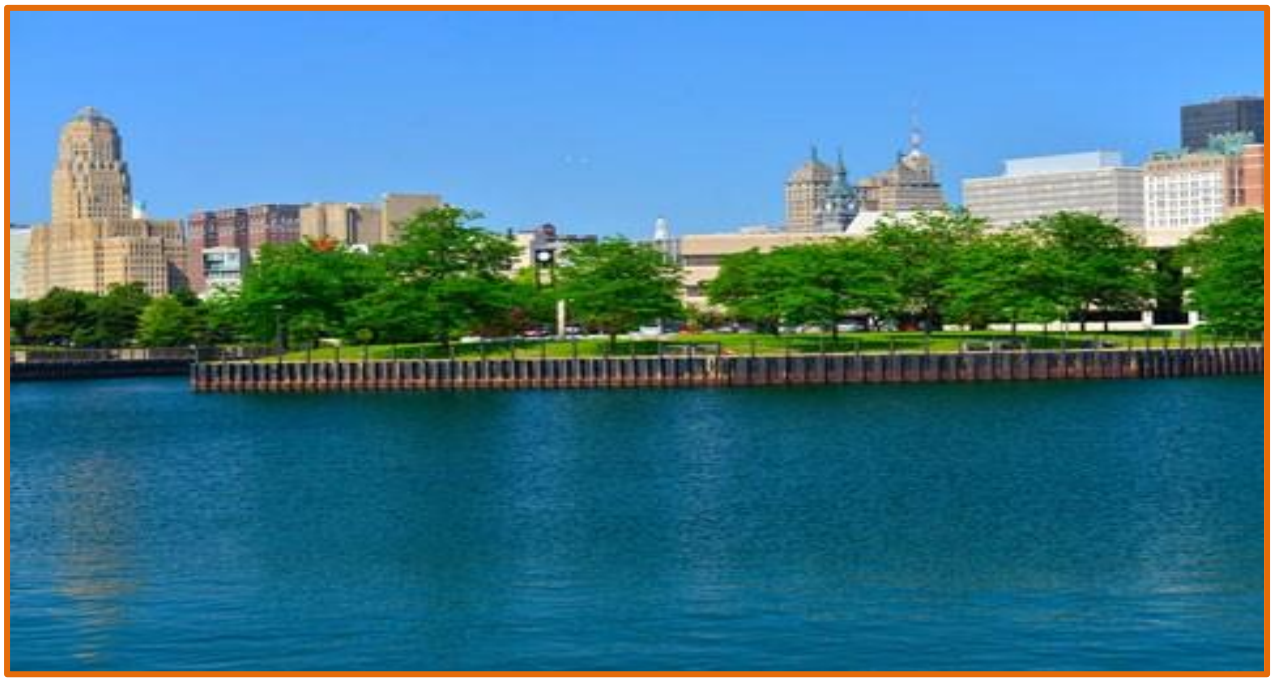
Summary Report

# Public Meeting on the Great Lakes
# Your Voice: Buffalo



Tuesday, March 28, 2017
WNED-WBFO Studio
Buffalo, New York

# Introduction

As part of the International Joint Commission's efforts to obtain public input on Agreement progress, public meetings were held in six communities across the Great Lakes region. Two meetings were held at the studio of WNED-WBFO public television to hear from community leaders, scientists and other local residents about the accomplishments, challenges and further actions that are needed to restore and protect waters in the Buffalo-Niagara Region and the Great Lakes. The afternoon panel discussion gave the opportunity for Commissioners and citizens to hear eight presentations on the latest research findings related to local water quality issues and innovative, community-based programs to address them.

During an evening public meeting, three presenters outlined key successes and challenges in the Buffalo-Niagara Region related to the Buffalo River Area of Concern, wetlands in the Niagara River corridor, and the importance of water-based recreation in the community's economic development and restoration strategies. A range of other issues were raised during the public comment sessions. Summaries of these discussions follow.

The IJC will incorporate these findings into its assessment report on Agreement progress, and hopes that the conclusions and recommendations made by residents of the Buffalo-Niagara Region also provide direction for cooperative strategies to deal with unique issues facing their part of the watershed.

