

St. Lawrence County Environmental Management Council

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Minutes

Wednesday February 16, 2022 at 6:00 PM

Via ZOOM

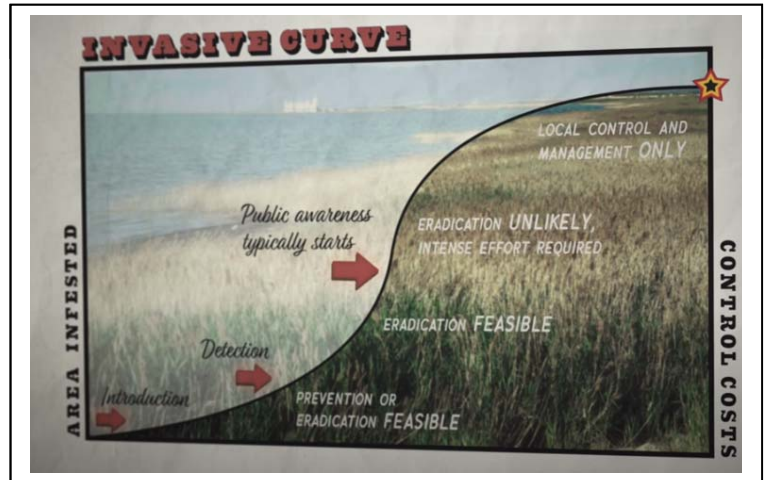
- 1. Call to Order:** Catherine Bennett, Chair, called the meeting to order at 6:05 PM.
- 2. Land Acknowledgement:** John Tenbusch read a Land Acknowledgement, provided by Tony David, SRMT Environment Division:

“As we meet today, let us first give thanks and acknowledge that the land upon which we are gathered is part of traditional indigenous territories, including the Rotinonshionni (Low-dee-no-SHOO-nee), the People of the Longhouse, also known as the Iroquois Confederacy; and the Kanienkehaka (Ga-nyun-geh-HA-gah), the People of the Land of Flint, also known as the Mohawk Nation.”
- 3. Roll Call, Determination of Quorum. A quorum was obtained.**
Members present: Catherine Bennett, (Chair); Herb Bullock; Lucas Hanss; Richard Marshall; Sue Rau (Vice Chair); Lance Rudiger; Tiernan Smith; Nicole Terminelli (BOL Liaison); Gerard Tozzi; Brian Washburn.
Members absent: Dustin Bowman; Joe Brant.
Guests: Emily Fell, DEC, William Stephens
Staff: Dakota Casserly and John Tenbusch.
- 4. Acceptance of Order of Business, Items for New Business, Items for Unfinished Business:**
Accepted by consensus.
- 5. Approval of the Minutes of the January 2022 EMC Meeting**
Minutes were approved (Rau/Smith).
- 6. Comments from the Public / Speaker:** There was NOT a speaker at this meeting. Instead, staff showed the DEC-sponsored documentary “Uninvited: The Spread of Invasive Species” (<https://www.youtube.com/watch?v=NKh8Lc31rm8>)

The film made a number of points:
 - Invasive species are introduced to an area, on purpose or by chance. They do not have natural predators or other controls on their growth. Therefore they may be able to take advantage of their new environment, and overwhelm native species.
 - Over 60% of NYS is forested; trees are valuable resources.

EMC: Everybody Must Care!

- Invasive species threatening NYS forests include Asian Longhorned Beetles, Emerald Ash Borers, Southern Pine Beetles, and Hemlock Woolly Adelgids. These invasives can take out whole species of trees.
- New York is a hotbed for invasive species. In response, the State has created eight Partnerships for Regional Invasive Species Management to deal with invasive species.
- It is best to look ahead, to see what will be the next most likely invasive species, and try to eradicate them early. Once established, control costs can be huge, and eradication may not be possible.
- Example: Spotted Lanternfly (SLF) affects grapes, tree fruits, etc. They are relatively recent in NYS; state efforts to eradicate SLF are ramping up.
- Controlling after an invasive species gets established, is hard. There is a need to eradicate invasives before the species gets established.
- Water Chestnut and Eurasian Watermilfoil are aquatic invasive plants. Often, these are managed by cutter boats, or harvested by hand by the roots. Researchers are trying to develop bio-controls to help manage these, in a similar manner to bio-controls used to reduce populations of purple loosestrife.



7. Report by the Representative of the Board of Legislators (Nicole Terminelli)

- Annual agreement signed to reduce damage caused by beavers.
- NYS environmental protection and spill compensation funds have been approved for three local properties.
- The BOL Legislative Agenda, which will be submitted to Albany and to federal officials, to use the Environmental Bond Act to address the impact of Eurasian Watermilfoil on local environments and economies.
- The Youth Advisory Board is planning another Trash Dash event, to be held on April 30th. They will be looking for partners.
- The BOL has had conversations about a potential wood burning ban; this is actually a proposal in the draft NYS Climate Action Plan to reduce wood burning as a heating source by 40% by 2050.
- At the recent BOL Operations Committee meeting, Legislator Dan Fay acknowledged that the presentation made by Dakota Casserly regarding solar projects was excellent.
- There has been one application to serve on the EMC.

