

Fall 2015



NEWS FROM THE EARTH

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Local Partnerships Keeps Silver River Stream Gage Online

The Silver River Watershed is the largest watershed within the KBIC L'Anse Reservation. Since 1999 KBIC NRD water program staff have collected baseline water quality data from the system. In 2001 USGS installed a continuous record stream gage on the Silver River at Skanee Road and this monitoring station has been in operation ever since. Historically, funding for the gage was provided by USGS and KBIC. Two additional stream gages were installed on separate branches of the Silver River system, but due to lack of funding were shut down in 2013. In 2015 the stream gage on Skanee Road was in danger of being shut down due to lack of funding. KBIC and USGS did not want to lose the long term monitoring capability on the Silver River so USGS reached out to the community and the response was outstanding. An email was received from a concerned kayaker in Wisconsin that uses to the online stream gage data to know when the best time is to venture to the Upper Peninsula to kayak on the Silver River. Without the gage, they would likely no longer come to the area. This email sparked interest from several community groups and NRD staff were asked to attend meetings to share information about the importance of the USGS stream monitoring gages. The Baraga County Chamber of Commerce was the first to offer funding to support the continuation of the gage followed by the Keweenaw Bay Ojibwa Community College (KBOCC), Village of L'Anse and Baraga County Convention & Visitors Bureau.

On November 7th, the Baraga County Chamber of Commerce presented the KBIC with a "big" check to signify the newly established partnership between the two organizations (see picture). Debbie Stouffer presented the check to KBIC Tribal President Chris Swartz on behalf of the Baraga County Chamber of Commerce. Also in attendance were Bob LaFave from the Village of L'Anse and Tracey Barrett from the Baraga County Convention & Visitors Bureau. A representative from KBOCC was not able to attend the Council meeting.

Data from the Silver River Stream Gage can be accessed at the following internet address: http://waterdata.usgs.gov/mi/nwis/uv?site_no=04043150



From left to right: Bob LaFave, Kit Laux, Erin Johnston, President Chris Swartz, Debbie Stouffer, and Tracey Barrett

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KBOCC and KBIC NRD receive joint EPA Award for Tribal Eco-Ambassadors Program

With ongoing concerns with climate change and potential detrimental impacts on fish habitat, KBOCC in collaboration with the KBIC NRD secured EPA funding to increase baseline data collection in coldwater streams and the Lake Superior nearshore. Emphasis is on sites of fisheries management focus for the NRD. The purpose of this project is to gain capacity and support (via KBOCC students) to better monitor and collect information pertaining to seasonal water temperature fluctuations to assist the NRD with fisheries assessments and stocking efforts.

Objectives of the project include

- Acquiring and deploying advanced and long-term continuous water temperature profiling devices at a minimum target 50 locations throughout the declared KBIC Home Territory within 1842 Ceded Territory in Lake Superior and the western Upper Peninsula of Michigan.
- Utilizing KBOCC student support in accomplishing the above mentioned effort.
- Working with KBOCC students to efficiently and effectively collect vital fisheries data for both the KBIC NRD Aquaculture and Fisheries Management Programs.
- Allowing KBOCC students opportunity to partake and assist KBIC -NRD with collecting, summarizing, and reporting results of efforts detailed above.

To date, 22 loggers have been deployed with a goal of 30 before winter sets in. The project will continue into Fall 2016, but majority of the field work should be completed by May 2016. Temperature profile data will be compared to fish assessment and macroinverte-

brate data to assist in NRD fisheries management and stocking efforts in the region. Other research opportunities for KBOCC students include exploring the relationship between water temperature and other water quality parameters or investigating temperature profiles within river systems upstream and downstream from industry, water treatment plants or other human activity. Look for project updates in Fall 2016!



NRD staff and KBOCC students placing data loggers in the field

Fisheries Program Updates



GLIFWC fisheries biologist Ben Michaels and KBIC fisheries technician Patrick LaPointe affix a special temperature recording tag to a lean lake trout in Keweenaw Bay.

KBIC NRD Standardized Summer Lake Trout Surveys were completed in July and August, and minimum survey efforts and collection targets (of 6 different gear sets in lower and Middle Keweenaw Bay) were reached. These efforts involve strategic deployments of small mesh gill-nets (standardized nets that mimic gear deployed by multiple agencies throughout Lake Superior), with juvenile lake trout being the primary research target. Over 500 Age Structure samples (inner ears) were collected from juvenile lean lake trout, siscowet lake trout, lake whitefish, cisco, and other species. Sample and Data summary and analyses will be conducted during the fall and winter, and will contribute to population and safe harvest modeling for Keweenaw Bay waters of Lake Superior.

