment/retention
- Redistribute native gravel from the levee's core to adjacent river and floodplain
- Place large wood throughout the floodplain and river, including an oxbow (remnant channel)
- Excavate a small side channel to promote flows into a historic river channel
- Remove invasive plants and revegetate restored lands with native vegetation
- Construct 1,300-foot long setback revetment to protect farmland from erosion
- Construct 600-foot long setback levee to reduce flooding potential on farmland
- Construct additional downstream erosion protection features (if necessary) to moderate future channel migration
- Construct 2,500-foot long gravel road for long-term monitoring/maintenance of new facilities

The levee, constructed in 1960, is failing and confines the river channel, preventing habitat-forming processes in the floodplain. The project goal is to improve salmonid rearing and spawning habitat throughout 80 acres of forested floodplain to increase the freshwater survival of ESA listed Chinook and Steelhead, and other salmonids.

While the mouth of Burns Creek (which flows into the Green River near the eastern portion of Lones Levee) will likely be manipulated through the construction (and for salmonid benefit) of this project, most of the lower 0.5 miles are intended to be restored via a future separate restoration project.

Impact: With the levee removal, the Green River would be allowed to re-occupy and reset old meander bends and channel migration zones, improving the diversity of habitat for salmonids and other species.

McSorley Creek Final Design

Location/River Mile: Nearshore, Des Moines, [Saltwater State Park](#)

2005 Salmon Recovery Plan Project Number: NS – 15: McSorley Creek Pocket Estuary Restoration in Des Moines

Sponsors: Sarah McCarthy, Supervising Ecologist and Project Manager, King County Water and Land Resources Division; Lisa Lantz, Stewardship Manager, Washington State Parks

Capital Budget Request: SRFB = \$295,895; PSAR = \$500,000 (Cost increase request for final design)

Overview of Project: The goals of the project are to: (1) remove rock armoring along McSorley Creek, (2) restore stream habitat, and (3) remove marine shoreline armoring to the maximum extent possible while protecting cultural resources (e.g., historical fire pit) and infrastructure (including buildings at the top of the bluff) and enhancing low-impact recreational activities. The objectives of the project, once fully designed and built are:

- removal of fill material to restore natural ecosystem processes to 1 acre of intertidal habitat at the creek delta;
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- restoration of the stream channel, for approximately 400 feet upstream of the mouth, including removal of rock armoring along approximately 150 feet of both banks of McSorley Creek upstream from the mouth;
- removal, or replacement with soft shoreline protection, of as much of the 1,445 feet of marine shoreline armoring as possible to maximize habitat benefits while maintaining protection of known cultural resources; and
- enhancement of low-impact marine recreation opportunities.

Impact:

- Restore natural ecosystem processes to 1 acre of intertidal habitat at the creek delta,
- Remove 1,000 ft of shoreline bulkhead to reconnect the bluff with the nearshore,
- Remove approximately 1.7 acres of intertidal beach fill, and
- Restore sediment dynamics for 1.5 miles of beach downdrift of the park.

Gilliam Creek Feasibility and Design – Match Funding

Location/River Mile: RM 12.5 Left Bank; on the Green River at the confluence with Gilliam Creek in the highly developed Southcenter area of Tukwila

2005 Salmon Recovery Plan Project Number: Project LG-16: Gilliam Creek Fish Passage Improvements and Riparian Rehabilitation at RM 12.5 (Left Bank)

Sponsor: Mike Perfetti, Habitat Project Manager, Public Works Department, City of Tukwila

Capital Budget Request: CWM = \$100,000 (Feasibility and Design Total Cost ~\$450,000)

Overview of Project: The Gilliam Creek Fish Barrier Removal and Habitat Enhancement Project seeks will create fish passage between Gilliam Creek and the Green River in Tukwila. Gilliam Creek is mostly inaccessible to aquatic species due to the presence of a 1960s era 108”-diameter flapgate at the outlet of a 207-foot long culvert beneath 66th Ave. S.

Impact: The project goals aim to address some of the identified limiting factors, with attention to improving conditions for juvenile ESA-listed Puget Sound Chinook salmon. The goals are:

- Improve fish passage into Gilliam Creek - by replacing the existing barriers, the goal is to create juvenile fish access into the creek system 99% of the time.
 - Improve Green River and Gilliam Creek fish habitat -improve tributary habitat types - river, convergence, backwater and confluence. King County data of lower Green streams showed that convergence habitats had the highest density of juvenile Chinook; this is the segment of the stream where the water surface elevation was influenced by the level of the river, but still had flowing water predominantly from the stream source.
 - Maintain or improve flood protection - the project will at least maintain the flood protection; there will be coordination with future plans.
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- Create awareness of salmon recovery efforts along the trail.

