



## **Green Shores Coastal Development Rating System Demonstration and Training Project**

### **PROJECT SUMMARY**

**May 2014**



## Executive Summary

The Green Shores™, Coastal Development Rating System (CDRS) Demonstration and Training Project demonstrated the innovative CDRS for Green Shores provided professional development training and community outreach for Green Shores, and took some initial steps in developing an effective business model for the CDRS certification process. Quantitatively, the project resulted in using the CDRS on three projects, involved more than 150 professionals and community decision-makers in training and assessing the utility of the CDRS, and it created four forums for community, government and shore professionals to learn about and discuss how to use the CDRS to meet changing conditions on our shores. Overall, this project took a firm step towards increasing the utility of the CDRS by assessing its processes and by providing forums for discussion of its benefits, challenges and most importantly, how the CDRS can be integrated with current planning and regulatory requirements.

## Introduction

The Stewardship Centre for BC (SCBC) is an organization dedicated to creating new knowledge and tools based on sound science and scientific research since 1994. SCBC provides technical guidance to audiences including consulting professionals, government planners and policy makers, land owners and land use managers involved in environmental decision making. SCBC is a registered not-for-profit organization based in British Columbia.

The Green Shores program was initiated by the SCBC in 2005 with multiple funding partners.<sup>1</sup> Green Shores promotes healthy shore environments that provide goods and services of significant environmental, economic and social value to coastal communities. It encourages project design that recognizes the natural features and functions of coastal ecosystems and connects people with the shore environment. Green Shores also aims to reduce risk to shoreline property and infrastructure by accounting for the dynamic nature of coastal environments and projected changes to that environment. A major component of Green Shores is the Coastal Development Rating System, a tool intended for use by designers, builders and owners to guide Green Shores design and assess design performance. The CDRS applies to multi-family residential and commercial waterfront development projects as well as to infrastructure development (such as public walkways) and shore protection works in public spaces (parks and recreational areas). It is voluntary and relies on support from industry, government, non-government organizations, building owners and the building sector for its adoption. The CDRS is intended to be applicable to all coastal systems and could be national or international in scope.

This project undertook to demonstrate the assessment and certification under the CDRS of three existing or proposed shoreline development projects.

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<sup>1</sup> We thank the following the following organizations for their contributions to the Green Shores program: Bridge Coastal Legacy Fund/BC Hydro; BC Ministry of Environment; Real Estate Foundation BC; Comox/Strathcona Regional District; District of Squamish; Ducks Unlimited; Environment Canada, Eco Action; Canadian Wildlife Service, Environment Canada; Georgia Basin Ecosystem Initiative, Environment Canada; Fisheries and Oceans Canada; Habitat Conservation Trust Fund; Sunshine Coast Regional District; Natural Resources Canada

## Project Objectives

- To conduct Green Shores pilot certifications on three shoreline developments and develop case studies
- To provide Green Shores professional development training and outreach
- To research development of a sustainable business model for Green Shores CDRS
- To promote of Green Shores as a preferred standard for shoreline design and certification in British Columbia, Canada and beyond
- To increase the uptake of Green Shores principles, practices and standards at the community level in Canada

## Project Methods and Results

### Green Shores Pilot Certification – Case Studies

Three projects were selected by SCBC for pilot certification:

- Deep Bay Marine Research Station, Vancouver Island University
- Jericho Beach Park, Vancouver Parks Board
- Squamish Oceanfront Phase One, Squamish Oceanfront Development Corporation.

Each project was assessed for certification by a Green Shores verifier team, working closely with the SCBC and the project proponent. Information on the project was collected by the proponent, using the CDRS Guide and Template and then submitted to the verifier team for assessment. The discussion of the results may be found in the Discussion section below.



*Deep Bay Marine Station, Vancouver Island University; Bowser, BC*



*Jericho Beach Wharf Restoration; City of Vancouver, Parks Board, Vancouver, BC*



*Squamish Oceanfront Development; Squamish, BC*



## Professional Development Training and Outreach

Four workshops were held in the fall of 2013<sup>2</sup>. Workshop participants had the opportunity to learn about and discuss Green Shores tools such as the Coastal Development Rating System and its application; get updates on the Greening Shorelines, Enhancing Resilience: An evaluation of the effectiveness of Green Shores approaches and Green Shores for Homes projects; as well as share experiences with Green Shores and other shoreline initiatives.



*Vancouver Parks Board biologist, Nick Page, gives a tour of the Jericho Beach Green Shores project to workshop participants, November 5, 2013*

At the Deep Bay and Vancouver workshops, there was also the opportunity to take an optional tour of a Green Shores project located nearby.

### Workshop Evaluation

Workshops were evaluated by both informal and formal methods. In general, all workshops received positive feedback and had lively discussions and questions/answers periods.

With 80-90% of workshop participants indicating that the workshops were very useful, some feedback included:

“... Examples were varied, relevant and gave much food for thought ... as there are many aspects from policy, law, risk, science, and steps to apply.”

“So valuable to learn of CDRS examples and challenges facing local government and developers... and to learn more about Green Shores for Homes.”



