

SeaChange Marine Conservation
Society
2019 - 2020 Annual Report



www.seachangesociety.com

WHO WE ARE

SeaChange Marine Conservation Society was established in 1998 as a charitable non-profit environmental organization. We educate children and the public about marine and watershed environments and conserve and restore marine habitats in British Columbia in partnership with coastal communities.

OUR GOALS

- *To educate the public regarding the effects human populations are having on marine ecosystems.*
- *To conduct education workshops for schools and the public on marine conservation issues.*
- *To organize expeditions for on-site interpretation of ecosystems for the public.*
- *To cooperate with other environmental groups to promote systemic change in the ways we make use of marine resources.*
- *To participate with other like-minded organizations to create marine sanctuaries, collect data and organize workshops and conferences on the importance of rehabilitating and sustaining marine biodiversity.*
- *To reverse the continual degradation of marine ecosystems through restoration, rehabilitation and/or conservation activities.*



Notes from the Executive Director's Seat

While the SeaChange crew surveys bays and estuaries in the Salish Sea to observe damaged nearshore habitats that might be repaired, we often engage in lively discussions about possibilities – if we plant a small plot of eelgrass, will it take at this site? What exposure does this site have to winter storms? What kind of impacts are affecting this area? We experiment with curious minds. Most of our transplants (70%) are successful. For over twenty years we have learned and questioned and learned again that nature will heal, or not, beyond our greatest expectations.

Since March, 2020 we have passed through another threshold of restoration. As we continue with ecological nearshore recovery work, we also find ourselves restoring our spirits, individually and collectively. Zoom calls take the place of in person community connectivity; planning is more detailed and contingent on present COVID-19 and climate conditions. We find ourselves fatigued. Restoration in the field continues with masks, physical distancing and contact tracking in place.

Nevertheless, the response to this work is blossoming, even in these times of uncertainty and fear. In Mannion Bay on Bowen Island, despite the smoky atmosphere of August and the pandemic, community members came out to the shore to tie the washers to eelgrass shoots with wonderful enthusiasm and, again, curiosity. After the transplant, the members of the local Community Association and the Municipality of Bowen Island sat on drift logs and, together, planned the next steps in community engagement to conserve the nearshore habitats of the Bay.

When it is time to plan the removal of debris from the seabed, Wharfingers, staff from local Districts and Municipalities and staff from the local landfill generously provide their services as in-kind contributions or bill at drastically reduced costs. Everywhere we work within coastal communities surrounding the Salish Sea, we uncover this spirit of collective good will and hopefulness. We thank you all for striving for the health and recovery of the Commons.

Nikki Wright
SeaChange Executive Director



'Collective Effort' SeaChange Barge and Crane

SeaChange accomplishes much because of the dedication of the

SeaChange Board of Directors, staff and volunteers;
Lorne Underwood and the Coast Salish, Cowichan Tribes, Tsleil-Waututh and Squamish First Nations;
Pacific Salmon Foundation;
All donors and funders (listed in this report);
BC Parks'
Educators within School Districts #61 & #63;
Seagrass Conservation Working Group;
Coastal Photography Studio;
University of Victoria Geography Department, and
Cynthia Durance, R.P. Bio Precision Identification.

And all the environmental conservation organizations we have had the privilege to work with:

Cowichan Community Land Trust, Ekological Connections, Friends of Tod Creek Watershed, Gabriola Eelgrass Mappers, Galiano Conservation Association, Gambier Island Conservancy, Hornby Island Conservancy, Howe Sound, Sechelt and Gulf Islands communities, Mayne island Conservancy Society, Moonstone Enterprises, Pender Island Conservancy Association, Peninsula Streams Society, Saanich Inlet Protection Society, Seaquaria in Schools, Squamish River Watershed Society, Thetis Island Nature Conservancy, West Coast Environmental Law, World Fisheries Trust and the World Wildlife Foundation.



