Final Feasibility Report: Curley Creek Prioritized Restoration, NTA 2018-0901

Prepared by Mid Sound Fisheries Enhancement Group and Wild Fish Conservancy

March 29, 2023

1.0 Background

Curley Creek, one of three high-priority freshwater streams in the East Kitsap watershed, supports spawning coho, summer and fall chum, and ESA listed steelhead, and its estuary is important nearshore habitat for ESA listed Chinook. Both the chum and coho populations are important to the Suquamish Tribe treaty fishery as well as for non-tribal recreational and commercial fisheries. The three subwatersheds of Curley Creek – Salmonberry Creek, Long Lake, and mainstem Curley Creek – are all designated by NOAA Fisheries as critical habitat for ESA-listed Puget Sound steelhead.

In 2017, the Suquamish Tribe prepared the Curley Creek Watershed Assessment and Restoration Plan (hyperlink). The plan categorized the Curley Creek watershed into 31 Action Areas, and provided recommendations to protect and restore watershed, riparian, floodplain and stream processes and habitat conditions for salmonids. In 2019, Mid Sound Fisheries Enhancement Group (Mid Sound) was awarded NTA 2018-0901 to build upon the Watershed Assessment by working with partners to identify and rank the highest priority restoration actions and develop a conceptual or preliminary design for the top-ranking feasible restoration action.

Through early 2021, Mid Sound led a process to rank the Habitat Restoration Action Areas in order of priority, and to identify priority habitat projects within the priority reaches (Appendix A). The process included a technical Partner Group comprised of representatives from the Suquamish Tribe, Great Peninsula Conservancy, Washington Department of Fish and Wildlife, Kitsap Conservation District, Kitsap Noxious Weed Control Board, Wild Fish Conservancy, Kitsap County, Pierce County, and the City of Port Orchard.

Subsequently, Mid Sound reached out to landowners of the top ranked restoration projects and secured permission to further assess the top three prioritized restoration opportunities, which included a floodplain reconnection and two fish passage barriers, all on Salmonberry Creek. In September 2021, Mid Sound contracted Wild Fish Conservancy (WFC) to help determine the feasibility of implementing recommendations for the top three ranked restoration projects and move forward with design development for at least one of these. For various reasons, none of the top three restoration projects were feasible to advance at the time of our project.

After consultation with the Partner Group, our focus switched to the Long Lake Action Area. The Long Lake action area was the highest ranked in our initial prioritization, because of the large spatial scale of potential habitat benefits and the connectivity of the lake to all other habitats in the watershed. Located at the center of the Curley Creek watershed, the lake is recognized as a potential bottleneck for salmon survival due to several factors including predation by non-native warmwater fish, nutrient pollution and pesticide runoff impacting water quality, and shoreline habitat degraded by both lack of native riparian vegetation and overwater structures. The specific salmon recovery actions recommended for Long Lake are: protect remaining areas of undeveloped shoreline; revegetate impacted shoreline; control input of nutrients and pesticides from surrounding land; and assess and manage predation impacts. Because of the complexity of issues in Long Lake and the number of landowners who would need to be engaged, we opted to start our feasibility work with the highest-ranked restoration projects described above. Once we realized that none of the first three projects would be feasible to advance further, the Partner Group agreed that we should revisit the Long Lake action area recommendations and see what kind of progress could be made, since addressing impacts to salmon occurring in Long Lake had the highest benefit score of all the projects we ranked. In 2022, our team worked on developing (1) a plan for addressing impacts to salmon in Long Lake, and (2) conceptual designs for restoration of the stream reach where Salmonberry Creek flows into Long Lake.

The goals of this project were: to develop a flexible and practical framework for prioritizing restoration and protection actions in the Curley Creek watershed; to identify feasible restoration projects that Mid Sound and partners can pursue in future years; and to prepare documentation to support applications for funding for full design and implementation of those projects. To the extent possible, the prioritization framework and the recommended actions contained within are meant to promote future projects that protect and restore natural processes in support of a healthy watershed and resilient salmon populations. Our intent with the prioritization framework is that it can be used to consider the watershed context of individual stream reaches and project locations in planning efforts, and it can be updated and revised as new information becomes available.

2.0 PRIORITIZATION

The Curley Creek Watershed Assessment categorized the Curley Creek watershed into 31 Action Areas, and provided recommendations to protect and restore watershed, riparian, floodplain and stream processes and habitat conditions for salmonids. The Prioritization Matrix (Appendix A) details the prioritization process used to rank Action Areas and associated recommendations identified in the Watershed Assessment.

The prioritization process was led by Mid Sound Fisheries Enhancement Group with funding from the National Estuary Program, and technical advice and guidance from the project Partner Group:

- Ali Erskine, Great Peninsula Conservancy
- Brittany Gordon, Kitsap County
- Carin Anderson, Kitsap Conservation District

- Dana Coggon, Pierce Conservation District
- Erik Steffens, Great Peninsula Conservancy
- Jamie Glasgow, Wild Fish Conservancy
- Kathie Peters, Kitsap County
- Marty Ereth, Pierce County
- Steve Todd, Suquamish Tribe
- Tom Ostrom, Suquamish Tribe
- Zack Holt, City of Port Orchard

The Watershed Assessment presented a framework to prioritize action areas. Across four workshops, the Partner Group adapted and expanded on the initial framework to further differentiate the benefits of each project. The criteria used, along with descriptions of why criterion were included or excluded, are presented in Appendix A, Sheet 7. Each criterion was scored, and the scores were summed to assign a Benefit Score and Implementation Score (Table 1).

To rank the Action Areas:
1. Action Areas were sorted by Benefit Score (highest Benefit Score at the top);
2. Action Areas with equal Benefit Scores were sorted by Implementation Score (highest Implementation Score at the top);
3. Implementation considerations were reviewed to identify Action Areas that should be clustered, or Action Areas where sequencing considerations meant Actions should be moved higher or lower on the ranked list.

Partner feedback highlighted the importance of being both strategic and opportunistic in pursuing recovery actions. The third step in the ranking process allowed the group to move projects higher or lower on the ranked list based on implementation considerations to allow flexibility to prioritize the most feasible projects, while also considering the benefit scores. This ranking is based on available information, and is designed to be a flexible and useful template that can be updated as new information becomes available or new opportunities are identified. We also developed an interactive Web Map to visually display the results of the ranking process (available online, password *CurleyCreekPartners*).

Table 1. The top 15 ranked projects from the prioritization, with projects currently underway by others highlighted in green, and projects included in our feasibility assessment and design development highlighted in blue.

Ranking	Project Type	Action Area	Benefit Score	Implementation Score
1	Other	(28) Long Lake Shoreline	41	6
2	Passage	(12) Salmonberry Creek Crossing at Clover Valley Road SE	15	9
3	Passage	(14) Salmonberry Creek Crossing at SE Baker Road	18.5	9
4	Other	Watertyping and Enforcement	16	7
5	Passage	(17) Salmonberry Creek Crossing at SE Sedgwick Road	13	8
6	Protection	(2) Curley Creek Estuary to Sedgwick Road	11	7
7	Passage	(7) Unnamed Stream 15.0187 to Locker Road	10	11
8	Protection	(25) Cool Creek upstream of Phillips Road	10	8
9	Protection	(4) Banner Creek (15.0186) to Sedgwick Road	9	9
10	Protection	(09) Unnamed Stream 15.0187 near Frog Pond Road	9	9
11	Channel Complexity	(16) Salmonberry Creek from Cool Creek confluence to Sedgwick Road	8	9
11	Channel Complexity	(24) Cool Creek Alluvial Fan Downstream of Phillips Road	5	7
12	Channel Complexity	(3) Curley Creek Upstream of Sedgwick Road to Long Lake	9	8
13	Protection	(15) Salmonberry Creek from Baker Road to Cool Creek confluence	9	7
14	Channel Complexity	(19) Salmonberry Creek from Salmonberry Road to Constructed Side Channel Ponds	9	6
15	Protection	(31) Wetland Complex at SE corner of Long Lake	8	10

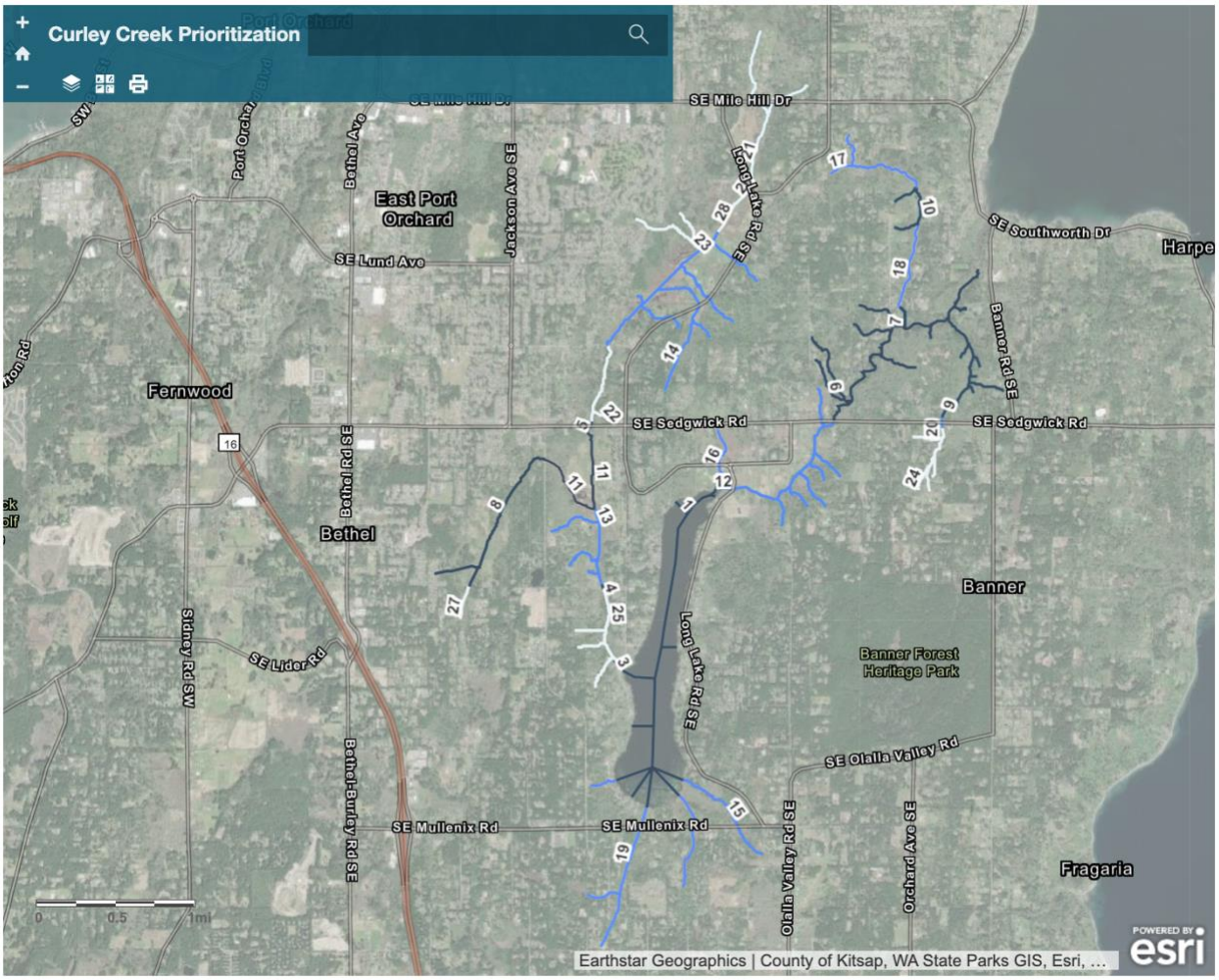

Figure 1. Screen shot of the Curley Creek Prioritization Web Map. Action areas are linked to the Prioritization Framework. Available online [CurleyCreekPartners].

3.0 Feasibility Assessment

3.1 Synthesis of existing information

WFC reviewed the Suquamish Tribe's 2017 Curley Creek Watershed Assessment and Restoration Plan, and the 2021 Curley Creek Partner Group's subsequent ranking of restoration priorities. WFC conducted a desktop- and GIS-based analysis of the ranked action areas, including the project GIS map corresponding with the prioritization matrix, as well as:

- Publicly-available LiDAR and airphoto data
- The preliminary ground-truthed hydrography, field data, and photos from WFC's ongoing water typing assessment in Curley Creek.
- The results from two eDNA samples that were collected from within Curley Creek in April 2021 (Appendix B).
- The FEMA polygon representing the 100-year floodplain in Salmonberry Creek, provided by Mid Sound.

- The 2008 results of WDFW's fish passage assessment at the two prioritized county road crossings.

3.2 Site Visits / Discussions with landowners

AA12 and AA11: Salmonberry Creek crossing at Clover Valley Road SE and Salmonberry Creek Outlet at Long Lake

Initial site visits to both of these project locations were conducted in September 2021, with representatives from WFC, MSFEG, WDFW, and the Suquamish Tribe. We discussed fish passage and other habitat restoration opportunities with Landowners A and B at the mouth of Salmonberry Creek (AA11) downstream from the Clover Valley Rd SE crossing (AA12), and both expressed support (Figure 1). Restoration of fish passage at AA12 was the highest ranked fish passage project and second ranked overall project in our prioritization, and we initially thought it could be combined with restoration of AA11, the stream reach between the culvert and the mouth of the creek where it flows into Long Lake. During this initial site visit, an abundance of ~10" rainbow or cutthroat trout (downstream eDNA results suggest the latter) and the prevalence of live and dead freshwater mussels (*M. falcata*) were noted in the stream reach downstream from the culvert outlet. Landowner A has invested considerable effort to remove invasive yellow flag iris and reed canary grass from the wetted width of the stream channel.

The county culvert under Clover Valley Rd. SE (AA12) appears undersized, a partial barrier to fish passage. A large and deep plunge pool indicated high velocities concentrated at the culvert outlet during storm events, with no indication of the road overtopping. This culvert requires analysis by WDFW engineer; may not be a restoration priority at present for a variety of reasons, including that it is a partial barrier and is currently not included on the Kitsap County TIP. See also section 3.4 below. The gradient from the road to the lake is less than 1%. The channel is simplified and would benefit from addition of LWD. Riparian revegetation opportunities exist, especially on the left bank. Evidence of overtopping and localized flooding were noted on the left bank, but the landowners seem accepting of it.

WFC biologists and engineers met again on site with Landowners A & B in November 2022. We discussed options for revegetation and in-stream wood installation, completed a topographic survey of the stream reach needed for conceptual design, and installed a stream flow gauge that the property owner agreed to monitor during winter high flows. WFC observed adult chum and coho in the project reach during this visit. The mouth of Salmonberry Creek is an important transition zone for salmonids, and with support from the landowners, we opted to prepare conceptual designs for restoration of the stream in this reach, including riparian planting and small wood placement to enhance channel complexity (Appendix F).

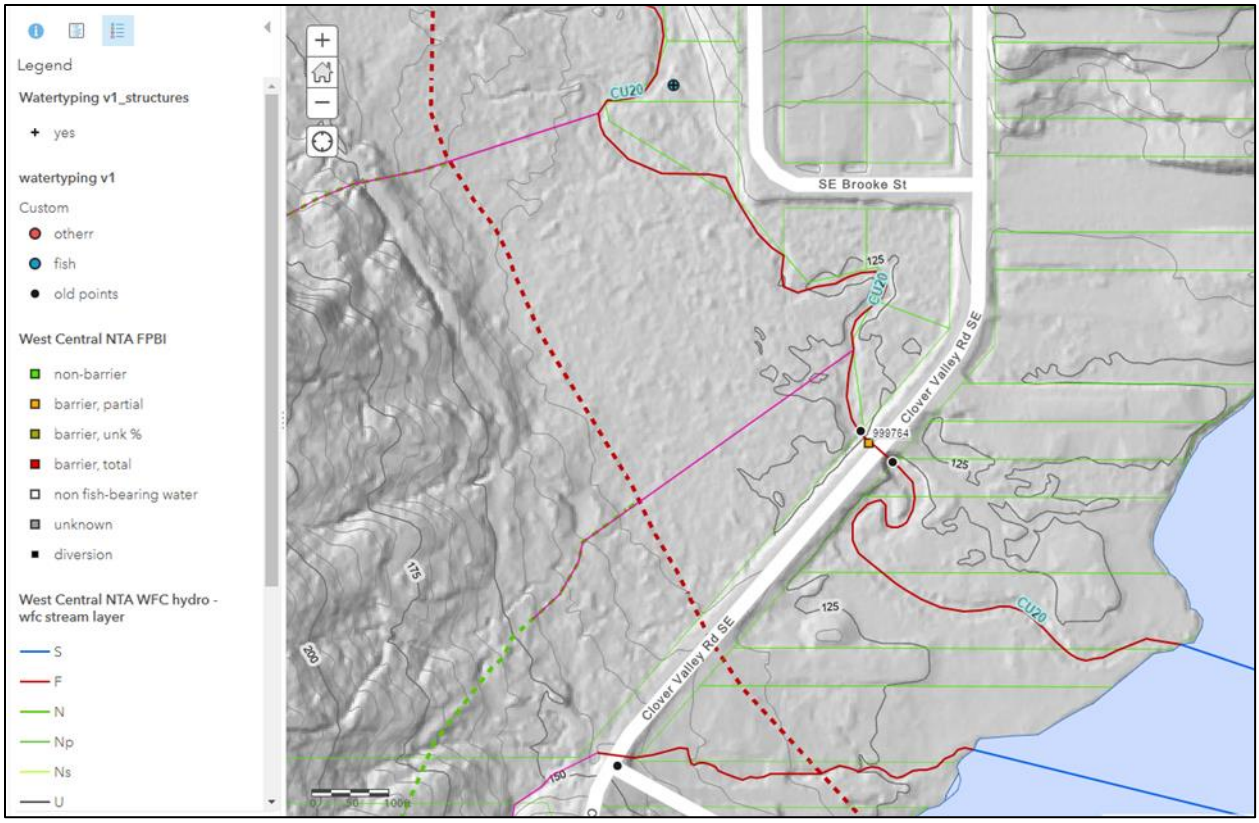

Figure 2. Preliminary water typing map showing corrected channel location at the confluence of Salmonberry Creek with Long Lake.

AA16 and AA24: Salmonberry Creek from the Cool Creek confluence to Sedgwick Road and the Cool Creek alluvial fan downstream of Phillips Road

We met with Landowner C, whose property includes encompasses both AA16 and AA24, in September 2021, with representatives from WFC, MSFEG, WDFW, and the Suquamish Tribe. Restoration of AA16 and AA24 together was the top-ranked channel complexity project in our prioritization. The property was a golf course when purchased by the current landowner several decades ago and now serves as a wedding and event venue (Figure 2). Landowner C is interested in protecting / restoring the stream, and leaving a conservation legacy for the future. He is a life-long landscaper, and has strong ideas about how the stream should look – which may conflict with our process-based restoration goals. He expressed concerns about who would be responsible for maintaining a restoration project once it is completed. We agreed to share information regarding how the stream looked and functioned historically, and see if we can find some common ground on a future restoration plan.