IJC representation at meeting:
Lana Pollack, US Chair
Gordon Walker, Canadian Chair
Rich Moy, US Commissioner
Richard Morgan, Canadian Commissioner
Trish Morris, Director, IJC Great Lakes Regional Office (GLRO) Raj Bejankiwar, Physical Scientist/Deputy Director, IJC GLRO Frank Bevacqua, Public Information Officer, IJC US Section
Matthew Child, Physical Scientist, IJC GLRO
Sally Cole-Misch, Public Affairs Officer, IJC GLRO
Sarah Lobrichon, Acting Public Affairs Advisor, IJC Canadian Section
Victor Serveiss, Environmental Advisor, IJC US Section
Allison Voglesong, IJC Michigan Sea Grant Fellow
Cindy Warwick, Policy Advisor, IJC Canadian Section

# Afternoon Panel Discussion Presentations

## Key Messages

*Community Collaboration for Restoration Action*: Jill Jedlicka, Buffalo-Niagara Riverkeeper
The Buffalo River Restoration Partnership is an international model for comprehensive, community-based collaborative approach. Tributaries such as Scajaquada Creek in the Buffalo River Area of Concern were covered in the 1950s because the polluted water was considered to be a health hazard to local communities. We need a bold vision to turn the situation around: healthy water drives economic revitalization. We can put jobs back into the local economy while re-establishing living connections between people and the water. Restoring water quality can enhance communities by restoring habitat, managing storm water, creating waterfront communities, watch-dogging bad actors and bringing residents to the table.

*Making the Great Lakes the Place to Be for Outdoor Recreation: Great Lakes Coast Initiative*, Krystyn Tully, Vice President, Swim Drink Fish Canada and co-founder, Lake Ontario Waterkeeper
When we talk about protecting the Great Lakes, we are really talking about protecting and restoring the things we care most about in life: health, prosperity, community and culture. Healthy water is an economic advantage making the region a desirable place to work and live. The IJC's poll shows that 86 percent of people agree Great Lakes should be protected for recreational use. We support the IJC's statement in draft TAP report that governments need to pay more attention to recreational matters. The fact that we have clean, swimmable water is the greatest competitive advantage that we have. It is the reason why businesses want to locate here and why people want to invest and innovate in this community.

*Emerging Contaminants and Impacts on Fish and Wildlife:* Diana S. Aga, Ph.D., Henry M. Woodburn professor of chemistry, University at Buffalo
We've become more aware of emerging contaminants, such as pharmaceuticals, personal care products and flame retardants, because new analytical tools such as liquid chromatography-mass spectrometry have become widely available. Emerging contaminants can cause adverse effects in fish and wildlife at extremely low levels measured in nanograms/liter. PBDEs at very low levels affect cognition, motor development and behavior in children. The highest concentration of emerging contaminants found in Niagara River fish are psychiatric drugs – anti-depressant drugs. These accumulate in the brain and have neurologic effects that may affect their survival behaviors of fish and wildlife.

*Wetland Habitat Restoration Needs for Larval Fish Nursery in the Niagara River:* Dr. Alicia Pérez-Fuentetaja, Professor of Biology and Great Lakes Ecology, State University of New York at Buffalo State
Emerald shiners are the glue of the aquatic ecosystem in Niagara River. They are native, abundant and support all the other fish, including game fish, as well as being an economically important bait fish. However, hardened shorelines and bulkheads, and faster water velocities have replaced the pools and wetlands that provided natural spawning and a nursery habitat for larval fish. The health of the Emerald shiner is a good indicator of the health of the ecosystem. Needed actions include improving water quality, softening shorelines, eliminating bulkheads, enhancing existing wetlands and creating new wetlands.

