



Making a difference...together

Report #ESP 08-53

**REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE  
MEETING OF WEDNESDAY, 28 MAY 2008**

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**SUBJECT**      **HARBOURS ENVIRONMENTAL ACTION PROGRAM 2007 ANNUAL REPORT**

**PURPOSE**

To present the 2007 achievements of the Harbours Environmental Action program and highlight the accomplishments of the Esquimalt Lagoon Stewardship Initiative (ELSI) and the Gorge Waterway Initiative (GWI).

**BACKGROUND**

In the Core Area Liquid Waste Management Plan (LWMP), the Capital Regional District (CRD) commits to coordinate environmental protection and improvement efforts in Victoria and Esquimalt harbours, Portage Inlet, Gorge Waterway and Esquimalt Lagoon, and to work cooperatively with other harbour groups to achieve the goals of the harbours environmental management strategy (EMS). These commitments are implemented through participating in the Victoria and Esquimalt Harbours Environmental Action program (VEHEAP) and area-based initiatives led by other agencies, facilitating ELSI and GWI, and carrying out special projects. The CRD's involvement in harbour initiatives is carried out under the Stormwater, Harbours and Watersheds program (SHWP).

**2007 Accomplishments**

The 2007 annual reports on the Harbours Environmental Action program, ELSI and GWI are now complete (see attached). The Harbours Environmental Action program report describes SHWP participation in VEHEAP and area-based initiatives, as well as special harbours and watersheds projects that SHWP is involved with. The GWI and ELSI annual reports highlight the many accomplishments of those initiatives and identify their focus for 2008.

Victoria and Esquimalt Harbours Environmental Action Program Committees

VEHEAP is an initiative comprised of the main regulatory and jurisdictional agencies for the harbours working together to protect and improve the environmental quality in Portage Inlet, Gorge Waterway, Victoria Harbour, Esquimalt Harbour and Esquimalt Lagoon. Each agency is responsible to work towards the goals outlined in the harbours EMS. In 2007, SHWP staff:

- continued to foster cooperative relations with senior government departments involved in the harbours by chairing and coordinating the VEHEAP Stewardship committee and participating in the VEHEAP Information Sharing committee
- held discussions with the Greater Victoria Harbour Authority (GVHA) regarding the environmental practices for cruise ships entering Victoria Harbour
- provided coordination and support for ELSI and GWI projects and activities
- provided input to the Department of National Defence (DND) as members of the DND Esquimalt Harbour Steering committee and the DND Esquimalt Harbour Environmental Advisory committee

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**Esquimalt Lagoon Stewardship Initiative**

ELSI is a broad coalition of community and environmental groups, government agencies and First Nations working together to protect, enhance and restore Esquimalt Lagoon and Coburg Peninsula. In 2007, the ELSI partners worked together to:

- prevent further loss and destruction of habitat through implementation of a pilot dune habitat restoration project and continuation of the fish monitoring program
- participate in the review of the City of Colwood Official Community Plan
- finalize and begin implementation of the interim management guidelines for Coburg Peninsula
- work with developers of major construction projects located near the lagoon to promote environmentally protective land uses
- encourage environmentally protective recreational use by facilitating a bird distribution study and proposing limitations to recreational activities on land and water to protect migratory birds and their habitat
- promote lagoon stewardship and education with displays and events
- continue the water quality monitoring program to screen for contaminant inputs

**Gorge Waterway Initiative**

GWI is a collaborative, community-driven group of organizations dedicated to the protection and enhancement of the natural and cultural features of the Gorge Waterway, Portage Inlet and the surrounding watersheds. In 2007, GWI worked together to:

- promote community stewardship and restoration of the waterway through participation in community events along the Gorge Waterway, the continuation of the GWI Speakers Series and the development of three new information sheets about the waterways highlighting First Nations interests, watersheds and water quality, and a "Who do you call?" contact list for the various agencies involved in the harbours
- promote protection of the endangered and threatened wildlife using the waterway by implementing a Purple Martin Nest Box program and by raising concerns regarding the potential impact of a proposed pink salmon net pen fishery at Ogden Point on the spawning population of wild chum and coho salmon and sea-run cutthroat trout that use Colquitz River, Craigflower Creek and the waterway
- promote restoration of the waterway through participation in the Point Ellice House shoreline restoration project to remove invasive plants and replant with native vegetation along 90 meters of shoreline

**Special Projects**

SHWP staff also work on a variety of special projects that contribute to achieving the CRD's harbour commitments in the Core Area LWMP. In 2007, SHWP staff worked to:

- launch an extensive website that describes the major watersheds and harbour areas in the core area and provides information for the public to help protect these areas and minimize stormwater pollution
- merge the Harbours Atlas with other CRD interactive mapping products into one unified viewer and add the estuary habitat data to the intertidal information for the waterway

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- obtain approval to proceed with a project to install green roofs and a living wall on the CRD Headquarters building and to develop a performance monitoring program in partnership with the BC Institute of Technology Centre for the Advancement of Green Roof Technology. SHWP has received \$296,000 from the Union of BC Municipalities New Deal Gas Tax Innovations Fund towards this project.

**CRD Representation on the Greater Victoria Harbour Authority (GVHA)**

On November 22, 2006, the Core Area Liquid Waste Management committee approved an action plan in response to the recommendations of the Scientific and Technical Review Panel (SETAC) and of Jacques Whitford in the audit of the LWMP. The action plan recommended that the same CRD staff member should be the representative on both the GVHA and VEHEAP to better coordinate harbours environmental protection and improvement.

The SETAC report states that, while the CRD coordinates harbour environmental protection and improvement efforts with its partners, it lacks the authority to enforce related LWMP commitments. A CRD staff representative on the GVHA Board will ensure that the CRD LWMP commitments for the harbours are represented and considered on the lands and water lots under the control of the GVHA. The GVHA will also benefit from the knowledge and understanding of the harbour environment, and ready access to CRD environmental information for the harbours. There exists an opportunity to make this change in the representation on the GVHA Board when the term of the current representative expires on December 31, 2008, at which point the CRD Board will need to appoint a new representative to the GVHA.

