



Maude-Roxby Wetland (Bird Sanctuary)

A CENTRAL OKANAGAN NATURALISTS' CLUB CONSERVATION
SUBCOMMITTEE ANALYSIS REPORT

Prepared by:
Barry Jones
Craig Lewis
Mike Howard MSc

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This report has benefitted from the contributions of qualified biologists. We wish to gratefully acknowledge the contributions from Les Gyug, R.P. Bio., Heather Larratt, R.P. Bio., and Ian Walker, PhD. These specialists visited the site with the study team and offered a number of constructive observations and recommendations. In addition, Les contributed to the content for the "Formation of Maude-Roxby Wetland" report section. Our thanks also to Rick Gee for reviewing drafts of this report and providing constructive comments.

We also wish to thank Alan Newcombe (Infrastructure) and Blair Stewart (Parks Services Manager), City of Kelowna for sharing their specific knowledge of the site.

Summary

This Report was prepared by members of the Conservation Committee of the Central Okanagan Naturalists' Club (CONC) during the spring and summer of 2018. It was partly in response to the damage to the boardwalk caused by the high lake level in 2017 but also in response to a desire to improve the overall condition of the Maude-Roxby Wetland and adjacent Mud Bay.

The wetland area was formed from accumulated sediments and organic debris carried to the area by a creek which has since been filled in during adjacent residential development. The connected mud flats to the south of the wetland contain productive organic materials gathered from the adjacent deltas, and is the apparent meeting place of both north-flowing and south-flowing shore currents. Mud Bay has no other equivalent in the Central Okanagan and is an importance feeding ground for shorebirds. Given its unique status for wildlife and visitors alike, the Maude-Roxby Wetland and adjacent Mud Bay should receive special consideration. The future of this site is currently under threat from foreshore erosion which is caused by wave and wake action.

The creation of this Park was in large part due to the efforts of members of CONC in the late 1980s and early 1990s in cooperation with Provincial Ministries and City of Kelowna (the City) Parks staff. No formal agreement was ever established with either level of government as to the role that CONC would play in the management of the site. As a result, CONC's role has been largely limited to semi-annual cleanup campaigns and removal of invasive vegetation. The Committee felt that a formal agreement with the City with regard to cooperative Park management could only be helpful.

Discussions with the City in the spring of 2018 resulted in the reconstruction of the boardwalk (a year earlier than originally planned for in their budget).

The Committee next turned its attention to the interior of the wetland to evaluate the possibilities of improving the visitor experience and enhancing the quality of the water in the canals and thereby increasing the biodiversity. Opinions were solicited from several experts as to the likely result of improving the aeration of the stagnant water and/or increasing the water flow through modifications to the existing pumping system.

These experts agreed that the various options under consideration were not likely to significantly improve the biodiversity of the site. They also agreed that the greatest threat to the survival of the site was the extent of the ongoing erosion of the foreshore which, if not corrected, was going to lead to the disappearance of the entire wetland in time.

The Committee recommended that CONC re-establish a permanent Maude-Roxby Committee and enter into a formal cooperative agreement with the City Parks Department to define an on-going role for CONC volunteers. A CONC Maude-Roxby Committee could supervise and coordinate efforts by CONC volunteers to help maintain the Park in good order and to develop a program of establishing and keeping up-to-date

a site –specific biological inventory. It also recommended that CONC actively participate in the City of Kelowna and regional level efforts to better understand and protect Central Okanagan Lakeshore sites of interest.

1 Introduction

The Central Okanagan Naturalists' Club (CONC) membership expressed concerns of the state of the Maude-Roxby Wetland Bird Sanctuary following the flooding that occurred in 2017. This flooding resulted in the destruction of a significant portion of the boardwalk within the Maude-Roxby Wetland and adjacent areas. CONC Conservation Committee struck a subcommittee to assess the current state of the Maude-Roxby Wetland and recommend options for CONC's future involvement in the on-going conservation of this site.