*Niagara River Corridor Ramsar Site, Proposal for a Wetland of International Significance*: Jajean Rose- Burney, deputy executive director, Western New York Land Conservancy
Our steering committee has been working for four years to obtain Ramsar designation for both sides of the Niagara River. The river has been degraded, but it is turning around and its internationally significant habitat deserves this international honor under the 1971 Ramsar Treaty. The US side of the Niagara River meets eight of the Ramsar criteria and the Canadian side meets all nine criteria. The designation supports many benefits including increased recreation, tourism, conservation efforts and outside funding.

*Alternative Futures for Restored Waterfronts:* Sean Burkholder, Assistant Professor, University at Buffalo Architecture and Planning
The Great Lakes region is experiencing rapid urban growth. Recreational waterfront amounts to only 20 percent of Great Lakes shoreline. We not only need to preserve accessible, recreational shoreline; we need to reclaim more. There are numerous opportunities in the post-industrial landscapes. We need to focus on best use of land, including accessibility, natural dynamic changes to the shoreline and proper planning, not desperation-based decision making. Encouraging publically-accessible shoreline encourages stewardship.

*Green and Smart: Restoring Buffalo's Waterways:* Oluwole A. McFoy, general manager, Buffalo Sewer Authority
The latest Long-Term Control Final Plan was approved by EPA and New York State in 2014. The plan has a $135 million price tag for water quality improvements (separate from general capital improvements), $100 million of which is for green infrastructure. Green infrastructure focuses on managing water where it falls and keeping it out of the sewer system. Projects include rain barrels, asphalt streets and parking lots, stormwater planning and eliminating structures and impervious surfaces on vacant lots. We are also implementing smart sewers, including at the Lang and Bird Island sites, which store stormwater for treatment instead of releasing it to our streams.

*Buffalo Blue, a Sustainable Business Perspective*: Mark Shriver, President of Western New York Sustainable Business Roundtable
The Sustainable Business Roundtable was founded in 2014 to support the growth of our business community through sustainable measures. Currently we have 76 members, half of which have sustainability plans. We provide examples, tools and technical support, workshops, access to third-party assistance and grants, and networking to share best practices. Collectively, members have reduced resource use, including 24 percent reduction in water use.

## Key Messages from the Afternoon and Evening Sessions

### A Holistic Approach to Water Quality

Residents experience Great Lakes water quality from the perspective of end users of the resource rather than in terms of whether agencies are meeting their particular program objectives. Several participants at the Buffalo public meetings said that having access to beaches, parks and boat ramps is as important as having healthy, swimmable waters from the user's point of view. This was similar to the message heard in other communities that lack of access to safe, affordable drinking water will be experienced as a failure of government regardless of whether the source water itself is safe and healthy. Thus, water quality and safe access to that water for drinking, swimming and fishing are equally important. Participants said the Parties should consider this perspective and do more to collaborate with other units of government to ensure that both countries are delivering the essential services that are part and parcel of the general objectives of the Agreement.

### The Role of Water-Based Recreation

Several participants emphasized the importance of recreation to the economic and ecological health of the watershed. In order to appreciate their intrinsic value, citizens need to directly experience the waters of the Great Lakes through activities such as boating, fishing and swimming in the open waters, and picnicking, hiking and bicycling along the shores.

Communities that recognize this connection between clean, swimmable and drinkable water and residents' commitment to their lakes and neighborhoods will drive their own economic revitalization. Community members are likely to become more committed to the ecological health of the region by focusing on restoring habitat, managing stormwater, making waterfront communities more sustainable, reclaiming recreational shoreline, and controlling point and nonpoint pollution sources so that residents can use and enjoy the lake.

### Public Engagement and Governance

Great Lakes issues and effective local and regional water management need consistent, systemic approaches by local governments within a region, such as setting sewage discharge regulations regionally versus a city-by-city approach. Governments, businesses and citizens also can focus

management efforts on sustainable approaches to engaging stakeholders and gaining their support. Resolving the nutrient loading issue that all lakes but Lake Superior are experiencing will require such a systematic approach to regional water management and stakeholder engagement. The Parties also need to fully implement public engagement subcommittees of the LAMPs to provide consistent structure for residents to participate in Great Lakes protection.