The stream is ditched and straightened through Landowner C's parcel, with opportunities for re-meandering, increasing floodplain elevation complexity, adding large woody debris, and increasing the size and diversity of riparian habitats. There is a pump station that draws surface water from a pond fed by Cool Creek, with volume and screening unknown. Beaver activity is widespread on the property. The landowner acknowledges that they help raise the water table

and keep the trees wet, but (along with a restored shrub-scrub wetland mosaic) sees beaver dams as an impediment to stream flow. Freshwater mussel beds are prolific through the ditched stream reach.

MSFEG and WFC conducted a follow-up site visit with Landowner C in November 2021, to provide more information about natural process restoration and the range of restoration options that could be considered for the streams on his property. We shared three restoration concepts, ranging from light-touch to large-scale restoration / enhancement. We also shared examples (photos and design drawings) of other similar restoration efforts (WFC's Langlois Cr.). We discussed in general terms the possibility of purchasing a conservation easement, and fee-simple acquisition. Landowner C was receptive to the information, and requested more time to consider our information. He clearly will need time to reconcile process-based restoration with his vision of a healthy stream reach, and is open to future discussions about potential habitat restoration on the property.

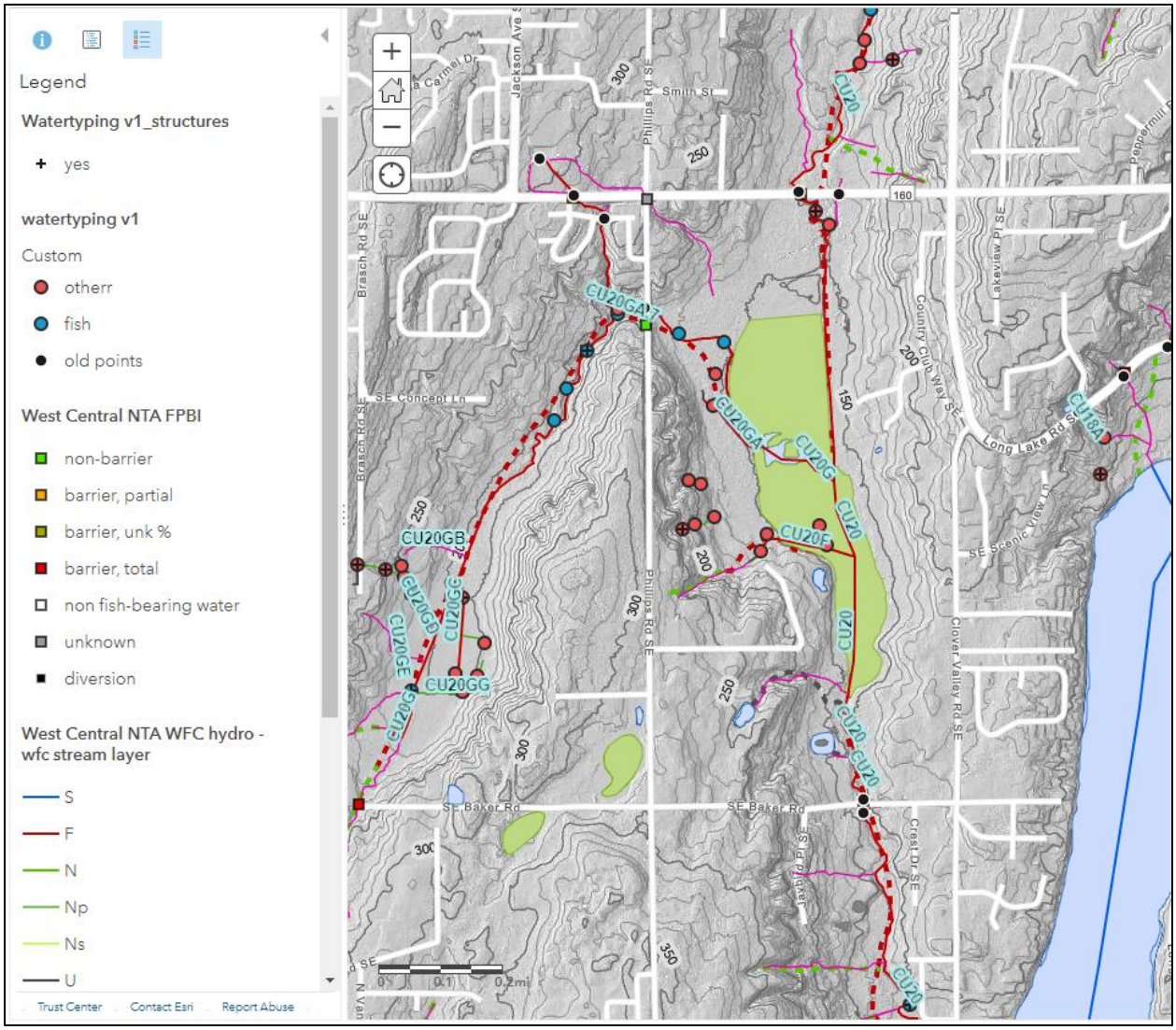

Figure 3. Preliminary water typing map showing corrected channel location at Yang's Botanical Gardens.

AA14: Salmonberry Creek Crossing at SE Baker Road

An initial site visit to AA14 was completed in September 2021, following a meeting with Kitsap County Roads to discuss the culverts that were ranked in our prioritization. Restoration at AA14 was the second highest ranked fish passage barrier and third ranked project overall. This is a partial barrier, with a beaver dam at the inlet and much beaver activity upstream. A right bank tributary joins the main channel just downstream from the culvert outlet. This culvert requires analysis by WDFW engineer; may not be a restoration priority at present for reasons similar to those described above for the Clover Valley Rd culvert. See also Section 3.4 below.

Past project within AA19: Salmonberry Creek Side Channel Ponds

In November 2021, with GPC and the property landowners we visited a decade-old habitat protection and restoration project that restored wetlands, side channel habitat, and riparian habitat along Salmonberry Creek. MSFEG completed the original restoration and protection project here in 2006, with GPC managing a conservation easement and stewarding the site. The site appeared to be excellent fish rearing and waterfowl habitat – with constructed ponds and extensive riparian plantings. This protected and restored reach is a good model for what's possible over time at the AA16/AA24 (Landowner C's) property. The landowners – avid birders and naturalists – might be good advocates for replicating this restoration / conservation model elsewhere.

AA28: Long Lake – Long Lake Predation Study

As part of our plan to start developing a roadmap for addressing the suite of issues occurring in Long Lake that are impacting salmon populations, an initial meeting to discuss the Long Lake predation and fishery management issue was held in Feburary 2022, with representatives from MSFEG, WFC, WDFW, and the Suquamish Tribe. WDFW shared that the older predation study (Bonar et al. 2004) used a model to estimate the coho population size in the watershed, which may have introduced bias into the estimate that largemouth bass were consuming between 1/3 to 1/2 of all juvenile coho in the watershed. Based on that, they recommended that we first develop a study to provide an unbiased estimate of coho productivity in the watershed, using smolt trapping or other quantitative techniques. Once we and WDFW feel confident in our estimates of smolt productivity, then WDFW would be in support of pursuing the predation assessment component of the study.

MSFEG had a follow up meeting with staff from the Hood Canal Salmon Enhancement Group (HCSEG) later in February 2022, to discuss HCSEG's experience, method considerations, and lessons learned from their years of running smolt traps for the Hood Canal Steelhead Study on the Dewatto, Tahuya, and Little Quilcene Rivers, and the Fish In-Fish Out monitoring for Hood Canal Summer Chum on the Union River. HCSEG would be able and willing to advise on future smolt counting efforts in the Curley Creek watershed, including sharing expertise on recruiting and training volunteers to help monitor smolt traps. A follow-up meeting was also held with staff

from the WDFW Science Program, to review methods from the Hood Canal IMW study that could be applied to a coho population study in Curley Creek.

3.3 Project meetings

- Sept. 9 fish passage priorities discussion with WDFW, Kitsap County, Suquamish, MSFEG, WFC
- Oct. 7 AA16/AA24 planning discussion with MSFEG, WFC, and Great Peninsula Conservancy (GPC). Discuss conservation easement and acquisition alternatives, and potential interest from Waterman Mitigation Partners in developing the property as a wetland mitigation bank.
- Oct. 12 – WFC and MSFEG project manager check in; discuss next steps.
- Oct. 26 – WFC and MSFEG project manager check in.
- Nov. 9 – project update to WSPER TAG
- Nov. 23 – project update and next steps planning with the workgroup

3.4 Updated culvert information from WDFW

Following the site visit with WDFW to the road crossings in September 2021, and at the project team's request, WDFW re-assessed the two county road crossings (Clover Valley Rd. SE and SE Baker Rd.) in October 2021 and provided the updated data to the project team (Appendix C). The SE Clover Valley Rd. crossing is identified by WDFW as "unknown" fish passability due to the lack of downstream water surface elevation (WSE) control, though given its span and slope it appears to be a partial barrier with an estimated ~67% passability (J. Glasgow, pers comm). The Baker Rd. SE crossing is identified by WDFW as having an estimated ~67% passability. Both culverts would require a WDFW engineer's review to confirm their passability, in part because the surveyors were unable to locate downstream controls for the structures. WDFW engineers are currently prioritizing WSDOT culverts for their review, and so would be unable to visit these culverts until their replacement being planned. Kitsap County Public Works identifies both culverts as being in good condition and neither is currently on the TIP. If we were able to find funding to replace them, they could be added to the TIP. We evaluated each culvert using the scoring criteria for the Brian Abbott Fish Barrier Removal Board (FBRB) grant, administered through the state Recreation and Conservation Office (RCO). Based on the scoring criteria, these two culverts would not rank highly enough compete for funding. In the future we will investigate additional funding sources and continue coordinating with Kitsap County, the Suquamish Tribe, and WDFW to identify a path forward for both culvert projects.

3.5 Development of concepts and plans

- Prior to the November 4 meeting with Landowner C, we developed a conceptual design folio for the AA16/AA24 property representing a range of restoration options (Appendix D).
- Long Lake predation assessment study design (Appendix E).
- Concepts for Salmonberry Confluence (Appendix F).

4.0 NEXT STEPS

A. Use WSPER Working Group meetings as a forum for continuing to track happenings in the watershed and update the prioritization matrix as needed. Many of the Curley Creek partner group members are active in WSPER and eager to continue the momentum built over the past two years.
B. Seek grant funding to support the Long Lake Predation Study and the Salmonberry Confluence Restoration.
C. Work with the WSPER Coordination Team to make sure the Prioritization Framework, the Final Report, and the project StoryMap are available online and everyone knows where to find them.
D. Follow up with Landowner C regarding restoration concepts and options.
    a. Explore easement / acquisition options, in partnership with GPC
    b. Present McLane Nature Trail as a potential model for restoration possibilities. Online photos here.
E. Investigate opportunities to work with Kitsap County on fully restoring fish passage and stream connectivity on Salmonberry Creek.

Appendix A. Prioritization Framework

Appendix A: Prioritization Framework

Curley Creek Watershed Assessment
Action Area Prioritization

Final V1 June 30, 2021

Background

The Curley Creek Watershed Assessment categorized the Curley Creek watershed into 31 Action Areas, and provided recommendations to protect and restore watershed, riparian, floodplain and stream processes and habitat conditions for salmonids. This workbook details the prioritization process used to rank Action Areas and associated recommendations identified in the Watershed Assessment.

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- Zack Holt, City of Port Orchard

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Approach

The Watershed Assessment presented a framework to prioritize action areas. Across four workshops, the partner group adapted and expanded on the initial framework to further differentiate the benefits of each project. The criteria used, along with descriptions of why criterion were included or excluded, are presented in Sheet 7. Each criterion was scored, and the scores were summed to assign a Benefit Score and Implementation Score.

To rank the Action Areas:
1. Action Areas were sorted by Benefit Score (highest Benefit Score at the top)
2. Action Areas with equal Benefit Scores were sorted by Implementation Score (highest Implementation Score at the top)
3. Implementation considerations were reviewed to identify Action Areas that should be clustered, or Action Areas where sequencing considerations meant Actions should be moved higher or lower on the ranked list

Partner feedback highlighted the importance of being both **strategic and opportunistic** in pursuing recovery actions. The third step in the ranking process allows the group to move projects higher or lower on the ranked list based on implementation considerations to allow flexibility to prioritize the most feasible projects, while also considering the benefit scores. This ranking is based on available information, and is design to be a flexible template that can be **updated as new information becomes available** or new opportunities are identified.

Navigation

This workbook is structured in the following sheets:
• Sheet 2 presents the ranked Action Area list.
• Sheets 3 – 6 summarizes the recommended actions and presents the scored criteria for each Action Area. This information can also be viewed in the webmap at https://www.midsoundfisheries.org/curley-creek-prioritization-draft-v3/ (password CurleyCreekPartners).
• Sheet 7 defines the criteria used, and describes the rationale for including or excluding criteria from the assessment.

The Curley Creek Watershed Assessment can be accessed through the links below. Refer to Section 6 for full project descriptions (beginning electronic page 107 if using pdf viewer).

Curley Creek Watershed Assessment and Restoration Plan

Appendix A Field Reconnaissance

Appendix B Data Inventory

Appendix C HRCD Maps

Appendix D Wetland Maps

Appendix E Canopy Height Maps

Appendix F Lidar REM

Appendix G WDFW Fish Passage Reports

Appendix H Action Area Maps

Appendix I Prioritization Framework

Appendix A: Prioritization Framework

Action Area Ranking

The following process was used to rank Action Areas:
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3. Action areas were moved higher or lower on the list based on implementation considerations.

				Key:	**Blue** - Mid Sound to assess feasibility	**Green** - AA Recommendations in progress
Ranking	**Project Type**	**Action Area**	**Benefit Score**	**Implementation Score**	**Additional Ranking Considerations**	**Next Steps**
1	Other	(28) Long Lake Shoreline	hi	6		Proposed - Mid Sound to start conversations with aim to create roadmap to tackle lake issues
2	Passage	(12) Salmonberry Creek Crossing at Clover Valley Road SE	15	9	Moved to the top barrier project. Seond highest benefit project is a barrier upstream of this. This downstream barrier should be addressed first.	Proposed - Mid Sound to assess feasiblity.
3	Passage	(14) Salmonberry Creek Crossing at SE Baker Road	18.5	9		Proposed - Mid Sound to assess feasiblity
4	Other	Watertyping and Enforcement	16	7		In progress: WFC
5	Passage	(17) Salmonberry Creek Crossing at SE Sedgwick Road	13	8		In progress: This is planned to be addressed by WSDOT 2021-2023.
6	Protection	(2) Curley Creek Estuary to Sedgwick Road	11	7		In progress: GPC Active in this reach.
7	Passage	(7) Unnamed Stream 15.0187 to Locker Road	10	11		In progress: Conservation District
8	Protection	(25) Cool Creek upstream of Phillips Road	10	8		
9	Protection	(4) Banner Creek (15.0186) to Sedgwick Road	9	9		
10	Protection	(09) Unnamed Stream 15.0187 near Frog Pond Road	9	9		

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Ranking	Project Type	Action Area	Benefit Score	Implementation Score	Additional Ranking Considerations	Next Steps
11	Channel Complexity	(16) Salmonberry Creek from Cool Creek confluence to Sedgwick Road	8	9	Prioritized above Channel Complexity projects with slightly higher score due to feasibility of implementation. There is a single landowner for this site, who has previously expressed interest in a project. Clustered with AA24 (same landowner).	Proposed - Mid Sound to assess feasiblity
11	Channel Complexity	(24) Cool Creek Alluvial Fan Downstream of Phillips Road	5	7	Clustered with AA16 (same landowner).	Proposed - Mid Sound will assess if there is efficiency in combining this project with AA16.
12	Channel Complexity	(3) Curley Creek Upstream of Sedgwick Road to Long Lake	9	8		
13	Protection	(15) Salmonberry Creek from Baker Road to Cool Creek confluence	9	7		
14	Channel Complexity	(19) Salmonberry Creek from Salmonberry Road to Constructed Side Channel Ponds	9	6		
15	Protection	(31) Wetland Complex at SE corner of Long Lake	8	10		
16	Protection	(30) Additional Tributaries draining to Long Lake	8	8		
17	Protection	(10) Headwaters of Unnamed Stream 15.0187	8	7		
18	Protection	(08) Unnamed Stream 15.0187 in Ravine Upstream of Locker Road	8	7		
19	Passage	(29) Upper Curley Creek	7	11		

Action Area Ranking

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				Key:	**Blue** - Mid Sound to assess feasibility	**Green** - AA Recommendations in progress

Ranking	Project Type	Action Area	Benefit Score	Implementation Score	Additional Ranking Considerations	Next Steps
20	Passage	(5) Banner Creek (15.0186) Crossing at Sedgwick Road	7	11		
21	Channel Complexity	(23) Salmonberry Creek at Howe Farm County Park	7	10		
22	Protection	(18) Salmonberry Creek between Sedgwick Road and Salmonberry Road	7	8		
23	Protection	(27) Tributary Channels Draining Urban Growth Area	7	8		
24	Protection	(06) Banner Creek (15.0186) Upstream of Sedgwick Road	7	8		
25	Protection	(13) Salmonberry Creek from Clover Valley Road to Baker Road	7	7		
26	Passage	(22) Salmonberry Creek Crossing at Long Lake Road	6	10	Clustered with 21 - barrier projects located close together.	Clustered with 21 - barrier projects located close together.
26	Passage	(21) Salmonberry Creek Crossing at Private Road Downstream of Long Lake Road	6	10	Clustered with 22 - barrier projects located close together.	Clustered with 22 - barrier projects located close together.
27	Channel Complexity	(26) Cool Creek Downstream of Baker Road (Ashby Farm)	5	8		
28	Channel Complexity	(20) Salmonberry Creek from Constructed Side Channel Ponds to Long Lake Road	5	8		
29	Channel Complexity	(11) Salmonberry Creek Outlet at Long Lake	4	6		

