

LOWER COLUMBIA FISH RECOVERY BOARD  
CLARK COUNTY CLEAN WATER RESTORATION FUND  
APPLICATION NARRATIVE AND SUPPLEMENTAL QUESTIONS

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**Project Name: Upper Salmon Creek Restoration**

**Primary Sponsor: Clark Public Utilities**

**Project type:**     Restoration

Outreach & Education

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Please respond to each question individually. Do not summarize your answers collectively in essay format. Applications are limited to ten (10) pages (single sided) – *you may delete the italicized portion of the questions and the inapplicable supplemental questions to shorten the proposal.*

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

The project is located upstream of the Battle Ground Urban Growth Area on the Salmon Creek main stem, near Risto Road, in the upper central portion of the watershed. Two properties are within the Bridlewood development north of Hockinson, east of NE 182<sup>nd</sup> Avenue. The third property is upstream, also on the main stem.

2. **Brief Project Summary.** *Summarize your project in a few sentences (1200 characters).*

The proposed project will restore 5 acres of riparian, floodplain and palustrine wetland habitat along 730 linear feet and 200 feet of meander scar currently active during high stormwater flow. The project will capture stormwater sheeting off a main arterial road, improve watershed processes impacted by anthropogenic changes during the last 150 years, address water quality impairments including temperature and turbidity. This will be accomplished by planting 5300 native trees and shrubs, removing non-native invasive blackberry and reed canarygrass, providing bank stabilization on a portion of the main stem. The planting will be followed by five years of monitoring and maintenance. All actions address limiting factors for salmon in the LCFRB Salmon Recovery Plan for Salmon Creek. In addition to the restoration portion of the project, StreamTeam, Clark Public Utilities' volunteer-based program, will engage students in hands-on tree planting field trips. This grant will allow us to expand our established school planting program from 200 students to 650 students per year with the addition of a new field trip location. Additionally, this grant will allow us to add water quality and wildlife monitoring.

3. **Problems Statement.** *Describe the specific stormwater impacts or problems your project seeks to address. Describe the current project site, reach, and watershed conditions and how they are affected by stormwater inputs. Describe how those conditions impact watershed health. Include current and historical factors important to understanding the problem.*

The Hockinson and Venersborg areas of the Salmon Creek watershed were impacted significantly by logging, land clearing, and crop and dairy farming. The Cove Silty Clay Loam and McBee Silty Clay Loam soils of the Bridlewood area were overworked, creating hardpan, resulting in poor water infiltration and anoxic conditions. More recently, the general area has been converted to housing and hobby farms. The vegetation covering most of the project site consists of invasive blackberry and reed canarygrass and a mix of non-native grass species providing poor habitat. The hardpan soil and invasive plants create an environment that is difficult for natural regeneration of the forest that should exist here. As a result, the infiltration that later successional species support is not occurring and less stormwater is intercepted,

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absorbed and filtered before it reaches the stream channel. In addition, this open area with little tree cover adds to water quality impairments such as temperature and turbidity. Additionally, within Clark County, there are only a handful of organizations that provide environmental education opportunities, which has been identified as a priority for all grade levels across the state of Washington. This project combines these two critical components of our program; riparian restoration and environmental education.

**4. Project Goals and Objectives.**

- A. **What are your project's goals?** The goal of your project should be to remedy observed problems, ideally by addressing the problems' root causes. Your goal statements should articulate desired outcomes (your vision for desired future condition) and what watershed health or habitat benefits will occur as a result of those outcomes.

*Goal examples:*

- i. *(Restoration and design project) Improve water quality and ecosystem health in Salmon Creek caused by stormwater runoff.*
- ii. *(Education project) Help the general public understand actions they can take to reduce stormwater inputs.*

**Goal 1** Improve riparian conditions affected by stormwater runoff: Create a self-sustaining native plant community. Eliminate invasive nonnative plant species and the conditions that allow them to thrive. Plant a substantial riparian and palustrine wetland buffers that will be resilient through both manmade and natural disturbances and that will improve watershed processes such as stormwater retention and aquifer recharge.

**Goal 2** Increase student knowledge on the impact of stormwater on water quality and salmon habitat.

- B. **What are your project's objectives?** *Objectives support and refine your goals, breaking them down into smaller steps. Objectives are specific, quantifiable actions your project will complete to achieve your stated goal. Each objective should be "SMART:" Specific, Measureable, Achievable, Relevant, and Time-bound.*

*Objective examples:*

- i. *(Restoration and design project) Improve water quality caused by stormwater runoff by removing exotic plants and planting native plant species along the Lower Washougal River in a 50 foot riparian buffer for approximately one mile.*
- ii. *(Education project) Develop five public workshops in the lower two miles of Burnt Bridge Creek targeted to private businesses adjacent to the Creek that produce stormwater inputs resulting from impervious surfaces. Workshops will focus on approaches to reduce stormwater runoff.*
  1. Improve water quality caused by stormwater runoff by: (a) removing exotic plants; (b) planting native plant species along Salmon Creek and a connected palustrine wetland with an average of a 150 foot riparian buffer for 730 linear feet, creating connectivity with the Bridlewood Phase I project.
  2. Engage 650 students per year through: (a) native tree planting field trips; (b) water quality and wildlife monitoring, (c) lessons on the impact of stormwater on water quality and salmon habitat.