Achievements over the last fiscal year

July 1, 2019 – June 30, 2020

Education

325 youth and adults participated in SeaChange environmental programs over the past year.

SeaChange delivered two EcoRowing classes in the fall, toured SNIDŽEL, *Place of the Blue Grouse* (Tod



Inlet – pronounced *sngheet kwith*) with students in the Chinese Youth Leadership Program (CYLP) with Ken Josephson and members of the WSÁNEĆ Nations, taught students from the Vancouver Island University Tamagawa program at Rathtrevor Park, dove for marine life specimens and provided education during the CRD Marine Day in July of 2019 and offered a field trip at Medicine Beach, Pender Island to students of the TETÁCES Climate Action Project.

The COVID-19 pandemic prohibited on site outdoor education or youth volunteer projects such as Creatures of Habitat during the spring of 2020.



Outreach and Partnerships

SeaChange staff and the four Regional Coordinators for the Salish Sea Nearshore Habitat Recovery Project delivered public presentations and trainings, including for Redfish School for Change students, the community members of Howe Sound, Sechelt and Burrard Inlets and the Gulf Islands, the W̱SÁNEĆ Leadership Council, the Qul-hanumutsun Aquatic Resources, Broughton Archipelago Transition Initiative, Tla'amin First Nations, Oceans Day / STEM event in Victoria, Metchosin and the Gibsons communities. A video interview for the Pacific Salmon Foundation was created to address nearshore eelgrass habitats in relation to salmon survival. Just prior to the closing of public events, the Executive Director made a presentation during the nationwide Department of Fisheries and Oceans Coastal Restoration Conference in Vancouver (March, 2020).

Conservation

SeaChange is initiating conservation projects that may reduce the need to restore eelgrass habitats in the Salish Sea

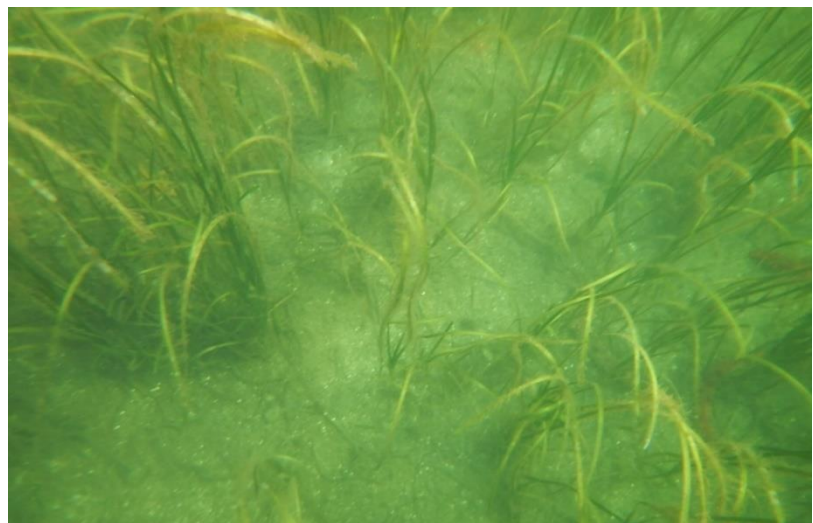


Mid-line buoys prevent anchor chains from dragging on the seabed, disrupting and damaging eelgrass growth in shallow waters. The Pacific Salmon Foundation contributed to the installations of these mid-line buoy systems in several bays for the summer and fall of 2020.



SeaChange staff interviewed and videotaped restoration practitioners in Puget Sound during the summer of 2019. These videos will be distributed to varied audiences north of the 49th Parallel. One of the initiatives that we intend to replicate as a result of these Puget Sound dialogues is Voluntary No Anchoring Zone designations near eelgrass meadows. Work towards this goal is on-going, and will take the collaborative efforts of local governments, boaters and others to implement.