The goal of the subcommittee was to:

- Encourage repair of the sanctuary boardwalk;
- Consider options that could not only conserve the site but also improve the biodiversity of this unique remnant wetland;
- Improve visitor experience; and;
- Collaborate with the City of Kelowna to achieve the above objectives.

This report outlines the investigation undertaken, the options considered and the recommended next steps to conserve and improve the Maude-Roxby Wetland.

2 Background

2.1 FORMATION OF MAUDE-ROXBY WETLAND

Maude-Roxby Wetland is part of a creek delta that includes the adjacent Mud Bay. This site was formed from accumulated sediments and organic debris carried to the area by a creek which has since been filled in during adjacent residential development. Delta lands are fertile and biologically productive and tend to support a variety of avian species as a feeding ground.

The persistence of the creek delta depends on an equilibrium between the deposits of sediments from upstream and the erosive forces of lake wave action. In the absence of yearly sediment deposition, the erosive forces will prevail and the delta will gradually erode away.

When the lake level is low, a spit of land is often evident in front of and to the south of the wetland. At Mud Bay the predominant west winds appear to create a south-flowing shore current that took the fresh coarse delta material and deposited it in a hook south of Maude-Roxby running parallel to the shore current. This hook ended up protecting Mud Bay from infilling by coarse sediment so that fine sediments could dominate. The only similar site in Kelowna is at the foot of Cedar Avenue, where the predominant west winds and the shape of the lake appear to create a north-flowing shore current (opposite

to that at Mud Bay) that takes coarse deposits, probably from an old delta of Mission Creek, and creates a hook parallel to the shore but facing north, and a muddy bay within that hook. However, the small bay at the foot of Cedar Avenue is not as productive as the mud flats at Mud Bay.

The only other such site in the Central Okanagan is Green Bay (in West Kelowna) where a sandy hook has developed on the north side of the coarse delta deposits of McDougall Creek. Fine muds and silts have gathered in the bay protected by the sandy hook. However, the shores and the hook of Green Bay have all been developed.

Mud Bay is regularly visited by a variety of shorebirds including such species as the American Avocet, a rarity in the Okanagan. Given its unique location which gathers the productive organic materials from the adjacent deltas, and the apparent meeting place of both north-flowing and south-flowing shore currents, Mud Bay has no other equivalent in the Central Okanagan. Its importance to the birds and the visitors to this site should afford the Maude-Roxby Wetland and adjacent Mud Bay special consideration.

An article in The Daily Courier on June 25, 2018 entitled: "Okanagan Lake's natural areas threatened, regional board told" reported that increased development around the lake is affecting natural areas and their associated ecological functions. The regional director of community services, Todd Cashin, further predicted that all the remaining natural areas along Okanagan Lake could be developed in the next generation or two. Currently, about 41 per cent of the lake's 290 kilometres of shoreline is in a natural state.

2.2 JURISDICTION

The responsibility for the oversight and management of the Maude-Roxby Wetland, originally called the Robin Way Marsh and sometimes the Bird Sanctuary, has changed over the years. The following notes are abstracted from files belonging to the Central Okanagan Naturalists' Club and from information obtained from other sources.

In 1956, the City of Kelowna (the City) applied to the provincial Department of Lands and Forests to obtain a Crown Grant over the lands now called the Maude-Roxby Wetland. Because the area was considered to be accreted land adjacent to local lake-front properties, the request was turned down in 1957 and jurisdiction remained with the Department of Lands and Forests.

In 1984, the City requested that the Province give the area Map Reserve status. The City recognized its value as unique foreshore and as a bird sanctuary and did not want it to fall into private hands. The Map Reserve was granted in March 1984 and was to be in effect for five years.

A letter from CONC (Cec Dillabough) to the Rotary Club of Kelowna, dated May 1992, states that the Sibell Maude-Roxby Bird Sanctuary was created by Order-in-Council in 1986 and was a designated Provincial Wildlife Refuge.

