



# Keweenaw Bay Indian Community Natural Resources Department Annual Report 2011



The KBIC Natural Resources Department (KBIC NRD) administers natural resource programs for the Keweenaw Bay Indian Community on the L'Anse, Marquette, and Ontonagon reservations as well as the western Upper Peninsula of Michigan (1842 ceded territory). These programs encompass a variety of activities, including: Lake Superior fishery assessments, Baraga county stream assessments, surface water and ground water monitoring, air and radon studies, brownfields program, wildlife and wetland management, environmental assessments, monitoring of metallic mining and exploration activity in the Lake Superior basin, participation in the protection and enhancement of Lake Superior, and fish stocking from our hatchery. The department facilitates projects through grants from the Bureau of Indian Affairs, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S. Department of Agriculture. The Tribal Council funds hatchery operations.

Fish and wildlife staff began working in 1988 and an environmental specialist was hired in 1992. The Department was organized in 1999 and brought environmental, fish and wildlife programs under one department. The departmental staff has grown over the years to the present level of sixteen full-time and one part time employee. Our staff works closely with the KBIC Natural Resources Committee. Our department is also guided by a 10 year Integrated Resource Management Plan adopted by the Tribal Council and Bureau of Indian Affairs in 2003.

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## Funding Sources

- ◆ Keweenaw Bay Indian Community (KBIC)
- ◆ U.S. Environmental Protection Agency (USEPA)
- ◆ U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS)
- ◆ Bureau of Indian Affairs (BIA)
- ◆ Administration for Native Americans (ANA)
- ◆ U.S. Fish & Wildlife Service (USFWS)
- ◆ U.S. Forest Service (USFS)



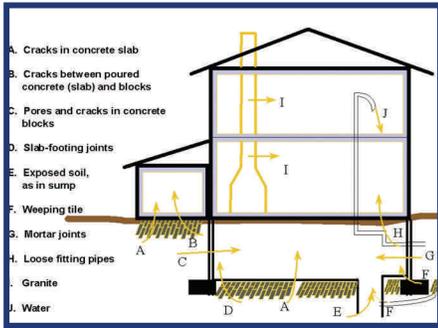
## Partners & Collaborators

- ◆ Lac Vieux Desert Band of Chippewa (LVD)
- ◆ Ottawa National Forest (ONF)
- ◆ Great Lakes Indian Fish and Wildlife Commission (GLIFWC)
- ◆ Bureau of Indian Affairs (BIA)
- ◆ U.S. Department of Agriculture-Natural Resource Conservation Service
- ◆ Natural Features Inventory
- ◆ Ferris State University
- ◆ Cedar Tree Institute
- ◆ Superior Watershed Partnership (SWP)
- ◆ Baraga County Cubscouts
- ◆ Baraga County Conservation District
- ◆ U.S. Forest Service (USFS)
- ◆ U.S. Fish & Wildlife Service (USFWS)
- ◆ U.S. Environmental Protection Agency (EPA)
- ◆ Michigan Department of Natural Resources (MDNR)
- ◆ Cooperative Weed Management
- ◆ Chippewa Ottawa Resource Authority (CORA)
- ◆ Michigan Technological University (MTU)





**Tribal Waste Response Assistance Program  
National Tribal Steering Committee, Las  
Vegas, Nevada**



**How radon can get into your home**



**Example of a waste transfer station**

## Emergency Management

As part of the Tribal Response Program, the Environmental Response Specialist has been involved with emergency management activities. KBIC is coordinating with the Baraga County Local Emergency Planning Commission to update the Emergency Operations Plan. The Environmental Response Specialist is also involved in quarterly conference calls with Region 5's Tribal Emergency Preparedness and Homeland Security group. In addition, the Response Specialist is involved with the joint Eastern Sector Maritime Security Committee and Upper Peninsula Port Area Committee meetings and exercises.

## Environmentally Preferable Purchasing Program

KBIC Tribal Council passed a resolution to support the establishment of policies and procedures that result in environmentally respectful purchasing decisions. The KBIC NRD's Environmental Specialist and Environmental Response Program Specialist are coordinating and developing the program. The initial step is to develop a pilot project to implement green cleaners and practices. Other focus areas include paper & office supplies; office equipment & furniture; building materials & fixtures; food services; meetings & conferences; landscaping; and fleet management.

