

Friends of Covehead Brackley Bays Inc.

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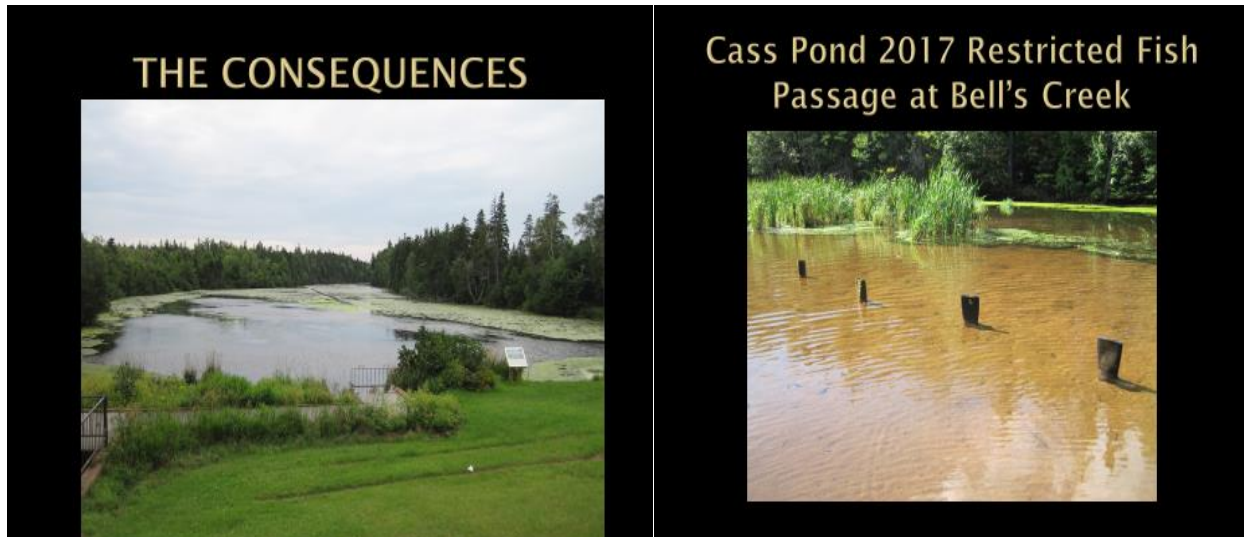
SUMMARY CASS' POND RESTORATION PROJECT AND UPDATES

OWNERSHIP OF POND: Province of PEI

The Cass's Pond Project is designed to restore an essential marine habitat in our North Shore Community. The current pond, fed by Bell's Creek was impounded in 1972. A fish ladder was built and the result was the pond which occupies an area 700 meters long x average width of 40 meters = 140,000 square meters at the estuary of Covehead Bay. Over the years conditions have deteriorated as shown in the slides below:

CURRENT DETERIORATED CONDITION IN POND:

- **Excessive legacy sedimentation** -estimated at 28,000 m² x 5 meters depth = **140,000 m³** (initially remove 90,000 cubic meters)
- **Restricted fish passage-reduction in brood stock and salmonids**
- **Rise in water temperature, growth of algae, anoxic events**
- **Degraded community facilities -Unsafe road access**



Cass' Pond Vegetation



IMPACT ON COVEHEAD BAY ESTUARY:

- Reduced tidal flushing
- Increase in anoxia & hypoxia
- Increased water temperatures
- Excessive silt loading into Covehead Bay

CASS'S POND ESTUARY ANOXIA DRONE PHOTO 2017



ACTIONS COMPLETED 2018-19

- **Project planning** (Critical Path Plan completed for entire multiyear project)
- Large amounts of **data collection** (water/sediment depths, water temp/d.o./ph/flow patterns/etc, drone surveys, creel surveys, water fowl surveys, vegetation surveys)
- Numerous public meetings to garner **public support** . Conducted numerous interviews of adjacent property owners, municipal council, property users/stakeholders for project input
- **Deed research** and facilitated correction of adjacent property deeds naming **Province as the sole owner of the pond alleviating public liability concerns.**
- **Collected project input from professionals and project collaborators** (DFO, PEI FF&W, aquatic engineers, contractors, PEI Watershed Alliance, provincial & federal departments of agriculture, agriculture producers, commercial and recreational fishers, shellfish producers, other watershed groups)
- Started **pond draw down** and installed **tidal gate**
- Completed extensive **sediment analysis** of the entire pond with STANTEC ENGINEERING
- **Fish ladder infrastructure** to be upgraded in Fall 2019

MAJOR RESTORATION TASKS:

- **Remove 90,000 m3 of sediment & use for agricultural fertilization**
- **Improve connectivity & aid annual migrations for several aquatic species**
- **Restore essential spawning habitat**
- **Install sediment detention structures**
- **Upgrade fish ladder**
- **Expand communal area & upgrade public boat launch**
- **Provide safer road access to Hwy #6**

CURRENT VIEW OF CASS' POND DRAWN DOWN (21 SEP 2019)



MAJOR PROJECT BENEFITS

- Restore fish passage & habitat
- Adapt fish ladder and pond to climate change
- Complete pilot project demonstrating agricultural applications of sediment
- Expand community outdoor recreation infrastructure (fishing, boating, tourist activity, etc)
- Contribute to Municipality of North Shore -Covehead Bay Sustainability Plan

Fall 2019 Cass's Pond Update

To remedy these conditions, FCBB has partnered with private and government officials to ensure this restoration project meets time frames and stays on budget.

Controlling the tidal flow: In the spring of 2019 FCBB hired a contractor to construct and install a tidal flow restriction gate in the Cass's Pond dam to prevent the incoming tide from flooding the pond. When the tide is high, the gate closes and prevents tidal waters from flowing into the pond. However, while the gate is closed fresh water from the Bell's Creek river system still flows downstream and temporarily re-floods Cass's Pond daily. This process has slowed the natural drying of pond sediments and has resulted in our having to postpone all potential restoration until 2020.

Sediment Testing for Agricultural Applications: This year FCBB hired a non-government, independent company to conduct extensive scientific sampling and analysis of sediments throughout Cass's Pond. This extensive sediment analysis goes beyond that required by provincial regulators because FCBB is attempting to determine if these sediments can be used in all agricultural applications. To date, the initial analysis of has shown that the sediment is very high in nutrients and no contaminants are present. Once the official sediment report is complete FCBB will be partnering with Provincial and Federal Departments of Agriculture to conduct field growth trials. -

Upgrading Fish Ladder: This fall FCBB will be upgrading the fish ladder infrastructure at Cass's Pond so that it meets Department of Fisheries and Oceans standards to improve aquatic species migration.

Expanding the Communal Area: FCBB will also be making preparations to expand the communal area to allow more public utilization of the site and safer access to the highway.

Going Forward: FCBB appreciates your concern, support, and patience while we pursue this difficult but essential habitat restoration project. We look forward to dramatically improved environmental and aquatic health of the pond and to its enjoyment as a restored community asset provided we receive the support of Provincial and Federal agencies.