

Project #18-1259, Meadowdale Beach Park & Estuary Restoration

Current Status: Application Submitted

Project Details

Primary Sponsor: Snohomish County Parks Department

Primary Contact: Logan Daniels
(425) 388-6619
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Funding Program: Salmon State Projects

Lead Entity: Lake Washington/Cedar/Sammamish
Watershed (WRIA 8) Lead Entity

Project Type: Restoration

Project Description

Snohomish County will complete a Puget Sound nearshore restoration project at Meadowdale Beach Park located at the N end of Browns Bay at the inlet of Lund's Gulch Creek. A historic (pre-railroad) pocket estuary will be re-established and connected to the nearshore by removing 17,000 CY of fill, creating 1.3 ac. of high functioning, low energy, and sustainable rearing habitat for non-natal juvenile Chinook (threatened). Approx. 128 lf (2,000 CY) of shoreline armor, associated undersized 6' wide culvert under the BNSF rail-line, and 75 lf of streambank armor will be removed and replaced with a 5-span railroad bridge to provide a 90' opening to restore natural channel meander and sediment delivery to the nearshore (80-250 CY/YR); 27 pieces of wood will be placed in the estuary for habitat structure for juvenile salmonids. The overall larger park project will additionally improve quantity and quality of the creek delta and lower stream reach habitats known to be used by non-natal juvenile Chinook salmon by enhancing beach nearshore and riparian areas outside the estuary. The protected park setting and the County's commitment to max. restoration make this a unique opportunity in central Puget Sound. This multi-benefit project is precedent-setting by working with BNSF on railroad modifications, providing a resilient solution to a long-standing conflict; and illustrating how Puget Sound Recovery can occur in areas historically impacted.

Project Overall Metrics (Outcomes, Benefits)

Category / Work Type / Metric

Application Answer

Completion Date

Projected date of completion 06/30/2023

Sponsor Match: Monetary Funding

Amount of other monetary funding (A.12) \$158,176.00
Source of other monetary funding (A.12.a) Local County funds
Timing of other monetary funding Available in May, 2019 and available for the project through 6/30/2023 (subject to County budget process).

Sponsor Match: Donated Un-paid Labor (volunteers)

Value of Donated Unpaid Labor (Volunteers) (A.13.a.2) \$0.00
Source of Donated Un-paid labor contributions (A.13.a.4) 0

Sponsor Match: Donated Paid Labor

Value of Donated Paid Labor (A.13.b.1) \$0.00
Source of Donated Paid Contributions (A.13.b.2) 0

Sponsor Match: Other In-kind Contributions

Value of Other In-Kind Contributions (A.13.c.1) \$0.00
Source of Other In-Kind Contributions (A.13.c.3) 0
Description of other In-Kind contributions (A.13.c.2) 0

Project Funding

Funding Request		Funding %	Min Match Required	Sponsor Match Source	
Salmon State Projects (FY2019)	\$800,000	83.49 %		Appropriation \ Cash	\$158,176
Sponsor Match	\$158,176	16.51 %	15%		
Total Project Funding	\$958,176	100.00 %			

Project Cost Summary		Project %	Admin/A&E %	Maximum for Selected Program
RESTORATION COSTS				
Restoration	\$863,251			
A&E	\$94,925		11.00 %	\$258,975 (30%)
Subtotal	\$958,176	100.00 %		
Total Cost Estimate	\$958,176	100.00 %		

Worksites and Properties

County: Snohomish

Legislative Districts 2012: 21
Congressional Districts 2012: 02
Salmon Recovery Regions: Puget Sound
DNR Watershed Units (WAU): Puget
4th Field Catalog Units (HUC): KITSAP
WRIA: Cedar-Sammamish
Sections: 05
Township: T27NR04E
Coordinates: 47.85981045
-122.33479837

Worksite #1: Meadowdale Beach Park

Coordinates from Mapped Point:	Latitude: 47.85981045	Longitude: -122.33479837
Coordinates from Worksite	Latitude: 47.858058	Longitude: -122.333326
Directions:		

Worksite Description: All project activities will be conducted at Meadowdale Beach Park. Railroad Bridge construction will occur within BNSF R/W (milepost 21.7 to 21.9) with temporary access berms necessary for bridge construction and materials staging located on the two adjacent county-owned parcels including the tidelands to the west of BNSF R/W and lower park land to the east of the BNSF R/W. Restoration activities including fill removal, substrate placement, native planting, and riparian enhancement will occur on BNSF r/w, county-owned tidelands, lower lawn area and lower 850' reach of Lund's Gulch Creek. The access road requires soil reinforcement for haul of fill material.