8. Report of the Committees

- a. **Executive Committee.** No meeting was held.
- b. **Conservation of Resources Committee.** See attached report.
 - i. EMC members are encouraged to sign up to review and comment on various sections of the Draft Scoping Plan for the Climate Action Council. Comments are due by the March EMC meeting.
- c. **Environment & Economy Committee.** See attached report.
- d. **Invasive Species / Watershed Management Committee.** See attached report.
 - i. Sue Rau reported that she had sat in on a presentation on “Rights of Nature”. In short, “Rights of Nature” is a theory under which rivers, lakes, other natural features and areas should be treated like people, with rights that could be protected by suing polluters and others who might damage them. Sue reported that a local group is working with people from Akwesasne to establish a local law that would protect significant local natural sites.
 1. Rod Tozzi asked whether there aren’t enough laws to protect natural sites.
 - a. Tiernan Smith stated that the Clean Water Act already protects rivers and other water resources.
 2. Rick Marshall reported that indigenous groups in the Pacific Northwest, and other places, are pursuing the concept.
 - ii. Tenbusch reported that the Invasive Species Committee will begin to work on a comprehensive assessment of invasive species in the County.

9. Report of the Staff

- John Tenbusch reported that he is working on CDBG paperwork that is required before funds can be spent on two recent grant awards.
- Dakota Casserly reported that the County Planning Board had recommended denial of permits for solar installation in Madrid. The proposed parcel includes significant prime farm land, but the Madrid zoning code does not protect prime farm land from solar development. The final decision rests with the Madrid Planning Board.
 - Herb Bullock asked if forest land is considered prime farm land; Casserly agreed.

10. Unfinished Business

11. New Business

- a. Dakota reported on the upcoming North Country Rights of Nature Symposium (3/22/22, 6:30-8pm)
 - i. The North Country Rights of Nature online symposium explores the process of creating a BILL OF RIGHTS for the Kaniatarowanéhne / St. Lawrence River Watershed, Haudenosaunee Territory.

12. Announcements

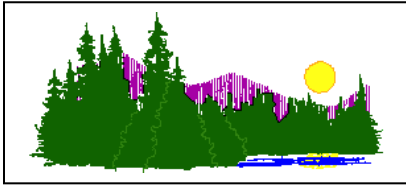
- Tiernan Smith introduced William Stephens, a co-worker at the Environment Division at SRMT. Mr. Stephens is interested in serving on the EMC.
 - Cat Bennett proposed that the EMC might include gender diversity as new members are considered/proposed.

- Tenbusch reported that the EMC will hold its annual election of officers (Chair; Vice-Chair; Secretary) in March. He will talk with Cat Bennett, EMC Chair, on the nominating process.

13. Message to Board of Legislators. None.

14. Adjournment. The meeting adjourned at 8:16 PM (Rudiger/Bullock).

Minutes prepared by John Tenbusch.



SLC EMC Action Item Agenda for Conservation of Resources Committee

Members: C. Bennett; D Bowman; L Hanss; R. Marshall; S. Rau

STAFF: Dakota Casserly **Guest:**

Meeting Date: **Wednesday February 9, 2022 at 5:00 PM via Conference Call**

Time	Item	Outcome	Responsibility	Next Steps / Notes
5:00pm	Meeting starts	Meet via ZOOM: https://us02web.zoom.us/j/88129276948?pwd=U2xvYmhydU1zMTZGay9KNDBIWjNTdz09	Committee members	
5:05	Review Report of November Mtg. Review EMC Member Questionnaire from January 2022		All	
5:10	Discuss Priority Projects	<ul style="list-style-type: none"> • Climate Crisis <ul style="list-style-type: none"> - Request from Planning Director to review NYS Climate Act Scoping Plan • Working with Youth Advisory Board • Wise use of resources • Conservation of flora/fauna 	All	
5:40	Discuss speakers for EMC meetings	This Committee will provide at least 3 speakers per year on CR topics for EMC meetings	All	
5:45	Discuss ideas for EMC Public Service Announcements	This Committee will develop 1-3 PSAs per year on CR topics	All	
5:50	Set date/time for next mtg.	Next Mtg: March 9, 2022		
5:55pm	Adjourn			

Attendance: Rau (SR), Bowman (DB), Bennett (CB)

Actions in **bold**

Meeting time change: CB (M, 6pm), Rau and DB good on Monday, DC will check with E+E for Wednesday.

EMC member survey comments

- Action due dates for CB, they all support more defined due dates for work. More action orientated for projects.
- Rau, Legislator contact list and EMC member contact list (need to share with the EMC members). **Casserly will do.**
- DB talked about improved information sharing, Slack, Google (Workspace (Chat)), etc.).
 - Use for event communication.

Climate Crisis

- Draft Scoping Plan comments due 5/1/22.
- **DB and CB** will work on ag section: Chapter 15. Ag and Forestry.
- **Rau** to work on Chapter 6. Achieving Climate Justice, 6.3 Prioritizing Measures to Reduce Greenhouse Gas Emissions and Co-Pollutants in Disadvantaged Communities.
 - Comments due at the March committee meeting

Working with YAB

- **DC** to work on improved contact with YAB Director, Alexa Backus.
- Projects: Organic pollinator garden (lasagna garden), Sandy Corners (Boyden Rd/Farnes Rd., Canton)
 - Mid-April, (site prep), May/June (planting time)
 - Supplies: wood chips (**DB/DC**) and cardboard (**CB**)
 - Possible Earth Day project
 - Marketing of this project for EMC (Naming of project?)