Nearshore Habitat Surveys and eelgrass mapping continued during this year. Surveys included Howe Sound, Sechart Inlet, Gibson’s Harbour, the Gulf Islands and Burrard Inlet. Eelgrass maps of Spanish Banks, False Creek, Burrard Inlet and the Vancouver Harbour were produced for the Tsleil-Wauth First Nation and the City of Vancouver by Ekological Connections (Anuradha Rao, M.Sc., R.P.Bio), in concert with SeaChange contractors.



Jamie Smith/Coast Photo Studio

We continue to create and install eelgrass signage at key locations, such as marinas, BC Parks and dock and wharves near known eelgrass habitats.

Saanich Inlet and Peninsula Atlas of Shorelines Revisited

The Saanich Inlet and Peninsula Atlas of Shorelines Revisited (SIPAS) is the rejuvenation of work completed in 2011 of shoreline attributes and seawalls on the Saanich Peninsula. Two summer staff in June of 2020 began the work. An excellent report of selected sites on the Saanich Peninsula was produced during the summer months. A copy of the report can be obtained through SeaChange (seachange@seachangelife.org) It is hoped that with more funding support, the entire Peninsula can be surveyed to illustrate the changes in shore ecology due to development and rising tides.

The updated report will be useful for land use development decisions in all three municipalities on the Peninsula and can complement the Bioregional Framework for the Saanich Peninsula. This document can be found at: <https://www.placespeak.com/en/topic/6354-a-bioregional-framework-for-the-saanich-peninsula/#/resources/18245> The intention of the Bioregional Framework is to provide strategies to Sidney, North and Central Saanich municipalities to achieve environmental sustainability across jurisdictional boundaries. The SeaChange Executive Director has had the privilege to serve on the Saanich Peninsula Environmental Coalition to help develop this exemplary framework.

What do we lose if we don't pay
attention?



Restoration

Shell Hash Project in SNITØET

As a continuation of the beach enhancement work undertaken in 2017 on the shore of Tod Inlet, a student from the Restoration of Natural Systems at the University of Victoria is coordinating the deposit of crushed oyster shell on the intertidal area of the restored beach. The two main objectives for the shell-hash application is to enhance habitat for invertebrate species and to act as an active filter for existing environmental toxins. It is hoped the deposition will be completed in the spring of 2021 in partnership with BC Parks, Ian Bruce and other partners.



Before and After the Beach Enhancement (2017)

Eelgrass Restoration

A total of 7,614 eelgrass shoots (761m²) was transplanted with community support; and two marine riparian projects were completed. Transplant sites included Tunstall and Cotton Bays in Howe Sound, and Lasqueti, Saturna and Pender Islands in the Gulf Islands.

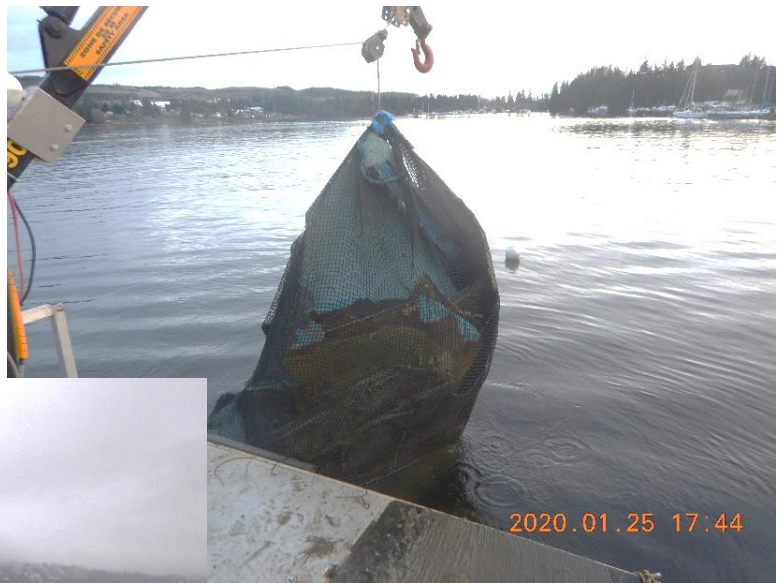
In addition, SeaChange transplanted 5,000 shoots (500m²) under contract with Cowichan Tribes for their Whole Watershed Coastal Restoration Fund Project. Based on monitoring results of all transplant sites, assessing area coverage and shoot density, more eelgrass could be planted in all these sites for the following year.

