

ST. CLAIR RIVER BINATIONAL PUBLIC ADVISORY COUNCIL
(BPAC)

Final - Draft Minutes

Meeting 2015-3

Tuesday, May 12, 2015
Port Huron High School Media Centre
2215 Court Street
Port Huron, Michigan

ATTENDEES:

Donna Strang
Terry Burrell
Kris Lee
James Clatworthy
Marina Plain
Sharon Bender

Kathy Watts
Paulette Duhaime
Patty Troy
Judy Ogden
Fred Kemp

Christine Loeffler
Dan Collins
Sheri Faust
Melanie Foose
Robert Clegg

REGRETS:

Phil Vallance
Fred Fuller
Craig Griffiths

Frank Frisk
Theresa Warren
Ted Briggs

Terry Richardson
April White

GUESTS:

Kirsten Lyons
David Harwood
Venessa Davis
Jason Taipale

Amy Tseng
Marvin Kirchoff
Larry Mavis
Rachelle Winkoup

Pete Tseng
Robert Stonefish
Michael Bernitsas

Call to Order and Introductions – P. Troy

The meeting was called to order at 6:30 pm by Patty Troy.

Adoption, Additions or Corrections of Draft Agenda - All

The draft agenda was reviewed and additions or corrections were solicited from BPAC members.

Moved by Paulette Duhaime and seconded by Terry Burrell that the draft agenda be accepted with the following revisions: 1) Rose Ellison was unable to attend the meeting, therefore no report on the National Coastal Conditions Assessment will be provided, 2) Kris Lee would like to discuss a local alert system available to the community under Other Business and 3) also in Other Business, Kris Lee and Patty Troy would like to discuss the BPAC survey distributed at the last meeting on March 26, 2015.

CARRIED

Approval of March 26, 2015 Draft Minutes and Actions – All

Actions arising from the last meeting on March 26, 2015 were reviewed along with the draft minutes.

Moved by Judy Ogden and seconded by Terry Burrell that the draft minutes of February 10, 2015 be accepted.

CARRIED

St. Clair Community College – Water Monitoring Update – L. Mavis

Larry Mavis attended the BPAC meeting held in Port Huron in February 2015, and returned to provide an update on the student run water monitoring program offered at St. Clair Community College. The program trains students on United States Environmental Protection Agency (USEPA) approved methods of water quality analysis using Gas Chromatography (GC) and Gas Chromatography-Mass Spectrometry (GCMS). Students have collected and analyzed water samples along the St. Clair River and at water intake plants.

Results continue to show low concentrations of contaminants in water samples. Two compounds of interest were observed (aspartic acid and hexanol) at low concentrations, triggering further investigation to determine sources. The working hypothesis developed related to the possibility that untouched land sources of these two compounds along the St. Clair River shoreline were submerged, dissolved and transported to the water body as a result of recent high water levels. Soil samples collected close to the shoreline at Algonac and Marine City had tetradecanoic acid and pentadecanoic acid observed in extractions, however these compounds cannot explain the aspartic acid and hexanol found in water samples.

Additionally, students from St. Clair Community College sampled the Black River for heavy metals. Although nothing of concern was observed, iron concentrations were higher than expected and were attributed to deteriorating steel walls along the River.

Larry Mavis and the students are hopeful that future work will consist of collecting and analyzing sediment samples for both organic compounds and heavy metals and expanding their volatile and oil analysis capabilities. Both initiatives are funding dependent. BPAC expressed their support for the program and were interested in what other compounds might be extracted from soil samples along the St. Clair River shoreline and whether they have been detected in water samples. BPAC offered to write a letter of support for the program to accompany grant applications, etc.

ACTION – BPAC members will forward Larry Mavis any funding opportunities (e.g., grants) they are aware of that may contribute to the continuation of the water quality monitoring program at St. Clair Community College.

St. Clair River Energy Generation – Vortex Hydroenergy – Dr. M. Bernitsas

Dr. Bernitsas and his colleague Jason M. Taipale of Vortex Hydro Energy attended the BPAC meeting and provided an overview of past and future activities for the St. Clair River Energy Generation project. The project involves the deployment of equipment capable of harnessing energy from the flow of the St. Clair River and converting it into electrical energy. The prototype was deployed twice and fully submerged at the mouth of the St. Clair River in the summer of 2014 approximately 90 feet (27 meters) from the shoreline adjacent to the Dunn Paper Company in Port Huron. The next deployment of the prototype is scheduled for the summer of 2015 (one device). More than one of the prototypes will be submerged in 2016 to assess the capabilities of a hydrokinetic energy farm. The company hopes the assessment of prototypes will be positive and this technology could be utilized in the St. Clair River to generate commercial energy.

