

KING COUNTY FLOOD CONTROL DISTRICT

Signature Report

King County Courthouse 516 Third Avenue Room 1200 Seattle, WA 98104

FCD Resolution

	Proposed No. FCD2023-07.1 Sponsors
1	A RESOLUTION relating to the operations and finances of
2	the King County Flood Control Zone District; authorizing
3	the expenditure of District funds for projects and activities
4	in Water Resource Inventory Areas 7 (Snoqualmie
5	Watershed portion), 8, 9 and 10 (King County portion).
6	WHEREAS, the King County Flood Control Zone District's
7	comprehensive plan prioritizes expanded partnerships and collaborations with
8	watershed forums, and
9	WHEREAS, the King County Flood Control Zone District's
10	comprehensive plan emphasizes the consideration of fish and wildlife habitat
11	when managing flood-risk, and
12	WHEREAS, King County Flood Control Zone District ("the District")
13	seeks to protect public safety and promote the recovery of native salmon
14	species, and
15	WHEREAS, the District adopts an annual work program, budget,
16	operating budget for King County, capital budget and six-year capital
17	improvement program pursuant to chapter 86.15 RCW, and
18	WHEREAS, the District desires to continue funding watershed resource
19	inventory area ("WRIA") activities and projects that are identified using a

FCD Resolution

20	process for awarding WRIA grants in which the WRIA forums made grant
21	recommendations to the District and the King County water and land resources
22	division administers the grant processes, and
23	WHEREAS, in establishing the District's 2023 amended budget, the
24	District provided \$12,163,818 in funding for projects and activities in WRIA's 7
25	(Snoqualmie Watershed portion), 8, 9 and 10 (King County portion);
26	NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF
27	SUPERVISORS OF THE KING COUNTY FLOOD CONTROL ZONE
28	DISTRICT:
29	SECTION 1. A. The Board authorizes the funding of water quality and
30	water resources and habitat restoration projects and activities as follows:
31	1. WRIA 7 (Snoqualmie Watershed portion) - \$2,328,677;
32	2. WRIA 8 - \$5,133,490;
33	3. WRIA 9 - \$4,148,660; and
34	4. WRIA 10 (King County portion) - \$552,991.
35	B. The amounts listed in subection A. of this section are in accordance

FCD Resolution

- 36 with the projects, grant recipients and individual grant amounts described in
- 37 Attachment A to this resolution.

FCD Resolution was introduced on 7/19/2023 and passed by the King County Flood Control District on 9/12/2023, by the following vote:

Yes: 9 - Balducci, Dembowski, Dunn, Kohl-Welles, McDermott, Perry, Upthegrove, von Reichbauer and Zahilay

KING COUNTY FLOOD CONTROL DISTRICT KING COUNTY, WASHINGTON

DocuSigned by: Keogon Dum B60CACB4B3EC49E

Reagan Dunn, Chair

ATTEST: DocuSigned by: Russell Pethel 42A7D875B6B4420..

Russell Pethel, Clerk of the District

Attachments: A. 2023 Cooperative Watershed Management Grant List

WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
SNOC	QUALMIE/SF SK		ATERSHEDS IN WRIA 7			
7	Salmon in Schools 2023-2024	Sound Salmon Solutions	The Salmon in Schools program is a dynamic and hands-on education program that engages elementary through high school students in salmon education and recovery (typically 3-5th grade classes). The program brings 100 - 300 salmon directly to students, providing them with a unique opportunity to get hands-on experience with a species that has significant meaning to our ecosystem, history, and culture. Students raise coho salmon in tanks from the egg life stage to the fry life stage, and then release the fry into a local stream.	\$53,136	\$38,848	\$38,848
7	Youth Engaged in Sustainable Systems (YESS) in Riverview School District	Mountains to Sound Greenway Trust	Support the expansion of Youth Engaged in Sustainable Systems (YESS) into the Riverview School District. Through a six-week summer course with YESS (formerly EGOYH), high school students earn graduation credit and a stipend while gaining knowledge, skills, and inspiration to pursue careers in conservation and natural resources.	\$51,840	\$71,728	\$71,728
7	Community Action Training School (CATS) 2024	Sound Salmon Solutions	Empower local community members to become leaders in watershed health and salmon recovery by providing them with relevant knowledge, applicable skills, and the organizational support to implement on the ground projects. CATS will recruit at least 20 WRIA 7 residents to engage in curriculum and then design and implement a 50+ hour community-involved service project related to watershed health & salmon recovery in the basin.	\$28,540	\$26,049	\$26,049
7	2024 Snoqualmie River Juvenile Salmon Outmigration Monitoring	Tulalip Tribes	Continue the annual monitoring of juvenile salmon outmigration in the Snoqualmie River Basin utilizing a rotary screw trap located at river mile 12.2 on the Snoqualmie River in 2024. This project is part of the overall Snohomish Basin juvenile salmon out migration monitoring effort which began in 2001 and which provides ongoing status, trends and abundance monitoring needed to support run forecasting, and is a quintessential indicator of successful salmon recovery monitoring in the Snohomish Basin.	\$60,000	\$40,000	\$40,000
7	Designing Habitat Restoration Projects to Increase Juvenile Chinook Growth	King County WLRD	This study will help guide restoration practitioners towards project designs and restoration strategies that promote abundant, high-quality food resources and greater juvenile Chinook growth. This work will detail juvenile Chinook diets and food resources, which are largely unknown in the Snoqualmie River. The goal of the study is to provide a comprehensive assessment of juvenile Chinook growth, diet, and food resources across Snoqualmie River habitats.	\$10,000	\$118,040	\$118,040

