

Andy Buchsbaum: The Present Condition of the Great Lakes and the Action Needed
Unitarian Universalist Church of Ann Arbor
November 21, 2019

The evening opened with a welcome that invited everyone to take part as they wished. Dorothyann Coyne and Ann Thomas got together last spring and wondered what they could do about our global climate crisis. Because they both have a strong affection for our Great Lakes, they decided to "bloom where planted." It began with education: they attended Great Lakes events locally. They then decided that Andy Buchsbaum would be the best one to teach them. And so this evening event was born.

Jan Urban-Lurain, a friend of UUAA climate action group co-lead Jeannine LaPrad, began the evening's work by guiding the attendees into small groups for sharing what we love about the Lakes and what worries us.

We love the Lakes:

- for their peacefulness and also their wild beauty
- as a place for fun and refuge

Subjects raised:

- 20% of the world's fresh surface water -- amazing
- EPA funding issues
- microplastics contamination
- political issues
- over development of shore houses, runaway growth
- in the 70's and 80's the Lakes were declared "dead"
- what rules are in place, statewide
- collaboration with all parties, Canadian as well, the Compact
- Nestles takes the water
- Nevada wants the water
- a young woman wants these lakes to be here for generations to come.

Andy was eager to hear everyone's concerns. Andy wore a lavalier microphone and two hand mikes were passed among the 70 members of his audience. Andy was on his feet the entire evening, a large power point presentation unfolding behind him.

Andy introduced himself as a kid growing up in Chicago. He was always told that to find his way, just remember "the Lake is East" and you will never be lost. Lake Michigan became part of his personal identification. During school years in California, he felt it was somehow not right that the big water was West.

96% of citizens of the Great Lakes Basin region feel that "We must protect the Lakes."
There has been great bi-partisan support in Washington for Great Lakes funding.

Andy's plan was to cover three important crisis subjects for the Lakes:

- Line Five carrying shale oil under the Straits of Mackinac
- The Asian Carp problem in the Chicago River
- The Hazardous Algal Bloom in the Western Lake Erie Basin

ACTION: Who is it we want to influence and what do we want them to do???

OVERVIEW:

The amount of fresh water in the Great Lakes could fill the Grand Canyon and then with the remaining water cover the entire continental United States to the depth of nine feet.

Lake Superior holds thousands of wrecked ships, many never found in the depths. The water in the depths of Lake Superior is considered to be original water from the ice age of centuries ago. This huge lake puts out a very distinct energy.

Only 1% of each lake is renewed each year. What is there or enters the waters stays there for generations.

Scientists in 2005 declared that the ecosystem of the Great Lakes was in meltdown. The stresses and insults over the centuries have left the Lakes irrevocably damaged.

They put out a report that was widely circulated. The report told hard news:

1. The Great Lakes suffer from massive ecosystem breakdown. (At first they wrote "meltdown" but that sounded too catastrophic and so the word was changed)
2. The self-healing mechanisms have been damaged.
3. There is a chain reaction of degradation, irreversible harm is done, the insults magnify and degradation cascades.

Self healing mechanisms exist at the big river mouths where there is great bio-diversity. In recent years, there has been massive toxic sediment buildup, hardened shorelines due to development and the loss of precious wetlands. In addition, the Lakes have been stressed by over-fishing.

So recommended actions are

1. Restore land elements
2. Stop abusive practices
3. Protect the good segments of the Lakes
4. Measure everything carefully

There has been federal investment through the Great Lakes Restoration Initiative and 4,700 restoration projects have been accomplished during the last eleven years.

Senator Stabenow is right now bringing this Initiative once again through Congress for renewal starting in 2020.

Probably the most fundamental toxic challenge to the Lakes has come through the arrival of the Zebra and Quagga Mussels. These invasive species arrived on ship bottoms through the Welland Canal. Their growth in the recent 15 years has climbed from a zero population to 100,000 per square meter. This has caused change to the subsurface and affected the filtering capacity of the water.

Andy: "We can't put this genie back in the bottle. The Lakes must fix themselves."

The sea lamprey also came through the Welland Canal. This creature literally sucks the life out of fish. There is some good news here as a pesticide was discovered that impacted the reproduction capability of the sea lampreys and over 20 years has knocked down this population.

LAKE ERIE

Lake Erie is in serious trouble. The zebra mussels have the effect of clearing the water which allows more sunlight in to the lake and therefore more warmth promoting growth and bloom of the algae.

