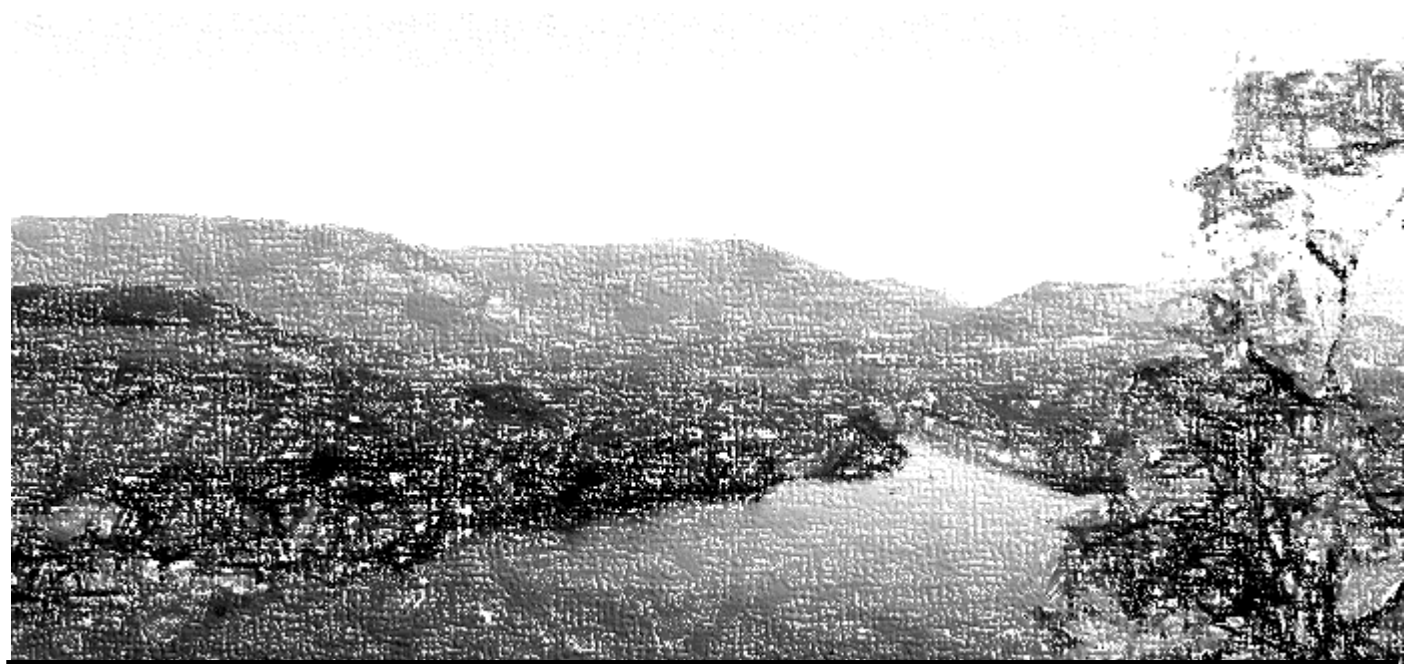


SHAWNIGAN LAKE FORESHORE INVENTORY 2015

EAST SUB-BASIN

&

SHAWNIGAN CREEK SUB-BASIN



Shawnigan Lake Foreshore Inventory 2015 : East Basin

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Shawnigan Basin Society

*Our purpose is to establish a model of participatory
ecological governance of the Shawnigan Community
Watershed.*



Summary

The Shawnigan Lake foreshore inventory was conducted during June and July of 2015. The foreshore inventory was initiated, by the Shawnigan Basin Society, as a baseline study to assess the current state of the foreshore. As the society works towards a watershed management plan, one of the pieces to water quality is the health and integrity of riparian vegetation along the foreshore. Around the lake we encountered a spectrum of conditions, from robust and intact riparian zones to significantly altered shorelines. Images for this inventory were assembled and coded as a means to capture the total lake circumference and it's associated riparian state. Over 500 pictures were stitched together and coded to visualize the current state of the Shawnigan Lake foreshore. The various categories of impacts to riparian habitat along the shoreline are identified and explained in the following pages. In total five sub-basin 'neighbourhoods' were delineated and they are represented as individual documents in the Shawnigan Foreshore Inventory Sub-Basin Series.

Over 500 pictures were stitched together and coded to visualize the current state of the Shawnigan Lake foreshore.