Appendix A: Prioriitzation Framework

Channel Complexity Projects

Project Description					Benefit Criteria								Implementation Criteria					
Action Area (AA)	**Notes** WA: Watershed Assessment, ST: Steelhead Recovery Plan	**Steelhead Recovery Plan Category**	**Primary Strategy**	**Secondary Strategies**	**Project Type**	**Scale** 1 point per 1000m or 10 acre project footprint	**Habitat Quality** 3 = Low 2 = Medium 1 = High	**Continuity** 3 = Fills gap between high quality habitats 2 = Adjacent high quality habitat 1 = Not adjacent high quality habitat	**Education**	***Benefit Notes***	**Target Species**	**BENEFIT SCORE**	**Sequencing Score** 4 = required for upstream project 3 = increases benefits of upstream project 2 = Standalone or Cluster 1 = Requires downstream project	**Response Time** 3 = Short 2 = Moderate 1 = Long	**Complexity** 4 = Low 3 = Moderate 2 = High 1 = Very High	**Estimated Cost**	***Implementation Notes***	**IMPLEMENTATION SCORE**
(16) Salmonberry Creek from Cool Creek confluence to Sedgwick Road	WA: Creek channelized and straightened. Previously golf course, now botanical gardens. Disconnected floodplain is flat and overgrown with reed canary grass. ST: In order for restoration of riparian vegetation and floodplain protection to occur, land needs to be acquired through conservation easements. Restoration will encourage wood recruitment and broaden the channel migration zone and improve floodplain health. Additional info from WFC 4/27/2021: There is a failed steel bridge located just south of Salmonberry creek's crossing of SW Sedgwick Rd on a small piece of property owned by Steven Childers. The right bank footings of this bridge have eroded, and the right side of the bridge is resting on the streambed. The bridge does not appear to limit fish passage, at least at the time of the survey,	Channel Complexity	Channel Restoration	Protection Riparian Wood	1	2	3	2	0	SCALE: Mainstem only: 800m; 21.4 acres Including connecting tributaries: 800m NOTES: Create new and improve existing habitat in 660m in lower third of Salmonberry Creek. Riparian cover to reduce water temperatures.	All	8	1	2	4	2	SEQUENCING: Requires downstream project Barrier at AA14 (Baker Road) RESPONSE TIME: Side channel / meanders / wood placement immediately benefits processes. Detect improved survival within 5 years. COMPLEXITY: 660m within 1 parcel, plus two others in action area.	9
(3) Curley Creek Upstream of Sedgwick Road to Long Lake	ST: The stream channel will be actively modified to move the stream out of the artificial ditch, and improve channel complexity. Restoration of riparian vegetation will complement this work. Acquire land for conservation.	Channel Complexity	Channel Restoration	Protection Riparian Wood Beaver Management Passage	1	3	3	2	0	SCALE: Mainstem only: 1,600m 27 acres Including connecting tributaries: 4,400m; 30.1 acres NOTES: Used by all migrating salmonids. Lots of room for improvement. Create new habitat plus improve existing habitat. Would contribute to temperature improvements for all of Curley Creek.	All	9	2	2	2	2	SEQUENCING: Standalone No downstream barriers. RESPONSE TIME: Side channel / meanders / wood placement give immediate additional habitat. Riparian restoration more long term benefits. COMPLEXITY: Approx. 12 private landowners total. Good potential for smaller project with just 2-4 landowners.	8
(26) Cool Creek Downstream of Baker Road (Ashby Farm)	WA: 1000ft segment channelized with riparian plantings. ST: The landowner of this property has previously taken steps to restore riparian vegetation and exclude cattle, but this project proposes to restore the stream corridor with wood placements and additional riparian vegetation.	Channel Complexity	Channel Restoration	Protection Riparian Wood	1	1	2	1	0	SCALE: Mainstem only: 300m, 0.6 acres Including connecting tributaries: 300m, 0.6 acres NOTES: Previous work has achieved benefits. Proposed project would be incremental.		5	1	2	3	2	SEQUENCING: Requires downstream project Barrier at AA14 (Baker Road). Barrier at Sedgwick Road planned for replacement 2021-2023. RESPONSE TIME: Wood placement, riparian planting. COMPLEXITY: 1 - 2 private landowners	8
(24) Cool Creek Alluvial Fan Downstream of Phillips Road	WA: Upper segment of alluvial fan is forested; recommended for protection and wood placement. Lower segment is channelized into ditch; recommended re-routing, riparian planting. Complete in tandem with Botanical Gardens (AA16). ST: This project will place large woody debris and move the channel out of a ditch. Additionally beaver will be encouraged to establish in this area.	Channel Complexity	Channel Restoration	Protection Riparian Wood	1	1	1	2	0	SCALE: Mainstem only: 700m, 9.9 acres Including connecting tributaries: 700m, 9.9 acres NOTES: Total project area 750m. Includes upstream forested section needing protection and wood placement; and downstream section where channel needs to be moved out of ditch.	Coho Chum Steelhead Cutthroat	5	1	2	2	2	SEQUENCING: Requires downstream project Barrier at AA14 (Baker Road). Barrier at Sedgwick Road planned for replacement 2021-2023. Cluster with AA16 because share a property owner (botanic garden). RESPONSE TIME: Side channel / meanders give immediate additional habitat and restore habitat forming processes over time. COMPLEXITY: 6 parcels, but could do a portion of project with only 3 parcels - one also includes AA16 (golf course)	7
(19) Salmonberry Creek from Salmonberry Road to Constructed Side Channel Ponds	ST: Previous restoration actions were completed in 2004, but roughly 1,000 feet of the stream has not been restored. WA: The segment upstream of Salmonberry Road was previously cleared of riparian vegetation and channelized in a ditch crossing agricultural fields (Figure 6-12). Restoration actions completed in 2004 established conservation easements and created a complex of side channel ponds. There is an approximately 1,000 foot segment of the stream corridor between Salmonberry Road and the constructed side channel ponds that has not been treated and remains impaired by past impacts. Additional info and actions recommended in June 7, 2021 partner meeting: This is a really important area – the main rearing, overwintering habitat for Coho in the watershed, and important headwater functions. There is a lot of beaver activity. There are private ponds with warm water species and unpermitted landowner activity. There is a risk of these predator species connecting with Salmonberry Creek. One landowner has been in trouble for unpermitted work, even on properties with easements. This reach would benefit from more protection.	Channel Complexity	Channel Restoration	Protection Riparian Wood	1	4	2	2	0	SCALE: Mainstem only: 1,600m, 42.2 acres; Including connecting tributaries: 5,400m, 47.9 acres. NOTE: Identified as a very important reach for coho overwintering and rearing.	All	9	1	2	1	2	SEQUENCING: Requires downstream project Barrier at AA14 (Baker Road). Barrier at Sedgwick Road planned for replacement 2021-2023. RESPONSE TIME: Side channel / meanders / wood placement give immediate additional habitat. Riparian restoration longer response time. COMPLEXITY: Area yet to be restored has 8 parcels. No parcels cover both sides of stream (i.e. creek is parcel boundary). Plus approx 10 more unprotected parcels, and a number of protected parcels.	6

Appendix A: Prioriitzation Framework

Channel Complexity Projects

Project Description					Benefit Criteria								Implementation Criteria					
Action Area (AA)	**Notes** WA: Watershed Assessment, ST: Steelhead Recovery Plan	**Steelhead Recovery Plan Category**	**Primary Strategy**	**Secondary Strategies**	**Project Type**	**Scale** 1 point per 1000m or 10 acre project footprint	**Habitat Quality** 3 = Low 2 = Medium 1 = High	**Continuity** 3 = Fills gap between high quality habitats 2 = Adjacent high quality habitat 1 = Not adjacent high quality habitat	**Education**	***Benefit Notes***	**Target Species**	**BENEFIT SCORE**	**Sequencing Score** 4 = required for upstream project 3 = increases benefits of upstream project 2 = Standalone or Cluster 1 = Requires downstream project	**Response Time** 3 = Short 2 = Moderate 1 = Long	**Complexity** 4 = Low 3 = Moderate 2 = High 1 = Very High	**Estimated Cost**	***Implementation Notes***	**IMPLEMENTATION SCORE**
(23) Salmonberry Creek at Howe Farm County Park	WA: 1000ft segment with very narrow riparian corridor. Opportunities to expand riparian buffer and install wood structures. Trail crossing is a fish passage barrier. Partner meeting June 7, 2021 (Brittany Gordon): Beaver activity has resolved the fish passage barrier; that area is flooded now. Concerns about bacteria in dog park.	Not listed	Riparian	Wood Passage	1	2	2	1	1	SCALE: Mainstem only: 1,700m, 13.3 acres Including connecting tributaries: 2,200m, 14 acres NOTES: Riparian restoration would increase shading and potential for wood recruitment. BONUS POINTS: 1 point for public engagement opportunity of project on actively used public land.	Coho Cutthroat	7	1	2	4	3	SEQUENCING: Requires downstream project Multiple partial barriers downstream on Salmonberry Creek. RESPONSE TIME: Passage project would give immediate benefit. Riparian restoration long term. COMPLEXITY: Public landowner.	10
(11) Salmonberry Creek Outlet at Long Lake	WA: This area is an important transition zone. Existing outlet channel crosses 3 residential properties, and has minimal riparian cover. Restoration of processes may not be compactible with existing land use. Would include removing constraints to lateral channel migration, large wood installation and planting riparian buffer. Potential for riparian planting and small wood placement with existing landowners. ST: In order for restoration of riparian vegetation and floodplain protection to occur, land needs to be acquired through conservation easements. Restoration will encourage wood recruitment and broaden the channel migration zone and improve floodplain health.	Land Use	Protection	Riparian Channel Restoration Wood	1	1	1	1	0	SCALE: Mainstem only: 100m, 2.9 acres Including connecting tributaries: 100m, 2.9 acres	All	4	2	2	1	1	SEQUENCING: Standalone Located immediately downstream of first Salmonberry Creek barrier. RESPONSE TIME: Restoration of lateral migration moderate response. Establishing riparian vegetation longer response. COMPLEXITY: Approximately 4 landowners. Would need to acquire properties / change land use to do the full project.	6
(20) Salmonberry Creek from Constructed Side Channel Ponds to Long Lake Road	WA: Creek confined in a ditch. Restoration actions in this segment should aim to restore channel complexity, floodplain connectivity, and riparian conditions. ST: This project will move the creek out of the ditch that was constructed to drain agricultural lands.	Channel Complexity	Channel Restoration	Protection Riparian Wood	1	2	1	1	0	SCALE: Mainstem only: 500m, 10.1 acres Including connecting tributaries: 500m, 10.1 acres NOTES: 600m channelized in ditch. Some existing riparian vegetation from aerial imagery. Less benefit than reaches completely lacking shade, or lower reaches.	Coho Steelhead Cutthroat	5	1	2	3	2	SEQUENCING: Requires downstream project Barrier at AA14 (Baker Road). Barrier at Sedgwick Road planned for replacement 2021-2023. RESPONSE TIME: Side channel / meanders / wood placement give immediate additional habitat. Riparian restoration longer response time.	8

Appendix A: Prioritization Framework

Fish Passage Projects

Project Description					Benefit Criteria													
Action Area (AA)	**Notes** WA: Watershed Assessment, ST: Steelhead Recovery Plan	**Steelhead Recovery Plan Category**	**Primary Strategy**	**Secondary Strategies**	**Project Type**	**Scale** 1 point per 1000m or 10 acres of habitat immediately accessed + half points for habitat potentially accessed following additional barrier removal	**Habitat Quality** Quality of habitat immediately accessed 1 = Low 2 = Medium 3 = High	**Continuity** 3 = Fills gap between high quality habitats 2 = Adjacent high quality habitat 1 = Not adjacent high quality habitat	**Education**	***Benefit Notes***	**Target Species**	**BENEFIT SCORE**	**Sequencing Score** 4 = required for upstream project 3 = increases benefits of upstream project 2 = Standalone or Cluster 1 = Requires downstream project	**Response Time** 3 = Short 2 = Moderate 1 = Long	**Complexity** 4 = Low 3 = Moderate 2 = High 1 = Very High	**Estimated Cost**	***Implementation Notes***	**IMPLEMENTATION SCORE**
(12) Salmonberry Creek Crossing at Clover Valley Road SE	WA: 8.5 foot diameter pipe arch culvert is undersized for location (33% passability) (15 foot bank full width).	Not listed	Passage		2	10	2	1	0	SCALE: Immediate: 1,700m, 11.1 acres Potential: 18,100m, 151.9 acres NOTES: Would increase access (from 33%) to Salmonberry Creek (Capacity). Located close to Long Lake.	Chum Coho Steelhead SR Cutthroat Resident Trout	15	3	3	1	2	SEQUENCING: Increases benefits of all upstream projects. Already significant investment upstream, as well as additional projects planned. RESPONSE TIME: Short for all passage projects. COMPLEXITY: County-owned road. Temporary road closure would cut off access to ~30 homes.	9
(14) Salmonberry Creek Crossing at SE Baker Road	WA: 2008 survey says culvert is impassable. 2015 reconnaissance noted culvert was backwatered so not creating a barrier. (0% or not a barrier) ST: Actions would replace the existing culvert with a bridge or larger culvert. County road?	Barrier	Passage		2	11.5	3	2	0	SCALE: Immediate: 5,800m, 51.4 acres Potential: 16,400m, 140.8 acres NOTES: Culvert replacement would potentially open up or improve access to most of Salmonberry Creek, although unclear if currently a barrier (Capacity).	Chum Coho Steelhead SR Cutthroat Resident Trout	18.5	1	3	3	2	SEQUENCING: Requires downstream project Increases benefits of all upstream projects. Already significant investment upstream, as well as additional projects planned. One downstream barrier (AA12, 33%). RESPONSE TIME: Short for all passage projects. COMPLEXITY: County-owned road. Detour possible during construction.	9
(17) Salmonberry Creek Crossing at SE Sedgwick Road	WA: 7.5 foot diameter arches culvert. Barrier due to 1.5 foot water surface drop on downstream side. (33% passability). ST: Actions would replace the existing culvert with a bridge or larger culvert. WSDOT Included on WSDOT Fish Passage Barrier Protection Plan. Construction planned 2021 - 2023. https://wsdot.wa.gov/projects/fishpassage/project-delivery-plan	Barrier	Passage		2	9	1	1	0	SCALE: Immediate: 8,100m, 71.4 acres Potential: 10,600m, 89.4 acres NOTES: Would increase access (from 33%) to approx. half of Salmonberry Creek.	Chum Coho Steelhead SR Cutthroat Resident Trout	13	1	3	2	2	SEQUENCING: Requires downstream project Two downstream barriers (AA12, AA14). RESPONSE TIME: Short for all passage projects. COMPLEXITY: WSDOT-owned. Major road. Detour available.	8
(21) Salmonberry Creek Crossing at Private Road Downstream of Long Lake Road	ST: This action would replace the existing crossing with a bridge or larger culvert. Private Road - Kitsap CD or other? WA: Private road crossing with 2 foot diameter culvert at a slope of 11%. WDFW 2008 assessment noted that the culvert was beginning to wash out. (0% passability)	Barrier	Passage		2	1	1	2	0	SCALE: Immediate: 0m, 0 acres Potential: 2,200m, 14 acres NOTES: Open access to 2,200m of habitat, currently impassable.	Chum Coho Steelhead SR Cutthroat Resident Trout	6	1	3	3	3	SEQUENCING: Cluster Three downstream barriers (AA12, AA14, A17). RESPONSE TIME: Short for all passage projects. COMPLEXITY: Privately owned, one landowner. Low complexity if willing landowner.	10
(22) Salmonberry Creek Crossing at Long Lake Road	WA: 3 foot diameter culvert. Barrier due to velocity. (67% passability). ST: This action would replace the existing crossing with a bridge or larger culvert. County Road?	Barrier	Passage		2	2	1	1	0	SCALE: Immediate: 2,200m, 1.1 acres Potential: 2,200m, 1.1 acres NOTES: Improve access (from 67%) to AA23, through Howe Park and upstream reaches.	Chum Coho Steelhead SR Cutthroat Resident Trout	6	2	3	3	2	SEQUENCING: Cluster Four downstream barriers (AA12, AA14, A17, A21). RESPONSE TIME: Short for all passage projects. COMPLEXITY: County-owned. Detour available.	10

Appendix A: Prioritization Framework

Fish Passage Projects

Project Description					Benefit Criteria								Implementation					
Action Area (AA)	**Notes** WA: Watershed Assessment, ST: Steelhead Recovery Plan	**Steelhead Recovery Plan Category**	**Primary Strategy**	**Secondary Strategies**	**Project Type**	**Scale** 1 point per 1000m or 10 acres of habitat immediately accessed + half points for habitat potentially accessed following additional barrier removal	**Habitat Quality** Quality of habitat immediately accessed 1 = Low 2 = Medium 3 = High	**Continuity** 3 = Fills gap between high quality habitats 2 = Adjacent high quality habitat 1 = Not adjacent high quality habitat	**Education**	***Benefit Notes***	**Target Species**	**BENEFIT SCORE**	**Sequencing Score** 4 = required for upstream project 3 = increases benefits of upstream project 2 = Standalone or Cluster 1 = Requires downstream project	**Response Time** 3 = Short 2 = Moderate 1 = Long	**Complexity** 4 = Low 3 = Moderate 2 = High 1 = Very High	**Estimated Cost**	***Implementation Notes***	**IMPLEMENTATION SCORE**
(29) Upper Curley Creek	WA: Channel segment from Long Lake to crossing is channelized and incised. Mullenix Road crossing is impassable due to water surface drop. Recommend culvert replaced with bridge of larger culvert, and wood placement and riparian restoration. ST: "This action would replace the existing crossing with a bridge or larger culvert. BUT CHECK TO SEE IF THIS IS ABOVE STEELHEAD EXTENT!" Information from WFC 4/27/2021: WFC located a natural feature, ~500' upstream of the SE Mullenix Rd crossing, that should be investigated as a potential natural barrier to fish passage. This feature appeared to be a zone of significant erosion and has a 10' vertical drop between the upper and lower stream beds. Upstream, the channel runs subsurface for about 50', reemerging at the base of the drop.	Barrier	Passage	Protection Riparian Wood	2	1	3	1	0	SCALE: Immediate: 150m, 0.2 acres (to natural barrier noted by WFC) Potential: 1,700m, 2.1 acres NOTES: Open access to approx. 500'. Total upstream length (past natural barrier) 1300m. Photos in culvert report indicate ephemeral stream. Barrier report lists multiple species. SalmonScape maps don't show use. Assume potential use if barrier removed, but confirm.	Coho Steelhead SR Cutthroat Resident Trout	7	2	3	3	3	SEQUENCING: Standalone No upstream projects. No downstream barriers. RESPONSE TIME: Short for all passage projects. COMPLEXITY: County-owned. Detour available.	11
(7) Unnamed Stream 15.0187 to Locker Road	Potentially current RCO funding for this project. SH to confirm. Weir replaced in 2014 with KCD funding. Partial barrier (67%) due to outfall drop and undersized low flow notch. WA: Near term recommendation: replace concrete control with additional weirs/logs to reduce drop. Longer term recommendation: removal of dam, restoration of floodplain and channel migration zone, riparian restoration, wood placement. ST: Actions include a replacement of the concrete control with additional weirs or log assemblage and the removal of the dam and restoration of floodplain and channel migration zone at the tributary confluence.	Barrier	Passage	Channel Restoration Protection Riparian Wood Passage	2	3	2	3	0	SCALE: Immediate: 3,200m, 5.3 acres Potential: 3,200m, 5.3 acres NOTES: Improve passability (from 67% to 100%, or still difficult with undersized low flow notch?) to entire length of tributary (approx. 2662m) (Capacity). Improved habitat conditions at confluence.	Coho Chum Steelhead	10	3	3	3	2	SEQUENCING: Increases benefits of upstream project No downstream barriers. This project will increase benefits of AA8, AA9, AA10 upstream. Increases benefits of upstream project. RESPONSE TIME: Short response for passage projects. Medium for channel complexity. COMPLEXITY: Private ownership (1 landowner, or up to 3 if include 2 smaller parcels close to Locker Rd). KCD project suggests willing landowner? No road closures required.	11
(5) Banner Creek (15.0186) Crossing at Sedgwick Road	WA: 2.5 foot diameter culvert with length of 175 feet, 5% slope and 2.5 foot surface water drop. Recommend culvert replacement with wood placement upstream and downstream to prevent further incision. ST: This action would replace the existing crossing with a bridge or larger culvert. WSDOT ST: Large woody debris will be placed in the creek. Acquire land for conservation.	Barrier, Channel Complexity	Passage	Wood	2	2	1	2	0	SCALE: Immediate: 1,500m, 2.5 acres Potential: 1,500m, 2.5 acres NOTES: Culvert replacement would open access (currently 0%) to 837m habitat (Capacity, Diversity). Wood placement to re-establish channel complexity, promote sediment storage and prevent additional accelerated incision. Upstream habitat appears forested on aerial imagery. Not included in canopy height maps.	Coho Steelhead SR Cutthroat Resident Trout	7	4	3	2	2	SEQUENCING: Required for upstream project No downstream barriers. Upstream (AA6) proposed for protection, this project will be required to gain benefits in AA6. RESPONSE TIME: Short for all passage projects. COMPLEXITY: Major road; state ownership.	11

