

SeaChange Marine Conservation Society



**2015 – 2016 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

Nikki Wright

On the cover of this Annual Report, Richard Elliott of the Tsartlip First Nations is shown steering the canoe of EcoRowing students through the calm waters of Tod Inlet while he is recounting deer hunting as a young man in his community. Earl Claxton Jr. continues to teach students the uses of plants from the inlet for food, medicines and tools. We are staying the course of support for First Nations teachings. These lessons reveal their deep long lasting ties to the lands and waters of the Salish Sea.

During the year, we worked hard to forge new relationships, including those with the Hakai Institute, other academic institutions and public institutions and with other environmental non-profit organizations so that a more robust and effective marine conservation ethic takes hold. We stay the course of working for the Commons.

SeaChange increased its capacity to achieve its mission by employing more staff to help with fundraising, administrative tasks and outreach. We are staying the course of remaining effective and visible in our community in order to increase protection of our marine wealth.

We continue to plan for new projects and programs while carrying out our business of marine education, conservation and restoration within the Salish Sea - always trying to make the boat bigger as we traverse the waves of changing climates, economics and social orders. Staying the course.





SeaChange accomplishes much because of the dedication of the

SeaChange Board of Directors and staff, SeaChange volunteers, Coast Salish, Cowichan Tribes, Tseil-Waututh and Squamish First Nations

All donors and funders (listed in this report)

BC Parks

Lenny Ross

Educators within School Districts #61 & #63 and the W̱SÁNEĆ School Board

Seagrass Conservation Working Group

Community Advisors Fisheries and Oceans Canada

Capital Regional District Parks staff

Local Businesses (listed in this report)

Coastal Photography Studio

Dr. Leah Bendell, Simon Fraser University

University of Victoria Geography Department

Cynthia Durance, R.P. Bio Precision Identification

...and all the environmental conservation groups with whom we have had the privilege of working:

Cowichan Community Land Trust, Friends of Tod Creek Watershed, Gabriola Eelgrass Mappers, Galiano Conservation Association, Habitat Acquisition Trust, Maple Bay Community Association, Mayne Island Conservancy Society, Moonstone Enterprises, Pender Island Conservancy Association, Peninsula Streams Society, Raincoast Conservation Foundation, Saanich Inlet Protection Society, Seaquaria in Schools, Squamish River Watershed Society, Thetis Island Nature Conservancy, and the World Fisheries Trust.

Achievements over the last fiscal year

July 1, 2015 – June 30, 2016

Education



Over 1,100 students of varied ages were part of SeaChange environmental programs over the past year.

One of the greatest gifts we can give young people today is an opportunity to explore natural outdoor beauty to learn first-hand ways they can engage in hopeful work that sustains themselves and the natural world. EcoRowing does this for students. Twenty middle school and four elementary schools took part in EcoRowing during the fall of 2015 and spring of 2016 (720 students total). This year we

acquired a floating dock on the inlet reserved for our EcoRowing enthusiasts.

Students paddled in a canoe on the calm waters of the estuary, studied marine life and investigated the health of the estuarine waters, walked with a First Nations Elder into the forest to learn about the importance of native plants as medicines, food and tools, and actively helped build the health of the soils and forests by removing invasive plant species, installing native plants and mulching.

We added a new component to the program. Students learned about soil biology and how they can help make a more balanced fungi/bacteria soil by adding leaf mulch to newly restored sites. The educator specializing in soil health created hands-on games and activities to clarify what otherwise might be a puzzling subject.





New schools joined the program. All six Grade 6 classes from Colquitz Middle School participated. As well, we had several fall programs, and hope to expand it so that young people can experience team work at the beginning of the school year, and also experience the changes in Tod Inlet over the seasons.

Many of the students come from economically disadvantaged neighborhoods and lack the accessibility to natural beautiful places such as Tod Inlet. Many of them expressed a desire to return to this site with their families

Environmental and cultural programming in SNIDŹEL (pronounced *sngēet kwith* in SENCOTEN, or The Place of the Blue Grouse – Tod Inlet) continued for the Chinese Youth Leadership Program and the students from the University of Victoria and the Redfish School for Change from Canada and the U.S. Stimulating discussions ensue on site as students learn of the ability of a small organization to wield large changes - our response to collective and mounting concern and fear for the future.