Site Access Directions: From I-5, take exit for 220th St SW (Exit 179). Turn west onto 220th St SW. Turn right onto 76th Ave W which becomes 75th Pl W. There is a gate at this entrance which requires a pin code to open the gate (call 425-388-6619 or 425-388-6600 for code). There is limited parking at this entrance but official visitors may travel past Ranger residence and park on the paved path or lawn if dry. Additional park access is available from 156th St SW and requires a 1-1/4 mile hike down a steep trail.

Worksite Address:
15433 75th Pl. W.
Edmonds, WA 98026-4006

Restoration Metrics (Outcomes, Benefits)

Category / Work Type / Metric	Application Answer	Work Type Costs
Targeted salmonid ESU/DPS (A.23)	Chinook Salmon-Puget Sound ESU, Chum Salmon-Puget Sound/Strait of Georgia ESU, Coho Salmon-Puget Sound/Strait of Georgia ESU	
Targeted species (non-ESU species)	Searun Cutthroat	
Miles of Stream and/or Shoreline Treated or Protected (C.0.b)	0.17	
Project Identified In a Plan or Watershed Assessment (C.0.c)	The Recovery Plan that identifies the need for the project is the following salmon conservation plan: WRIA 8 Salmon Recovery Council. 2017. Lake Washington/Cedar/ Sammamish Watershed Chinook Salmon Conservation Plan 10-year Update (2017). Water Resource Inventory Area (WRIA) 8, Seattle, WA. [http://www.govlink.org/watersheds/8/reports/plan-update.aspx] The project is listed under plan Number: M228	
Priority in Recovery Plan	The plan cited above (Appendix E) outlines the strategies to address the highest priority stressors on Chinook salmon in WRIA 8. The Meadowdale project targets the following: 1) reconnect backshore areas and pocket estuaries, 2) restore natural marine shorelines, and 3) protect and restore functional riparian vegetation (Appendix E, pages E-2, E-14, E-15). Implementation of the project will achieve 50% of the habitat goal identified in the plan for pocket estuary restoration (App D-2, D-3)	
Type Of Monitoring (C.0.d.1)	Implementation Monitoring	
Monitoring Location (C.0.d.2)	Onsite	
Estuarine / Nearshore Project		
Total Amount Of Estuarine / Nearshore Acres Treated (C.9.b)	1.3	
Creation of new estuarine area (C.9.q.1)		
Total cost for Creation of new estuarine area		\$300,830.00
Acres of Estuary Created (C.9.q.2)	1.3	
Culvert modification / removal (C.9.f.1)		
Total cost for Culvert modification / removal		\$505,134.00
Number of Culverts Modified/Removed To Allow Fish Passage (C.9.f.2)	1	
Acres Opened To Fish Passage through culvert modification/removal (C.9.f.3)	6.3	
Estuarine planting or native plant establishment (C.9.r.1)		
Total cost for estuarine planting or native plant establishment		\$12,111.00
Acres of Estuarine planting or native plant establishment (C.9.r.3)	0.8	
Species (scientific) name(s) of plants. (C.9.r.2)	Aster subspicatus, Deschampsia cespitosa, Grindelia integrifolia Scirpus americanus, Sidalcea hendersonii, Carex lyngbyei, Plantago maritima, Potentilla anserina ssp. Pacifica, Carex obnupta, Dodecatheon pulchellum, for remainder see L-3 plan	