**PREPARING FOR CHANGE:** DG Blair [from left], executive director of the Stewardship Centre for British Columbia, shows Mary James, a Powell River resident, some of the information provided during a presentation about the impacts of sea level rise.

<sup>2</sup> Courtenay, BC – October 8, 2013; Deep Bay Marine Station, Bowser, BC – October 9, 2013; Powell River, BC – October 10, 2013; Vancouver, BC – November 5, 2013

“Excellent mix of perspectives; great presentations; tangible examples; sharing of challenges (candidly); discussion of next steps and where this could go.”

A number of people indicated that the diversity of participants (local government, community organizations, and professionals) was beneficial to the discussion at all workshops.

The challenges to implementing Green Shores identified by **most** workshop participants included:

- Need for property owner buy-in
- Need for more “Green Shores 101” education and outreach to get public, staff and council on-side
- Project budgets – perceived added expense, affordability of Green Shores
- Need for Green Shores for Homes in addition to CDRS.

Other issues identified by a number of participants included the lack of understanding and support from governments (all levels) for Green Shores and the lack of implemented (yet) incentives for Green Shores. Finally, one participant commented, “these (workshops) are needed on a regular basis. Local governments are finding this a very challenging area and these meetings provide a secondary but important role of collaboration with colleagues and support for pursuing issues that often have limited local support.”

In addition to workshops, the SCBC designed and implemented a communications and outreach plan that consisted of an updated GS website, e-newsletter sign-up list, Linked-In Green Shores group, SCBC newsletters, Fact Sheets, and participation in other partner workshops and working groups (Metro Vancouver Waterfront Initiative, Green Shores for Homes Steering Committee, West Coast Environmental Law, SEP Community Workshop).

- ✓ *Successfully developed Green Shores workshops for professionals, local government, communities, landowners, stewardship groups, and the public with very positive results.*
- ✓ *Successfully tested ratings systems with feedback by both project proponents and consultant teams*
- ✓ *Two Green Shores developments have been rated via GS and can be used for demonstration, education and promotional purposes by project proponents/Green Shores/SCBC/ and funders*
- ✓ *Increased interest in Green Shores from local, provincial, national and international shore design community and associated professionals*
- ✓ *Increased ability to attract partners and associates*
- ✓ *Increased contribution to BC’s reputation for innovative technical achievement in the field of environmental sustainability.*

## Discussion

There are four main areas where we gained insights through the CDRS demonstration pilot project:

- GS Credits and Requirements
- GS Submittal Template (format, ease of use)
- Professional Training, Education and Outreach
- GS CDRS Rating System and Green Shores Program implementation

### CDRS Credits and Requirements

In 2010, Green Shores completed the operational version of the Coastal Development Rating System. It was developed after extensive consultation with coastal professionals and pilot testing on a number of coastal development projects. The Green Shores CDRS employs the use of prerequisites and credits that are described in the guide, Coastal Development Rating System, Version 1.0 (March 2010) and its accompanying submittal template, both of which are available on the Green Shores website [www.greenshores.ca](http://www.greenshores.ca)

All prerequisites and credits support the four Green Shores principles to promote sustainable use of coastal ecosystems through planning and design that:

- Preserves the integrity or connectivity of coastal processes.
- Maintains or enhances habitat diversity and function.
- Minimizes or reduces pollutants to the marine environment.
- Reduces cumulative impacts to the coastal environment.

Prerequisites	
Prerequisite 1	Siting of Permanent Structures
Prerequisite 2	Conservation of Critical or Sensitive Habitats
Prerequisite 3	Riparian Zone Protection
Prerequisite 4	Conservation of Coastal Sediment Processes
Prerequisite 5	On-Site Environmental Management Plan

Credits		
Credit 1	Site Design with Conservation of Shore Zone	1 to 3 points
Credit 2	Shore Friendly Public Access	1 point
Credit 3	Re-Development of Contaminated Sites	1 point
Credit 4	Climate Change Adaptation Plan	1 to 5 points
Credit 5	Rehabilitation of Coastal Habitats	0.5 to 4 points
Credit 6	Rehabilitation of Coastal Sediment Processes	2 to 3 points
Credit 7	Enhanced Riparian Zone Protection	0.5 to 4 points
Credit 8	Light Pollution Reduction	1 point
Credit 9	Integrated Stormwater Planning and Design	1 to 4 points
Credit 10	Innovation	1 to 2 points
Credit 11	Outreach and Public Education	1 point

Overall, feedback on the prerequisite/credits is they offer clear, quantifiable criteria for projects. However, there was multiple commentaries by both the proponents and verifier teams that the documentation required to verify prerequisite/credits achieved may need some adjustment to meet the ideal as outlined below.

#### CDRS Guide and Submittal Template

Most of the feedback centred on the submittal template rather than the CDRS guide. All three proponents found the submittal template onerous to use. As a result, the consultant verifier teams completed the template for the proponents. Some suggestions for improvement for the template included:

- replace template with new set of Proponent Guidelines
- list typical documents based on those normally required by a shoreline development linked to each pre-requisite or credit
- identify specific areas where GS documentation may vary from document standards for shoreline projects
- avoid overly detailed prescription of methodologies
- include simple summary checklists to assist proponent in compiling the required information
- signed certifications should not be required beyond those already required for project development.