SeaChange made 11 public speaking engagements as varied as a Neighborhood Association meeting in Maple Bay, the Gulf Island Conservation Convention on Mayne Island, the Salish Sea Ecosystem Conference in Vancouver and the Burrard Inlet Science Symposium, addressing approximately 500 members of the public on varied subjects from eelgrass mapping and restoration to new approaches to environmental education for youth. We also supported the Capital Regional District's Marine Day at Witty's Lagoon, diving for marine life to be enjoyed by families on the beach. Two summer camps participated in SeaChange beach and subtidal activities during the summer of 2015: the Cowichan Community Land Trust coordinated a beach clean-up and eelgrass transplant with us in Genoa Bay with 15 high school students, and the Thetis Island Nature Conservancy developed a summer program for 8-12 year olds. We kayaked into Cufra Inlet together and explored the muddy sea bottom for sand dollars, sea cucumbers and sea stars.





Conservation

SeaChange forged new partnerships to further the conservation of the Salish Sea

Ecological restoration is inextricably related to social ecological health. To that end, SeaChange continues to make long term relationships with First Nations, coastal communities, other environmental non-profits, academic institutions and BC Parks to continue to improve our influences on the oceans. We had a joint conference with the Hakai Institute on eelgrass conservation in BC; completed eelgrass mapping in Boundary Bay (50km²), Pender Island and

Oak Bay; composed a report on the health status of native eelgrass in Howe Sound Report (www.futureofhowesound.org) and furthered a science based methodology for kelp mapping for both sides of the border. Research on sediment quality in former log storage sites was sponsored by SeaChange and the Squamish River Watershed to help determine the extent of degradation and factors limiting eelgrass growth, in partnership with Simon Fraser University and the Pacific Salmon Foundation.



Integrating marine nearshore habitats is the next challenge for SeaChange. We envision a network of coastal communities actively engaged in monitoring, conserving and restoring kelp, eelgrass, forage fish spawning sites and marine riparian areas. Advantages of this network include sharing strategic plans, equipment, funding and outreach. A more comprehensive collaboration makes sense in the face of increasing threats, such as coastal development and its associated non-point source pollution, increased oil tanker traffic and climate changes.

Restoration

SeaChange continues marine and backshore restoration in Tod Inlet and other coastal communities

In 2015 SeaChange started planning for the restoration of the shore in Tod Inlet with coastal engineer John Readshaw, Peninsula Streams Director Ian Bruce, Tsartlip First Nations Lands Committee and BC Parks. Although the project took longer than expected (completed in February, 2017), the results have been ecologically and socially very positive.



Terrestrial Native Plant Restoration in SNIDØEŁ



Large tracts of invasive blackberries were removed during the spring of 2015 with the assistance of Walter Langer, operator and owner of AllTerra Spider



Excavating Ltd. Community volunteers and SeaChange

summer staff, under the diligent care for the installed in these Creatures for Habitat returned again this year over these areas.



supervision of Judith Arney, hundreds of native plants cleared areas. (all Bayside Gr. 6 students) to keep invasives from taking

Marine Restoration



A total of 581 m² of native eelgrass was installed in 7 sites surrounding the Salish Sea with the assistance of 10 partnerships and 57 volunteers. Reports of this work can be found on the Seagrass Conservation Working Group web site:

www.seagrassconservation.org/restoration

Marine sediments

were collected at each of the transplant sites for analysis by a student at Simon Fraser University, under the supervision of Dr. Leah Bendell, Professor of Marine Ecology and Ecotoxicology at SFU. We will continue to investigate methods for remediating the toxic impacts of chemical, physical and biological sediment changes to improve the success rate of native eelgrass transplants within damaged estuarine environments.

Four successful marine riparian restoration projects took place near Tod Inlet, Roberts Creek on the Sunshine Coast, Mayne Island and Lynn Creek estuary in Burrard Inlet in partnership with other conservation groups. This recovery work was possible through SeaChange's funding support from the Recreational Fisheries Conservation Partnership Program. The purpose was to restore lost or damaged vegetation bordering marine shores to demonstrate the important function of native plant vegetation zones. These native plants serve as food sources for juvenile fish as insects drop down from the vegetative leaves. They also function as filters for the flow of water often containing toxins from the land into marine shores.



Future Plans

Education



SeaChange will deliver more EcoRowing programs in the spring and fall of 2017. Native plant restoration, marine studies, canoeing or rowing, and ethnobotany will be offered to elementary and middle school students within the Greater Victoria School District.



Plans will commence to construct an Open Classroom in SNIDØEL to replace our ageing Nature Float. The structure will house an integrated First Nations and Western marine science and indigenous language lab.



SeaChange will continue to develop robust, relevant and interactive environmental programming for all ages.

Conservation



Eelgrass mapping will commence in the Cowichan Estuary and other sites as requested. The maps produced will be used to further conserve this critical nursery and feeding grounds for multiple marine species.



SeaChange will organize a nearshore marine habitat network to support communities in marine conservation in partnership with existing organizations.