Appendix A: Prioritization Framework

Protection Projects

Project Description					Benefit Criteria								Implementation Criteria						
Action Area (AA)	**Notes** WA: Watershed Assessment, ST: Steelhead Recovery Plan	**Steelhead Recovery Plan Category**	**Primary Strategy**	**Secondary Strategies**	**Project Type**	**Scale** 1 point per 1000m or 10 acre project footprint	**Habitat Quality** Quality of habitat protected 3 = High 2 = Medium 1 = Low	**Continuity** 3 = Fills gap between high quality habitats 2 = Adjacent high quality habitat 1 = Not adjacent high quality habitat	**Outreach**	***Benefit Notes***	**Target Species**	**BENEFIT SCORE**	**Sequencing Score** 4 = required for upstream project 3 = increases benefits of upstream project 2 = Standalone or Cluster 1 = Requires downstream project	**Response Time** 3 = Short 2 = Moderate 1 = Long	**Complexity** 4 = Low 3 = Moderate 2 = High 1 = Very High	**Estimated Cost** 3 = Low (<12.5 acre) 2 = Moderate 1 = High (>50 acres)	***Implementation Notes***	**IMPLEMENTATION SCORE**	**COMBINED SCORE**
(2) Curley Creek Estuary to Sedgwick Road	Zoned Rural Protection. This reach includes GPC Tyner Preserve, and Williamson / Miller properties proposed for conservation. WA: Recovering forest in ravine. Riparian buffer in generally good condition except specific patches. Very limited wood. Given potential of riparian buffer to recruit wood, wood placement should be focused in areas with disturbed riparian buffer. ST: Native riparian vegetation will be restored and replaced in locations where it was removed. Additionally, large woody debris will be placed in the stream to improve channel complexity. Mentions CE.	Riparian	Protection	Riparian Wood	3	3	3	2	0	SCALE: Mainstem only: 2,600m, 18.8 acres Including connecting tributaries: 5,700m, 23.1 acres NOTES: Good riparian cover. Lower position in watershed.	Steelhead Coho Resident Coastal Cutthroat Chum	11	2	2	1	2	SEQUENCING: Standalone No downstream barriers. COMPLEXITY: GPC already active in this area. Approx. 15 additional private parcels in this area. (Approx. 2600m AA). COST: Estimating $200,000/10 acres	7	40
(4) Banner Creek (15.0186) to Sedgwick Road	WA: Well forested ravine should be protected by dedicating land for conservation. Field assessment required to assess wood loading. Relatively steep channel gradient makes this stream sensitive to channel incision with increases in runoff from contributing watershed.	Not listed	Protection	Wood	3	1	3	2	0	SCALE: Mainstem only: 1,200m, 2.8 acres Including connecting tributaries: 2,100m, 3.4 acres NOTES: Expect this area to have cooler water temperatures based on good forest cover. May provide valuable thermal refuge. Lower position in watershed.	Coho Chum	9	2	2	2	3	SEQUENCING: Standalone No downstream barriers. COMPLEXITY: Approximately 8 landowners. (Approx. 1200m AA)	9	36
(06) Banner Creek (15.0186) Upstream of Sedgwick Road	Zoned Rural Protection. ST: Land will be dedicated for habitat protection. These part of the creek contains several tributaries near the headwaters, and protecting this land will prevent impacts from land use. WA: The channel segment upstream of Sedgwick Road is less steep than the ravine segment downstream and is connected with several small tributaries forming the headwaters of this creek. The stream corridor should be protected from land use impacts by dedicating land for habitat protection.	Land Use	Protection		3	1	2	1	0	SCALE: Mainstem only: 700m, 2 acres Including connecting tributaries: 1,500m, 2.5 acres NOTES: There is no water temperature data for this area, but would expect to have lower water temperatures due to forest cover. Potential to provide thermal refuge, if downstream barrier removed. Higher position in watershed (headwaters of lower positioned tributary).	[Barrier removal required]	7	1	2	2	3	SEQUENCING: Requires downstream project Sedgewick Rd culvert is a complete barrier (AA 5). COMPLEXITY: Approximately 7 landowners based on mapped tributaries. (Approx. 700m AA)	8	29
(08) Unnamed Stream 15.0187 in Ravine Upstream of Locker Road	Zoned Rural Protection. ST: Land will be dedicated for habitat protection. Large woody debris will be placed to enhance stream habitat. This is a steep stream that flows through a forested area, and the protection of this land will prevent channel incision and increased sediment loads. WA: The stream corridor is forested and should be protected. Field assessment recommended to assess wood loading. Absent sufficient wood loading, channel incision will undercut steep hillslopes of the ravine disrupting sediment dynamics and resulting in excessive sedimentation in lower gradient areas.	Land Use	Protection	Wood	3	1	3	1	0	SCALE: Mainstem only: 900m, 1.5 acres Including connecting tributaries: 900m, 1.5 acres NOTES: Protect processes of well forested area. Immediately upstream of Williamson property proposed for conservation, and AA2. Lower position in watershed.	Coho Chum Steelhead likely	8	1	2	1	3	SEQUENCING: Requires downstream project Improvements to Williamson fish ladder would improve access. COMPLEXITY: Proximity to current GPC projects. 14 landowners. (Approx. 900m AA)	7	31
(09) Unnamed Stream 15.0187 near Frog Pond Road	Zoned Rural Protection. WA: Recommend field assessment of channel conditions, habitat protection encompassing off-channel wetlands, placement of wood and riparian restoration. ST: Riparian vegetation will be restored to promote future wood recruitment. Acquire land for conservation.	Riparian	Protection	Riparian Wood placement	3	1	2	3	0	SCALE: Mainstem only: 900m, 1.5 acres Including connecting tributaries: 900m, 1.5 acres NOTES: Established riparian buffer provides shade.	Coho Resident Coastal Cutthroat Potentially Chum and steelhead	9	1	2	3	3	SEQUENCING: Requires downstream project Improvements to Williamson fish ladder would improve access. COMPLEXITY: 3 private parcels (400m AA)	9	36

Appendix A: Prioritization Framework

Protection Projects

Project Description					Benefit Criteria							Implementation Criteria						
Action Area (AA)	**Notes** WA: Watershed Assessment, ST: Steelhead Recovery Plan	**Steelhead Recovery Plan Category**	**Primary Strategy**	**Secondary Strategies**	**Project Type**	**Scale** 1 point per 1000m or 10 acre project footprint	**Habitat Quality** Quality of habitat protected 3 = High 2 = Medium 1 = Low	**Continuity** 3 = Fills gap between high quality habitats 2 = Adjacent high quality habitat 1 = Not adjacent high quality habitat	**Outreach**	***Benefit Notes***	**Target Species**	**BENEFIT SCORE**	**Sequencing Score** 4 = required for upstream project 3 = increases benefits of upstream project 2 = Standalone or Cluster 1 = Requires downstream project	**Response Time** 3 = Short 2 = Moderate 1 = Long	**Complexity** 4 = Low 3 = Moderate 2 = High 1 = Very High	**Estimated Cost** 3 = Low (<12.5 acre) 2 = Moderate 1 = High (>50 acres)	***Implementation Notes***	**IMPLEMENTATION SCORE**	**COMBINED SCORE**
(10) Headwaters of Unnamed Stream 15.0187	Zoned Rural Residential and Rural Protection. ST: Land will be dedicated for habitat protection. Large woody debris will be placed to enhance stream habitat. This area is well forested and land conservation will protect this habitat in the future. WA: The upper segment of this tributary flows from west to east and steepens in gradient compared to the downstream reach. Drainage from a developing residential area off of Mile Hill Road contributes runoff to the stream. The stream corridor is generally well forested and should be protected by dedicating land for habitat protection. Wood placement is recommended to provide channel stability and prevent incision associated with land use impacts to peak flows.	Land Use	Protection	Wood	3	1	3	1	0	SCALE: Mainstem only: 1,400m, 2.3 acres Including connecting tributaries: 1,400m, 2.3 acres NOTES: Protection can buffer pollutants, moderate flows from development around SE Mile Hill Dr. Higher position in watershed (headwaters of lower positioned tributary).	Coho Steelhead likely Cutthroat?	8	1	2	1	3	SEQUENCING: Requires downstream project Improvements to Williamson fish ladder would improve access. COMPLEXITY: 10 landowners in this AA. Can do this in conjunction with AA9. (1400m AA)	7	31
(13) Salmonberry Creek from Clover Valley Road to Baker Road	Zoned Rural Protection. WA: Stream corridor is recovering from past clearing and is relatively well forested in some locations. Protect areas with quality riparian cover; restore riparian conditions in impacted areas. ST: Riparian vegetation will be restored along with wood placement to create channel complexity.	Riparian	Protection	Riparian Wood	3	1	2	1	0	SCALE: Mainstem only: 800m, 9.7 acres Including connecting tributaries: 1,700m, 11.1 acres NOTES: Lower position in watershed (close to Long Lake) Haring (2000) noted high quality wetlands in this reach, including several small tributaries and good gravels. Some riparian shade (mostly 10 - 50' height, patchy 50+feet).	All	7	1	2	1	3	SEQUENCING: Requires downstream project One partial barrier downstream (AA12). COMPLEXITY: Upstream portion has approx. 15 parcels (larger on west, smaller on east). Downstream portion is within one large parcel. (Approx. 750m creek in AA).	7	28
(15) Salmonberry Creek from Baker Road to Cool Creek confluence	Zoned Rural Protection. WA: Flows through narrow valley bottom forested along channel margin. Overall condition is better than other segments. Contains relatively large shrub-scrub wetland complex with beaver activity. ST: This project will protect the stream corridor through conservation easements. This action will preserve the wetland area at the confluence of cool creek.	Land Use	Protection		3	1	3	2	0	SCALE: Mainstem only: 800m, 14.7 acres Including connecting tributaries: 1,800m, 16.1 acres NOTES: Overall better condition. Contains wetland complex. Lower position in watershed (close to Long Lake). Mapped canopy height 0-10'.	Coho Chum Steelhead	9	1	2	2	2	SEQUENCING: Requires downstream project Two partial barriers downstream (AA12, AA14) COMPLEXITY: 7 parcels with creek on boundary. 2 larger parcels. (800m AA).	7	34
(18) Salmonberry Creek between Sedgwick Road and Salmonberry Road	Zoned Rural Protection and Urban Low Residential (5-9 Du/acre) (Creek within or very close to 5 UL lots). WA: Stream corridor is well forested. Riparian and channel conditions should be inspected. If natural wood recruitment is unlikely given riparian conditions, recommend wood placement. ST: This project will protect the stream corridor through conservation easements. This portion of the stream is well forested and this action will promote continued natural recruitment of large woody debris.	Land Use	Protection		3	1	2	1	0	SCALE: Mainstem only: 800m, 13.0 acres Including connecting tributaries: 1,100m, 13.4 acres NOTES: Highest value for protecting functions in and around UGA. Water monitoring site on upstream end of this AA shows high temperatures. Protection of forest will mitigate high temperatures from upstream deforested reaches. (Includes patches with canopy height >100'). Haring (2000) noted this areas was reported to be high quality with good gravels. Highest position in watershed.	Coho Steelhead	7	1	3	1	3	SEQUENCING: Requires downstream project Three partial barriers downstream (AA12, AA14, AA17) RESPONSE TIME: Short response time due to location in UGA (assume higher development pressure). COMPLEXITY: Many small parcels (approx. 12 parcels in 800m AA). COST: Anticipate higher costs in UGA.	8	

Appendix A: Prioritization Framework

Protection Projects

Project Description					Benefit Criteria								Implementation Criteria						
Action Area (AA)	**Notes** WA: Watershed Assessment, ST: Steelhead Recovery Plan	**Steelhead Recovery Plan Category**	**Primary Strategy**	**Secondary Strategies**	**Project Type**	**Scale** 1 point per 1000m or 10 acre project footprint	**Habitat Quality** Quality of habitat protected 3 = High 2 = Medium 1 = Low	**Continuity** 3 = Fills gap between high quality habitats 2 = Adjacent high quality habitat 1 = Not adjacent high quality habitat	**Outreach**	***Benefit Notes***	**Target Species**	**BENEFIT SCORE**	**Sequencing Score** 4 = required for upstream project 3 = increases benefits of upstream project 2 = Standalone or Cluster 1 = Requires downstream project	**Response Time** 3 = Short 2 = Moderate 1 = Long	**Complexity** 4 = Low 3 = Moderate 2 = High 1 = Very High	**Estimated Cost** 3 = Low (<12.5 acre) 2 = Moderate 1 = High (>50 acres)	***Implementation Notes***	**IMPLEMENTATION SCORE**	**COMBINED SCORE**
(25) Cool Creek upstream of Phillips Road	Zoned Rural Residential (1 DU/5ac), RP (1 DU/10ac), Urban Low Residential (5-9 DU/ac), Urban Restricted (1-5 DU/ac) ST: Wood will be placed in the stream within the Port Orchard UGA. WA: Relatively well established riparian corridor and should be protected. Wood placement recommended to increase channel complexity and stabilize the channel.	Channel Complexity	Protection	Wood	3	2	3	2	0	SCALE: Mainstem only: 1,600m, 2.7 acres Including connecting tributaries: 2,000m, 3.4 acres NOTES: Cool creek input keeps lower salmonberry creek cooler. Important to maintain thermal refuge within this habitat, and maintain lower salmonberry creek temperatures. Canopy height mostly 10-50', and 50+ feet. Mapped as wetland complex - not sure of condition. Second highest position in watershed.	Coho Chum Steelhead likely	10	1	3	1	3	SEQUENCING: Requires downstream project Two partial barriers downstream (AA12, AA14) RESPONSE TIME: Short response time due to location in UGA (assume higher development pressure). COMPLEXITY: 14 parcels including 1 larger parcel. COST: Anticipate higher costs in UGA.	8	
(27) Tributary Channels Draining Urban Growth Area	WFC is currently doing water typing surveys throughout watershed. WA: Several small tributaries drain upland hillslope areas, including within UGA. Field reconnaissance indicates gaps in WDNR water type map. ST: This project will map tributary channels to identify their location, and define a riparian corridor around the channels. These actions will protect the tributary channels from future disturbance and support existing riparian vegetation.	Land Use	Protection	Riparian Wood	3	1	2	1	0	SCALE: Area proposed for protection: 150m, 0.2 acres. Total AA (including areas already protected): Mainstem only: 1,100m, 1.7 acres; Including connecting tributaries: 1,100m, 1.7 acres NOTES: Benefits come from protecting existing functions.	Potentially Coho, Steelhead, Cutthroat	7	1	2	2	3	SEQUENCING: Requires downstream project 2 - 3 downstream barriers on Salmonberry Creek. COMPLEXITY: WFC is currently doing water typing surveys. Coverage is limited by landowner permissions. 7 unprotected parcels on mapped streams; potentially more streams not yet mapped.	8	

Appendix A: Prioritization Framework

Protection Projects

Project Description					Benefit Criteria								Implementation Criteria						
Action Area (AA)	**Notes** WA: Watershed Assessment, ST: Steelhead Recovery Plan	**Steelhead Recovery Plan Category**	**Primary Strategy**	**Secondary Strategies**	**Project Type**	**Scale** 1 point per 1000m or 10 acre project footprint	**Habitat Quality** Quality of habitat protected 3 = High 2 = Medium 1 = Low	**Continuity** 3 = Fills gap between high quality habitats 2 = Adjacent high quality habitat 1 = Not adjacent high quality habitat	**Outreach**	***Benefit Notes***	**Target Species**	**BENEFIT SCORE**	**Sequencing Score** 4 = required for upstream project 3 = increases benefits of upstream project 2 = Standalone or Cluster 1 = Requires downstream project	**Response Time** 3 = Short 2 = Moderate 1 = Long	**Complexity** 4 = Low 3 = Moderate 2 = High 1 = Very High	**Estimated Cost** 3 = Low (<12.5 acre) 2 = Moderate 1 = High (>50 acres)	***Implementation Notes***	**IMPLEMENTATION SCORE**	**COMBINED SCORE**
(30) Additional Tributaries draining to Long Lake	WA: Further evaluation of riparian and channel conditions required. Protect areas with functioning riparian conditions. Correct fish passage barriers when tributaries cross Mullenix Road. Further information from WFC surveys: 1. CU25- Unnamed stream located on the south end of Long Lake (Listed on the Curley creek restoration priority matrix, but additional information was requested from WFC surveys) a. Restoration opportunity: Replace Full barrier culvert at Mullenix Rd crossing (WDFW Barrier ID: 420083). A rainbow trout smolt was caught at the culvert outlet, but no fish were observed in the upstream reach. i. Replacing this culvert would allow fish passage to 2,200 ft of known type F habitat upstream. The stream is spring fed, flowing through a steep sided ravine forested with mature conifers and deciduous trees. development does exist upslope on both banks, but a wide, intact riparian corridor exists throughout the reaches surveyed by WFC. WFC surveys have also demonstrated that the channel has characteristics similar to where fish were documented downstream, qualifying it for type F classification upstream beyond the WDNR mapped type F/N break, and aligning with the habitat quality and habitat type observed in other streams within the Curley basin where fish were brought to hand by WFC. ii. An additional barrier culvert exists, ~2,200 ft upstream of the Mullenix Rd crossing, at the Lawrence Dr SE crossing. WFC surveys show that type F habitat extends 200 ft upstream of this crossing. Though beyond that point, water type is unknown due to lack of access. iii. Although a wide riparian buffer exists between the stream and upslope development, WFC observed signs of excess erosion within the channel, where the stream was incised up to 5 ft in some locations. This could be related to stormwater, and a topic of future investigation/mitigation/restoration. 2. CU17.1-An unnamed, and previously unmapped, stream located on the north end of Long Lake. a. The lower reach of this stream (~800'), and its confluence with Long Lake, are located within Long Lake County Park. There are two failed culverts within the park that limit upstream fish passage. Numerous juvenile coho were observed below the failed culverts during WFC's site revisit in 2021. The stream flows through the park in a narrow riparian corridor lined with alder. A gravel access road follows along the left bank with a gravel parking area located beyond the narrow riparian corridor on the right bank. i. Restoration opportunity: improve fish passage, establish a wider riparian buffer, improve habitat complexity within the channel. b. There is a full barrier culvert upstream of Long Lake County Park, at the crossing of Long Lake Rd SE. Fish were observed in the plunge pool of this culvert, but nowhere else in the upstream channel. Much of the upstream channel surveyed by WFC had been ditched or modified in some way, including a 500' length of channel that was diverted and ditched along Long lake Rd SE. The upper channel could be the focus of future restoration, but the lower channel, in the park, would likely be higher priority.	Not listed	Protection	Passage	3	2	2	1	0	SCALE: Mainstem only: 1863m, 4.6 acres Tributaries: 1863m, 4.6 acres NOTES: Passage project from correction of culvert on tributary between Upper Curley Creek and wetland complex would open access to approx. 600m, including an area mapped as 50' to 100' canopy height. More information on functions to be protected in this area may come from WFC water typing surveys.	Coho Steelhead SR Cutthroat Resident Trout	8	2	2	1	3	SEQUENCING: Cluster Coordinate passage correction with replacement of culvert at Upper Curley Creek (AA 29). COMPLEXITY: Many small parcels (26). This Action Area covers many small tributaries around Long Lake, so could be implemented as many smaller projects.	8	

