

Updating Shoreline Mapping for the Saanich Peninsula

A Presentation to the Saanich Peninsula Wastewater Commission

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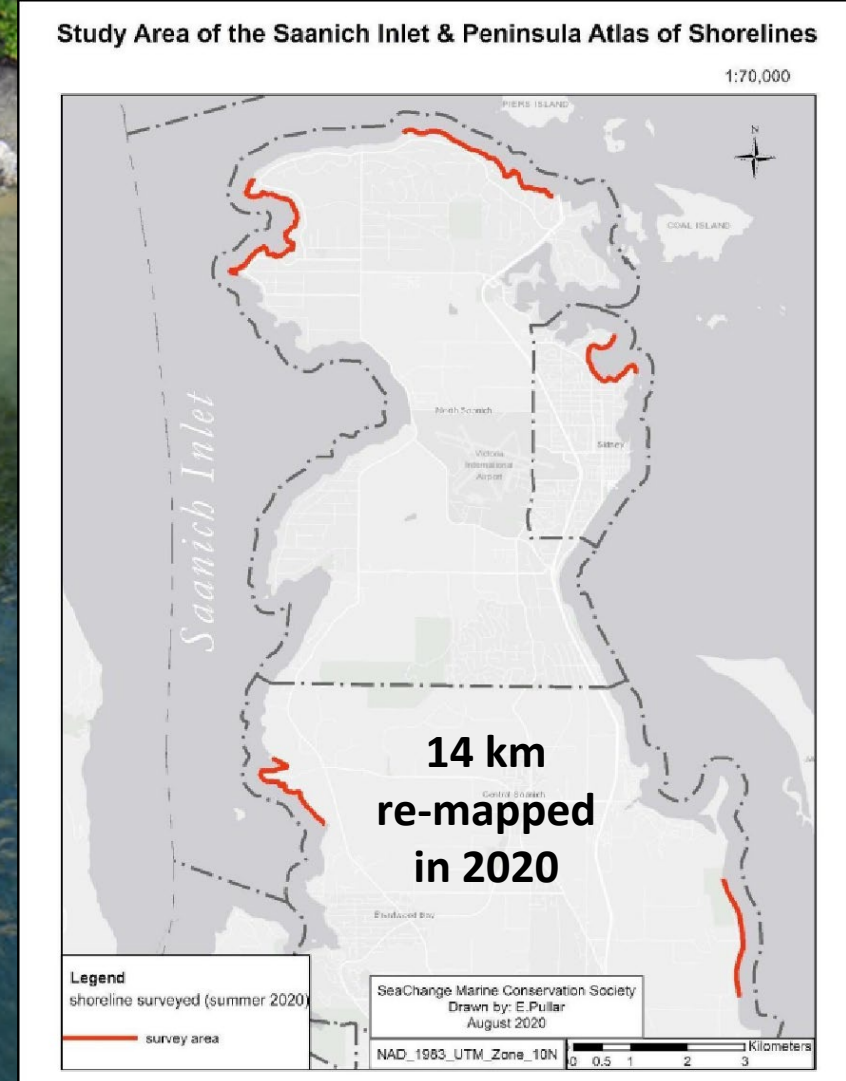
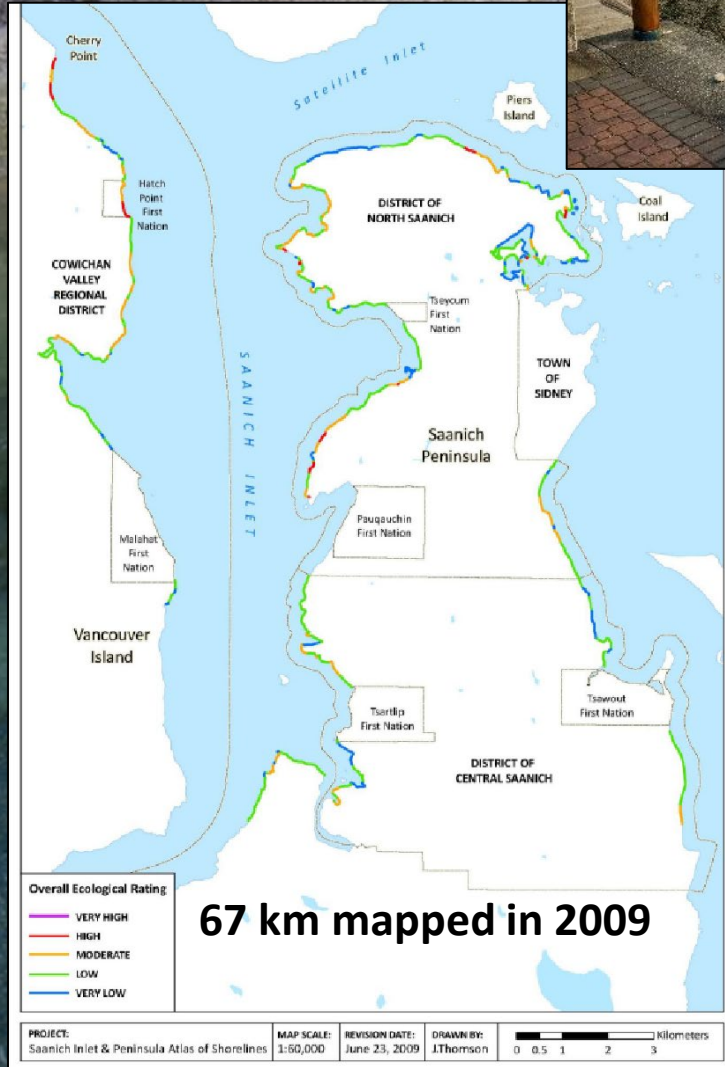
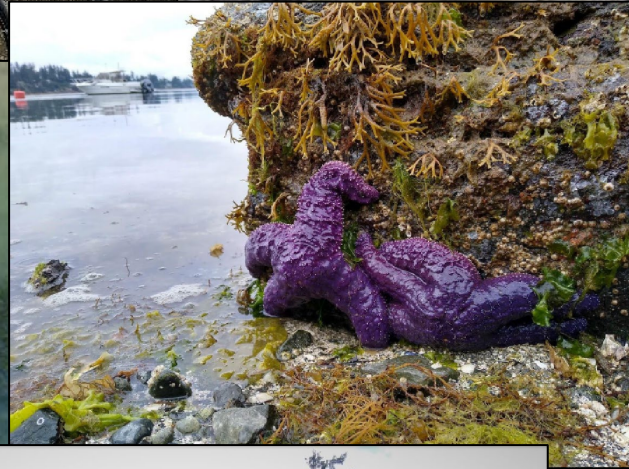
**Saanich Peninsula
Environmental
Coalition**