Wise use of resources

- Tabled until above is completed.

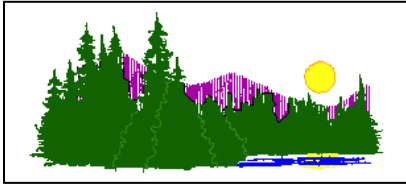
Conservation of flora/fauna

- Tabled

Speakers: DB (Loon Rescue, Saranac Lake, [Adirondack Center for Loon Conservation](#))

PSA: Organic Pollinator Garden Project

Adjourn @ 5:57 pm



SLC EMC: Agenda for Environment + Economy Committee

Members: Herb Bullock, Tiernan Smith (Chair), Rod Tozzi, Rich Marshall

Staff: D. Casserly **Guest(s):**

Meeting Date: Monday, February 7, 2022 at 5:00 PM via Zoom

Time	Item	Outcome	Responsibility	Next Steps
5:00 PM	Meeting starts	Join Zoom Meeting: https://us02web.zoom.us/j/88133654545?pwd=TmxNYnQrOUM5SIVYanpwcwJhSINGQT09 Meeting ID: 881 3365 4545 Passcode: SLCEMC One tap mobile: +19292056099,,88133654545#,,,,*306954# US (New York)		
5:05	Review Report of Last Committee Meeting (November 2021)		All	
5:30	Priority Projects for 2022			
	Fish Ladders/Passage Project on the Grasse and Oswegatchie Rivers.	PSA - Follow up Fish Creek Atlantic Salmon Club , speaker, Paul Miller (Former Madison Co. Administrator, EMC member, Planning, and SWD)		
	North County Rights of Nature	Symposium 3/22/22		
	Ogdensburg dam FERC relicensing	Update (Casserly) <ul style="list-style-type: none"> Relicensing begins 5/31/2022 Status call with the City 		
	DEC Deer Management Program	Preparation/Update (All)		
	Recreation Road salt	SLC Snowmobile economic impact Recent reporting from ADK Explorer <ul style="list-style-type: none"> Town of Hague, NY example 		
5:45	Discuss speakers for EMC meetings	DEC Deer Management Program <ul style="list-style-type: none"> Joe Lydon (DEC), postponed until in person 	All	
5:50	Develop Pub. Service Announcements	This Committee will develop 1-3 PSAs per year on E+E topics	All	
5:55	Set date/time for next meeting	March 7, 2022 @ 5pm *Note, no EMC meetings in December		
6:00	Adjourn			

Attendance: Bullock, Smith, Tozzi

Actions in **bold**

NoCo Rights of Nature

- Bullock introduced the topic to the group, **Bullock and Casserly** will meet with members of this organization and update the full EMC.

Fish Ladder/Passage

- **Casserly** will schedule Paul Miller to speak to the full EMC in late spring/early summer.
- Follow-up, Bullock sent some questions for us to send to stakeholders who we targeted with the PSA.
 - St. Lawrence Fisheries Advisory Board follow-up, we need to take with Bob Flavin to get an official response.
 - **Casserly** will coordinate with Flavin for the next E+E Committee for discussion.
 - **Casserly** will draft follow-up questionnaire (digital delivery).

Ogdensburg Dam

- Casserly reminded the group that FERC relicensing begins 5/31/22. Also, he shared a summary of a discussion he had with the City's Planner, Andrea Smith, which was about the lessee (Ampersand Energy) not paying PILOT tax payments and the general dissatisfaction with operations at the dam.
- Bullock talked about a Watertown solar developer who is investigating the feasibility of power generation from a defunct dam in the City. Could this serve as an example for Ogdensburg's dam.

DEC Deer Management

- Casserly talked work assignments for this project.
- **Casserly** will share links again and we can discuss at our next meeting.

Recreation

- **Casserly** said that he will ask Deb Christie to come speak to the Committee about snowmobile/ATV/UTV economic impact.

Road salt

- Casserly talked about recent news articles that have highlighted road salt reduction examples.
- Bullock said we should be ready to review a report by the Adirondack Road Salt Reduction Task Force.
- Smith said that Franklin Co. does not use salt, more so sand on its town and County roads. **Casserly** will double check.
- Bullock asked about the Village of Canton salt storage and if SUNY Canton professor (Adrienne Rygel) can investigate.
- Bullock talked about Pierrepont and Hermon salt storage challenges. **Casserly** will investigate.
- **Tozzi** will check on where salt storage is for the Town and Village of Canton.



**St. Lawrence County Environmental Management Council
Invasive Species Committee /
Watershed Management Committee
Joint Meeting
Tuesday, February 8, 2022**

Meeting started at 4:01 PM.

Present: Sue Rau, Chair, ISC; Brian Washburn, Chair, WMC; Lucas Hanss; Lance Rudiger. John Tenbusch attended as staff.