In 1987, the provincial Ministry of the Environment began the process of transferring the administration and control of the wetland from the Ministry of Forests and Lands to the Ministry of Environment and Parks and this was accomplished in May 1988.

In February 2012, the province granted a Crown Grant over the wetland to the City and the City has been responsible for the wetland since then.

Original intent to have cooperative management

At the onset of this project, CONC's interactions and correspondence were mainly with the Province. As early as 1987, letters in CONC files document the Province's intent to manage the site in coordination with CONC (letters: March 26, 1987, Turner, and May 13, 1987, Peatt). Following that, in June 1988, A. Peatt of the Provincial Ministry of Environment and Parks again requested that CONC accept responsibility for the general maintenance of the lands and for joint enhancement activities. This responsibility was accepted by CONC secretary, Brenda Thomson. A following letter from A. Peatt, dated April 1990, again requested that CONC be responsible for the long-term maintenance of the marsh. This was accepted by CONC secretary, Brenda Thomson, and CONC Project Manager, Cec Dillabough.

During the years that the wetland was under the management of the Province (up until 2012 when it was granted to the City), CONC provided intermittent clean-up parties to remove man-made debris. There has however never been a formal written and signed agreement between the Province and CONC as to what form cooperative management would take. CONC did have a Maude-Roxby Wetland committee for a few years which carried out the garbage collection but even that committee had no formal responsibilities. Gradually interest in this "committee" waned.

Since the transfer of responsibility from the Province to the City in 2012, there has been no formal ongoing commitment by CONC to work on the Wetland with the exception of regular clean-ups of the site.

A couple of years ago a CONC member noticed that the information kiosk needed repair. That member informed the City and the kiosk was promptly fixed up by the City Parks department.

CONC's previous interactions with the City are also documented in letters on file. In 1990, the City committed to providing a power easement to the Maude-Roxby Wetland and to maintaining the pumping system. This commitment was reaffirmed in August 1991. The pump had to be replaced by the City in 1997.

In the 1992 letter from CONC to the Rotary Club, referenced above, it is stated that CONC had a 20-year management agreement with the Ministry of the Environment and that the club had agreed to act as wardens for the site. The person writing this letter has recently verified that this was not a formal agreement.

Since 1997, when the pump was replaced, there is nothing further in the CONC files to document any interaction between CONC and either the Province or the City. There is nothing to indicate that the commitment to act in coordination with government or to act as wardens for the Maude-Roxby Wetland, as agreed to in several letters on file, was ever defined in some binding way. This is probably a moot point now that the City has taken over management of the site. However, because of a sympathetic attitude on the part of CONC members toward the Maude-Roxby Wetland, based on the extraordinary efforts made by CONC to establish this Wetland in the early 1990s, some club members have continued to carry out clean-up exercises on a volunteer and irregular basis.

2.3 CURRENT STATE OF THE SITE

In the spring of 2018 the Maude-Roxby Wetland remained closed to visitors to allow for repairs to the boardwalk which had been largely destroyed by the lake flooding.

Human and flood debris had accumulated in some areas of the wetland and shoreline. Vegetation was overgrown along the boardwalk and selective beaver harvesting of cottonwoods was occurring. The site required attention to restore it to its previous productivity and make it a more attractive experience for visitors.

The boardwalk repairs were largely completed by early summer (2018) and the site was reopened to the public. CONC financially contributed to these repairs. Since the repairs to the boardwalk were completed, the City Engineer has identified additional minor damage to two of the boardwalk piers; the City stated they would be looking into how they will repair them later this year.

In addition, the City advised that they had hired a biologist to assess the Maude-Roxby Wetland site for impacts resulting from the flood waters and on-going erosion of the foreshore. The City indicated that the results of that assessment will assist them in determining what could be done in regards to implementing permanent flood and erosion protection measures.

3 Options Considered

In addition to weekly monitoring of the site to observe changes in water level and wildlife use of the wetland, the subcommittee team called upon qualified biologists to visit the site and provide their expert opinion on the potential options under consideration.

