

# waterlines

## COVEHEAD-BRACKLEY WATERSHED NEWS

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### Enhancement Work Completed 2014-2015

- ◇ Cleared 5 streams from estuaries to springs
- ◇ Constructed 12 brush mats to collect silt
- ◇ Planted 2500 native trees and shrubs with rabbit protection
- ◇ Constructed a bridge in Black River
- ◇ Tested stream and surface water weekly at 10 locations
- ◇ Canada Day displays
- ◇ Measured shoreline erosion at 10 worst spots
- ◇ Cleaned Covehead Bay shorelines
- ◇ Hosted public meeting
- ◇ Displayed activities on website and Facebook
- ◇ Monthly fish sampling at 6 sites in Covehead and Brackley Bays (CAMP Program)
- ◇ Cooperate with Farmers on Nutrient Management Planning
- ◇ Measured oxygen and temperatures hourly in 2 estuaries
- ◇ Constructed 9 rock dams in field drainage ditch
- ◇ Collected sea lettuce for composting at Agro-Canada
- ◇ Mailed and delivered 1000 newsletters to communities
- ◇ Purchased new Nitrate Testing Photometer
- ◇ Replaced alders with native trees and food shrubs
- ◇ Completed annual spring runoff and red surveys



Summer 2015 crew: Aaron Jackson, Daniel Hobbs, Justin Misener, Justin Walsh, CJ Misener



@Friends of Covehead-Brackley Bays

## Nutrient Management Planning with Black River Farmers

With funding from Environment Canada Eco-Action Program, FCBB has contracted with Nutrient Management Planner, Brian Craig to work with 10 farmers in the Black River section of the watershed.

Nutrient Management | Planning promotes the right use of nutrients (fertilizers and manures) at the right rate, at the right time and in the right place. In order to determine the right amounts of nutrients, soil samples are taken and nutrient application needs can be determined for each crop.

By providing the appropriate amount of nutrients when the crop can best utilize it, excess nutrient applications,

which leach into the groundwater and streams, can be reduced. Less nutrients reduce sea lettuce growth and anoxic events promoting healthier streams, estuaries and bays.



## Restoring Fish Habitat

With funding from DFO Recreational Fisheries Conservation Partnership Program (RFCPP), FCBB has enhanced five streams, constructed brush mats to capture silt, planted native trees and food shrubs in small alder patch cuts as well as placing 9 rock dams in a field drainage ditch and building a 12' x 12' bridge over Black River replacing crushed culverts.

The RFCPP objective is to restore, rebuild and rehabilitate recreational fisheries habitat. By constructing enhancements, capturing silt, planting trees, reducing erosion and improving fish access, FCBB hopes to increase spawning, fish health and restore riparian areas for increased recreational fishing opportunities.



## Bat Inventory in PEI National Park

In collaboration with the Canadian Wildlife Health Cooperative at the Atlantic Veterinary College, Parks Canada will be participating in a bat inventory program throughout the summer of 2015. The inventory is part of the North American Bat Monitoring Program (NABat) and the goal is to gain a better understanding of bat species distribution and composition in PEI National Park.

### Why study bats?

In recent years, the population of bats on PEI and across northeastern North America has drastically decreased. Since 2014, three bat species have been listed under the Federal Species at Risk Act (SARA): the Tri-coloured bat, the Northern Myotis, and the Little Brown Myotis. The reason behind this devastating drop is a European born fungal agent called *Pseudogymnoascus destructans* that causes white-nose syndrome.

Through this inventory, all four ecosystems found in the park – coastal, forest, freshwater, and wetlands will be monitored. In addition, potential roost sites will also be monitored in order to gather information on species that are mating, and where maternity colonies are located. The main goals of the inventory are to identify what bat species are located in PEI National Park, and to collect data on the distribution of various bat species in order to better understand critical areas for bats within PEI National Park.

It is often difficult to locate bats as they vocalize outside the auditory range that humans can detect. For this reason, acoustic bat detectors which record high frequency bat calls will be used when conducting the inventory. Both stationary and mobile acoustic bat detectors will be used: the sta-

tionary systems will be placed for 7 nights within various locations throughout PEI National Park, while the mobile detector will be modified to attach to a vehicle moving slowly along defined survey areas.

This inventory will provide a better understanding of the bat species at risk found in PEI National Park and will also contribute to international bat monitoring, as it is compatible with NABat. All data collected from PEI National Park will be included in regional, national, and continental-scale bat monitoring databases. This inventory is the first step in the recovery process for these species at risk as it will establish primary data on bats in PEI National Park as well as identify areas of importance to bats such as roost and hibernation sites which can then be protected.