Review Previous Committee Meeting Reports. S Rau reported that she had not attended the previous meeting.

Comments on EMC Member Questionnaire.

- Lucas Hanss reported that he has collected wildflower seeds. He would like to hold a planting activity.
 - Hanss has enough seeds to spread over ¼ acre.
 - He has Indian Blanket, Black-Eyed Susans, Coneflower, and others.
 - Would need tools to disturb the ground (hoes, shovels, etc.) and something to cover (sand or straw).
 - It was suggested that the EMC could do a planting activity in conjunction with Earth Day, or Arbor Day.
 - o John Tenbusch noted that several Catholic churches are looking to do tree planting

Discussion of Black Lake Milfoil Project.

- Tenbusch reported on the meeting held 1/17/22 for and among researchers with an interest in Black Lake (**see attached meeting report**).
 - Sue Rau noted that all in attendance expressed a willingness to work together.
 - Brian Washburn reported that the contract between GEI Consultants and the Town of Oswegatchie did not include testing for phosphorus- and other nutrient-loading.
 - o Washburn had asked Lauren Townley of DEC about Total Maximum Daily Load (TMDL) measurements; Townley had reported that DEC would begin to collect those data.
 - o Washburn had referred to a TMDL study done on Chautauqua Lake.
 - Committee members will look at the Chautauqua Lake study (found at https://www.dec.ny.gov/docs/water_pdf/tmdlchautlk12.pdf)
 - Lucas will review the study, and report to the Committee.



Chautauqua Lake, in
Chautauqua County NY

- Washburn reported that there is NOT a USGS gauging station on Black Lake.
- Washburn reported that data collected during the 1970s indicated that ~ 60% of phosphorus in Black Lake was dumped by the Indian River.
- Lance Rudiger reported that local tackle shops have maps that indicate depths around the Black Lake. He will call around.
- Rudiger also suggested that NYSPRHP might have depth info about the Lake. Tenbusch will check with NYSPRHP.
- Washburn reported that the Black Lake Chamber of Commerce stated they are working to develop an interpretive center somewhere on Black Lake.
- Tenbusch will put together a group of stakeholders from the communities around Black Lake. He intends to convene this group by the time the consultants present their draft report, in the end of March.
- Tenbusch reported on an upcoming “Rights of Nature” presentation. He suggested that it would be good for the EMC to stay abreast of the discussion.

Discussion of Comprehensive Management Plan for Invasive Species in SLC.

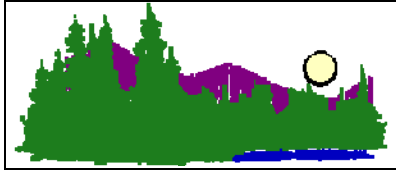
- Washburn reported that SLELO PRISM has prepared a 4-tiered list of invasive species in/around Black Lake. See attached.
- Rau reported that other lists also exist; we need to be able to decide which species are to be addressed.
 - Rau suggested that the County will need to coordinate with organizations knowledgeable about invasives in our region (SLELO PRISM; DEC; others).
 - Rau suggested that the County will need to coordinate with local groups and “citizen scientists” to address invasives in their communities.
 - o Washburn suggested that this would be a good Public Service Announcement (PSA) from the Committee.

Misc.

- Rudiger asked if staff had been able to get information out to Town Highway Departments about Wild Parsnip, and how to manage it through mowing schedules.
 - Tenbusch reported that he had distributed this information.

The meeting ended at 4:55 PM.

Meeting report prepared by John Tenbusch



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**EMC Black Lake Project
Report of the Meeting, 1/17/2022
Via ZOOM**

The meeting started shortly after 10:00 AM.

Attending were: Brad Baldwin, SLU; Bill Dashnaw, Black Lake Chamber of Commerce; Luke Gervase, GEI Consultants; Lee Harper, Riveredge Environmental Inc.; William Kirkey, RATES; Damon Oscarson, GEI Consultants; Sue Rau, EMC; Lauren Townley, DEC; John Tenbusch, SLC Planning; Nicole Terminelli, SLC BOL; Brian Washburn, EMC.

All present introduced themselves, stated their institutional affiliations, and reported on past activities at Black Lake. Tenbusch then asked those who have ongoing or proposed research to describe their activities:

- Brad Baldwin is looking to pilot test approaches to absorbing nutrients coming into Black Lake from Indian River and Black Creek.
- Lauren Townley reported that DEC will conduct a Total Maximum Daily Load (TMDL) study on Black Lake. She indicated that TMDL studies usually take 3-4 years. She noted that Black Lake has been considered impaired for more than 20 years, and is on NYS 303-D Priority list.
- Lee Harper has no immediate plans to work on Black Lake. He has worked on milfoil issues nearby on Goose Bay and on Mud Lake.
- Bill Kirkey has monitoring equipment on Black Lake and on the Indian River in Rossie. He has a small grant to do monitoring on Black Lake in 2022. He has spoken with Gervase, and may change his grant to monitor sites indicated by Gervase.
 - Baldwin asked if Kirkey's equipment can monitor phosphate. Kirkey replied, not at this point.
- Luke Gervase reported that he is looking at aquatic vegetation on the Lake. His firm did two weeks of on-site monitoring on Black Lake during 2021. He offered to share data, observation photos, etc.
 - Gervase also reported that he has worked with SLELO-PRISM. He noted that water chestnut has been observed near the Lake.

