Resilient Coasts for Salmon:

Green Shores Feasibility Inventory for the Gorge Waterway and Portage Inlet, Victoria, BC

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Prepared for:
Pacific Salmon Foundation
Stewardship Centre for BC

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CONTEXT

This document is an excerpt from the report, **Resilient Coasts for Salmon: Green Shores Feasibility Inventory for the Gorge Waterway & Portage Inlet, Victoria, BC**, produced by Fish-KW Environmental (FKW) for the Pacific Salmon Foundation (PSF) through the Stewardship Centre for BC (SCBC), in partnership with the Capital Regional District (CRD), to evaluate sites for potential shoreline restoration which could benefit salmonids in Portage Inlet and the Gorge Waterway in Victoria, BC. The focus was on municipally-owned rights-of-way (especially road ends) and publicly owned shoreline such as parks suggested by municipal staff. The evaluation covers four municipalities (Victoria, Esquimalt, View Royal and Saanich).

The list of sites is not exhaustive. As the extensive list of sites was being compiled, it became apparent that a full inventory of publicly owned shorelines was beyond the scope of the project. It was decided that the partially completed inventory (Appendix A) would be provided as a community resource for future restoration considerations as a working document, allowing for updated maps, photos and information.

ACKNOWLEDGEMENTS

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Municipal partners: Rick Hatch (Saanich Parks), Darryl Woodley (View Royal Engineering), Rick Daykin (Esquimalt Parks and Recreation), Brianne Czypyha (Victoria Stormwater Management)

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PROJECT INTENT and FUNDING

The Strengthening Adoption of Nature-Based Solutions for Climate Adaptation and Shoreline Resilience in British Columbia project 2021-2026 (aka Resilient Coasts for Salmon) is a project of the Pacific Salmon Foundation (PSF) in collaboration with the Stewardship Centre for BC (SCBC). One of the key objectives of the project is to create visibility of nature-based shoreline solutions through demonstration projects on Vancouver Island. Over the next five years, the PSF/SCBC team will work with partners to complete at least three shoreline restoration projects with a focus on improving salmon habitat on Vancouver Island and demonstrate a nature-based approach in a community setting that can also be used as a hands-on platform for volunteer and shoreline practitioner training.

METHODOLOGY

A desk top review was combined with personal background knowledge of many of the potential sites, gained through detailed familiarity with conservation activities in the waterways involved and over 23 years of stormwater sampling for the Capital Regional District (CRD). Many of these stormdrains occur at road end rights-of-way and parks.

Resources included: CRD, Victoria, and Saanich Online Regional Maps (including aerial photos, property lines, legal lot descriptions, stormdrain/sewer infrastructure, contours, parks boundaries, and the Harbours and Shorelines layers); stormdrain/sewer infrastructure map books for Esquimalt & View Royal (these systems are not yet available online); CRD Stormwater Discharges sampling field sheets and photos; and conversations with municipal staff (parks, environmental services, engineering, planning), and conservation groups and stewards familiar with the project area. These interested parties include many of the Gorge Waterway Initiative (GWI) partners (World Fisheries Trust, Salmon in the City, Gorge Waterway Action Society, Gorge Swim Fest).

Interesting work examining underused public land and/or shoreline restoration potential has been conducted previously by others:

- The Gorge Waterway Action Society (GWAS) conducted a series of shoreline restorations and/or recommendations to municipalities and landowners in 2006, including at Murray Drive (Saanich) and Yarrow Place (Esquimalt) (Lloyd, K. 2006; Lloyd, K. 2021).
- The University of Victoria (UVic) Environmental Law Centre conducted a review of roads ends in 2017, focusing mainly on private use of public green space, but not restoration particularly, in the Saanich and Esquimalt portions of the Gorge Waterway (Parker and Sandborn, 2017).
- The Gorge Swim Fest volunteers prepared a review in 2019 with a focus on improving swimming and boating access through public lands in the Gorge Waterway (including the municipalities of Saanich, Esquimalt and Victoria) (Gow & Meredith, 2019).
- The Victoria Natural History Society (VNHS) conducted an inventory of public land (including, but not limited to, shorelines) in their unpublished list titled Greenways Inventory - Saanich Rights of Way that Have Greenway Potential (VHNS, 1999). From their website:

  > *The Green Spaces Project (GSP) was a special project of the Victoria Natural History Society. In 1997, with the aid of volunteers and financial assistance from various funding sources, the GSP began the task of identifying and mapping the undeveloped land remnants and inventorying natural values within the Capital Regional District. The Green Spaces' Project vision was for an ecologically sustainable system of green/blue spaces for the Capital Regional District, protecting and maintaining the full range and diversity of natural ecosystems and the flora and fauna that exist today.*

Additional secondary resources included: Sensitive Ecosystem Inventory (SEI) of East Vancouver Island and Gulf Islands (map sheets 92B-043 & -044), the BC Conservation Data Centre (CDC) records for rare species

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occurrences, the BC Fisheries Inventory Data Query (FIDQ) and the Wildlife Tree Stewardship Program (WiTS) occurrences. The listings were reviewed for environmentally sensitive ecosystems, sensitive habitat inventory mapping, rare species, red or blue-listed flora and fauna, wildlife trees, or any other pertinent environmental features.

The desktop review was combined with site visits to a limited number of potential project areas identified. The sites were visited and photographed between April-July 2021 and the general conditions of the sites were noted, along with potential opportunities and barriers. Observations included: areas of potential restoration, listing indigenous and invasive/ornamental vegetation species and general coverage, existing structures (roads, paths, walls, etc), physical characteristics (substrate, general slope, intertidal condition, length of shoreline), and adjacent publicly owned areas, access, shoreline types, adjacent aquatic flora and fauna identified in surveys.

These parameters were used to create tables for each[1] site that could (potentially) be restored to the Green Shores for Shoreline Development standard (parameters in *italics* are in progress or part of Phase 2 in-depth assessment) and which were then ranked (low, medium, high) for a number of qualitative criteria:

- Site reference (includes municipality where site is located)
- Name and Type of site (street right-of-way, park, or address)
- CRD Stormwater Discharge Reference # (if applicable)
- Length of shoreline for restoration potential
- Area of shoreline for restoration (including foreshore/upland)
- Relative amount of work required (e.g. from replanting to invasive species removal to shoreline reconstruction).
    - Includes: erosion present, amouring present, invasive species versus indigenous species present,
- Potential contribution to increase habitat value, especially salmon habitat (predation protection, shading, terrestrial insect drop) and including forage fish[2] potential.
- Opportunities to showcase Green Shores for community education (publicly visible, high foot traffic past area, adjacent private/municipal properties need restoration)
- *Estimated restoration costs (Low, Medium, High) based on site conditions*
- *Estimated engineering costs (Low, Medium, High) based on site conditions (e.g. steep slope, foreshore work, complex site)*
- Potential for showcasing a variety of Green Shores restoration techniques and goals.
    - Includes: simple, low-cost riparian planting in grassy areas, removal of invasive species and replanting with indigenous species, Green Stormwater Infrastructure (for salmonid health), seawall/amouring removal, beach nourishment for forage fish, dendritic channels for fish
- Potential neighbouring municipal or institutional partners (ideally engaging all four municipalities)
- *Potential neighbouring homeowner partners*
- *General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance*
- *Species at Risk (Critical and Sensitive) habitat at site including upland and aquatic habitat* [3]
- *Challenges to restoration (CRD Stormwater Discharge Water and Sediment Quality Data (if applicable), possible substrate contamination)*
- *Demonstrate potential for meeting Green Shores for Shoreline Development (GSSD) criteria, see GSSD table below*

[1] Not all parameters were recorded for each site. The level of detail generally corresponds to the suitability of the site for the goals of the Project. A full inventory of publicly owned shorelines was beyond the scope of this project.
[2] Particularly Pacific sand lance (*Ammodytes hexapterus*) and surf smelt (*Hypomesus pretiosus*).
[3] Federal Species at Risk Act (SARA) and Committee on the Status of Endangered Wildlife in Canada (COSEWIC), and BC Conservation Data Centre (CDC) listings.

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Prerequisites *(must be able to meet at the minimum)*	
Prerequisite 1	Siting of Permanent Structures
Prerequisite 2	Conservation of Shoreline Sediment Processes
Prerequisite 3	Conservation of Critical or Sensitive Habitats
Prerequisite 4	Riparian Zone Protection
Prerequisite 5	Construction Environmental Management Plan

Credits *(potential)*		
Credit 1	Site Design with Conservation of Shore Zone	1 to 3 points
Credit 2	Shore-Friendly Access	1 to 3 points
Credit 3	Re-Development of Contaminated Sites	2 points
Credit 4	Restoration/Enhancement of Shoreline Sediment and Tidal Flow Processes	2 to 9 points
Credit 5	Restoration/Enhancement of Aquatic Habitats	1 to 8 points
Credit 6	Enhanced Riparian Zone Protection	1 to 9 points
Credit 7	Integrated Stormwater Planning and Design	2 to 5 points
Credit 8	Climate Change Adaptation Plan	2 to 5 points
Credit 9	Exceptional Performance and Innovation	1 to 2 points
Credit 10	Outreach and Public Education	3 to 5 points

This list of shoreline public spaces is not exhaustive. Due to the scope and timing, the focus was on the most feasible areas for restoration with a focus on salmonids. A full inventory of publicly owned shorelines was beyond the scope of this project[4].

A note on municipal rights-of-way (ROW) and "undeveloped parks" subdivided from the adjacent properties: There have been a few reviews (see Section 2.0) of these municipal parcels/ROWs that have sought a response from municipalities as to the legal status of these lots and/or their potential for public use. Many of these shoreline segments are being used by the adjacent property owners for their own use, whether as a continuation of their landscaped back yards, parking, or disposal of residential yard & garden waste. Many of the shoreline segments are also not accessible to the public except by water. The status of these lands was not investigated as part of this review and there may not be a current priority to address these undeveloped parks by some of the municipalities.

The inclusion of these parcels in this review is to identify potential opportunities for future restoration and, with the exception of some parcels identified by municipalities as a priority, this review is not intended to suggest changes to the status quo without municipal intent.

NOTES:

[4] The partially completed inventory (Appendix A) will be provided as a community resource for future restoration considerations in a working document format.

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- Site codes were assigned using the following naming reference: V=Victoria, E=Esquimalt, VR=View Royal, S=Saanich. The numbers are generally sequential along the shoreline.
- Stormwater discharges are municipal (or in rare occasions include private perimeter drains), but are labelled according to a CRD numbering system (eg CRD#707).
- Personal Watercraft are generally defined here as kayaks, paddle boards, canoes, etc. that do not require vehicle trailer access.

MAINTENANCE

Of note when visiting previous restoration sites within the study area and in other locations, there is variation in maintenance but usually trending toward a lack of maintenance and an increase in invasive species re-growth, along with other issues such as trampling, yard & garden waste dumping, and generally loss of plantings from lack of watering and protection from browsing.

