



# R & E Grant Application 17-19 Biennium

Project #: 17-036

## Lower Scappoose Creeks Fish Habitat Restoration

### Project Information

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**Requested Cycle:** 17-4  
**R&E Project Request:** \$55,656  
**Other Funding:** \$495,038  
**Total Project:** \$550,694  
**Spending Start Date:** 7/1/2018  
**Spending End Date:** 4/30/2019  
**Project Start Date:** 11/1/2017  
**Project End Date:** 6/30/2019  
**Organization:** Scappoose Bay Watershed Council (Tax ID #: 93-1266389)

### Fiscal Officer

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**Name:** Pat Welle  
**Address:** 57420-2  
Warren, OR 97053  
**Telephone:** 503-397-7904  
**Telephone 2:** 503-860-2540  
**Email:** pat@scappoosebay-wc.org

### Applicant Information

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**Name:** Pat Welle  
**Address:** 57420-2 Old Portland Road  
Warren, OR 97053  
**Telephone:** 503-397-7904  
**Telephone 2:** 503-947-9704  
**Email:** pat@scappoosebay-wc.org

### Past Recommended or Completed Projects

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This applicant has no previous projects that match criteria.

## **Location Information**

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### **Where is it?**

The project will occur on public land owned or managed by another party  
The project will occur on private land owned or managed by another party

### **Landowner Information**

**Name:** Lorna and Ken Hill  
**Address:** 32780 Scappoose-Vernonia Hwy  
Scappoose, OR, 97056  
**Phone:** 503-543-4811

**Name:** Gene Hasenkamp  
**Address:** 32800 Scappoose-Vernonia Hwy  
Scappoose, OR, 97056

**Name:** K. Bernet  
**Address:** 51364 Dike Rd  
Scappoose, OR, 97056

**Name:** City of Scappoose  
**Address:** 33568 E. Columbia Ave.  
Scappoose, OR, 97056

**Name:** Chip Buxton  
**Address:** PO Box 503069  
White City , OR, 97503

### **Site Description**

*Street Address, nearest intersection, or other descriptive location.*

Site 1: 32800 Scappoose-Vernonia Hwy, approximately 1 mile northwest of Hwy 30.

Site 2: 33244 SW JP West Rd, Scappoose

*Directions to the site from the nearest highway junction.*

Site 1 is one mile northwest of the intersection of Hwy 30 and Scappoose-Vernonia Hwy; towards Vernonia.

Site 2 is two blocks west of Hwy 30 on SW JP West Road, in City of Scappoose

*Following project completion, public anglers will be allowed the following level of access to the project site:*

Limited access

*Please describe what leases, easements, agreements are in place to ensure angler access to the project site, and what is the length of each agreement.*

One-half of Site 2 is a City of Scappoose public park; access is available along entire stream length (approximately 0.5 mile).

*Dominant Land Use Type:*

Rural residential

*General Project Location.*

**County:** COLUMBIA  
**Town/City:** Scappoose  
**ODFW Dist:** North Willamette  
**Stream/Lake/Estuary Name:** North Scappoose Creek  
**Sub-basin:** 17090012  
**Tributary of:** Scappoose Creek

*Specific Project Location.*

Latitude		Longitude	
	45.77358		-122.89159
	45.75695		-122.88278

## ***Project Summary***

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### *Project Summary*

*Please provide a couple sentence summary of the proposal.*

North and South Scappoose Creeks are crucial salmonid habitat tributaries to Scappoose Creek and Scappoose Bay. Project restores natural stream processes at two sites in the lower watersheds (1 site/creek). Installed LWD, channel reconnections, and riparian vegetation will provide habitat functions for Lower CR salmon and steelhead fisheries.

### *Overall Project Goals*

*Describe the primary goals or outcomes of the entire project, including elements not requesting funding from R&E.*

Increase the amount of, and improve high quality salmonid habitat for rearing, migration and spawning within the lower Scappoose Creek watershed. Project expands on previous restoration actions, and existing conditions, to increase habitat and support Lower Columbia River Fall and Spring Chinook, Coho and Steelhead populations.