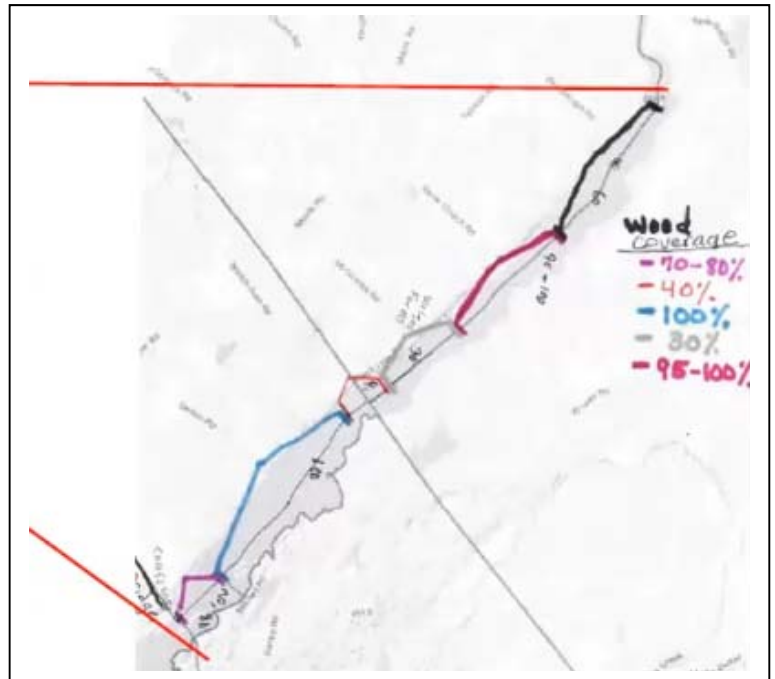
Tenbusch provided a brief review of the presentation that he made to the County's BOL in September 2021; this presentation described the EMC's involvement in Black Lake milfoil issues. He reported that the economic impact of Black Lake, as measured by DEC in 2017, totaled more than \$17 million. He reviewed a number of previous studies that had been done on Black Lake; he reviewed the work done in

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2021 by the Black Lake Association (BLA), to cut a channel through the northern end of the Lake.

Tenbusch showed a map, where the person who had cut milfoil in 2021 estimated the amount of milfoil coverage in various parts for the northern end of the Lake. Gervase reported that his own research from 2021 indicated similar rates of infestation.

Tenbusch reported that the EMC wanted to hold meetings with stakeholders in the region; three meetings have been held, in October, November and December. Coordination with other subwatershed efforts, especially in the Indian River area, is important. The EMC hopes to develop a watershed management plan; Brian Washburn of the EMC has completed an early draft framework for such a plan.



There was discussion about the Draft Watershed Management Plan, prepared by Brian Washburn. **See attached.** Washburn had followed an outline taken from “Diet for a Small Lake”, developed by NYS Federation of Lake Associations (NYSFOLA). This was significant, because it is designed to be accessible to/for citizens, not limited to professional researchers.

- Washburn reported that another Watershed Management Plan, for Lake Chautauqua, had followed the same outline; he felt that they had done an exceptional job.
- Gervase reported that NYSFOLA will hold an annual meeting in Lake George in April 29-30, 2022. He intends to present results of his work on Black Lake at that Conference.
- Washburn’s Draft Plan included vintage DEC data from 1972-73 regarding Phosphorus (P) loading.
- The Draft Plan also calls for development of a committee structure to address invasives.

Baldwin asked if we intend to develop a Plan before hearing about research findings from Gervase or others. Tenbusch responded that he believes that the EMC and Planning staff can/will be working to develop social capital/coordination among various municipalities, organizations, and other stakeholders in the area. Gervase indicated that his lake management plan would also call for development of such a group to manage those tasks recommended in his plan.

There was discussion about the relationship between management plans and funding sources; it was generally agreed that coordination among stakeholders is essential to the development and funding of management strategies.

Bill Dashnaw reported that local groups, including the Black Lake Association, Black Lake Chamber of Commerce, and Black Lake Fish & Game Club, are working together better than they had in the past. He emphasized the need to coordinate among stakeholders to ensure desired future development.

Washburn noted there was no one common platform where people can get information from multiple sources about Black Lake; Rau concurred. Gervase suggested the development of a working group that would include representation from all local groups, municipalities, etc. This group could meet periodically to share information.

Tenbusch asked about involvement/interference with research work.

- Gervase reported that his fieldwork is completed; he will publish a draft plan (March 2022?) and seek community input. He also intends to present his work at the NYSFOLA Conference in April.
- Baldwin agreed that coordination is key to achieving success. He suggested that one result of current activity might be to create a list of future research needs; this could enable local colleges to select various research projects on Black Lake.
- Washburn suggested that the Associated Colleges of the St. Lawrence Valley might help to recruit research activity from all four local colleges.