During Summer Lake Trout Surveys, NRD staff assisted GLIFWC with capturing and tagging lean lake trout with depth and temperature recording units (bathythermal tags—see picture to left). If you catch a fish with one of these recording tags, please contact the NRD and do not freeze the tag. A \$100 reward is associated with proper return of these tags to GLIFWC.

Cleaning Up Our Beaches

KBIC NRD organized their Annual Lake Superior Day beach cleanup on July 17th. Approximately 40 people including NRD staff and tribal youth crews cleaned approximately 7 miles of Lake Superior beaches from just north of Assinins/Sand Point all the way around the Bay to Pequaming/Second Sands Beach. The day started with an opening ceremony performed by KBIC member Pauline Spruce. The cleanup was followed by a luncheon at the Sand Point Light House day use area.

Lake Superior Day, which was created in the early 1990's by the Binational Forum, is officially the third Sunday in July. The Binational Forum, a group of volunteers from the United States and Canada working together to protect Lake Superior, states that Lake Superior Day is a "special day held around the lake to highlight the importance of the world's largest freshwater lake to the basin's environment and economy." KBIC will continue to hold annual events in honor of Lake Superior Day, but we encourage the community to treat every day as Lake Superior Day and take actions to restore and protect our beautiful Lake.



NRD staff cleaning the beach for the September clean-up event

For the second year in a row KBIC NRD was asked to organize a beach cleanup in support of the Adopt-a-Beach program through the Alliance for the Great Lakes (www.greatlakes.org). The cleanup took place on Wednesday, September 23rd. NRD staff and several volunteers from Baraga County Trails in Motion cleaned the same beaches addressed during the Lake Superior Day event. The most common trash found was small pieces of plastic (tops to pop bottles and fragments of larger plastic items). Other items include cigarette butts, fireworks, foam, plastic bags, diapers and syringes. Remember to take your trash with you as the beaches are a shared resource for everyone to enjoy.

Underground Storage Tank Removal at The Rez Stop

The Natural Resources Department (NRD) received a call September 4th regarding the discovery of a potential underground storage tank (UST) at the Rez Stop in L'Anse. The tank was discovered as the site was being prepared for blacktop. After further investigation two approximate 660 gallon tanks and one 300 gallon tank were uncovered. Although the exact age of the tanks are unknown, the NRD believes the tanks are from a gas station that operated on site in the late 1940's-early 1950's. The tanks were abandoned in place and filled with sand with product still in the tanks. This practice was typical with older USTs prior to any environmental regulations. The tanks were removed and found to be in deteriorated condition with visible signs of leaking. Impacted soil from under the tanks was removed and soil sampling conducted to determine if additional soil removal needed to take place. Results from the laboratory indicated that the contamination levels were not high enough to warrant further remediation. For additional information contact Katie Kruse, Environmental Response Program Specialist at 524-5757 ext. 20



Removal of UST at The Rez Stop

Aquatic Invasive Species Program Moving Forward

In 2014, the NRD received funding through the USFWS to develop an Aquatic Invasive Species Adaptive Management Plan (Plan). The Plan was completed in late 2014 and approved by Tribal Council in 2015. The Vision Statement of the Plan is “to promote and protect the health and existence of native plants and animals of ecological, cultural, or subsistence significance upon which the Keweenaw Bay Indian Community depends by preventing, monitoring, and managing aquatic invasive species and educating the community about these plants and animals.” Once the Plan was developed, the NRD sought additional funding through the USFWS to implement actions in the Plan and hire two new employees to assist with AIS program development (AIS Specialist and seasonal AIS Technician). Karen Andersen was hired as the AIS Specialist and an AIS Technician will be hired in Spring 2016. Activities throughout the summer included sea lamprey net checks, assisting with fisheries program assessments, monitoring for AIS in Lake Superior and local rivers, AIS e-DNA sample collections for Michigan State University, Monitoring Eurasian water milfoil, manual control of purple loosestrife, implementing early detection rapid response protocols within the NRD, and outreach and education whenever possible. The NRD AIS staff intends to work with the USFWS this winter to plan AIS monitoring activities for 2016. For additional information on aquatic invasive species in our area or to view the KBIC Aquatic Invasive Species Management Plan, check out our website at <http://nrd.kbic-nsn.gov/> or contact Karen Andersen (kanderson@kbic-nsn.gov or 906-524-5757 ext. 25).