## Radon Monitoring

KBIC NRD staff conducted monitoring of indoor radon gas concentrations as requested at the KBIC Natural Resources Fish Hatchery buildings, and residential homes. A few ways that radon can enter a home or building is through cracks in floors and walls, openings around sump pumps and drains, or gaps around utility penetrations (pipes and wires). No elevated levels in residential homes were detected in 2011.

## Tribal Waste Response and Assistance Program

The Institute for Tribal Environmental Professional (ITEP) established a national tribal steering committee in order to assist with the work of the Tribal Waste and Response Assistance Program (TWRAP) and to ensure that tribal needs and priorities are addressed by this program's activities. KBNRD Response Program Specialist Katherine Kruse was chosen as one of the representatives for the committee and is currently serving as Vice-chair.

## Transfer Station

KBIC received funding in 2010 from the Indian Health Service (IHS) for the construction and development of a solid waste management facility or transfer station. The proposed transfer station will accept residential solid waste from Baraga County and will have the capacity for future expansion, including recycling, composting, and storage for bulky waste and household hazardous waste (HHW). The transfer station will be located within the Ojibwa Industrial Park in Baraga, MI. The KBIC NRD took part in planning and design of the facility throughout 2011. While construction was initially set to begin in 2011, higher than anticipated construction costs delayed the project. Additional funding and alternative designs are being considered.



## Great Lakes Restoration Initiative

KBIC NRD received funding from the Environmental Protection Agency's (EPA) Great Lakes Restoration Initiative (GLRI) to develop a sustainable hazardous waste collection program to serve tribal and non-tribal community members in Baraga County to prevent toxic contaminants from entering into Lake Superior. To date, KBIC has hosted two Household Hazardous and Electronic Waste Collection events, one "Milk Run" and one tire collection event for Baraga County. Total waste for the two collection events was 29,636 lbs, including 19 lbs of mercury. Over 31,000 lbs of waste were collected during the Milk Run, including 261 computer monitors and over 11,000 lbs of paint and related materials. Over 200 tires were collected during the event in November. Similar collection events are planned for 2012 and 2013.

## Brownfields

KBIC NRD staff completed a draft Phase I Environmental Site Assessment report in May 2011 concluding that a property known as Beartown Road #6 did not contain Recognized Environmental Conditions (RECs) therefore sampling and further investigation was not necessary. KBIC NRD staff also coordinated and/or performed investigations into three brownfield properties on the KBIC L'Anse Reservation in 2011: US-41 Draper, Power Dam Road and Beartown Road #2. Coleman Engineering was contracted to conduct soil borings, installation of temporary wells and groundwater sampling with assistance from KBIC NRD staff at US-41 Draper and Power Dam Road properties in May 2011. Soil samples were collected from an area of open dumping adjacent to Little Carp Creek on a property known as Beartown Rd. #2 in August 2011. Additional brownfield activities centered on: securing a contractor to perform data validation and assessment of brownfield property laboratory analytical data and Phase II reporting.

## Air Quality Program Funding Proposal

In 2011, the KBIC NRD prepared and submitted a proposal for funding to the Environmental Protection Agency (EPA) for the development of an air quality program. Currently, KBIC has very limited capacity to address air quality issues. The funding proposal included a full-time staff position, the completion of a basic air quality assessment, as well as an emissions inventory. An emissions inventory calculates the amount of pollutants released to the atmosphere and is vital to understanding and addressing air quality issues. Notification of award is anticipated in early 2012.

## Contaminated Soil Clean-up on Indian Cemetery Road

In 2010, KBIC NRD staff responded to a call about a front-end loader that had overturned at the sand pit on Indian Cemetery Road. The machine was leaking fuel, coolant, hydraulic oil and transmission fluid into the soil. KBIC Tribal Response Program responded to the situation. Testing after the initial excavation indicated that the soil was still contaminated and a second excavation took place in December 2010. Following completion of the second excavation soil testing indicated that contaminants had been cleaned up and remaining soil was clean. A total 30 tons of contaminated soil were excavated and recently disposed of at the K & W Landfill.