Address limiting factors in lower-watershed habitat of an ODFW high-priority stream:

- Install 6 LWD structures on North Scappoose to create pools, high-flow refugia and escape cover
- Create off-channel habitat access with bank laybacks and channel reconnections
- Improve hyporheic conditions to sustain cooler/late summer flows.

Promote long term, self-sustaining riparian habitat:

- Remove invasive species and plant native vegetation to provide complexity for shading, detrital inputs, and future coniferous wood recruitment

Education - project location supports community awareness and restoration involvement.

- promote natural habitat values and continued restoration projects along creeks
- Increase youth and adult understanding of connections between habitat and fisheries.

### *Primary objectives of R&E funding*

*Please describe the measurable objectives for the R&E portion of the funding request.*

R&E funds are to supply, deliver and install six large wood debris structures, (installed during 2018 in-water work period); and to purchase 6880 native trees and shrubs for winter 2018-19

planting.

### Current Situation/Justification

*Please describe the current situation and explain why this funding is needed.*

North and South Scappoose Creeks merge to form Scappoose Creek one mile downstream of the two project sites, and are two of three major subwatersheds in the Scappoose Bay watershed. Scappoose Creek and its tributaries support ESA-listed Coho and Chinook salmon, winter steelhead and cutthroat trout. Scappoose Creek drains into Scappoose Bay and Multnomah Channel just upstream of the Lower Columbia River near the Lewis River, where chinook, coho and steelhead are fished commercially and recreationally.

A lack of adequate LWD for habitat complexity, gravel retention and floodplain connectivity was the major limiting factor for salmon production, identified in the 2012 Limiting Factor Analysis (LFA). Elevated temperatures in the lower subwatersheds is also cited to be prohibitive to salmonid production. This project continues restoration actions on both the North and South Scappoose creeks, above a previous LWD project at their confluence. The North Scappoose site is directly upstream of an LFA-identified Anchor Habitat reach.

The City of Scappoose is contributing \$90,000 to the project; BPA is funding design, permitting, and construction; CSWCD, ODFW, landowners, volunteers and SBWC are contributing additional match; R&E funds are needed for LWD purchase and installation, and native plant purchase on the N. Scappoose site.

### Recreation and Commercial Benefit

*This project will provide benefits to:*

- Recreational fisheries
- Commercial fisheries

*Explain how this project will contribute to current (and/or potential) fishing opportunities, access, or fisheries management.*

Significant seasonal recreational and commercial fisheries occur throughout the Lower Columbia River and Multnomah Channel. Fall Chinook and Coho are caught from St. Helens to Tongue Point, and Fall Chinook are important from Bonneville Dam to St. Helens. Winter steelhead are important through these reaches and in Multnomah Channel, where Spring chinook is also an important population. All species either currently use, or can potentially use Scappoose Bay, Scappoose Creek, and its major tributaries.

North and South Scappoose Creeks contain 51% of Scappoose Bay Watershed's total stream miles. Coho, chinook and steelhead use the lower reaches of both creeks for rearing, migration, and spawning. Available data for North Scappoose show the number of coho spawners has been variable but consistently low. Streamnet data and a Rapid bio-Assessment supports the LFA data, which described the North Scappoose mainstem as supporting approximately 3980 summer coho parr. The LFA noted that 80% of these were rearing below RM6.5 in the reach exhibiting the most severe temperature limitations.

The project creates a mile of enhanced cool-water refugia within the lower reaches in a ODFW high priority stream; combined with other projects, uplift is provided to 3 miles of lower habitat in this major subwatershed.

*Percent benefit split between Commercial and Recreational anglers:*

40 % Commercial  
60 % Recreational

*Please explain, or justify, how the percentage split was determined:*

ODFW Fish Biologist's estimate for commercial and recreational fishing in the lower Columbia River, Multnomah Channel and Scappoose Bay.