A total of 217 community volunteers gave their time during meetings and restoration events. Over \$62,994 in labour and services are included as in-kind contributions in the form of accommodations,

supplies, equipment and time, including: debris bins, tote bags, waivers for tipping fees, excavators, local government staff time for debris removals, work space for transplants, time for logistical planning, and boat moorage space. Thirty-four partnerships were sustained or newly developed in four regions, including those with industries, local and First Nations governments and agencies.

Underwater Debris Removals

Debris removals in Scottie Bay (Lasqueti Island), Porpoise Bay, Sechelt Inlet and Cates Bay in Burrard Inlet totaled 19,500 kg of debris removed from the seabed.



Monitoring

Monitoring of all eelgrass transplant sites on a six month schedule was completed with PSF support. Thirty-one eelgrass signs will be installed in the coming months after many consultations with community members.

SeaChange staff together with eelgrass researchers is analyzing the monitoring results of the thirty-four eelgrass transplants from 2014 to the present. This work will further our collective understanding of all the variables to consider in restoration site selections.



Future Plans

Education



Dependent upon the constraints of the COVID-19 pandemic, SeaChange hopes to develop and deliver outdoor education for youth and adults, both in SNITØEŁ and in other marine estuaries and bays within the Salish Sea.



SeaChange will organize eelgrass ecology workshops and presentations for students, educators and community members of all ages when requested on virtual platforms if necessary.



SeaChange will continue to mentor future environmental educators so that outdoor learning remains an integral part of the BC education curriculum.

Conservation



SeaChange will work with First Nations, other local governments and not for profit organizations, surveying nearshore marine environments to promote conservation.



iSeaChange will work with recreational boaters to promote best practices to conserve and protect nearshore habitats, including native eelgrass beds.



SeaChange will network with others to broaden our capacities to increase net gains in nearshore habitats within the Salish Sea.

Restoration



Crushed oyster shells will be deposited on the shores of Tod Inlet to increase surface area for shellfish and other invertebrates and to aid in the recovery of contaminated soils.



More debris removal sites will be identified and debris will be removed from shores and underwater with new partners and community volunteers.



SeaChange will increase its capacity for marine conservation, education and restoration by employing qualified staff for administrative and field work.



Coastal Photography Studio

All photos taken by SeaChange staff unless otherwise noted.

Funding Sources for SeaChange Marine Conservation Society

2019 – 2020

Support In-Kind and Cash

Department of Fisheries and Oceans Canada	Marine nearshore restoration
Greater Victoria School District	EcoRowing in SNIDØEŁ
Islands Trust Fund	Opportunities for presentations
Ministry of Environment	Permits to work in SNIDØEŁ; In-Kind support for Conservation
Pacific Salmon Foundation	Eelgrass education, conservation and monitoring
Service Canada	Summer staffing for SIPAS Revisited

Other Funding

Donations through Canada Helps	Core and project expenses
CRD Parks	Marine Day at Witty's Lagoon
Eagle Wing Tours	1% for the Planet – core expenses
Horne Coupar Barristers & Solicitors	1% for the Planet - core expenses
Individual donors	Core and project expenses
Roy Group	1% for the Planet – project expenses
GIS specialist	Donation for SIPAS Revisited
University of Victoria Geography Department	In-kind labour & equipment for environmental education and outreach
User Fees	EcoRowing in SNIDØEŁ, Ethnobotanical tours, beach programs
SCUBA Diving contracts	Eelgrass compensation projects and other contracts