

# Esquimalt Lagoon Stewardship Initiative

Year in Review 2022



## Capital Regional District

The Esquimalt Lagoon Stewardship Initiative (ELSI), supported by the Capital Regional District (CRD), is a coalition of community and environmental groups, institutions, and governments working together to protect, enhance and restore Esquimalt Lagoon and Coburg Peninsula. Highlights of ELSI's work in 2022 include:

### European Green Crab Monitoring

ELSI volunteers worked with the DFO's Aquatic Invasive Species program to monitor the lagoon for invasive European Green Crabs (EGCs), which were originally detected in the lagoon in 2019. In September, following a concentrated sampling effort, monitors captured five EGCs, east of Royal Roads University. ELSI's EGC monitors volunteered for approximately 150 hours in 2022. Through their efforts, some of these highly invasive crabs in the lagoon have been removed, and future monitoring work will be focused on areas where the crabs were most recently captured.



### Bee Creek Cutthroat Trout Monitoring

The Bee Creek cutthroat trout monitors were busy between May and October of 2022. Fish were monitored at 6 sites along Bee Creek on a monthly basis. Volunteers found 137 cutthroat trout in 2022. This is double the

number of fish compared to 2021, primarily due to two months with no sampling in 2021 due to bridge construction. The small group of dedicated fish monitors volunteered a total of 260 hours in 2022.

### National Urban Park

Parks Canada is considering creating a National Urban Park in Colwood, and ELSI members provided initial feedback for consideration in 2022, with further engagement planned for 2023.

### Research Opportunities

ELSI wants to encourage post-secondary research at the lagoon to develop a better understanding of the area's ecology, physical processes, and human impacts. ELSI developed an online research listing summarizing past research and future opportunities for research at the lagoon, and has shared the listing with local post-secondary institutions.

### MBS Signage

The Canadian Wildlife Service worked with the City of Colwood and Royal Roads University to put up signage surrounding the lagoon about the Esquimalt Lagoon Migratory Bird Sanctuary, including requirements for dogs to be leashed.



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## Water Quality

CRD staff collect water quality data annually from Colwood, Bee and Selleck creeks and a selection of stormwater flows that discharge into Esquimalt Lagoon.

In 2022, staff assessed twelve stormwater discharges/creeks that flow into Esquimalt Lagoon including a more comprehensive water quality assessment in Colwood Creek. The Colwood Creek monitoring involved sampling throughout the watershed for a wide selection of stormwater contaminants and benthic invertebrates. CRD staff also worked with a consultant to collect in-stream flow measurements. The flow data will result in a more refined estimate of creek discharge through different water levels at the CRD hydrometric station in lower Colwood Creek.

The results of the data are as follows:

- Low bacterial counts (less than 400 E.coli /100 mL) were measured in seven of the twelve discharges, while the other five had moderate counts (400 to 2,000 E.coli /100 mL).
- Selleck Creek had the highest E.coli counts and results indicate that bacteria levels have been increasing over time.
- Water quality in Colwood Creek was poor in 2022 and showed a decline since 2018, especially at the lower end of the creek. Guideline exceedances were measured for several metals, dissolved oxygen, E. coli, phosphorus, temperature, suspended solids, and turbidity.

## Outreach and Education

In partnership with Peninsula Streams Society, outreach staff shared the ELSI display, materials, and Esquimalt Lagoon watershed model with members of the public at two events 2022: World Oceans Day at Fort Rood

Hill/Fisgard Lighthouse National Historic Site, and Colwood's Eats and Beats Festival on Ocean Boulevard.

Alongside the Greater Victoria NatureHood, ELSI participated in a beach clean-up and mini bioblitz at Esquimalt Lagoon with families from the Inter-cultural Association of Greater Victoria.

ELSI members joined a September beach clean-up organized by Surfrider Canada and Royal Roads University's Bachelor of Business Administration in Innovation and Sustainability program.

ELSI partners also helped to share information about the lagoon through events and speakers. The Citizen's Environment Network in Colwood hosted a public presentation on biodiversity at Esquimalt Lagoon, and the Victoria Natural History Society hosted a "Lagoon Night," where three speakers presented on topics related to the lagoon. The VNHS also hosted two birding walks at the lagoon, open to birders of all abilities.



## Focus Areas for 2023

- Review and provide input to development applications and municipal plans, as appropriate.
- Continued support for existing volunteer programs and development of new programs as opportunities arise.
- Development of new ELSI educational materials for use at special events and public locations.