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- C. **What are the uncertainties and constraints that could impact whether you achieve your objectives?** *Uncertainties and constraints are external conditions that are not under the direct control of the project, but have the potential to directly affect the outcome of the project. These may include subsequent availability of other funding needed to complete the project, public or community acceptance of the project, land use constraints, changes in upstream or downstream habitat conditions, permitting issues, geomorphic or geologic factors, cost uncertainties, access, etc. How will you address these issues if they arise?*

There are no anticipated uncertainties, constraints, or other possible problems that may hinder project completion.

5. **Project Details.** *Please answer the questions below and all pertinent supplemental questions at the end of the application form.*
- A. **Provide a narrative description of your proposed project.** *Describe the specific project elements and explain how they will lead to achieving the project's objectives. Include relevant existing project documentation (if any) as attachments.*

This project includes implementation of riparian restoration along 730 feet of Salmon Creek with a 100 feet buffer average. Restoration components include restoring approximately 5 acres of riparian, floodplain and palustrine wetland vegetation by controlling invasive species (non-native blackberry, reed canarygrass) and planting native vegetation (Western red cedar, cottonwood, Oregon ash, willow, red osier dogwood, spirea, etc.). Enhancement of vegetation will restore long-term ecological processes including stream shading, large wood recruitment, bank integrity, floodplain roughness, and nutrient exchange. Education of children attending Battle Ground schools is an important component of the project. At least ten classes a year will receive a presentation on the impacts of stormwater on water quality and salmon and have the opportunity to plant trees at the project site. We would like to add additional schools outside of the Battle Ground school district, if possible.

- B. **Provide a scope of work.** *Provide a detailed description of the proposed project tasks, who will be responsible for each, what the project deliverables will be, and a schedule for accomplishing them. The work should include well-thought out and/or well tested approaches and opportunities to measure responses to show that the goals were met.*

Task 1: Preparation of Sites for Planting

Responsible party: CPU Watershed Projects Coordinator

Deliverables: Control of non-native invasive blackberry and reed canarygrass using integrated weed management practices.

Schedule: May and Sep 2020

Task 2: Preparation of Presentation and Educational Materials

Responsible party: CPU StreamTeam Program Coordinator

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Deliverables: (1) Onsite presentation will show the children how stormwater can adversely affect stream health and how proper riparian vegetative buffers can mitigate these adverse effects. (2) Onsite tour of the existing Bridlewood Phase I project will show the students how water quality can be improved through restoration projects and provide an example of what their planting efforts will look like in a few years.

Schedule: 2020

Task 3: Revegetation

Responsible party: CPU Watershed Projects Coordinator

Deliverables: Planting of streambank, riparian, floodplain and wetland areas. The work will be coordinated by CPU staff and performed by CPU staff and both contracted and volunteer labor.

Schedule: Nov 2020

Task 4: Education and Student Planting Events

Responsible party: CPU StreamTeam Program Coordinator

Deliverables: 15 planting events, including educational presentations, involving the participation of 1,350 students over the course of three years

Schedule: Nov 2020

Task 5: Maintenance

Responsible party: CPU Watershed Projects Coordinator

Deliverables: Watering of plants. Mowing of competing non-native vegetation.

Schedule: Summer 2021 and Summer 2022.

Task 6: Monitoring and Replants

Responsible party: CPU Watershed Projects Coordinator

Deliverables: Plant survival monitoring. Replacement of dead plants.

Schedule: Nov 2021 and Nov 2022. This monitoring and replanting effort will continue after the grant funding period has finished.

The plants will be monitored in detail, counting survival and mortality and determining specific causes of stress and death. Evaluation and replanting of dead trees will occur in order to achieve 90% survival after 5 years. This replanting and maintenance helps ensure constantly increasing native plant cover and species diversity, and decreasing non-native cover.

**C. Is the project scalable?** *Can your project be scaled back in the event that full funding is not available, or expanded if additional funding becomes available?*

Yes. Though the two locations are not far apart and the positive impact will be greater in combination, the project can definitely be scaled down to either of the two locations. The

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location near the intersection of Risto and NE 182<sup>nd</sup> Ave can be considered Bridlewood Phase II as it brings in two parcels not taking part in the original Bridlewood project, and will result in a large continuous stretch of native vegetation restoration with accompanying stormwater, habitat and other benefits. The other location, at 20001 Risto Road, can also stand alone as an important project as it involves needed bank stabilization and planting of riparian buffer. Scaling down to one or the other of these locations will not be harmful to the effectiveness of the restoration or the likely of project success.