Acknowledgements

I would like to thank and acknowledge Grant and Corrine Price for their contributions to supporting the lake photos, without their help much of this study would not have been possible. Furthermore, a special thanks to the support and guidance of Kelly Musselwhite and Bruce Fraser. As well as the support and feedback from the Museum and the Focus, an extended thank-you to Lori Treloar.

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How to use this document?

For the use of home owners around the lake, (1) start by identifying which sub-basin ‘neighbourhood’ you reside in. Refer to the Sub-basin classification map and index below.

Village Sub-Basin
East Sub-Basin
Shawnigan Creek Sub-Basin
West Sub-Basin
McGee Creek Sub-Basin

(2) Select the corresponding sub-basin document in the foreshore inventory series. (3) Review the coding system outlined in the introductory. (4) Reference the closest waypoint on your specific sub-basin map to locate the image roll that contains your property, or simply leaf through the entire image roll to better understand your sub-basin ‘neighbourhood’.

(5)The appendix includes background and supplementary materials to incorporate your findings and support Shawnigan Lake water quality for the future.

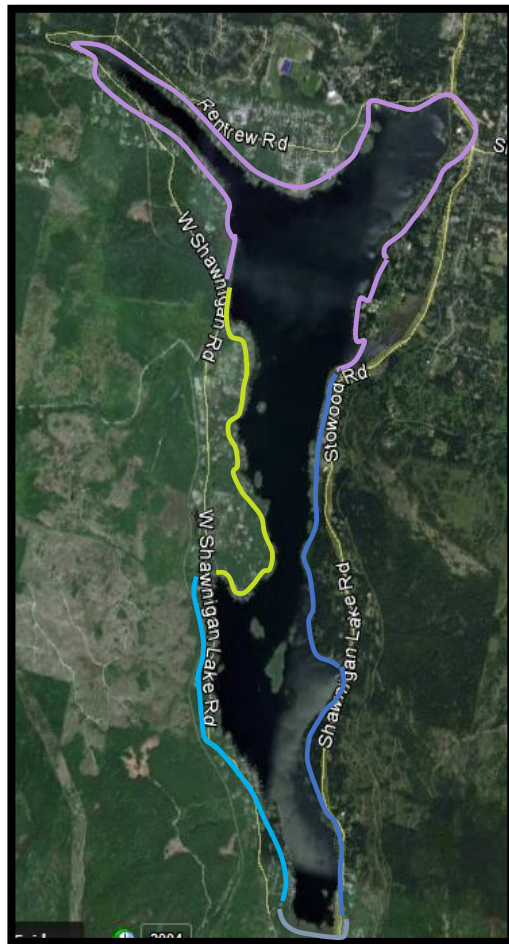


Figure 1. Sub-basin classification
(image source: google maps retrieved July 12th, 2015)



Foreshore coding

The following pages outline the five categories used to colour code the foreshore.

They are presented in increasing level of impact; where an ecological resilient riparian zone is the ideal 'or natural' state. *These categories were used to assess shorelines but no measurements were taken to identify these categories.*

The areas for which human impacts remained lowest are coded in green, we further distinguished this into two categories of green, vegetated and sparse vegetated, bright green and light green, respectively.

Vegetated

Level of Impact - none

Vegetated or 'bright green' includes shorelines that exhibit healthy riparian vegetation. Examples of this include common overhanging foreshore shrubs such as Sweet gale and Hardhack, as well as emergent vegetation such as, Bulrush and Cattails that mitigate wave erosion.

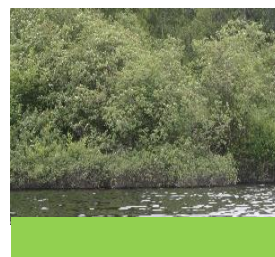


Figure A



Figure B

Low Vegetated

Level of Impact - variable

Low Vegetated or 'light green' includes shorelines that contain vegetation, but typically not native vegetation. For example, lawns that approach the water line with little to no extended structures such as emergent vegetation or shrubs.



Figure C



Rocky

Level of Impact – variable

Grey coding denotes rocky shorelines, although this category includes natural features such as rocky outcrops and bluffs these areas are delineated from vegetated shorelines because rocky shorelines don't lend to surface water filtration or reducing runoff.