For more information on the bat inventory, please feel free to contact us at: 902-566-7050.

Photo By: Jordi Segers



## Sustainable Water Footprint

FCBB attended a 2 day workshop last year on issues relating to agriculture and groundwater. Speakers provided a variety of information including:

- ⇒ PEI is the only province relying 100% on groundwater for drinking.
- ⇒ High capacity wells can pump 140 gallons per minute.
- ⇒ Groundwater management challenges—population, agriculture intensity, water quality and contamination sources.
- ⇒ 96% of nitrates in Northumberland Strait are from PEI.
- ⇒ PEI uses 17 million kg of fertilizer annually with only 36% used by crops.
- ⇒ Higher nitrogen loss from fall ploughing than spring ploughing.
- ⇒ Groundwater provides 65% of stream flow.
- ⇒ Rainwater utilization— 40% evaporation, 40% recharge, 20% runoff.

- ⇒ Robert Coffin has developed a new potato— PR-07-11-1, that grows well in poor soil, needs less fertilizer, and uses nitrogen-fixing bacteria. Trials are also underway for blight-resistant potato varieties.
- ⇒ Fields with drainage tiles may allow runoff to reach streams quicker.
- ⇒ World resources are becoming restrained— land/capital decreasing, water resources decreasing, and soils are being degraded.
- ⇒ Farmers could manage land better and understand how to add value to soil through more expansive crop rotation.
- ⇒ More anoxic events on North Side of PEI is a result of lower tides and less tidal flushing in bays.
- ⇒ North American trends—Health & nutrition, less sugar & salt, less preservatives, natural, organic, gluten-free, vegan, local food, ethnic food.



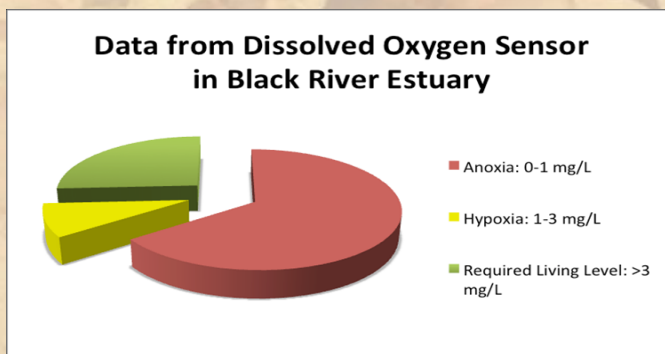
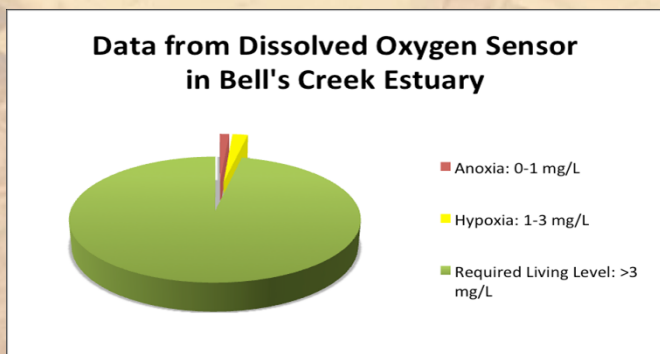
Best wishes to Lorne Kielly, a founding board member who recently moved to Charlottetown.

*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.*

## Groundwater and Surface Water Testing

FCBB have 2 HOBO sensors located in 2 watershed estuaries which record dissolved oxygen and temperature every hour all summer.

Here's a comparison of data from Covehead Bay and Brackley Bay in 2014



## Funding Partners 2015

FCBB wish to thank the following funding partners and volunteers without whom very little could be accomplished:

- PEI Department of Environment, Labour & Justice
- PEI Department of Transportation & Infrastructure
- Environment Canada Eco-Action
- Hon. Wade MacLauchlan MLA York-Oyster Bed
- PEI Rural Jobs Initiative
- PEI Jobs For Youth
- PEI Greening Spaces Program
- Parks Canada
- North Shore Community Council
- J Frank Daudet Provincial Tree Nursery
- Robert Vessey, former MLA & Minister of PEI TIR
- Agriculture & Agri-Foods Canada
- FCBB Board of Directors & volunteers
- Evergreen & Cannon Canada
- Wildlife Conservation Fund
- Canada Summer Jobs
- PEI Employment Development Agency

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