**ALTERNATIVES**

1. That the CRD staff member representing the CRD on VEHEAP be appointed to the GVHA.
2. That a member of the public be appointed as the CRD representative on the GVHA.

**FINANCIAL IMPLICATIONS**

Programs are funded under existing core budgets and through grants and project funding provided by external agencies.

**ENVIRONMENTAL IMPLICATIONS**

Appointing a CRD staff member to represent the CRD on both the GVHA and VEHEAP will provide an important link between these two groups. This will provide a mechanism to ensure that the CRD LWMP commitments for the harbours are considered on the lands and water lots under the control of the GVHA. In addition, it will promote environmental protection and improvement in this area of the harbours.

**SUMMARY/CONCLUSIONS**

During the period of January to December 2007, SHWP staff worked effectively with the community to protect and improve the harbours. The integrated approach of working with the community and municipalities is successfully making progress towards implementing the harbours' EMS, achieving VEHEAP's goals and helping to achieve CRD commitments identified in the Core Area LWMP. In particular, the achievements of GWI and ELSI have actively engaged local residents, community and environmental organizations, local stakeholders and government agencies and have provided a more effective method for dealing with harbour environmental issues.

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Successful environmental management of the harbours requires the continued cooperation, coordination and commitment of many stakeholders and government agencies responsible for the harbours' environmental management. This will be further improved by strengthening the relationship between VEHEAP and the GVHA by appointing the same CRD representative to both groups.

**RECOMMENDATIONS**

That the Core Area Liquid Waste Management committee:

1. receive the report, *Capital Regional District Harbours Environmental Action Program 2007 Annual Report*, for information; and
2. recommend to the Board that, to improve the effectiveness of the delivery of the Capital Regional District's (CRD) commitments under the harbours environmental action component of the Core Area Liquid Waste Management Plan, the CRD staff member representing the CRD on the Victoria and Esquimalt Harbours Environmental Action program be appointed to the Greater Victoria Harbour Authority.

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Laura A. Taylor, M.Sc.  
Senior Manager, Scientific Programs

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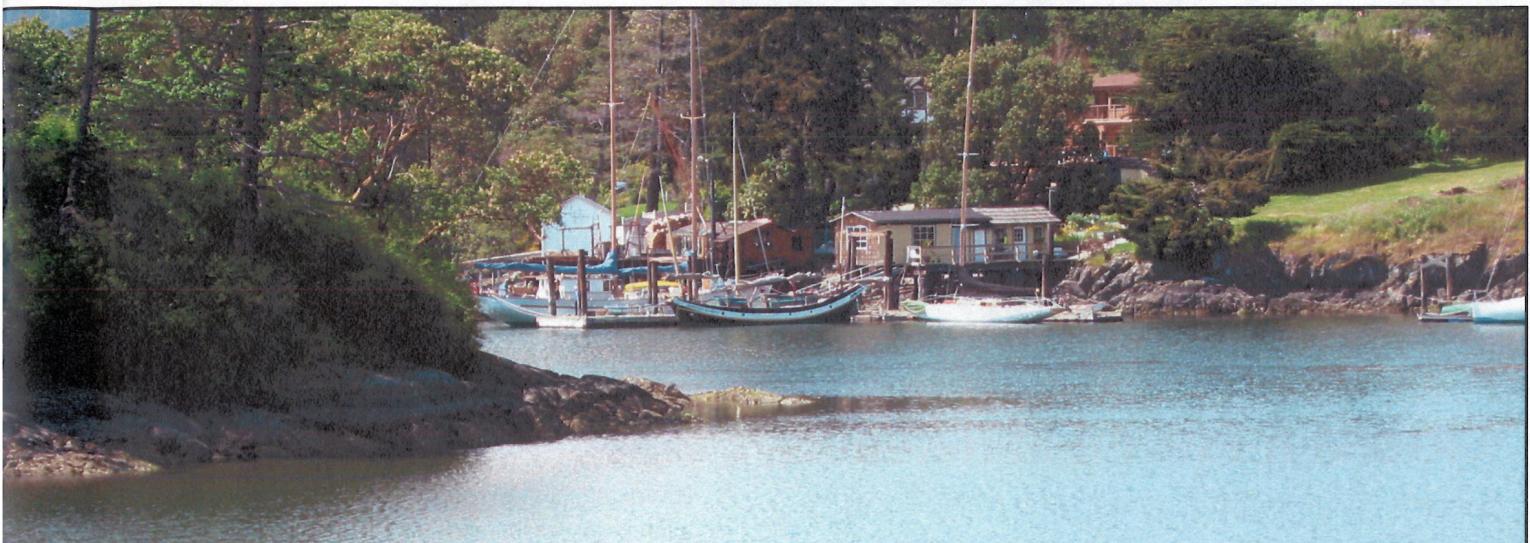
Dwayne Kalynchuk, PEng  
General Manager, Environmental Services  
Concurrence

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Kelly Daniels  
CAO Concurrence

**COMMENTS**

JW:cam  
Attachment: 1



Thetis Cove, Esquimalt Harbour

# Harbours Environmental Action Program

Capital Regional District | 2007 Annual Report

In the Core Area Liquid Waste Management Plan (LWMP), the Capital Regional District (CRD) commits to coordinate harbours environmental protection and improvement efforts in Victoria and Esquimalt harbours, Portage Inlet, the Gorge Waterway and Esquimalt Lagoon. The CRD also agreed to work cooperatively with other harbour groups to achieve the goals outlined in the harbours environmental management strategy (EMS).

These commitments are implemented through participating in the Victoria and Esquimalt Harbours Environmental Action program (VEHEAP) and area-based harbour initiatives led by other agencies, coordinating the Esquimalt Lagoon Stewardship Initiative (ELSI) and the Gorge Waterway Initiative (GWI), and carrying out special projects. The CRD's involvement in harbour initiatives is carried out under the Stormwater, Harbours and Watersheds program (SHWP) which focuses on working with the community and stakeholders to achieve common goals and improve the environmental quality of the harbours and their watersheds.

The 2007 annual report on the harbours environmental action program describes SHWP participation in VEHEAP and area-based harbour initiatives, highlights the accomplishments of ELSI and GWI, and describes special harbours projects that SHWP is involved in.