ATTACHMENT A: 2	2023 COOPERATIVE WATERSHED MANAGEMENT GRANTS
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WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
7	KC Fish Passage Barrier Supplementation Phase II	Wild Fish Conservancy	Supplement KC barrier inventory and prioritization efforts by using state- sanctioned protocols to inventory and assess (~117) private structures and (~14) natural barrier data gaps where access is granted in the Raging River, Patterson Creek, Griffin Creek, and associated mainstem floodplains. The purpose of this project is to improve salmon and watershed resiliency by supporting the removal or replacement of fish passage barriers.		\$114,365	\$114,365
7	Cherry Creek and Raging River NetMap Model	Wild Fish Conservancy	Create GIS models for Cherry Creek and Raging River using LiDAR data coupled with geospatial analysis tools. The models will delineate river networks, floodplain reconnection opportunities, forested wetlands, shade and thermal loading, instream wood recruitment, road hydrologic connectivity and sediment delivery, fish and beaver intrinsic potential, landslide and debris- flow potential, among other watershed processes and landforms. The models include a suite of analysis tools to identify and prioritize process-based habitat restoration actions, science-based resource management planning, and stakeholder communication and collaboration; and provides information about where watershed integrity and human infrastructure are at risk from climate-mediated changes in hydrology.	\$300	\$80,026	\$80,026
7	2024 Snoqualmie Restoration and Project Assistance Program	King County WLRD	This is an ongoing effort managed and delivered by the Snoqualmie Watershed Forum staff to maximize success in implementing the 2005 Snohomish River Basin Salmon Conservation Plan (Salmon Plan) in the King County portion of WRIA 7. The program will (1) assist project implementers in identifying, developing and advancing high priority habitat projects, water quality improvement and planning efforts, (2) conduct Forum-led project coordination activities, and (3) support regional watershed management through policy and technical coordination.		\$130,000	\$130,000
7	Lower Miller River Floodplain Restoration Design	King County WLRD	Design a project to restore the lowermost mile of the Miller River and its floodplain at the confluence with the South Fork Skykomish River. The design will seek to maximize habitat value for ESA listed fish: Chinook, coho, chum, pink, steelhead, bull trout, and other species throughout the roughly 165-acre floodplain within the project area by removing artificial constraints on fluvial processes. This project is for design phase of a habitat restoration project, now in alternatives analysis and preliminary design phases.	\$350,000	\$400,000	\$400,000

WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
7	Fish Hatchery Road Alternatives Analysis	King County WLRD	Build on King County's recently completed feasibility study to explore concepts to improve habitat along the mainstem Snoqualmie River and reconnect off-channel habitat between Fall City and the Snoqualmie Falls. In 2020 King County Roads decommissioned the SE Fish Hatchery Road Bridge opening the opportunity to remove up to 2,000 feet of old road infrastructure (bridge and armoring) and improve the connection with habitat features in the floodplain at a range of river flow levels.	\$50,000	\$300,000	\$300,000
7	Duvall Meadows NE 147th Place Culvert Replacement	Wild Fish Conservancy	Restore fish passage to ~1/2 mile of spawning and rearing habitat in an unnamed tributary to Cherry Creek at NE 147th Place in Duvall WA. Funding is being requested for phase I: permitting and final design. Expected outcomes (after construction phase) of the project are to replace an 81' x 30" barrier culvert with a 60' x 24' bridge, install large wood debris (LWD) to improve salmonid habitat, and plant native vegetation along disturbed banks to increase species diversity, and provide cover and future LWD potential.	\$9,000	\$437,176	\$145,422
7	McKittrick Riparian Restoration	Sound Salmon Solutions	Restore 4.32 acres of riparian habitat on 1,030' of the right bank of the mainstem Snoqualmie River (RM 28) at the confluence of Griffin Creek. This project is directly upstream of Haberzetle Riparian Restoration project which is currently funded by CWM. In support of this grant, King County Noxious Weeds, will complete all invasive weed removal for the extent of the grant through the Healthy Lands Project. SSS restoration activities include the installation of 4,000 native trees and shrubs. Post planting SSS will maintain the project area to ensure 75% reduction of invasive vegetation and an 80% survival rate of installed plants.	\$25,500	\$76,080	\$76,080
7	Griffin Creek Farm West End Riparian Restoration	Stewardship Partners	Improve water quality and riparian fish and wildlife habitat on a private agricultural property along the mainstem Snoqualmie River. Goal builds on previous efforts at Griffin Creek Farm. Stewardship Partners will restore 2,000 linear feet of riparian habitat along the mainstem Snoqualmie River (14.8 acres). Buffers will average 220+ feet. Once restored, the buffer will provide a more diverse habitat, improved water quality and more shade to cool water temperature for spawning and rearing salmon	\$42,500	\$91,590	\$91,590

WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
7	Carnation Marsh Riparian Restoration Phase II	Sound Salmon Solutions	Restore a total of 10.22 acres (over both phases) of riparian habitat on 1,600 feet of the upper mainstem Snoqualmie River and 1,040 feet of an unnamed tributary, downstream of the Tolt River confluence. The property is owned by the Seattle Audubon Society and is bound by Snoqualmie Springs Farms to the north, the Snoqualmie River to the south and east, and rural residential and agricultural properties to the west. Phase II will address 5.10 acres of riparian habitat on 650 feet of the right bank Snoqualmie River and 445 feet of the unnamed tributary. Phase II is heavily infested with invasive knotweed and blackberry and RCG species along the riverbank	\$1,500	\$142,348	\$142,348
7	Chinook Bend Riparian Restoration Phase II	Sound Salmon Solutions	Restore 14.5 acres of the King County owned park, Chinook Bend Natural Area. The park is bordered by the left bank of the Snoqualmie River on the North, East and South sides, and is dominated by Knotweed, Scotch Broom and Reed Canary Grass (RCG). It has sparse and threatened native vegetation. Some sections interspersed throughout the park have very little canopy cover and the overstory is severely lacking in species diversity, particularly in native conifer presence. In 2009 King County lead a restoration project at Chinook Bend that included levee removal, floodplain reconnection, and 59 acres of revegetation. After 14 years, the park needs maintenance to address beaver impacts, plant mortality, and invasive plant proliferation.	\$6,000	\$149,846	\$149,846
7	Tollgate Forest Restoration Maintenance and Planting	City of North Bend	Continue to restore the riparian corridor throughout Tollgate Forest, improving conditions across over 100 acres of this City property and along 3,000 feet of both banks of the South Fork Snoqualmie River. This project builds upon the successful collaboration with MSGT to restore floodplain at Tollgate Forest and the opportunity to continue to protect and enhance riparian floodplain forest habitat so it doesn't degrade into its previous state.	\$10,000	\$60,355	\$60,355
7	Meadowbrook Slough Phase 6 and Riparian Maintenance	Mountains to Sound Greenway Trust	Continue to build upon prior restoration efforts at Meadowbrook Slough. Phase 6 of this multi-year restoration project will decrease habitat fragmentation by restoring an additional 4.5 acres of wetland buffer and connecting previously disconnected project phases. This proposal will also fund maintenance efforts at prior project phases to support native tree canopy establishment and prevent encroachment of weeds.	\$95,344	\$86,344	\$86,344

WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
7	South Fork Skykomish Revegetation	Sound Salmon Solutions	Improve ecosystem function of the riparian corridor to improve salmon habitat in RM 6.5 – 20 of the S Fork Skykomish River. Revegetation efforts will be performed from RM 8.3 - 12, in sections that have received a minimum of 4 years of invasive removal treatment, collectively restoring 7,590 feet of the bank, totaling 21.57 acres. This funding will also allow KC Noxious Weeds Control Program to continue invasive removal efforts from RM 6.5 to 19 including surveying 13.5 RM of critical habitat, mapping, landowner outreach permissions, and continuing herbicide treatments on 39 gross acres of the S. Fork Skykomish River.	\$10,000	\$321,010	\$65,000
7	South Fork Snoqualmie River Conservation Acquisition	King County Parks & Recreation	Acquire a conservation easement on approximately 350 acres of undeveloped forest land along the South Fork Snoqualmie River for habitat preservation. Acquiring a conservation easement on this land will prevent development of approximately 60 homes with septic systems and private wells on the forested land above the river. This project protects almost 6,000 linear feet of the South Fork Snoqualmie River protecting delivery and recharge processes, an identified priority in the Snohomish Basin Protection Plan.		\$400,000	\$192,636
			WRIA 7 Subtotals	\$803,660	\$3,083,805	\$2,328,677
WRIA	8					
8	Cedar River Rutledge Johnson Floodplain Restoration Final Design and Implementation	King County WLRD	Implement floodplain reconnection and salmon habitat restoration on the left bank lower Cedar River near the mouth of Taylor Creek reach. This will reconnect up to 16 acres of the Cedar River floodplain and remove up to 600 feet of the Rutledge Johnson levee, with the goal of restoring riverine processes that benefit Chinook, coho, sockeye, and steelhead trout. The completed project will improve in-stream and off-channel salmon habitat and increase channel complexity, creating more diverse flow conditions, and facilitating more direct connections to floodplain habitats.	\$200,000	\$2,075,480	\$2,012,110
8	Issaquah Creek In- Stream Restoration at Lake Sammamish State Park	Mountains to Sound Greenway Trust	Complete restoration improvements along the 6,600 linear feet of Issaquah Creek that flow through Lake Sammamish State Park to benefit Chinook salmon, particularly the juvenile life stage, other salmonid species, and to provide other benefits by increasing in-creek structural diversity, floodplain and side-channel connectivity, and more functional and complex refuge and foraging habitat through installation of large wood, targeted excavation, and riparian reforestation.		\$550,147	\$550,147

ATTACHMENT A: 2023 COOPERATIVE	WATERSHED MANAGEMENT GRANTS
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WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
8	Cottage Lake Creek Weir Removal and Restoration Design and Permitting	Mid Sound Fisheries Enhancement Group	The lowest fish barrier in Cottage Lake Creek, a weir formerly used for irrigation, is currently failing and creating a 67% fish passage barrier. This project will remove the weir and concrete walls just downstream of the weir, regrade the stream channel and banks, and replace existing noxious weeds with native vegetation. This funding will cover preliminary design, final design, and permitting.	\$118,000	\$283,243	\$283,243
8	Daniels Creek at 185th Ave NE Fish Passage	King County Road Services	Remove a deteriorating 6-foot-diameter culvert on Daniels Creek under 185th Ave NE between NE 179th St and NE Woodinville-Duvall Rd. The culvert will be replaced with a 101-foot bridge that spans the entire creek and adjacent wetlands.	\$1,990,505	\$600,000	\$300,000
8	May Creek Delta Restoration Design Project	Mid Sound Fisheries Enhancement Group	Assist with preliminary design, final design, and permitting of the restoration at the mouth of May Creek, where it enters Lake Washington. Mid Sound is working with the community HOA restore habitat at the mouth of May Creek. This award will fund some early phases of this project including a sediment analysis which can help inform future design alternatives.		\$270,364	\$160,000
8	Fish Passage Improvements on Little Bear Creek at 134th Avenue NE Phase 1	City of Woodinville	The City of Woodinville will remove three 60-inch deteriorating and undersized concrete culverts and replace them with a bridge on Little Bear Creek located at 134th Avenue NE. These culverts are a documented fish passage barrier by WDFW. The proposed work under Phase 1 includes stakeholder engagement, project permitting, and design.	\$21,000	\$190,000	\$190,000
8	Bear Creek Tretheway Habitat Restoration	Mid Sound Fisheries Enhancement Group	This floodplain reconnection and riparian restoration project includes 1,000 linear feet of Bear Creek north of 116th Street. The project involves adding large woody material to the stream, recontouring the stream banks, adding low velocity side channel habitat, and planting native riparian plants. WRIA 8 funded this project in prior grant rounds, and this modest cost increase will close the gap between funding awarded last year and the revised engineer's estimate.		\$35,000	\$35,000
8	Cedar River Knotweed Control and Riparian Planting	Mountains to Sound Greenway Trust	Control invasive knotweed and revegetate riparian areas on the lower Cedar River and its tributaries. The Cedar River knotweed project is in its final phase, and this will be the last three years of funding requested for knotweed control before shifting fully to riparian revegetation and periodic knotweed maintenance. This effort will build on over 15 years of work on the Cedar River to minimize the impacts of invasive knotweed and plant and restore healthy riparian buffers.	\$60,000	\$247,341	\$247,341

WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
8	Bear Creek Watershed Riparian Enhancement Program	Mid Sound Fisheries Enhancement Group	Continue critical knotweed control along the length of Bear Creek and its tributaries to minimize lapses in treatment and revegetate riparian buffers on key public and private properties where knotweed has been successfully controlled. This effort seeks to reinforce and expand knotweed control throughout the Bear Creek Watershed through landowner outreach and education to open new opportunities for future revegetation.		\$119,979	\$119,979
8	Orcas Inspiring Riparian Restoration	Whale Scout	Engage the community in restoring the Sammamish River at the Former Wayne Golf Course and Bear Creek on a private homesite, with the effort led by diverse student interns. Riparian restoration will improve habitat and water quality for Chinook salmon, lowering water temperatures and increasing cover. Additional project outcomes include increased engagement in salmon recovery efforts by a wide audience and more equitable opportunities for students to pursue careers in environmental fields.	\$15,671	\$73,122	\$73,122
8	2024 Chinook (Fish-In) Monitoring	King County WLRD	The proposed 'fish-in'monitoring involves the collection of escapement data for spawning adult Chinook in the Cedar River. The project is part an ongoing, annual, inter-agency effort to support long-term monitoring of the effectiveness of the WRIA 8 Chinook Salmon Conservation Plan.	\$2,160	\$27,982	\$27,982
8	Improving Lake Washington Juvenile Chinook PIT Tag Systems	Washington Department of Fish and Wildlife	The primary objective of this project is to describe Chinook parr-to -smolt survival using Passive Integrated Transponder (PIT) tags that are inserted into Chinook parr and then re-detected at various sites in the watershed. WDFW seeks to improve their ability to estimate juvenile survival during smolt outmigration and the marine portion of the life cycle. This award will support the portion of this work proposed for the Ballard Locks, which includes installing rigid floating antennas upstream of three of the spillways in the forebay at the Ballard Locks and replacing an antenna in the adult fish ladder.	\$178,437	\$178,437	\$145,000
8	LWSC Roundtable Data Gaps II	Long Live the Kings	Reduce the impacts of high temperature and low dissolved oxygen on salmon in the Lake Washington Ship Canal (LWSC). This work will refine cold water outfall temperature, quantity, and location estimates needed to create a continuous pathway of cold water in the LWSC and advance the feasibility of an approach from an engineering perspective.		\$133,160	\$133,160

ATTACHMENT A: 2023 COOPERATIVE	WATERSHED MANAGEMENT GRANTS
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WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
8	Artificial Light at Night and Consequent Predation Risk for Juvenile Salmon- Phase 3	US Geological Survey	Salmon predators hunt visually and increasing artificial light at night (ALAN) has expanded the spatial-temporal threat of predation to rearing and migrating juvenile Chinook, sockeye, and other key species. USGS will quantify spectral intensity patterns into estimates of predation risk in nearshore- offshore regions of Lake Washington and the Ship Canal. Conduct controlled lab experiments to parameterize a visual foraging model for northern pikeminnow in terms of reaction distances to prey fish as functions of light and turbidity.		\$125,675	\$125,675
8	Sentinel Studies to Determine Disease Factors for Chinook Salmon in Lake Washington Ship Canal	US Geological Survey	Climate change combined with water quality issues in the Lake Washington Ship Canal are stressors that increase susceptibility of Chinook salmon to pathogens and disease, including myxozoan parasites, during their respective juvenile and adult migrations. The goal of this study is to determine the temporal prevalence of pathogens associated with Chinook salmon in the ship canal by live-caging Chinook salmon in three different time-periods and evaluating them for infectious agents and disease. This data will inform managers on temporal disease risks within the ship canal and help suggest mitigation practices to reduce disease impacts during Chinook salmon migration in the ship canal.	\$68,411	\$128,379	\$128,379
8	Managing Predation of Juvenile Chinook Salmon and Sockeye Salmon by Nonnative Fishes in WRIA 8	US Fish and Wildlife Service	Continue to collect and process diet samples in partnership with WDFW, King Co., and Muckleshoot Indian Tribe to expand predator evaluation and management in the Lake Washington system. Obtain information on the number of juvenile Chinook salmon and other salmonids in predatory fish diets, and the spatial distribution of predation risk to inform management actions targeting this key limiting factor to salmon recovery in WRIA 8. Collect information on predator attraction to ALAN in the south end of Lake Washington.	\$94,556	\$130,571	\$80,571
8	Monitoring Aquatic Weed Regeneration and Fish Utilization Post Treatment	Trout Unlimited	With the significant investment being made to remove aquatic weeds in project areas in spring 2023, Trout Unlimited (TU) is undertaking a complementary project to their 2022 CWM-funded aquatic weed removal project. TU will conduct additional surveying post treatment in late summer/fall 2023, spring 2024, and summer 2024 in the study sites to record plant regeneration and fish utilization. This will provide effectiveness monitoring of treatment type, treatment longevity, inform potential future maintenance needs if largescale treatment is pursued, and changes in fish abundances and species present.	\$5,000	\$49,744	\$49,744

WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
8	Multiple Stressor Influences on Juvenile Chinook Salmon in Lake Washington Priority Locations	University of Washington	Investigate the impact of multiple key stressors on juvenile Chinook salmon in priority locations in the Lake Washington watershed. Prioritize stressors including artificial light at night (ALAN) and habitat (e.g., armoring, overwater structures, non-native aquatic macrophytes). Use intensive day/night snorkel and acoustic sampling to understand the interactive influence of the ALAN and habitat modifications.	\$1,000	\$158,941	\$75,000
8	Predation Reduction Project for the Lake Washington Basin	Washington Department of Fish and Wildlife	Build on previous sampling efforts that have identified areas of Lake Washington, Lake Sammamish, and the Ship Canal where non-native piscivorous fish species such as yellow perch, rock bass, and black crappie consume juvenile Chinook and sockeye during the Lake-rearing and out- migration periods. Gill net surveys will be conducted in the south end of Lake Washington and other near-shore areas of the lake to assess areas of acute predation by non-native predator fishes during the time that lake-rearing Chinook fry are rearing and throughout the juvenile Chinook out-migration period. Diet samples of piscivorous fishes will be analyzed for evidence of predation on juvenile salmon.	\$145,000	\$149,400	\$99,400
8	Bear Creek Tretheway Floodplain Reconnection Effectiveness Monitoring	Mid Sound Fisheries Enhancement Group	Begin a three-year monitoring project to measure impacts of restoration on habitat complexity, use of large wood structures and off-channel habitat by juvenile salmonids, impact of restoration on water temperature throughout the reach, longevity of low velocity off-channel habitat, movement of large and small woody material over time, and impact of large woody material on formation of pools and other habitat structures.	\$1,000	\$79,801	\$40,000
8	Cedar River Salmon Journey	Seattle Aquarium	This program raises awareness in our community about local salmon, the challenges they face and the opportunities for all of us to engage with and support salmon recovery in WRIA 8. Both a volunteer program and a public outreach program, CRSJ provides multiple entry points for audiences to see and learn about salmon. Volunteers are recruited and trained as naturalists, and then make free, family-friendly presentations to the public in October when salmon are spawning in the Cedar River, and at the Ballard Locks in the summer, when salmon are passing through to spawning grounds.	\$43,105	\$38,500	\$38,500

ATTACHMENT A: 2023 COOPERATIVE	WATERSHED MANAGEMENT GRANTS
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WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
8	Salmon Heroes	Environmental Science Center	Salmon Heroes is an education and stewardship program for students in south King County. This includes two classroom lessons framing a three-hour field study outside at the Cedar River in Renton. Classes also have the opportunity for an optional one-hour stewardship project outside on their school campus. Using salmon as a local phenomenon to center the program, Salmon Heroes goals are to use outdoor education experiences to increase awareness and understanding of limiting factors of salmon survival, and to improve stewardship behaviors to keep our waters healthy for salmon and humans alike.	\$85,000	\$15,000	\$15,000
8	Beach Naturalists	Seattle Aquarium	The Beach Naturalist program is designed to engage people who visit our local beaches in learning and getting excited about the nearshore environment and its importance for salmon. Beach Naturalists seek to inspire behavior change by raising awareness about the value and fragility of the intertidal ecosystem, salmon, the nearshore and Puget Sound. With 250+ active volunteers engaged on 11 local beaches (three in WRIA 8) for 15-23 days each year, the Beach Naturalist program connects with thousands of beach visitors annually.	\$42,964	\$13,200	\$13,200
8	Greenway Education Program – Forest and Fins	Mountains to Sound Greenway Trust	The "Forests and Fins" curriculum teaches 5th-8th grade students about the vital role of salmon in the Pacific Northwest. Students receive up to 10 hours of instruction about salmon life cycle and habitat needs and what we can do to contribute to ongoing salmon recovery efforts. Students use Issaquah Creek at Lake Sammamish State Park as their outdoor classroom as they evaluate the health of a salmon-bearing creek and help improve habitat for salmon and other wildlife through an ecological restoration project.	\$10,000	\$38,730	\$27,500
8	Community Action Training School	Mid Sound Fisheries Enhancement Group	Community Action Training School will recruit, educate, and engage 40+ watershed residents over two years in becoming active lifelong stewards of their local watershed and its salmon. Class participants will attend a series of eight evening classes and three weekend field trips and will return 50+ hours of service each in a stewardship action project that benefits watershed health and WRIA 8 salmon recovery goals.		\$65,156	\$43,437
8	Friends of North Creek Forest Education & Stewardship	Friends of North Creek Forest	Maintain and improve the ecological function of North Creek Forest (NCF) through education, stewardship and conservation. This program focuses on field trips for K-12 students, hosting 2-3 work party crews that will train local high school students on stewardship practices and develop their leadership skills, hosting four summer camps for ages 6-14, and hosting educational booths and public events such as birdwatching, plant ID hikes, and art walks.	\$30,000	\$46,400	\$35,000

WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
8	Enhancing Education and Outreach for FISH	Friends of Issaquah Salmon Hatchery	Increase hatchery accessibility and create an equitable and inclusive outdoor education space through projects like audio tour translations and providing financial aid to low-income schools and families. FISH seeks to continue these projects with much needed support for staffing and technological equipment updates, allowing them to maintain and increase their operational capacity.	\$90,430	\$35,000	\$10,000
8	Engage, Educate and Discover at Mapes Creek	Rainier Beach Link to Lake Steering Committee	Monitor the impact of a community-designed natural beach and underwater salmon habitat at Be'er Sheva Park and Mapes Creek Estuary and engage local educators and community stakeholders to create educational opportunities that raise awareness and stewardship of salmon recovery needs and priorities. The intent is to develop strong partnerships with Rainier Beach schools to build environmental justice activities that engage children and young people in learning Mapes Creek's significance, history, and ecosystem; understanding their own neighborhood's environment, both built and natural; and environmental justice issues through continued interrogation of disparities in monitoring results and in action.	\$2,000	\$90,764	\$45,000
8	Salmon Friendly Lakes Pilot Program	Mid Sound Fisheries Enhancement Group	Provide five landowner workshops and site tours along with free site visits for lakeshore landowners and additional outreach events to WRIA 8 communities. The Salmon Friendly Lakes Program seeks to work with waterfront landowners and communities to restore nearshore salmon habitat in Lake Sammamish and Lake Washington by providing landowners with educational and technical assistance resources.	\$49,870	\$70,848	\$30,000
			WRIA 8 Subtotals	\$3,254,109	\$6,020,364	\$5,133,490
WRIA	9					
9	Corbin Beach Deconstruction	King County WLRD	The site is located on the marine shoreline on NE Vashon Island. King County would remove much of the fill, docks, and structures and restore this 260' section of shoreline on a recently acquired 3.4-acre property. The funding from this grant will be used to construct a bulkhead return to protect an adjacent property and cover projected increases in construction costs.	\$1,170,000	\$250,000	\$141,500
9	Auburn Narrows Restoration Final Design	King County WLRD	Complete final design and obtain all necessary permits for the Auburn Narrows. Construction is planned to take place during the summer of 2025. This project, once implemented, will increase off-channel salmon habitat (particularly rearing habitat) in a floodplain adjacent to the Green River at River Mile 33.	\$125,000	\$675,000	\$675,000

WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
9	Cecil Moses Park Habitat Restoration Design	King County DNRP, Director's Office	This project will 1) explore three restoration opportunities: (a) Restoration of Left Bank of Duwamish River (Bank Element); (b) Creation of Side Channel (Side Channel Element); and (c) Restoration of Upstream Tributary Stream Delta (Tributary Element); 2) produce conceptual design alternatives for the Bank and Side Channel Elements; (3) produce conceptual design alternatives for the Tributary Element if research shows it to be practicable and supported by all relevant landowners, utilities, and authorities; (4) evaluate opportunities, costs, risks, and constraints of each alternative; (5) identify preferred alternatives; and (6) provide a foundation document for proceeding with development of preferred alternatives and seeking requisite permits.		\$200,000	\$150,000
9	Des Moines Creek Estuary Restoration	City of Des Moines	Complete a site assessment to provide 10% preliminary engineering design, conduct initial cultural resource support, conduct public outreach support, and identify permits needed for improvements to the shoreline, estuary habitat and public access near the mouth of and adjacent to Des Moines Creek. The work will identify potential improvements to address flooding impacts to Des Moines Beach Park while bolstering both shoreline and estuary habitat, and evaluate public access and connectivity impacts to the estuary from the Des Moines Marina to the Des Moines Beach Park.	\$250,000	\$250,000	\$250,000
9	Middle Newaukum Creek Revegetation	King County WLRD	Install livestock exclusion fencing and plant native trees and shrubs on eight riparian acres along Newaukum Creek (River Mile 8 - 9) to reduce water temperatures of and fecal inputs to the stream, and to improve fish and wildlife habitat. The project site is on private land with a KC-owned conservation easement with a minimum buffer width of 100-feet on both sides of the stream. This reach of stream (1,300-feet in length; 2,600-feet of streambank) is significantly degraded with livestock access to the creek and very few shade producing plants in the riparian zone.	\$200,000	\$600,000	\$400,000
9	NE Auburn Creek Restoration	King County WLRD	Add a new flow-through side channel off the mainstem and a channel connecting NE Auburn Creek to an existing wetland to provide fish egress. This will increase connectivity to approximately 25,000 feet of existing floodplain tributary channel that is currently inaccessible due to a perched flapgate. The flapgate is creating a source of mortality, and this project will replace it with a fish friendly flapgate further upstream. Restore a 150-foot- wide riparian buffer along 1,200 feet of the left bank of the Green River.	\$2,650,000	\$1,000,000	\$750,000

WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
9	Springbrook Creek Rehabilitation Action Plan	City of Renton	First phase of a multi-phase project that aims to rehabilitate Springbrook Creek in Renton, WA from SW 43rd St to the Black River Riparian Forest. This plan will assess the existing conditions of the creek and its banks, vegetation growth, width of the riparian buffer, and any directly connected wetlands along the project corridor. It will evaluate conceptual solutions to improve habitat and ecological function in the creek and define a phasing plan for implementation of future projects. It is anticipated that habitat improvements will be made through riparian plantings, large woody material, pool construction, channel branch excavation, and a potential two-stage channel to enhance channel complexity. Private property acquisitions and their impact onto the extent/feasibility of desired improvements will be evaluated as part of the action plan.	\$45,000	\$150,000	\$150,000
9	Nelsen Salmon Habitat Side Channel	City of Tukwila	This funding will be used in conjunction with other funding sources to perform acquisition, survey, site analysis, stakeholder coordination, design and permitting for this project. This unique off channel restoration project will create about one acre of rare off-channel rearing habitat and restore another acre of riparian forest by setting back a levee and reconnecting the river with its historic channel as part of the watershed-wide effort to recover threatened Chinook salmon and to benefit other aquatic species. This proposal is integrated with the work of the City's non-profit partner, DirtCorps, who is restoring nearly an acre of shoreline upstream from the side channel.	\$800,000	\$700,000	\$200,000
9	Hall Property Acquisition on Miller Creek	City of Normandy Park	Acquire a parcel on Miller Creek to create an open space pocket park. This site will provide one of the only publicly accessible sites for viewing salmon in the watershed. The existing structures associated with the single-family residence on the property would be demolished by the City to restore natural function of the creek and prevent annual downstream flooding across 13th Ave SW. These structures are all located within the buffers of wetlands associated with Miller Creek.	\$400,000	\$400,000	\$150,000
9	Lower Green River Revegetation Maintenance	King County WLRD	Provide maintenance for two years on up to five sites along the Lower Green River. The sites include Desimone Levee, GRA (Tukwila Shoreline), Midway Creek, Mullen Slough, and West Valley Highway. Native trees and shrubs were planted during 2020-22 at these sites, and all have received at least one year of maintenance work. Across the five sites, a total of 4,200 trees and 11,500 shrubs were planted over 11.15 acres along 6,500 linear feet of the Lower Green River.	\$10,000	\$40,000	\$40,000

WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
9	Soos Creek Riparian Restoration	King County WLRD	Contribute to restoring the ecological function of Soos Creek in a rapidly developing part of King County. Public lands (King County-owned Soos Creek Park and Trail) will be enhanced for the benefit of fish/wildlife habitat and water quality. The lower four miles of Soos Creek contains Chinook and steelhead; both ESA-listed species spawn and rear in this reach. Most restoration efforts will be implemented between RMs 6 and 8. This work will expand the previously implemented riparian restoration efforts that have occurred in several locations along the creek by revegetating 1400 linear feet of riparian and associated wetland habitat.	\$20,000	\$120,000	\$120,000
9	Lower Green- Duwamish Live Staking 2023	Green River Coalition	Target riverbank sites categorized as High and Critical on Sun-Shade GIS mapping from River Miles 15 to 7, as well as along the Downey Farmstead site. Shoreline planting during autumn and spring launches coupled with monitoring will further establish the practicality of this re-vegetative technique. Best Management Practices will be further developed in collaboration with our partners at King County. Finally, relationships among homeowner neighbors of the Duwamish and Allentown Tukwila neighborhoods have led to permissions for live-willow staking on their managed properties.	\$115,000	\$80,941	\$89,171
9	Tukwila's "Green the Green" Shoreline Revegetation Phase 4	City of Tukwila	Provide two years of maintenance for two in-progress restoration sites along the Green River in Tukwila. Together, the restoration sites are shown as a combination of "critical", "high" and "medium" need areas in the Riparian Aspects Map.	\$10,000	\$50,000	\$40,000
9	Summer Youth Crew	Mid Sound Fisheries Enhancement Group	Implement the Summer Youth Crew Green Jobs Training Program. For 2024 and 2025, the focus would be on riparian restoration and maintenance along high priority areas along the Green River and Soos Creek. Students from the Auburn area would work four days a week at six hours a day performing restoration tasks at Fenster and Isaac Evans Parks, Mary Olson Farm, the Triangle Parcel at O CT NE, and 104th St SE Park. Included in the programming would also be other green jobs training, including exposure to other career paths through presentations by industry professionals, lessons on planting plan creation, resume building, and other activities.	\$211,255	\$127,414	\$120,000

WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
9	Lower Green River Riparian Revegetation Phase V Maintenance	Green River Coalition	Lower Green River main stem sites from Phases 3 and 4 will continue with lateral expansion along river revetments and levees with a focus on Minkler and Riverbend North and the Prologis site at 48th Avenue South. Additional sites are being negotiated along Gateway Drive that were previously initiated by the Forterra group. Substantial closeout at these sites will occur before site planning can begin; both sites represent key opportunities for stewardship after early investments were made. Work by professional, trainee, youth and volunteers will remove invasive plants and replace them with native four- season shade trees (typically conifers) and a diverse riparian tree and shrub layer, along with a substantial expansion of maintenance activities.	\$145,000	\$38,998	\$38,998
9	Springbrook Lost Urban Creeks Restoration	Mid Sound Fisheries Enhancement Group	Restore native riparian buffers to 48,000 square feet of Springbrook Creek, a historically neglected stream identified as part of Soundkeeper's Lost Urban Creeks program. Develop an education and restoration focused project, providing job training, environmental education, and hands-on learning experiences through ten events serving at least twenty youth each event. We have identified five restoration sites totaling over 48,000 square feet in which we would remove invasive plants and plant over 1,250 trees and shrubs. We will work with the City of Renton and King County Drainage District 1 to identify potential sites beyond the ones already listed.	\$50,862	\$53,952	\$53,952
9	Soos Creek Basin Expansion & Upper Green	Green River Coalition	Expand riparian restoration sites within the Soos Creek Basin and the upper Green River. The project will provide the Green River Coalition internship program with hands on experience in riparian restoration along with volunteer opportunities for the local community. Intern projects will advance invasive removal and native vegetation establishment in high priority areas, satisfying Green River College intern cap stone project requirements while delivering benefits to the main stem river.	\$5,000	\$43,846	\$43,846
9	The Three R's: Riparian Restoration and Renewal on Little Soos Creek	The Institute for Community Leadership	ICL owns and operates the 20-acre Jack O'Dell Education Center in rural, Southeast King County which includes two salmon-bearing streams Little Soos Creek and Winter Creek. Through this project, ICL students, staff, and community members will conduct riparian maintenance, remove blackberries and invasive plants, and pick up and trash from Little Soos Creek. In addition, native plants will be planted within the riparian areas to improve the project grounds for salmon, birds, and wildlife.	\$5,920	\$24,425	\$10,473

