

A Plan for Wetland Restoration at Warrens Pond, Burlington, PEI
Kensington North Watersheds Feb. 2013



Background

Warrens Pond is located at the head of tide on the Southwest River in Burlington, Queens County. The location was made into a mill pond early in the 19th century. The water-powered saw and shingle mills were productive for over 100 years, until the arrival of electrical power in the 1950's.



Aerial photo of Warrens Pond from the 1935 PEI Aerial survey, showing the mill pond intact, along with active mill flumes on the right

The abandoned mill pond fell into disrepair, and eventually was breached sometime in the mid to late 1950's.



From the 1958 PEI Aerial Survey, showing the breach of the mill pond dam

Ducks Unlimited (D.U.) created a concrete dam and fish passage in the 1970's. In the early 1980's the property owner at the time created a series of berms and ponds, complete with various water level control structures, in order to create a U-Fish'em aquaculture site.



2000 PEI Aerial Survey, showing aquaculture ponds and D.U. structure intact

The creation of these ponds changed the function of the D.U. structures to the point that D.U. requested that the landowner sign a document absolving D.U. of responsibility for the structures, which the owner apparently did sign. In the early 2000's, the D.U. structures did fail, as did the control structures in the trout ponds, and the location fell into disrepair. The location currently remains in this situation.



2010 PEI Aerial Survey photo, showing remnants of 3 ponds with Spring Valley Brook on left

At the AGM of the Kensington North Watersheds in April 2012, association president Ches Boutilier announced KNWSA's intention to select a "flagship project", a project that would require an amount of effort and funding beyond normal operations, in order to tackle one of our more difficult problem areas and to create awareness of watershed issues in the Kensington North area. In December 2013, after a lengthy review of several potential locations, the Board of KNWSA selected Warrens Pond as our Flagship Project.

In the weeks following the board's selection, KNWSA staff met with several key people, all of whom have contributed greatly to the collective plan to date, including:

- Glen and Rhena Rochefort, land owners
- Wade Caseley, adjacent land owner
- Kevin Arsenault, Watercourse, Wetland and Buffer Zone Technician
- Ross Bernard, Provincial Watershed Coordinator, Western Division
- Ali McLennan, Eastern Habitat Joint Venture Program Coordinator, PEI Dept. of Agriculture and Forestry
- Jonathan Platts, Conservation Programs Specialist, D.U. Canada
- Brian McCollough, Environmental Engineer
- KNWSA Board Members

A plan is beginning to take shape. A general view of what will be permitted under Watercourse Alteration permits is understood. Structures, adjacent springs, and other features have been mapped.



Contours and locations of prominent structures and features

A work plan is under development. In order to proceed in a timely fashion, the project has been divided into five general sections. The work plan will be amended and updated as required. The general work plan is as follows:

1. Meet with DUC regarding their possible participation in the securement of the fishing ponds. It will then be necessary to survey the ponds to determine the ideal operating level and to see if the ponds can be combined and operated by one structure.
2. Prepare a preliminary design of a channel that will allow fish to migrate around the dam. Review with DFO and then prepare construction plans.
3. Obtain a budget price for the dam/fishway removal and the construction of the rock channel.
4. Secure funding.
5. Obtain landowner permission to do the work.
6. Apply for permits and schedule construction.



Non-functional power generator

Project Schedule

Project Phase	Time Frame	Projected Cost	Key Players
Phase 1 – removal of broken dam	2013	est. \$6000	Permitting agencies, Land Owners Funding Partners
Phase 2 – removal of non-functioning structures, buildings, debris	2013, ongoing	unknown	Permitting agencies Land owners Funding Partners
Phase 3 – design a channel for fish passage, removal of existing fishway, construction of new fishway	2013 - 2014	unknown	Environmental Engineers Permitting Agencies Land owners Funding Partners
Phase 4 – stabilizing ponds for waterfowl habitat	2014, beyond	unknown	Environmental Engineers Ducks Unlimited Land owners Funding Partners
Phase 5 – Developing Community Access to Recreational Resources (fishing, trapping)	2014	unknown	Land owners KNWSA
Phase 6 – improving fish passage upstream at Cannes Pond, MacLeods Pond	2014 - beyond	unknown	Permitting Agencies Ducks Unlimited Landowners

Communication Plan

- signage may be posted on site, in tasteful fashion, recognizing funding partners
- news releases, local newspaper articles, website and facebook postings, as newsworthy happenings occur
- meetings and site tours with potential funders, public



Non-functioning water control structure