Instream Habitat Project

Total Miles Of Instream Habitat Treated (C.4.b)	0.17	
Channel structure placement (C.4.d.1)		
Total cost for Channel structure placement		\$16,175.00
Material Used For Channel Structure (C.4.d.2)	Individual Logs (Anchored), Individual Logs (Unanchored), Logs Fastened Together (Logjam), Stumps With Roots Attached (Rootwads)	
Miles of Stream Treated for channel structure placement (C.4.d.3)	0.17	
Pools Created through channel structure placement (C.4.d.5)	0	
Number of structures placed in channel (C.4.d.7)	53	

Riparian Habitat Project

Total Riparian Miles Streambank Treated (C.5.b.1)	0.20	
Total Riparian Acres Treated (C.5.b.2)	1.7	
Planting (C.5.c.1)		
Total cost for Planting		\$1.00
Species Of Plants planted in riparian (C.5.c.2)	Picea sitchensis Thuja Plicata Tsuga heterophylla Acer macrophyllum Alnus rubra Malus fusca Picea sitchensis Pinus contorta var. "contorta" Pseudotsuga menziesii Salix hookeriana Salix scouleriana Tsuga heterophylla Thuja Plicata Acer circinatum Amelanchier alnifolia Cornus sericea Corylus cornuta Holodiscus discolor Mahonia aquifolium Oemleria cerasiformis Physocarpus capitatus Rosa nutkana Rubus parviflorus Sambucus racemosa Symphoricarpos albus see L-3 for remaining	
Acres Planted in riparian (C.5.c.3)	1.7	
Miles of streambank planted (C.5.c.4)	0.17	
Average Riparian Width	50	

Cultural Resources

Cultural resources

Total cost for Cultural resources		\$29,000.00
Acres surveyed for cultural resources	6.50	

Architectural & Engineering

Architectural & Engineering (A&E)

Total cost for Architectural & Engineering (A&E)		\$94,925.00
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Restoration Questions

1 of 6 Cultural Resources: Has the worksite been investigated for historical, archeological, or cultural resources? If yes, when did this occur and what agencies and tribes were consulted? Attach related documents (letters, surveys, agreements, etc.) to your project in PRISM.

Yes, An Archaeological Screening Findings was prepared in 2013 for maintenance of the culvert; this was very site specific to the actual maintenance action. The memo indicated there were no recorded sites relative to the location where maintenance would occur. This determination was based on contact with the Washington Department of Archaeology and Historic Preservation (DAHP). A desktop study was conducted during the Feasibility Study for the overall larger project which included restoration, railroad bridge and park and recreation elements in 2015, followed by the Cultural Resources Survey prepared in 2017/2018 based on the APE for the larger overall project. Archaeologists conducted monitoring of the geotechnical boring and test pit excavation activities and a pedestrian survey. In addition, several shovel probes were excavated with the Area of Potential Effect (APE) and a literature search was also performed as part of the Survey. Formal consultation with affected Native American tribes (as determined by the Corps) will be performed by the Corps, as the lead federal agency for the project. The State Historic Preservation Officer (SHPO) will also be able to comment during the federal permit process. Informal contact was made to the SHPO, Suquamish, Tulalips and Mukleshoot tribes during the Cultural Resource Survey work. The previous Findings Memo, desktop study and Cultural Resources Survey prepared for the larger overall project are attached in PRISM.

2 of 6 Cultural Resources: What is the current land use of the site? Has there been ground disturbances historically, if so, what are/were those disturbances? Is there any fill where ground disturbance is proposed? If known, how deep is the fill? The answer to this question will be used in cultural resource consultation so please provide detailed information.

The current land use is a County Park. Snohomish County 2035 Comprehensive Plan designation for the site is Public/Institutional Lands (GMACP) and Urban Low Density and the present zoning is R9600 for parcels 27040500200200 and 27040500200100 (Uninc. Snohomish County). City of Edmonds Comprehensive Plan designation for parcel 00500900000500 is Open Space within a Park Overlay zone and zoning is RS-20. The railroad embankment and tracks lies within 100-foot BNSF owned right of way. There has been historic ground disturbance within the project site associated with construction of the railroad embankment, and construction and demolition of the Meadowdale Country Club (MCC). Demolition of the MCC, in particular, included filling the facilities swimming pool with clubhouse demolition material and other debris. Test Pits within the proposed estuary restoration area revealed fill deposits ranging from 1 to 10 feet in thickness. Four of the test pits contained concrete fragments, metal wiring, painted dimensional lumber, rebar, sheet metal, glass and pool tiles. Additional shovel probes revealed historic refuse fill (nails, brick fragments and swimming pool tile fragments) in 3 of the 18 probe locations. No archaeological materials or deposits were identified in the shovel probes excavated on the beach (Source: Cultural Resource Survey, 2018).

