Lavallière Bay (St-Louis Marsh)

Projet n^{o} 12-29

Habitat Conservation, Restoration and Enhancement

Final Project Report
to Wildlife Habitat Canada (WHC)
for fiscal year 2011/2012

Prepared by:
Patrick Harbour, technicien en biologie
André Michaud, biologiste et chef d'équipe

Ducks Unlimited Canada
710, rue Bouvier bureau 260
Québec, QC G2J 1C2

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1.0 PROJECT HIGHLIGHTS

For the past few years, pressures, in part due to the agricultural activities practiced in the watershed, have gradually transformed Lavalier Bay and have contributed to the deterioration of habitats in the region and poorer water quality. Today, we estimate the area of water still available to wildlife is 61 hectares during the summer. In addition to this already low presence of habitat resources are the agricultural pressures that reduce the quality of nearly 80% of habitats still available in the bay.

To provide solutions to the above issues, management for the Bay was updated in 2009 (Brodeur et al. 2009). The new management plan consists of seven recommendations, including that to diversify the types of wetlands by increasing the proportion of deep marshes and areas of water available for waterfowl. The general objective is to diversify the wetlands found in the area by constructing a marsh measuring 117 hectares. To respond to these recommendations and ensure the long-term sustainability of these habitats, the development of a swamp dammed in the upstream portion of the St. Louis River (St. Louis marsh) for both the protection and maintenance of adjacent wet grasslands is being considered as a top priority. Located in the major bypass tributaries of Lavalier Bay, this project will be segregated from the main sources of the sediments and nutrients from the agricultural surroundings. It will allow the prolonged flooding of this area to a side higher than that which is maintained in the rest of Lavalier Bay. The level will therefore be managed independently of the remainder of the hydrographic system of the catchment area of the bay.

The restoration of a 117-hectare swamp for waterfowl and fish is included in the priority activities pursued by the Joint Plan Habitat Venture (PCHE/EHJV) and is therefore directly linked with the conservation objectives of the NAWMP.

2.0 GOALS, OBJECTIVES, ACTIVITIES & RESULTS

Goal	Objective	Activity	Result
Develop and implement an agricultural action plan in order to improve the water quality and reduce the load by sediments		*Agriculture committee meeting in December 2011 and in February 2012.*	*- Outline of a plan for implementation and monitoring of the actions* *- Update of the activities carried out in 2011*
Provide a habitat of quality to waterfowl, fish, and other species		*Finalization of the biological concept*	*The biological concept has been endorsed by the partners and*

that inhabit wetlands. Increase the area of marsh available for wildlife.	*integrating the parameters for ichtyenne wildlife*	*owners of the site at which the project will take place*
	Survey results and installation of probes at water level	
	Implementation of management plans	
	Evaluation, negotiation and estimation of costs with Quebec Hydro to install the electrical line necessary to operate the pumping station.	*- Receive a cost estimate from Hydro Quebec to achieve the aforementioned*
	Request for authorization from the Agricultural Lands Commission of Quebec(ALCQ)	*-Receipt of preliminary orientation from ALCQ.* *- Public speaking conference with ALCQ to arrive at the final decision*
	Preparation of authorization requests for MDDEP, the municipality of Yamaska, and the MPC of Pierre-de-Saurel	*- Preliminary meeting with the MDDEP to reveal the project* *- Get a favourable preliminary approval from MDDEP*

b) Explanation of habitat products/results that were supported by WHC's contribution:

Management of St-Louis marsh will allow for the restoration of 117 hectares of quality habitat for migration, reproduction, and the raising of flocks of waterfowl, as well as for the spawning and nutrition of fish. In addition, the maintenance of the prairies adjacent to the marsh will enable the benefits of the wildlife that use this area to be maximized.

c) Briefly describe new tools, landscape practices or protocols that were used in the project to conserve, enhance or restore wildlife habitat.