Flaming Geyser Feasibility and Revegetation

Location/River Mile: RM 43 on the south side (left bank) of the Green River

2005 Salmon Recovery Plan Project Number: Project MG-5: Flaming Geyser Slide Sediment Management at RM 43 (Left Bank)

Sponsor: Josh Kahan, Middle Green Basin Steward, King County Water and Land Resources Division

Capital budget Request: CWM = \$150,000

Overview of Project: This proposal is to implement phase 1 of riparian plantings that would occur along the Green River and associated side channels, drainages, and wetlands through Flaming Geyser State Park. Cultural resources will continue to be discussed with King County (KC), Muckleshoot Indian Tribe MIT), and WA State Parks (SP) and all requirements will be met prior to and during planting. KC is currently requesting SWM funds to contribute to this effort. In time, this restoration project will improve fish and wildlife habitat and water quality, including temperature, of the Green River. This project proposal is in response to the MIT Sun Map and the WA Ecology TMDL for water temperature in the Green River.

Impact: Remove hardened material on 1,000' of levee. Add large trees with root wads to the river channel. Move levee gravels into river channel. Plant hundreds of native trees, shrubs. Expected outcomes: Significant/immediate improvement of salmon rearing habitat, which, over time can result in 15 acres or more being created as the river traverses an unconstrained floodplain.

NE Auburn Creek (LG- 5) Feasibility and Design

Location/River Mile: RM 25.3 Left bank

2005 Salmon Recovery Plan Project Number: Project LG-5: Northeast Auburn Creek Rehabilitation at RM 25.6 (Left Bank)

Sponsor: Katie Beaver, Lower Green Basin Steward, King County Water and Land Resources Division

Capital Budget Request: CWM = \$200,000

Overview of Project:

This project funding will help advance this project into the design phase. With funding, project team will:

- Develop and evaluate project design alternatives in terms of costs, habitat benefits, constructability, compliance with permit regulations and impacts to surrounding agricultural properties.
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- Develop conceptual design drawings
- Data collection, including hydrological data, flapgate operation, fish use of Auburn Creek and topographic survey.
- Hydraulic analysis of existing conditions and project alternatives to determine project impacts and compliance with floodplain regulations.

Overall this project will:

- Stop the likely mortality of juvenile Chinook currently occurring when they exist the hanging flapgate onto a riprap apron.
- Improve connectivity to spring rearing and refuge habitats in NE Auburn Creek by removing or replacing the existing flapgate
- Increase the amount of spring off-channel habitat for juvenile salmon in by lengthening the stream channel right before it enters the Green River. Relocation of channel will allow for proper stream gradient connection to river.
- Improve habitat conditions in NE Auburn Creek by increasing habitat complexity, woody debris and riparian cover
- Reroute NE Auburn Creek channel to connect disconnected floodplain wetland with creek, providing additional rearing opportunities for juvenile salmon

Impact:

- Increase floodplain tributary habitat length by approximately 1,300 feet through channel relocation
- Increase connectivity to approximately 14,000 feet of existing floodplain tributary channel
- Increase access to, size of, and quality of approximately 4 acres of floodplain wetland
- Restore riparian habitat for approximately 400 feet of the left bank of the Green River, greater than 165ft in width
- Increase the amount of large wood in floodplain stream channel

Dockton Beach Preservation and Restoration

Location/River Mile: Maury Island, [Drift cell](#) KI-13-8

2005 Salmon Recovery Plan Project Number: Project NS-17: Functioning Nearshore Habitat Protection on Vashon/Maury Island

Sponsor: Greg Rabourn, Vashon Steward, King County Water and Land Resources Division

Capital budget Request: CWM = \$95,000

Overview of Project: This project will acquire priority properties and remove structures from two parcels totaling .8 acres and 300 feet of shoreline near the Dockton Natural Area on Vashon-Maury Island. The CWM funding will be used to remove the structures after acquisition.

This project continues efforts to help restore chinook salmon populations by restoring and enhancing nearshore processes in the Maury Island Aquatic Reserve. Once restored the habitat

enhancements will allow for more natural shoreline function. The project will improve conditions for juvenile chinook salmon by increasing the availability of prey species (forage fish and terrestrial invertebrates) and shallow water refuge areas.