Maintenance of restoration sites is often neglected in the planning and excitement of the original restoration project. Whether due to discrete project funding amounts, timelines and partners, lack of clear responsible partners, or falling short of optimistic hopes placed on and by volunteers, there is often a gradual deterioration of project sites over time.

It would be crucial for the success of these Resilient Coasts for Salmon project areas selected to explore the funding and delivery mechanism of multiyear maintenance agreements for the sites.

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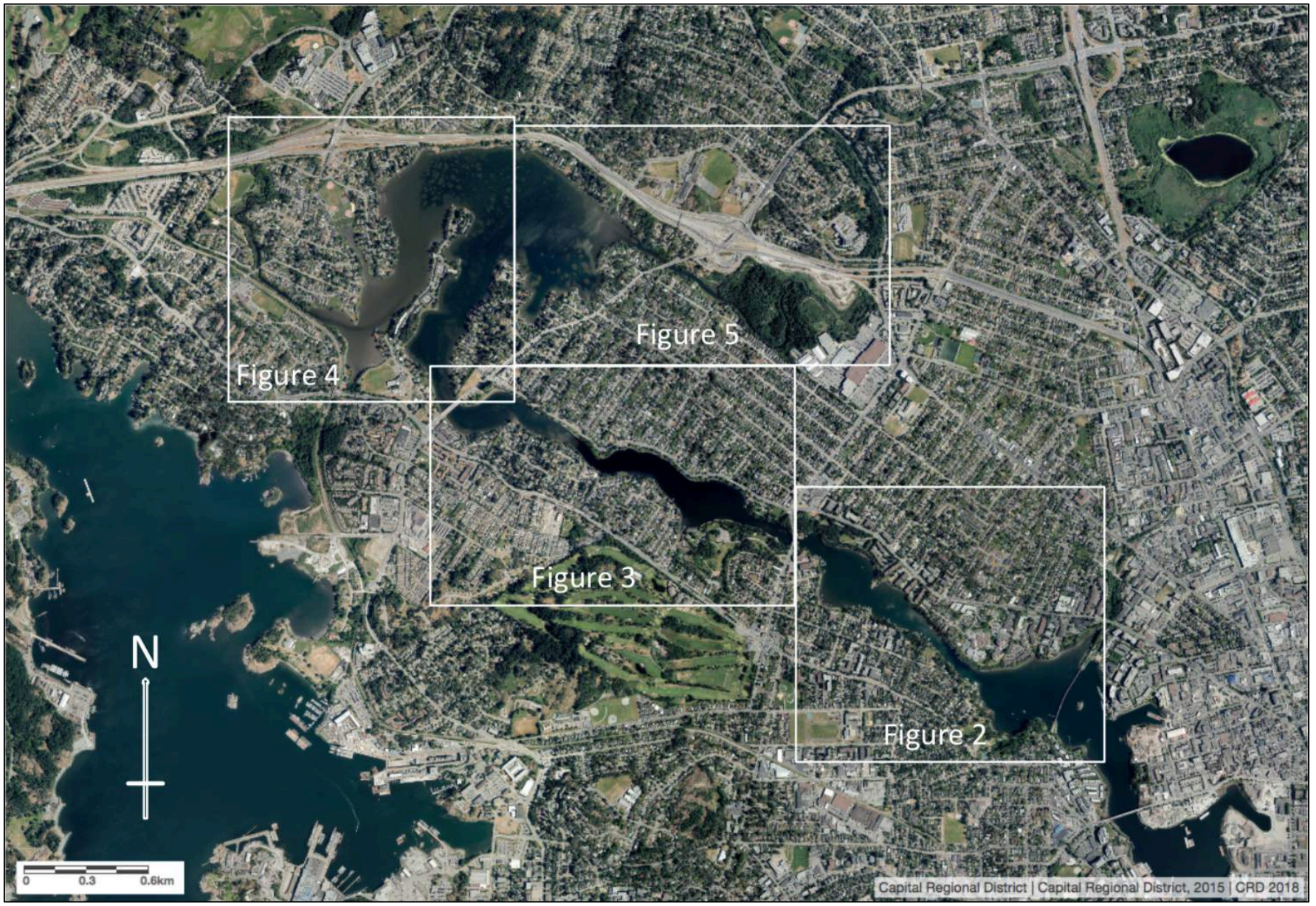

FIGURE 1 – Project Area Reference Map

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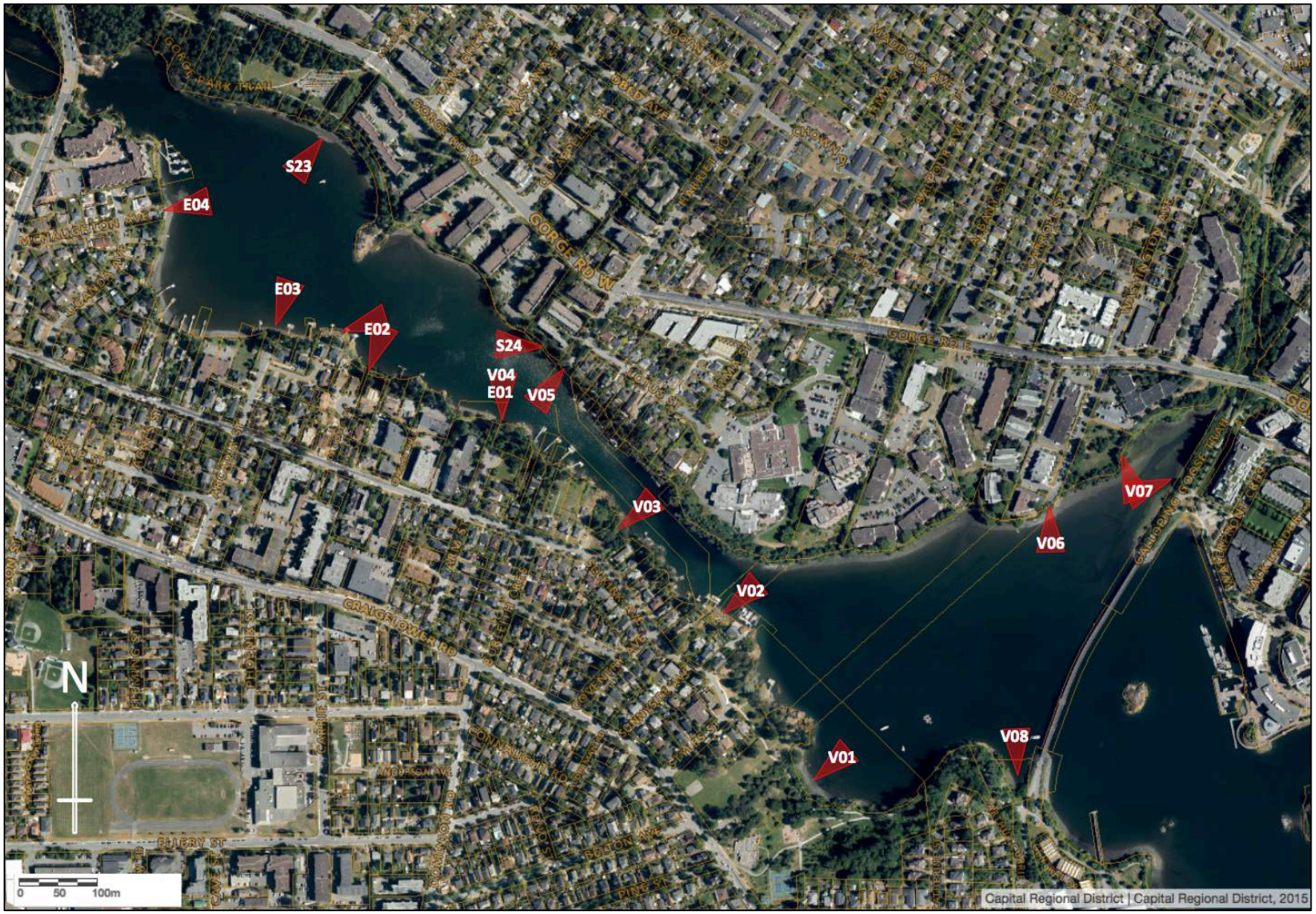

FIGURE 2 – Gorge Waterway: S23-24, V01-08, E01-04

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FIGURE 3 – Gorge Waterway: S18-22, E05-16

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FIGURE 4 – Portage Inlet: S01-02, VR01-20

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FIGURE 5 – Portage Inlet: S02-15

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APPENDIX A – SITE SUMMARIES (not exhaustive)

SAANICH

S01/VR01 – Portage Park ROW – Transport Canada (Figures 4 & S01/VR01)
Not visited for this review. Peninsula Streams undergoing potential projects under discussion here.

S02 – Portage Road ROW (Figures 4, 5 & S02)
MAPs & PHOTOS to be added.

S03 – Wilkinson Road ROW (Figures 5 & S03)
MAPs & PHOTOS to be added.

S04 – Grange Rd ROW (Figures 5 & S04)
This small segment of shoreline on the north side Portage Inlet is fully vegetated with mature trees and shrub vegetation. Stormwater discharges (CRD#690C) at the west edge of the ROW. The ROW is used for adjacent residential parking. Invasive species removal, particularly the growth of English ivy coverage on riparian trees, is required tp protect from tree loss. The ROW is used for yard & garden waste. This location was identified in the UVic Environmental Law report (2017) as a location of private use of publicly owned shoreline (Site 3 in report).

Figure S04 – Grange Road ROW in red.

S04 – Grange Rd ROW			
Type: ROW	**Project length (m):** 18	**Project area (m^2):** depends	**CRD#:** 690C

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		on how much of ROW is used – 400-1300	
Relative amount of work required: variable Low to Medium possible	Major invasive species removal, including English ivy on trees A portion of the ROW could be used for a raingarden for filtration of road runoff in stormwater (watershed size not calculated).		
Estimated restoration costs: variable Low to Medium possible		**Estimated engineering costs:** variable None to Medium possible	
Potential contribution to increase habitat value, especially salmon habitat: Low-Medium	Shoreline is in Portage Inlet, rearing habitat for a number of fish species. The current vegetation requires removal of invasive species (particularly English ivy on trees) to prevent loss of trees and other vegetation. Current conditions include predation protection, shading, and terrestrial insect drop. Filtration of road runoff through a Rain Garden would improve water quality from this catchment of undetermined size and scope (stormwater infrastructure extent and connections not clear).		**Species at Risk (Critical and Sensitive) habitat at site**: Coastal Cutthroat Trout in aquatic habitat
Opportunities to showcase Green Shores for community education: Low	Location is remote from pedestrian traffic. Education would be directed at local waterfront residents.		
Potential for showcasing a variety of Green Shores restoration techniques and goals: Low	Green Stormwater Infrastructure (for salmonid health): space available for Rain Garden Stormwater Rehabilitation: Unknown watershed size and traffic volumes. Removal of ornamental and invasive species, especially English ivy on trees. Ban on yard & garden waste disposal.		
Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: Low		Potential municipal and local Portage Inlet stewardship support.	
Challenges to restoration: Low	None identified to date.		