## Harbour Goals

- advocate environmental protection
- decrease contaminant inputs
- protect and enhance habitat quality
- set environmental quality objectives
- achieve environmentally protective land uses
- monitor environmental quality

CRD



Victoria's Inner Harbour

## Victoria & Esquimalt Harbours Environmental Action Program

VEHEAP is an initiative of the main regulatory and jurisdictional government agencies in the harbours working to protect and improve environmental quality in Portage Inlet, Gorge Waterway, Victoria Harbour, Esquimalt Harbour and Esquimalt Lagoon. Established in 1994 through a memorandum of understanding, the VEHEAP partners agreed to work in a cooperative and supportive fashion towards common goals. In 2000, the partners committed to an Environmental Management Strategy and shared goals for the harbours. These goals became the CRD commitments in the LWMP.

### Information Sharing Committee

The VEHEAP Information Sharing committee advances the implementation of the EMS and the shared harbour goals by providing a forum for member agencies to share information, discuss area-based initiatives and collaborate on appropriate projects and studies. This committee meets twice yearly to share information about the activities of the area-based initiatives and the individual member agencies. The chair of the committee rotates among the member agencies. The CRD participates on this committee and provides regular updates on ELSI, GWI, the VEHEAP Stewardship committee and other CRD harbour-related activities.

### Stewardship Committee

The VEHEAP Stewardship committee develops and coordinates agency programs and activities around shared priorities that promote environmental stewardship of the harbours and their watersheds. This committee, which is coordinated by the CRD, meets quarterly in a forum to promote conservation and ecological values in the harbours, collaborate on environmental projects, facilitate agency support for area-based initiatives and facilitate access to environmental information and tools for the harbours. In 2007, the Stewardship committee initiated discussions with the Greater Victoria Harbour Authority regarding potential environmental issues related to the increased cruise ship traffic in Victoria Harbour.

## Participation in Area-based Initiatives

### Esquimalt Harbour

DND acquired administration and control of the Esquimalt Harbour seabed in the spring of 2005. As part of this transfer, and as per its VEHEAP commitments, DND created a Steering committee consisting of representatives from organizations with an interest in Esquimalt Harbour and an Environmental Advisory committee to provide advice and a forum for collaboration on environmental programs. The CRD participates on both of these committees for Esquimalt Harbour.

### Victoria Harbour

Transport Canada agreed to lead environmental management and planning for the areas over which it has administration and control (Victoria Harbour seabed from Selkirk Trestle to Ogden Point); however, it has not initiated a multi-stakeholder, area-based initiative in Victoria Harbour to date. The CRD holds a seat on the board of the Greater Victoria Harbour Authority. This seat is currently filled by a member of the public.

### Esquimalt Lagoon, Gorge Waterway & Portage Inlet

The CRD provides coordination and support to ELSI and GWI, the community-driven initiatives focused on Esquimalt Lagoon, the Gorge Waterway and Portage Inlet. This involves facilitating and chairing the steering committee, liaising with member groups, managing projects, obtaining external funding and providing support to the working subcommittees. The accomplishments of ELSI and GWI are highlighted in their annual reports which accompany this report.

## VEHEAP Partners

Capital Regional District (CRD)\* | BC Ministry of Environment (MOE)\* | Department of National Defence (DND) | Environment Canada (EC)\* | Fisheries and Oceans Canada (DFO)\* | Public Works and Government Services Canada (PWGSC) | Transport Canada (TC)

\*also member of the VEHEAP Stewardship Committee

## Special Projects

### Harbours Atlas

The Harbours Atlas is a web-based information and mapping tool that brings together environmental and land use information for the harbours and their watersheds. Its use promotes well informed, responsible and sustainable land and water use decision making for the harbours and their watersheds. Users are able to retrieve ecological and geographic data from over 70 layers of spatial information, including harbour vegetation, marine fauna, substrates, sensitive shoreline habitats, seasonal bird use and density and underwater videos.

In 2007, the Harbours Atlas was promoted at conferences, outreach events and displays, key information on the estuary habitats was added, and the atlas viewer was integrated into a unified viewer that delivers all available CRD on-line mapping tools. The Harbours Atlas remains widely available, free of charge, at [www.harboursatlas.ca](http://www.harboursatlas.ca).

Green Roof at Burnside Gorge Community Centre



The CRD also works on a variety of special projects that contribute to achieving the harbour commitments in the LWMP, including the Harbours & Watersheds Web site, the Green Roof & Living Wall, and the Harbours Atlas Projects.

### Harbours & Watersheds Web Site

SHWP created an extensive website that provides information about the programs and detailed information about the major watersheds and harbours in the region. The site also provides users with information on how to minimize stormwater pollution and how to protect and restore our terrestrial, freshwater and nearshore marine environments. This site was launched as part of the new CRD website in 2007 - [www.crd.bc.ca/watersheds](http://www.crd.bc.ca/watersheds).

### Green Roof & Living Wall Project

SHWP initiated a project to install a green roof and living wall on the CRD Headquarters building. Green roofs/living walls are environmental building features that create sustainable buildings. They retain rainwater and reduce stormwater runoff, improve energy efficiency and reduce long term energy costs, regulate temperature in and around buildings and increase the life span of a roof. SHWP staff obtained senior management and Board support for the project, completed a preliminary design to determine the feasibility of a green roof, identified roof areas that could support this technology and submitted external funding applications. The CRD received \$296,000 from the Union of BC Municipalities through the New Deal Gas Tax Innovations fund to complete this project.

The CRD Green Roof/Living Wall project will install and monitor an extensive green roof, intensive green roof and living wall on the CRD Headquarters Building. The implementation of this innovative project will provide an example of sustainable building practices and, through a proposed partnership with BCIT Centre for the Advancement of Green Roof Technology, will establish a field testing site to monitor the effectiveness of the technology. The data will provide real-time regional information on the environmental and economic benefits of these innovative technologies.