Spawning conditions for forage fish (sand lance and surf smelt) will be improved by removing shoreline armoring and intertidal fill that currently has about .4 acres of beach inaccessible to any marine life. About 350 feet of concrete armoring currently wrap the property on three sides. This project will ultimately restore the nearshore by removing this human infrastructure, shoreline armoring, and intertidal fill. Depending on the final design, some slope stabilization may eventually be needed at the new ordinary high-water mark to protect a neighboring road. Even if necessary, this would be a large ecological gain over the existing configuration.

This phase of the project will acquire the property and remove the infrastructure (house, carport and shed) and will allow the project to move forward into design. This project is one step in preserving and restoring 4000' of shoreline at Dockton Natural Area.

In addition to the WRIA 9 Salmon Habitat Plan, this project is supported by WA DNR's Maury Island Aquatic Reserve Management Plan which states as its first goal "Protect, enhance and restore the integrity of natural nearshore habitats and function of shoreline processes for the benefit of native plants and wildlife."

Impact: This project will acquire and restore about 5 acres of nearshore habitat with approximately 2000 feet of shoreline, primarily feeder bluff.

Midway Creek Culvert Removal

Location/River Mile: Midway Creek, 276 meters (905 ft) upstream from mouth with Green River (RM 19.6)

2005 Salmon Recovery Plan Project Number: Fish passage, sub-project under LG-33 (Midway Creek Wetland Complex)

Sponsor: Katie Beaver, Lower Green Basin Steward, King County Water and Land Resources Division

Capital budget Request: CWM = \$25,029

Overview of Project: The objective of this project is to remove an abandoned culvert and associated fill to allow upstream access to off-channel habitat for both non-natal rearing juvenile Chinook as well as adult and juvenile coho.

This project encompasses ~ 15' of stream channel, roughly 15' wide. This is a small culvert with dirt/fill on top. This project would entail fill removal, culvert removal, regrading the stream to natural conditions, and installing erosion control/planting for ~400 square feet. The expected outcome would be restoring this short section of stream to its natural geometry and vegetated state.

Impact: This project would provide access to ~12 acres of high-quality floodplain wetland for juvenile salmon flood refuge and non-natal rearing habitat. This would also provide passage to adult coho, and 0.25 miles of stream habitat above the floodplain wetland.

Alternate - Pt. Heyer Acquisition Strategy Implementation

Location/River Mile: Eastern side of Vashon Island

2005 Salmon Recovery Plan Project Number: NS – 17: Functioning Nearshore habitat protection on Vashon/Maury Island

Sponsor: Greg Rabourn, Vashon Steward, King County Water and Land Resources Division

Capital budget Request: Alternate project (up to \$650,000)

Overview of Project: King County Water and Land Resources proposes to purchase two target properties with a total of 990 feet of feeder bluffs located in the south reach of the Pt. Heyer Drift Cell (PHDC) shoreline on the east side of Vashon Island in central Puget Sound. Acquiring this property will preserve the sediment supply to the largest (and last) remaining barrier lagoon in King County with a 5+ acre salt marsh which provides important refuge and rearing habitat for juvenile salmonids. All the parcels in the drift cell are prioritized for acquisition. If King County is unsuccessful in acquiring the target properties, they will move on to other Tier 1 and 2 parcels.

The long-term goal of this project is to protect roughly 10,500 feet of the Pt. Heyer Drift Cell, which begins at the feeder bluffs at Vashon Landing and terminates 2.2 miles to the south at the Pt. Heyer barrier lagoon. As of March 2019, this effort has protected 13 parcels, totaling 72 acres and 3,646 feet of marine shoreline. Chinook, chum, coho, cutthroat, pink, and steelhead are known or expected to be present along the eastern shoreline of Vashon Island. Forage fish, which are a key food source for salmon, also spawn along the drift cell. Ongoing stewardship maintenance, including invasive species and litter monitoring and removal, will continue indefinitely.

Impact:

- 2,650 feet of high-quality shoreline
 - 3.5 riparian acres
 - 5.3 acres of salt marsh
 - 2 upland acres
 - 13 tideland acres
-

Education and Stewardship Investments

Policy ES1: Support vigorous education/information efforts to promote greater awareness of the watershed, its resources – including salmon – and how people depend on and affect those resources.

Environmental Science Center's Changing Behaviors: Improving Watershed Health and Salmon Habitat Through Education and Outreach

Sponsor: Kelly Steffen, Grant and Program Coordinator, Environmental Science Center

Environmental Science Center will increase public awareness of watershed health and salmon habitat protection through student field studies, educational outreach, and community events. This project will encourage people in WRIA 9 to make positive behavior changes to improve water quality of Puget Sound and protect salmon habitat.