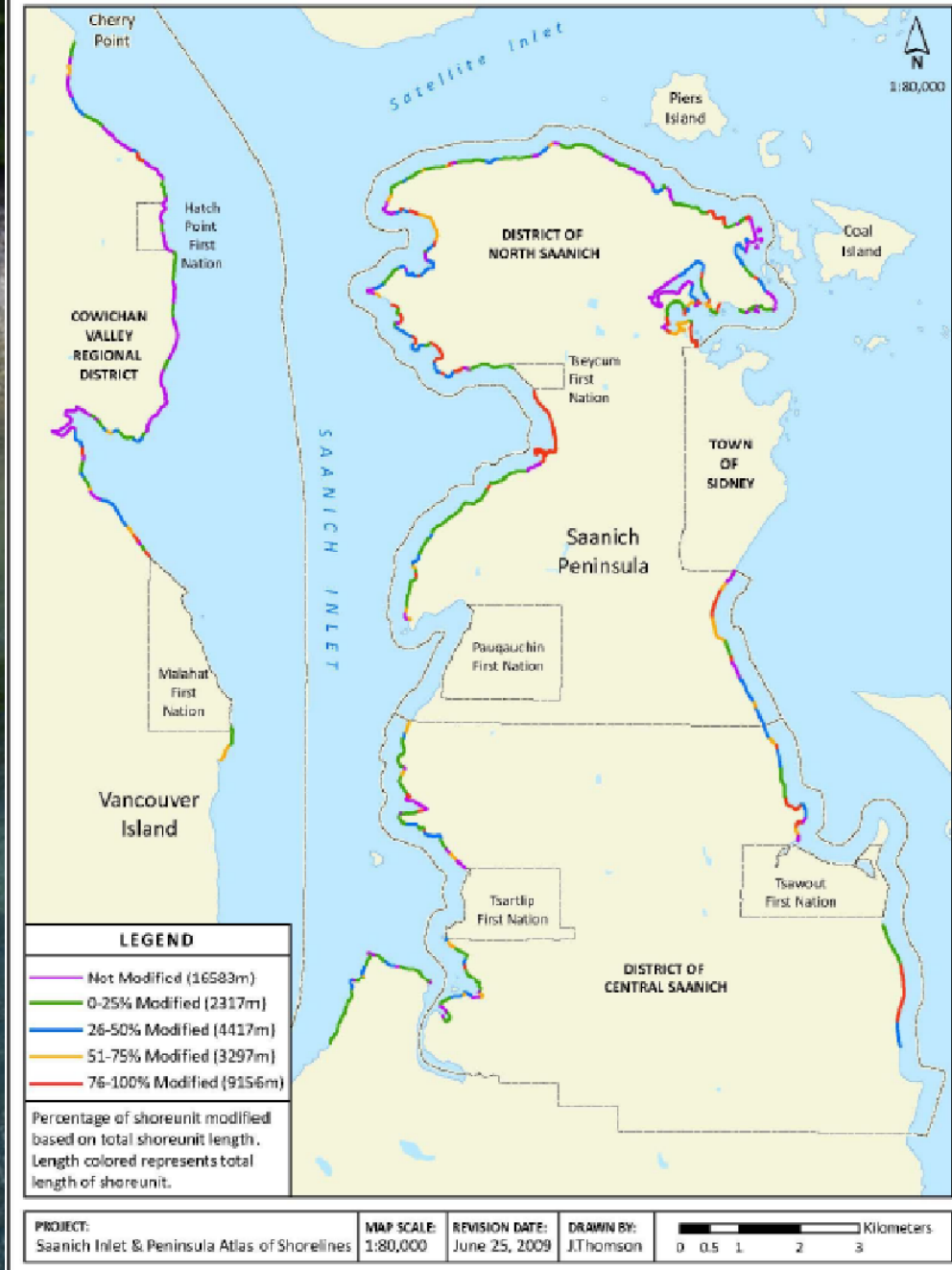
Saanich Inlet and Peninsula Atlas of Shorelines (SIPAS) Mapping