3 of 6 Is the worksite(s) located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site? If yes, name the area and specify if the land is owned by local, state or federal government.

Yes, The worksite is located within an existing park, named Meadowdale Beach Park. The Park, including the tidelands is owned by local government (Snohomish County) but a 100-foot width of right-of-way owned by BNSF Railway parallels the shoreline and separates the county-owned tidelands from lower lawn area in the park.

4 of 6 Cultural Resources: Describe any proposed ground disturbing activities that will take place as part of your project. This includes work conducted by hand or mechanized tools. Provide specific information including length, width, and depth of the ground disturbance. Ground disturbing work includes all restoration activities, geotech, fencing, demolition, etc. Avoid subjective phrases such as "ground disturbing activities will be minor".

Substantial ground disturbing activities will occur as part of the project. This work will be conducted primarily with mechanized equipment, including pile drivers,

tracked excavators, frontend loaders, compactors and soil-nailing drivers, backhoes and dump trucks. Ground disturbing activities will include driving piles up to 130 feet for the railroad bridge, placement of approx. 5,100 cyd fill (quarry spalls and CRBC) for temporary work pads for the railroad bridge construction east and west of the existing embankment, removal of approximately 2,000 cubic yards (cy) of railroad embankment material, grading of the new channel and estuary areas removing 17,000 cy of fill (up to 7' depths of cut), and upland demolition of the restroom enclosure, site furnishings, streambank armoring, pathways, and select trees. A portion of the access road will be regraded with three locations reinforced by soil nailing to accommodate equipment and materials mobilization (i.e. repetitive dump truck loading)

5 of 6 **Give street address for this worksite if available.**

15433 75th PI W Edmonds 98026-4006, gate access code required, contact 425-388-6600 or 425-388-6619

6 of 6 **Cultural Resources: Are there any structures existing on the property (including tidegates, dikes, residential structures, bridges, rail grades, etc.)? If so, please list all existing structures. Indicate if any of these structures will be altered or demolished as a result of the project, and provide the following for each structure that could be altered or demolished: identifying name, year constructed, year(s) remodeled/renovated. Attach at least one photo of each altered structure.**

Yes, Structures within the worksite area include the railroad embankment with two sets of tracks, the concrete box culvert, and portable restroom enclosure. Approximately 128 linear feet (2,000 cyds) of the rail embankment (established in the late 19th century, modified in 1940's) will be removed with the tracks altered (rebuilt on the bridge surface) and the concrete box culvert constructed in 1940's will be demolished. The portable restroom enclosure built in the late 1990's is located in the BNSF right of way and subject to flooding will be demolished with a new structure constructed upland. Photos of each altered structure are provided as attachments.

Property for Meadowdale Beach Park Worksite #1: BNSF Railroad Right of Way

Activity: Restoration

Landowner

Burlington Northern and Santa Fe Railroad
PO Box 961056
Fort Worth, TX 76161-0056

Control and Tenure

Instrument Type: Landowner Agreement

Purchase Type:

Term Length: Perpetuity

Expiration Date:

Note: A C&M agreement which will replace current agreement is being prepared by BNSF to be executed by the County and BNSF prior to construction

Property for Meadowdale Beach Park Worksite #1: Snohomish County - Meadowdale Beach Park

Activity: Restoration

Landowner

Snohomish County Parks Department
6705 Puget Park Dr
Snohomish, WA 98296

Control and Tenure

Instrument Type: Sponsor owned property (deed)

Purchase Type:

Term Length: Perpetuity

Expiration Date:

Note:

Landowner Type: Local Government

Overall Project Questions

1 of 6 **Is any part of the scope of work included in this application required as mitigation for another project or action? E.g. FERC relicensing, Habitat Conservation Plan, legal settlement, etc. If yes, explain:**
No

2 of 6 **Do you need state SRFB dollars (not Federal) to match the requirements of any other federal funding you will be using to complete this project. If Yes, please state the amount of state dollars needed out of your total request.**
No

3 of 6 **Is the project on State Owned Aquatic Lands? Please contact the Washington State Department of Natural Resources to make a determination. (www.dnr.wa.gov/Publications/aqr_land_manager_map.pdf)**
No

4 of 6 **Does your project address or accommodate the anticipated effects of climate change? If yes or maybe, please describe how.**
Yes, The undersized 6-foot wide culvert currently exacerbates flooding from large storm events, and interrupts sediment transport from the stream to the Puget Sound. Flooding has worsened over the last decade as storm events increase in intensity and frequency (State of Knowledge Report – Climate Change in Puget Sound). The project addresses climate change effects by replacing the culvert and shoreline embankment with a 128 foot railroad bridge with a 90-foot channel opening that restores the meander zone and will deliver 80-250 cy of sediment to the beach and beaches 7 miles north through littoral drift. Approximately 17,000 cyds of fill will be removed from the existing lawn area to restore the estuary. Over time, as sea levels rise, the restored estuary will provide increased flood storage and area for sediments to deposit and dynamically shift as they make their way out to the beach and northward. The estuary has enough buffer area (initially freshwater marsh) for additional areas to be tidally inundated and transition to brackish, tidal marsh habitats. Restoration will increase resilience by restoring the natural coastal hydrologic and sediment processes and creating a resilient community park setting with space to accommodate changing water levels associated with climate hazards and extreme weather. Separating the creek and beach access under the new railroad bridge will ensure the sustainability and resiliency of both park elements and improve safety and habitat conditions.

5 of 6 **Is your project located in the Puget Sound or Hood Canal region? If yes, is your project referenced in the Puget Sound Action Agenda?**
Yes, This project is currently on the list of NTA's recommended for adoption into the 2018-2022 Action Agenda. The project received a ranking score of 3 for Regional Priority SA3 Shoreline Armor to implement Approach SA3.3.

6 of 6 **Will veterans (including the veterans conservation corps) be involved in the project? If yes, please describe.**
No

Project Permits

Permit Type	Applied Date	Received Date	Expiration Date	Permit Number
Archeological & Cultural Resources (EO 05-05)	03/15/2018			
Clear & Grade Permit				
Clear & Grade Permit				
Cultural Assessment [Section 106]	03/15/2018			
Dredge/Fill Permit [Section 10/404 or 404]	03/15/2018			
Endangered Species Act Compliance [ESA]	03/15/2018			
Hydraulics Project Approval [HPA]	06/22/2018			
Nationwide Permit	03/15/2018			
NEPA				
SEPA				
Water Quality Certification [Section 401]	03/15/2018			
Shoreline Permit	07/06/2018			
Shoreline Permit	07/06/2018			
Shoreline Permit	07/06/2018			
Other Required Permits				
Other Required Permits				
Other Required Permits				
Other Required Permits	07/06/2018			
Other Required Permits				
Other Required Permits				

Permit Questions

- 1 of 2 **Will this project require a federal permit? If this project requires a federal permit, will the scope of that permit cover ALL proposed ground disturbing activities included in this project? You may need to request a pre-application meeting with the permitting agency to answer this question.**
 Yes, The project will require a federal permit with the US Army Corps of Engineers (Corps) under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. The scope of the permit review will cover all ground disturbing activities for the project. The permit applications have been submitted to the Corps, and the County will be coordinating with Corps throughout the permit review and approval process, including consultation with US Fish and Wildlife Service and NOAA Fisheries under the Endangered Species Act (ESA), as well as consultation with the Department of Archaeology and Historic Preservation (DAHP) under Section 106 of the National Historic Preservation Act.
- 2 of 2 **Are you planning on using the federal permit streamlining process (Limit 8, www.rco.wa.gov/documents/fact_sheets/Permit_Streamlining_fact_sheet.pdf)?**
 No, The County is not anticipating that the project meets the conditions necessary for the Limit 8 federal streamlining process. We hope to confirm if/how the project meets the conditions for Nationwide Permit #27 with the Corps, which will streamline the Corps' review of the project.