SeaChange will continue to participate in the Saanich Inlet and Cowichan Stewardship Roundtables.



The Seagrass Conservation Working Group, of which the SeaChange Executive Director is Co-Chair, will continue conserving nearshore habitats through inventories, nearshore restoration and public education.

Restoration



SeaChange will continue to partner with Simon Fraser University and other universities and colleges to support applied research of the limiting factors of eelgrass growth in degraded log storage sites.



We will continue to restore and monitor eelgrass habitats within the Salish Sea in collaboration of coastal communities.



Judith Arney will continue to coordinate the native plant restoration in SNIDZEŁ with the support of community volunteers and WSANEC (Saanich) First Nations communities.



The beach enhancement project in Tod Inlet will be completed with the support of Ian Bruce, R.P. Bio. and coastal engineers, in partnership with the Tsartlip First Nations, BC Parks and the Institute of Ocean Science.



SeaChange will financially support the carving of a Welcoming Figure by Charles Elliott for placement in SNIDZEŁ to replace a figure stolen decades ago.



SeaChange will increase its capacity for marine conservation, education and restoration by continuing to employ part-time staff for administrative and field work.

Photos: All photos taken by SeaChange staff unless otherwise noted

Cover page: Photo of Richard Elliott in canoe

Pg. 3: Students from the Chinese Youth Leadership Program pouring water onto the Tod Creek Watershed model

Pg. 5: EcoRowing students on Tod Inlet Dock (Staff); Lenny Ross of Strawberry Vale demonstrating rowing technique

Pg. 6: Elementary students rowing in dinghies on the inlet

Pg. 6: Cowichan Valley summer camp youth pick up debris from Genoa Bay; Summer youth help with eelgrass transplant in Genoa Bay; Executive Director telling tall tales to summer camp youth on Thetis Island (Staff)

Pg. 7: Coastal conservationists touring beach near Parksville to discuss Green Shore approaches to erosion

Pg. 7: Community volunteers on Galiano Island mapping intertidal native eelgrass

Pg.8: Beach at Tod Inlet before restoration

Pg. 8: Before, During and After restoration photos of one of the large tracts of land in Tod Inlet formerly covered with Himalayan Blackberries

Pg.9: SeaChange volunteers helping with eelgrass restoration in Saanich Inlet (Mill Bay Marina kindly gave us dock space to work)

Pg. 9: Sediment collector for sampling bottom sediment near eelgrass transplants

Pg. 9: Before and After Marine Riparian Restoration, Roberts Creek, Dianne Sanford

Funding Sources for SeaChange Marine Conservation Society 2015 - 2016

Grants

Environment Canada	Eelgrass restoration
Greater Victoria School District	EcoRowing in SNIDØEŁ
Ministry of Environment	Permits to work in SNIDØEŁ; In-Kind support for Conservation
National Wetlands Conservation Program (NWCP)	Eelgrass restoration
North American Partnership for Environmental Community Action (NAPECA)	Tod Inlet Beach Enhancement
Pacific Salmon Foundation (Salish Sea Marine Survival Project)	Eelgrass inventories, research and restoration
Recreational Fisheries Conservation Partnerships Program	Marine riparian restoration
Service Canada	Summer staffing for Tod Inlet Nature Float

Other Funding

Donations through Canada Helps	Core expenses
BC Parks	In-Kind consultations/permits
CRD Parks	Marine Day at Witty's Lagoon
Horne Coupar Barristers & Solicitors	1% for the Planet - core expenses
Individual donors	Core expenses
<i>Not Just Pretty</i> Clothing Store	1% for the Planet - core expenses
Roy Group	1% for the Planet – core expenses
Private donor	Leveraged funding for summer staff and programming
Sidney Anglers	Eelgrass restoration
Squamish River Watershed Society	Eelgrass restoration/monitoring in the Squamish Estuary
University of Victoria Geography Department	In-kind labour & equipment Coastal Community Mapping & GIS support for the SCWG
User Fees	EcoRowing in SNIDØEŁ, Ethnobotanical tours, beach programs
SCUBA Diving contracts	Eelgrass compensation projects and other contracts

Supportive Local Businesses

Mitchell Farms
Zanzibar Restaurant
Sherwood Marine
Tonelli's Delicatessen
Brentwood Bay Village Emporium
Level Ground Trading
ACE Courier
B & C Food Distributors
Breadstuffs Bakery

Horne Coupar Barristers and Solicitors
Island Blue Print
Mill Bay Marina
Not Just Pretty Modern Clothing
Pixelart Computers
Polster Environmental Services Ltd.
Roy Group
Russell Nursery
Spinnakers