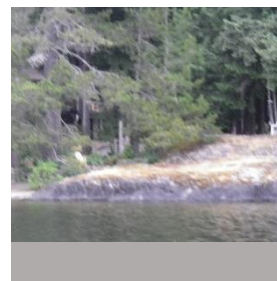


Figure D

Moderately Altered

Level of Impact – moderate (11-40%)

It's important to note that water levels change throughout the year. S.L.F.I. 2015 therefore is a snapshot time.

Moderately altered shorelines or 'yellow' can have low vegetation with a mixture of gravel or sand. These areas tend to be patchy and discontinuous, an attribute that is not present in areas with greater impacts.

Moderately altered shorelines also include shorelines that are predominantly sand or gravel.



Figure E



Figure F

Very Altered

Level of Impact – high (> 40%)

Very altered shorelines or 'orange' have continuous non-permeable shorelines generally, retaining walls. Buildings built on the shoreline also fall into this category of high impact level.

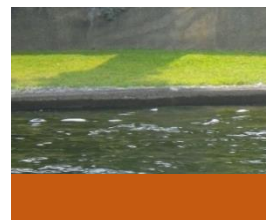


Figure G



Figure H

Invasive Species Alert

One invasive plant species that has made its way into the Shawnigan Lake Foreshore Inventory 2015 is the Yellow Flag Iris. This showy flower with its six distinguishing yellow petals, 3 smaller petals orientated up and 3 larger petals downward was in bloom during our survey months, June and July. We have included an icon on image rolls where this aggressive invasive plant species was spotted. It's important to note that at other times of the year without the flower, this invasive can appear to look like other shoreline vegetation such as, cattail. So far Shawnigan Lake does host this fast spreading weed, but populations are relatively small, with periodic patches around the lake.



Ecologically, the Yellow Flag Iris changes shorelines by outcompeting native plant species. The rhizomes of the Iris (which grow horizontally and facilitate vegetative propagation) form dense mats. This results in a loss of habitat as sediments become trapped due to compacted soils thereby increasing elevation.

In addition, lake stewards should be aware that all parts of this tenacious plant are poisonous, and as such limits food resources for wildlife. Therefore if you do take action to remove any part of the plant, WEAR gloves as this plant can cause skin irritation and nausea.

Removal of the flower, preventing and eliminating the seed is a proactive action that helps contain current populations. It's also the least intensive. Once you've collected the flowers seal it tight in a garbage bag, label invasive plant, for disposal in the landfill. Don't compost this flower. Digging up the plant is a more intensive process and you can read more about this process through the District of Saanich - Yellow Flag Iris Alert. For more information check out the Invasive Plant Council of BC.



Figure 1: Blue arrows highlight the waypoints of the East Basin Foreshore .



Figure 2: Blue arrows highlight the waypoints of the Shawnigan Creek Sub-basin.