Appendix A: Prioritization Framework

Protection Projects

Project Description					Benefit Criteria								Implementation Criteria						
Action Area (AA)	**Notes** WA: Watershed Assessment, ST: Steelhead Recovery Plan	**Steelhead Recovery Plan Category**	**Primary Strategy**	**Secondary Strategies**	**Project Type**	**Scale** 1 point per 1000m or 10 acre project footprint	**Habitat Quality** Quality of habitat protected 3 = High 2 = Medium 1 = Low	**Continuity** 3 = Fills gap between high quality habitats 2 = Adjacent high quality habitat 1 = Not adjacent high quality habitat	**Outreach**	***Benefit Notes***	**Target Species**	**BENEFIT SCORE**	**Sequencing Score** 4 = required for upstream project 3 = increases benefits of upstream project 2 = Standalone or Cluster 1 = Requires downstream project	**Response Time** 3 = Short 2 = Moderate 1 = Long	**Complexity** 4 = Low 3 = Moderate 2 = High 1 = Very High	**Estimated Cost** 3 = Low (<12.5 acre) 2 = Moderate 1 = High (>50 acres)	***Implementation Notes***	**IMPLEMENTATION SCORE**	**COMBINED SCORE**
(31) Wetland Complex at SE corner of Long Lake	Little information was found to characterize the wetland complex. Recommend further protection of existing functions, and further assessment.	Not listed	Protection	Passage	3	1	3	1	0	SCALE: Mainstem only: 1,200m, 1.9 acres Including connecting tributaries: 1,200m, 1.9 acres NOTES: TBC - More information on functions to be protected in this area may come from WFC water typing surveys in this area.	Salmon use not mapped in this area.	8	2	2	3	3	SEQUENCING: Standalone No downstream barriers. COMPLEXITY: One large parcel closest to lake owned by HOA. Approx. 8 additional residential parcels upstream.	10	

Appendix A: Prioritization Framework

Combination/Other Projects

Project Description					Benefit Criteria								Implementation Criteria					
Action Area (AA)	**Notes** WA: Watershed Assessment, ST: Steelhead Recovery Plan	**Steelhead Recovery Plan Category**	**Primary Strategy**	**Secondary Strategies**	**Project Type**	**Scale Score**	**Habitat Quality** Quality of habitat restored (Low = 3) or protected (High = 3)	**Connectivity** 3 = Directly adjacent a quality area 2 = <1000 m from high quality 1 = >1000 m from high quality	**Outreach**	***Benefit Notes***	**Target Species**	**BENEFIT SCORE**	**Sequencing Score** 2 = required for / increases benefits of upstream project 1 = Standalone 0 = Requires downstream project	**Response Time** 3 = Short 2 = Moderate 1 = Long	**Complexity** 4 = Low 3 = Moderate 2 = High 1 = Very High	**Estimated Cost** 3 = Low 2 = Moderate 1 = High	***Implementation Notes***	**IMPLEMENTATION SCORE**
(28) Long Lake Shoreline	WA: Sedimentation and eutrophication are ongoing issues. The lake is listed as a Category 5 (polluted water requiring a TMDL) water body for phosphorus under Section 303(d) of the Clean Water Act. Study from 1998 - 2000 indicates large mouth bass likely have a substantial impact on coho smolt production. Recommendations: > Protect remaining areas of undeveloped shoreline. > Revegetate impacted shoreline. > Control input of nutrients and pesticides from surrounding land. > Assess and manage predation impacts. ST: This project will repair riparian habitat, and develop strategies to reduce the input of nutrients and pesticides into the lake. Create long term management plan for nutrient and pesticide inputs.	Riparian	Protection Riparian Nutrient/pesticide management Predation management		1	34	3	3	1	SCALE 336.3 acres NOTES: Potential to greatly improve productivity by reducing predation pressure, if findings of past study still hold true. Currently low quality habitat to be restored. Not connected to high quality habitat, but used by all fish migrating to Salmonberry Creek, SE wetlands etc.	Coho especially, also others	hi	1	2	1	2	SEQUENCING: Standalone No downstream barriers. RESPONSE TIME: Response time varies for each action. COMPLEXITY: Projects could be split into multiple lower complexity projects. Politically challenging location.	6
Watertyping and Enforcement	Water typing and subsequent monitoring and enforcement of regulations	NA	Protection		1	9	3	3	1	NOTES: Underpins all protection measures. WFC suggests that water typing maps may underestimate the actual miles of fish-bearing waters by 20%, based on findings in Blackjack Creek Watershed. Curley Creek watershed includes 46 km of waters (including Long Lake). Assuming 20% more fish bearing streams are identified this project has an estimated scale of 9.2km.	All	16	1	2	1	3	SEQUENCING: Standalone RESPONSE TIME: Benefit to processes within 5 years. COMPLEXITY: Very high complexity due to number of landowners, although landowners likely more willing than a restoration / acquisition project because only agreeing to site survey.	7
(1) Curley Creek Estuary and Nearshore	WA: The nearshore area of Yukon Harbor is extensively developed and the shoreline is highly modified. Actions to prevent further shoreline armoring and remove existing armor are needed to allow for natural shoreline adjustments to sea level rise anticipated in Puget Sound. Estuary upstream of the bridge is protected through GPC acquisitions. ST: This project will identify shoreline armoring to be removed or replaced with soft shorelines, identify houses and structures to be moved away from shorelines, encourage compliance with the SMP, encourage the use of natural vegetation, and restore riparian habitats.	Channel Complexity	Shoreline softening	Protection Riparian Relocate structures Compliance	NA	NA	NA	NA	NA	This Action Area was excluded from the assessment. The recommended actions related to restoration in Yukon Harbor. These actions are prioritized at a regional scale through the East Kitsap Nearshore Prioritization Assessment. The regional scale is more appropriate than a watershed scale for these projects, because fish using the Curley Creek watershed will use nearshore habitats throughout the region.	NA	NA	NA	NA	NA	NA	This Action Area was excluded from the assessment. The recommended actions related to restoration in Yukon Harbor. These actions are prioritized at a regional scale through the East Kitsap Nearshore Prioritization Assessment. The regional scale is more appropriate than a watershed scale for these projects, because fish using the Curley Creek watershed will use nearshore habitats throughout the region.	NA

Prioritization Criteria

BENEFIT CRITERIA

Score	Description	Rationale
Project Type		
3	Protection Projects	Based on literature identifying protection as the first priority (Beechie et al), and findings of IWMs that passage projects consistently have measurable benefits.
2	Passage Projects	
1	Channel Complexity	

Score	Description	Rationale
Scale		
1+	One point per 1000m or 10 acres of habitat, with project footprint rounded to the nearest 1000m or 10 acres. Scale of restoration and protection projects refers to project footprint. Scale of passage projects refers to the area of habitat accessed after barrier removed. Full points were given to habitat immediately accessed, and half points were given to habitat with potential to be accessed if all upstream barriers are removed.	The highest score from either length or area applied. Area mapped as FEMA 1% annual chance of occurrence floodplain layer, or where FEMA map doesn't cover a reach, a 5m buffer to the streamline. Scale from mainstem only, not smaller connecting streams (e.g. for an Action Area on Banner Creek, Banner Creek is considered mainstem).

Score	Description	Rationale
Habitat Quality - for Protection and Passage Projects		
3	High - Habitats with minimal disturbance, native riparian vegetation with good canopy cover, moderate to high channel complexity. Nowhere is perfect - these areas typically have little to no wood.	Habitat quality mapped based on field observations noted in watershed assessment and qualitative input from partners. Categories are relative across the watershed. High quality habitats scored highest for protection and passage projects, but lower quality habitats scored highest for restoration projects (i.e. most room for improvement).
2	Medium - Some high quality habitat elements, but other aspects degraded.	
1	Low - Channelized, low complexity, limited riparian canopy cover, little or no wood.	

Score	Description	Rationale
Habitat Quality - for Restoration Projects		
3	Low	See description above.
2	Medium	
1	High	

Score	Description	Rationale
Habitat Continuity		
3	Fills gap between high quality habitats	Reflects benefit of creating contiguous reaches of good quality habitat.
2	Adjacent high quality habitat	
1	Not adjacent high quality habitat	

IMPLEMENTATION CRITERIA

Score	Description	Rationale
Sequencing Considerations		
4	Required for upstream project Does the action need to be constructed before other high priority actions to facilitate achievement of their benefits?	From original Watershed Assessment Prioritization Framework
3	Increases benefits of upstream project	
2	Cluster or Standalone: Is the action part of a “cluster” of other actions that need to be addressed as a whole? Can the action be constructed as “stand alone?”	
1	Requires downstream project: Does the action need to be constructed after other high priority actions because it is dependent on their processes to achieve its benefits?	

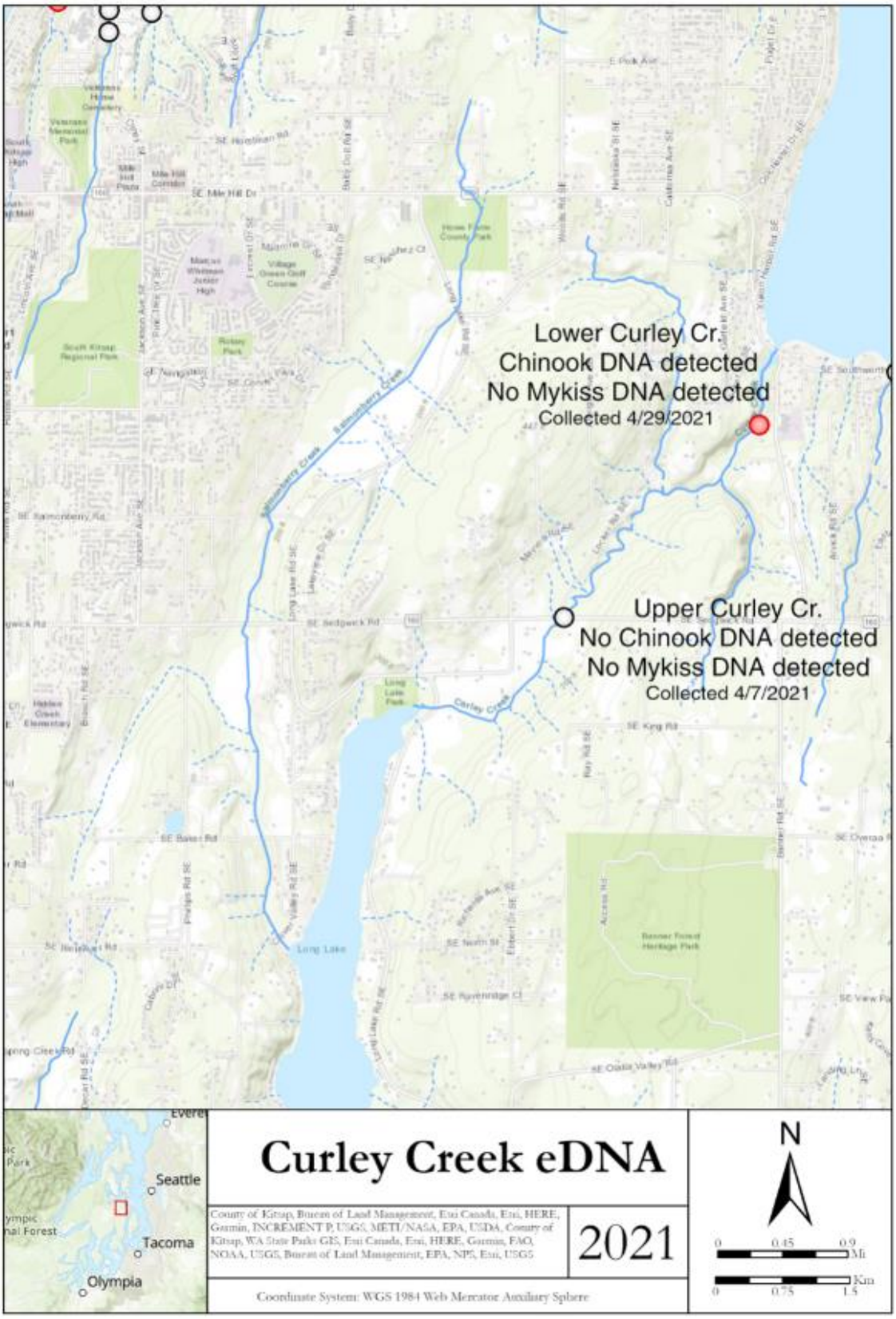
Prioritization Criteria		
Red flag	Will preclude higher priority action: Will the action preclude a higher biological priority action that is not currently feasible?	
Score	**Description**	**Rationale**
Response Time		
3	Short Response Time Species are present in the reach or immediately downstream and experience full benefit immediately following implementation (e.g., culvert replacement for fish passage).	From original Watershed Assessment Prioritization Framework
2	Moderate Response Time Action will have an immediate benefit to restoration of habitat forming processes at reach scale, species may now access previously inaccessible areas and improvement in survival would be observed within approximately 5 years following implementation (e.g., placement of large woody material, removal of constraints to lateral migration)	
1	Long Response Time Restoration of habitat forming processes depend on long-term maturation of strategy; species may be slow to respond to the restored habitat or habitat elements will take time to develop to the point of being beneficial; species experience benefits within 10+ years following implementation (e.g., riparian restoration).	
Score	**Description**	**Rationale**
Complexity		
4	Low Relatively simple permitting Single property ownership (E.g. Kitsap County or Suquamish Tribe) for conservation	The definitions from the original Watershed Assessment Prioritization Framework were adapted to better differentiate between Action Areas. The vast majority of action areas include multiple private landowners which would have resulted in most being ranked High complexity. These were updated
3	Moderate <5 private landowners. More involved permitting / includes in-water work. Includes work on a county-owned road.	
2	High <10 private landowners. Complex permitting process involving multiple federal, state and local government agencies; complex design and construction. Includes work on a state-owned road.	
1	Very High 10+ landowners. Includes work on a road with no available detour.	
Score	**Description**	**Rationale**
Cost		
3	Less than $250,000 > Uses low cost techniques (e.g., replacement small culverts, focused riparian planting actions) > Minimal excavation and hauling distance of spoils > Little to no planting or weed control > No dewatering required > Easy access conditions	Definitions from Watershed Assessment Prioritization Framework. For protection projects, used a very rough cost estimate of $200,000 per 10 acres conserved (either CE or fee simple) based on costs of Childers Property and Estuary in Salmon Recovery Portal.

Prioritization Criteria		
2	$250,000 to $1,000,000 > Uses moderate cost techniques (e.g., replacement moderate size culverts, focused removal artificial constraints to lateral connectivity, typical log jam structures) > Moderate to high excavation and hauling distance of spoils > Planting or invasive weed control ranging from typical to complex > No dewatering requirements to standard requirements > Moderate access conditions	
1	Greater than $1,000,000 > Uses high cost techniques (e.g., replacement large size stream crossings, extensive removal artificial constraints to lateral connectivity, highly engineered log jams, extensive channel contouring) > Deep excavation or long distance hauling of spoils > Entails construction of additional new flood control or bank erosion features > Extensive planting or invasive weed control over several years > Intensive dewatering requirements > Limited, difficult, or remote access	

ITEMS NOT INCLUDED IN CRITERIA

Item	**Description**	**Rationale for exclusion**
Limiting factors	Considered awarding points for projects that addressed a limiting factor for salmon	This criteria was discussed in partner meetings #2 and #3. It was found that scoring by limiting factor didn't differentiate between projects. Each of the actions recommended in the Watershed Assessment addressed at least one, but typically multiple ecological concerns and the extent that an action addresses limiting factor is related to the action's scale. For example, the Steelhead Recovery Plan identifies 10 ecological concerns that encompass the different conditions that directly impact salmonids as: habitat quantity, riparian condition, peripheral and transitional habitats, channel structure and form, water quality and water quantity. The plan also notes 2011 Biological Review Team identified degradation and fragmentation of freshwater habitat, with consequential effects on connectivity as the primary limiting factors and threats facing Puget Sound Steelhead.
Location in watershed	Considered awarding points based on location in the watershed. This could be higher points for upper watershed, due to the importance of headwater functions, or higher points for lower parts of the watershed where more species and more individuals would use that habitat.	This criteria was discussed in partner meeting #2. Partners somewhat agreed to strongly disagreed that this should be a criteria, and were split between where to prioritize headwaters or downstream habitats. The only position-related approach that was agreed on by the group was that downstream passage projects should be prioritized before upstream projects. This was incorporated into the ranking by through 'Sequencing' criteria.
Salmon species impacted	Giving higher points for reaches with more salmon species, or listed salmon species.	The species that would benefit from a project are listed in Sheets 3 - 6, but weren't included in the scoring. It can be assumed that steelhead will be present throughout the watershed, so scoring for listed-species presence doesn't differentiate between action areas. Scoring higher for a higher number of species would give lower reaches with chum more points than higher reaches that provide important watershed functions.
Climate Change	Awarding higher points to projects that would ameliorate the impact of climate change or increase resiliency, and deducting points for projects where climate change would reduce an action's affect, based Beechie et al 2013.	Each of the actions can be considered to increase resiliency, so this criteria didn't help differentiate between action areas.

Appendix B. Results of eDNA samples in lower Curley Creek.