- D. Explain how you determined your cost estimates.** *Please attach the LCFRB budget sheet located on the [CCCWRF webpage](#) for completing the scope of work. Include anticipated costs for labor, land acquisition, consultant fees and tasks, permitting, construction contracts, materials, and other relevant costs.*

Costs were estimated according to project size and scale and based on 20 years of successful riparian revegetation projects.

- E. Describe your preferred approach for achieving your project's objectives and the alternatives you considered.** *Why did you choose your preferred alternative?*

Our approaches - both riparian restoration to benefit stormwater, water quality and habitat and education of student groups – have a long history of success.

- F. How have lessons learned from completed projects or existing studies and monitoring data informed your project?** *Sources of results may be from individual sponsors, lessons learned from previously implemented projects, stormwater plans, technical reports or other sources.*

CPU has completed dozens of successful projects in the Salmon Creek watershed. Specifically, Phase I of the Bridlewood project has provided first-hand experience of the harsh conditions created by Cove Silty Clay Loam hardpan, the soil preparation needed, and the native plant mix that can survive these conditions. These lessons are clarified throughout our implementation, maintenance, monitoring and replanting phases.

- G. Describe the long-term stewardship and maintenance needed to sustain the project's benefits?**

CPU is committing to 5 years of maintenance. We have a long history of extending project monitoring and maintenance past the grant period.

**6. Context within local Stormwater and/or other Plans.**

- A. Discuss how this project fits within or works to implement the strategies of existing stormwater and/or other relevant plans for reducing or eliminating the negative effects of stormwater runoff.** *(i.e., addresses a priority action, occurs in a priority area, or targets a priority aquatic species).*

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Clark County's 2010 Stormwater Needs Assessment Report for this portion of Salmon Creek (RM 14.66 and Morgan Creek) lists the following opportunities and actions addressed by our proposed project:

- "This reach of Salmon Creek shows large increases in temperature and is among the warmest in the watershed" (page 8).
- The stormwater infrastructure in this unincorporated area of Salmon Creek is primarily roadside ditches (page 8). Unfortunately, the downhill slope of the Risto Road shoulder as it nears NE 182<sup>nd</sup> Avenue is not well-ditched so there is a need to properly buffer the wetland from stormwater sheeting off the road.
- The report's Executive Summary lists the need to "coordinate and leverage opportunities with groups and agencies active in the Salmon Creek watershed" (page 8).
- "Educate private landowners on importance of riparian buffers and native riparian vegetation for shading streams" (page 68).
- Also on page 68: "Educate private landowners concerning importance of invasive plant removal, and suggest removal techniques."
- Page 92 states that standard watershed scale metrics "suggest habitat is on the margin of non-functioning."
- The report lists the following in the Analysis of Potential Projects: "Salmon Creek, within the Salmon Creek RM 14.66 subwatershed is... Category 2 listed (Waters of Concern) for temperature and dissolved oxygen" (page 92).
- Temperature monitoring by Clark County showed increased temperature for this area of the watershed. "Primary reasons for the increase appear to be lack of riparian canopy over the Salmon Creek mainstem..." (page 93).

Lower Columbia Fish Recovery Board's 2010 Lower Columbia Salmon Recovery Plan, specifically Chapter N, covering the Salmon Creek Subbasin lists the following needs that the project addresses:

- Key Priority: Restore Floodplain Function, Riparian Function and Steam Habitat Diversity
  - "Riparian restoration will enhance streambank stability..."
  - "Partially restoring normal floodplain functions will also help control downstream flooding and provide wetland and riparian habitats..."

**B. Explain why it is important to do this project now instead of later.** *(Consider its sequence relative to other needs in the watershed and the current level and imminence of risk to watershed health. Are there other actions or constraints that need to be addressed first, before desired outcomes can be fully achieved?).*

Projects located upstream that improve stormwater capture, lower water temperature and reduce turbidity are highly valuable as they have a positive effect on all main stem locations downstream. As this project is in the upper area of the middle portion of the main stem, it is, by definition, more important to the entire length of the creek than a similar project lower in the watershed.

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- C. **If your project is part of a larger overall project or strategy, describe the goal of the overall strategy, explain individual sequencing steps, and which of these steps are included in this application for funding.** *Attach a map that illustrates how this project fits into the overall strategy, if relevant.*

The 250 linear feet of streambank and 3.2 acres of Bridlewood Phase II restoration plantings will connect the two halves of Phase I, allowing for an uninterrupted 1500 feet of streambank improvements and 17 acres of total restoration. The Jones project 0.7 miles upstream will decrease erosion and turbidity and install a 200-foot vegetative buffer. The two halves of the project work together to support our long-term goals for clean water and salmon habitat.