Upon its completion in 2008, the green roof and living wall will be highly visible to the public and will serve as demonstration for these technologies in the region. Conversion of rooftop areas to green roofs will also significantly reduce the amount of rainwater leaving the CRD Headquarters Building and lessen the impact of stormwater on the harbour environment. Additional benefits of green roofs include heating or cooling savings by insulating buildings, aesthetic benefits, air quality benefits, reductions in the 'urban heat island' effect and providing wildlife habitat in an urban environment.



Westsong Walkway, Victoria Harbour

## An Integrated Approach

During the period of January to December 2007, the CRD worked effectively with municipalities and the community to protect and improve the harbours and their watersheds. This was particularly evident through partnerships such as ELSI and GWI. Through outreach and education, and participation in community monitoring programs, restoration and cleanup projects, these initiatives have actively engaged local residents, community and environmental organizations, local stakeholders and government agencies, and have provided a more effective method for dealing with harbour environmental issues.

Successful environmental management and stewardship of the harbours requires the cooperation, coordination and commitment of many community stakeholders and the government agencies responsible for harbours environmental management. Taking an integrated approach and refocusing efforts to work directly with multi-stakeholder groups that are largely community driven and that include local residents, proves to be an effective approach to watershed and harbour management, and significant progress continues to be made. By working together to provide input into community development and planning process, this approach helps to better meet the needs of the community and serves as an effective structure for the implementation and achievement of the CRD's LWMP commitments and harbour goals.

### For more information contact:

Harbours and Watersheds Coordinator  
625 Fisgard Street  
PO Box 1000  
Victoria, BC  
V8W 2S6  
(250) 360-3065  
[www.crd.bc.ca/watersheds](http://www.crd.bc.ca/watersheds)



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### Important Links:

Harbours Atlas  
[www.harboursatlas.ca](http://www.harboursatlas.ca)

Natural Areas Atlas  
[www.naturalareasatlas.ca](http://www.naturalareasatlas.ca)

Esquimalt Lagoon  
Stewardship Initiative  
[www.elsi.ca](http://www.elsi.ca)

Gorge Waterway Initiative  
[www.gorgewaterway.ca](http://www.gorgewaterway.ca)



ESQUIMALT LAGOON  
STEWARDSHIP INITIATIVE

# 2007 Annual Report

## Our Vision

To protect, enhance and restore the health of Esquimalt Lagoon for future generations of people, plants and animals. (Founded 2001)

## Our Goals

- Promote & support lagoon stewardship & education
- Prevent further loss or destruction of habitat & wildlife
- Reduce contaminant inputs to the lagoon
- Promote environmentally protective recreation uses in the lagoon area
- Promote environmentally protective land uses



## The Esquimalt Lagoon Stewardship Initiative

The Esquimalt Lagoon Stewardship Initiative (ELSI) is a broad coalition of community and environmental groups, institutions, government and First Nations, working together to protect, enhance and restore the Esquimalt Lagoon and Coburg Peninsula.

From ELSI's founding in 2001, a Stewardship Plan for Esquimalt Lagoon provides a framework for a coordinated approach to environmental management. ELSI creates opportunities for collaboration on environmental projects and outreach activities and provides a forum for the exchange and sharing of information.

ELSI is led by a consensus-based steering committee that is responsible for guiding the implementation of the Esquimalt Lagoon Stewardship Plan. Two working subcommittees focus on implementing outreach, education, planning and restoration. ELSI is chaired by the CRD's Stormwater, Harbours and Watershed Program (SWHP). A part-time coordinator, funded through SWHP, initiates and manages projects, seeks funding and coordinates ELSI.

## Accomplishments

In 2007, ELSI:

- presented displays and held events to promote lagoon stewardship and education
- commenced a pilot dune habitat restoration project, supported phase 2 of the Bee Creek restoration project and continuation of the fish monitoring program to prevent further loss and destruction of habitat
- continued the water quality monitoring program to screen for contaminant inputs to the lagoon
- volunteers assisted with a bird distribution study and proposed limitations to recreational activities on land and water to protect bird habitat
- actively participated in the City of Colwood's Official Community Plan (OCP) review process, finalized and began implementation of the Interim Management Guidelines (IMG) for Coburg Peninsula and worked with developers of major projects occurring near the Esquimalt Lagoon to promote environmentally protective land uses.

Above photo: Volunteers planting Dunegrass, *Elymus mollis*, in October 2007, for ELSI's Pilot Dune Habitat Restoration Project.



## ★EcoStar AWARDS

Congratulations to Pacific Centre Family Services for their CRD EcoStar Award in the category of Conservation & Restoration for their restoration of Bee Creek



Bee Creek 2005 prior to restoration



Bee Creek 2007 post restoration

## ELSI Committee

- Canadian Wildlife Services
- Capital Regional District Environmental Services
- City of Colwood
- Colwood Association for Smart Growth
- Esquimalt Lagoon Enhancement Association
- Habitat Acquisition Trust
- Local residents
- Pacific Centre Family Services
- Parks Canada
- Royal Roads University
- Victoria Natural History Society
- West Shore Chambers of Commerce

## Advisory Members

- BC Ministry of Environment
- Capital Regional District Parks
- Department of National Defence
- Environment Canada
- Esquimalt Nation
- Fisheries and Oceans Canada
- Songhees Nation

## Stewardship & Education

ELSI hosted and participated in a number of events encouraging stewardship of and promoting education about the Esquimalt Lagoon. At the Fort Rodd Hill and Fisgard Lighthouse National Historic Site's annual Canada Day Celebration, ELSI showcased a new outreach display, children's art activity table and the Esquimalt Lagoon watershed interactive model. ELSI also conducted the annual Shorekeepers event, monitoring the mouth of Colwood Creek for change over time.

## Pilot Dune Habitat Restoration Project

ELSI commenced a Pilot Dune Habitat Restoration project along the Coburg Peninsula. The goals of the project were to: restore native dune habitats through the establishment of demonstration restoration plots, realign beaches with access points, monitor the effectiveness of restoration, and increase stewardship and awareness of dune habitats.