A method to manage the water level of the marsh has been developed with the MRNF in order to increase the use of this area by fish by 40%. The ecological functions of this area will be enhanced for fish by enabling their access to the marsh and by increasing the duration of the flooding of habitats for nursery. Waterfowl could also benefit from this area during spring and fall migration periods as well as during the reproductive season. Additionally, a maintenance plan for the prairies adjacent to the marsh will be developed in order to maximize and maintain waterfowl and other species use of this area.

The management concept for St. Louis marsh aims, among other things, to diversify the types of wetlands by increasing the proportion of deep marshes and areas of water available for use by wildlife in Lavalier Bay. The management of St. Louis marsh will restore an area of 117 hectares of marsh and to give the land a strong wildlife presence once again. Waterfowl could benefit

from this area during spring and fall migration periods as well as during the reproductive season. Management of this marsh will provide the necessary conditions for the development and maintenance of diverse aquatic vegetation; an invaluable resource to a multitude of wildlife species as well as waterfowl, fish, aquatic birds, amphibians, reptiles, and aquatic mammals in addition to increasing the area of available habitat. The wildlife that uses this marsh will have a place to live, food, and reproductive sites at their disposal.

d) List the species and estimate the number of all waterfowl, wetland-associated species and migratory birds that will benefit as a result of this project.

Sauvagine (espèces)	**Sauvagine (numéro)**	**Espèces d'oiseaux associées de zones humides (espèces)**	**Espèces d'oiseaux associées de zones humides (numéro)**	**Oiseaux migrateurs gibier (espèces)**	**Oiseaux migrateurs gibier (numéro)**
Canada Goose	*5 600*	*Variegated-beaked Grebe*		*American Woodcock*	
Common Mergansers duck	*150*	*American Bittern*		*Ruffed Grouse*	
Canard souchet (type of swimming bird)	*245*	*Great Blue Heron*			
Pintail Duck	*75*	*Green Heron*			
Mallard duck	*2300*	*Osprey*			
Black duck	*400*	*Gallinule water hen*			
Blue-winged teal	*130*	*Winged Blackbirds*			
Winter teal	*200*	*Marsh Owl*			
Diving ducks	*250*	*Night Heron Gray*			

	Habitat de zones humides (acres)	**Habitat d'hautes terres (acres)**	**Total (acres)**
Conserver	-	242	242
Améliorer	-	-	-
Restaurer	289	0	289
Total	289	242	531

g) Indicate if the habitat that was conserved, enhanced or restored will be used by waterfowl for migration, breeding or staging. Check all that apply.

X Migration X L'élevage X Mise en scène

h) Relevance to habitat planning, decision making and/or management

Lavalier Bay is of particular interest since it is located within one of the priority areas for the wetland preservation of the St. Laurence River. In fact, St. Pierre Lake has been recognized by UNESCO as a Worldwide Biosphere Reserve since 2000. In addition to its location at the heart of the Atlantic migratory path, Lavalier Bay is a land of great importance as a migration stop for waterfowl. Consisting of marshes, bogs and prairie wetlands, the bay contributes in a significant way to the diversity of wildlife to St. Pierre Lake. At the moment, Lavalier Bay is recognized as a priority habitat for waterfowl according to the conservation and wildlife protection laws. The wetlands and flood plains of rivers have important ecological roles and are essential to the maintenance of the aquatic ecosystems of the St. Lawrence River. Yet, these areas are continually subjected to anthropogenic pressures (i.e. urbanization, agriculture, commercial development) and are continuously shrinking. Management of St-Louis marsh will allow for the restoration of 117 hectares of wetlands and to return a strong wildlife presence to the land. Moreover, a 20-year conservation agreement will be signed with the owners, the MRNF (Ministry of Natural Resources and Wildlife).

