

~ *FUNDY TIDINGS* ~

The Quarterly Newsletter of the

Bay of Fundy Ecosystem Partnership (BoFEP)

April 2019 ~ Spring Issue

A. BoFEP and its activities:

1. BoFEP update

Recent BoFEP Management Committee meetings have considered a number of ways to move the organization forward. We have hired a part-time social media coordinator to critically review our website and undertake a series of improvements to enhance our social media presence by making better use of Facebook, Twitter, Instagram and Youtube to connect with our members and partners. Planning is now underway for the 2020 Bay of Fundy Science Workshop, which will be the 13th in this series! Stay tuned for confirmation of time and place as well as details of the program. If you have any ideas for theme sessions that you would like to see included please forward them to seapencom@gmail.com. Some BoFEP members are also working on a toxic contaminants paper for the Marine Pollution Bulletin, linking toxic chemical levels of PAHs, PCBs, and halogenated pesticides in mussels with those levels in coastal sediments. This is a Gulf wide project involving a number of organizations in Canada and the US. BoFEP is now looking into the feasibility of hiring a part-time coordinator to move the BoFEP agenda forward more effectively. As always, we welcome new members, particularly ones who may be interested in actively participating in our Steering and Management Committees.

2. Ocean Literacy and Awareness Working Group

Because of the fundamental importance of the Ocean with respect to the earth's climate, the urgency of promoting ocean literacy and awareness world wide is a "no brainer" ! There are some significant local and national initiatives underway, such as Canadian Network of Ocean Education (CANOE), the Canadian Ocean Literacy Coalition (COLC), and Ocean School. However, a major shortcoming has not been addressed, namely Teacher Education. Without a minimum understanding of the ocean sciences, both natural and social, the benefits to be derived from the above "tools" will not be optimized. Hence, it has been suggested that the BoFEP Working group on Ocean Literacy should continue to focus on promoting the incorporation of ocean themes in all subjects of the school system. This can be achieved by providing a basic understanding of the ocean sciences within the B.Ed and M.Ed programs of the provinces relevant universities. We are taking some steps toward this end. [Complete Working Group report.](#)

B. Partners and other organizations:

1. ACCESS Conference 2019

The Atlantic Canada Coastal and Estuarine Science Society (ACCESS) will hold its 2019 annual conference in conjunction with the Climate-Resilient Coastal Natural Infrastructure Workshop (C-RCNIW) at St. Mary's University in Halifax. The ACCESS Conference on Thursday, May 9th and Friday May 10th offers professional and student oral and poster presentations focused on coastal & estuarine science and management, with special sessions on climate change adaptation, coastal habitat restoration, and Indigenous-led coastal research. The C-RCNIW will take place from Monday, May 6th to Wednesday, May 8th and will feature workshops on the implementation of nature-based adaptations to climate change. [Program and registration details.](#)

2. GMRI 2018 Annual Report Available

The [Gulf of Maine Research Institute](#) recently released its [2018 annual report](#), which showcases the institute's work on ocean warming and climate change, shifting fish stocks, bluefin tuna, electronic monitoring, Gulf of Maine seafood, aquaculture, and many other fields.

3. COINAtlantic March newsletter available

The [March 2019 edition of the COIN Atlantic Coastal Update](#) prepared by the Coastal and Ocean Information Network is now available online. You can also visit COINAtlantic on [Facebook](#), [Twitter](#), [YouTube](#), and the [COINAtlantic website](#) for regular updates and event listings.

4. Avon River Supporters stage music festival

In 1968 the Nova Scotia government built the Avon River Causeway near Windsor, NS with 'zero' fish passage, creating a river in distress and putting many fish and other species at risk. Supporters of the Avon river, including Friends of the Avon River and the Blue Beach Fossil Museum, stage an annual three-day "Blue Beach Bash" music festival to educate and draw attention to the plight of the river. [This year's festival](#), whose slogan is "Voices from Ground Zero", will be held August 23rd-25th at Blue Beach. It will also feature guest speakers talking about the river. Everyone is invited.