The approximately 10 x 11 foot (3 x 3 meter) hydrokinetic generators stand 18 feet (5.5 meters) high, approximately 1.5 to 2 feet (0.5 meter) below the surface of the water and are marked by buoys. Oscillating cylinders (either two or four) are enclosed within the frame of the device. Their motion is driven by the flow of the St. Clair River where energy from the current is harnessed by the cylinders and converted to electricity. At a flow rate of 3.2 knots (5.5 feet/second or 1.6 meters/second), 4 kilowatts can be generated (enough to power four average American homes).

Questions and feedback from BPAC members included:

1. How does the hydrokinetic generator impact fish communities?
Dr. Bernitsas – Researchers at Harvard University conducted assessments of fish behavior and impacts caused by the wake/vortices created by the generators, yielding positive results. Because the technology itself is based on the theory of “fish drag”, the physical alteration of flow mirrors that created by a school of fish (e.g. fish behind the generator ride on the energy of the wake created in front, much like fish located in the back of a school of fish would do).
2. If moving forward with the production of commercial energy, how many devices would you expect to deploy in the St. Clair River at one time?
Dr. Bernitsas – Many units would fit in the St. Clair River however there would be a limit on how many to deploy as too many units could lead to other issues.
3. The release of chemicals into the St. Clair River has been an issue on both sides of the River. Would the hydrokinetic generators promote the mixing of chemicals (i.e., mixing pot)?
4. Why aren't large lakes being considered as a possible location for the creation of a hydrokinetic energy generating farm?
5. How would these generators impact recreational navigation? Because of how close the top of the units are to the surface of the water, they would definitely impede movement of boats, etc.
Dr. Bernitsas – When the units were deployed in the St. Clair River in 2014, to comply with Coast Guard guidelines, their locations were identified by two buoys (one upstream and one downstream). During the three month deployment there were no problems reported with recreational boaters.
6. There are endangered fish found in the St. Clair River whose populations are recovering. There would have to be some research conducted or information provided that would address concerns surrounding impacts on local fisheries.
7. Are fish able to pass through the unit without being injured?
Dr. Bernitsas – No injuries to fish are expected and fish should easily pass through the unit because the oscillators move at a very slow speed. Meetings have been held with the Michigan Department of Environmental Quality (MDEQ). MDEQ staff have not expressed any issue related to how the equipment could potentially injure fish.
8. Is there a possibility for these devices to become a permanent installation in the St. Clair River?
Dr. Bernitsas – Someday we would like to see a permanent installation. That would involve the next level of design.

BPAC members also expressed their interest in seeing the underwater footage of how fish behave/respond to the wake created by the oscillators and recommended that cameras be installed on the equipment deployed in the St. Clair River. BPAC members were encouraged to send any additional questions to Dr. Bernitsas regarding the project (michaelb@umich.edu).

Combined Sewer Overflow and Engineering Projects – City of Port Huron – B. Clegg

Bob Clegg from the City of Port Huron provided BPAC members with an overview of the extensive engineering work completed and in progress to reduce untreated sewage from entering the St. Clair River through combined sewers.

In 1992, 2400 acres (971 hectares) of the City were served by combined sewers with 19 outfall locations for overflows. Because of issues with basement flooding and sewage back-up during heavy rain events along with the impact on local water quality, engineers recommended initiating a sewer separation project. The project has been on-going since 1999 with the total investment expected to reach \$185 million. Progress to date has been substantial. Only 12 acres (5 hectares) of the City remain that are still serviced by combined sewers and the number of combined sewer overflow outfalls has been reduced to one. By the end of the 2015 construction season in Fall, results from the project will see a 99% reduction in areas serviced by combined sewers, a 99% decrease in the annual volume of combined sewer overflows and a 95% reduction in combined sewer outfalls compared to 1999 values.

Throughout the duration of this project, the City of Port Huron also investigated and repaired sanitary problems on private property, reconstructed roads and improved water main infrastructures. Illicit connections to the sewer system were also identified and corrected.

Beach Monitoring Report – St. Clair County Health Department – S. Faust

Sheri Faust reported to BPAC on the beach monitoring activities conducted by the St. Clair County Health Department. Every summer, Health Department staff visit 20 beaches along the shorelines of the St. Clair River and Lake Huron weekly from Memorial Day to Labour Day and sample *E. coli* levels. Two of these beaches are located within the St. Clair River AOC boundaries (Marysville and Marine City).