*This project has been identified as an ODFW priority for:*  
Statewide

*Does this project directly support implementation of the ODFW Strategic Plan and/or current Fish Division priorities?*

*Please briefly explain when this was identified as a priority and what process or workgroup was used to identified this as an ODFW priority.*

*Identify any plan or other document that identifies this priority.*

ESA Recovery Plan for LCR Salmon (2013); pg. 6-30: "...an immediate priority is to implement actions to increase off channel, side-channel, and floodplain habitat" in low-elevation tributary locations".

ODFW-LCR Salmon Recovery Plan (2010); Action IDs 10 & 15: "...restore riparian areas..., provide long-term supply of large wood... restore impaired instream habitat complexity..." Plus actions 150, 152, 155-157.

*Is this project part of an approved Salmon-Trout Enhancement Program (STEP) activity?*  
No

*This project is intended to benefit the following species:*

Fall Chinook Salmon  
Spring Chinook Salmon  
Coho Salmon  
Lamprey  
Winter Steelhead  
Cutthroat Trout

*This project will benefit anglers or fishery by providing:*

Education/Outreach  
Habitat Enhancements

#### Education/Outreach

*This project will:*

Teach the public about fish (ecology, life history) and/or fish habitat needs  
Teach the public about watershed health and it's relation to the health of fish populations

*The main focus of this project is to:*

Informational signage/kiosk  
In addition to information provided on-site, project will provide multiple hands-on educational opportunities at project sites - including native vegetation planting and management, and student watershed restoration studies.

*Is this education/outreach associated with ODFW efforts?*  
No

*This education/outreach effort will target:*

Youth (< 18 years old)  
Adults (18 years old or more)  
School groups

Number of people targeted by this proposal:  
200

Estimate the average amount of time that each attendee will participate in the proposed effort.  
4

Explain the duration/frequency of the proposed outreach effort.

Outreach to nearby landowners began during the proposal phase, and will continue to the general public through City of Scappoose meeting presentations, newsletter articles, website updates, and landowner meetings. Additional information will be provided in increasing intervals as project goes to construction, and to greater numbers of people as volunteers are recruited for planting activities. Council is working with local schools to develop educational opportunities during the project implementation, and for longer-term studies as the project sites mature. A minimum of two public tours will be offered on an annual basis on the City of Scappoose site.

Will the developed materials be available for use by other organizations or the public(i.e curriculum, teaching techniques, educational strategies, materials)?  
No

#### Habitat Enhancements

The primary purpose of this project is to improve/increase:

In water structure, complexity, and habitat  
Planting or vegetation management  
Riparian - reduce bank erosion

### **Project Description**

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#### Schedule

Activity	Date	RE Funding
Complete 60% construction designs; submit for permits	Nov 2017-Jan 2018	No
Obtain required permits	May 2018	No
Complete 100% engineered drawings; bid and award construction	May-Jun 2018	No
Materials acquisition (large wood, plants)	June-Aug 2018	Yes
Construct during in-water work window	July-Aug 2018	Yes
Vegetation area preparation and planting	Nov 2018 - Mar 2019	Yes
Post-project monitoring and plant maintenance	July 2019 - Jun 2021	No

#### Permits

Permit	Secured?	Date Expected
USACE/DSL Joint Permit	No	May 2018
FEMA No-rise Certification	No	May 2018

#### Project Design and Description

Please describe in detail the methods or approach that will be used to achieve the project objectives.

This project is the result of several previous studies of Scappoose Creek, including an alternatives analysis for the lower reaches of South Scappoose Creek. There have been

multiple landowner discussions regarding long-term creek condition, and potential restoration actions. The Council has done three additional in-stream projects along Scappoose Creek (one above the South Scappoose site, another at the confluence of North and South Scappoose, and the third on the mainstem), as well as corrected 22 fish passages in this subwatershed. The two sites in this project were selected to extend the high-quality habitat in the lower reaches (building off previous projects and existing Anchor Habitat). These projects have significant public support and interest, and use standard, proven restoration methods. Alternatives considered to the current designs were primarily vegetation-only projects, or more complex restorative actions. It was determined even a high-density planting would be insufficient to reduce velocities and create necessary side-channel reconnections to obtain the goals of stream complexity and cooler-water refugia. Restoration elements have been refined to balance achievable project goals with costs.