S05 – Colquitz Park @ 3104 Esson Rd & shoreline formerly of 945 Portage Rd (Figures 5 & S05/S08)

This shoreline on the north side of the Colquitz Estuary at the Admirals Rd bridge is fully vegetated with mature trees and indigenous vegetation, an excellent showcase for intact riparian habitat. The inundated shoreline edge is composed of saltwater fringe marsh vegetation. Recent construction has occurred in the park as part of the CRD expanded sewer infrastructure and/or the McKenzie Interchange reconfiguration. Underground sewer and stormdrain infrastructure are located in the park and stormwater discharges (CRD#690B) at the southeast end of the park adjacent to the bridge. Unlike some of the other Colquitz Park sites, this section is fenced off from the upland properties and no formal trails are present. The park was best photographed from the bridge and shows some disturbance from the recent construction and some invasive species. Invasive species removal, particularly the growth of English ivy coverage on riparian trees, is required soon in order to maintain the current mostly undisturbed state of this natural area. (See Figure S02/3.)

S05 – Colquitz Park @ 3104 Esson Rd & shoreline formerly of 945 Portage Rd			
Type: Park	**Project length (m):** 80	**Project area (m^2):** portions within 2790 possible.	**CRD#:** 690B
Relative amount of work required: variable Low to Medium possible	Minor invasive species removal on trees (English ivy) A portion of the park could be used for a raingarden for filtration of road runoff in stormwater (watershed size not calculated). .		
Estimated restoration costs:		**Estimated engineering**	

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variable Low to Medium possible		**costs:** variable None to Medium possible	
Potential contribution to increase habitat value, especially salmon habitat: Low-Medium	Shoreline is part of the narrow estuary of a large salmonid-bearing river (Coho, Cutthroat Trout). The current vegetation is excellent, but removal of invasive species (particularly English ivy on trees) is required to prevent loss of trees and other vegetation. Current conditions include predation protection, shading, and terrestrial insect drop. Filtration of road runoff through a Rain Garden would improve water quality from this small, but very high traffic catchment.		**Species at Risk (Critical and Sensitive) habitat at site**: Coastal Cutthroat Trout in aquatic habitat; Geyer's Onion (*Allium geyeri* var. *tenerum*) all of Portage Inlet, but is historical (1959) observance.
Opportunities to showcase Green Shores for community education: Medium	Adjacent shoreline is a well-used natural area park with walking trails and has undergone recent extensive shoreline restoration by Sean Wong, MOTI biologist. Improvements would not be highly visible, but signage along the middle of the bridge railing could highlight the important contribution of this natural shoreline, as compared to impacted lengths of shoreline visible from the bridge.		
Potential for showcasing a variety of Green Shores restoration techniques and goals: Low	Green Stormwater Infrastructure (for salmonid health): space available for Rain Garden Stormwater Rehabilitation: Moderate watershed size and high traffic volumes. Removal of ornamental and invasive species, especially English ivy on trees.		
Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: Low		Strong Colquitz stewardship support.	
Challenges to restoration: Low	None identified to date.		

S05- Colquitz Park – north shore west of Admirals Rd bridge, view northwest along intact shoreline.

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S05- Colquitz Park – west of Admirals Rd, English ivy on Garry oaks (left) & low vegetation at recent construction (right).

S06 – Cuthbert Holmes Park @ Burke Street (Figures 5 & S06)
This site has been the subject of extensive restoration in tandem with the MOTI McKenzie Interchange Project. MAPS & PHOTOS to be added.

S07 – Colquitz Park @ Austin Ave ROW & shoreline adjacent to 3104 Austin Ave & 714 Newbury St (Figures 5 & S07)
This ROW is fully vegetated at the shoreline, but is currently used for parking on the landward side adjacent to a small watercourse flowing with groundwater. Mowing of the vegetation in the ROW watercourse occurs by neighbouring property owners to prevent historic ongoing flooding that occurs when the vegetation is high. This shoreline park is an undeveloped portion of subdivided residential lots where residential activities are occurring, including mowing up to the water's edge, dumping of yard & garden waste and burn barrels. The inundated shoreline edge is composed of saltwater fringe marsh vegetation. Restoration of this site would be highly supported by Saanich Parks. Restoration could be as simple as invasive species removal and planting of riparian vegetation, or could involve the creation of dendritic channels for juvenile salmonids (as have been created by Sean Wong, MOTI biologist, on the opposite shoreline in 2019). A portion of the ROW could be used for a raingarden to demonstrate filtration of road runoff in stormwater, including the watercourse mentioned above and a small discharge to the west which appears to be stormwater.

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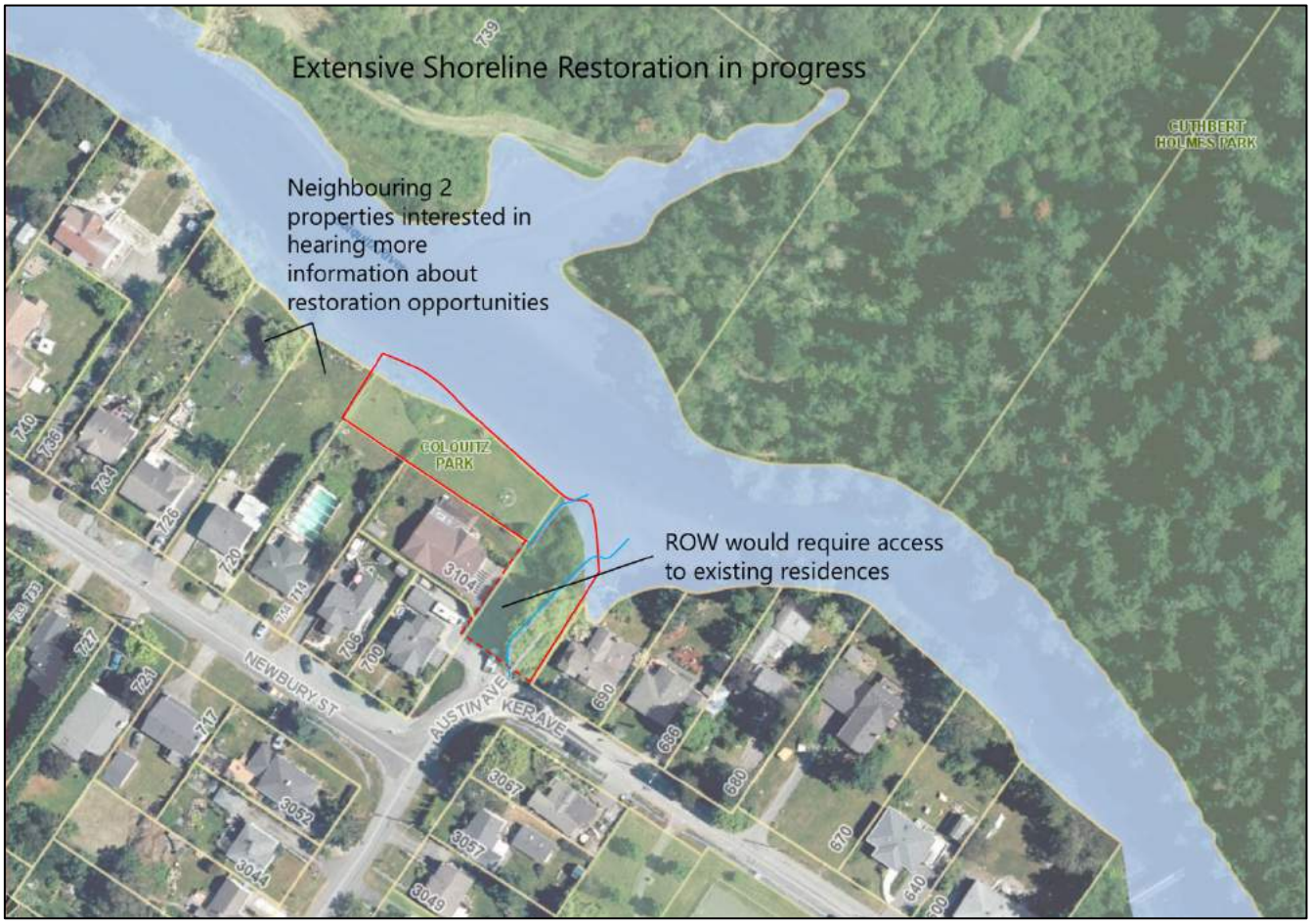

Figure S07 – Colquitz Park @ Austin Ave ROW & shoreline adjacent to 3104 Austin Ave & 714 Newbury St.

S07 – Colquitz Park @ Austin Ave ROW & shoreline adjacent to 3104 Austin Ave & 714 Newbury St			
Type: ROW & Undeveloped Park	**Project length (m):** 80	**Project area (m^2):** variable, up to 1600 possible, depending on extent restored	**CRD#:** 690AG & un-numbered discharge.
Relative amount of work required: variable Low to High possible	Minor invasive species removal on former residential properties, English hawthorn and yellow willow in ROW. Extensive planting of riparian vegetation, including overhanging shrubs and trees possible. Shoreline height (0.7-1.1 m) would allow creation of dendritic channels for juvenile salmonids. A portion of the ROW could be used for a raingarden to demonstrate filtration of road runoff in stormwater (watershed size not calculated).		
Estimated restoration costs: variable Low to High possible		**Estimated engineering costs:** variable Low to High possible	
Potential contribution to increase habitat value, especially salmon habitat: Very High	Shoreline is part of the narrow estuary of a large salmonid-bearing river (Coho, Cutthroat Trout). Contributions could include predation protection, shading, terrestrial insect drop, filtration of road runoff.		**Species at Risk (Critical and Sensitive) habitat at site**: Coastal Cutthroat Trout in aquatic habitat
Opportunities to showcase Green Shores for community education: High	Publicly visible and adjacent to well-used sports park and playground. Opposite bank is a well-used natural area park with walking trails and has undergone recent extensive shoreline restoration by Sean Wong, MOTI biologist.		

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Potential for showcasing a variety of Green Shores restoration techniques and goals: Very high	Green Stormwater Infrastructure (for salmonid health): space available for Rain Garden Stormwater Rehabilitation: Moderate watershed size and traffic volumes Removal of ornamental and invasive species, could include English hawthorn and yellow willow. Ban on yard & garden waste disposal. Fencing of property line along residences. Shoreline Planting: current condition is mostly lawn, with silverweed growing up to 5 m from HWM. Shoreline restoration including dendritic channels for fish.
Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: Very High	Preliminary support from Saanich Parks very high. Potential interest from adjacent shoreline owners to west (preliminary discussion). Strong Colquitz stewardship support.
Challenges to restoration: Low	None identified to date.

S07- Colquitz Park at Austin/Newbury, former 3104 Austin Ave lawn toward dense ROW vegetation (left) & 3104 Austin view toward former 714 Newbury Rd yard & garden waste and lawn.

S07- Colquitz Park at Austin/Newbury, view north across former 714 Newbury Rd yard & garden waste and lawn, toward Colquitz tributary shoreline restoration works on opposite bank (left) & Austin ROW, small watercourse on left (right).