Water samples are analyzed and compared to the Michigan Public Health Code Total Body Contact Standards and if an exceedance is observed an advisory (closure) is posted informing the local community that the water may be unsafe to swim in.

Beaches at Marine City and Marysville have been tested for 20 years and during that period, no advisories have been posted at the Marine City beach. The beach at Marysville (Chrysler Beach) has been posted numerous times, notably for 30 days in a row in 2011. This initiated a project that would address stormwater flows to the beach area, deter geese and identify and correct illicit connections that impact the beach water quality. The completion of this project resulted in no closures required in the summer of 2014.

Because of decreased funding, the number of locations that will be monitored in 2015 will be reduced to eight. Discussions are currently being conducted to determine which locations will be sampled. BPAC members recommended that Chrysler Beach be included in the eight selected.

The beach monitoring work by the Health Unit along with the sewer upgrades by the City of Port Huron directly contribute to the “Beach Closings” BUI status assessment which will be drafted for the Michigan side of the St. Clair River soon.

ACTION – BPAC members will send any questions they have regarding the “Beach Closings” BUI to Melanie Foose (foosem@michigan.gov) for inclusion in the FAQ document that will be included in the assessment.

National Coastal Conditions Assessment – R. Ellison

Rose Ellison was unable to attend the meeting. This agenda item will be deferred to a future meeting.

Areas of Concern in Recovery (AiR) Tabled Motion – P. Troy and K. Lee

At the March 26, 2015 meeting, Patty Troy made a motion regarding the use of the “Area of Concern in Recovery (AiR)” designation and the eventual delisting of the St. Clair River as an AOC that was tabled until a future meeting. The motion read:

“The St. Clair River BPAC recognizes that our AOC is one area. While completion of management actions may allow delisting criteria to be met and BUIs removed by each country separately, we will not recommend AOC delisting until all BUIs are removed on both sides of the border. This will not preclude, but rather encourage the use of the “Area of Concern in Recovery” designation in one or both countries while awaiting the necessary recovery for all BUI removals.”

Discussions occurred between BPAC members with some disagreeing with the proposed motion. Conversation regarding the proposed motion and the use of the AiR designation will be continued at future meetings, particularly when the AiR Guidance Document currently being prepared by federal, provincial and state representatives is released and BPAC members are able to review it.

Water Intake Monitoring Survey – P. Duhaime

The Michigan delisting criteria for the “Restrictions on Drinking Water Consumption or Taste and Odour Problems” BUI for the St. Clair River focusses on a number of factors related to spills including 1) whether spills are being sufficiently prevented and controlled, 2) that if a spill does occur, measures are in place that ensure efficient clean-up and notification and 3) that monitoring programs and the parameters they analyze and report on are documented. The latter aims to ensure that monitoring is sufficient enough that an unreported problem can be detected and mitigated appropriately.

Paulette Duhaime distributed a survey to water intake plants along the Michigan side of the St. Clair River (Port Huron, Marysville, St. Clair, East China, Marine City and Algonac). The survey solicited information on the parameters they monitor, sampling frequency, analytical detection limits of the equipment and methods they use along with other measures they employ to detect exceeded contaminant concentrations (e.g. alarms, back-up testing, etc). Some discrepancies were noted based on the current understanding of Michigan State regulations. Paulette Duhaime will follow-up with the appropriate State representative to ensure her understanding of the regulation is correct. It was suggested that once clarified, municipalities that are not conducting extensive monitoring could be contacted and encouraged to expand their programs.

OMOECC, EC, MDEQ and USEPA Updates on Canadian and American Projects – T. Briggs, A. White, M. Foose and R. Ellison

OMOECC Update:

Ted Briggs was unable to attend the meeting. No update was provided.

EC Update:

April White was unable to attend the meeting. She provided a chart prior to the meeting that outlines Great Lakes Action Plan (GLAP) Projects planned for the St. Clair River AOC for 2015-

16 as requested at the last BPAC meeting. April can provide a more detailed update at a future meeting.

ACTION – Donna Strang will circulate the chart provided by April White to BPAC members that outlines the projects planned for the St. Clair River as part of the Great Lakes Action Plan (PLAN) with the meeting minutes.

MDEQ Update:

Melanie Foose updated BPAC on the status of habitat restoration projects currently being implemented on the Michigan side of the St. Clair River.

Habitat Projects:

- Port Huron – Completed
- Cottreville – Will be completed soon
- Cuttle Creek – The project is on-going and is currently half way done. It is expected to take a couple of months for the construction stage of the project to be completed followed by planting of native vegetation.
- Krispin Drain – This project went out for tender and bids have been received. The USEPA is currently reviewing proposals and hoping to have everything finalized so construction can begin in the Summer.