The options the CONC Conservation Subcommittee decided to consider before making recommendations to the CONC board included:

- A “Do Nothing” option;
- Consider ways to enhance the biodiversity of the site;
- Improve visitor experience;
- Assess on-going monitoring and maintenance needs in cooperation with the City; and,

- Site Management

3.1 DO NOTHING OPTION

It was noted that the wetland has evolved over time and the water channels appear to be slowly infilling with cattails. The water within the wetland portion appears generally stagnant especially as the lake level lowers over the summer/fall months.

It is understood that the creek tributary that historically provided fresh water, siltation and nutrients to the Maude-Roxby Wetland, has been diverted and no longer provides this ecological service.

With the lack of ongoing siltation renewal, the wave and wake action on the lake appears to be eroding the foreshore of the site particularly along the northwestern portion. Foreshore erosion is evident and is likely eroding the site at a rate (in the order of) about a foot of frontage annually. This erosion, if unabated, will likely dislodge the foremost trees and break through the narrow berm currently protecting the wetland area.



October 6, 2018



October 6, 2018

With no intervention, it is the opinion of the experts consulted that these processes of infill and erosion will continue until an equilibrium is reached (the point of land would shrink back some distance and the wetland area would transform into lakefront over time).

To preserve the site will likely require an intervention of foreshore protection and addition (restoration) of the lost substrate materials. This “breakwater” would need to extend beyond the existing tree line and could potentially be made out of cement-infused sand bags or another alternative.

3.2 IMPROVE THE BIODIVERSITY OF THE SITE

The subcommittee considered a number of alternatives to improve the biodiversity of the site. The alternatives considered are briefly described below.

3.2.1 Improve the quality and quantity of water entering and exiting the site

The subcommittee examined the following ways and means to improve the quality and quantity of the water within the Maude-Roxby Wetland:

- Increase water flow
 - Pump
 - Restore creek tributary flow
 - Harness the wave and wake energy as a supply source
- Aerate water within the site

At present, the water within the Maude-Roxby Wetland is essentially a closed system with limited outflow to flush the site and maintain water purity. At the height of the spring, when the lake level is high, there is limited wetland-lake interchange and mixing of the waters but there is no discernible current or significant outflow.

A submerged pump was installed in the early 1990’s and replaced in about 1997. It is usually started up in early April and shut down in October. The usual flow rate is 60 gal/min. It appears from our observations this year (2018) that this flow rate is sufficient to start the replenishment of the wetland water in April (see Section 3.4) and may be sufficient to maintain some water depth in the wetland when the lake level drops in August. However, it does not appear to be enough to establish a net outflow to the lake sufficient to flush out the wetland and so the water surface becomes covered in green algae by early May. Sizeable carp can be seen in the wetland channels through the summer. It is not known whether there are other fish species present in the wetland.

The experts consulted agree that the water quality does not affect the aquatic life within the wetland. Improving water quality would benefit only the people visiting the site by esthetics and perhaps by reducing the skunky odors.

As far as the quantity of water entering and exiting the site is concerned, the current flow is not adequate to create a steady discharge from the wetland into the lake. The historical creek tributary source has been removed and the weak flow of water provided by a submersible pump from an unknown depth does not generate sufficient flow to flush the wetland system. In addition, the subcommittee is not aware of the state of the water that is being drawn up and added to the wetland. This water should be tested to ensure that it does not contain contaminants or create acidity/alkalinity problems. If the well water is of adequate quality then the wetland would benefit from an increased volume.

The subcommittee examined the idea of aerating the water within this closed system. This could be accomplished using small low-pressure/high-volume compressors fed through lead-weighted lines placed in the bottom of the 'moats' (main channels) within the marsh. This would move cold anaerobic water from the bottom to the surface, thereby mixing the water and adding oxygen. Most aeration programs are augmented with the addition of a special mix of microbes and insects that aid in tying up nutrients that help prevent algae growth and unpleasant odors. However, in the opinion of the experts consulted, this additional effort would not benefit the biodiversity of the wetland and the idea was not pursued further.