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S08 – Colquitz Park @ Colquitz Ave ROW & shoreline formerly of 3085 Colquitz Ave & 788 Newbury St (Figures 5 & S05/S08)

The ROW is fully vegetated at the shoreline and was fairly recently replanted with indigenous vegetation during reconstruction of the road and Admirals Rd bridge. The adjoining shoreline park is an undeveloped portion of subdivided residential lots where residential activities are occurring, including mowing, boat storage and private dock placement. The two docks rest on the mudflats at low tide. The inundated shoreline edge is composed of saltwater fringe marsh vegetation. This site has tree cover combined with lawn. The park portion was not traversed, but was photographed from the bridge. Saanich Parks is open to ideas for restoration of this site. Restoration could be as simple as invasive species removal and planting of riparian vegetation, but may not be. as suitable for the creation of dendritic channels for juvenile salmonids (as have been created by Sean Wong, MOTI biologist, on the opposite shoreline in 2019). The ROW is currently configured as partial raingarden to capture some overland flows from the roadway, but a review of the design drawings could reveal some additional opportunities to capture a greater amount of runoff and support emergent vegetation. The site requires general weeding, some invasive species removal and supplemental replanting. The ROW is adjacent to a well-used pedestrian and cycling route and would be an excellent location for educational signage regarding rain gardens and filtration of road runoff in stormwater.

Figure S08/S05 – Colquitz Park @ Colquitz Ave ROW & shoreline formerly of 3085 Colquitz Ave & 788 Newbury St (south polygon) and Colquitz Park @ 3104 Esson Rd & shoreline formerly of 945 Portage Rd (north polygon).

S08 – Colquitz Park @ Colquitz Ave ROW & shoreline formerly of 3085 Colquitz Ave & 788 Newbury St			
Type: ROW & Undeveloped Park	**Project length (m):** 50	**Project area (m^2):** variable, up to 1050 possible, depending on extent	**CRD#:** 690AD & 690AE

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		restored	
Relative amount of work required: variable Low to Medium/High possible	Minor weeding and invasive species removal. Ban on yard & garden waste disposal. Fencing of property line along residences. Supplemental planting of riparian vegetation, including overhanging shrubs and groundcover. Current treed state may not be conducive for dendritic channels. A portion of the ROW could be improved for a raingarden to demonstrate filtration of road runoff in stormwater (watershed size not calculated).		
Estimated restoration costs: variable Low to Medium possible		**Estimated engineering costs:** variable Low to Medium possible	
Potential contribution to increase habitat value, especially salmon habitat: Medium-High	Shoreline is part of the narrow estuary of a large salmonid-bearing river (Coho, Cutthroat Trout). Contributions could include improved predation protection, shading, terrestrial insect drop, filtration of road runoff.		**Species at Risk (Critical and Sensitive) habitat at site**: Coastal Cutthroat Trout in aquatic habitat
Opportunities to showcase Green Shores for community education: High	Publicly visible and adjacent to well-used pedestrian and cycling commuter and recreational route. Opposite bank is a well-used natural area park with walking trails and has undergone recent extensive shoreline restoration by Sean Wong, MOTI biologist.		
Potential for showcasing a variety of Green Shores restoration techniques and goals: High	Green Stormwater Infrastructure (for salmonid health): space available for improved Rain Garden. Stormwater Rehabilitation: Moderate watershed size with high traffic volumes. Removal of ornamental and invasive species. Shoreline Planting: current condition consists of shrubs, trees, and some lawn. Possible removal of two docks that rest on mudflats at low tide. Shoreline restoration could possibly include dendritic channels for fish.		
Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: High		Preliminary support from Saanich Parks. Strong Colquitz stewardship support.	
Challenges to restoration: Low	None identified to date.		

S08- Colquitz Park @ Colquitz Ave ROW & pedestrian/cycling access (left) & raised stormwater drain and weedy bed (right).

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S08- Colquitz Park @ Colquitz Ave ROW (right) and shoreline formerly of 3085 Colquitz Ave & 788 Newbury St (approximate extent shown by red line), view south from Admirals Rd bridge. Saltwater fringe marsh vegetation present. Two docks rest on mudflats at low tide.

S09 – Arundel Drive ROW @ Admirals Road (Figures 5 & S09)

MAPS & PHOTOS to be added.

S09 – Arundel Drive ROW @ Admirals Road			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:**

S10– Arundel Drive ROW (Figures 5 & S10)

MAPS & PHOTOS to be added.

S10 – Arundel Drive ROW			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:** 690, 690AA

S11– 976 Westing Road ROW (Figures 5 & S11)

MAPS & PHOTOS to be added.

S11 – 976 Westing Road ROW			
Type: needs verification	**Project length (m):**	**Project area (m^2):**	**CRD#:**

S12– Westing Road ROW (Figures 5 & S12)

MAPS & PHOTOS to be added.

S12 – Westing Road ROW			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:** 687,688

S13– Glenwood Ave ROW (Figures 5 & S13)

MAPS & PHOTOS to be added.

S13 – Glenwood Ave ROW			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:**

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S14– Murray Drive ROW (between 2872&2874) (Figures 5 & S14)
MAPS & PHOTOS to be added.

S14 – Murray Drive ROW (between 2872&2874)			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:** 685

S15– Ashley Road ROW (Figures 5 & S15)
MAPs & PHOTOS to be added.

S15 – Ashley Road ROW			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:** 684

S16– Murray Drive ROW (between 2836&2838) (Figures 4 & S16)
MAPS & PHOTOS to be added.

S16 – Murray Drive ROW (between 2836&2838)			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:** 683,683A

S17– Dunkirk Lane ROW (Figures 4 & S17)
MAPS & PHOTOS to be added.

S17 – Dunkirk Lane ROW			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:** 681,681A

S18 – Murray Drive ROW (Figures 3, 4 & S18)
This municipal ROW was extensively restored by the Gorge Waterway Action Society in 2006 in a pilot project with Saanich Parks and local landowners. MAPs & PHOTOS to be added.

S18 – Murray Drive ROW			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:** 680

S19 – Admirals Road ROW @ Craigflower Bridge (north bank) (Figures 3 & S19)
This municipal ROW was subject to extensive work during the reconstruction of the Craigflower Bridge. However, additional tree and shrub planting and control of invasive species is recommended. Maintenance, including watering, would be an important part of this restoration. MAPS & PHOTOS to be added.

S19 – Admirals Road ROW @ Craigflower Bridge (north bank)			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:**

S20 – Gorge Waterway Park (Figures 3 & S20)
MAPS & PHOTOS to be added.

S20 – Gorge Waterway Park			
Type: Municipal Park	**Project length (m):**	**Project area (m^2):**	**CRD#:** 660-679 (20 pipes)

S21 – Gorge Waterway Park @ Gorge View Drive (Figures 3 & S21)
Invasive species control required. MAPS & PHOTOS to be added.

S21 – Gorge Waterway Park @ Gorge View Drive			
Type: Municipal Park	**Project length (m):**	**Project area (m^2):**	**CRD#:** 658, 658A, 659

S22 – Gorge Waterway Park west of Tillicum (Figures 3 & S22)
Invasive species control required. Rain garden for stormwater runoff from large watershed with heavy traffic. MAPS & PHOTOS to be added.

S22 – Gorge Waterway Park west of Tillicum			
Type: Municipal Park	**Project length (m):**	**Project area (m^2):**	**CRD#:** 657

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S23 – Gorge Waterway Park east of Tillicum (Figures 2 & S23)
Invasive species control required. Rain garden for stormwater runoff from large watershed with heavy traffic.
MAPS & PHOTOS to be added.

S23 – Gorge Waterway Park east of Tillicum			
Type: Municipal Park	**Project length (m):**	**Project area (m^2):**	**CRD#:** 6655

S24 – Harriet Road ROW (Figures 2 & V05/S24)
See V05/S24

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VIEW ROYAL

VR01/S01 – Portage Park ROW – Transport Canada (Figures 4 & VR01/S01)
MAPS & PHOTOS to be added. Peninsula Streams undergoing potential projects under discussion here.

VR02 – Giles Street ROW (Figures 4 & VR02)
MAPS & PHOTOS to be added. Peninsula Streams undergoing potential projects under discussion here.

VR03 – Chancellor Ave ROW (Figures 4 & VR03)
MAPS & PHOTOS to be added. Peninsula Streams undergoing potential projects under discussion here.

VR04 – Hospital Creek Estuary "undeveloped park" (Figures 4 & VR04)
MAPS & PHOTOS to be added. Peninsula Streams undergoing potential projects under discussion here.

VR05 – Polly Place ROW/"undeveloped park" (Figures 4 & VR05)
MAPS & PHOTOS to be added.

VR06 – Kingham Place ROW (Figures 4 & VR06)
MAPS & PHOTOS to be added.

VR07 – Tidewater Rd ROW & Helmcken Centennial Park (Figures 4 & VR07)
MAPS & PHOTOS to be added.

VR08/V09 – Thomas Drive Park/"undeveloped park" and Thomas Drive ROW (Figures 4 & VR08/VR09)
MAPS & PHOTOS to be added.

VR10 – Midwood Road ROW & Possible Adjacent Shorelines (Figures 4 & VR10)
This road end is located outside of the estuary of Craigflower Creek, a cutthroat trout and coho-bearing stream. The majority of the site is mowed grass with very little vegetation and no shoreline trees. The bank is low and lined with riprap into the mudflats. Emergent vegetation grows along the shoreline. Restoration could include significant planting of native overhanging vegetation. Treatment of the riprap banks could include riprap removal and slope reduction. Some treatment of the riprap banks would be required to meet GSSD pre-requisites. The municipal stormwater discharge (CRD#706A) has a very small catchment, but there is room for a raingarden to demonstrate filtration of road runoff in stormwater and the municipality has expressed an interest in reconfiguring this discharge outlet (Woodley, pers. comm.) CRD#706 is a pump station emergency overflow. The popularity of the park and number of visitors is unknown.

The adjacent shoreline to the north is fenced at the property line shown on the atlas and the shoreline is mostly native groundcover vegetation. It is not known what the ownership status of the shoreline portion is, but overhanging vegetation along this area would be beneficial. The shoreline of the adjacent property to the south is composed of riprap and a crumbling concrete pathway. The ownership of this walkway is unclear and the property has recently been purchased by a new owner. Previous owners had considered the possible removal of this walkway.

VR10 – Midwood Road ROW & Possible Adjacent Shorelines			
Type: Municipal ROW & possible shoreline	**Project length (m):** 20 (ROW), possibly additional 70	**Project area (m^2):** 350 or more	**CRD#:** 706 & 706A
Relative amount of work required: variable Low to High	Extensive planting of riparian vegetation, including overhanging shrubs and trees possible. (Potential extension of planting to neighbouring properties to the north.)		