The goal of this project is to increase salmonid use of the lower Scappoose Creeks, through enhanced natural stream functions. This will be done through the following actions and methods:

Process:

- Complete final construction designs (from current 30% conceptual designs); this includes complete topographic surveys and modeling; secure permits and bid/award construction activities.
- Construct elements (described below) during in-water work window (July-August, 2018).
- Prepare vegetation areas and plant during winter (Nov 2018-April 2019)

Restoration Elements (per site)

North Scappoose:

- Increase off-channel habitat complexity by installing six engineered log jams that will be strategically located to enhance pool development and escape cover, provide high flow refugia and potential for hyporheic conditions at low flows, and/or protect existing gravel bars. Log jam details: each structure has 4-to-6 logs with rootwads, 3 logs without rootwads, and boulders for ballast support (see North Scappoose detail map for typical design). Structures do not cross stream, but are strategically placed for structure intent (text per structure site on NScap Estimates).
  - Improve floodplain function and connectivity by constructing 50 feet of layback at a 3:1 ratio on the left bank (identified on North Scappoose detail map).
  - Increase riparian vegetation species and structural diversity by:
    - o Treating invasive species across 3.5 acres through manual and chemical control.
    - o Planting over 6000 native plants, including 1500 conifers, and other trees and shrub species adapted to site conditions (see planting plan).
- Maintaining plants up to 5 years until they are 'free to grow'.

South Scappoose:

- Improve floodplain function and connectivity along 0.7 miles of stream, and increase fish species' access to off-channel habitat by excavating and re-grading off-channel habitat areas. Specifically:
  - o Construct 2800 feet of lay-back at a 3:1 ratio on the west bank.
  - o Construct 350 feet of floodplain bench at 2 locations on the left bank; approximately 0.4 acres.
  - o Install 210 feet of encapsulated toe lifts at 2 locations on the left bank.

- o Construct 3 side-channel reconnections to historical off-channel habitats, opening 3.3 acres of habitat.
- o Install a minimum of 10 and maximum of 20 log structures along 0.7 stream miles.
  - Provide approximately 500 feet along the channel for a natural stream migration area, supported by a wide riparian buffer; allowing a less-constrained interaction between the channel and floodplain.
  - Increase the area of inundation during high-water periods.
  - Increase riparian vegetation species and structural diversity by:
- o Treating invasive species across 9.4 acres through manual and chemical control on the left (west) side of the creek.
- o Planting over 9000 native plants, including trees and shrub species adapted to site conditions.
- o Maintaining plants up to 5 years until they are 'free to grow'.

Conceptual engineering and planting designs for each site are attached; detailed 60% and final engineering drawings will be completed by spring 2018.

### Engineering

*Does the project involve capital improvement, engineering, site grading or other construction?*

Yes

Not associated with ODFW

### Project Management and Maintenance

*What is the life expectancy of R&E funded construction, structures, equipment, supplies, data or fishery?*

Instream installations and streambank work are designed to require no maintenance, or will be designed to withstand 100-year flows. Little or no maintenance is expected for these structures. Riparian vegetation will be maintained as necessary to assure 'free to grow' status, primarily by landowners with SBWC assistance.

*Who is responsible for long term management, maintenance, and oversight of the project beyond what is funded by R&E.*

The SBWC is the overall project manager, but the City of Scappoose and individual landowners are ultimately responsible for restoration activities. The SBWC will work closely with landowners on long-term maintenance of project elements that require additional maintenance beyond installation. For example, the Council will work closely with landowners to assure newly-planted vegetation is kept irrigated and free of invasive species as necessary to be fully established to a "free-to-grow" status.

*Will the project require ongoing maintenance?*

No

*Is there a plan to collect baseline data and to conduct monitoring efforts to measure the effectiveness of the project?*

Yes

Water quality monitoring data exists above and below both the South and North Scappoose restoration sites. Additional data will be collected before, during and after these restoration activities. A detailed monitoring plan is attached, showing collection locations and times for



continuous temperature probes, photo points at each site, and a detail of other monitoring elements such as pool counts.