Appendix C. WDFW Fish Passage Evaluation, October 12, 2021

Clover Valley Rd. SE

WDFW Fish Passage and Diversion Screening Inventory Database

Site Description Report

Site ID 999764 **Project** COUNTY ☐ **Mitigated**

Geographic Coordinates

Latitude (WGS 84):	47.484332687
Longitude (WGS 84):	-122.595108334
East (NAD 83 HARN):	1,122,415.2
North (NAD 83 HARN)	791,321.9

Waterbody

Stream:	Salmonberry Cr
Tributary To:	Long Lk
WRIA:	15.0188
River Mile:	-999.99
Fish Use Potential:	Yes
FUP Criteria:	Mapped

General Location

Road Name:	Clover Valley Rd SE
Mile Post:	-999.99
County:	Kitsap
WDFW Region:	6

Owner

Type:	County
Name:	Kitsap County

PI Species

☐ Sockeye	☐ Chinook	☑ Sea Run Cutthroat
☐ Pink	☑ Coho	☑ Resident Trout
☑ Chum	☑ Steelhead	☐ Bull Trout

Associated Features

☑ Culvert	☐ Dam	☐ Natural Barrier	☐ Diversion
☐ Non-Culvert Xing	☐ Other	☐ Fishway	

Location/Directions

Site Comments

11/1/2021

These data represent a snapshot of the Washington Department of Fish and Wildlife's current records. Due to the ongoing nature of assessment and inventory of these features, these data may not accurately represent conditions on the ground, and are subject to change.

Clover Valley Rd. SE

WDFW Fish Passage and Diversion Screening Inventory Database

Level A Culvert Assessment Report

Site ID:	**999764**				
Latitude:	**47.484332687**	Stream:	**Salmonberry Cr**	WRIA:	**15.0188**
Longitude:	**-122.595108334**	Tributary To:	**Long Lk**	Fish Use Potential:	**Yes**

Data Source: Washington Department of Fish and Wildlife

Field Crew: Coffman;Storvick Review Date: 10/12/2021

Culvert Details — **Level A Parameters**

ID	Shape	Material	Span	Rise	Length	WDIC	Apron	WSDrop	Location	Countersunk	Backwater	Slope (%)	Sediment
1.1	SQSH	SPS	2.48	1.78	12.50	0.22	NO	0.00		No	No	0.32	

All dimensions in meters

Channel Description

Toe Width (m):	-99.99
Average Width (m):	5.18
Culvert/Stream Width Ratio:	0.48

Plunge Pool

Length (m):	0.00
Max Depth (m):	-99.99
OHW Width (m):	-999.99

Road

Fill Depth (m):	3.00

Assessment Results

		Tidal Influence:	No	Tidegate Present:	No
Barrier:	Unknown	Passability (%):	Unknown	Method:	Level A
Reason:	evel B Require	Fishway Present:	No	Recheck:	ER

Comments

Bank armoring on both banks @ inlet. Some erosion at inlet/outlet under culvert, but unclear if water is flowing under the culvert. Unable to locate control; streambed DS of outlet rapidly drops in elevation and lake is ~200m DS of the outlet.

Potential Habitat Gain

Survey Type:		Spawning (sq m):		Length (m):	
Significant Reach:	Unknown	Rearing (sq m):		**PI Total**	

Clover Valley Rd. SE

WDFW Fish Passage and Diversion Screening Inventory Database
Image Report - Active

Site ID:	**999764**				
Latitude:	**47.484332687**	Stream:	**Salmonberry Cr**	WRIA:	**15.0188**
Longitude:	**-122.595108334**	Tributary To:	**Long Lk**	Fish Use Potential:	**Yes**

Associated Features

☑ Culvert	☐ Dam	☐ Natural Barrier	☐ Diversion
☐ Non-Culvert Xing	☐ Other	☐ Fishway	

SE Baker Rd.

WDFW Fish Passage and Diversion Screening Inventory Database

Site Description Report

Site ID 999763 **Project** COUNTY ☐ **Mitigated**

Geographic Coordinates

Latitude (WGS 84):	47.490467237
Longitude (WGS 84):	-122.597789368
East (NAD 83 HARN):	1,121,812.0
North (NAD 83 HARN)	793,576.5

Waterbody

Stream:	Salmonberry Cr
Tributary To:	Long Lk
WRIA:	15.0188
River Mile:	-999.99
Fish Use Potential:	Yes
FUP Criteria:	Mapped

General Location

Road Name:	SE Baker Rd
Mile Post:	-999.99
County:	Kitsap
WDFW Region:	6

Owner

Type:	County
Name:	Kitsap County

PI Species

☐ Sockeye	☐ Chinook	☑ Sea Run Cutthroat
☐ Pink	☑ Coho	☑ Resident Trout
☑ Chum	☑ Steelhead	☐ Bull Trout

Associated Features

☑ Culvert	☐ Dam	☐ Natural Barrier	☐ Diversion
☐ Non-Culvert Xing	☐ Other	☐ Fishway	

Location/Directions

Site Comments

11/1/2021

These data represent a snapshot of the Washington Department of Fish and Wildlife's current records. Due to the ongoing nature of assessment and inventory of these features, these data may not accurately represent conditions on the ground, and are subject to change.

SE Baker Rd.

WDFW Fish Passage and Diversion Screening Inventory Database

Level A Culvert Assessment Report

Site ID:	**999763**				
Latitude:	**47.490467237**	Stream:	**Salmonberry Cr**	WRIA:	**15.0188**
Longitude:	**-122.597789368**	Tributary To:	**Long Lk**	Fish Use Potential:	**Yes**

Data Source: Washington Department of Fish and Wildlife

Field Crew: Coffman;Storvick Review Date: 10/12/2021

Culvert Details — **Level A Parameters**

ID	Shape	Material	Span	Rise	Length	WDIC	Apron	WSDrop	Location	Countersunk	Backwater	Slope (%)	Sediment
1.1	RND	CST	1.76	1.76	29.40	0.70	NO	0.45	Inlet	No	No	0.89	

All dimensions in meters

Channel Description

Toe Width (m):	2.8
Average Width (m):	5.18
Culvert/Stream Width Ratio:	0.34

Plunge Pool

Length (m):	0.00
Max Depth (m):	0.00
OHW Width (m):	0.00

Road

Fill Depth (m):	4.50

Assessment Results

		Tidal Influence:	No	Tidegate Present:	No
Barrier:	Yes	Passability (%):	67	Method:	Level A
Reason:	WS Drop	Fishway Present:	No	Recheck:	

Comments

WSD at inlet is due to beaver dam across the inlet of the culvert. Could not locate DS control to conduct Lvl B. ER required if dam is removed.

Potential Habitat Gain

Survey Type:		Spawning (sq m):		Length (m):	
Significant Reach:	Yes	Rearing (sq m):		**PI Total**	

SE Baker Rd.

WDFW Fish Passage and Diversion Screening Inventory Database

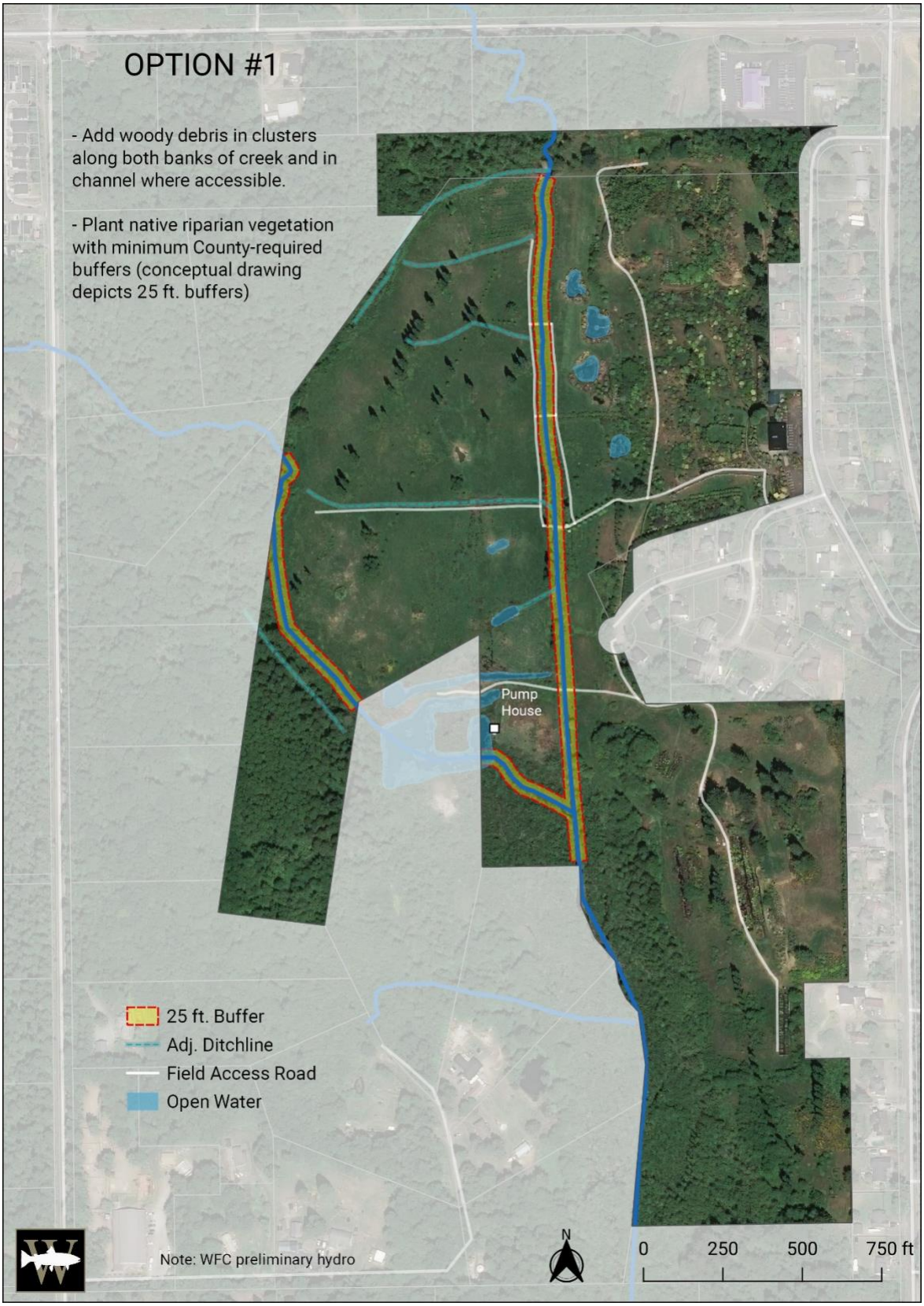
Image Report - Active

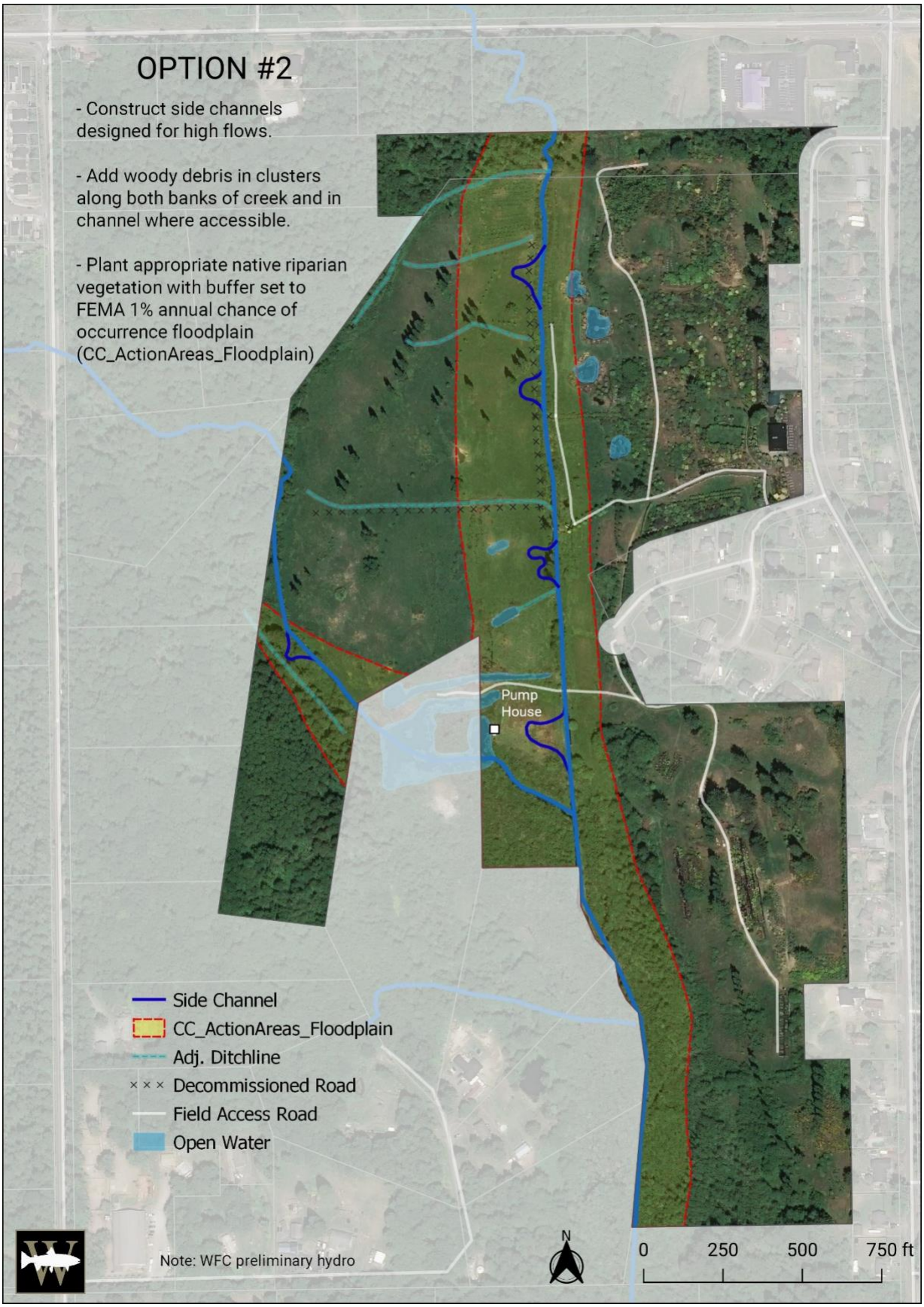
Site ID:	**999763**				
Latitude:	**47.490467237**	Stream:	**Salmonberry Cr**	WRIA:	**15.0188**
Longitude:	**-122.597789368**	Tributary To:	**Long Lk**	Fish Use Potential:	**Yes**

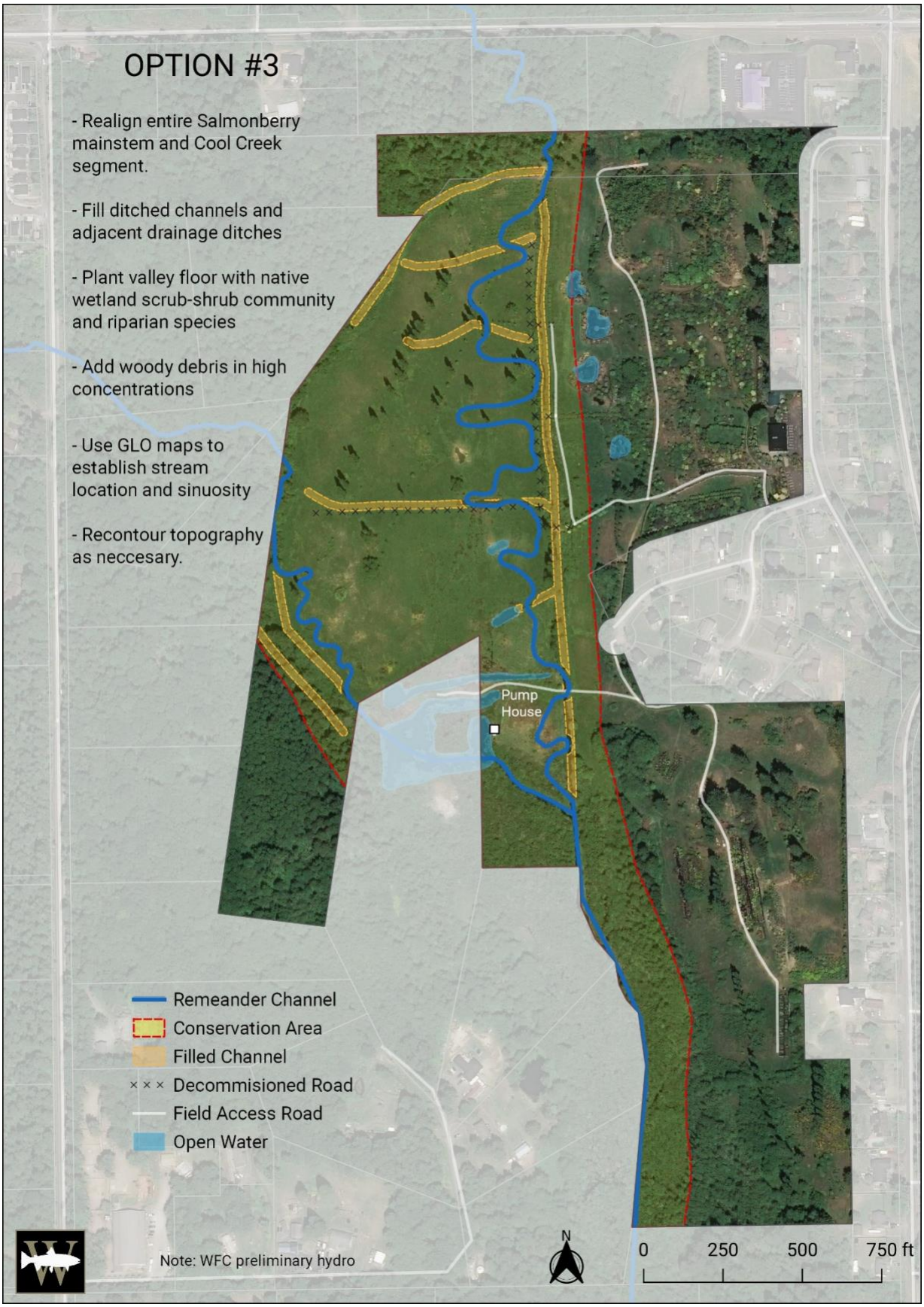
Associated Features

☑ Culvert	☐ Dam	☐ Natural Barrier	☐ Diversion
☐ Non-Culvert Xing	☐ Other	☐ Fishway	

Appendix D. AA16/AA24 Restoration Concepts




OPTION #2
- Construct side channels designed for high flows.
- Add woody debris in clusters along both banks of creek and in channel where accessible.
- Plant appropriate native riparian vegetation with buffer set to FEMA 1% annual chance of occurrence floodplain (CC_ActionAreas_Floodplain)
Pump House
Side Channel
CC_ActionAreas_Floodplain
Adj. Ditchline
Decommissioned Road
Field Access Road
Open Water
Note: WFC preliminary hydro
N
0
250
500
750 ft


OPTION #3
- Realign entire Salmonberry mainstem and Cool Creek segment.
- Fill ditched channels and adjacent drainage ditches
- Plant valley floor with native wetland scrub-shrub community and riparian species
- Add woody debris in high concentrations
- Use GLO maps to establish stream location and sinuosity
- Recontour topography as neccesary.
Pump House
Remeander Channel
Conservation Area
Filled Channel
Decommisioned Road
Field Access Road
Open Water
Note: WFC preliminary hydro
N
0
250
500
750 ft

Appendix E. Salmonberry Confluence Conceptual Design

Salmonberry Creek Restoration Project

DRAFT Conceptual Design Report

Submitted to:

WDFW Habitat Strategic Initiative and WSPER, for NTA 2018-0901

December 2022

Prepared by:

Wild Fish Conservancy
NORTHWEST

Mid Sound
Fisheries
Enhancement
Group

Wild Fish Conservancy and

Mid Sound Fisheries Enhancement Group

Contents

Introduction

Curley Creek, one of three high priority freshwater streams in the East Kitsap watershed, supports spawning coho, summer and fall chum, ESA listed steelhead, and its estuary is important nearshore habitat for ESA listed Chinook. Both the chum and coho populations are important to the Suquamish Tribe treaty fishery as well as for non-tribal recreational and commercial fisheries. The three subwatersheds of Curley Creek – Salmonberry Creek, Long Lake, and mainstem Curley Creek downstream from Long Lake – are all designated by NOAA Fisheries as critical habitat for ESA-listed Puget Sound steelhead. Salmonberry Creek and its tributary, Cool Creek, comprise the primary inflow into Long Lake, and provide the primary coho spawning and rearing habitat in the watershed. While the Salmonberry Creek subwatershed contains the most suitable spawning and rearing habitat in the watershed, it also faces many pressures due to human activities, including fish passage barriers at road crossings and land cover conversion, presenting an opportunity for protection and restoration to have a positive impact on salmon populations in the watershed.