- The purpose of SIPAS is to provide **accessible** and **understandable** geographic **information** for **science-based decision making** for local governments.
- Information includes locations of **sensitive habitats** such as eelgrass beds and forage fish spawning habitat, locations of **anthropogenic modifications** (seawalls, docks etc.), **wildlife** usage, and a rating of overall **ecological value**.
- Uses include:
 - Identification of properties to be **designated as ecologically sensitive** in OCP and Development Permit Areas
 - Identify areas for **conservation** and **restoration**
 - Assess **potential impacts** of development
 - Provide **baseline data** and a way to **monitor change over time**

SIPAS Data Summary



- FIGURE 4: Shore Units Modified -



SIPAS Data Summary

- **30%** of shoreline (19 km) **modified**
- **69%** of the units in the study area had at least **one seawall** with **no noted increase** in seawall cover in area re-surveyed in 2020; however, the **number of seawalls in poor condition increased by 25%** in the North Saanich units
- **33%** of units showed some degree of bank **erosion** (2009); the **severity of observed erosion increased in 33%** of units re-surveyed in 2020
- 17% of survey area had subtidal eelgrass (2009); little change noted in units re-surveyed in 2020
- 43% of units contained potential sand lance and surf smelt spawning areas

SIPAS Data Summary



Value	Overall Ecological Value	Description
0-5.5	Very Low 21% (11.8 km)	Shore unit is significantly altered by land use activities; there is little sign of wildlife activities or marine beach life.
5.6-10.5	Low 25% (16.1 km)	Shore unit has been disturbed, little remains of the natural landscape of the unit. Shore unit has potential for some marine and land based wildlife activities.
10.6-15.5	Moderate 39% (27.6 km)	Shore unit is in a semi-natural state with some anthropogenic land use activities occurring. Potential for signs of wildlife and marine beach activities at this location. Potential for presence of key life cycle species.
15.6-20.5	High 12% (8.9 km)	Shore unit is likely in a natural or almost natural condition, signs of wildlife activity present, and potential for presence of key life cycle species.
20.6-25	Very High 3% (2.1 km)	There is presence of key life cycle species in shore unit as well as wildlife activity, marine life and natural vegetation.

Mandate for SIPAS Update

CRD Bylaw 4391 “A BYLAW TO ESTABLISH THE SAANICH PENINSULA HARBOURS AND WATER MONITORING AND COORDINATION SERVICE”

1. The Service established is a service for the purpose of coordinating and implementing harbours, waterbodies, and watercourses environmental protection and improvement initiatives on and surrounding the Saanich Peninsula, namely Sidney, North Saanich, and Central Saanich, including:
 - a. **monitoring, mapping, reporting** and public education on issues relating **to the marine and shore area environments**;
 - b. coordination and collaboration with public authorities and other persons on issues relating to the marine and shore area environments; and
 - c. implementing programs related to rehabilitation and improvement of the marine and shore area environments.

CRD Bylaw 3642 “A BYLAW TO ESTABLISH A SERVICE TO IDENTIFY STORMWATER POLLUTION WITHIN THE DISTRICT OF CENTRAL SAANICH, DISTRICT OF NORTH SAANICH AND TOWN OF SIDNEY”

1. DEFINITIONS

In this bylaw:

“**identifying pollution in stormwater run-off from land**” means investigating, **monitoring and reporting on** stormwater quality, sediment quality, **near-shore marine waters and discharges to stormwater; prioritizing areas for investigation**; conducting public information exchange and education programs; coordinating stormwater quality management programs; and liaising with other government agencies and other related activities;

“**stormwater run-off**” includes seepage, overland flow and stormwater run-off within ditches, streams, rivers, ponds, lakes and other watercourses and in culverts and drains.

Mandate for SIPAS Update

Central Saanich Official Community Plan

- 4.6.3 The District acknowledges the natural environment is a shared asset across the Saanich Peninsula and supports the implementation of a Bioregional framework for the Saanich Peninsula in collaboration with W̱SÁNEĆ Nations, the District of North Saanich, the Town of Sidney and local environmental organizations, as outlined in the Saanich Peninsula Environmental Coalition report dated May 2021, including the following key principles:
- c. Establish a shared database and support a coordinated approach to the collection and use of environmental data, including knowledge gained through W̱SÁNEĆ oral history;
- 4.6.27 Commission an update to the Saanich Inlet and Peninsula Atlas of Shorelines to establish baselines of shoreline types, level of disturbance and overall ecological value specifically for the District as part of the Harbours Initiative. Results of the shoreline study should be used to support a monitoring program.
- 4.6.28 Undertake a study of marine waters to identify and map sensitive marine ecosystems, key features, and habitat for the District as part of the Harbours Initiative. Results of the marine study should be used to establish baseline conditions and to support a monitoring program.