Tenbusch reported that there seem to be two immediate tasks to work on:

1. Re-work the Draft Watershed Management Plan with research partners, possibly including Baldwin, Gervase, Harper, Kirkey, Tenbusch, Townley, Washburn. Other groups might include SLELO PRISM, Indian River Lakes Conservancy, Adk. Watershed Institute, etc.
2. Work to develop coordination among stakeholders, involving Dashnaw, Michelle Gallagher, Terminelli, Rau, Tenbusch, and others. He reported that each municipality around Black Lake have been asked to assign/recruit one or more persons to represent the town.

He suggested that each sub-group might meet within the next month.

Baldwin noted that there are many citizen-scientists around Black Lake. We have a huge opportunity to involve these persons, to their benefit and the benefit of their communities.

Washburn reported that there have been several ideas suggested to build an interpretive center somewhere on the Lake.

Dashnaw reported that the Chamber of Commerce has preliminary plans to establish an interpretive center in Edwardsville, on a parcel owned by the County; he offered to share conceptual plans.

The meeting adjourned at approximately 11:30 AM.

Meeting report drafted by John Tenbusch.

Draft Outline for the Development of the Black Lake Watershed Management Plan

Brian Washburn

SLC Environmental Management Council

The following outline follows the Outline of a Typical Watershed Management Plan found on page 273 of the Diet for a Small Lake. Questions and data are also contained.

- I. Executive Summary
- II. Introduction
 - a. Organizational structure (how will this be determined and by whom?)
 - b. Public participation efforts and results (surveys and by whom?)
 - c. History of efforts to address environmental issues within the Black Lake watershed including the Indian River watershed.
 - d. Discussion of the recommendations and cost estimates for the control of Eurasian watermilfoil contained in the 2008 Eurasian Milfoil Management Plan (EMMP))
- III. Watershed description
 - a. Physical and natural features (EMMP)
 - i. Should include shoreline gradients and specific shoreline geology. Is there sufficient soil depth for private waste water systems, do percolation tests results indicate sufficient land area for effective waste water treatment, and if soil depth is sufficient is there a significant groundwater flow gradient towards the lake?
 - b. Land use and land cover (requires a new assessment and comparison to the EMMP)
 - c. A description of the Indian River watershed upstream from Black Lake (might be informative)
 - d. Demographic characteristics (requires a new assessment and comparison to the EMMP)
 - i. Population statistics
 - ii. Number of shoreline property owners
 - iii. Number of shoreline residential property owners
 - iv. Percentage of residential property owners that are seasonal
 - v. Number and identity type of commercial enterprises primarily along the shoreline and on both sides of County Route 6.
 - vi. Economic impact - Suggest developed independent of any organization within the watershed. This effort would likely improve external funding efforts.
 - vii. Organizations with documented history of interest in the health of the watershed. Is there documentation of their efforts?
 - e. Watershed Conditions
 - i. Latest CSLAP summary with emphasis on the historical trends
 - ii. NYSDEC WI/PWI report (lake should be due for a new assessment)
 - iii. Eurasian Watermilfoil density map (The EMMP did a density determination on at least a portion of the lake. Based on interviews the perception is the condition has worsened. A current assessment of milfoil density is needed.
 - iv. Additional water quality assessments
 - f. Water quality standards

- i. NYSDEC WI/PWI standards including the classification of the lake and its principle tributaries.
- IV. Pollutant source assessment
 - a. Point sources to include:
 - i. all municipal waste water treatment in the Indian River watershed
 - ii. Any MS4's within the watershed
 - iii. Any CAFO's with in the watershed
 - iv. Evaluation of the above with respect to required compliance
 - b. Non-point sources to include:
 - i. Private waste water systems
 - 1. How many?
 - 2. Percentage constructed predating current NYSDOH criteria
 - 3. Percentage with updated waste water systems
 - 4. Number of participants in SLC waste water system grant program
 - 5. Any data evaluating waste water system effluent entering the lake. SLC SWCD?
 - c. Principle environmental issues primarily deal with invasive flora and fauna and the conditions attributing to their expansion within the watershed
 - i. Eurasian watermilfoil (present)
 - ii. Dreissena species (present) (what is the distribution?)
 - iii. HAB's (present)
 - iv. Other invasive flora and fauna (potential)
 - v. Due to the topography/morphology of the lake the potential for submergent invasive flora expansion is heightened. Historic phosphorus and nitrogen loading is suggested as significant contributors to invasive flora expansion.
- V. Pollution loads
 - a. TP, TDP, TN, TDN levels have been historically reported in CSLAP reports during the reporting time periods. TP levels are required components of all MWTS SERQ reporting.
 - b. There has not been any reported annual TP, TDP, TN, TDN loading determinations since the National Eutrophication Survey (NES) in 1972 as part of the initial stage of the implementation of the Clean Water Act of 1972. From 1972-1973 members of the NES team along with NYSDEC and the New York National Guard conducted the survey. The working paper No 148 is titled Report on Black Lake, St. Lawrence County, NY and can be found at <http://nepis.epa.gov>. With the survey being 49 years old it would be expected changes may have occurred with respect nutrient loading. The report did not identify any point sources of pollution. Since the survey numerous villages in the Indian River watershed possess MWTS facilities. The village of Hammond MWTS using Black Creek as a discharge point violated its discharge permit and had to take corrective actions to meet its discharge permit. The report's focus was on the influx of phosphorus and nitrogen via the three largest tributaries to Black Lake; the Indian River, Black Creek, and Fish Creek and did not address direct runoff from agriculture or private waste water systems. Some useful data is still available in the report as seen in the following tables:

Tributary	Annual P loading	% of the total
Indian River	76,640 lbs./year	64.1
Black Creek	11,450	9.6
Fish Creek	21,640	18.1
Minor Tributaries	8480	7.1
Direct Precipitation	1,300	1.1
Output	91,720	
Net P Accumulation	27,790	

A logical conclusion derived from the above table is the overwhelming majority of phosphorus is entering Black Lake from the Indian River watershed.