There is a dead zone of 10,000 square kilometers in the middle of Lake Erie where fish die because they are deprived of oxygen. The algal bloom coming out of the Detroit River contributes to this dead zone.

In the fifteen years since the scientists wrote their letter in 2005, there has been progress. We are making a difference. In 2009, The Great Lakes Restoration Initiative won financial support from Congress of \$3-4 million per year for Great Lakes cleanup. This has had bi-partisan support -- the Republicans voted to give even more money than the Obama administration asked.

The Great Lakes Compact agreed upon by all the states and provinces touching the lakes locked in both federal and state laws. Part of this compact prohibited exportation of water out the Basin.

NESTLE's removal of fresh waters from our rivers (a big concern for Michiganders) has found the loophole because the small drinking-size bottles are not considered in the Compact.

CLIMATE CHANGE

Water levels at present are way up on the Lakes. The Great Lakes swing between evaporation and precipitation rates. Scientists cannot predict this. The Lakes make their own weather. In addition, the jet stream which used to flow directly west to east now has changed. It now swings way north as it moves west to east and then dips down giving us the polar vortex which traps evaporation under thick ice.

Seasons have changed. We are experiencing earlier spring bringing warmer lake temperatures which make big differences. Lake Superior has the fastest warming in the world. The sea lampreys that used to be 12 inches long are now 18 inches in length.

HAZARDOUS ALGAL BLOOM IN WEST LAKE ERIE

This algal bloom is like a very thick green pea soup that is toxic. It causes the death of pets and illness to humans who swim in or somehow ingest these waters. The algal blooms are caused by excess nutrients in the warmer waters.

The main cause of the algal blooms is the phosphorous run-off from the farms of Michigan and Ohio. This phosphorous comes from the drainage ditches of the farms into the Maumee River and the outflow from the Detroit Water Treatment Plant into the Detroit River. The algae in the Detroit River is not as concentrated as in the Maumee but it is the major contributor to the dead zone.

How to stop this??

Michigan Attorney General, Dana Nessel is committed. She has law suits out against Enbridge. She wants her tombstone to read: "Nessel v Trump, Nessel v. Enbridge, Nessel v. Ohio."

Governor Gretchen Whitmer is not as strong in her commitment. We must hold her to keeping her campaign promises -- especially around the Enbridge tunnel project.

The Great Lakes Compact must be altered to read more about water quality, not just about water quantity.

The Great Lakes Quality Agreement between U. S. and Canada is not as strong as the Compact.

Mark Palms spoke of the effort in Germany where farmers practice, "no till" farming which would be useful if the practice caught on here:

- prevents erosion
- helps farms
- stops run off

In future, the farmers should test the soil before fertilizing.

Sadly, the Clean Water Act doesn't regulate farmers and plays one polluter off against another.

We need farmers to adapt best practices as learned from farmers around the world. In Ohio and Michigan 30% of farmers practice best practices

- 40% say that maybe they will
- 30% say no.

Big animal farms are not regulated. The toxic waste products of the animals are simply spread across the landscape and then drain into the rivers and streams. The Dept. of Agriculture is not aggressive on this. We need incentive programs.

We will have to pay the farmers to do what will protect clean waters that we all drink.

Our Huron River Watershed Council is the best in the United States and we had one of its leader with us this evening. This council's work is incredibly effective according to Andy.

CITIZENS NEED TO WRITE TO THOSE IN CHARGE

Gretchen Whitmer has to address the problems at the Detroit Water Treatment Plant so that the phosphorus outflow is reduced.

Animal farms which house about 1,000 animals produce as much pig waste as a city of 100,000 people. There is no regulation to have waste treatment as there is for human waste.

An audience member contributed that the Sierra Club has a lobby about these animal farms. The Department of Environmental Quality has banned putting animal excrement and waste on frozen ground. Ohio has better laws, someone added.

ASIAN CARP

It is said that Asian carp eat like hogs and breed like mosquitoes. They form 95% of the biomass of the Chicago River. When boats with engines go near them, the carp panic and leap high out of the water. They are huge fish as Andy proved with a picture

The city of Chicago used to discharge its waste directly into Lake Michigan. Then the City decided to use the Chicago River which flows to the Mississippi and on to the Gulf of Mexico. The city of St. Louis sued the city of Chicago over this, but lost the suit.