7. **Project Proponents and Partners.** *Please answer the following questions about your organization and others involved in the project.*

- A. **Describe your experience managing this type of project.** *Please describe other projects where you have successfully used a similar approach.*

Over the past 25 years, CPU has obtained extensive experience planning, designing and implementing water quality and salmon habitat restoration projects in the Salmon Creek watershed. This year alone, we have engaged the community in stream restoration tours, wild fish rescues and releases with the Northwest Wild Fish Rescue, a salmon life cycle obstacle course, student tours, and much more. Two Watershed Projects Coordinators, Casey Gozart and Dan Tanksley, and an Invasive Species Coordinator, Brad Mead, plan and direct the restoration planting projects and noxious weed removal. Casey Gozart has been with the program for one year and has over 15 years of experience with the Department of Natural Resources and Clark County Vegetation Management. Dan Tanksley and Brad Mead have been with the program for over two years. Dan Tanksley previously worked with Ash Creek Forest Management, overseeing tree planting projects for three years. Brad Mead previously founded an invasive species control program in Tillamook, Oregon. StreamTeam Program Coordinator Ashley King is in charge of event planning, volunteer coordination, and environmental education and has been with the Utility for over eight years. She has a Master's degree in Biology and Ecology and has been involved with volunteer coordination and environmental education for over 15 years. And the Environmental Resources Manager, Jeff Wittler, has over 25 years of experience in riparian restoration design and implementation, and has worked with over 300 landowners. Jeff has successfully managed and administered close to \$5 million in grant funds for habitat restoration projects. Over 1,000 volunteers participate in our restoration and outreach activities each year.

- B. **List all landowner names.** *If your project will occur on land not owned by your organization, attach a Landowner Acknowledgement Form (obtain from LCFRB) from each landowner acknowledging that his/her property is proposed for CLARK CCWR funding consideration.*

1. Dyer, Chase
2. Wood, Terry
3. Jones, Denise and Dan

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- C. **List project partners and their role and contribution to the project.** *Attach a Partner Contribution Form from each partner (obtain from LCFRB).*
- Battle Ground School District – education audience, source of volunteers
  - StreamTeam and Stream Stewards volunteers
- D. **Stakeholder Outreach.** *Describe your public outreach efforts taken or planned. Discuss any community feedback, endorsements, and expressions of support you have received for the proposed project. Describe any public opposition or concerns expressed and how you have addressed it. Are there any public safety concerns with the project? How will you address those concerns?*

The project has received an endorsement from the Battle Ground School District. All surrounding landowners have participated in Phase I of the Bridlewood project. There are no public safety concerns.

## Supplemental Questions

### Restoration Project

Answer the following supplemental questions (these are not included in the ten-page limit):

- A. **Will you complete, or have you already completed, a preliminary design, final design, and design report before construction?** YES.

- B. **Will your project be designed by a licensed professional engineer?**

No. Bridlewood Phase II does not require engineering as no reshaping of the streambank or placement of instream structure is occurring. The planting plan has been created by Jeff Wittler and Casey Gozart, possessing a combined 40 years of experience planning and implementing riparian restoration projects.

- C. **If this project includes measures to stabilize an eroding stream bank, explain why this bank stabilization is necessary to accomplish improved water quality or watershed health, and how the proposed design incorporates beneficial stormwater reduction elements while avoiding adverse impacts to upstream, downstream or adjacent properties?** N/A

- A. **Describe the steps you will take to minimize the introduction and spread of invasive species during construction and restoration. Specifically consider how you will use un-infested materials and clean equipment entering and leaving the project area.**

Our project plan takes into account the time and resources necessary to prevent the introduction and spread of invasive species on the project site. Before planting commences an evaluation of potentially invasive material is conducted and is mechanically removed or chemically treated when necessary. Our staff includes both a former noxious weed board coordinator and the Eradication Nation program, which is qualified to identify invasive species, educate staff and contractors, and treat invasive species on site throughout the entirety of the grant period. Whenever dense patches of invasive plants are removed, native grass seed is sown on bare ground to provide competition to potential germination of weed seed and prevent the spread of nearby invasive species. CPU sources all trees from its own native plant nursery. The CPU facility also includes an industrial vehicle power-washing station. After use at a weed-infested site, all equipment, including vehicles, clothing, and tools are washed upon arrival to our facilities, preventing the spread of invasive species from site to site. Outside contractors will be required to clean tools, clothing, and vehicles as well. In addition, we have conducted multiple surveys of Salmon Creek as well as its larger tributaries over the last 5 years as part of our Knotweed Eradication Program.

## Supplemental Questions

### Outreach/Education Project

Answer the following supplemental questions (these are not included in the ten-page limit):

- A. Who is your target audience?** Explain why this audience is appropriate for improving watershed health by reducing the impacts of stormwater runoff.

The education portion of our project targets Clark County students in grades 3 – 12. By engaging students at a young age, we hope to positively impact their behaviors as they relate to stormwater runoff.

- B. What are the target pollutants you expect to address?**

Sediment and temperature

- C. What is your strategy for changing behaviors related to watershed health?** Explain how this approach has been successful in the past by your organization or by other organizations with similar missions.

The State of Washington has deemed environmental education a priority, with a need to work toward increased environmental awareness across all grade levels. Environmental education activities have been shown to increase participants' knowledge and awareness and can often lead to an increase in actions and behaviors supporting the environment, not only by the students, but their parents as well. Volunteering can have a similar effect, and our AmeriCorps members deliver educational presentations during volunteer events to increase environmental awareness. We conduct pre- and post-quizzes to assess both a change in knowledge and changes in behavior, i.e., intended actions the students plan on taking to protect water quality and salmon habitat as a result of their participation in this program. On average, 87% of our past education participants have shown an increase in knowledge and 91% have shown a willingness to change their behavior.