1B



2B

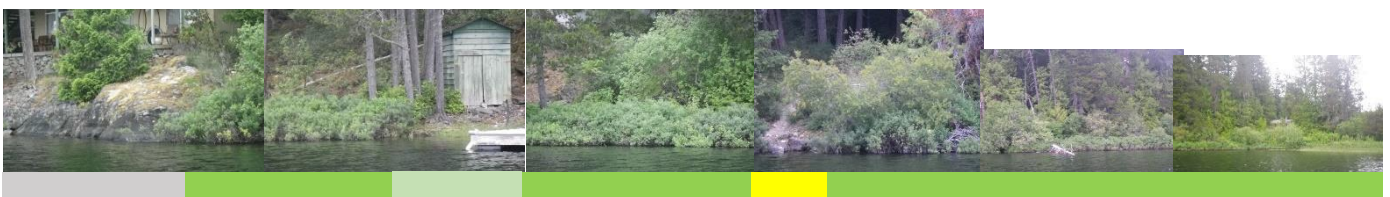




3B



3C



4A

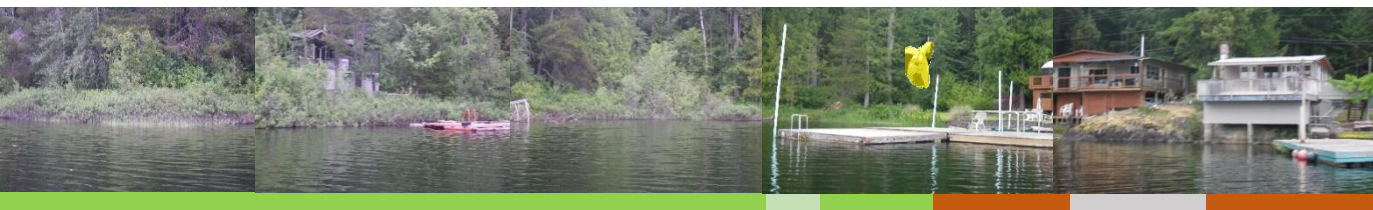
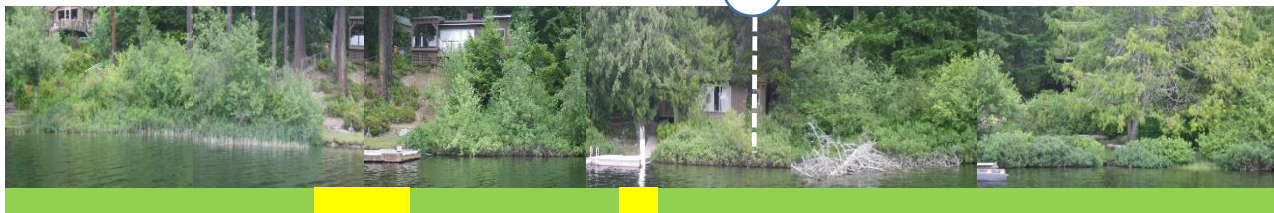


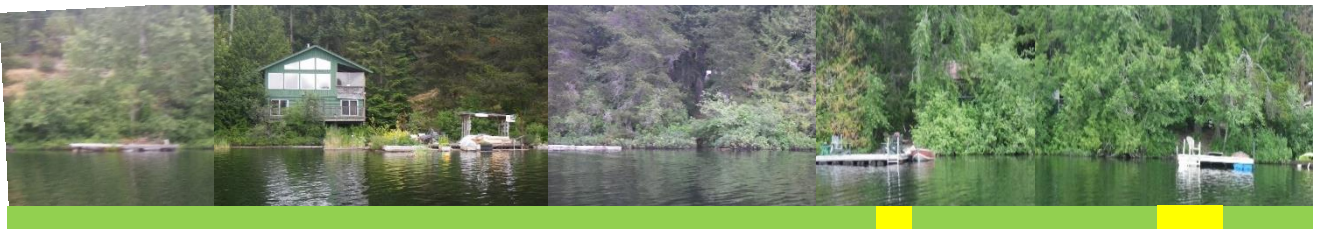
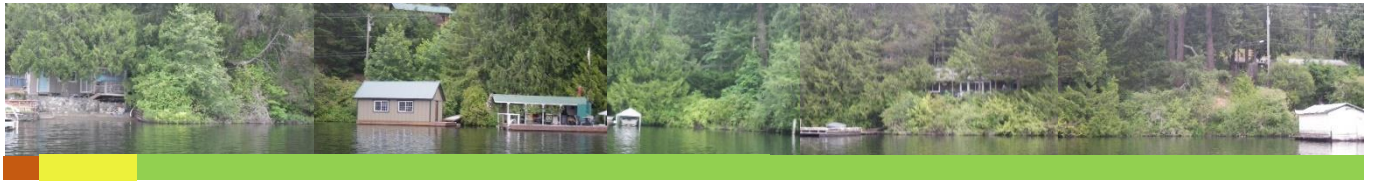
N/A

4C



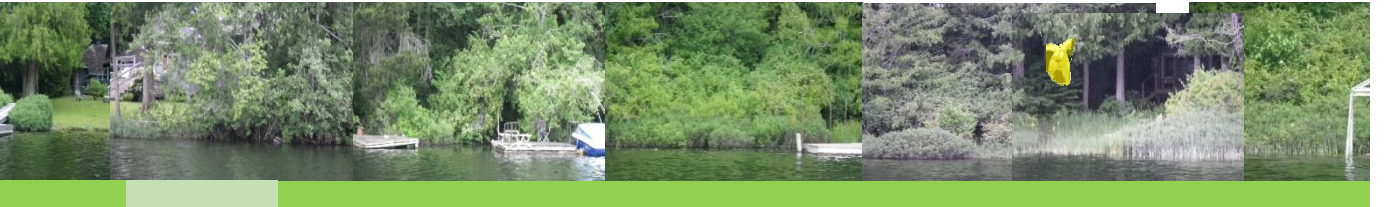
5B







7D





700



715



720



10A



Shawnigan Creek Basin

10A



10B