In 2017, the Suquamish Tribe prepared the Curley Creek Watershed Assessment and Restoration Plan (hyperlink). The plan categorized the Curley Creek watershed into 31 Action Areas, and provided recommendations to protect and restore watershed, riparian, floodplain and stream processes, and habitat conditions for salmonids. In 2019, Mid Sound Fisheries Enhancement Group (Mid Sound) was awarded NTA 2018-0901 to build upon the Watershed Assessment by working with partners to identify and rank the highest priority restoration actions and develop a conceptual or preliminary design for the top-ranking feasible restoration action.

Through early 2021, Mid Sound led a process to rank the Habitat Restoration Action Areas in order of priority, and to identify priority habitat projects within the priority reaches (Appendix A). The process included a technical Partner Group comprised of representatives from the Suquamish Tribe, Great Peninsula Conservancy, Washington Department of Fish and Wildlife, Kitsap Conservation District, Kitsap Noxious Weed Control Board, Wild Fish Conservancy, Kitsap County, Pierce County, and the City of Port Orchard.

The Long Lake Action Area was the highest priority – but the complexity of the issues there led us to first pursue the top three salmonid habitat restoration actions identified by the Curley Creek work group, all of which were located within the Salmonberry Creek sub-basin:

- AA12 – the downstream-most culvert on Salmonberry Creek, on Clover Valley Rd. SE
- AA14 – the next upstream culvert on Salmonberry Creek, on SE Baker Rd.
- AA16 – stream restoration at Yang's Botanical Gardens, a ditched and straightened stream reach extending for approximately 1 km downstream from SE Sedgewick Rd.

The two culverts are both on Kitsap County roads and ranked highly in the prioritization because of the amount of upstream habitat – nearly 10 miles – upstream of these crossings. The culverts were re-assessed by WDFW in 2021 at the project team's request, and estimated to be 67% passable. Kitsap County Roads also revisited the culverts and determined that they are still in good condition. We discussed the possibility of developing designs for the culverts further so

that we could seek fish passage funds, however at the time we felt that these would not rank well for funding.

The property owner at Yang's Botanical Gardens, Mr. Won Yang, was receptive to and interested in discussing stream restoration and conservation options for his property. WFC developed three restoration concepts for the property that were presented to Mr. Yang, along with some photo examples of similar stream restoration projects. He requested more time to think about the information and his long-term goals for the property, so we did not move forward with additional design work at that time.

After consultation with the Partner Group, we decided to revisit feasibility of pursuing restoration within the Long Lake action area, as well the lower 800 feet of Salmonberry Creek between Clover Valley Rd and Long Lake. This particular reach didn't rise to the top initially because of the small scale, and because it had a low implementation score (meaning that it would be challenging to complete) when evaluated as a potential acquisition project, which was the long-term recommendation in the Watershed Assessment. However, it was identified as an important transition zone, with riparian restoration and wood placement recommended as shorter-term actions. The Partner Group recognized that stream restoration between Clover Valley Rd and Long Lake could be done as part of barrier correction project, or standalone. We initially met the landowners during investigation of the Clover Valley Rd culvert, and knew that they were interested in restoration, and already trying to control invasive flag iris and blackberries along the stream corridor, making this a good opportunity to pursue design development now, and implementation in the future.

Salmonberry Confluence Site Description

The mouth reach of Salmonberry Creek, between Clover Valley Rd. SE and Long Lake, flows through residential properties in a simplified stream channel lacking instream and riparian complexity (Figure 1). This 800 foot long reach has little to no large woody debris (LWD) or other sources of channel roughness, and few discernable pools. Within this reach, the stream bankfull width rages from 12 to 16 feet and the gradient is less than 1%. The riparian cover is thin in sections, with areas completely lacking trees or understory vegetation, especially near the confluence of Long Lake.

Per the Statewide Integrated Fish Distribution dataset, this reach of Salmonberry Creek is utilized by coho and chum salmon, as well as steelhead and cutthroat trout. Wild Fish Conservancy (WFC) also documented freshwater mussels (*Margaritifera falcata*) within the project reach and further upstream. Stream gravels are present, but it is unknown whether salmonid spawning occurs within this reach. Seasonally, the only significant pool within the reach, at the culvert outlet, attracts large numbers of trout (species unknown), presumably seeking temperature refuge from Long Lake.

The project reach provides salmonids with opportunities for spawning and rearing, and an important migratory pathway through which all fish entering Salmonberry Cr. to spawn or rear must pass. The culvert at the upstream end of the project reach is a partial barrier to fish passage, but adult coho and chum salmon are known to pass through it. Targeted habitat

restoration in this reach will benefit salmonids by increasing instream habitat complexity and reducing water temperatures, improving the quality of water delivered from Salmonberry Cr. to Long Lake.

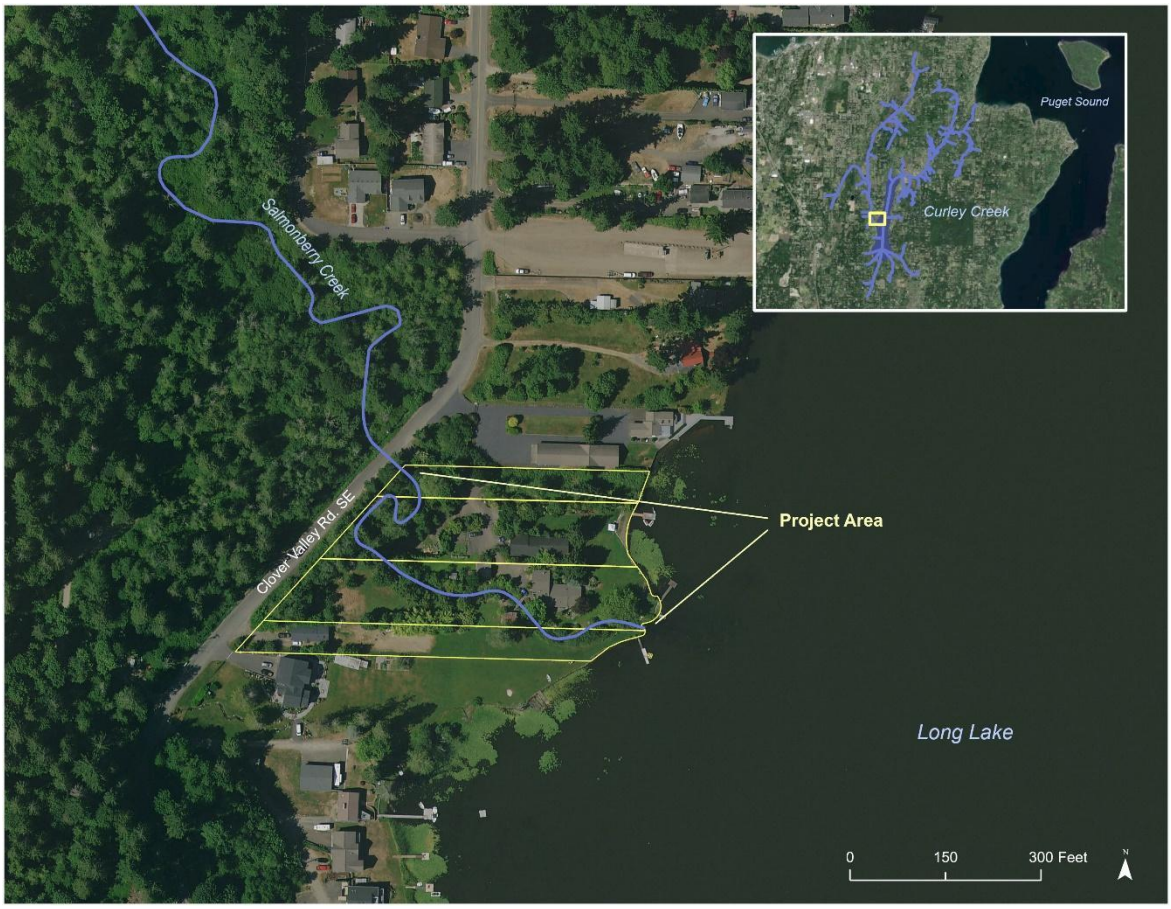


Figure 1. Project area overview. Salmonberry Cr. flows into the west side of Long Lake. Long Lake drains to Puget Sound via Curley Creek.

Site Survey

On November 22nd and 23rd 2022 WFC biologists and engineers conducted a topographic survey of the downstream-most 800 feet of Salmonberry creek to document the project reach's longitudinal profile, channel cross sections, and existing infrastructure (Figure 2). WFC installed and surveyed in a staff plate (Figure 2), which the landowner agreed to monitor during high winter flow events. WFC engineers and biologist geolocated located sites appropriate for potential LWD placement and sections of the stream lacking riparian cover. WFC met with subject property owners to discuss restoration opportunities and designs. Data collected during the site visit were used to produce conceptual plan drawings (Appendix A) that have been shared with, and approved by, the subject property owners. WFC observed adult coho and chum salmon in the project reach during the time of survey.

Figure 2. WFC staff documenting the elevation of a staff plate installed near the mouth of Salmonberry Creek.

Conceptual Design Development

The land-use surrounding the subject reach is substantially developed, with homes, outbuildings, landscaped yards, a foot bridge, powerlines, a septic drain field, irrigation pipes, a county road, and a network of driveways and parking areas abutting portions of both the left and right banks of the channel. This conceptual design considers instream and riparian habitat needs, existing infrastructure and associated constraints, and heavy equipment access logistics, to recommend restoration actions in locations that will provide process-based benefits to aquatic habitats while avoiding risk of damage to buildings, roads, yards, and utilities. The landowners reviewed and approved these restoration concepts, but expect to be fully engaged as the project evolves during the final design phase. Final designs will need to meet the needs and expectations of the affected landowners.

During the site visit WFC determined that LWD placement would be limited to the upper margins of the subject reach due to equipment accessibility constraints (Figure 3). Four locations were identified in the field, each with appropriate excavator access and channel morphology for LWD "log cluster" installations. Log dimensions and cluster shape concepts were designed by WFC engineers and have been used successfully by WFC in similarly sized watersheds. Conceptual plans include four log clusters, each cluster comprised of three logs, 12 to 16 inches in diameter, 25 feet in length, with sharpened ends and root wads intact. Cluster construction calls for penciled log stems to be pushed into the bank using an excavator, and the logs to be interlocked so as to pin each other in place. Logs placed in this method remove the need for excessive excavation, reduce the amount of disturbance to riparian vegetation, solidly anchor the logs in place to reduce the likelihood of their movement, and protect the stability and integrity of the streambanks.

Figure 3. Looking downstream at the upper section of the project reach near Log Cluster #1.

In the lower sections of the channel the riparian areas are lacking native vegetation, with sparse ornamental shrubs planted along both banks. In this location we recommend a supplemental planting of native shrubs and trees appropriate for riparian habitats and acceptable to landowners. Anticipated species include Pacific Willow, Red Osier dogwood, Nootka rose, Snowberry, Ninebark, Twinberry, Indian Plum, Pacific Crab Apple and Cascara. We recommend

that plantings are spaced 8 feet on center along both the left and right banks of the channel. A total of ~200 plants are recommended for the 2100 square foot planting area identified. In addition to native shrub planting, we recommend removing small patches of invasive Himalayan blackberry and flag iris located in the planting area. Invasive plant removal is to be conducted manually with shovel, avoiding use of chemical herbicides given the proximity to open water.

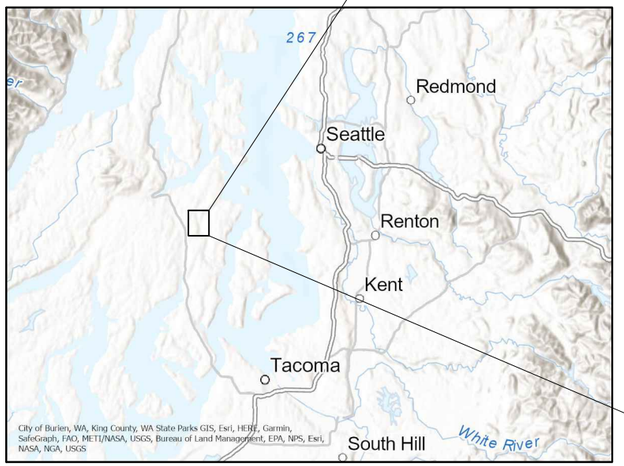
SHEET TITLE	NO.
TITLE SHEET	1
EXISTING CONDITIONS (ORTHO)	2
EXISTING CONDITIONS (TOPO)	3
RESTORATION PLAN (LWD)	4
RESTORATION PLAN (PLANTING)	5
LONG PROFILE	6

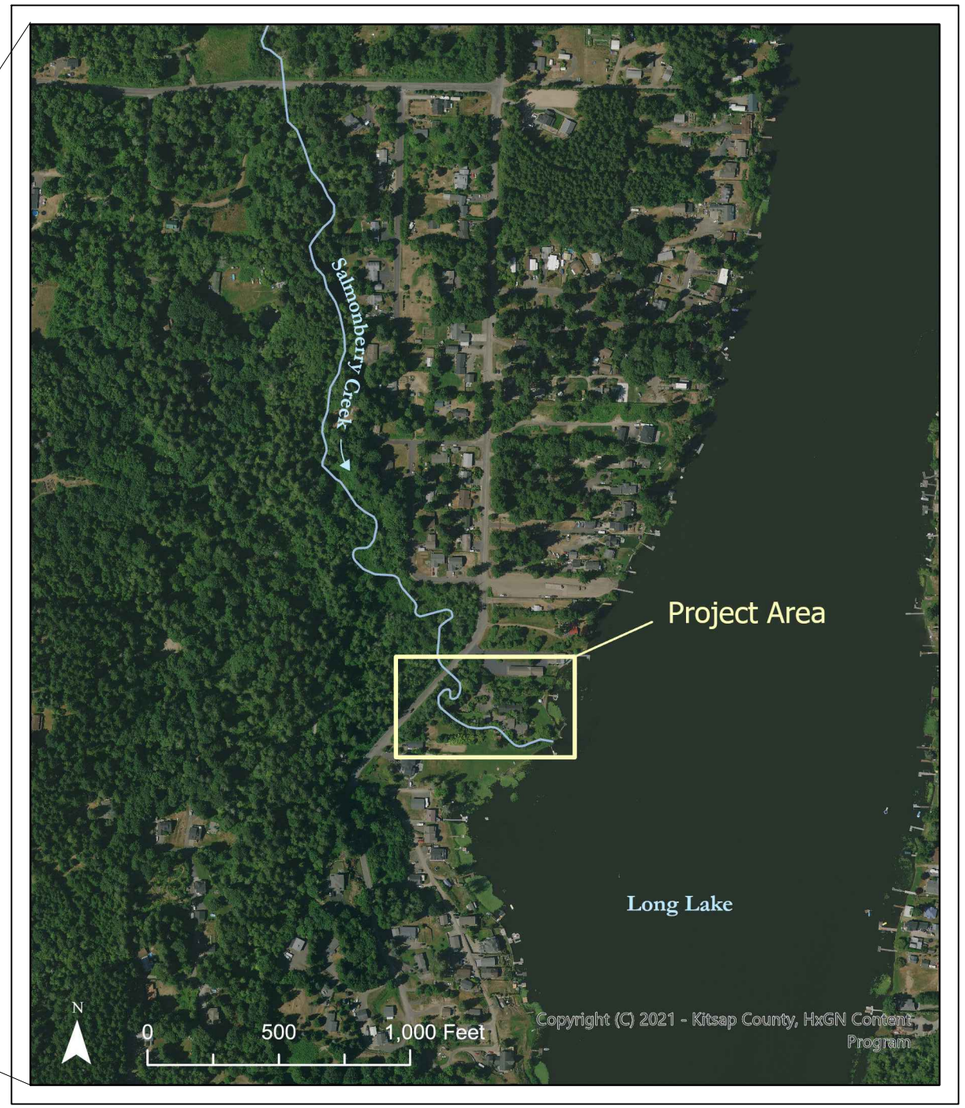
PROJECT SITE LOCATION

CLOVER VALLEY ROAD SE
PORT ORCHARD, WA 98367

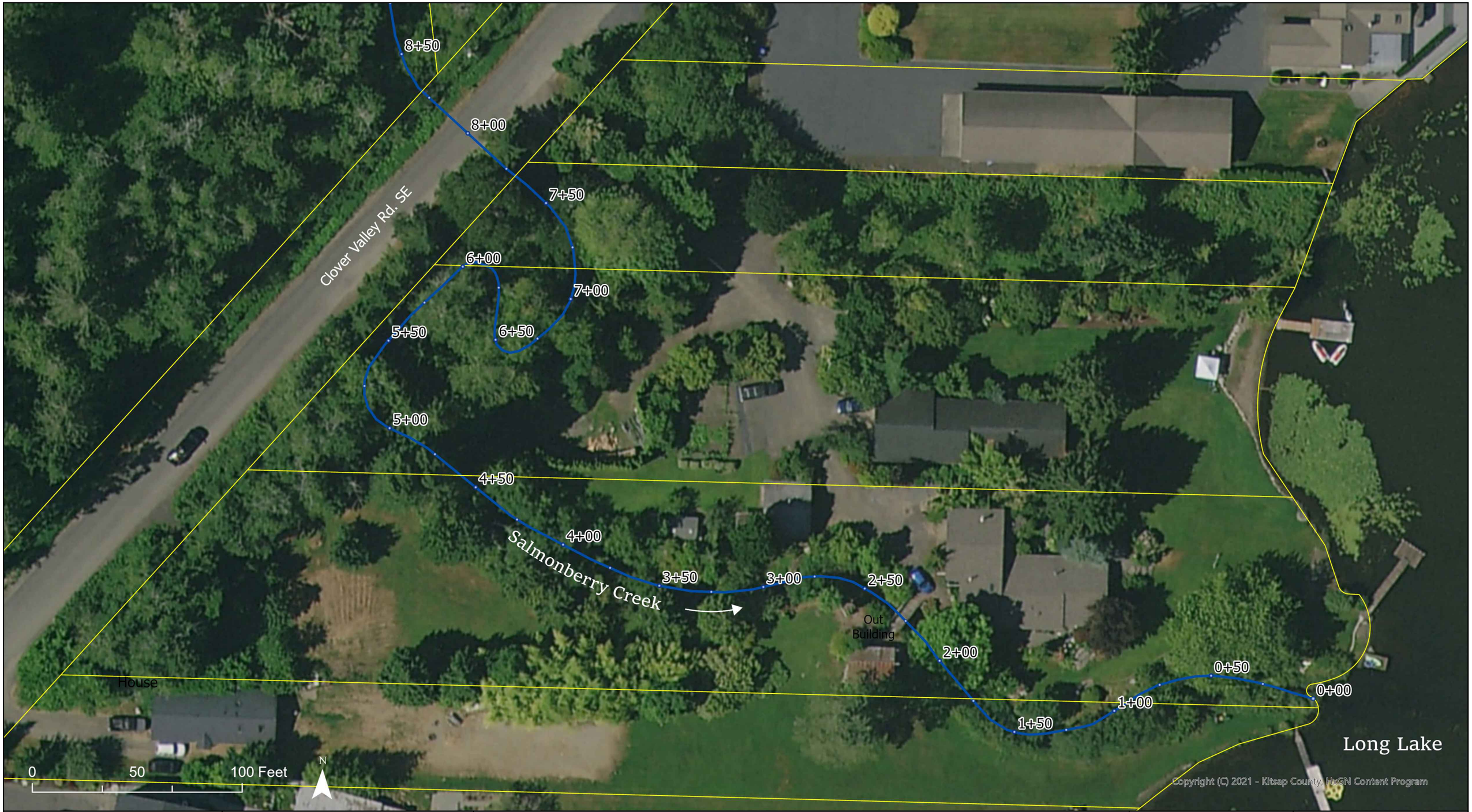
KITSAP COUNTY
LATITUDE: 47.48° N
LONGITUDE: 1122.59° W