Tributary	Annual N loading	% of the total
Indian River	1,413,820 lbs./year	66.6
Black Creek	172,530	8.1
Fish Creek	327,890	15.5
Minor Tributaries	128,030	6.0
Direct Precipitation	80,460	3.8
Output	2,046,510	
Net N Accumulation	76,220	

A logical conclusion derived from the above table is the overwhelming majority of the nitrogen is entering Black Lake from the Indian River Watershed. Another useful data is the relative inflow of water to the lake by the three tributaries evaluated.

- c. Total annual loading for phosphorus derived from both actual measurement and modelling was reported in the Journal of Environmental Engineering, volume 114, no. 2 (1988) in a submission by Anthony Collins and Thomas Young of Clarkson University. The abstract of the submission indicates the most significant fraction of annual phosphorus loading is not annual anthropogenic sources including agricultural runoff and private wastewater systems but rather resuspension and distribution of benthic phosphorus accumulated for decades. The conclusion was based on the low hydraulic retention time of approximately 36 days and virtually aerobic benthic conditions through out the lake. The latter is supported by the 2018 CSLAP Report Site Visit Profile indicating dissolved oxygen levels exceeding 7 parts per million at a depth of 4 meters. Additionally with a mean depth of 8 feet, Black Lake likely will not temperature stratify during the summer months and will likely not stratify based on light penetration (no delineated limnetic or profundal zonation. The majority of the lake will likely be totally littoral.
- d. Phosphorus levels reportedly have been evaluated for a period of time in the vicinity of the Indian River inlet and the Black Lake discharge to the Oswegatchie River by Robert Kirkey of Clarkson University. Comparison to the input and outflow may support the results of the 1972 NES. No journal articles by Dr. Kirkey have been located on the research. Where is the data and its evaluation?

VI. Watershed goals

- a. Revitalization of the Black Lake Association to include committee structure to address invasives
- b. Preparation of a biannual State of the Lake Report

- c. Reduction in Eurasian watermilfoil density to _____% to facilitate increased recreational use of the lake
 - d. Address sediment buildup on the southern side of the two causeways separating the lake. NYSDOT is responsible for the causeways.
 - e. Surveillance efforts to detect the presence of other invasive flora and fauna species
 - i. Invasive flora and fauna identification fact sheets prepared and distributed.
 - ii. NYSDEC presumptive testing for the presence of HAB's.
 - f. Continued water quality monitoring through CSLAP or the efforts of organizations or educational institutions.
 - i. The CSLAP reporting program evaluates the water quality at two-week intervals throughout the late spring to early fall months. The Black Lake Association as the participant in the CSLAP program should possess the equipment necessary to continue the non-chemical analysis portion of the CSLAP program as well as the water sample collection equipment. Review of the historic CSLAP reports indicates changes in phosphorus and nitrogen parameter levels from late spring to approximately mid-July to early fall. If CSLAP funding is not available, limited sampling in the late spring, mid-July and early fall may suffice in evaluating nutrient levels. Determination of nutrient levels, conductivity, pH could be determined by relatively inexpensive available testing kits or instrumentation. Agreements could be reached with local analytical laboratories to perform nutrient level determinations. CSLAP also determined algal conditions on the lake. Once a year temperature, dissolved oxygen, pH, and conductivity profiles were determined.
 - ii. Temperature, pH, and conductivity profiling is easily determined while dissolved oxygen is not. Continued monitoring of water temperature, pH, and conductivity can be monitored inexpensively.
 - iii. An effort should be made to develop research relationships with the Associated Colleges of the St. Lawrence Valley.
 - g. Increase political action activities
 - h. Educational activities within the watershed to reduce nutrient loading and activities contributing to the introduction and spread of invasive flora and fauna species.
 - i. Expansion of public access to the lake. Currently there is only one public access in the southern portion of the lake operated by the Thousand Island Park Commission. Additional access and recreational development may have a positive effect on the economic impact of the watershed.
- VII. Identification of management strategies
- a. Existing management strategies
 - i. Currently there does not exist a watershed wide set of management strategies. The Black Lake Association has historically been the sole organization with established management strategies for the lake. The Black Lake Association as a member of NYSFOLA participated in CSLAP water monitoring program from 1988 until 2018. The results of the CSLAP reports led to the 2008 Eurasian Watermilfoil Management Plan requested by the Invasive Aquatic Plant Committee of the Association and funded by St. Lawrence County. None of the

recommendations of the plan were implemented and no further mechanical harvesting took place until 2019. In 2019 the Association secured funding for a limited two-mile mechanical harvesting of the main channel in the northern portion of the lake. In 2021 the Association secured \$2,500 from towns bordering the lake and \$27,500 from St. Lawrence County to mechanical harvest an eight mile stretch of the main channel in the northern portion of the lake.