In consultation with ELSI, the City of Colwood Public Works contributed to the project by

defining beach access paths, moving benches and narrowing some parking areas, resulting in 1.6 hectares of reclaimed dune habitat. ELSI, school groups, community groups and individual volunteers then planted nearly 2000 native dune plants and shrubs in the plot and decommissioned parking areas, creating a total of 6.4 hectares under restoration. Students from Camosun College's Environmental Technology program and the University of Victoria's Restoration of Natural Systems program participated in ecological analysis, monitoring and report writing.

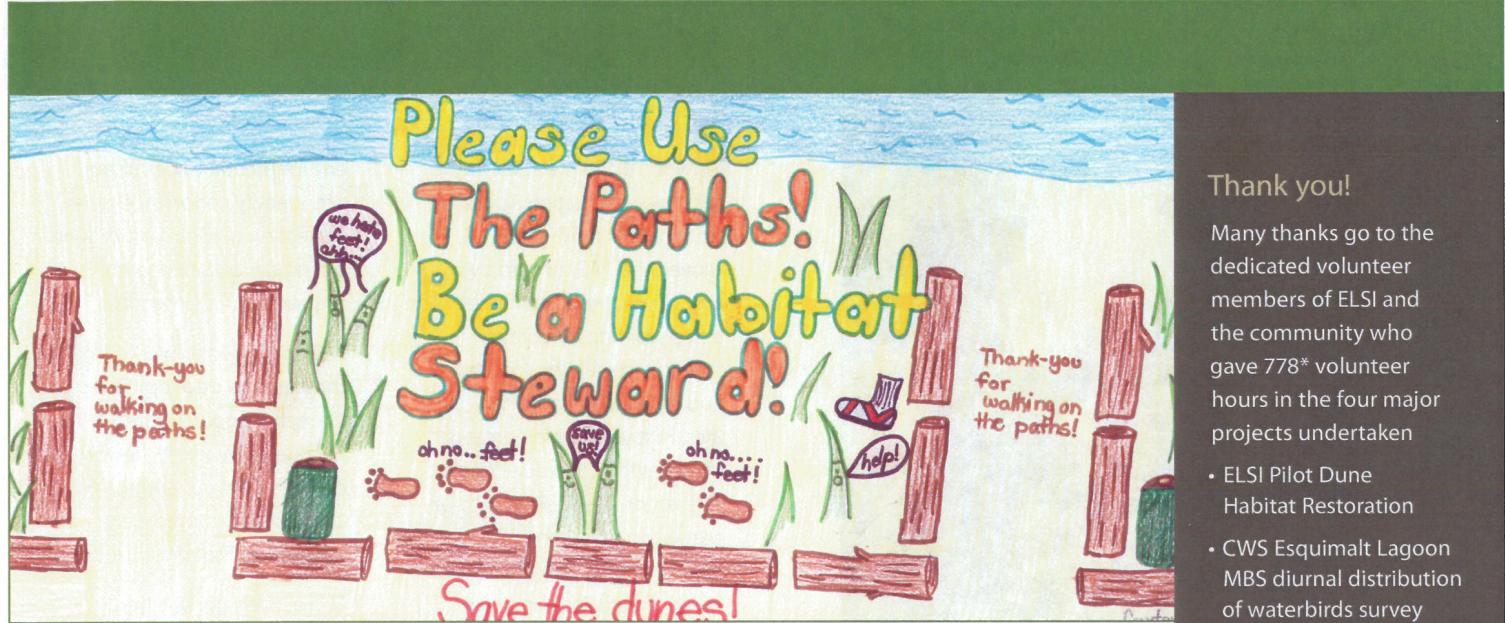
## Fish Monitoring Program

ELSI volunteers completed their fourth year of the community Fish Monitoring program in Colwood

Creek and Bee Creek. The purpose of the program is to determine the types of fish that are using the creeks and to assess the restoration potential of the creeks. ELSI supported the Bee Creek Restoration project and continued after restoration to monitor the creek. At the end of 2007, ELSI produced a report consolidating data collected from 2004 through to 2007. The fish monitoring has confirmed that there are resident populations of Cutthroat Trout throughout the lower reaches of Bee Creek and Colwood Creek. Coho Salmon were also found in Colwood Creek and are anticipated to be found in Bee Creek now that the two year restoration project, including removal of dams on Bee Creek, is complete.

Camosun College, Environmental Technology students conducting vegetation transects for the ELSI Dune Habitat Restoration project





Grade 6, Colwood Elementary student drawings will be placed along the dune restoration areas as interpretive signs.

## Water Quality Monitoring Program

ELSI completed its fifth year of water quality monitoring in its volunteer-run contaminants monitoring program in Esquimalt Lagoon. The aim of this program is to monitor the long-term health of Esquimalt Lagoon and its associated wildlife habitat by observing water quality parameters and events leading up to and following turnover events (periods of inversion where the water becomes anoxic). ELSI partnered with students from Camosun College's Environmental Technology Department to analyze the data (2003–2007) and propose recommendations to the monitoring program.

Although a decline in fecal coliform bacteria levels at many sampling locations was noted in 2006 (shortly after the sewers were brought to the area), in the summer and autumn of 2007, the lagoon experienced a visually strong, and long in duration, discolouration (red and milky turquoise) in large

parts of the lagoon, depicting an unhealthy aquatic environment. Partnerships with local universities were discussed to pursue further investigation into aquatic health of the lagoon.

## MBS & Disturbances to Birds

Esquimalt Lagoon and Coburg Peninsula is one of seven federal Migratory Bird Sanctuaries (MBS) in British Columbia and one of the very few across Canada that includes a 100 metre terrestrial buffer. The Esquimalt Lagoon MBS is also a high use recreation area, both on the water and on the land portion of the MBS. Water activities include both private and commercial motorized and non-motorized watercraft. Land activities include a road classified as a 'commuter route' with high amounts of pedestrian traffic, as well as dogs on and off leash. These various forms of recreational use of the MBS are expected to rise sharply with the growth of high density development directly adjacent to the lagoon and the popularity

of the area with CRD residents.