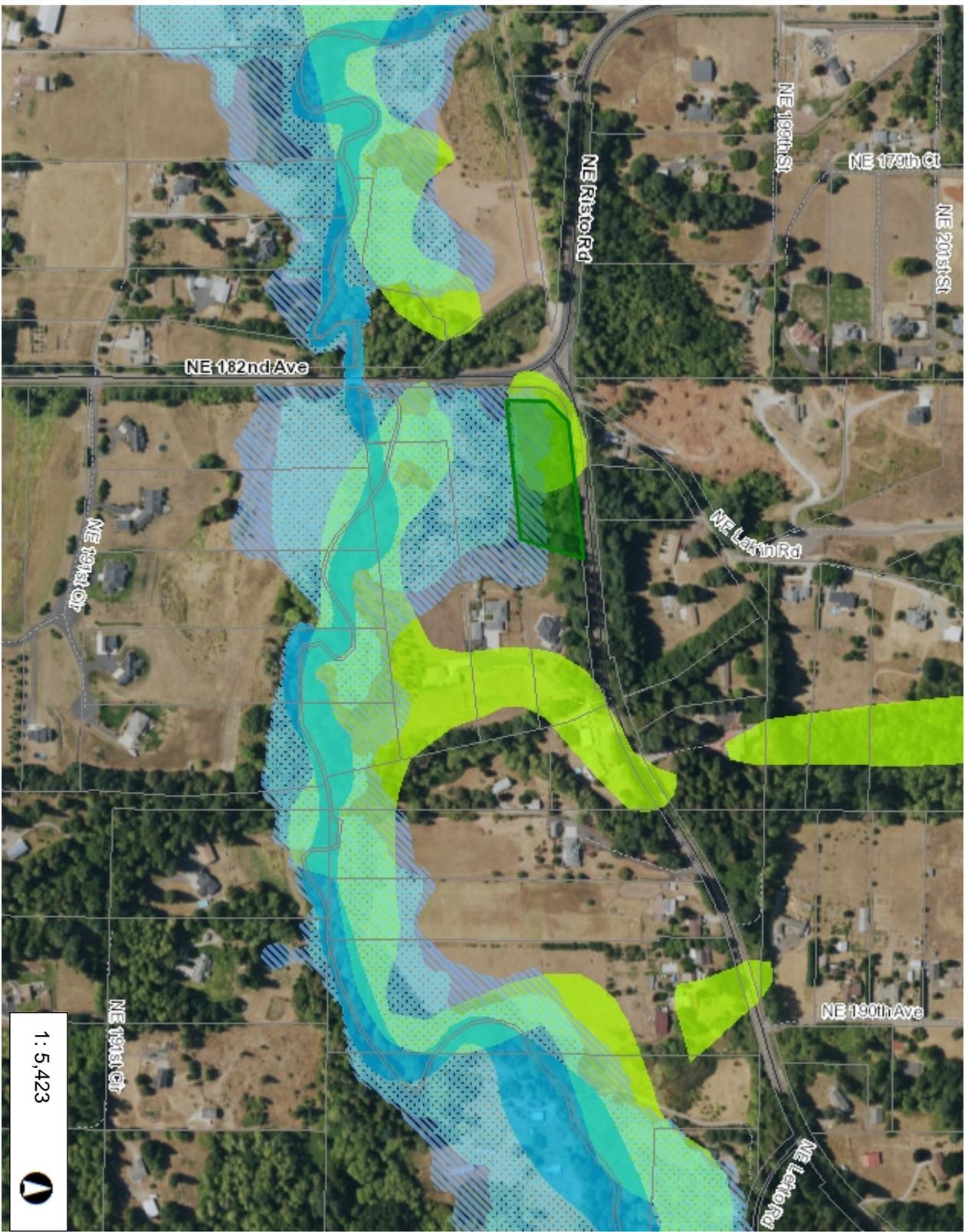
- Environmental Education Report 2007 by the Washington Office of Superintendent of Public Instruction (OSPI)
- Chalwa, L. & Cushing, D.F. (2007) Education for strategic environmental behavior. *Environmental Education Research*, 13(4), pp.437-452.
- Damerell, P. et al. (2013) Child-oriented environmental education influences adult knowledge and household behaviour, 8(1)
- Zylstra et al. (2014) Connectedness as a Core Conservation Concern: An Interdisciplinary Review of Theory and a Call for Practice, 2, pp. 119-143.

- D. How would you define success in this outreach and/or education project?**

We define success as 80% or more of our student participants reporting an increase in knowledge and a willingness to change their behavior.