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possible	Possible minor removal or covering of low riprap bank with potential bioengineering methods. A portion of the ROW could be used for a raingarden to demonstrate filtration of road runoff in stormwater (watershed size very small). Possible removal of seawall/walkway to the south.		
Estimated restoration costs: variable Low to High possible		**Estimated engineering costs:** variable Low to High possible	
Potential contribution to increase habitat value, especially salmon habitat: High	Shoreline is on migratory pathway to Craigflower Creek, an important salmonid-bearing river (Coho, Cutthroat Trout). Contributions could include predation protection, shading, terrestrial insect drop, filtration of road runoff.		**Species at Risk (Critical and Sensitive) habitat at site**: Coastal Cutthroat Trout in aquatic habitat
Opportunities to showcase Green Shores for community education: Low to Moderate	Publicly visible from Portage Inlet. Local area usage not known.		
Potential for showcasing a variety of Green Shores restoration techniques and goals: Moderate to High	Green Stormwater Infrastructure (for salmonid health): space available for Rain Garden Stormwater Rehabilitation: Small watershed size and traffic volumes Shoreline Planting: current condition is mostly mowed grass & emergent vegetation - extensive planting recommended. Shoreline restoration of low riprap bank with bioengineering methods, planting benches.		
Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: unknown		Strong stewardship for Craigflower Creek and fish habitat restoration upriver. Support in principle from municipality for reconfiguration of stormwater discharges.	
Challenges to restoration: None to Moderate	Depends on extent of works.		

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VR10 – Potential restoration area in ROW in red (solid line). The status of the shorelines on adjacent properties (north & south) are unknown, but not noted as park in the CRD Atlas.

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VR10 – Midwood Place room for raingarden and mostly mowed shoreline

VR10 – Midwood Place pump station overflow #706 (left) and 'park' (?) shoreline native meadow (right).

VR10 – Midwood walkway to south, property line to be determined.

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VR11 – Seabird Place ROW & Park (Figures 4 & VR11)

This road end and park are located along the estuary of Craigflower Creek, a cutthroat trout and coho-bearing stream. The majority of the property is mowed grass with very little vegetation and only a few shoreline trees. The bank is high, steep and lined with large riprap. Emergent vegetation grows in patches between the riprap along the tide line. There is a small amount of invasive vegetation. Restoration could include significant planting of native overhanging vegetation and removal of minor invasive species. Treatment of the riprap banks could include riprap removal, slope reduction, bioengineered slope stabilization, or infill of existing rip rap with coir logs and soil to create planting benches for trees and shrubs. Some treatment of the riprap banks would be required to meet GSSD pre-requisites. The municipal stormwater discharge (CRD#707) has a very small catchment, but there is room for a raingarden to demonstrate filtration of road runoff in stormwater. The popularity of the park and number of visitors is unknown.

<table>
<tr><td colspan="5">VR11 – Seabird Place ROW & Park</td></tr>
<tr><td>Type: Municipal ROW & park</td><td colspan="2">Project length (m): up to 150</td><td colspan="2">Project area (m²): up to 1900</td><td>CRD#: 707</td></tr>
<tr><td>Relative amount of work required: variable Low to High possible</td><td colspan="5">Minor invasive species removal.
Extensive planting of riparian vegetation, including overhanging shrubs and trees possible.
Possible extensive removal or covering of riprap with potential bioengineering methods.
A portion of the ROW could be used for a raingarden to demonstrate filtration of road runoff in stormwater (watershed size very small).</td></tr>
<tr><td>Estimated restoration costs: variable Low to High possible</td><td colspan="2"></td><td colspan="2">Estimated engineering costs: variable Low to High possible</td><td></td></tr>
<tr><td>Potential contribution to increase habitat value, especially salmon habitat: Very High</td><td colspan="4">Shoreline is part of the narrow estuary of a large salmonid-bearing river (Coho, Cutthroat Trout).
Contributions could include predation protection, shading, terrestrial insect drop, filtration of road runoff.</td><td>Species at Risk (Critical and Sensitive) habitat at site: Coastal Cutthroat Trout in aquatic habitat</td></tr>
<tr><td>Opportunities to showcase Green Shores for community education: Moderate to High</td><td colspan="5">Publicly visible from Portage Inlet and the E&N Rail Trail. Local park usage not known.</td></tr>
<tr><td>Potential for showcasing a variety of Green Shores restoration techniques and goals: Very high</td><td colspan="5">Green Stormwater Infrastructure (for salmonid health): space available for Rain Garden
Stormwater Rehabilitation: Small watershed size and traffic volumes
Removal of invasive species.
Shoreline Planting: current condition is mostly mowed grass with only a few mature trees - extensive planting recommended.
Shoreline restoration of steep bank with bioengineering methods, planting benches.</td></tr>
<tr><td colspan="3">Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: unknown</td><td colspan="3">Strong stewardship for Craigflower Creek and fish habitat restoration upriver.</td></tr>
<tr><td colspan="2">Challenges to restoration: Moderate</td><td colspan="4">High banks.</td></tr>
</table>

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VR11 – Potential restoration area in red. Stormwater discharge CRD#707 is in roadway alignment.

VR11 – Seabird Pl shoreline as seen from Caton Pl (left), mostly mowed with very little shrub or tree vegegation (right).

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VR11 – Seabird Pl riprap shoreline adjacent to Craigflower Creek estuary mudflats (left) and ROW (right).

VR11 – Seabird Pl riprap shoreline adjacent to portage Inlet (left) and ROW (right).

VR12 – Caton Place ROW & Shorelines of 29-57 Caton Place (Figures 4 & VR12)

This ROW and "undeveloped park" are located along the estuary of Craigflower Creek, a cutthroat trout and coho-bearing stream. A great portion of the ROW and promontory at the ROW is thickly vegetated with mature trees and shrubs, including invasive vegetation, making access through this area very difficult. Emergent vegetation grows along the tide line and the banks are fairly low. A long dendritic channel is present between the promontory and the shoreline park properties and has been recently partially modified to allow for residential kayak launching (broad step access and bricks in the channel bottom). The park area of the western three properties is adjacent to the ROW and dendritic channel. The easternmost park shoreline is a mix of lawns, native meadows and overhanging vegetation. Some of the park portions appear to be used by the current property owners as backyards, with contiguous landscaping and/or lawns. Many of the properties have installed fences along the homeowner/park boundary. Restoration could include significant planting of native overhanging vegetation and removal of minor invasive/ornamental species. The municipal stormwater discharge (CRD#711A) has a very small catchment, but there is room for a raingarden to demonstrate filtration of road runoff in stormwater. It is unlikely that the ROW or park have many public visitors, as the area currently has the appearance of private property and/or is difficult to access.

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<table>
<tr><td colspan="4">VR12 – Caton Place ROW & Shorelines of 29-57 Caton Place</td></tr>
<tr><td>Type: Municipal ROW & undeveloped park</td><td>Project length (m): 80 or more</td><td>Project area (m^2): 850 or more</td><td>CRD#: 711A</td></tr>
<tr><td>Relative amount of work required: variable Low to Moderate possible</td><td colspan="3">Moderate invasive species removal.
Extensive planting of riparian vegetation, including overhanging shrubs and trees possible.
A portion of the park could be used for a raingarden to demonstrate filtration of road runoff in stormwater (watershed size very small), but perhaps is better used for vegetation.
Possible removal of kayak launching modifications, to be determined.</td></tr>
<tr><td>Estimated restoration costs: variable Low to Moderate possible</td><td></td><td>Estimated engineering costs: variable Low to Moderate possible</td><td></td></tr>
<tr><td>Potential contribution to increase habitat value, especially salmon habitat: Very High</td><td colspan="2">Shoreline is part of the narrow estuary of a large salmonid-bearing river (Coho, Cutthroat Trout). Contributions could include predation protection, shading, terrestrial insect drop, filtration of road runoff.</td><td>Species at Risk (Critical and Sensitive) habitat at site: Coastal Cutthroat Trout in aquatic habitat</td></tr>
<tr><td>Opportunities to showcase Green Shores for community education: Low to Moderate</td><td colspan="3">Publicly visible from Portage Inlet and the E&N Rail Trail. Local park usage likely very low.</td></tr>
<tr><td>Potential for showcasing a variety of Green Shores restoration techniques and goals: Moderate</td><td colspan="3">Green Stormwater Infrastructure (for salmonid health): space available for Rain Garden Stormwater Rehabilitation: Very small watershed size and traffic volumes
Removal of invasive species and additional fencing of park boundary.
Shoreline Planting: current condition is mostly mowed grass or meadow with only a few mature trees and shrubs – extensive planting recommended.</td></tr>
<tr><td colspan="2">Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: unknown</td><td colspan="2">Strong stewardship for Craigflower Creek and fish habitat restoration upriver.</td></tr>
<tr><td>Challenges to restoration: unknown</td><td colspan="3">Possible negative feedback from adjacent homeowners currently using the area for yards, but most direct shoreline lots were already fenced at the boundary.</td></tr>
</table>

VR12 – Municipal ROW (red) and shoreline "undeveloped park" (blue).

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VR12 – Caton Place Shoreline Access sign at ROW and homeowner use of 'park' along dendritic channel.

VR12 – Caton Place ROW promontory (left) & shoreline park mix of lawn, native meadow and shoreline trees (right).

VR13 – Helmcken Rd ROW @ Caton Place (Figures 4 & VR013)
MAPS & PHOTOS to be added.

VR14 – Gull Rd ROW (Figures 4 & VR014)
MAPS & PHOTOS to be added.

VR15 – Gull Rd "undeveloped park" (Figures 4 & VR015)
MAPS & PHOTOS to be added.

VR16 – View Royal Park (Figures 4 & VR016)
MAPS & PHOTOS to be added.

VR17 – Helmcken Rd ROW @ bridge south side (Figures 4 & VR017)
MAPS & PHOTOS to be added.

VR18 – E&N ROW north side (Figures 4 & VR018)
MAPS & PHOTOS to be added.

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VR19 – 2750 Shoreline Dr (Shoreline Community Middle School) (Figures 4 & VR019)
MAPS & PHOTOS to be added. Previous community discussions with school administrators indicated interest in shoreline restoration.

VR20 – Shoreline Dr ROW (Figures 4 & VR020)
MAPS & PHOTOS to be added.

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VICTORIA

V01 – Banfield Park (Figures 2 & V01)

Figure V01 – Potential project shoreline areas marked in red: western cove is main focus.

This shoreline is within a large municipal park, with a shoreline path and recreational facilities (playground, swim dock, Vic West Community Centre). The shoreline has been modified with rip rap, some of which extends into the mudflats of the Selkirk waterway. CRD Discharge #758A is a municipal catchment which extends via a long concrete pipe into the mudflats and has had variable water quality results (bacterial and metals) in the past. CRD Discharge #758 is a smaller surface drain catchment with minimal flow which discharges directly onto the beach and no WQ issues. Some biological slope stabilization was conducted on this shore with a demonstration class under Dave Polster, RPBio (possibly in 2006). The Gorge Swim Fest report (2019) recommended this site as potential beach creation for both swimming and forage fish, along with increased access for personal watercraft recreation. This combined goal could be both an advantage and a challenge. Works could include increased riparian and emergent vegetation, removal of invasive species, installation of green stormwater infrastructure on municipal stormdrain, slope reduction, controlled access for pedestrians, removing riprap on the mudflats, beach nourishment on riprap (west) section of cove which may provide forage fish habitat and cap potential contaminated sediments.