Education can be an essential tool to develop public awareness and commitment to restoring and protecting the Great Lakes. This is especially important in urban, under-represented communities that often deal with the problems, such as deploying 1,000 acres of stormwater management, without seeing the lakes or spending time on or in them. Green infrastructure is an element of effective management that can provide hands-on opportunities for these communities to promote watershed education and participate in creating a cleaner, safer environment.

## Wetlands

The Niagara River corridor is home to world class habitat and a wealth of biodiversity. A designation such as Ramsar, which identifies wetlands of international significance under the Ramsar Convention of 1971, can serve to galvanize conservation efforts, tourism and recreation, and outside funding to protect wetlands. The Niagara River's wetlands provide critical spawning and nursery habitat for species such as the Emerald shiner, a prey fish that sustains the food chain and all important game fish species throughout the region. Modelling can be an important tool to design and evaluate alternatives for habitat restoration and protection.

The proposed Northern Access Pipeline Project would create a pipeline that will trench through 185 streams connected to the Great Lakes, disturbing contaminate sediment and increasing siltation, and through 270 wetlands with obvious effects on habitat and the ability of wetlands to filter water effectively. It also will harm native species and encourage further spread of *Phragmites*.

## Funding for Great Lakes programs

Several attendees expressed concerns for the proposed US budget that does not provide funding for Great Lakes restoration and protection. The Great Lakes Restoration Initiative has provided focus to work to restore degraded areas such as the Buffalo River, and is essential to stop new threats such as Asian carp. This funding also is essential to create demonstration projects to identify better ways to manage wastewater.

## Radionuclides

Approximately 30 miles from Buffalo is the West Valley nuclear waste facility, which is believed to be leaking into Cattaraugus Creek. Nuclear waste and radionuclides are an invisible threat to the lakes. It is not worth the risk to create a new nuclear waste repository next to Lake Huron, and concerns were also raised about a binational proposal to transport more than 100 shipments of nuclear waste across Peace Bridge, from Canada to the southern US region. Participants asked what precautions are being taken to ensure that no leaks or accidents occur, and what steps are in place if either does occur.

## CSOs and other threats to water quality

Consistent sewage discharge regulations are needed across the states and provinces to deal effectively with combined sewer overflows (CSOs). New targets and deadlines to create domestic action plans to deal with municipal wastewater are helpful, but we need a systems approach that links science and governance strategies and that creates buy-in and trust across all elements of society. The collective impact approach is a model that will work well for this issue. Regional plans can address upstream and suburban inputs.

Given that all towns have permits to release raw sewage into the Great Lakes under extreme rain conditions, do we know how much is going into lakes and how does this compare with agricultural runoff? How do we reduce both, especially as climate change creates more extreme storms? If extreme highs and lows in lake levels occur, it will be difficult for wastewater treatment plants to prevent raw sewage from going into the lake more frequently. Biosolids and commercial sewage sludge that are used as fertilizer on farmland are also flowing into the lake and must be dealt with more effectively. Hydrofracking waste has been received by the Buffalo Sewer Authority, which was flushed into Lake Erie, and also represents a threat to the lakes' health.

Other issues raised include an increased risk for diversions of Great Lakes water as the climate continues to warm, the need to review negative effects to beaches, shorelines and Lake Erie's food chain from the Niagara River ice boom, microplastics in the waters, fish and wildlife, and additional requirements to treat ballast water to prevent further introductions of aquatic invasive species. An additional annex in the Agreement to address human health objectives that include more indicators beyond beach closings, such as combined sewer overflows and harmful algal blooms, also was proposed.

## Specific Recommendations

Governments should reclaim more shoreline for public recreational use and ensure that measures to enhance opportunities for safe, water-based recreation are a central focus of the region's social, economic and environmental restoration strategy.

Governments should place greater emphasis on stakeholder engagement, including adoption of a collective impact approach to address nutrient loadings and fully implementing the outreach and education subcommittees for the LAMPs.

Governments should strengthen efforts to restore and enhance wetlands, soften shorelines and improve water quality in order to provide spawning and nursery habitat for native fish species.

Governments should require risk-benefit analysis of pipelines that cross wetlands.