## Project Funding

### Funding

*Have you applied for OWEB funding for this project?*

Yes

OWEB application number: 216-8201-15828

Received an award.

*Has this proposal, or similar proposal for this project location, previously been denied by OWEB or other funding source?*

```
[{"source":"OWEB
WMAHI","type":"Cash","secured":"Secured","dollarValue":361678,"comments":"Grant awarded
10/05/17"}, {"source":"City of
Scappoose","type":"Cash","secured":"Secured","dollarValue":75000,"comments":"Designated
city funds"}, {"source":"City of Scappoose","type":"In-
Kind","secured":"Pending","dollarValue":15000,"comments":"In-kind services expected to assist
with excavation/construction."}, {"source":"ODFW","type":"In-
Kind","secured":"Secured","dollarValue":8000,"comments":"Monitoring, plan reviews and fish
passage support during construction."}, {"source":"SBWC Native Plant Nursery","type":"In-
Kind","secured":"Secured","dollarValue":15960,"comments":"Plant materials and planting staff
time."}, {"source":"CSWCD","type":"In-
Kind","secured":"Secured","dollarValue":7000,"comments":"Staff time for design review, funds to
support planting crews."}, {"source":"Volunteers & Landowners","type":"In-
Kind","secured":"Pending","dollarValue":2400,"comments":"Landowner support in designs,
construction and vegetation planting and maintenance."}, {"source":"OWEB Small
Grant","type":"Cash","secured":"Pending","dollarValue":10000,"comments":"Funds to support
planting activities."}]
```

Other Funding Source	Type	Secured	Dollar Value	Comments
OWEB WMAHI	Cash	Secured	361678	Grant awarded 10/05/17
City of Scappoose	Cash	Secured	75000	Designated city funds
City of Scappoose	In-Kind	Pending	15000	In-kind services expected to assist with excavation/construction.
ODFW	In-Kind	Secured	8000	Monitoring, plan reviews and fish passage support during construction.
SBWC Native Plant Nursery	In-Kind	Secured	15960	Plant materials and planting staff time.
CSWCD	In-Kind	Secured	7000	Staff time for design review, funds to support planting crews.
Volunteers & Landowners	In-Kind	Pending	2400	Landowner support in designs, construction and vegetation planting and maintenance.
OWEB Small Grant	Cash	Pending	10000	Funds to support planting activities.
		Total	495038	

## Budget

Item	Unit Number	Unit Cost	In-kind or non-cash contributions	Funding from other sources	R&E Funds	Total Costs
<b>PROJECT MANAGEMENT</b>						
SBWC Coordinator	280	43.00	0	12040	0	12040
		<b>SUBTOTAL</b>	0	12040	0	12040
<b>IN-HOUSE PERSONNEL</b>						
SBWC Staff	340	31.00	0	10540	0	10540
Volunteers and Landowners	160	15.00	2400	0	0	2400
		<b>SUBTOTAL</b>	2400	10540	0	12940
<b>CONTRACTED SERVICES</b>						
Contract Engineering and Construction Services - S Scappoose	0	0.00	15000	203315	0	218315
CSWCD and ODFW Staff, supporting services (both sites)	0	0.00	11700	0	0	11700
Contract vegetation planting (both sites)	0	0.00	0	10000	0	10000
Contract Engineering and Construction Service - N. Scappoose	0	0.00	0	78200	0	78200
Contract - Install large wood - N. Scappoose	0	0.00	0	0	21600	21600
		<b>SUBTOTAL</b>	26700	291515	21600	339815
<b>TRAVEL</b>						
			0	0	0	0
		<b>SUBTOTAL</b>	0	0	0	0
<b>SUPPLIES/MATERIALS</b>						
Const. Materials, (LW, boulder, soil lifts, etc) - S.Scappoose	0	0.00	0	57471	0	57471
Construction Materials, Other (cobble, soil lifts, seeding)	0	0.00	3300	31953	0	35253
Native Plants and plant protectors - S. Scappoose	0	0.00	15960	11355	6880	34195
Const. Material (LW, boulder) - N. Scappoose	0	0.00	0	0	27176	27176
		<b>SUBTOTAL</b>	19260	100779	34056	154095
<b>EDUCATION/OUTREACH</b>						
Outreach materials	0	0.00	0	800	0	800
Post-project outreach	0	0.00	0	4550	0	4550
		<b>SUBTOTAL</b>	0	5350	0	5350
<b>EQUIPMENT</b>						
			0	0	0	0
		<b>SUBTOTAL</b>	0	0	0	0
<b>FISCAL ADMINISTRATION</b>						
Admin	0	0.00	0	26454	0	26454
		<b>SUBTOTAL</b>	0	26454	0	26454
		<b>BUDGET TOTAL</b>	48360	446678	55656	550694