Over the past two years, an alarming number of local residents expressed concern to ELSI regarding recreation within the MBS causing disturbances to birds. The Canadian Wildlife Services (CWS), the federal body that oversees MBS, attended the first annual ELSI Advisory committee meeting at ELSI's request to discuss concerns with disturbances to birds. In response, CWS agreed to fund and conduct a study examining the diurnal distribution of waterbirds during winter months in order to gather data to support the establishment of Voluntary Boating Exclusion Areas. At the same meeting, the City of Colwood agreed to investigate implementing key actions from within the Interim Management Guidelines to uphold the MBS.

## Interim Management Guidelines for Coburg Peninsula

In February 2007, the City of Colwood adopted the Interim Management Guidelines (IMG)

## Thank you!

Many thanks go to the dedicated volunteer members of ELSI and the community who gave 778\* volunteer hours in the four major projects undertaken

- ELSI Pilot Dune Habitat Restoration
- CWS Esquimalt Lagoon MBS diurnal distribution of waterbirds survey
- ELSI Community Fish Monitoring
- ELSI Community Water Quality Monitoring

\*this does not include volunteer hours in regular ELSI meetings or hours by students for class projects and reports

## Special thanks to:

1. Evergreen for their \$8000 contribution to the Dune Habitat Restoration project
2. City of Colwood for their \$25 000 in staff time and materials for contribution towards the Dune Habitat Restoration project
3. CWS for sponsoring and conducting the MBS diurnal distribution of waterbirds survey
4. Students and professors from University of Victoria, Restoration of Natural Systems Program and Camosun College, Environmental Technology Program who gave of their time.



volunteers with fish monitoring

for the Coburg Peninsula, the sand and gravel spit that encloses Esquimalt Lagoon. The IMG envisions the Coburg Peninsula as an outstanding example of an ecologically diverse barrier spit where people will enjoy a variety of recreational activities, while treating the natural and cultural features with respect.

Colwood appointed ELSI as the IMG Implementation Advisory Committee. In this role, ELSI moved the IMG forward by working with Colwood staff to develop a five year implementation strategy, identify budget items and embark on coordinated activities. First year implementation activities included dune habitat restoration, discussions with key parties on protection of bird and wildlife habitat and the development of traffic calming plans.

environmental values of the site, identify concerns, ensure protection of Esquimalt Lagoon during development and ensure its future integrity.

ELSI continued to work with the Aquattro development (formally Lagoon Estates), a 19 hectare, high density, residential development currently under construction immediately adjacent to Esquimalt Lagoon.

ELSI actively participated in Colwood and Langford's Official Community Plan (OCP) review. ELSI submitted a coordinated letter to Colwood Council outlining recommendations for items pertaining to protection of Esquimalt Lagoon and the Coburg Peninsula, encouraging Council to incorporate several strategies to protect the integrity of the Esquimalt Lagoon.

## Land Use & Development

An 11 hectare parcel of land immediately adjacent to Esquimalt Lagoon, the former Pacific Centre Family Services site, was sold to a developer. ELSI was approached by the new owner/developer, Corporate Hospitality Development, for consultation. ELSI met with the developer onsite to discuss

For more information, contact:

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## Outlook for 2008

In 2008, ELSI will focus on:

- celebrating the lagoon with an "Esquimalt Lagoon Festival" on May 18th, 2008, to promote lagoon stewardship
- offering workshops and hosting outreach events to the public, Colwood staff and members of ELSI to promote education
- completing a successful Pilot Dune Habitat Restoration project (2007-08) to prevent further loss of habitat
- continuing ELSI's Fish Monitoring program and seeking advice from the Department of Fisheries and Oceans (DFO) on how to proceed with effective monitoring
- continuing with ELSI's Water Quality Monitoring program and partnering with Camosun College and University of Victoria to monitor contaminant inputs and pursue further investigation into aquatic health of the lagoon
- funding a spring study to assist CWS and the City of Colwood on the issue of disturbances to birds in the MBS so that promotion of protective recreation uses may be implemented
- promoting environmentally protective recreation on the lagoon with the placement of signs, including dog on-leash requirements and Voluntary Boating Exclusion Areas (VBEA)
- advising and working with the City of Colwood on implementation of the IMG, including traffic calming, bylaws and signage
- continuing to examine Colwood's OCP review and conducting coordinated reviews of development occurring near the lagoon shoreline or creeks to ensure planning and development efforts consider the health of the lagoon environment.



GORGE WATERWAY  
INITIATIVE

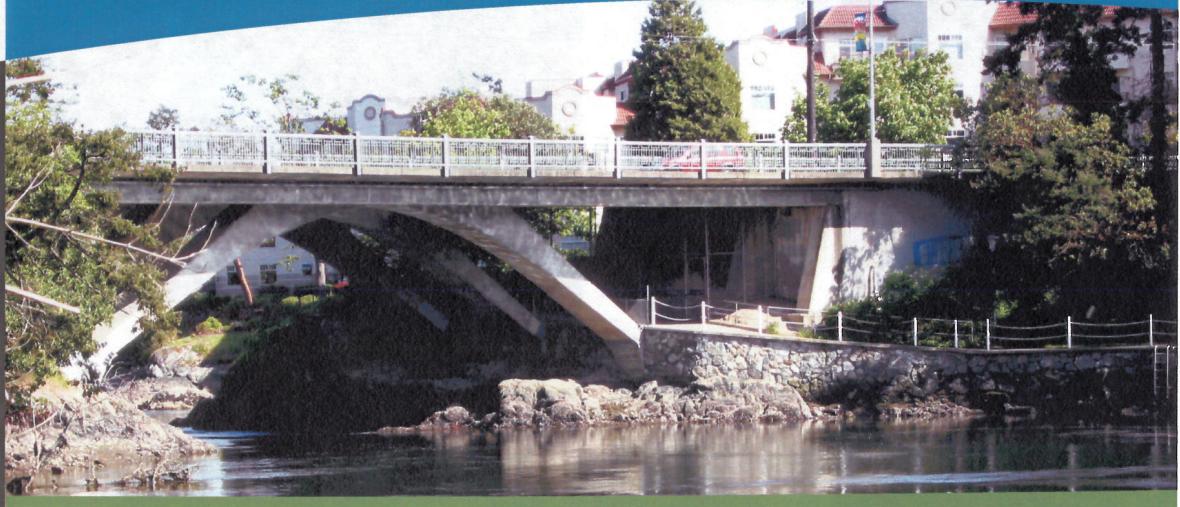
# 2007 Annual Report

## Our Vision

Promotion of a healthy environment for all life in the Gorge Waterway Portage Inlet, and their watershed and communities for the well-being of present and future generations.