Management of St. Louis marsh would benefit a number of groups and individuals, starting with the local community, hunters, ornithologists, municipal authorities as well as for the department as the owner. The management and development of the site is maintained by the Lavalier Bay Management Society. Activities such as hunting waterfowl (grouping of waterfowl hunters of St. Pierre Lake), muskrat trapping, sport fishing, marsh excursions and youth education are organized at the bay. An interpretation centre (Home of the swamp) and infrastructures are available on site to receive the local visitors and school groups. An ecological trail, which measures 1.3 km in length including its observation tower and appointed rest stops, leads us to the heart of Lavalier bay and, with the help of educational panels, helps us discover wildlife, flora, and the way in which this unique ecosystem functions. The trail ends at the works of bolting for the fish. SABL (Management society of Lavalier Bay) also constructed a network of nest boxes for arboreal ducks to restore the merganser duck's habitat.

i) Did you encounter any challenges over the course of your project? If so, how were they resolved?

At the time the original concept was developed, the wildlife management project aimed to develop a permanent marsh for waterfowl. During the winter of 2011, with the help of our partner, the Ministry of Natural Resources and Wildlife, we have broadened our management plan. Following detailed analyses and assessments of the completed sites at the beginning of summer, le Ministry decided to change the management vocation by adding the ichthyologic component. To achieve this, we had to review the concept as a whole to successfully reach the final concept on October 17, 2011. Consequently, these modifications have had an impact on the construction schedule.

In addition to the delays in processing the request to CPTAQ, a request for a public hearing has been made to the commission thus delaying the receipt of the final decision from CPTAQ.

Consequently we could not remove permission requests (CA, notice of compliance) to MDDEP in order to receive our CA on time to begin work before March 31, 2012.

3.0 PARTICIPATION

a) Indicate how many landowners were engaged through the project *None. The whole of the project will be completed on public land that belongs to the Ministry of Natural Resources and Wildlife.*

b) Provide a description of stewardship opportunities or other voluntary preventative measures that were engaged or promoted within the scope of the project.

An agricultural committee will be formed, consisting of diverse contributors (MRC, UPA, CIC, MRNF, SABL,…) to develop an agricultural action plan to improve the quality of the water from the basin catchment and to reduce the sediment loads and nutrients routed into Lavalier Bay by different tributaries.

c) Total number of participants / educators / volunteers that were involved in on-the-ground activities.

Nombre de participants	Type de Participants	Nombre d'éducateurs	Jours total du participant	Jours total de l'éducateur
6	**chasseurs**			
15	**agriculteurs**			
10	**ornithologues**			
5	**bénévoles (SABL)**			

d) Access to hunters: Is access for migratory game bird hunting permitted upon completion of the project?

X Oui ☐ Non

4.0 PARTNERS

Project Partner	Partner's Role(s)/Activity(ies) in the Project
MRNF	*Landowner, concept development, management and monitoring of facilities and financial partner.*
CIC	*Development concept, technical design, plans and specifications, calls for tenders, requests for permission, work supervision and financial partner.*
Wildlife foundation of Québec (FFQ)	*Financial partner*

Wildlife Habitat Canada (WHC)	*Financial partner*
SABL (1)	*Manager of the activities on the site (hunting, interpretation, etc…)*

(1) Management Society of Lavalier Bay

5.0 COMMUNICATION ACTIVITIES

a) Summarize to whom, how, and when the project results and achievements will be communicated.

Just prior to beginning work. The communication plan for wildlife management will mainly aim to rejoin the local community. In order to achieve this, a press release will be released to media and to local magazines and publishers. The media and our partners will be by the same occasion summoned to a site visit once work has begun. Furthermore, the press release will be posted on our Web site and an article will appear in our magazine "The Conservationist.

b) How will WHC's contribution to the project be publicly acknowledged and recognized? (e.g. website, brochure, meeting, workshop, newspaper article, presentation, etc.).

The press release mentioning Wildlife Habitat Canada's financial support will be posted on DUC's website and in "The Conservationist." Our partners' contributions will be recognized through these various forms of media.

c) Provide a sample of project communication products in section **7.0 - Appendices** of this report