# Wood property at Bridlewood - flood connectivity and palustrine wetland



### Legend

- Taxlots
- Flood Zone Designation**
  - Floodway
  - Floodway Fringe
  - 500 Year Flood Area
  - Area Not Studied
- NWI Wetland
- All Roads**
  - Interstate
  - State Route
  - Arterial
  - Forest Arterial
  - Minor Collector
  - Forest Collector
  - Private or Other
- Cities Boundaries**
- Urban Growth Boundaries**

### Notes:

This map was generated by Clark County's "MapOnline" website. Clark County does not warrant the accuracy, reliability, or timeliness of any information on this map, and shall not be held liable for losses caused by using this information.

1 : 5,423



903.8 0 451.89 903.8 Feet

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Clark County, WA. GIS - <http://gis.clark.wa.gov>

# CCCWRF Budget Spreadsheet

CPU Upper Salmon Creek Restoration and Student Education

#REF! <i>Make sure to double check the total formula links if extra lines are added to the worksheet!</i>					OVERALL PROJECT	GRANT REQUEST	MATCH (optional)		
					<i>Budget must account for all costs to complete the project</i>	<i>Enter only the amount of the grant request</i>	<i>The Grant Request and Match should equal the total project cost and Budget Check cell should be 0. Sponsors must account for all sources and types of match need to complete the project.</i>		
Category	Qty	Unit	Rate	Amount	Amount	Match	Source (Grant, Cash, Materials, Labor, Volunteers, etc)	Type (Federal, State or Local?)	
<b>Outreach and Education</b>									
<b>Services</b>									
Bus transportation [item]	Transportation for students [description]	45.00	roundtrip	\$ 125.00	\$ 5,625	\$ 5,625	\$ -		
		-		\$ -	\$ -	\$ -	\$ -		
				<b>STotal</b>	<b>\$ 5,625</b>	<b>\$ 5,625</b>	<b>\$ -</b>		
<b>Labor</b>									
Outreach staff	Contact schools, arrange fields trips, develop stormwater educational component	60.00	hours	\$ 30.00	\$ 1,800	\$ -	\$ 1,800	Labor	
Field Trip supervision	Clark Public Utilities staff time at field trips	240.00	hours	\$ 30.00	\$ 7,200	\$ -	\$ 7,200	Labor	
Volunteer Labor	Volunteer labor at field trips	240.00	hours	\$ 18.00	\$ 4,320	\$ -	\$ 4,320	Volunteers	
				<b>STotal</b>	<b>\$ 13,320</b>	<b>\$ -</b>	<b>\$ 13,320</b>		
<b>Materials</b>									
Plant guides	native plant guides for students	45.00	books	\$ 25.00	\$ 1,125	\$ 1,125			
Water quality kit	water quality monitoring kit	1.00	kit	\$ 300.00	\$ 300	\$ 300			
T-shirts	t-shirts for students and staff	1,500.00	shirts	\$ 5.00	\$ 7,500	\$ -	\$ 7,500	Materials	
Snacks	snacks for students	1,350.00	snacks	\$ 2.25	\$ 3,038	\$ -	\$ 3,038	Materials	
				<b>STotal</b>	<b>\$ 11,963</b>	<b>\$ 1,425</b>	<b>\$ 10,538</b>		
<b>Outreach &amp; Education Subtotal</b>					<b>\$ 30,908</b>	<b>\$ 7,050</b>	<b>\$ 23,858</b>		
<b>Restoration</b>									
<b>Services</b>									
[item]	[description]	-	-	\$ -	\$ -	\$ -	\$ -		
				<b>STotal</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>		
<b>Labor</b>									
Contract crew - site prep	site prep - invasive blackberry	128.00	1 hour	\$ 27.00	\$ 3,456	\$ 3,456	\$ -		
Licensed herbicide applicator	invasive weed control	32.00	1 hour	\$ 40.00	\$ 1,280	\$ -	\$ 1,280	Labor	
Contract crew - planting	labor hours - container plant instal	900.00	1 hour	\$ 27.00	\$ 24,300	\$ 24,300	\$ -		
Crew supervision - planting	coordinate/supervise planting	60.00	1 hour	\$ 40.00	\$ 2,400	\$ -	\$ 2,400	Labor; Volunteers	
Contract crew - mowing	Year 1 (2x)	96.00	1 hour	\$ 27.00	\$ 2,592	\$ 2,592	\$ -		
Contract crew - mowing	Year 2 (2x)	96.00	1 hour	\$ 27.00	\$ 2,592	\$ 2,592	\$ -		
Contract crew - mowing	Year 3 (1x)	48.00	1 hour	\$ 27.00	\$ 1,296	\$ 1,296	\$ -		
Contract crew - mowing	Year 4 (1x)	48.00	1 hour	\$ 27.00	\$ 1,296	\$ -	\$ 1,296	Labor	
Contract crew - mowing	Year 5 (1x)	48.00	1 hour	\$ 27.00	\$ 1,296	\$ -	\$ 1,296	Labor	
[type]	[description]	-	-	\$ -	\$ -	\$ -	\$ -		
				<b>STotal</b>	<b>\$ 40,508</b>	<b>\$ 34,236</b>	<b>\$ 6,272</b>		
<b>Materials</b>									
Plant materials	T-1 container	1,800.00	1 plant	\$ 2.75	\$ 4,950	\$ -	\$ 4,950	Materials	
Plant materials	D-pot container	3,500.00	1 plant	\$ 1.50	\$ 5,250	\$ -	\$ 5,250	Materials	
Tree protection	double-walled solid tubes	5,300.00	1 tube	\$ 1.45	\$ 7,685	\$ 7,685	\$ -		
Wood stakes	stakes for tree protection	10,600.00	1 stake	\$ 0.20	\$ 2,120	\$ 2,120	\$ -		
Misc project materials	flags, twine, etc	1.00	1 project	\$ 450.00	\$ 450	\$ -	\$ 450	Materials	
Irrigation parts/connections	Irrigation for watering plants	1.00	1 project	\$ 500.00	\$ 500	\$ -	\$ 500	Materials	
Tool use - planting	augers, bits, fuel, etc	1.00	1 project	\$ 500.00	\$ 500	\$ -	\$ 500	Materials	
[type]	[description]	-	-	\$ -	\$ -	\$ -	\$ -		
				<b>STotal</b>	<b>\$ 21,455</b>	<b>\$ 9,805</b>	<b>\$ 11,650</b>		
<b>Restoration Subtotal</b>					<b>\$ 61,963</b>	<b>\$ 44,041</b>	<b>\$ 17,922</b>		
<b>Administrative Costs</b>									
Financial administration	Time, tracking, accounts payable	100.00	1 hour	\$ 30.00	\$ 3,000	\$ -	\$ 3,000	Labor	
Management	Reporting	50.00	1 hour	\$ 40.00	\$ 2,000	\$ -	\$ 2,000	Labor	
[type]	[description]	-	-	\$ -	\$ -	\$ -	\$ -		
				<b>STotal</b>	<b>\$ 5,000</b>	<b>\$ -</b>	<b>\$ 5,000</b>		
<b>GTOTAL</b>					<b>\$ 97,871</b>	<b>\$ 51,091</b>	<b>\$ 46,780</b>		

