

waterlines

COVEHEAD-BRACKLEY WATERSHED NEWS

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ENHANCEMENT WORK COMPLETED 2011

2011 was another busy summer for FCBB staff with 6 people. The planned work was all completed along with several additional projects including:

- Clearing all 5 streams from springs to estuaries
- Stream assessments/inventory completed on all 5 streams
- Planted 360 long-lived trees and food shrubs with rabbit protection
- Tested 10 stream water stations each week
- Monitored and photographed anoxic events
- Wildlife assessment and surveys

- Sea lettuce disposal and by-catch monitoring
- 2 new wetlands and information booklets
- Hanging culverts removed and bridge constructed
- Nitrate clinic for drinking water and 9 groundwater springs
- Evergreen-Molson stewardship event
- Eagle and Kestrel banding participation
- Canada Day display with wildlife and fish tank
- Youth Eco-Learning day
- Brushmats and channel deflectors
- Charitable status application
- Erosion monitoring sites
- Community Aquatics Monitoring Program

Watershed crew: Marcie, Nathan, Justin, Jesse, Wanson, Christina.



STREAM HEALTH ASSESSMENTS

FCBB staff has developed a comprehensive stream health assessment/inventory checklist to evaluate the current health and conditions in all 5 streams.

This information is recorded and entered into our GPS and then transferred to spreadsheets and mapping programs.

Using colour coding and waypoint flags, we will be able to show the current conditions of all the streams on a watershed map with all the springs, crossing, vegetation, land use and fish habitat.

This information will help show land owners and future staff actual stream

conditions and indicate areas requiring more work and maintenance. Each stream area can now be returned to using our Garmin Dakota 20 GPS.

To request a copy of the stream health assessment field sheet, email coveheadbrackley@gmail.com

STREAM CROSSING ON AULD'S CREEK



A stream crossing on private land halfway up Auld's Creek had two crushed culverts (pictured left) that were placed too high for fish to move upstream.

This year FCBB was able to partner with the land owner and use heavy timbers and decking from the old Darnley Bridge to construct a 14' x 14' bridge (pictured right) on heavy concrete abutments.



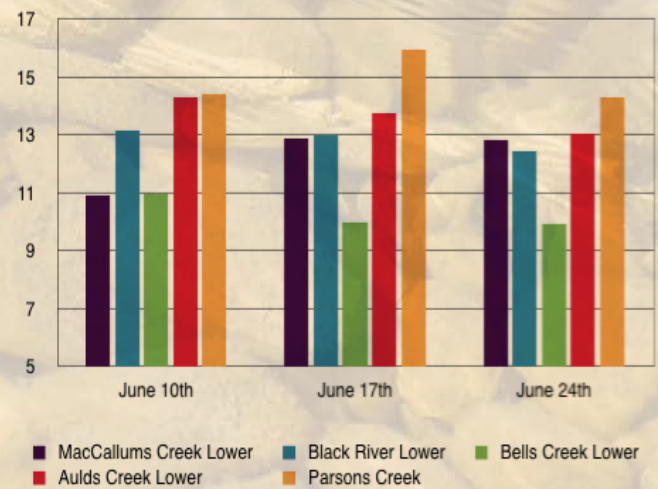
WATER TESTING RESULTS

Each Friday morning, FCBB staff tested stream water at 10 monitoring sites for temperature, pH, dissolved oxygen, salinity, conductivity and phosphates. Graphs were developed and compared to identify any abnormal readings. Given the cool summer, stream temperatures remained below 18°C and all measurements, except phosphates and nitrates, were within acceptable limits for good fish growing habitat in all streams.

A free nitrate testing clinic for drinking water was held on July 19

where only a couple of homes were close to the maximum 10 ppm standards set by Health Canada. Testing of the nine groundwater springs across the watershed showed increased nitrate readings in seven of the nine springs with the highest reading of 9.4 ppm which seems to show that nitrates are still percolating down to the water table and springs.

Dissolved Oxygen



SEA LETTUCE HARVESTING AND MONITORING

A pilot project of harvesting some sea lettuce growing in Covehead Bay and Mill River was conducted during June and July. Approximately 68 tons of wet sea lettuce was gathered in 22 ½ loads by a harvester from Florida in Covehead Bay. FCBB help located farms and compost operations to dispose of the sea lettuce and monitored the by-catch of fish caught in the sea lettuce. Much was learned from this pilot project including the following notes:

- Planning for access points, tides, water depths and unloading very important
- Harvester works very well gathering sea lettuce
- Farmers will accept large amounts of free sea lettuce for composting
- Unloading configuration must be high enough to load a full truck
- Sea lettuce grows fast in warm weather with available nutrient sources
- Sea lettuce floats near the surface when growing
- Harvesting near the bottom can harm eel grass growing on the bottom
- Unloading areas in Covehead and Brackley Bays must be deepened
- Sea lettuce rots in fall and sinks to the bottom restricting harvest
- Fish by-catch sampling identified significant # of several species
- Payment methods for sea lettuce harvesting — \$/ton or truckload may be the most efficient.



SAMQWAM AQQ KATEW — WATER AND EEL

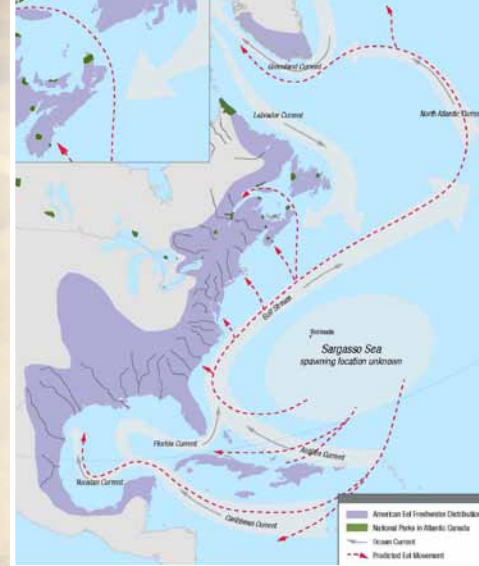
This summer I took a special journey with Parks Canada and the Samqwan aqq Katew — Water and Eel. I took this great opportunity to connect with the many resources within Parks Canada and resources within the Mi'kmaq community on Prince Edward Island.