The IJC should pay more attention to the impacts of radionuclides in the Great Lakes basin.

Governments should conduct an environmental assessment of the transboundary shipment of nuclear waste and implement measures to safeguard human health and water quality.

The IJC should urge governments to develop consistent, regional sewage discharge regulations.

Governments should study the potential impacts of emerging, large-scale commercial activities, such as injection of hydro-fracture waste and agricultural application of biosolids, and develop regulations needed to protect public health and the environment.

## Afternoon Public Comments: (Click hyperlink of participant name to view video comments)

*Richard Smith, former NYS Assemblyman:* I've fished and boated in Lake Erie for more than 70 years. We must push harder to help the Sewer Authority eliminate combined sewer overflows (CSOs) and reduce pollution runoff. These efforts must be funded. We must control ballast water discharges to

prevent aquatic invasive species. Finally, ensure proper funding of education and research.

*Paul Grenier, Regional Councilor, City of Welland:* With respect to protecting water quality, local governments do a lot of the heavy lifting. We need consistent sewage discharge regulations; they are not the same across Great Lakes states and provinces. Having consistent regulation would help me raise the appropriate funds through use and taxation, and secure funding from upper levels of government.

*Alan Oberst:* Where are we regarding scientific modeling of the lakes? If we had more detailed models for such things as habitat restoration, could we evaluate alternatives for different development projects as well as look at the cumulative impact of multiple projects?

*Charley Tarr:* We lack a regional sewer plan in western New York. The Buffalo Sewer Authority had to be compelled to complete its own Long-Term Control Plan. The plan is flawed and is Buffalo-centric. We need a regional plan that addresses both upstream and suburban inputs.

*Philip McIntyre:* The number one priority is to keep Great Lakes basin water in the Great Lakes basin.

*Joseph Barrett:* The Niagara River ice boom is a big threat facing the lower Great Lakes. It creates a stalled conveyor of ice that contributes to a buildup of biomass in Lake Erie and preventing needed nutrients from entering Lake Ontario. Lake beaches and shorelines are disappearing. Strawberry Island is disappearing, and the food chain in Lake Erie is collapsing. There was no problem with ice prior to 1964. We need to take a serious look at annual cycle of ice of the Great Lakes.

*Thomas Frank, Ellicott Creek Watershed Greenway:* The Williamsville Village Board voted last night to create the Ellicott Greenway Parks and Trails Project. I believe the Tonawanda Creek flood mitigation plan information should be made available to the public.

*Lynda Schneekloth, Sierra Club Niagara Group:* Please take the threat of aging nuclear infrastructure seriously. Nuclear power is not carbon free and from cradle to grave is as bad as coal. We need to close nuclear storage facilities. The West Valley waste facility is 30 miles south of Buffalo and has been problematic since the 1970's. Extreme storms place this facility in serious danger; it rests on glacial till and is not secure. Spilled waste could enter creeks and the Great Lakes. All waste facilities should be looked at with respect to climate change to ensure they are secure. Sierra Club has also tried to stop a shipment of liquid nuclear waste from Chalk River, ON to the Savannah River Site in South Carolina. No environmental impact was done and no alternatives were considered. Shipments are to begin soon. Both governments should insist on environmental assessments. Unitech's proposal to ship 10,000 metric tons of nuclear waste from Canada to Oak Ridge, Tennessee should have an assessment of the dangers and alternatives prior to being approved.

*Scott Franklin:* I grew up on the edge of Lake Erie, it was a great experience. I had a question about identifying a small fish I once caught that has a red side. As a boy I would eat the resources of the lake including crayfish and freshwater mussels. Without realizing it, I was single-handedly exterminating these animals. These animals are small in numbers and can live a long time, 30 years or more. I put a mussel in a neighbor's pond and came back years later; there it was, still there. Farmers let their cows run into the streams and now they are not in the best shape. I remember there used to be wood turtles too, but they are not around anymore either.