#### Professional Training, Education and Outreach

Training, Education and Outreach involved more than 150 professionals and community decision-makers in training and assessing the utility of the CDRS, and it created four forums for community, government and shore professionals to learn and discuss how to use the CDRS to meet changing conditions on our shores. A new Green Shores website [www.greenshores.ca](http://www.greenshores.ca) was developed which contains a gallery of Green Shores case examples, searchable by shoreline type. It is hoped to continue



to add to the gallery over time – highlighting Green Shores champions and communities that are implementing soft shore approaches to coastal development.

The project demonstrated the application of the CDRS in the field and also, very importantly, provided the opportunity to showcase the resulting case examples and the leadership of the proponents to an audience of professional peers, practitioners and decision-makers who have been following the development of the Green Shores project tools and resources. As a result, there is increased interest to actively implement Green Shores at the individual project planning and local government regulatory level as demonstrated by three communities coming forward as communities interested in participating in our 2014 Green Shores for Homes BC Pilot project that will utilize CDRS and other Green Shores tools and resources.

### Green Shores Program implementation

At the conclusion of the CDRS pilot, the consultant teams all commented on overall use of the Green Shores CDRS Rating System. All agree that overall, the Green Shores program has benefits – especially the clear, quantifiable criteria for projects undertaking the Green Shores certification process. The Green Shores rating system is currently formatted in a structure similar to LEED™. Because this process requires independent verification, it is more onerous and costly to administer than a ‘good faith’ program that simply requires applicants to fill in an unverified and unverifiable checklist. As the GS program is voluntary, it provides the option for regulatory authorities to make it mandatory in their jurisdictions if they wish to. The voluntary nature of the initiative means that it is perceived as industry-driven rather than regulator driven. However, one consultant team noted “Green Shores still has very little name brand recognition (as of yet) so it fails to deliver a marketing kickback in the way that LEED™ does, for example. We feel that there is certainly a valid criticism of the program in terms of value that it provides for time and money invested.” Another commented that “proponents need to see demonstrated value for the extra effort to obtain GS certification.”

However, it was noted that the major benefit of a more rigorous process is that the Green Shores program retains credibility in the long term. Program credibility will be established over time because all applications have background documentation that can be revisited and reviewed, and at the very least, the perception of applicants is that judging is conducted by a third party and will be unbiased and verifiable. It is envisioned that market demand and brand recognition will follow as the Green Shores program gains market exposure and credibility over time.

### Lessons Learned

There were a number of lessons learned over the course of the project. These included:

- ✓ **Need to find a balance between rigorous process and reasonable documentation.** This could be achieved through updated GS CDRS (clarified application process, letters of understanding, proponent guidelines, verifier templates are suggested options)
  - The value of GS needs to be clarified to potential market. This can be achieved by continued outreach to the existing GS network plus further networks linked to climate change adaptation, real estate markets, green building networks, and other professional networks

- There is a benefit of a more rigorous process in that the program retains credibility in the long term (third party review will be unbiased and verifiable)
- ✓ **Documents required and certifications needed for each prerequisite/credit needs review to match current government standards/guidelines**
  - This will make the process for proponents to be not overly onerous nor costly and provide value to proponents
  - Any additional GS specific documents should be identified
- ✓ **A roster of qualified GS professionals should be created and criteria for inclusion developed**
- ✓ **There is increased interest to actively implement Green Shores that should be leveraged to continue market momentum for Green Shores** by building on the “sold out” GS workshop response from participants in the planning, local government, NGO, private landowner sectors.

These lessons learned will inform the Green Shores program as it more fully develops its business model for implementation in more coastal shoreline communities.

### Recommendations

- ✓ Update to GS Program Structure (including certification process, incentives, verifier role) based on the results of this project
- ✓ Review and update CDRS Credits and Requirements and compare to typical permitting requirements
- ✓ Update the CDRS Submittal Template Format for ease of use for both proponent and verifier teams
- ✓ Pilot Green Shores for Homes – BC using the information gained from this pilot study and GSH work in Washington State/Islands Trust to broaden the application of GS principles at the community level
- ✓ Continue with training, education and outreach on the multiple values of the Green Shores tools and practices to increase the number of land use decision-makers implementing Green Shores.

## Conclusion

The project demonstrated the application of the CDRS in the field and also, very importantly, provided the opportunity to showcase the resulting case examples to an audience of professional peers, practitioners and decision-makers who have been following the development of the Green Shores project tools and resources. As a result, there is increased interest to actively implement Green Shores at the individual project planning and local government regulatory level. Overall, this project took a firm step in the direction of increasing the utility of the CDRS by allowing assessment of its processes and by providing forums for discussion of its benefits, challenges and most importantly, how the CDRS can be integrated with current planning templates and regulatory requirements.