Drinking water is what man needs for survival in the cycle of life and my special project was to examine the cycle of life of the American Eel (*Anguilla rostrata*), whose importance is highlighted because it is designated as a species of special concern by COSEWIC (Committee on the Status of Endangered Wildlife in Canada). For thousands of years, the Mi'kmaw, like other First Nations, lived in harmony with the land hunting, fishing and gathering and only took what was necessary. Today the four elements play a major part in the

environment: water, fire, air and Mother Earth. The Aboriginal people across Canada play the important role of being the steward of "Mother Earth".

Through the eel project I was able to show the connection with the Parks Canada mandate of protecting and presenting nationally significant examples of natural and cultural heritage and the Mi'kma'ki First Nations in the Atlantic. With this knowledge I was able to share information with Parks Canada visitors through a special program called Samqwan aqq Katew — Water and Eel.

On PEI, the Mi'kmaq fishermen have not fished eels for commercial use for over 15 years, but they spoke of how they used to fish them in the fall and winter, using the summer and winter eel spears. The fishermen also spoke of how our



ancestors would have used canoes while modern day fishermen use dories and fish at night. Today the PEI Mi'kmaq can fish eel for food, gatherings, celebrations and special events.

*Judy Clark, Mi'kmaq Interpreter
Mi'kmaq Confederacy of PEI and Parks
Canada Special Project*

WETLANDS, WILDLIFE AND CLEAN WATER



Wetlands are very important and productive ecosystems for wildlife, plants, insects and many bird and duck species. Wetlands also store carbon, nitrates and phosphorus; filter and purify water; and, reduce flooding and erosion. Many ponds, swamps, bogs and marshes have filled in over time with little open water. FCBB worked with Ducks Unlimited Canada, Environment Canada and local farmers to restore and construct 2 wetland ponds in our watershed.

FCBB developed a brochure called *Wetlands, Wildlife and Clean Water* to provide information to landowners, other watershed groups and the public on the values of wetlands and the criteria for evaluation of a potential wetland site. This is the first wetland brochure developed for PEI and is available by request at coveheadbrackley@gmail.com.

COMMUNITY AQUATICS MONITORING PROGRAM

Monthly from June to September, FCBB worked with Fisheries and Oceans Canada on a bays monitoring program where large nets sampled and counted fish species at 3 sites on Covehead Bay and 3 sites on Brackley Bay. Thousands of small fish were caught and recorded including including: Mummichog, Stickleback, Sand and Grass Shrimp, Silverside, Flounder, Cunner, Crab, Eel and a few amazing Pipefish (pictured right).

By keeping a good record of these fish and making comparisons over time, the health of the bays can be monitored.

Some fish like Mummichog and Shrimp will live in sea lettuce while Cunner and Pipefish only like Eelgrass habitat. As sea lettuce continues to smother the excellent eel grass fish habitat, then records of fish species numbers may be one indicator of the health of the bays.





Cass's Pond Interpretive sign is MISSING. If you have information that leads to the recovery of this sign, you will be eligible for a reward.

Friends of Covehead-Brackley Bay Inc. (FCBB) is a community-based volunteer organization established in 2000, incorporated in 2001. It was formed by a group of community members concerned with the health and sustainability of the Covehead-Brackley watershed area. Its mandate is to create a watershed area that is healthy: one which nourishes the land and water, one which is sustainable to native flora and fauna, and also balances the interests of residents, including those working in aquaculture, forestry, agriculture, fisheries and tourism.

WILDLIFE ASSESSMENT



Eagle nest in Winsloe.

FCBB has been working with Provincial Forest, Fish and Wildlife staff to develop a simple method for assessing wildlife populations and health in PEI watersheds. Six indicator species (ruffed grouse, black duck, bald eagle, leopard frog, beaver and brook trout) were selected for annual surveys to indicate the overall health of other watershed wildlife. FCBB is now completing evaluations of species

richness (the number of different species seen in the watershed) and an assessment of watershed strengths, weaknesses, opportunities and threats. This fall we will be working with Provincial Wildlife people on watershed heterogeneity (comparisons of different types of habitat within the watershed) and determining a percentage of protected area which are available from Provincial air photo data.

FRIENDS OF COVEHEAD-BRACKLEY BAY WATERSHED MANAGEMENT GROUP (FCBB)

Anyone looking for information on the group can contact **Wanson Hemphill**, Watershed Coordinator.

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Please visit our website:

www.stanhopecovehead.pe.ca

We want your feedback about any of our activities. Give us your ideas for new projects, funding, community connections, topics for public meetings, etc.

FUNDING PARTNERS

Friends of Covehead-Brackley Bay Watershed wish to thank the many funding partners and great volunteers, without which, very little could be accomplished.

2011 Funding Partners:

- PEI Dept. of Environment, Energy & Forestry
- Environment Canada
- Greening Spaces Program
- Parks Canada
- PEI Jobs For Youth
- PEI Wildlife Conservation Fund
- Walmart-Evergreen Program
- North Shore Community Council
- Evergreen Foundation
- Canada Summer Jobs
- FCBB Volunteer Board of Directors

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