*Julie Barrett ONeill:* I want to call to attention the critical role that the IJC plays looking after cross-border relations. We lost our Canadian Consulate Office, who used to connect the mayors and

communities. They would look at the river as a single waterway instead of two parts. You are in a unique position right now to build bridges between the countries. I had the privilege to work for Mayor Brown working in inner city neighborhoods on water quality issues. The portions of your report that speak to under-represented communities are particularly relevant for us as we deploy 1,000 acres of storm water management. We need to connect urban neighborhoods that often don't see or use the water resources; some of these children may or may not have ever put a line in the water or boated. I'm happy to see that programs such as the Lake Ontario Waterkeeper are very successful at bringing diversity to the table. But, unfortunately in the room here, we don't have a full spectrum of our community. I would like to work on behalf of Mayor Brown to engage our urban community in these dialogues. Neighborhoods want beautification, they want trees. Communities asked for green infrastructure in their plans five years ago and we were finally able to deliver it. I think that environmental education in urban neighborhoods is very important, along with green infrastructure work in after school programs and other initiatives.

*Charley Tarr:* I hope you are aware of the recent lawsuit in Lincoln, Ontario, it was a dramatic victory. Hydro-fracture waste is a terrible threat. It cannot be put into injection wells. There are billions of gallons that must be dealt with daily. We are seeing commercial anaerobic digestion of sewage sludge and industrial sludge that is then put onto farmland. We are very concerned about runoff from that farmland. Take note of Quasar Energy and Forest City, Inc. from Cleveland, Ohio. Forest City has launched an anaerobic digestion of waste for profit model. They will reference yogurt and all things benign, but the infrastructure will be ideal for getting rid of the world's most-polluted water. We lack the regulations for these systems.

## Evening Public Comments: (Click hyperlink of participant name to view video comments)

*Barbara Frackiewicz:* At the West Valley Demonstration Project, nuclear waste is buried on site. Small amounts have traveled offsite into Cattaraugus Creek and into the lakes. The US Congress is underfunding demonstration work at West Valley. Radiation is invisible and also appears to be invisible in your report. Nuclear issues should be a high priority.

*Brian McGowan:* I'm concerned about the President's proposed budget cuts and I hope that something can be done to keep the funds needed to ensure clean Great Lakes.

*Mike Kearns:* I'm a resident of Olcott, NY and work at the wastewater treatment plant. I'm concerned about the recent adjustment in the lake levels. We may see two-foot higher highs and two-foot lower lows. What will happen with the issues of riparian rights? I was wondering if anyone considered the possibility of raw sewage that would go into the lake if the water were to rise two feet?

*Paul Siepierski:* Could anyone give us a perspective on the effects of hydraulic fracking for gas on any of the Great Lakes?

*Thomas Frank, Ellicott Creek Watershed Greenway:* I would like to address Jajean Rose-Burney. My suggestion is to designate the entire Niagara River Watershed under Ramsar and not just the Niagara River corridor.

*Captain Larry D. Jones, President of Western Lake Erie Charter Boat Association:* The algae and dead spots on the west end of Lake Erie has forced fishermen to our end of the lake. It's good for our businesses, but the problem is boat access. We're getting bottle-necked at access points with no room for all of the boats to launch. They built a new launch at Safe Boat Harbor, but it is eight more launches just like we had before. Additionally, Barcelona Harbor was dredged with funds from the Hurricane

Sandy Relief Fund – at a cost of a million dollars. But, next season all the sand washed back into the harbor because the Army Corp of Engineers does not upkeep the walls at this end of the lake. They say it is at the bottom of the priority list. There is the same problem at Sturgeon Point Marina because of the way it was constructed. Everyone is trying to go out fishing, but it is closed. The City of Buffalo will not open the Erie Basin Marina early or late, because you need a guard at union wages. We don't have a safe place to go when the winds whip up, we need more access.