## Our Goals

- provide a forum for the exchange and sharing of information regarding the Gorge Waterway, Portage Inlet and their watersheds
- promote education and awareness programs on appropriate land and water use
- establish and encourage activities that show care and concern for the natural environment



## The Gorge Waterway Initiative

### Background

The Gorge Waterway Initiative (GWI) is a collaborative, community-driven group of organizations working to protect, enhance and restore the natural and cultural features of the Gorge Waterway, Portage Inlet and the surrounding watersheds.

The GWI was established in 2005 when organizations with a common interest in the waterways and their watersheds agreed to work together. As a 'group of groups' that represents a broad array of interests, members of the Gorge Waterway Initiative (GWI) includes representatives from community and environmental groups, landowners, local governments and local government environmental advisory committees, and recreational users. Collectively, they act as a community-based, multi-stakeholder body working to address environmental issues in the waterways and their watersheds and to foster partnerships between municipalities, community groups, landowners, universities and colleges and others.

The GWI partners created a common vision and goals for the waterway and established a community stewardship strategy and a communications plan for the initiative. The committee, which operates by consensus, meets monthly to facilitate program implementation and to share information. Working subcommittees are established when needed to move GWI projects and activities forward. The GWI is facilitated by the CRDs Stormwater, Harbours and Watersheds program and a part-time coordinator position has been established to provide administrative support and to manage projects.

During 2007, the GWI improved community appreciation and stewardship for the waterway through the development of outreach materials and at community events, initiated projects to restore habitat along the waterway and worked to protect threatened and endangered wildlife on the waterway.

### Initiatives and Projects

#### Community Events

The GWI hosted two free, public Speakers Series events about the Gorge Waterway. The first event featured Yogi Carolsfeld of World Fisheries Trust and Tom Rutherford of the Department of Fisheries and Oceans speaking about the fish that use the

Above photo: The landmark Gorge Bridge spans the narrows of the Gorge Waterway

## GWI Partners

### Community Members

- Burnside Gorge Community Association
- Friends of Cuthbert Holmes
- Gorge Tillicum Community Association
- Gorge Waterway Action Society
- Portage Inlet Protection Society
- Portage Inlet Sanctuary Colquitz Estuary Society
- POLIS Institute on Ecological Governance, University of Victoria
- Seachange Marine Conservation Society
- Seaquaria in Schools
- The Land Conservancy
- Habitat Acquisition Trust
- Veins of Life Watershed Society
- Victoria Canoe and Kayak Club
- Victoria West Community Association
- World Fisheries Trust

### Local Government Members

- Capital Regional District
- City of Victoria
- Victoria Shoreline and Environmental Advisory Committee
- District of Saanich
- Township of Esquimalt
- Esquimalt Parks and Recreation Commission
- Town of View Royal
- View Royal Parks, Recreation and Environment Advisory



Aerial view of the Gorge Waterway

waterway and nearby creeks. They discussed the local and global conditions that are impacting local fish populations and how our community can help protect these species. The second event, entitled "Underwater World of the Gorge," featured marine biologist Kitty Lloyd, Cathy Carolsfeld of the Seaquaria in Schools program, and Jody Watson, CRD Harbours and Watershed coordinator.

They explored the underwater habitats in the Gorge and the fascinating creatures that live there. A live aquarium full of species in the Gorge was set up for the public to discover these wonderful creatures. Both events were attended by more than 70 members of the public.

The GWI partners participated in the Vic West Community Fest and the Canada Day Picnic on the Gorge Waterway.

The GWI brought the interactive model of the watershed that drains to Portage Inlet and the Gorge Waterway in conjunction with the GWI display

and the Seaquaria live marine touch tank. The watershed model demonstrates how and where pollution occurs around the watersheds and the waterway, promotes watershed awareness and aquatic stewardship, and educates children and adults on things they can do to help protect and restore our waterways.

### Outreach Tools

The GWI is interested in promoting community stewardship and restoration of the waterway and focused much effort in developing outreach tools and events to achieve this goal.

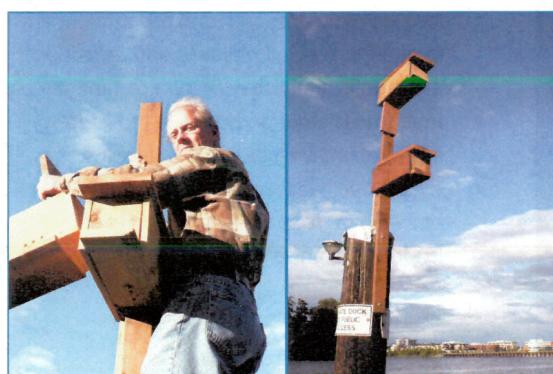
The GWI partners are developing infosheets that provide more detailed information about important ecological and cultural values of the waterway and offer

tips to help waterway users and residents protect those features. In 2007, three new information sheets were developed that highlight First Nations, which connection to the waterway, the watersheds and the water quality in the Gorge and a "Who Do You Call" contact list for the appropriate authority for things like oil spills, wildlife and fisheries concerns and bylaw infractions.