## ***Internal Review Results***

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**Review Score:** 0.5 out of 3

(0 = Do Not Fund, 1 = Strengthen Proposal, 2 = Recommend, 3 = Strongly Recommend)

### ***Summary of Review Team Comments***

The review team was generally not supportive of this application, while there would be some benefits to fish, the connection to angler benefit is tenuous at best. The team felt that the application did not demonstrate that this was enough of a priority for enhancement of sport fisheries to justify the cost, especially when compared to other projects. Review team scores included six 0s, three 1s, one 2, and no 3s.

### ***Specific Review Team Comments***

Some aspects of the project appear to be more for bank stabilization than habitat improvements.

The proposal talks about "uplift" in lower 3 miles, but it is not clear where this gets us in relation to the overall needs in the system. It is not clear if this is a key or substantial improvement or just one of many treatments needed. While this may be better than an average wood placement project and appears to address legitimate habitat limitations, it is difficult to connect the value to anglers especially when compared to other projects.

Significant funding from other sources and great partnerships but it seems like the application is using the "woody debris" to leverage additional funds. Does not appear the project is dependent on R&E funds to move forward.

This is a habitat project. While there may be some opportunity to educate the public by highlighting the project and its benefits, it is not an education project. The applicant seems to oversell this component.

Please further define the current and expected populations of Chinook in Scappoose Creek. Based on some initial inquiries, it appears this basin may have very low usage for this species.