5. Database on world's protected areas

[Protected Planet](#) is the most up to date and complete source of information on protected areas, updated monthly with submissions from governments, non-governmental organizations, landowners and communities. It is managed by the United Nations Environment World Conservation Monitoring Centre ([UNEP-WCMC](#)) with support from IUCN and its World Commission on Protected Areas ([WCPA](#)). It is a publicly available online platform where users can discover terrestrial and marine protected areas, access related statistics and download data from the World Database on Protected Areas ([WDPA](#)).

6. Publication on ocean governance

The International Ocean Institute-Canada has produced this collection of over 80 insightful essays entitled [The Future of Ocean Governance and Capacity Development](#). The book honors the work of Elisabeth Mann Borgese (1918-2002), preeminent ocean advocate and founder of the IOI. More than 90 leading experts explore future challenges and opportunities for ocean governance and capacity development. Major themes include the law of the sea, ocean sciences, integrated coastal and ocean management, fisheries and aquaculture, communication and negotiations, maritime safety and security, ocean energy, and maritime transportation. Several members of the BoFEP Steering Committee contributed to this publication.

C. Fundy/GOM and other News:

Climate change /sea level rise

1. Revisiting the Groundhog Day storm of 1976 in southwestern Nova Scotia

In Yarmouth, Shelburne and Digby counties in southwestern Nova Scotia (as well as other parts of the province) Groundhog Day is remembered for a vicious storm that came through the area on Feb. 2, 1976. [More information](#) (The Coastguard)

2. Repair work begins on Hantsport aboiteau

Work has begun on a \$4-million project to replace the aboiteau in Hantsport that failed more than a year ago. The former wooden box culverts will be replaced by two permanent concrete box culverts. An earthen berm will be restored after they're in place. [More information](#). (CBC News)

3. Gulf of Maine: one of the fastest warming spots on Earth

The Gulf of Maine has been warming rapidly as the deep-water currents that feed it have shifted. Since 2004 the gulf has warmed faster than anyplace else on the planet, except for an area northeast of Japan. During the "Northwest Atlantic Ocean heat wave" of 2012 average water temperatures hit the highest level in the 150 years that humans have been recording them. [More information](#). (Portland Press Herald)

4. "Perfect Storm" could cut off Nova Scotia

Over the past 69 years, the sea level at the mouth of the Bay of Fundy has risen about 38 centimetres, even as the dikes and coastal land continue to subside. In the event of a large storm and ongoing sea-level rise the Chignecto Isthmus would flood over the protective dikes along the coast at the border of

Nova Scotia and New Brunswick. A map shows where flooding could happen in a one-in-50 year storm. [More information.](#) (GlobalNews)

5. Climate change a threat to dikes protecting lowlands

Over the centuries the dikes protecting the Maritime lowlands have been extended, expanded and, in the 1950s and 60s, built higher and stronger through a massive federal rehabilitation program. But geomorphologists who study the changing shape of the coast say climate change is threatening anew the 241 kilometres of dikes that line the coasts and tidal rivers of Nova Scotia and another 100 kilometres in New Brunswick. [More information.](#) (Windsor Star)

Marine Mammals

6. Collecting Right Whale poop!

The [Marine Stress and Ocean Health Lab](#) at the New England Aquarium in Boston houses the world's largest collection of right whale poop. It sounds gross, but scientists can learn a lot from feces — reproductive and metabolic health, stress levels, exposure to infectious disease and biotoxins. And they can do it all without harming or bothering the animals. [Can Feces Save A Species?](#)

7. Snooping on Blue Whales

Underwater recorders attached to the ocean floor are revealing new information about endangered blue whales off the coast of Atlantic Canada. In 2019 scientists will be listening to recorders attached to the ocean floor at locations from the Bay of Fundy to far out into the Atlantic and into the Gulf of St Lawrence. [Ocean floor listening posts reveal secrets of blue whales](#) (CBC News)