The biologists consulted agreed that it may be possible to create a flow in the wetland by pumping water from the lake into the marsh area. This excess water would mix with the existing water in the wetland and find its way into the lake either by filtering through the ground or by free-flowing back into the lake. However, as the lake water and the wetland water are at the same level (i.e. there is no height gradient between the inland sections and the lake), it is hard to predict what the pumped water would do and what effect it would be likely to have.

3.2.2 Dredge the main channel within the site

The subcommittee learned that the main channel within the site has not been re-dredged since the original establishment of the Maude-Roxby Wetland. The main channel has received some in-fill of sediments and plant decay materials over the years but still supports a water flow. Although there has been an increase in the surface area of the cattails, they do not appear to be making a significant incursion into the channels.

Cattails and bulrushes are beneficial to the health of the wetland and provide nesting sites but periodically (every 20 to 30 years) the banks will infill and require excavation to restore to the original bank location.

Dredging may be required in the future if the channels become clogged with vegetative growth but at present dredging is not recommended.

3.2.3 Provide Foreshore Protection

All of the experts consulted agreed that foreshore erosion was the greatest threat to the continued survival of the Maude-Roxby Wetland.

The erosion is caused principally by wave and wind action. To combat the natural processes of wetland channel infill and foreshore erosion, it would be necessary to protect the current foreshore (along with a system to capture or inject additional siltation on an on-going basis).

The subcommittee noticed that the log booms that were slowing the impact of wave action on the western side of the wetland during boardwalk reconstruction had been removed from the area over the summer. These booms were offering some protection and could (should) be restored until a permanent solution is implemented. These booms could be extended further around the point into Mud Bay, and the subcommittee

recommends that they be placed further off-shore to accommodate paddle craft traffic between the shore and the logs.

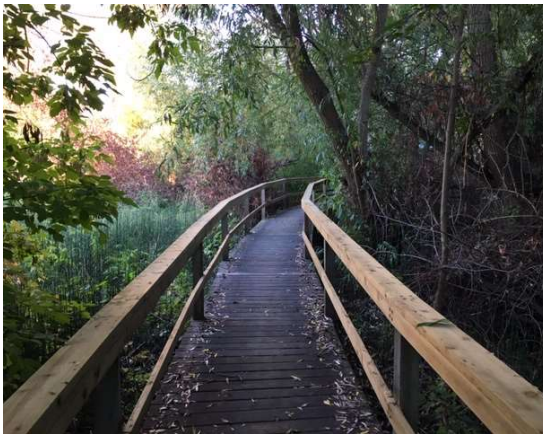
For the long-term protection of the wetland and the adjacent Mud Bay, one potential alternative is to place Gabian cages filled with rip rap along the shoreline. The Gabian cages would help keep the rip rap from sinking into the sand and mud. Silt and debris buildup behind the cages would support reeds and rushes which will help to further mitigate wave action and erosion.

The subcommittee proposes that it will be necessary to consult a subject area specialist to advise upon Foreshore Protection alternatives.

In addition, the chicken-wire protection attached to the trunks of the cottonwood trees should be maintained to combat tree loss to the beaver(s) that are currently active on the site.

3.3 IMPROVE VISITOR EXPERIENCE

Visitor experience could be improved by making the site more visually appealing. A general site clean-up is required to remove manmade and flood damage debris which can be found throughout the site.



October 6, 2018



October 6, 2018

Where vegetation has become overgrown and sight lines obscured selective trimming is proposed. During the site clean-up, special attention could be made to remove invasive species. The larger logs within the channels provide resting points for ducks and turtles and therefore should remain.

Some areas of the boardwalk were not repaired during the spring restoration and these areas should be earmarked for further renewal.