PRELIMINARY DESIGN DRAWINGS PREPARED BY
WILD FISH CONSERVANCY





DATE: 12/02/2022 DRAWN BY: A. JORGENSON DESIGNED BY: WILD FISH CONSERVANCY CHECKED BY: JOB NO:	Wild Fish Conservancy 15629 Main Street NE Duvall, WA 98019 Phone: 426-788-1167	TITLE SHEET SALMONBERRY CREEK - RESTORATION PLAN KITSAP COUNTY, WA		SHEET NO. 1 SHEET 1 of 6 .



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DESIGNED BY:	WILD FISH CONSERVANCY
CHECKED BY:	
JOB NO:	

Wild Fish Conservancy
15629 Main Street NE
Duvall, WA 98019
Phone: 426-788-1167

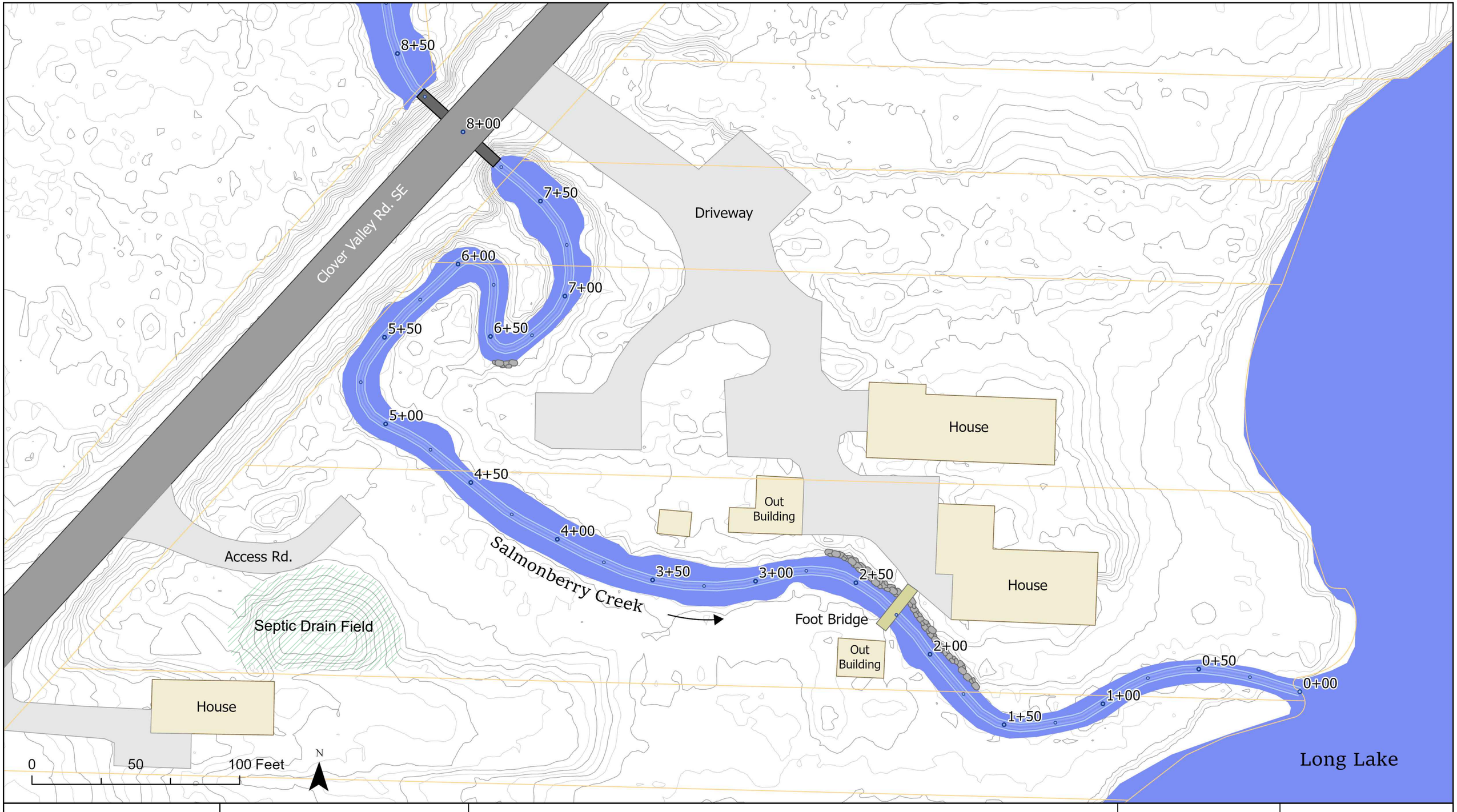
EXISTING CONDITIONS - ORTHO (KITSAP 2021)

SALMONBERRY CREEK - RESTORATION PLAN

KITSAP COUNTY, WA

SHEET NO.

2



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CHECKED BY:	
JOB NO:	

Wild Fish Conservancy
15629 Main Street NE
Duvall, WA 98019
Phone: 426-788-1167

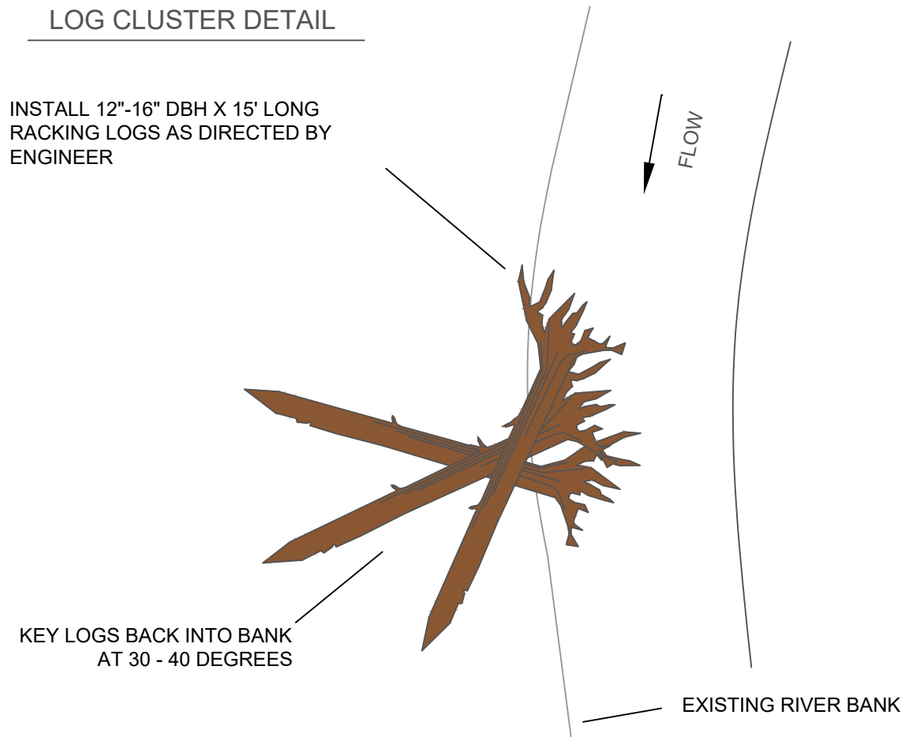
EXISTING CONDITIONS - TOPO

SALMONBERRY CREEK - RESTORATION PLAN

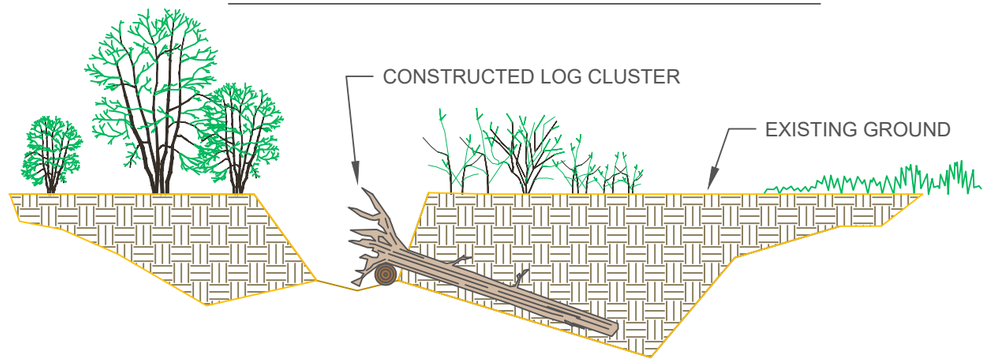
KITSAP COUNTY, WA

SHEET NO.
3
SHEET 3 of 6 .

LOG CLUSTER DETAIL



SECTION VIEW WITH LOG CLUSTER (TYP)



DATE:	12/02/2022
DRAWN BY:	A. JORGENSON
DESIGNED BY:	WILD FISH CONSERVANCY
CHECKED BY:	
JOB NO:	

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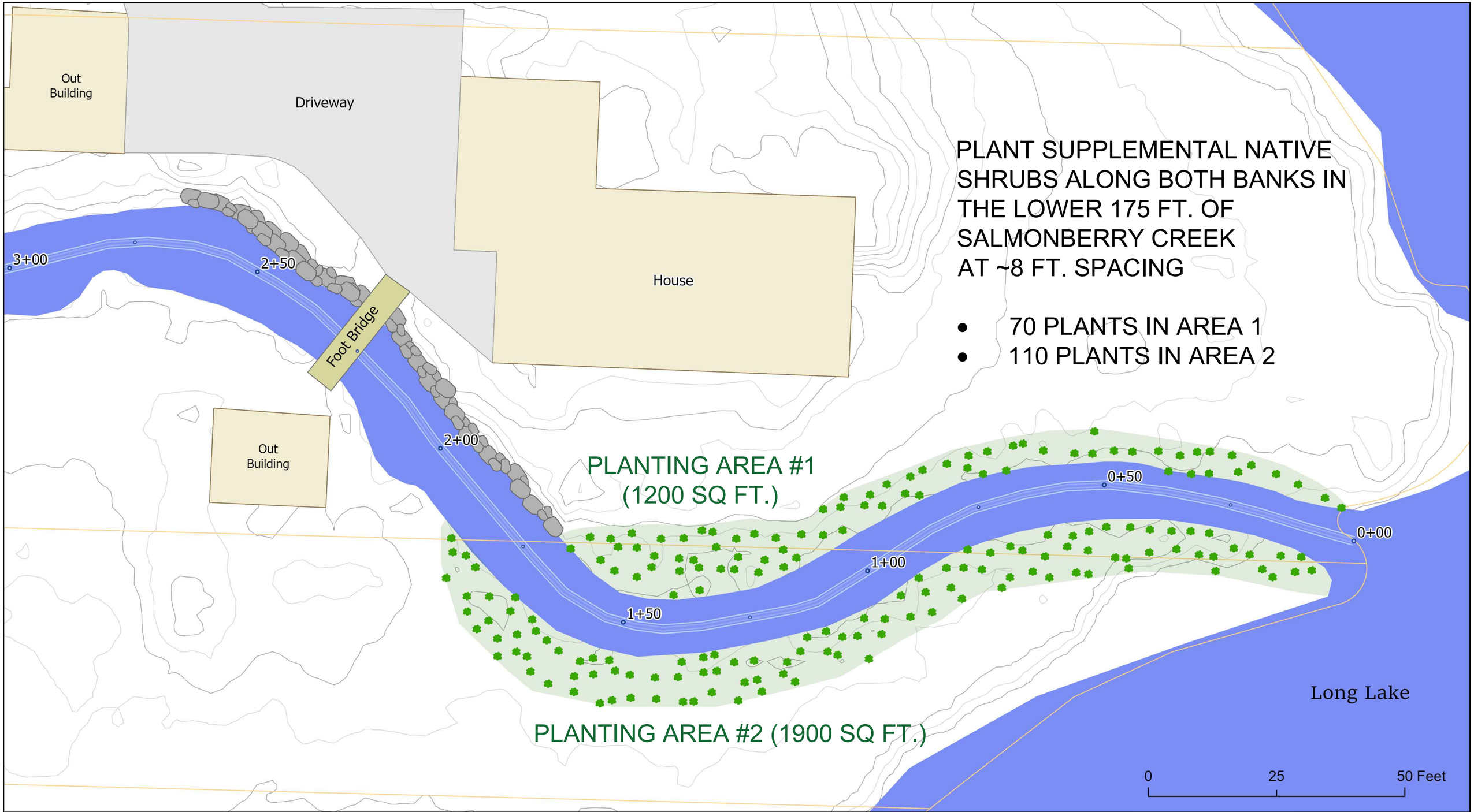
15629 Main Street NE
Duvall, WA 98019
Phone: 426-788-1167

RESTORATION PLAN - LOG CLUSTER

SALMONBERRY CREEK - RESTORATION PLAN

KITSAP COUNTY, WA

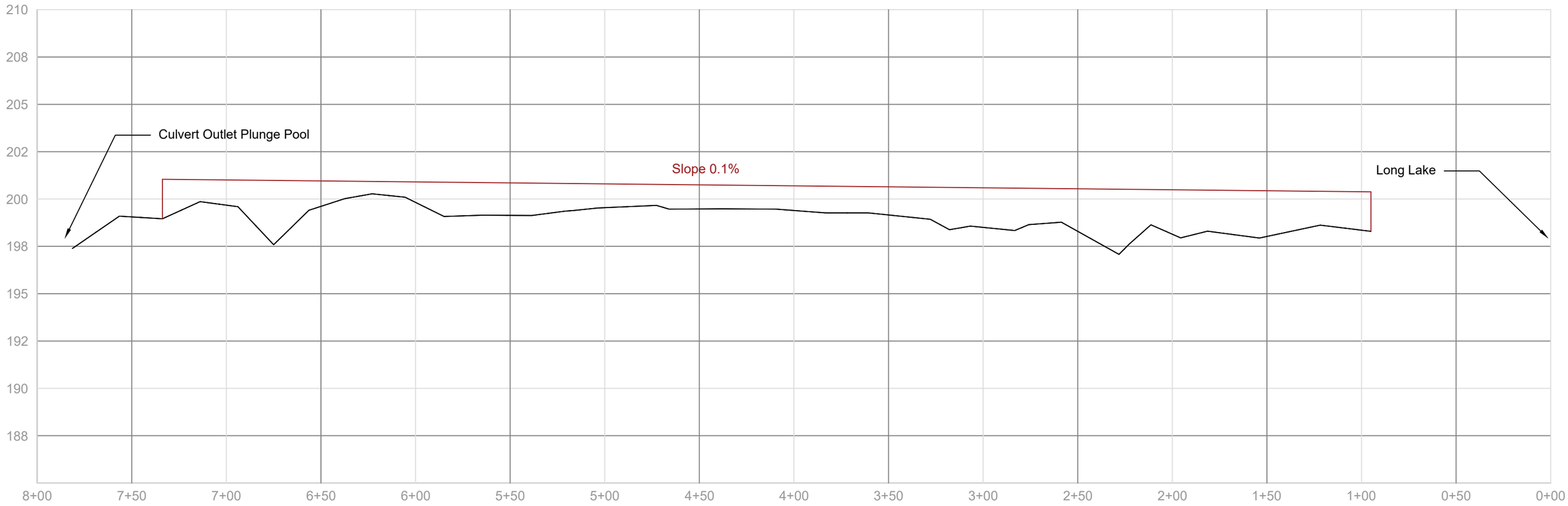
SHEET NO.
4
SHEET 4 of 6



PLANT SUPPLEMENTAL NATIVE SHRUBS ALONG BOTH BANKS IN THE LOWER 175 FT. OF SALMONBERRY CREEK AT ~8 FT. SPACING

- 70 PLANTS IN AREA 1
- 110 PLANTS IN AREA 2

DATE: 12/02/2022 DRAWN BY: A. JORGENSON DESIGNED BY: WILD FISH CONSERVANCY CHECKED BY: JOB NO:	Wild Fish Conservancy 15629 Main Street NE Duvall, WA 98019 Phone: 426-788-1167	RESTORATION PLAN - PLANTING AREA SALMONBERRY CREEK - RESTORATION PLAN KITSAP COUNTY, WA		SHEET NO. 5 SHEET 5 of 6



DATE: 12/02/2022 DRAWN BY: A. JORGENSON DESIGNED BY: WILD FISH CONSERVANCY CHECKED BY: JOB NO:	Wild Fish Conservancy 15629 Main Street NE Duvall, WA 98019 Phone: 426-788-1167	LONG PROFILE SALMONBERRY CREEK - RESTORATION PLAN KITSAP COUNTY, WA		SHEET NO. 6 SHEET 6 of 6 .