8. Promising year for Right Whale calves

Seven Atlantic Right Whale calves have been spotted along the east coast this season. See [7th Endangered North Atlantic Right Whale Calf Spotted This Season](#) (MyNews13) and also [Three Endangered Right Whale Calves Spotted in New England Waters](#) (Smithsonian Magazine) This has brought a sliver of optimism after a devastating 2017 and 2018 for the right whale population. During that time, [20 right whales died](#), many from boat strikes or fishing line entanglements, several in the Gulf of St. Lawrence. To make matters worse, [few mothers bore calves during that time](#). While this is a small step in the right direction, more than 16 mother-calf pairs need to be spotted in order for the whale's population to grow. Meanwhile, [Transport Canada has outlined a number of actions](#) it has taken to reduce the incidence of whale-ship collisions in the Gulf.

Aquaculture Highlights

9. Cooke, Martha Stewart partner on value-added seafood range

A New Brunswick based seafood giant is teaming up with lifestyle guru Martha Stewart to push a new product line. Cooke Aquaculture, under its True North Seafood sales arm, is partnering with Sequential Brands Group, which licenses a range of consumer brands, including Martha Stewart's. The range of products will launch next month and will be on show at the upcoming Boston seafood show, held in the East Coast US city from March 17-19. [More information.](#) (Undercurrent News)

10. New Report: Chemical-free sea lice treatments take off

As the industry moves away from chemical treatment such as Slice, it is finding success with a new set of treatment options. [More information.](#) (Intrafish)

11. Global salmon farming company eyes \$500M expansion along Nova Scotia coast

A Mitsubishi-owned company is considering bringing 10-20 open-pen salmon fish farms and land-based support facilities to province, including St. Mary's Bay in the Bay of Fundy. [More information.](#) (CBC News)

Ecological protection/conservation

12. National Park on Grand Manan?

After 213 years, the family that owns an iconic chunk of Grand Manan Island is preparing to bid it farewell. The Hole-In-The-Wall campground, known for its cliff-side campsites boasting spectacular and

unobstructed views of the Bay of Fundy, is up for sale. At the same time another group is pushing for that strip of coast of North Head to become a satellite portion of Fundy National Park. [Group hopes to make iconic piece of Grand Manan part of national park](#) (CBC News)

13. Ile Haute Conservation Plan?

Apparently [Environment and Climate Change Canada](#) is preparing to announce the creation of the Ile Haute National Wildlife Area, possibly as early as late April. Recheck the ECCC site for more details as they become available. Ile Haute is a pristine island, located 8 kilometres from the shores of Cape Chignecto in Cumberland County. See also: [Casey Petitions Minister of Environment to Make Ile Haute a National Wildlife](#) (Liberal Party Website)

14. Investment in coastal research in Port of Saint John

The Government of Canada has announced that it is investing an additional \$1.1 million in five marine environmental data collection projects in the Port of Saint John as part of Canada's Oceans Protection Plan. These projects, which fall under the \$50.8 million Coastal Environmental Baseline Program, will support the advancement of coastal data collection projects and involve close collaboration between Fisheries and Oceans Canada scientists, Indigenous and coastal communities, and other local partners. Participating groups will gather comprehensive data that will help detect changes in our marine environment over time. [More information.](#) (Benzinga)

Fish and Fisheries

15. Tracking Sturgeon populations with DNA

Atlantic sturgeon *Acipenser oxyrinchus oxyrinchus* was at one time distributed on both sides of the Atlantic Ocean, but the last European populations in the Baltic were extirpated in the 1960s. Atlantic sturgeon are anadromous, and historically spawned in 38 rivers along the North American Atlantic Coast, including the Bay of Fundy. Today spawning is confirmed in only 19 of these rivers and suspected in another six. Mitochondrial DNA sequence and microsatellite DNA polymorphisms provide inherent genetic tags that have been used to characterize individual spawning populations of Atlantic sturgeon, define their genetic population structure, and estimate their evolutionary relationships. [Use Of DNA Analysis In Identifying The DPS And Population Origin Of Highly Migratory Atlantic Sturgeon](#) (Sciencetrends)