3.4 ON-GOING MONITORING AND REPAIR

This spring and summer, the subcommittee has been monitoring the water levels in the wetland by taking photographs at weekly intervals from defined positions along the boardwalk.

The attached photos show that in April, before the pump was started, there was very little water in the canals. Within a week or so of the start-up of the pump in April, at 60 gal/min, the water levels can be observed to rise. This was observed well before the lake level began to rise and so we conclude that the lake level is only a contributor to the dynamics of the wetland water levels and not the most important water source (see photos April 6 to June 7).



April 6, 2018



April 12, 2018

April 6, 2018 is either just before or very soon after the pump was turned on. The following pictures document levels at various intervals before the lake level began to rise.



May 7, 2018



June 7, 2018

At high water (in mid-to-late July in 2018), there was free back and forth flow of water between the wetland and the lake through two narrow channels near the north and west

sections of the foreshore. When lake levels dropped, the west channel closed off and the north channel became a slow outflow current (see photographs A, B, C, D and E below).



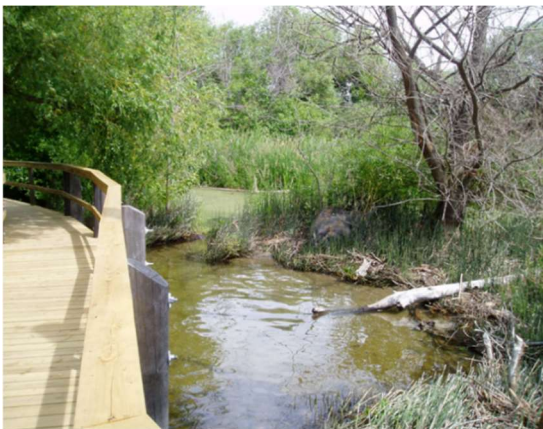
Photograph A: June 16, 2018



Photograph B: June 24, 2018



Photograph C: July 27, 2018



Photograph D: June 16, 2018



Photograph E: August 10, 2018

As well, standing water appeared in the wooded area next to the shore of Mud Bay, unconnected to the wetland canals further inland.

As the lake level subsided in August, the outflow from the wetland to the lake through the north channel dwindled to a trickle (photograph C) and yet the wetland water levels subsided only very slightly. This may reflect the effectiveness of the inland pump.

The repairs to the boardwalk, carried out by the City, made it easy to observe the foreshore. There are several areas in which trees are being undercut and the sandy shoreline is clearly being eroded. The subcommittee did not have before-and-after photographs of these areas and can not say with accuracy how much erosion of foreshore occurred as a result of high water conditions this year. The wave action is however quite impressive as observed from the boardwalk.

Finally, in the course of doing the weekly monitoring, it was clear that sight lines into the wetland become more and more obscured by the growth of leafy vegetation as the spring and summer seasons progressed, particularly in the upland sections of the boardwalk. By mid-July there were no areas along a large section of the boardwalk from which visibility into the wetland area was possible.

3.5 SITE MANAGEMENT

Since 2012, when the ownership of the wetland was taken over by the City, there has been no formal co-management agreement between CONC and the City. Because the Maude-Roxby Wetland project began in the early 1990's as an attempt by CONC to preserve the wetland and the adjacent shoreline to the south, and since the successful completion of the project was such a source of satisfaction to CONC, the club has maintained an interest in the maintenance of the wetland. Even without a specific agreement, CONC members have made at least annual garbage collection expeditions. It seems likely that such informal contributions to the aesthetics of the wetland will continue on an irregular basis by CONC members whether or not an agreement is made with the City.

However, the subcommittee has wondered if there are any potential advantages in trying to come to a defined relationship with the City dealing with wetland management.

From the City's point of view, the attractiveness of such an arrangement might include the obligation of CONC to carry out garbage collection at certain intervals. CONC could also commit to the maintenance of sight lines through the foliage to enhance the viewer's experience, and perhaps monitor the avian biodiversity in the wetland from year to year. It is possible that enhancement measures to improve biodiversity could be proposed and researched by CONC members.