b. Additional strategies needed

- i. The 2008 EMMP estimated elimination of milfoil by various methods would cost in excess of 26 million dollars. The possibility of ridding the lake of the milfoil is unlikely leaving management as the only alternative. Once the desired milfoil density percentage goals are established and a 10-year action plan is created a funding strategy must be created and should include:
 1. External funding from grants either regionally or nationally to assist in the action plan. One organization would need to have this responsibility with the assistance of the St. Lawrence County Planning Department. Additionally, the watershed plan should coordinate with any research activities at colleges and universities.
 2. Defined annual minimum budgetary allocations from the six townships bordering the lake. Several factors may influence the respective allocations including shoreline property assessments and economic activity within each township. Could unspent monies from the towns be escrowed for future activities or is the allocations to be on a need basis only?
 3. Annual contributions from organizations, businesses directly benefiting from expanded lake usage, and shoreline property owners.
 4. With NYSDEC either taking over the operation of the existing boat launch or the creation of the possible second boat launch at the northern end of the lake an agreement to support the action plan is needed.
 5. Annual contributions from non-residents who utilize the lake.
 6. An agreement with St. Lawrence County to provide funds to complete the action plan if other resources do not cover the cost.
 7. The development of a marketing plan for the lake to include a number of revenue-generating activities to support the action plan. Fishing tournaments both during the summer and winter months are one possibility. What has the Black Lake Chamber of Commerce done?

SLELO-PRISM Invasive Tiers (2/7/2022)

Aquatic Invasives

2012 SLELO-PRISM begins biannual invasive species surveillance program for Black Lake identifying four Highly Probable Conservation Areas (HPA's) for surveillance. PRISM has established a tier system. The following lists the tiers and the aquatic organisms contained within each. There is a Rapid Response Process (RRP) in place which involves detection of the invasive, develop a strategic response team, conduct a site survey, determine the BMP, communicate activities, seek permits, execute the plan, and monitor the plan's success. The Rapid Response Process is only applicable to Tier 1 and possibly Tiers 2 and 3 invasives. Information about invasives has been supplied to the Black Lake Association for distribution to its membership and the general public.

SLELO PRISM's Current Species Tiers

Tier 1 - Prevention/Early Detection Species - Not in PRISM, but within 100-mile buffer or introduction pathway exists. Highest level of early detection survey efforts.

- Hydrilla
- Silver, Big Head and Grass Carp Slender False Brome
- Water Lettuce
- Water Hyacinth
- Water Soldier

Tier 2 – Eradication Species - Present in PRISM, but at low abundance with suitable treatment methods available to make eradication feasible within Priority Conservation Areas (PCA's).

- Asian Clam
- Fanwort
- Bloody Red Shrimp
- Spiny Water Flea
- Tench

Tier 3 -Suppression Species - Too widespread for eradication from PRISM, but some areas remain unaffected. Targeted management to suppress the population within Priority Conservation Areas (PCA's).

- Rusty Crayfish
- Water Chestnut

Tier 4 - Local Control Species - Present and widespread throughout PRISM with no chance of eradication. Localized (landowner) management applied to protect high priority resources like rare plant or recreation assets.

- Curly Leaf Pondweed

- Eurasian Water Milfoil
- European Frogbit
- Round Goby
- Zebra/Quagga Mussel

Tier 5 – Species - Species that may or may not be in PRISM but are difficult to respond to or that require more knowledge of.

Terrestrial Invasives

Tier 1 - Prevention/Early Detection Species - Not in PRISM, but within 100-mile buffer or introduction pathway exists. Highest level of early detection survey efforts.

- Asian Longhorned Beetle
- Kudzu
- **Mile-A-Minute Vine**
- Slender False Brome
- Spotted Lanternfly

Tier 2 – Eradication Species - Present in PRISM, but at low abundance with suitable treatment methods available to make eradication feasible within Priority Conservation Areas (PCA's)

- Giant Hogweed
- Porcelain Berry

Tier 3 -Suppression Species - Too widespread for eradication from PRISM, but some areas remain unaffected. Targeted management to suppress the population within Priority Conservation Areas (PCA's).

- Common and Glossy Buckthorn
- Invasive Swallow-worts
- Hemlock Woolly Adelgid
- Japanese Knotweed
- **Japanese Stiltgrass**
- Oriental Bittersweet
- Phragmites
- Starry Stonewort
- Tree of Heaven
- Wild Chervil
- Yellow Iris

Tier 4 - Local Control Species - Present and widespread throughout PRISM with no chance of eradication. Localized (landowner) management applied to protect high priority resources like rare plant or recreation assets.

- Emerald Ash Borer
- Feral Swine
- Leafy Spurge
- Purple Loosestrife
- Spotted Knapweed
- Wild Parsnip

Tier 5 – Species - Species that may or may not be in PRISM but are difficult to respond to or that require more knowledge of.

- Jumping Worm