16. Harvesting/processing sea cucumbers in NS?

The Nova Scotia Utility and Review Board will decide soon whether a sea cucumber processing facility is built in the Yarmouth area. At a special meeting of the local municipal council last November, a development agreement to allow the pharmaceutical processing plant was approved. But, those who live near the site of the proposed development say they are concerned about its potential environmental impact. The developer, Ocean Pride Fisheries in Wedgeport, is confident that the proposed operation would not be a nuisance. The issue will be the focus of a public hearing of the board on April 24 in the Mariners Centre in Yarmouth. [Sea cucumber project to be subject of hearing](#) (Chronicle Herald)

17. DFO not protecting decimated cod stocks

Although Fisheries and Oceans Canada announced this week it will close the Atlantic cod fishery on the Scotian Shelf and in the Bay of Fundy, it plans to keep allowable bycatch levels at 825 tonnes, which critics say violates the department's own policy to keep all sources of fishing mortality as low as possible and hampers the endangered species' chances of recovering. [Oceana Canada](#) says that the department (DFO) has failed to follow its own precautionary framework and take adequate action, despite [identifying bycatch as a problem](#) in a 2011 recovery potential assessment. [DFO breaking own policy, failing to protect cod stock: Oceana Canada](#) (Ipolitics)

Tidal Turbine/power

18. Is harnessing ocean energy worth it or feasible?

Tidal energy has been consistently cited for its energy potential. However, when compared to other renewables such as wind and solar, tidal is expensive, leading many to proclaim it is not worth pursuing.

But do the benefits of tidal outweigh the cost concerns? This article looks at five tidal farms around the world: [Potential vs. expense: is tidal energy worth the cost?](#) (Power-technology.com). There are also questions being raised about the feasibility of other basic ideas for harnessing ocean power as outlined in: [Ocean Power Generating Systems--Going Nowhere Fast](#) (Canada Free Press)

19. Grand Passage turbine begins generating

On Feb. 23, two big spinning turbines in Grand Passage, Digby County, started producing electricity from the tide driven current. For the owner, Sustainable Marine Energy, it was a big day and for this province's fledgling tidal energy industry, it was good news in the midst of much bad. [Sustainable Marine Energy's plant begins generating electricity](#) (Chronicle Herald) see also: [PLAT-I tidal power platform settles in Canada's Grand Passage](#) (Marine Energy)

20. Overview of tidal energy plans in Minas Passage

Kings County News has prepared a comprehensive summary of some companies that have proposed or installed devices to harness energy from the tides in the Minas Passage. [TIMELINE: Tidal power in the Minas Passage](#) (Kings County News)

21. Troubled turbine saga continues

The wrangling over the responsibility for the broken and financially abandoned turbine sitting on the bottom in the Minas Passage continued unabated. It looks as though taxpayers will initially foot the bill for its removal.

[Taxpayers might be on the hook for turbine removal](#) (Chronicle Herald)

[Nova Scotia Revokes Licence for Cape Sharp Tidal and Orders Removal of Turbine](#) (Lexology)

[N.S. government pulls plug on financially troubled Bay of Fundy turbine project](#) (CBC News)

[Tidal recall: the province says it will pay the estimated \\$5 million to remove the tidal turbine abandoned on the floor of the Minas Basin, but doesn't say when](#) (Halifax Examiner)