*Brian Smith, Citizens Campaign for the Environment:* Thank you for the past decade of scientific work and citizen outreach that led to the adoption of Plan 2014. Thank for this meeting tonight. It shows that people care about the Great Lakes and will come out on their behalf. While the IJC is doing a wonderful job, there should be full implementation of the outreach and education subcommittees for the LAMPs. This ensures a consistent structure for people to weigh in on the Great Lakes Water Quality Agreement and Great Lakes Restoration Initiative (GLRI). Second, nuclear waste issues are critical to our area. West Valley is just 30 miles from here. There is also is a bad proposal to store nuclear waste on Lake Huron. There should be more attention in both countries to address nuclear waste issues. Finally, everyone should weigh in to the governments on the importance of the GLRI. It is s game changer for Great Lakes restoration. GLRI keeps Asian carp out and is critical to protecting the health of the Great Lakes.

*Nate Drag, Alliance for the Great Lakes:* The TAP is a great opportunity for citizens to weigh in on the progress of the Great Lakes. It's a great tool for citizens to keep tabs on their governments. However, the report could have been communicated better and been more visually attractive; there are no pictures in it. We believe it should also emphasize the areas where the Parties fell short. Please include an annex to address human health objectives. With respect to recreation, include more indicators beyond beach closings, such as combined sewer overflows and Harmful Algal Blooms are very useful. Microplastics are serious concern along with aquatic invasive species. We believe the Laker ships should treat their ballast water too as a way of reducing the spread of AIS. TAP is useful, but it should be communicated in different media formats. Perhaps create a short video on each objective. Show what the governments have done and not done. It might be a way to provide further education on the issues.

*Gail Hall, New York Geographic Alliance:* I am a resident of Erie County, NY. The Buffalo News has reported about shipments of nuclear waste from Canada to the US that would traverse the Peace Bridge. The report indicated there are supposed to be over one hundred shipments crossing the bridge. What are the precautions begin taken if there should be a leak? I'm concerned about this.

*Joseph Gibson, Clean Air Council:* I grew up in Lakeview and swam at Hamburg Beach. When I was young I was not able to swim at Woodland Beach and didn't understand until a later age why. I am concerned about the Northern Access Pipeline 2016 Project and how it could impact Lake Erie and the Great Lakes basin. Citizens have expressed are concerned that it will cross 192 streams, 185 through trenching, which allows sedimentation and silting downstream. These methods could disturb contaminated sediments, such as those in Bull Creek, which will be crossed twice. Bull Creek contains BCCs thanks to the West Valley nuclear project. It will trench through 270 wetlands, with obvious effects on the Great Lakes, including TIS and habitat destruction. When introducing industrial projects we need a method to evaluate the risk to benefits. Many of these projects will not benefit people of western New York and harm the Great Lakes. I'm asking the IJC and citizens to contact the state of NY to ensure the protection of the environment when creating these projects.

*Charles Henderson:* I would like to reiterate the issue of nuclear waste. Radioactive waste in Lockport, NY drains into the Erie Canal and Lake Erie.

*Evelyn Hicks, Town of West Seneca Environmental Commission:* Our town is within the Buffalo River watershed. One of our main concerns is the erosion of river banks and sediment loadings into tributaries of the Buffalo River. We have had a difficult time getting enough momentum and interest to repair the stream banks. We need more support. We fully support the mission of the EPA and The Great Lakes Restoration Initiative; because of the GLRI we have received two grants for aquatic invasive species eradication and scientific studies. We need to look at other examples from around the world for water management. For example, Israel has come up with more progressive ways to manage their waste water. We need some demonstration sites with ideas to better manage waste water, before continuing to build outdated infrastructure.

*Mark Arnold, Williamsville Central School District:* I hope we keep moving forward with Ramsar. I have great concern over nuclear waste in the Great Lakes basin. I believe this is the elephant in the room, especially in light of the IJC not addressing it. I would encourage the IJC to push forward to obtain answers about nuclear waste.

*Charley Tarr:* All radiological concerns raised today in Buffalo absolutely dwarf the other concerns that you have heard. We need to educate our youth and fortify environmental education. I would ask that the Commission look at hydrofracturing. My colleagues identified that the Buffalo Sewer Authority received an unknown quantity of hydrofracture waste that was straight lined flushed into Lake Erie. It would be useful for this committee to look into the legal issue of redress. Lastly, we see instances of members of the community who are knowledgeable and willing to enter the court process, but lack the funds to do so. The question of standing is being used to flush cases in the system. We need a better system to bring litigation.