From CONC's point of view, we would benefit from an undertaking by the City not to initiate any projects within the park without discussing them with CONC. We would also appreciate written reassurance from the City that we would be considered to be management partners for the wetland.

The City Parks department staff would liaise with a specific CONC member who is charged with the oversight of Maude-Roxby Wetland. That member might be defined as the Chairperson of the Maude-Roxby Committee. That member would try to establish a cordial working relationship with a specific Parks department manager. CONC could provide expertise and manpower and could do research on management issues to share the load with City staff.

Possibly the most pressing challenge that a combined CONC/City Maude-Roxby working group will have to tackle is the need to protect the foreshore from further erosion. Closely related to this will be to consider measures to protect and enhance the shoreline of Mud Bay adjacent to the wetland as this is an important bird stop-over in spring and fall.

Of course, even if the City declines to enter into a formal or semi-formal agreement with CONC, CONC will still be able to lobby as effectively as possible for the measures that this report proposes in the Recommendations section.

4 Recommendations

After considering the state of the site and the alternatives available, the subcommittee recommends the following:

4.1 A DEFINED COOPERATIVE AGREEMENT WITH THE CITY OF KELOWNA

The subcommittee recommends that these findings be presented to the CONC membership. If the CONC membership agree with these recommendations, some of them can be implemented within CONC. However, as CONC no longer has any formal or informal agreement with the City of Kelowna Parks Department, then discussions should be held with the City of Kelowna Parks Department to determine if there is any interest on their part to draw up such an agreement (see Section 3.5) and agree upon the role CONC will perform. If there is no acceptable agreement, then CONC's role will be mainly advocacy and occasional clean-up expeditions.

4.2 SHORELINE PROTECTION

Without timely intervention, the wetland's survival is threatened by erosion. The subcommittee recommends the City and CONC determine how they could achieve protection of the wetland and adjacent Mud Bay.

The subcommittee recommends consultation with recognised experts (e.g. "Foreshore Protection" – Kyle Hawes has experience with Rotary Marsh) to assess the most effective means to stabilize the foreshore of the site.

Design of the shoreline protection should include the mud flat area section of Mud Bay adjacent to the site entrance. This will require further study to select the best method to

ensure the stability of the foreshore without at the same time affecting the mud flat in a negative way.

4.3 SITE INVENTORY AND MONITORING

The subcommittee recommends that CONC and the City conduct a full inventory of the site and establish a thorough monitoring program.

The subcommittee recommends creating a plan for on-going monitoring of geophysical and wildlife observations to measure changes (and the effect this has on erosion, plant and wildlife) to water level, water quality (particularly algae blooms), plant growth, insect blooms, aquatic and avian use of the site.

The subcommittee recommends re-establishing a CONC Maude-Roxby Committee to carry out these tasks.

4.4 ESTABLISH A PROGRAM OF ON-GOING MAINTENANCE

The subcommittee recommends that the City establish a program of on-going maintenance including the boardwalk pathway and the kiosk which should be maintained in good order.

The subcommittee recommends that CONC and the City schedule periodic site clean-up, pruning and removal of invasive species (Develop a work plan short, medium, long-term) to maintain sight lines and enhance the visitor experience. Consultation with a qualified arborist is recommended prior to selective pruning and removal of damaged vegetation.

The subcommittee recommends existing tree resources to be protected from beaver harvesting via maintenance of wire mesh wraps.

The subcommittee recommends that consideration be given to selective planting (e.g. native shrubs, butterfly bushes etc.) in the grassy area adjacent to the pump to attract wildlife.

4.5 PARTICIPATE IN REGIONAL LAKESHORE PROTECTION EFFORTS

The subcommittee recommends that CONC become better informed about efforts to protect Okanagan Lakeshore Sites of Interest within the Central Okanagan and add their voice and expertise wherever possible.