Local field studies help students to learn about their watershed and begin the process of developing a sense of place. Both our school and community programs serve to raise awareness, deepen knowledge, and change behaviors of students and community members. The programs use “take action now” messaging to ask people to make a commitment to reduce their footprint on salmon habitat. Participants gain tools, information, and resources to start making positive behavior changes which improve watershed health and salmon habitat.

Grant Request: CWM = \$40,000 | **Total Project Cost:** \$138,770

Seattle Aquarium Beach Naturalists Program

Sponsor: Charlotte Spang, Field Outreach Coordinator, Seattle Aquarium

The Beach Naturalist program is a public education and outreach program designed to engage Puget Sound community members in learning how to protect and conserve the nearshore environment. Beach Naturalists seek to motivate behavioral change by raising public understanding about the value and fragility of the intertidal ecosystem, salmon, the nearshore and Puget Sound.

The Beach Naturalist program takes place in the Central Puget Sound Watershed, subwatershed marine nearshore at the following locations: Olympic Sculpture Park pocket beach, South Alki/Constellation Park, and Lincoln Park in Seattle; Seahurst Park in Burien; Des Moines Beach Park; Saltwater State Park, Redondo Beach in Des Moines; and Dash Point State Park in Federal Way.

Naturalists record their contacts on journal forms completed after each beach shift using tally counters. There were over 61,791 general contacts, including 36,869 on eight WRIA 9 beaches, in 2019.

Grant Request: CWM = \$30,000 | **Total Project Cost:** \$158,892.09

Monitoring and Research Projects

Green River smolt monitoring plus PIT tagging – 2021 field season

Sponsor: Joe Anderson, Research Scientist at Washington Department of Fish and Wildlife

We are requesting funds to operate a smolt trap (located in the Green River in the lower part of the Middle Green subwatershed, at approximately River Mile 34.5) capturing downstream migrating juvenile salmon, an ongoing monitoring project that has provided essential abundance, productivity and life history diversity data on salmonids, including ESA-listed Chinook salmon and steelhead trout, in the Green River since 2000. For the 2021 field season, the project has added a new element: inserting PIT tags into juvenile salmonids to understand habitat use of the lower river, in partnership with King County researchers.

Grant Request: CWM = \$80,000 | **Total Project Cost:** \$80,000

WRIA 9 Marine Shoreline Monitoring and Compliance Project: Phase 3

Sponsor: Kollin Higgins, Senior Ecologist King County WLRD, Science and Technical Support Section

The proposed project would undertake boat-based surveys of the 92 miles of WRIA 9's marine shoreline in the summer of 2021 to evaluate changes in marine shoreline condition (e.g. armor, vegetation, overwater structures, etc.). This phase will build from and repeat the two previous shoreline assessments. The project is intended to produce trend data and establish baseline data prior to launching the Shore Friendly King County collaborative program between the King Conservation District, Mid-Sound Fisheries Enhancement Group, WRIA 9, and King County.

Grant Request: CWM = \$42,000 | **Total Project Cost:** \$42,000

PIT tag arrays for tracking juvenile Chinook at site-specific locations in the lower Green River

Sponsor: Chris Gregersen, Environmental Scientist III, King County WLRD, Science and Technical Support Section

This project provides additional site-specific monitoring capacity that enhances the scale of a currently funded (2018-0624) Near Term Action, which will install a mainstem PIT (passive integrated transponder) tag array in the lower Green and tag juvenile Chinook throughout the lower Green. Additionally, funding sought by WDFW through WRIA 9 CWM will PIT tag fish at their screw trap in the Middle Green to substantially increase the number of fish tagged for this overall effort. This project will install small site-specific PIT tag arrays, which can be installed almost anywhere and detect when a tagged fish passes by them. This increased geographic scope allows us to build on previous work on fish use of Green River tributaries. Data will be evaluated to compare timing, migration rates, restoration site use, and use of different habitats throughout the lower Green.

Grant Request: CWM = Up to \$110,000 | **Total Project Cost:** Up to \$410,000

Puget Sound Floodplain Restoration: Economic Study Phase 2

Sponsor: Brandon Parsons, Conservation Associate and Floodplain Restoration Lead, American Rivers

This project will quantify the economic impact of urban floodplain, waterway, waterfront, greenway and salmon habitat improvements on local communities including on property values, businesses and economic activity in the Puget Sound Region. The outcome of this project is to understand the impacts of restoration on local revenue and fiscal strength and use that information to identify incentives and sustainable funding mechanisms that can be used to finance and maintain restoration efforts in perpetuity.

Grant Request: CWM = \$40,000 | **Total Project Cost:** \$75,000