AIS Specialist Karen Andersen controlling purple loosestrife at the head of L'Anse Bay



NRD Staff checking the sea lamprey net on the Silver River

Sea Lamprey Control

Since the late 1980's the KBIC NRD has been contributing sea lamprey wounding data to the Great Lakes Fishery Commission and Lake Superior Technical Committee. Other Tribal, State, and Federal agencies also contribute similar data for the Lake Superior Basin, providing managers a more holistic view of the extent of damage inflicted by sea lamprey on various fish species and populations.

In addition, KBIC NRD has been involved in adult sea lamprey population estimates since 2007 in collaboration with USFWS. Adult sea lamprey traps were deployed at two locations this past Summer; Silver River (Baraga County) and Misery River (Houghton County). In 2015, 16 adult sea lamprey were captured on the Silver (down from 105 in 2014) and 39 were captured on the Misery (down from 100 in 2014). According to an article published in [efforts to control sea lamprey populations across the Great Lakes has been successful](#). Sea lamprey numbers are at a 20 year low.



Sea lamprey wound on Lake Trout from Lake Superior caught in 2015

Sea Lamprey Continued

NRD staff had the opportunity to tag along with the USFWS when they were in Baraga County treating several river systems with TFM (3-trifluoromethyl-4-nitrophenol, also known as lampricide). TFM targets larval sea lamprey, and is also deadly to adult lamprey. It is not effective against their eggs. Properly administering TFM takes a team of USFWS many hours over the course of several days. The site is monitored days before treatment and while the TFM is released into the system water samples are taken at designated sites along the waterway to make sure the concentration of the TFM in the water is at an appropriate level. If levels are too high or too low, adjustments are made immediately or the entire operation is shut down until the issue is resolved. A USFWS employee is on duty controlling the amount of TFM released into the system at all times during the treatment period (rotating shifts over an 8-12 hour period).



Larval sea lamprey killed by TFM

Clean Boats, Clean Waters

For the second year the USFS provided funding for KBIC to provide boat washing services at boat landings across Baraga, Houghton and Keweenaw Counties. This summer our boat washer/AIS educator made contact with 250 people, washed 95 boats, and participated a Landing Blitz during Aquatic Invasive Species Awareness Week. To our knowledge, KBIC is the only agency in the tri-county region offering this service to boaters.



Just a reminder in the State of Michigan:

Required Actions – It's the Law in Michigan!

- **Remove** aquatic plants from boats, boating equipment and boat trailers before launching or placing in the water.
- **Drain** live wells, bilges and all water from boats before leaving the access site.
- **Dispose** of unused bait in the trash. Do not release bait into the water.

Don't transfer fish to water bodies other than where they were caught.

Recommended Actions – Protect Our Waters!

- **Inspect and remove** plants and mud from boats, trailers and gear and dry equipment before leaving the access area. Dispose of the material in a trash receptacle or otherwise away from the water body, if possible.
- **Wash** boats, trailers and gear before leaving the access area if possible, or at a nearby car wash or at home.
- **Dry** boats and equipment for at least 5 days before launching into a different body of water.
- **Disinfect** live wells, bilges and gear with a bleach solution (1/2 cup bleach to 5 gallons of water).

<http://www.michigan.gov/dnr/0,4570,7-153--357603--,00.html>



AIS educator and boat washer Jacob Haapaapuro cleaning a boat at Chassell Park

Youth Conservation Crew

KBIC and the Superior Watershed Partnership (SWP) teamed up for the seventh year in a row to offer a Youth Conservation Corps (YCC) for tribal youth. This year's crew was supervised by Tonya Swenor, Emily Goodman, and Nathan Simpson from SWP. YCC activities included (but were not limited to) beach clean-ups, invasive species control, composting, native plantings at Sand Point, lamprey monitoring, and fishing derby set-up and take-down. We hope to continue to offer this program every year to provide opportunities for tribal youth to get outdoors and learn about natural resources and environmental stewardship.



YCC members building compost bins at the Brewery Road community garden

Annual Kid's Fishing Derby

This year marked the 13th annual KBIC Kid's Fishing Derby at Sand Point near the Lighthouse Pond in Baraga. A total of 388 kids were registered for the day, slightly up from 2014. Over 100 people volunteered during the Derby including local sportsman's club members, state, federal and tribal agency employees, community members, KBIC summer youth programs, and many more.

Activities include the pond fishing contest, inner tube casting, Velcro fishing, big trout tank fishing, moon walks, and other small games. Food and beverages are free for everyone in attendance. The Lighthouse Pond is stocked with bluegill, rock bass, small mouth bass, pumpkinseed sunfish, and yellow perch. Prizes were given away for the most fish, biggest fish, and catching a tagged fish. No kid left the Derby empty handed. Each registered fisher kid received a new fishing pole.