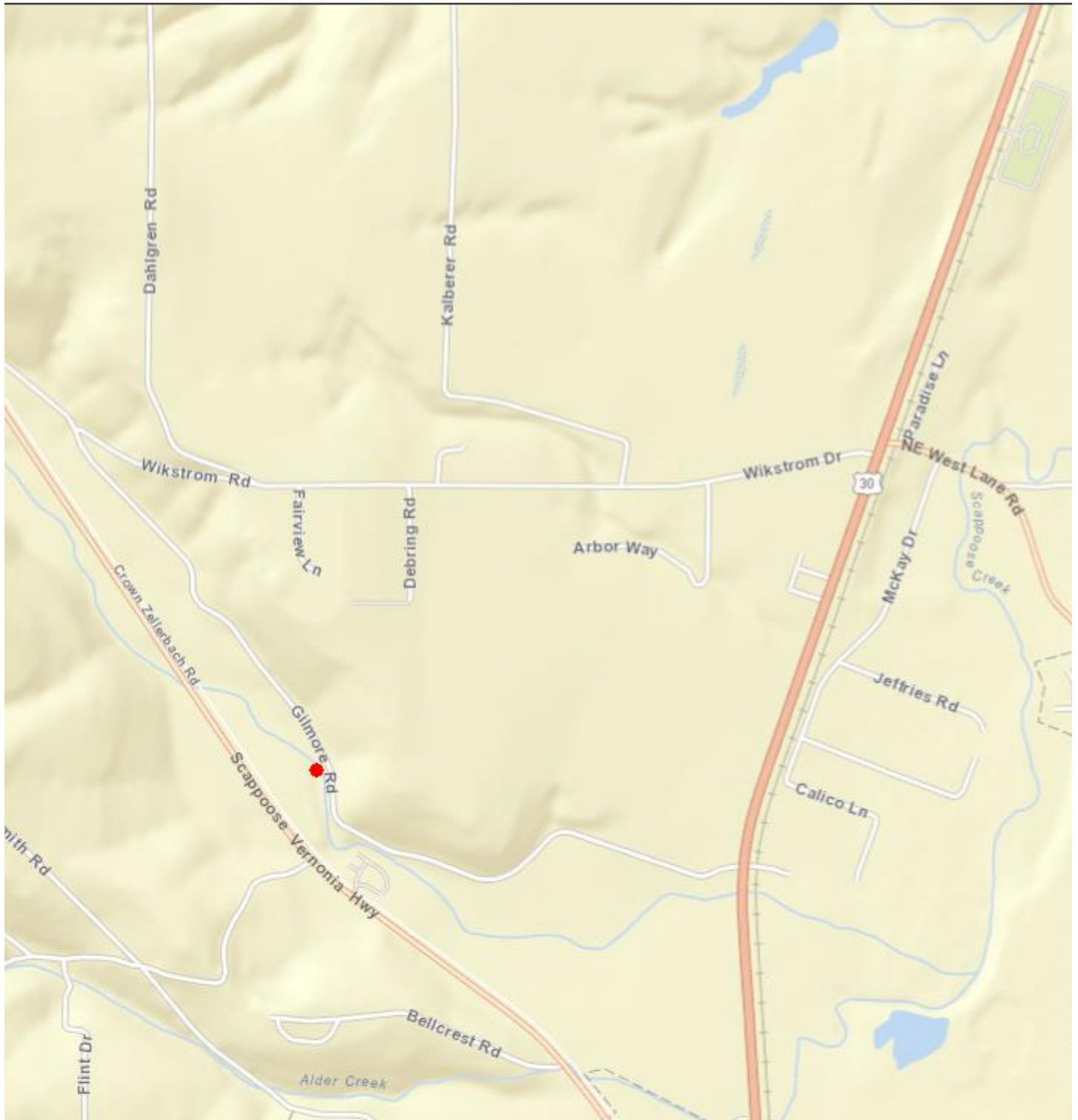
### ***Specific Review Team Questions***

*Pictures show a location where cattle access the stream, but the project description does not speak to whether grazing and cattle access will be maintained or not, and if so what the impacts to the stream would be. Would cattle be excluded from the riparian plantings?*

*Is a two month (Jul-Aug) in-water work period enough time to complete both tributaries?*

## Project Map

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## ***Additional Files***

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### **Budget Information**

[Estimate\\_NScap\\_LWD](#)

*Engineer estimate for LWD materials*

### **Maps**

[Location\\_Map\\_ScappooseCreek](#)

*Project location map*

[Project Map](#)

*Map image of project location*

### **Photos**

[Photos\\_SS-NS](#)

*Photo pages for both sites*

### **Design Information**

[Detail\\_Map\\_NScap\\_6LWD](#)

*Design detail and map for North Scappoose site*

[Detail\\_Map\\_SScappoose](#)

*Detail map of South Scappoose Site - design elements*

[Scappoose\\_PlantingPlan](#)

*Native vegetation planting plan - both sites*

### **Management Plans and Supporting Documents**

[RecoveryPlan\\_excerpts](#)

*Excerpts from supporting documents*

[ScappooseMonPlan](#)

*Project monitoring plan*

### **Permits and Reviews**

### **Partnerships**

[OWEB\\_GrantAward\\_171005](#)

*OWEB-BPA Scappoose Restoration grant award documentation*

[SBWC\\_SupportLetters2](#)

*Project letters of commitment and support*

### **Public Comment**

### **Administrative Documents**

[2006\\_IRS\\_TaxExemptStatus](#)

*SBWC Tax Exemption Status Letter*

[SBWC\\_RacialEthnic](#)

*Racial and Ethnic Statement*

[SBWC\\_SignatureAuthorization](#)

*Signature Authorization Page*

### ***Completion Report***

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A completion report has not been submitted for this project.