# Proposed Upper Salmon Creek Project

## Photos of Current Conditions

Dyer property. Invasive blackberry along creek.



Wood property. Risto Road slope to palustrine wetland connected to Salmon Creek floodplain:



Wood property. Reed canarygrass in wetland:



Wood property. Blackberry bordering wetland:



Line between Bridlewood planting and Wood property. The reed canarygrass is removed and replaced with red fescue and the installed plants are thriving within the Bridlewood planting. The wetland within the proposed project on the Wood property is a reed canarygrass monoculture:



# LCFRB Landowner Acknowledgement Form

## Landowner Information

Property Address or Location: **18426 NE 191<sup>st</sup> Cir, Brush Prairie, WA 98606**

Property Owner's Name: **Chase Dyer**

Contact Mailing Address: **18426 NE 191<sup>st</sup> Cir, Brush Prairie, WA 98606**

Contact E-Mail Address: chase.a-dyer@gmail.com

I certify that **Chase Dyer**  
(Landowner, Company, Organization)

is the legal owner of property described in this grant application to the Lower Columbia Fish Recovery Board (LCFRB). I am aware the project is being **proposed** on my property. **My signature authorizes the applicant listed below to seek funding for project implementation, however, it does not represent authorization of project implementation and is pending my final approval of plans and specifications and signature on a formal landowner agreement.**

  
\_\_\_\_\_  
Landowner Signature

10/25/19  
Date

## Project Applicant Information

Project Name: **Salmon Creek Restoration - Bridlewood**

Project Applicant Contact Information: **Clark Public Utilities**

Primary sponsor's Name: Jeffrey Wittler

Title: Environmental Resources Manager

Mailing Address: PO Box 8900, Vancouver, WA 98668

E-Mail Address: jwittler@clarkpud.com

# LCFRB Landowner Acknowledgement Form

## Landowner Information

Property Address or Location: **18505 NE Risto Road, Battle Ground, WA 98604**

Property Owner's Name: **Terry Wood**

Contact Mailing Address: **18505 NE Risto Road, Battle Ground, WA 98604**

Contact E-Mail Address: **Woodfencing@yahoo.com**

I certify that **Terry Wood**

*(Landowner, Company, Organization)*

is the legal owner of property described in this grant application to the Lower Columbia Fish Recovery Board (LCFRB). I am aware the project is being **proposed** on my property. **My signature authorizes the applicant listed below to seek funding for project implementation, however, it does not represent authorization of project implementation and is pending my final approval of plans and specifications and signature on a formal landowner agreement.**