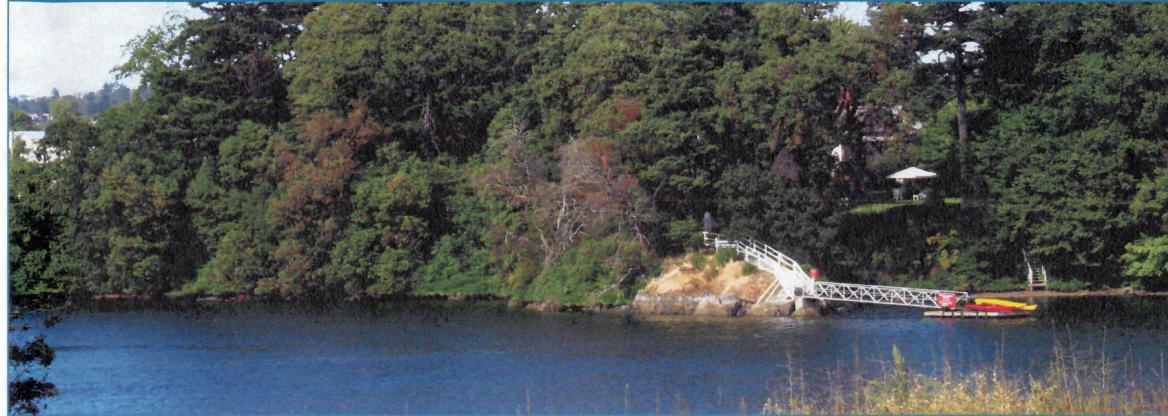
The GWI continued work on an extensive website for the initiative that provides links to detailed information about the history and ecology of the Portage Inlet and the Gorge Waterway and to community stewardship information. Visit us at [www.gorgewaterway.ca](http://www.gorgewaterway.ca)

### Purple Martin Nest Box Program

The GWI is helping reestablish nesting colonies of Purple Martins (*Progne subis*) along the Gorge Waterway. Historically, Martins bred in Vancouver and the Lower Fraser Valley and



Volunteer working on the purple martin nest box program



Point Ellice House woodland shore restoration site (photograph by Kitty Lloyd)

eastern Vancouver Island from Sooke to Campbell River; today they are restricted to six sites on Vancouver Island (Victoria Harbour, Esquimalt Harbour, Cowichan River Estuary, Nanaimo River Estuary, New Castle Island and Ladysmith Harbour).

Purple Martins are currently on the BC Environment Wildlife Branch Red List as a candidate for threatened or endangered status due to its small population size, its historical decline in numbers and range, and the continuing loss of its nesting habitat. An active program of nest box establishment and maintenance is considered critical for their survival in the province.

The GWI initiated a nest box establishment program to install purple martin nest boxes at four new locations along the waterway. Through this program, the GWI provides willing homeowners with nest boxes, helps to install them in the appropriate location and provides training on nest box maintenance. The homeowner is responsible for the annual maintenance which includes cleaning the nest boxes,

plugging the entrances in the fall to prevent starling or sparrow from taking over the nest, and reopening the nest when the martins return in the spring.

In 2007, the GWI identified potential locations for nest box placement and discussed the program with interested homeowners. Four purple martin nest boxes were installed on the docks of an eager homeowner on the Lower Gorge. The hope is that young adult martins from the successful nest site at the Gorge Rowing Centre will use this new site in 2008.

### Point Ellice House Shoreline Restoration

The GWI is working with the Capital Mental Health Association and the Point Ellice House (PEH) Society to restore native vegetation along 90 m of shoreline at Point Ellice House historic site. The restoration site a steeply sloped natural shoreline with pocket beaches and rocky outcrops along the Gorge Waterway and is a unique remnant of the natural arbutus, Douglas fir, big leaf maple for-

est ecosystems that historically lined the shores of the Gorge.

The forest is nearing the end of its life and the native woodland understory is severely overgrown with invasive ivy, holly, laurel and periwinkle. Dense stands of ivy overhanging the shoreline crowd out marine grasses and compromise the stability of the clay banks. The objectives of the restoration project are to create an overstory with trees of multiple age classes, remove the invasive species, and replant native understory vegetation and ground cover to improve the biodiversity and ecological functioning of the site.

In 2007, the partners completed the inventory and mapping fo the site, developed a restoration plan, completed an Heritage Alteration permit and submitted funding applications to continue with the next phases of the project.

### Net Pen Fishery

In 2007, the Gorge Waterway Initiative initiated discussions with the Amalgamated Salmon Enhancement Society, the prov-

The Gorge Waterway Initiative has an area of interest that includes the Gorge Waterway, a six-kilometre arm of the sea that stretches from Victoria Harbour to the Craigflower Bridge, Portage Inlet and their watersheds. Spanning four municipalities – Victoria, Saanich, Esquimalt and View Royal – the area is a tidal estuary and a federal migratory bird sanctuary that supports a biologically diverse population of plants and animals.



Kayakers enjoying the Gorge Waterway

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incial Ministry of the Environment and Department of Fisheries and Oceans regarding a pink salmon net pen that is proposed for Ogden Point, Victoria Harbour. The objectives of the proposed net pen are to revitalize a near-shore salmon fishery, encourage renewed public interest in fishing and promote community involvement with salmon. The GWI raised concerns regarding the protection of the existing salmon and herring stocks, and the potential establishment of pink salmon run in local creeks.

The waterway provides important eelgrass and estuary habitats which function as nursery and rearing habitat for existing runs

of wild coho and chum salmon, and sea-run cutthroat trout. Two streams that flow into Portage Inlet – the Craigflower Creek and the Colquitz River – support spawning populations of these fish which is a rare asset for urban streams.

Pink salmon have always migrated along the Victoria waterfront on their way to the Fraser River; however, they have never spawned in our local creeks. The proposed net pen at Ogden Point raises a major concern that the fry, which imprint to their release site, will return to Ogden Point in search of a creek to spawn.

Colquitz River supports spawning populations of wild salmon and cutthroat trout (photograph by Rob Boech)



The GWI has requested assurance from senior levels of government that the release of pink salmon will not have a negative impact on native salmon populations in local creeks.

Consideration of the proposed net pen fishery was voluntarily delayed by the proponents until further consultation with local groups was completed and a response from senior levels of government received.

## Outlook for 2008

In 2008, GWI will focus on:

- ongoing communication and outreach with waterway and watershed residents
- promoting activities that engage the community in stewardship of the Gorge Waterway
- obtaining funds to implement the Point Ellice House Shoreline Restoration project

- installing Purple Martin nest boxes at three more sites in cooperation with willing property owners
- consulting with senior levels of government and the Amalgamated Conservation Society regarding the concern on the proposed pink salmon net pen
- providing coordinated input into the review of Saanich Official Community plan.