V01 – Banfield Park			
Type: Municipal Park	**Project length (m):** variable, up to 200 possible in two coves	**Project area (m^2):** variable, up to 3000 possible, depending on extent	**CRD#:** 758 & 758A
Relative amount of work required: variable Low to High possible	Moderate invasive species removal. Increasing width of riparian vegetation, including emergent fringe vegetation, overhanging shrubs and trees possible. Shoreline height at western end may be appropriate for reducing slope angle.		

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	Sufficient space for a raingarden to demonstrate filtration of road runoff in stormwater (watershed size not calculated). Has been identified for potential creation of forage fish spawning beach nourishment, through removal of riprap in mudflat and beach nourishment capping mudflats.		
Estimated restoration costs: variable Low to High possible		**Estimated engineering costs:** variable Low to High possible	
Potential contribution to increase habitat value, especially salmon habitat: High	Contributions could include improving predation protection, shading, terrestrial insect drop (increased vegetation), and filtration of road runoff (raingardens). Intertidal Works: Emergent vegetation planting, forage fish new habitat potential and capping potential contaminants in historic fill.		**Species at Risk (Critical and Sensitive) habitat at site**: Coastal Cutthroat Trout in aquatic habitat; Twisted Oak Moss (*Syntrichia laevipila*) (not in shoreline area)
Opportunities to showcase Green Shores for community education: High	Publicly visible and adjacent to well-used park, community centre, playground and popular swimming beach. The park is a community focal point. Easy access and close to downtown Victoria for Green Shores training programs.		
Potential for showcasing a variety of Green Shores restoration techniques and goals: Very high	Green Stormwater Infrastructure (for salmonid health): space available for Rain Garden Stormwater Rehabilitation: Moderate watershed size and traffic volumes Removal of ornamental and invasive species. Shoreline Planting: current condition includes overhanging shrubs and trees, but width of this vegetation is narrow and transitions to mowed grassy area (and shoreline path). Shoreline restoration could include reduction of steepened banks and planting of emergent vegetation, in addition to possible beach nourishment for forage fish.		
Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: Moderate		Local stewardship (Gorge Swim Fest) supports a combination of public recreational access/use and ecological restoration.	
Challenges to restoration: Moderate	Possible heavy metals and other contaminants in intertidal zone and/or continuing input from municipal stormdrain. Capping potential contaminants in historic fill. Community input to the Gorge Swim Fest review identified the area for potential beach creation for both swimming and forage fish, along with increased access for personal watercraft recreation. This aspect can be both an advantage and a challenge.		
Comment: From Gorge Swim Fest review (2019) ideas - Design should include/consider the following: 1. Test the bottom for contamination and clean up if needed. 2. Evaluate the storm drains for contamination and deal with as appropriate. 3. Remove the rock debris close to the edge of the water. 4. Create a designated forage fish spawning area (as per presentation by Peninsula Streams). 5. Decrease the slope of the bank behind the western portion of the beach 6. Improve access to water at the shore for people of all ages and abilities. 7. Evaluate access for dogs relative to creating a beach for forage fish. 8. Landscape to integrate with other park elements, including playground, paths, plants, bike racks, picnic area, toilet, etc. 9. Install bike racks visible from the beach. 10. Install toilet and change facilities. 11. Install a water park in Banfield Park that could double as a rinse off shower. 12. Include signage to encourage stewardship. 13. Include safety signage noting any hazards such as rocks.			

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V01 – Banfield Park western cove. Riprap covers most of beach, but not slopes. Previous bioengineering on some slopes.

V01 – Emergent shoreline vegetation present under native overhang, but missing under ivy and daphne vergrowth.

V01 – Lots of room for demonstration raingarden for stormwater filtration (CRD#758A).

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V02 – 510 Selkirk Ave (formerly portion of 508 Selkirk), 512 Selkirk & CRD ROW (Figures 2 & V02)

Figure V02 – Potential project shoreline areas marked in red.

In partnership between The Land Conservancy, the CRD and City of Victoria, this CRD ROW and municipal park (created through subdivision of 508 Selkirk Ave) was restored in 2004-2006 using a design created by students in the UVic Restoration of Natural Systems (RNS) program. The project was enabled through the $250,000 replacement of the CRD sewer crossing the Gorge at this location, with an additional $50,000 used for the removal of an existing seawall and fill, addition of beach sediments and restoration of natural vegetation along the shore. The continued maintenance of the site has been sporadic and a recent site visit indicates that an ongoing maintenance plan is required to ensure the integrity of the restoration continues. The spread of invasive species in the riparian area (mainly Himalayan blackberry) and the CRD ROW (many) threatens the native species that were installed. A rowboat has been stored on the beach vegetation in the intertidal area for many years should be moved to a location outside of the restoration area. Yearly maintenance of the site could be used as a learning tool for the importance of developing maintenance plans and could include restoration partners, past RNS students involved in the original project concept, and current students of the RNS program. Getting together and viewing the project on a yearly basis could be part education and part reunion for those involved or interested in the project.

V02 – 510 & 512 Selkirk Ave & CRD ROW			
Type: Undeveloped Park & CRD ROW	**Project length (m):** approx. 20-25	**Project area (m^2):** approx. 240 + ROW	**CRD#:** 649AA
Relative amount of work required: Low	Moderate invasive species removal. Increasing riparian vegetation in areas of invasive species removal. Development of ongoing maintenance plan. Homeowner education recommended. Educational signage on shoreline recommended (visible to boating traffic). Potential for public path through ROW, but requires consideration of whether public use may be detrimental to habitat and homeowner privacy.		

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Estimated restoration costs: Low		**Estimated engineering costs:** None	
Potential contribution to increase habitat value, especially salmon habitat: Low	Contributions to salmon habitat have been already been completed, however the maintenance of this project is required. Intertidal Works: Emergent vegetation needs to be protected from boat storage		**Species at Risk (Critical and Sensitive) habitat at site**: Coastal Cutthroat Trout in aquatic habitat
Opportunities to showcase Green Shores for community education: Moderate	Publicly visible from the waterway. Public access from the street not as visible or encouraged. Easy access and close to downtown Victoria for Green Shores training programs.		
Potential for showcasing a variety of Green Shores restoration techniques and goals: Very high	Shoreline restoration already includes removal of seawall, addition of beach sediments, riparian backshore planting, and planting of emergent intertidal vegetation. Yearly maintenance of the site could be used as a learning tool for the importance of developing maintenance plans and could include restoration partners, past RNS students involved in the original project concept, and current students of the RNS program. Getting together and viewing the project on a yearly basis could be part education and part reunion for those involved or interested in the project.		
Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: Moderate		see above	
Challenges to restoration: Low	No challenges noted.		
Comment:			

V02 – Previously restored shoreline project involved bulkhead removal, beach creation and shoreline planting.

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V02 – Previously restored shoreline project involved bulkhead removal, beach creation and shoreline planting.

V02 – Ongoing maintenance required: invasive species removal, additional native planting, and alternative boat location.

V03 – Burleith Crescent ROW (1414 Burleith) & Park (Figures 2 & V03)

This road end and park include a rocky outcrop shoreline and densely treed pocket cove. A municipal stormdrain (CRD Discharge #757) extends into the cove from a high bank that is composed of fill and construction waste, which has been slumping for a number of decades and dense ivy has caused the collapse of a number of trees in the cove. These factors together have made a more detailed exploration of the cove difficult and the stormdrain can no longer be accessed for sampling. A tree fort can be seen along the shoreline. There may be residential use at the far west of the ROW and there is minor loss of rocky outcrop vegetation due to public access. The site was recommended for restoration by both current and past Victoria staff and it is a site recommended for improved access and restoration by the Gorge Swim Fest report. Whether water access is compatible with habitat enhancement at this location has not been explored. Existing flat pads, potentially for historic picnic tables, are located in the higher reaches of the park (>15 m from shore) on the western edge, but are overgrown with shrubs. Restoration should include the removal of invasive species to protect mature shoreline trees, at a minimum. Additional restoration could include green stormwater infrastructure, some planting along rock outcrops and park currently mowed for private use on west edge, stabilization of failing slopes, and possible community amenities to direct traffic off cliffs and/or add controlled water access.

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Figure V03 – Potential project shoreline areas marked in red.

V03 – Burleith Crescent ROW (1414 Burleith) & Park			
Type: Municipal ROW & Park	**Project length (m):** variable, up to 92 possible	**Project area (m^2):** variable, depending on extent	**CRD#:** 757
Relative amount of work required: variable Low to High possible	Extensive invasive species removal, including ivy on shoreline trees. Minor riparian planting on residentially used areas and areas of trampling along shoreline. Sufficient space for a raingarden to demonstrate filtration of road runoff in stormwater (watershed size approx. 71, 000 m^2, residential and arterial roads). Potential for controlled water access (as per community proposals). Potential for major bank stabilization with bioengineering possible.		
Estimated restoration costs: variable Low to High possible		**Estimated engineering costs:** variable Low to High possible	
Potential contribution to increase habitat value, especially salmon habitat: High	Contributions could include protecting existing shoreline trees from collapse due to ivy overgrowth, some increased shoreline vegetation due to shoreline use, and filtration of road runoff (raingardens). Potential steep bank stabilization would not necessarily increase/improve salmon habitat.		**Species at Risk (Critical and Sensitive) habitat at site**: Coastal Cutthroat Trout in aquatic habitat
Opportunities to showcase Green Shores for community education: High	Not a highly used park, but in dense residential area. Easy access and close to downtown Victoria for Green Shores training programs. Major bank stabilization with bioengineering possible.		
Potential for showcasing a variety of Green Shores restoration techniques and goals: Very high	Green Stormwater Infrastructure (for salmonid health): space available for Rain Garden. Stormwater Rehabilitation: Moderate watershed size and traffic volumes Removal of ornamental and invasive species. Shoreline Planting: minor additions in area of high traffic. Shoreline restoration could include stabilization of eroding bank.		

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Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: Moderate	Local stewardship (Gorge Swim Fest) supports a combination of public recreational access/use and ecological restoration.
Challenges to restoration: Low	Community input to the Gorge Swim Fest review identified the area for increased access for personal watercraft recreation. This aspect can be both an advantage and a challenge. Some of the recommendations (such as removal of trees) would not be compatible with restoration. The steep cove is not necessarily compatible with forage fish beaches.
Comment: From Gorge Swim Fest review (2019) ideas - The vision is for a naturalized setting that provides an access point for viewing flora and fauna. Design should include/consider the following recommendations: 1. Clear some trees to enhance bird watching 2. Create a mini beach for forage fish 3. Re-naturalize with indigenous plants 4. Provide public art by first nations artists 5. Didactic panel highlighting indigenous uses & names of natural habitat 6. Plant trees (Douglas Fir) for roosting/nesting birds and providing shade for intertidal zone 7. Include signage to encourage stewardship. 8. Include safety signage noting any hazards such as rocks.	