Project Attachments

Attachment Type	Title	Attach Date
Applicant	Authorization.pdf.pdf	07/23/2018
Resolution/Authorizations		
Correspondence	WRIA8_MeadowdaleLinktoStrategy_Final.pdf.pdf	04/30/2018
Cost Estimate	Cost_Estimate_SRFB format_080818.xlsx.xlsx	08/08/2018
Cost Estimate	60%_Cost-Estimate_detail_080618.pdf.pdf	08/06/2018
Design document	Railroad Bridge_60% Track and Civil.pdf.pdf	07/23/2018
Design document	Railroad Bridge_60% Structural.pdf.pdf	07/23/2018
Design document	RCO 15-1056 Prelim Design Rpt_Meadowdale Beach Park and Estu.pdf	05/22/2018
Design document	Meadowdale Beach Park 60PCT_11x17_compress.pdf.pdf	03/30/2018
Design document	Meadowdale Feasibility Report_Addendum.pdf.pdf	03/30/2018
Design document	Meadowdale Feasibility Study_Appendices.pdf.pdf	03/30/2018
Design document	Meadowdale Feasibility Study Report.pdf	03/30/2018
Historical – Legal Documents	Current BNSF agreement.pdf.pdf	07/26/2018
Historical – Legal Documents	Meadowdale Beach Vesting Deeds.pdf.pdf	04/20/2018
Historical – Legal Documents	Meadowdale Beach Plat Certificate 12-17-15.pdf.pdf	04/20/2018
Letters of Support	Letters of Support_compiled.pdf.pdf	07/23/2018
Map: Multi-site and geographic envelope	Lunds Gulch Drainage Basin map.pdf	03/30/2018
Map: Restoration Worksite	SRFB_figures_080818.pdf.pdf	08/08/2018
News Article	Herald Article_Congressman Larsen Site Visit.pdf.pdf	07/23/2018
Photo	2016 Aerial.JPG.jpg	08/08/2018
Photo	Aerial Dec_2014_compressed.jpg.jpg	08/08/2018
Photo	Railroad Embankment_to be demolished.JPG.jpg	08/01/2018
Photo	Railroad Tracks_to be altered.jpg.jpg	08/01/2018
Photo	Restroom Enclosure_to be demolished.JPG.jpg	08/01/2018
Photo	Culvert_to be demolished.JPG.jpg	08/01/2018
Photo	Streambank Armor2.jpg.jpg	03/30/2018
Photo	People_Stream_Trains.JPG.jpg	03/30/2018

Photo	Beach Pocket Estuary.JPG.jpg	03/30/2018
Photo	Receding Floodwaters.JPG.jpg	03/30/2018
Photo	Sediment at Culvert Entrance.JPG.jpg	03/30/2018
Photo	High Flow Culvert Outlet.JPG.jpg	03/30/2018
Photo	Flooded lawn.JPG.jpg	03/30/2018
Photo	2-9-17_storm.jpg.jpg	03/30/2018
Photo	Under-sized Culvert _Upstream Inlet.JPG.jpg	03/30/2018
Project plan document	Salmon Proposal_References.docx.docx	03/30/2018
Salmon Project Proposal	Salmon Proposal_Track Changes On.DOCX.docx	08/08/2018

Application Status

Application Due Date: 08/09/2018

Status	Status Date	Name	Notes
Application Submitted	08/08/2018	Logan Daniels	
Preapplication	02/16/2018		

I certify that to the best of my knowledge, the information in this application is true and correct. Further, all application requirements due on the application due date have been fully completed to the best of my ability. I understand that if this application is found to be incomplete, it will be rejected by RCO. I understand that I may be required to submit additional documents before evaluation or approval of this project and I agree to provide them. (Logan Daniels, 08/08/2018)