22. Controversy over Annapolis Tidal Power Plant boils over

The long simmering debate over the 35 year old Tidal Power Plant at Annapolis Royal has finally flared up and turned rather ugly. Opponents accuse DFO of ignoring its own fisheries habitat rules and being overly complacent in its dealings with hydroelectric companies. There have been several small anti turbine demonstrations at the plant. Regrettably, a meeting of a panel of the Canadian Science Advisory Secretariat convened to discuss the issue was postponed and then relocated. When it did finally take place, one of the scientists most knowledgeable about the impacts of the turbine on fish stocks was shockingly refused entry to the meeting. Sometime during the furor, DFO finally reacted and ordered the plant to shut down until it receives a Fisheries Act authorization. This was a seemingly simple decision given that the plant is shut down for maintenance anyway! In the meantime a Bruce MacKinnon cartoon perfectly skewered DFO's dismissive attitude to long expressed public and scientific concerns about the plant. The impacts of a long-term shutdown or permanent closure of the plant has raised concerns about the potential impacts on revenue to the town of Annapolis Royal from what the mayor calls "a good corporate citizen". There is also now a long overdue discussion about whether or not fish stocks and habitats can be restored if the plant is permanently closed.

[DFO 'complacent' on fish kills at Nova Scotia's turbines, biologist says](#) (Chronicle Herald)

[Protestors on Annapolis Royal causeway want end to fish kills](#) (Chronicle Herald)

[Scientist banned from Annapolis turbine/fish kill meeting](#)

[Bruce MacKinnon cartoon](#) (Western Star)

[DFO puts brakes on Annapolis Tidal Station](#) (Chronicle Herald)

[No worries - Annapolis Royal mayor says turbine shutdown won't hurt town's coffers](#) (Annapolis County Spectator)

[Is species and habitat mitigation possible at the Annapolis Royal causeway?](#) (Annapolis County Spectator)

Pollution/Habitat disturbance

23. UNB raising awareness of plastic pollution

Massive quantities of plastic of every description are pouring into our oceans and threatening marine ecosystems. A number of initiatives are focusing on reducing the input and removing what is already there. The UNB Art Centre recently launched a plastic use awareness campaign. The anti-plastic campaign asks that participants post a photo of plastic they find on the UNB campus on Instagram using the hashtag #plasticfreeunb. [UNB Art Centre spearheads plastic use awareness campaign](#) (Brunswickian)

24. Alton Natural Gas battle intensifies

The battle to prevent Alton Natural Gas from hollowing out underground salt domes and dumping 10,000 tons per day of the resulting brine in the Shubenacadie River is getting more intense. The plan has raised the concern of Indigenous protesters who have set up a permanent camp near the waterway. Protesters have gathered at the site for several years, arguing that the plan poses dangers to the traditional fisheries of the Mi'kmaq and risks harming the river used by Indigenous populations for thousands of years. The company has filed an application in the Supreme Court of Nova Scotia requesting safe access to its Alton River facilities near Shubenacadie, and is seeking to remove protesters who are trespassing on its property and who have “consistently” blocked access to the site. A Nova Scotia Supreme Court judge has granted the Alton Natural Gas Storage Project company a temporary injunction against a Mi'kmaw water protector and his supporters currently occupying the entrance to the company's property. Three women described as “grassroots grandmothers” were arrested by the RCMP at the indigenous protest camp. Meanwhile, the federal government has belatedly stepped in to regulate the project. Environment and Climate Change Canada says the proposed regulations will be aimed at managing potential threats to fish, fish habitat and human health, but a Mi'kmaq leader says Ottawa's move doesn't go far enough.