V03 – Native vegetation on bedrock (left) and pocket cove with slumping banks and overhanging vegetation (right).

V03 – Mixture of Garry oak species and infrequently mowed path to the shoreline.

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V03 – English ivy is bringing down trees (left) and contributing to slope destabilization. Ivy on shoreline is displacing licorice ferns and mosses (right).

V04/E01 – Arm Street ROW & Park (Figures 2 & V04/E01)

Figure V04/E01 – Potential project shoreline areas marked in red.

This road end and park includes a rocky outcrop shoreline with mature tree and shrub vegetation (Victoria side) and a seawall parklet and pocket cove (Esquimalt side). Municipal stormdrains discharge onto the shoreline at the far west pocket cove (CRD Discharge #754) and at the Arm St. ROW (#756), with an additional non-municipal pipe (#755) located in the seawall. The mature trees have extensive coverage of English ivy along the rocky

shoreline and there is some damage to vegetation adjacent to the east end of the seawall where informal access to the beach has been made. A pathway and benches front the seawall and are well-used by areas residents and the care home adjacent to the park. The site was recommended for improved access and restoration in the Gorge Swim Fest report. Potential improvements include invasive species removal, especially on shoreline trees, and planting of overhanging vegetation on the far west edge of the seawall which would provide more habitat in the pocket cove (where there is no path and would not block the viewscape). Planting could also occur at the informal beach access, perhaps combined with formalised access at the east end of the seawall to prevent repeated trampling. *The Esquimalt portion of the shoreline would not meet the minimum GSSD requirements because of the current seawall.*

<table>
<tr><td colspan="4">V04/E01 – Arm Street ROW & Park</td></tr>
<tr><td>Type: Municipal ROW & Park</td><td>Project length (m): variable, 10-90 possible</td><td>Project area (m^2): variable, depending on extent</td><td>CRD#: 754, 755, 756</td></tr>
<tr><td>Relative amount of work required: Low to Moderate</td><td colspan="3">Extensive invasive species removal, including ivy on shoreline trees possible.
Possible riparian planting on grassy park west-facing edge and/or informal shoreline access/trampled areas.
Possible formal beach access from east seawall to relieve pressure on shoreline vegetation.
Sufficient space for a raingarden to demonstrate filtration of road runoff in stormwater (CRD Discharge #756 only)(watershed size approx. 23, 000 m^2, residential roads).</td></tr>
<tr><td>Estimated restoration costs: variable Low to Moderate</td><td></td><td>Estimated engineering costs: Low</td><td></td></tr>
<tr><td>Potential contribution to increase habitat value, especially salmon habitat: Low</td><td colspan="2">Contributions could include protecting existing shoreline trees from collapse due to ivy overgrowth, some increased shoreline vegetation due to shoreline use, and filtration of road runoff (raingardens).</td><td>Species at Risk (Critical and Sensitive) habitat at site: Coastal Cutthroat Trout in aquatic habitat</td></tr>
<tr><td>Opportunities to showcase Green Shores for community education: Low</td><td colspan="3">Locally used park, but in dense residential area. Easy access and close to downtown Victoria for Green Shores training programs, but with minimal Green Shores techniques to demonstrate.</td></tr>
<tr><td>Potential for showcasing a variety of Green Shores restoration techniques and goals: Low</td><td colspan="3">Green Stormwater Infrastructure (for salmonid health): space available for Rain Garden.
Removal of ornamental and invasive species.
Shoreline Planting: minor additions in area of high traffic and current lawn.</td></tr>
<tr><td colspan="2">Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: Low</td><td colspan="2">Local stewardship (Gorge Swim Fest) supports public recreational access/use on west side of seawall, but east side may be a better ecological fit.</td></tr>
<tr><td>Challenges to restoration: Low</td><td colspan="3">Community input to the Gorge Swim Fest review identified the area for increased access for personal watercraft recreation.</td></tr>
<tr><td colspan="4">Comment: The Esquimalt portion of the shoreline would not meet the minimum GSSD requirements because of the current seawall.</td></tr>
</table>

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V04/E01 – Arm Park is on the Victoria/Esquimalt border, a mixture of mostly natural shoreline and built up park

V04/E01 – Native trees & shrubs on a (mostly) natural shoreline (Victoria side).

V04/E01 – Mostly natural shoreline with ivy overgrowth (Victoria, left) and hardened shoreline park (Esquimalt, right).

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V04/E01 – There is no shore access and vegetation is destroyed by informal paths (beyond photo). A pedestrian/personal watercraft access from the existing promenade and replanting the shoreline would help alleviate this impact.

V04/E01 – Overhanging vegetation would help create habitat in this pocket cove on the far west of the park (left). Education of private landowners could provide additional habitat through management of fallen trees from invasive vegetation and yard & garden waste disposal.

V05/S24 – Harriet Road ROW (Figures 2 & V05/S24)

V05 – This municipal & CRD ROW (sewer crossing) was reconstructed after major slope slumping in the last 20 years. Municipal discharge CRD# 650 carries flow from Harriet Rd and discharges at the base of the steep slope. In the park above the slope there is extensive room for the creation of a raingarden to demonstrate filtration of road runoff in stormwater. The slope itself is stabilized with a heavy duty plastic mesh and is covered in Himalayan blackberry. The trees at the top of the slope are the invasive laburnum. The mesh covering allows for vegetation planting, but the original native plants (if any) have been covered by blackberries. Municipal discharge CRD# 650A emanates to the west of the ROW.

S24 – The shoreline to the west of the ROW includes a narrow strip of municipal land as an undeveloped park. It is inaccessible for the most part due to the steep high slope and lack of access. This made a closer site visit by land difficult. It is mostly overhanging vegetation, but heavily covered in invasive species.

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Figure V05/S24 – Potential project shoreline areas marked in blue (S24) and red (V05).

V05/S24 – Harriet Road ROW			
Type: Municipal ROW & Undeveloped Park	**Project length (m):** variable, 25-60 possible	**Project area (m^2):** variable, up to 530 depending on extent	**CRD#:** 750, 750A
Relative amount of work required: Low to Moderate	Extensive invasive species removal, including Himalyan blackberry and ivy on shoreline trees possible. Riparian planting on steep slope. Possible formal shoreline access to relieve pressure on shoreline vegetation undergoing current trampling. Sufficient space at top of slope park for a raingarden to demonstrate filtration of road runoff in stormwater (CRD Discharge #750, 750A)(watershed moderate size, high traffic roads).		
Estimated restoration costs: variable Low to Moderate		**Estimated engineering costs:** Low to Moderate	
Potential contribution to increase habitat value, especially salmon habitat: Low	Contributions could include protecting existing shoreline trees from collapse due to ivy overgrowth, improving predation protection, shading, terrestrial insect drop (increased vegetation), and filtration of road runoff (raingardens).		**Species at Risk (Critical and Sensitive) habitat at site**: Coastal Cutthroat Trout in aquatic habitat
Opportunities to showcase Green Shores for community education: Low	Small, locally used parklet, but in dense residential area. Easy access and close to downtown Victoria for Green Shores training programs, but with minimal Green Shores techniques to demonstrate.		
Potential for showcasing a variety of Green Shores restoration techniques and	Green Stormwater Infrastructure (for salmonid health): space available for Rain Garden. Removal of ornamental and invasive species. Shoreline Planting: major additions of riparian species.		

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goals: Low		
Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: Low to Medium		
Challenges to restoration: Moderate	A major CRD infrastructure pipe runs down this slope and crosses the waterway at this location.	
Comment:		

V05/S24 –This road end slope failure repair is covered in invasive species, with no evidence of native plantings, if any were planted. The Saanich shoreline (left) is heavily vegetated, but invasive species control is needed.

V06 – Washington Street ROW (Figures 2 & V06/V07)

This municipal ROW is a steep bank of boulder sized rip rap and used as an unofficial access to the mudflats. The shoreline is in need of overhanging vegetation and emergent shoreline vegetation, but the shoreline armouring is required for the stability of the road surface and potentially the adjacent building to the west. This road end would not likely meet the GSSD minimum requirements. Municipal discharge CRD# 643 is located at the base of the slope. The top of the slope is part of the roadway.

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Figure V06/V07 – Potential project shoreline areas marked in red. Dotted line is private property.

V07 – Arbutus Park, Cecelia Creek & Galloping Goose Regional Trail ROW (Figures 2 & V06/V07)
This shoreline of extensive Cecelia Creek estuary mudflats is composed of Arbutus Park to the west and the CRD Galloping Goose ROW on the east, with Cecelia Creek discharging from the head of the bay (CRD# 641). A portion of the shoreline in the centre is privately owned. There are significant overhanging mature trees along Arbutus Park, with increasing English ivy growth at the northeast park boundary and extensive ivy growth on shoreline trees of the private property. On the east shore of the cove, Himalayan blackberry form extensive cover and transitions to a row of conifers toward the trestle. These shorelines require extensive removal of invasive species and addition of native overhanging shrubs and trees in many areas.

V08 – Arthur Currie Lane & Galloping Goose Regional Trail ROW (Figures 2 & V08)
This pocket cove is located in the municipal ROW of Arthur Currie Lane and Tyee Road and is sandwiched between Banfield Park to the west and the CRD Galloping Goose ROW on the east. It has a combination of native and invasive overhanging vegetation, but the invasive vegetation (mainly Himalayan blackberry is taking over. The Goose side of the cove is used as an informal access to the boats anchored in the Selkirk Waterway. CRD# 759 discharges at the head of the cove (moderate bacterial rating).

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Figure V08 – Potential Project shoreline areas marked in blue.

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ESQUIMALT

E01 – Arm Street ROW & Park (see V04/E01)

E02 – DeCosta Place ROW, Shoreline of 1004 DeCosta Place (Units 1-3), Shoreline of 1017,1019, 1021, 1023 DeCosta Place & Shoreline of 1013 Arcadia Street (Units 1 & 2) (Figures 2 & E02/E03)

This contiguous shoreline is composed of a narrow municipal ROW and a series of "undeveloped parks" subdivided from the adjacent properties (east & west). The ROW and the shoreline segments are all being used by the adjacent property owners. The ROW was visited, but the adjacent properties were not. There may not be a current priority to address these undeveloped parks by the municipality. The shoreline of the ROW is thickly vegetated, but has invasive species (especially English ivy) threatening native trees and is being used for residential yard & garden waste. The "undeveloped parks" shorelines are mostly landscaped matching the adjacent residential properties, with the exception of 1004 DeCosta which appears to be fully vegetated with overhanging mature trees on the shoreline. PHOTOS to be added.

E02 – DeCosta Place ROW, Shoreline of 1004 DeCosta Place (Units 1-3), Shoreline of 1017,1019, 1021, 1023 DeCosta Place & Shoreline of 1013 Arcadia Street (Units 1 & 2)			
Type: Municipal ROW & undeveloped park shoreline	**Project length (m):** 120 possible	**Project area (m^2):** 1275 possible	**CRD#:** 753

Figure E02/E03 – Potential Project shoreline areas marked in red (ROW) and blue (undeveloped park).