The carp began to move up the river. It takes only 10 carp to create a breeding population. An electric barrier was created to stop the carp, but small ones still get through. There is a choke point at the Brandon Road Lock and Dam. It will cost 800 Million dollars to build a dam here.

WRITE GOVERNOR WHITMER that you approve the state of Michigan using 9 million dollars of tax money to support this Brandon Road Lock project and prevent the Asian Carp from coming into Lake Michigan. Be sure to thank her first for her strong environmental positions.

"Dear Governor Whitmer -- Thank you for your environmental work. I support Michigan using tax dollars to support the anti-Asian carp project at Brandon Road in Illinois to protect our wonderful Lake Michigan."

WRITE SENATORS DEBBIE STABENOW AND GARY PETERS – both are long-time strong supports of Great Lakes protection. WORK FOR Gary Peters re-election.

It's best to justify your requests to our political leaders with both economic and environmental reasons.

LINE FIVE

Andy showed us a picture of the Kalamazoo River oil spill that came with Enbridge lack of care for their pipeline carrying oil under the river. There are two Enbridge pipelines under the Straits of Mackinac carrying the shale oil. He showed us the theoretical video that has been created to graphically reveal the 700-spread of oil through the neighboring Great Lakes. This video was based on a U of M study.

There has been enormous progress since 2012. Republican governor Snyder and Attorney General Bill Schutte created task forces. Schutte was heard to say that the "pipeline days are numbered." Voters of Michigan agreed.

But in the 'lame duck" period between Governor Snyder and Governor Whitmer, a deal was made to allow Enbridge to build a tunnel to carry the pipelines. This tunnel agreement has no timeline. Enbridge was designated owner of the tunnel.

THIS AGREEMENT IS AN ILLUSION. Legally Enbridge has no need to do anything.

Our present attorney general, Dana Nessel and Governor Whitmer agree that the line must be shut down to spare the precious waters of Lake Michigan, Superior and Huron and beyond. Andy is helping Attorney General Nessel with the two law suits she has going. Governor Whitmer is not as aggressive.

The argument for the tunnel is that it will provide union jobs for its construction.

Enbridge has launched a massive campaign. We need to find a way to oppose it successfully. Nessel is in there working.

WRITE TO GOVERNOR WHITMER and urge her to keep her campaign promises.

70-80% of the shale oil transported under the Straits simply passes through Michigan. It comes from Canada west of Lake Superior and goes on to Sarnia and Ontario.

There is an argument is that the residents of the Upper Peninsula need the propane gas that also crosses under the Straits. It could easily be carried on one rail car or on it could be trucked to them.

There have been anchor strikes to the pipeline. It's 50-60 years old now. There are long spans of the pipeline that have no support at all.

Enbridge is proposing a tunnel 100 feet under bedrock, 10 feet wide. Why not ask the Governor to give them three years to do it or shut them down?

Or the Governor could revoke the easement. Insurance held by Enbridge was created in 1953 and now it needs way more insurance. Lloyds of London would never insure this.

This same Line Five moves through Tribal land in Minnesota and the native people are fighting it. Native tribes are sovereign nations. The Bad River Tribe in Minnesota is on it and just sued Enbridge regarding easements on the tribal land.

All commitments to this pipeline project have been made by a subsidiary, not the parent company, Enbridge.

OTHER GROUPS FIGHTING FOR THE GREAT LAKES -- check them out:

1. In Traverse City, there is a COALITION "OIL AND WATER DON'T MIX:
2. SIERRA CLUB
3. FLOW -- "FOR LOVE OF WATER"
4. FRESH WATER FUTURE
5. ALLIANCE FOR THE GREAT LAKES

As 8:45 came around, the conversation really heated up and folks hated to stop quizzing Andy. Cards had been distributed to everyone present with suggestions advising how to keep the conversation going.

WE CAN REFUSE TO STOP TALKING ABOUT OUR GREAT LAKES!

We have a week until we sit for Thanksgiving dinner with other Americans. Bring up the Great Lakes as a conversation subject.

We have a full year before we cast our votes. Let's bring true environmentalists to the positions of power in this country. Let's take care of this precious planet in its time of true need.

LET'S PROTECT OUR GREAT LAKES!

20% OF THE WORLDS SURFACE FRESH WATER!!

84% OF NORTH AMERICA'S SURFACE FRESH WATER!!!