  
\_\_\_\_\_  
Landowner Signature

10-30-19  
Date

## Project Applicant Information

Project Name: **Salmon Creek Restoration - Bridlewood**

Project Applicant Contact Information: **Clark Public Utilities**

Primary sponsor's Name: **Jeffrey Wittler**

Title: **Environmental Resources Manager**

Mailing Address: **PO Box 8900, Vancouver, WA 98668**

E-Mail Address: **jwittler@clarkpud.com**

# LCFRB Landowner Acknowledgement Form

## Landowner Information

Property Address or Location: **2001 Risto Rd, Battle Ground, WA 98604**

Property Owner's Name: **Denise & Dan Jones**

Contact Mailing Address: **2001 Risto Rd, Battle Ground, WA 98604**

Contact E-Mail Address: \_\_\_\_\_

I certify that **Denise Jones**  
(Landowner, Company, Organization)

is the legal owner of property described in this grant application to the Lower Columbia Fish Recovery Board (LCFRB). I am aware the project is being **proposed** on my property. **My signature authorizes the applicant listed below to seek funding for project implementation, however, it does not represent authorization of project implementation and is pending my final approval of plans and specifications and signature on a formal landowner agreement.**

\_\_\_\_\_  
Landowner Signature

\_\_\_\_\_  
Date

## Project Applicant Information

Project Name: **Salmon Creek Restoration - Jones**

Project Applicant Contact Information: **Clark Public Utilities**

Primary sponsor's Name: **Jeffrey Wittler**

Title: **Environmental Resources Manager**

—  
Mailing Address: **PO Box 8900, Vancouver, WA 98668**

E-Mail Address: **jwittler@clarkpud.com**

# LCFRB Project Partner Contribution Form

**Project Partner:** Battle Ground Public Schools

**Partner Address:** PO Box 11104 NE 149<sup>th</sup> St,  
Brush Prairie, WA 98606

## Contact Person

First Name: *Andrea* Last Name: *Parker*  
Organization: *Battle Ground School District*  
Mailing Address: *11104 NE 149<sup>th</sup> St*  
*Brush Prairie, WA 98606*  
E-Mail Address: *parker.andrea@battlegroundps.org*

## Description of contribution to project:

Student volunteer hours planting native trees at Clark Public Utilities' project site in Battle Ground, Washington.

**Estimated value to be contributed:** \$13,500 over three years

Partner's signature

*Andrea R Parker*

Date

*10/24/19*



# River HomeLink

## Battle Ground Public Schools

PO Box 200 - Battle Ground, WA 98604-0200 - Office Location: 610 SW Eaton Blvd, Battle Ground, WA 98604  
Phone 360.334.8200 Fax: 360.334.8223

October 23, 2019

To Whom It May Concern:

This letter is to express my support of Clark Public Utilities' grant application for habitat restoration with school children. The past year, Clark Public Utilities' stream restoration program, StreamTeam, organized streamside tree plantings along Woodin Creek involving several classes of our students and parents. CPU not only did a great job organizing the tree plantings but also did an excellent job of engaging and educating students on why the plantings were important and the how that work will improve water quality. Parents who were helping with the planting commented on how well the CPU team worked with our students.

The previous year several River HomeLink classes went to the CPU site and participated in tree potting. Students planted 800 bare root trees into pots to enable them to grow enough to be planted along streams. Students were able to see the nursery trees and learn what native plants and trees that Clark Public Utilities' Stream Team grows for habitat improvement. Students felt good to be able to contribute to future plantings by potting the trees.

The program provides an opportunity for students to engage in service projects that contribute to improving water quality and the environment. This leads to stronger, connected communities that take action for things they care about. Students felt connected to this project because we monitor water quality on Woodin Creek and are interested in improving the quality of the stream. Students were able to take action to make a difference in our stream quality rather than just monitoring it.

These activities support students in achieving Next Generation Science Standards: Biodiversity and Humans: Populations live in a variety of habitats and changes in those habitats affect the organisms living there. Also, Ecosystem Dynamics, Functioning, and Resilience: When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, some move out to new locations, still others move into the environment, and some die. Engaging in service projects also supports social studies standards in civics.

Sincerely,

Susan Remmen  
3<sup>rd</sup>/4<sup>th</sup> grade teacher River HomeLink

The Battle Ground School District provides equal opportunity in programs and employment and does not discriminate on the basis of race, color, national origin/language, creed/religion, sex, sexual orientation-including gender identity, disability, or the use of a service animal by a person with a disability, age, marital status, honorably discharged veteran or military status and HIV/Hepatitis C status. Diana Gilsinger, Marcia Christian and Jane Mercier are designated to handle questions and complaints of alleged discrimination. They can be reached as follows: Maria Christian, Title IX Sexual Harassment Coordinator, 360-885-5415, [christian.marcia@bgisd.k12.wa.us](mailto:christian.marcia@bgisd.k12.wa.us); Diana Gilsinger, Deputy Superintendent, 360.885.5338, [gilsinger.diana@bgisd.k12.wa.us](mailto:gilsinger.diana@bgisd.k12.wa.us); Jane Mercier, Section 504/ADA Coordinator 360.885.5318, [mercier.jane@bgisd.k12.wa.us](mailto:mercier.jane@bgisd.k12.wa.us); or a letter may be submitted to the designated coordinator at the Battle Ground School District, PO Box 200, Battle Ground, WA 98604.