E03 – Arcadia Street ROW (Figures 2 & E02/E03)

This municipal ROW is currently overrun by invasive species and is also being used by the adjacent property owners as a continuation of back yards and for dumping of yard & garden waste. The shoreline is thickly vegetated, but is extensively composed of invasive species. The shoreline was not accessible due to the dense Himalayan blackberry and English ivy and was not assessed. Potential restoration could include extensive

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invasive species removal, yard & garden waste & debris removal, native planting (if needed), homeowner education, and signage.

E03 – Arcadia Street ROW			
Type: Municipal ROW	**Project length (m):** 21possible	**Project area (m^2):** 500 possible	**CRD#:**

E04 – McNaughton Avenue ROW (Figures 2 & E04)
This municipal ROW has a seawall parklet and a combination of native and ornamental plantings. There is no designed beach access. Fringe marsh vegetation is scattered along the base of the seawall. The seawall makes this site ineligible for Green Shores unless the seawall was to be removed, which is unlikely. PHOTOS to be added.

E04 – McNaughton Avenue ROW			
Type: Municipal ROW	**Project length (m):** 20 possible	**Project area (m^2):** 200 possible	**CRD#:** 748

Figure E04 – Park boundary in red.

E05 – Gorge Esquimalt Park and Sioux Place ROW (Figures 3 & E05)
There is an existing restoration project occurring in this park by World Fisheries Trust through PSF funding. The restoration is focussed on improving the riparian function of this engineered/daylighted stream created in 2005. Plans include improving fish habitat through the addition of dendritic channels, forage fish beach nourishment and possibly Chum spawning gravel additions (pending extensive channel and water quality monitoring). Additional restoration beyond the current WFT budget could include the planting of shrub and tree vegetation above the intertidal benches on the Sioux Place ROW and along the playground shoreline, increasing intertidal vegetation, fencing, the addition of crush oyster shells to the personal watercraft boat ramp which is currently eroding and the creation of a raingarden to demonstrate filtration of road runoff in stormwater at stormdrain CRD#742. The location is used extensively for community and student environmental education through the WFT and GWAS Gorge Waterway Nature House.

Figure E05 – Potential project areas in red. Entire riparian area of park in current restoration plans by WFT. Discharge path from CRD#742 visible at far left.

E05 – Gorge Esquimalt Park and Sioux Place ROW			
Type: Municipal Park & ROW	**Project length (m):** variable, up to 200 for smaller scale project, or significantly more depending on extent restored	**Project area (m^2):** variable, up to 3000 for smaller scale project possible, or significantly more depending on extent restored	**CRD#:** 742 (municipal), 742AA (likely perimeter drain), 744 (creek) [additional pipes discharge into the creek upstream of the potential project site: 742B, 743, 743A, 744A, 744B]
Relative amount of work required: variable Low to High possible	Minor invasive species removal. Extensive planting of riparian vegetation, including overhanging shrubs and trees possible. Shoreline height (0.7-1.1 m) would allow creation of dendritic channels for juvenile salmonids. A portion of the ROW on the west shoreline could be used for a raingarden to demonstrate filtration of road runoff in stormwater for discharge CRD# 742. Beach nourishment for forage fish on main beach (upper right) possible. Crushed oyster shell could be used for boat access to control erosion and filter road runoff.		
Estimated restoration costs: variable Low to High possible		**Estimated engineering costs:** variable Low to High possible	

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Potential contribution to increase habitat value, especially salmon habitat: High	Contributions could include predation protection, shading, terrestrial insect drop, filtration of road runoff, and potential forage fish spawning habitat.	**Species at Risk (Critical and Sensitive) habitat at site**: Coastal Cutthroat Trout in aquatic habitat
Opportunities to showcase Green Shores for community education: High	Publicly visible and part of well-used park, playground and Gorge Waterway Nature House education centre. Recreation Meeting Centre currently under construction.	
Potential for showcasing a variety of Green Shores restoration techniques and goals: Very high	Green Stormwater Infrastructure (for salmonid health): space available for Rain Garden Stormwater Rehabilitation: Moderate watershed size and traffic volumes Minor removal of ornamental and invasive species. Shoreline Planting: current condition is mostly lawn, with some upper intertidal emergent benches. Shoreline restoration could include dendritic channels for fish. Large nearby parking lot and meeting centre could be useful for visiting classes/workshops.	
Potential neighbouring municipal or institutional partners; Potential neighbouring homeowner partners; General identified restoration partnering opportunities during complementary work (synergies) and/or neighbourhood/community group buy-in for maintenance: Very High	Preliminary support from Esquimalt Parks very high. Strong GWAS and WFT stewardship support.	
Challenges to restoration: Low	Stormwater discharge CRD#742 has been rated as high for metals input and moderate for bacterial input. Inputs into the creek (CRD# 742B-744B) have also had varying degrees of metals & bacterial contaminants). This is also an excellent reason to create a raingarden at the Sioux Place ROW.	
Comment: The entire shoreline of Gorge Esquimalt Creek/Estuary could be included in the project restoration. A subset of the park is discussed here.		

E05 – Sioux Place boat ramp and unsuccessful emergent planting bench has been reduced to dirt, possibly due to heavy Canada Goose browsing.

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E05 – Sioux Place stormwater drainage CRD#742 and previous restoration efforts.

E05 – Gorge Esquimalt Park heavily used beach area could be planted with shoreline vegetation.

E06 – Forshaw Road ROW (Figures 3 & E06/E07)

This hardened shoreline municipal ROW parklet has a number of mature trees on the landward side of a concrete access stair built on the foreshore. It would not meet the prerequisites for the GSSD unless the structure was removed, which is unlikely. PHOTOS to be added.

E06 – Forshaw Road ROW			
Type: Municipal ROW parklet	**Project length (m):** 13	**Project area (m^2):** NA	**CRD#:** 740

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Figure E06/E07 – Sites not visited.

E07 – Rhoda Lane ROW (Figures 3 & E06/E07)
This very narrow (2 m wide) municipal ROW parklet was not visited, but appears to be used by adjacent neighbours. There may not be a current priority to address these ROWs by the municipality, especially one so narrow.

E07 – Rhoda Lane ROW			
Type: Municipal ROW	**Project length (m):** 2	**Project area (m^2):** NA	**CRD#:** 739

E08 – Garthland Road ROW & Shoreline of 1190 Rhoda Lane (Units 4-6) (Figures 3 & E08)
This ROW is vegetated in mature trees overhanging the shoreline and has a fringe of emergent vegetation on narrow benches. It has some invasive vegetation. A narrow path goes through the ROW and along the adjacent "undeveloped park", which is partially vegetated and partially used as an extension of the neighbouring lots, including a hardened shoreline and a dock. There may not be a current priority to address these undeveloped parks by the municipality. There may be an archeological site (shell midden) at the east edge of the ROW.

E08 – Garthland Road ROW & Shoreline of 1190 Rhoda Lane (Units 4-6)			
Type: Municipal ROW	**Project length (m):** 26 (ROW) + 65 ('park') = 90	**Project area (m^2):** variable	**CRD#:** 737

Figure E08 – ROW generally vegetated (red), with "undeveloped park" (blue) and filled shoreline with seawall (red dashed line).

E09 – Glen Vale Road ROW/park (Figures 3 & E09)

This combination of ROW and "undeveloped park" contains a mixture of mature trees overhanging the shoreline, mowed shoreline sections and has a fringe of emergent vegetation on narrow benches. The west portion is mowed along the fence line, with trees and pruned shrubs along the shoreline. The area is fenced off along the property lines of the adjacent properties, but also has a private dock and stored personal watercraft on the banks. The street is part of a strata and is not maintained by the municipality; it is unknown whether the mowing maintenance is done by the municipality, though it may be done by the local homeowners. There may not be a current priority to address these undeveloped parks by the municipality.

E09– Glen Vale Road ROW/park			
Type: Municipal ROW & undeveloped park	**Project length (m):** 160	**Project area (m^2):** variable, up to 1700	**CRD#:** 736A

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Figure E09 – The areas in red are listed as park and/or ROW.

E10 – Mesher Place ROW (Figures 3 & E10)
MAPS & PHOTOS to be added.

E10 – Mesher Place ROW			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:** 736

E11 – Dellwood Road ROW (Figures 3 & E11)
MAPS & PHOTOS to be added.

E11 – Dellwood Road ROW			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:** 735

E12 – Rankin Road ROW/park (Figures 3 & E12)
MAPS & PHOTOS to be added.

E12– Rankin Road ROW/park			
Type: Municipal ROW & undeveloped park	**Project length (m):**	**Project area (m^2):**	**CRD#:** 733

E13 – 1382 & 1384 Treebank Rd Shoreline/park (Figures 3 & E13)
There may not be a current priority to address these undeveloped parks by the municipality. MAPS & PHOTOS to be added.

E13 – 1382 & 1384 Treebank Rd Shoreline/park			
Type: undeveloped park	**Project length (m):**	**Project area (m^2):**	**CRD#:** 731

E14 – Aral Road ROW (Figures 3 & E14)
MAPS & PHOTOS to be added.

E14 – Aral Road ROW			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:** 727

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E15 – Yarrow Place ROW & Shoreline of 906-927 Yarrow Place (Figures 3 & E15)

There is an existing large restoration project here in the ROW with raingardens and mature native vegetation. The trees overhang the shoreline and the planting density is high. The restoration was undertaken by GWAS and the municipality in 2006 and the growth has been excellent. The neighbouring shoreline (east and west) is composed of a narrow municipal "undeveloped park" subdivided from the adjacent properties. The shoreline segments are for the most part being used by the adjacent property owners and are mostly landscaped matching the adjacent residential properties, with some of them fully vegetated with overhanging mature trees on the shoreline. The ROW was visited, but the adjacent properties were not, with the exception of 910 Yarrow which could be viewed from the ROW and appeared to be newly planted with native vegetation for part of the shoreline. GWAS approached a number of the homeowners in 2006 and some accepted free planting plans; however, it is not known if there was any follow up on these sites. Despite there not being a current priority to address these undeveloped parks by the municipality, this area seems like a good opportunity for ongoing homeowner education and further voluntary restoration.

E15 – Yarrow Place ROW & Shoreline of 906-927 Yarrow Place			
Type: Municipal ROW	**Project length (m):** 180	**Project area (m^2):** 800	**CRD#:** 726A, 726B

Figure E15 – Previously restored ROW and "undeveloped parks" along the adjacent shorelines east and west (in blue). Shoreline parcel widths 2-4 m.

E16 – Admirals Road ROW @ Craigflower Bridge (south bank) (Figures 3 & E16)

This municipal ROW was subject to extensive work during the reconstruction of the Craigflower Bridge. However, additional tree and shrub planting and control of invasive species is recommended. Maintenance, including watering, would be an important part of this restoration. MAPS & PHOTOS to be added.

E16 – Admirals Road ROW @ Craigflower Bridge (south bank)			
Type: Municipal ROW	**Project length (m):**	**Project area (m^2):**	**CRD#:** 722, 722A, 722AA

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