[Lobbied 22 times, Trudeau government proposes to let Alton Gas dump saltwater into Shubenacadie River](#) (National Observer)

[Alton Gas goes to court to remove protesters from work site](#) (CBC News)

[Nova Scotia judge grants temporary injunction against Mi'kmaw water protector, supporters](#) (Kukukwes News)

[Federal government to regulate controversial Alton Gas cavern project](#) (Global News)

[Trudeau blasted in House over handling of N.S. natural gas project](#) (CBC News)

[RCMP arrest three 'grandmothers' at Alton Gas protest site in Nova Scotia](#) (Toronto Sun)

25. Why is major U.S. oil company storing explosives at Walton?

As word spreads that the American oil company Halliburton is setting up shop in Walton, it appears many locals – including some politicians – have more questions than answers. Halliburton is planning to establish a storage facility for explosives used in oil extraction. A spokesperson said the facility will be comprised of several secured storage modules surrounded by a steel fence. No public meeting, consultation or council vote was undertaken prior to the approval of the facility. The company has received all necessary permits from Canada's Department of Natural Resources – Explosives Regulatory Division for storage. Some locals wonder whether the explosives storage site might be connected to the start of possible fracking in this area.

[What's going on in the wilds of Hants County?](#) (Kings County News)

[Locals lament lack of information as U.S. oil company sets up explosives storage facility in Walton](#) (Hants Journal)

26. Whites Point Quarry Update

Remember the prolonged battle over the planned Whites Point quarry on Digby Neck over a decade ago? Bilcon, a company owned by the Clayton brothers wanted to blast massive amounts of basalt rock from the shores of Digby neck and ship it south by freighter (requiring a specially constructed shipping terminal) to ballast US highways. Environmentalists said the shipping traffic at a new terminal serving the quarry would be a risk to the ecology of the Bay of Fundy, which is frequented by endangered right whales. It would also have been a threat to the expanding tourism economy of Digby Neck and the islands. After an extensive federal/provincial panel hearing (at which BoFEP presented input!) the project was halted because would violate core community values. Citing the badly flawed (and strongly opposed by most Canadians) North American Free Trade Agreement (NAFTA) Bilcon sued Canada for \$443. In a recent ruling NAFTA arbitrators ordered Canada to pay \$7 million for a supposedly botched environmental review, but they overwhelmingly rejected Bilcon's bid for \$400+ million in lost profits.

[Canada must pay \\$7M over botched assessment of N.S. quarry project](#) (Global News)
[Canada ordered to pay \\$7 million for botched environmental review, but NAFTA arbitrators reject U.S. investors' bid for \\$400+ million in lost profits](#) (Investment Arbitration Reporter)
[NAFTA - Chapter 11 - Investment: Clayton/Bilcon v. Government of Canada](#) (Global Affairs Canada)
[EDITORIAL: Quarry saga dust settles](#) (Chronicle Herald)

Odds and ends

27. Walrus skull found in Fundy

New Brunswick scallop fishermen have hauled up the skull of a walrus complete with its tusks. Museum officials estimate the skull to be 9-10,000 years old. The same boat dragged up a similar skull three years ago in the same general area. The last known sighting of a live walrus in the bay of Fundy was in the 1700s. [More information and picture.](#) (CBC News) See also: [Ice age walrus skull pulled from Bay of Fundy](#) (CBC News)

28. Photos of Fundy rock formations

An Asian news site has posted some spectacular photographs of the various rock formations at Hopewell Rocks, NB. However, the site is a little geographically off in claiming that "*These interesting objects are between the United States and Canada.*" [View photographs.](#) (The Mice Times of Asia)

29. Cougars in Fundy forests?

A video recording of what appear to be three cougars taken by a homeowner living near Tiddville on Digby Neck has once again raised the question of whether or not these big cats are really extinct in the Maritimes. [Video interview \(7:05 mins\) with homeowner and biologist Andrew Hebda.](#)

30. What is a tidal bore?

Tidal bores explained, particularly from a surfers point of view. Considers best places to surf tidal bores, including the Bay of Fundy rivers. Pictures as well! [More information.](#) (Surfer Today)

D. ADMINISTRIVIA

Fundy Tidings is circulated quarterly to members of BoFEP and others who have expressed an interest in BoFEP and its activities. If you know someone who might like to receive Fundy Tidings, or if you would like to be removed from the Fundy Tidings mailing list, e-mail a request to: seapencom@gmail.com Back issues available at [Fundy Tidings Archive](#)