ATTACHMENT A:	2023 COOPERATIVE \	WATERSHED MANAGEMENT	GRANTS
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WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
9	Environmental Heroes: Improving Watershed Health and Salmon Habitat Through Education and Outreach	Environmental Science Center	Use experiential learning techniques to increase awareness of watershed and salmon environmental issues for WRIA 9 students, teachers, and the general public. ESC's school-based field study programs – Salmon Heroes and Beach Heroes – will reach over 3,200 youth in gradesK-8 with multi-part lessons designed to get students outside at a spawning salmon stream or a low-tide beach. Free public outreach and community events will give the public opportunities to increase their connections with their local watershed. Using salmon and the nearshore environment as teaching tools, ESC will emphasize tangible stewardship actions community members can take.	\$92,100	\$50,000	\$50,000
9	Beach Naturalist Program	Seattle Aquarium	This is an education and outreach program designed to engage Puget Sound communities in learning about the nearshore, the animals that live there and the conservation actions that benefit salmon and watershed health. With 250+ active volunteers engaged on 11 local beaches (eight in WRIA 9) for 15-23 days each year, the Beach Naturalist program connects with thousands of beach visitors annually. Visitors learn about the intertidal world, the salmon that use the nearshore, the forage fish on which they depend, and the things we can all do to help improve water quality, protect habitat and support salmon recovery.	\$85,928	\$37,500	\$37,500
9	Youth Watershed Education, Stewardship, and Community Science	Nature Vision	Provide up to 150 students from diverse and low-income communities in the Green/Duwamish Watershed with Nature Vision's classroom, environmental stewardship, and community science programming. Six classes of 3rd-12th grade students will become stewards of their watersheds by conducting a restoration project, data collection, analysis, and projects designed to improve water quality and salmon habitat.	\$56,422	\$17,358	\$17,358
9	BeachNET: Discovering Our Role in a Healthy Puget Sound	Vashon Nature Center	Coordinate community science monitoring at a series of beach restoration sites on Vashon—including Corbin Beach Natural Area, Dockton, Lost Lake, and Piner Point; and launch a concerted effort to increase involvement of students, including underrepresented students, in our BeachNET (Beach Nearshore Ecology Team) community science program both through offering paid internships and community service volunteer credit. This year we would also like to expand our BeachNET program to involve community members in kayak surveys that help document the extent of natural kelp beds surrounding the islands.	\$18,500	\$28,125	\$28,125

ATTACHMENT A: 2023 COOPERATIVE V	WATERSHED MANAGEMENT GRANTS
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WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA
9	Youth Engaged in Sustainable Systems	Mountains to Sound Greenway Trust	Implement the Youth Engaged in Sustainable Systems (YESS), a summer internship program created in partnership with Highline School District and Pacific Education Institute. Over six summer weeks, YESS equips teens with knowledge, skills, and inspiration they need to pursue conservation careers while they earn a stipend and school credit.	\$3,600	\$18,698	\$18,698
9	Utilizing PIT Technology to Assess Juvenile Chinook Use and Survival in Lower and Middle Green River	King County WLRD	Utilize PIT tagging and tracking technology to assess juvenile Chinook salmon habitat use, residence, and survival in the Green River basin. This study will also explore limiting factors and data gaps regarding Chinook recovery. This work will focus on using HHD flow management to collect survival and residence data relating to various river flows. In addition, we will partner with USACE to measure survival and residence of juvenile salmon outmigrating from HHD through the middle and lower river. If possible, we will expand our PIT tagging partnership to work closely with the Muckleshoot Indian Tribe to utilize juvenile Chinook from Palmer Ponds.	\$25,000	\$154,039	\$154,039
9	Middle Green River Flow and Chinook Rearing Habitat Assessment.	King County WLRD	Create a 2D hydraulic model of the Middle Green River. Eight flow scenarios will be run through the model with the goal of understanding what flow maximizes slow water, off channel, juvenile Chinook rearing habitat. The primary goal is for the results to help inform in-season flow management decision-making and secondarily to be used for as a base model to provide feasibility and design assistance to mainstem Middle Green CIP projects (e.g. Hamakami, Auburn Narrows).		\$180,000	\$180,000
9	Green River Smolt Trap and PIT Tag project - 2024 Field Season	Washington Dept of Fish and Wildlife	Operate a smolt trap 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 2024 field season, the project will continue inserting PIT tags into juvenile salmonids to understand habitat use of the lower river, in partnership with King County researchers.	\$70,747	\$90,000	\$90,000
9	WRIA 9 Capital Projects Implementation 2024	King County WLRD	Support implementation of the updated 2021 WRIA 9 Salmon Habitat Plan, including development of project funding strategies, technical support for project development and grants applications, solicitation of new projects and project sponsors, and implementation of vital monitoring and adaptive management projects. This programmatic grant supports the capacity, resources, and tools vital for successful capital program implementation.	\$100,000	\$150,000	\$150,000
			WRIA 9 Subtotals	\$6,665,334	5,530,296	4,148,660

WRIA	Project Name	Project Sponsor	Project Description	Secured Leveraged Funds	Funding Requested	Funding Recommended by WRIA		
WRIA 1	WRIA 10							
10	White River Juvenile Assessment	Puyallup Tribe of Indians	Monitor the outmigration of juvenile salmon, during late winter and spring of 2025, on the White River to estimate abundance, run timing and other biological characteristics of ESA listed salmon species (Chinook and Steelhead).	\$23,786	\$177,373	\$177,373		
10	Upper White River Final Design	South Puget Sound Salmon Enhancement Group	Develop the final design package for floodplain restoration actions in the Upper White River, including removing legacy roads, installing large wood jams, and instream wood addition to support White River spring Chinook, steelhead, coho, pink, and bull trout.		\$269,303	\$269,303		
10	Community Based Social Marketing	King County WLRD	This is a community-based social marketing vegetation restoration campaign designed to increase the number of landowners that voluntarily install and maintain riparian buffer areas in the Boise Creek, Pussyfoot Creek, and Second Creek watersheds.		\$27,569	\$27,569		
10	Boise Creek Riparian Restoration	King County WLRD	Restore a riparian zone on Boise Creek by removing invasives, planting native trees and shrubs, and site maintenance, to combat high water temperatures in a creek used by Chinook, coho, pink, steelhead, and bull trout.	\$20,000	\$180,000	\$78,746		
			WRIA 10 Subtotals	\$43 , 786	\$654,245	\$552,991		
	ALL CWM TOTALS \$10,766					\$12,163,818		