Mandate for SIPAS Update

Sidney Official Community Plan

- 12.3.18** Collaborate with W̱SÁNEĆ Nations, the District of North Saanich, the District of Central Saanich, the CRD, and local environmental organizations to:
- c. Establish a centralized database and support a coordinated approach to the collection and use of environmental data, including information from W̱SÁNEĆ traditional knowledge
- 12.4.18** Zoning designations and development on the shore land, inter-tidal and deep-water zones of the Roberts Bay area will be monitored to protect marine life and wildlife from harassment and habitat loss, deterioration, or contamination.

BIOREGIONAL FRAMEWORK: PRINCIPLES AND OUTCOMES SUMMARY

VISION

ECOLOGICAL SUSTAINABILITY

In respectful collaboration with the WSÁNEĆ Nation, the municipalities of Central Saanich, North Saanich, and Sidney recognize the rich and interconnected ecology of the Saanich Peninsula Bioregion and commit to work together to foster a healthy, sustaining environment for future generations.



PRINCIPLE	CENTRAL OUTCOME	SUB-OUTCOMES
ECOSYSTEM INTEGRITY	CONSERVE, PROTECT, AND MAINTAIN ECOSYSTEMS AND THE CONNECTIVITY OF THE NATURAL ENVIRONMENT	<ul style="list-style-type: none"> Protect existing vital habitats and ecosystems Revitalize and protect ecological connectivity Manage natural assets Support best practices Utilize indicators and metrics
JURISDICTIONAL COLLABORATION	OPERATE COLLABORATIVELY AND COOPERATIVELY TO SUPPORT ECOLOGICAL SUSTAINABILITY	<ul style="list-style-type: none"> Maintain a common view of the natural environment Develop mechanisms of collaboration and communication Form strategic partnerships to support ecological sustainability Inform policy with best practices
COMMUNITY PERSPECTIVE	STRONG PUBLIC KNOWLEDGE AND STEWARDSHIP OF THE NATURAL ENVIRONMENT SUPPORTS ECOLOGICAL SUSTAINABILITY	<ul style="list-style-type: none"> Engage and integrate WSÁNEĆ traditional ecological knowledge Emphasize the connection between the environment and the health of our society, economy, and culture Contextualize ecological sustainability within global climate and environmental change Support public stewardship

Mandate for SIPAS Update



Saanich Peninsula Environmental Coalition

Coalition Member Groups

Friends of North Saanich Parks
Friends of Shoal Harbour

NatuR&D

North Saanich PROW Association
Peninsula Streams and Shoreline Society
Roberts Bay Residents Association
Saanich Inlet Protection Society
SeaChange Marine Conservation Society
Tsehum Harbour Task Force



SAANICH INLET PROTECTION SOCIETY

Streams & Shorelines

Since 2002

SIPAS Update Proposal

It is proposed to negotiate TOR for a contract for SeaChange to perform this project for SPWWC if funds (estimated \$50k) are allocated in SPWWC's 2024 budget. It is expected that this work can be completed within 12 months from start.

SIPAS uses pre-defined shoreline units created from ShoreZone mapping, last completed along the Saanich Peninsula in 2004. SeaChange, which runs ShoreZone as a social enterprise, therefore proposes several parts to this update:

1. **Re-image and re-map ShoreZone** along the shoreline of the Saanich Peninsula (~70 km). This will provide updated shore units for the ground surveys.
2. Trained staff will conduct **ground and boat surveys** over that area to update the SIPAS attribute data.

Deliverables would be:

- **Public GIS portal** to view attribute layers
- **Geodatabase** with all attribute data and documentation
- **Technical Report** with summaries and comparison of change over time
- **Presentation** of results and **Workshop** for staff on using SIPAS data

SIPAS Update Proposal

Timeline would be the **2024 fiscal year** with the field work occurring during the spring and the final report completed in the winter.

Costs are estimated to be **\$50K**.

If SPWWC sees merit in our proposal we would ask you to consider this request in your 2024 budget.

Terms of Reference for a contract would be negotiated with CRD staff if funding is allocated.

If this process does move forward, SeaChange and SPEC would look for potential synergies (e.g. other municipalities and the west side of Saanich Inlet) and other funding sources.