*Catherine Brown:* Several years ago I became interested in the land application of treated biosolids. During the time that Toledo, OH had its problem with drinking water, I found that there are over 90 Class B permits to spread treated biosolid waste in the Maumee River watershed. When it rains, you can see the runoff coming from fields. In Wilson, NY, they had to pay fines after finding chemicals in the harbor from agricultural runoff during dredging. Because of the chemicals the dredged soils could not be put in the landfill. In Germany, they incinerate the sewage waste, using it for power. I would urge you to look into the application of biosolids and its high phosphorus content and algal blooms.

*Janet Lenichek:* I worked on an EPA vessel in 1978; some of the issues of that era are still a concern. For example, 40 years later we are still talking about combined sewer overflows and agricultural runoff. What else can citizens do to get governments to take these problems seriously? I'm also concerned about the potential for water diversion from the Great Lakes as the climate warms and communities need more sources of fresh water.

*John Joyce, thesupershore.com:* All of the water from the upper Great Lakes goes over the falls and is used to generate electricity. It lights the cities on the shore forming a giant letter S, beaming into the cosmos. It is a beautiful symbol seen from space. We need a place to put our ideas together. I've launched a website where we can express our ideas.

*Kathryn Friedman, University of Buffalo:* I would like to share thoughts on the significant challenge of nutrient loading to the Great Lakes and associated harmful algal blooms. All Great Lakes are experiencing significant water quality issues regarding nutrient loading, with the exception of Lake Superior. There has been progress to set new targets and the governments' report they are on track to meet the 2018 deadline for their domestic action plans. The IJC suggests that the parties should enhance science modeling. Good science and metrics are helpful, but insufficient to deliver the much

needed course correction. In our view, we need a systems approach that links science and governance strategies. The next step must be bold and involve good governance. The course correction should involve good process design to build trust and buy in across all sectors. The region should adopt the collective impact approach, a model that stems from non-profit and social activism literature, in order to develop a common agenda for solving problems. Nutrient loading may be one issue that is suited for this approach and collective action.

*Christopher Allan:* There is emerging research into micro fibers that are washing into the Great Lakes and ending up in the gastro-intestinal tracts of fish. Are you aware of this work and researching this issue?

*Ronald Rezabek:*. Of the $300 million appropriated for the GLRI, do we spend it all? Is it accounted for? Is there any movement to reduce the number of raw sewage permits? Almost all towns on both sides of the border have a permit to release raw sewage into the Great Lakes under extreme rain conditions. How does this compare to farm runoff? As a resident of Grand Island, please keep up the work reducing pollution.

*Monica Elderkin, Stronger Together WNY:* We are a collection of activists with 12,000 members connecting non-profits and community activists. We have daily calls to action. Besides calling our Congressmen, do you have any advice on what we can do to restore Great Lakes funding to the national budget?

*Carl Mrozek, Eagle Eye Media:* I'm a videographer and independent film maker. I was recently working with another producer on a film called Lake Ontario love story. I was alarmed to find the threats posed to Lake Ontario by the West Valley Nuclear Waste Facility. It's important to get the word out to citizens, but the days of hard-hitting network documentaries are over. As a film-maker people often refer me to public television, but they do not have piles of money to produce documentaries. If I manage to produce something, they may help distribute it. If you really want to get the word out to the public about the work you're doing, please fund media projects. My challenge to you is to think about the ways you want to communicate your message and what can we do to work together to get the report out in a digestible form.

*Fred Mikulec:* I'm a local fisherman and wondering about the Emerald shiner catastrophe that has been going for the last three years. It is a main item in the food chain from the Grass Perch all the way up to the Muskies and Sturgeon. Is that on the agenda and does anyone have an update? I noticed climate change was part of your report. Hopefully our illustrious master tweeter -leader will come to recognize climate change and stop wanting more F15s and invest in the environment.