This year the Derby was held in honor of John and Patrick (aka Hummer) LeFernier. Jacob Haapapuro, an engineering student at Michigan Technological University was the recipient of the *Todd Warner Legacy Award*, which was established in 2013.



Hayride fun at the Derby



Successful fisher kids

Brewery Road Site

People's Garden

This year marked another successful year at the People's Garden located on Brewery Road in L'Anse. The Community Garden area was filled with individual and family vegetable garden plots growing everything from tomatoes and potatoes to pumpkins and peppers. Most plot holders were repeats from last year, but there were a few new-comers that had very successful growing seasons. The area was tilled prior to planting and aged manure was provided to gardeners for use while planting. While the garden area is not certified organic, we encourage use of organic, non-GMO seeds and discourage use of commercial pesticides and fertilizers. This season a larger compost bin was placed outside the community garden area along the fence to make it accessible for our gardeners. This new compost bin is a change in design from other years. This is a three bin system where fresh organic matter is added to the starter bin, where it will be rolled over as it begins to break down. Lastly, there is now electricity at the Brewery Road site! We no longer need to run a generator to provide water at the site.

Hoop House and Fruit Orchard

Work on the Hoop House was completed in 2015. The NRD plants program is now making plans to establish various native berry species and other plant species in the hoop house in an

attempt to extend the growing season and provide access to certain plants/foods earlier in the spring and later into the fall.

Beyond the Hoop House, within a newly constructed fence, you will now find the beginnings of a fruit tree orchard. This year the NRD planted 64 trees in the fruit orchard area. Species include varieties of apples, pears, peaches, nuts, cherries and serviceberry trees. Future plans are to establish a seed orchard for native/medicinal plant species as well as pollinator gardens throughout the site.

Bees at the Garden

This year marked the first attempt to establish bee hives at the Brewery Road site. In collaboration with the PEAR program through Keweenaw Bay Ojibwa Community College, 10 bee hives were placed on the outside of the fence near the fruit tree orchard. The first batch of bees, established in late April, were Carolinian honey bees. The second batch, established in late May, were Minnesota Hygienic strain- Italians. Of the 10 hives established, 5 remain and the PEAR program will attempt to overwinter these colonies. It is hoped that with sufficient honey stores and no disease issues, 1-2 of the 5 colonies will be able to make it through winter.



A delicious cucumber grown by one of the gardeners



Natural Resources Technician, Dave Kauppila, planting fruit trees at Brewery Road

Monarch Workshop

In July 2015 the University of Minnesota's *Monarchs in the Classroom* program and the US Forest Service hosted the 6th annual University of Minnesota North American Monarch Institute (NAMI) for teachers. NAMI was held at the Urban Ecology Center in Menominee Valley Milwaukee, Wisconsin and several NRD plant technicians had the opportunity to attend the Institute. The event included three days of field and laboratory work on the topics of monarch biology, ecology, and conservation. The institute provided the tools and expertise necessary to lead students in the science and conservation of monarchs.

The monarch observation stations included identifying, planting, safe handling, and locating milkweed. Monarchs cannot survive without milkweed. A huge emphasis was placed on

planting milkweed to support monarch populations on their migration. Milkweed also provides nectar resources to a diverse population of bees and other butterflies. In our region milkweed species include common milkweed, swamp milkweed, butterflyweed, whorled milkweed, and poke milkweed.

At the institute NRD staff received grade specific materials to educate students as young as headstart up to 12th grade about monarch butterflies and their habitat. Monarch education was provided to the KBIC youth group and to children as an activity during the NRD hosted Environmental Forum. The educational opportunities for our community will help promote awareness and motivation to help the staggering monarch population.



Monarch butterfly



Participants in the monarch workshop, including NRD staff

Celebrate the UP!

The Upper Peninsula Environmental Coalition (UPEC) will hold its annual *Celebrate the UP!* event at the Baraga Campus of Keweenaw Bay Ojibwa Community College on Friday and Saturday, March 18-19. The event is free and open to the public.

At 7PM Friday the Michael Loukinen film *Ojibwe Drum Songs* will be shown. Some KBIC members are featured.

On Saturday, after an opening ceremony, twelve presentations (four time slots, three presentations per time slot) will highlight the UP's unique culture, special natural places, and recreational opportunities. Some will have Native American themes. Following that, the keynote presentation will feature Trevor Thomas, a blind hiker who has hiked nearly 20,000 miles on some of this nation's most difficult and spectacular trails. Many of those miles were hiked alone, with just his service dog. This promises to be a very inspirational talk. Following the talk is a reception, with refreshments and the opportunity to meet many of the presenters.

As the date approaches, details will be available at www.upenvironment.org.