A mudpuppy study is being conducted along the Huron-Erie Corridor. Two of the restoration sites along the St. Clair River are included in the monitoring where a total of seven mudpuppies have been observed. Mudpuppies have also been reported at the Blue Water River Walk.

USEPA Update:

Rose Ellison was unable to attend the meeting. An update was not provided.

Committee Reports:

Statewide Public Advisory Council (SPAC) – P. Troy and P. Duhaime:

The last SPAC meeting was held on May 4 and 5th in Port Huron. Tours of some of the local habitat restoration projects were provided to those that attended. Patty Troy reported that the PAC support grants may be delayed due to internal issues between the federal and state governments. Patty suggested drafting a letter addressed to USEPA from BPAC that encourages the timely funding of PAC support grants.

Moved by Terry Burrell and seconded by Paulette Duhaime that a letter be drafted and sent to USEPA recommending timely funding of PAC support grants.

CARRIED

In addition, the new delisting criteria for the “Beach Closings”, “Restrictions on Dredging Activities” and “Eutrophication or Undesirable Algae” BUIs has been updated. The new criteria will require approval by BPAC.

ACTION – Donna Strang will send the updated Michigan delisting criteria for the “Beach Closings”, “Restrictions on Dredging Activities” and “Eutrophication or Undesirable Algae” BUIs to BPAC members prior to the next BPAC meeting on the American side for their review and feedback.

Friends of the St. Clair River (FOSCR) – D. Randell and T. Burrell:

Terry Burrell reported on FOSCR activities on behalf of Darrell Randell who was unable to attend the meeting. The last FOSCR meeting was held in April. FOSCR plans to support a number of projects/organizations over the next year including 1) the Walpole Island Land Trust for the purchase of a pump for Swan Lake, 2) site maintenance at Bowen's Creek by the St. Clair Region Conservation Authority and 3) Return the Landscape projects.

Friends of the St. Clair River Watershed (FOSCRW) – S. Faust:

Sheri Faust reminded BPAC members that the Sturgeon Festival will be held in Port Huron on May 30th. Kirsten Lyons, Stewardship Director for FOSCRW reported that 600 volunteer hours have been logged supporting the St. Clair River since January 1, 2015.

BPAC Membership Subcommittee – A. Kerr:

Fred Kemp reported on the BPAC Membership Subcommittee for Archie Kerr who was unable to attend the meeting. Both have been working on updating and revising the membership list to identify those members who did not attend a meeting in 2014 and follow-up with them regarding their interest in remaining on BPAC.

Canada:

- 12 Canadian members did not attend any meeting in 2014.
- 3 members had incorrect emails or phone numbers that were old or not found on the Canada 411 directory. These members have been removed from the list.
- 4 members who were contacted replied and asked to be removed from the membership list
- 5 members who were contacted but did not reply were sent a second email or called a second time.

United States:

- 17 American members did not attend any meeting in 2014.
- 5 members had invalid contact information.
- 7 member who were contacted replied with 4 expressing interest in remaining on BPAC and 3 asking to be removed from the membership list.
- Political contacts also need to be updated.

Canadian RAP Implementation Committee (CRIC) – P. Vallance:

Phil Vallance was unable to attend the meeting. No CRIC meeting has occurred since the last BPAC meeting on March 26, 2015. Donna Strang reported that the next meeting will be held on June 10, 2015.

Four Agency Managers Work Group – T. Briggs:

Ted Briggs was unable to attend the meeting. No update was provided.

Other Business:

1. Kris Lee made BPAC members aware that a local email alert system is available to sign-up for. Alerts can be customized based on your preferences and include alerts for spills, inclement weather, etc.
2. Paulette Duhaime reported on the 2015 partnership awards that would be given on behalf of BPAC.
 - a. Jim Lesnau and Celesta Brill (Marine City Drain habitat project)
 - b. Jim Bloch (Journalist, press coverage of BPAC and restoration progress)

- c. St. Clair County Health Department (Beach monitoring for *E. coli*, staff expertise and facility use)
- d. Cottreville Township (Riverfront habitat restoration project)
- e. Huron to Erie Drinking water Protection Network (enhanced monitoring of intake water).

Next Meeting Date:

The next BPAC meeting will be held on Thursday, July 14, 2015 in Sarnia, Ontario (Location – TBD).

Adjournment:

The meeting was adjourned by Patty Troy at 9:45 pm.