Waste collected during the June collection event



Pile of tires collected during the fall collection event



Contaminated soil clean-up



**KBIC NRD staff with the anemometer in Zeba**

## **EPA Tribal Solid Waste Peer Match**

In 2010, KBIC was invited to participate in an EPA pilot peer match project. The pilot project was organized by EPA Region 5 solid waste staff to ‘match’ or pair tribes in need of solid waste technical assistance, with experienced tribes who could provide the assistance. KBIC was ‘matched’ with the Bad River and Fond du Lac Bands of Lake Superior Chippewa with the intentions of receiving technical assistance in the development of a solid waste transfer station. The project began in late 2010 and continued throughout 2011. Each tribe was able to receive a small amount of funding to participate in the project. With EPA coordination and facilitation, information and technical assistance has been exchanged between the tribes through various conference calls. Site visits to Bad River and Fond du Lac solid waste facilities were also arranged in 2011 and proved to be a very valuable source of information. KBIC staff also gave a presentation on the project at the 2011 Tribal Lands Forum.

## **Renewable Energy: Wind Tower Monitoring**

Monitoring of KBIC’s wind resource at the second wind study site (Buffalo Fields, Zeba) continued in 2011. Gaps in the data were found in 2010 Data plugs store the wind data collected by the anemometer and this information is used to assess whether an electrical-generating wind turbine is feasible. The first study site was the KBIC NRD Fish Hatchery to assess the feasibility of a wind turbine to offset the large electrical demand. Results from the study were inconclusive as to whether a wind turbine was feasible.



**MTEG members touring the KBIC walleye ponds**

## **Michigan Tribal Environmental Group (MTEG) Meeting**

KBIC hosted the Michigan Tribal Environmental Group (MTEG) summer meeting at the Keweenaw Bay Ojibwa Community College. The purpose of MTEG is to serve as a forum for tribal environmental and (to a lesser extent) natural resource staff to share information and knowledge in the interest of protecting tribal resources. Employees from all 12 Michigan tribes were in attendance in addition to representatives from the Inter-Tribal Council of Michigan, and the EPA Tribal Liaison for Michigan. Several KBIC NRD staff presented information on mining, uranium testing, and the Sand Point restoration project. Other topics of discussion included wild rice, air quality monitoring programs, and tribal environmental health issues. The group toured the Sand Point restoration area, KBIC walleye ponds, Huron Bay wild rice beds, and the KBIC fish hatchery.



**Tank removal at Former Pines Convenience Center**

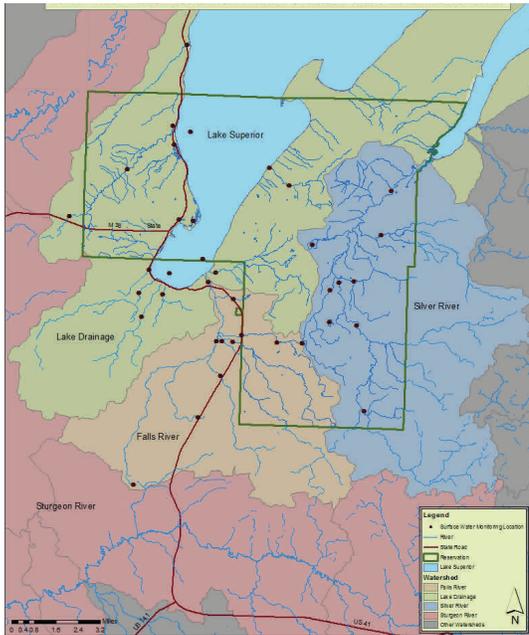
## **Former Pines Convenience Center Leaking Underground Storage Tank (LUST) Site**

In 2002 a release from the underground storage tank (UST) at the KBIC Former Pines Convenience Center was detected when the tank was removed from the site and contaminated groundwater was discovered. Groundwater monitoring at this site occurred from 2004 until 2010. In 2010, sampling results showed that contamination levels were below applicable cleanup levels and are expected to continue to decrease. Discussion began with the Environmental Protection Agency (EPA) regarding permanent closure of the site and in 2011, KBIC received a formal “No Further Action” determination from the EPA Groundwater monitoring at the site has ceased.



## Baseline Data Collection

The surface waters within and adjacent to the L'Anse Reservation are critical resources for both human and environmental health. In 2011, Water Resources Staff sampled 28 sites for 28 parameters as selected in our two year cycle for water quality. The sites were sampled in each of the four quarters during the fiscal year. This practice has been ongoing since baseline sampling was completed in 2005.



Falls River



Water resources technician Kit Laux collecting data

## Residential Well Sampling

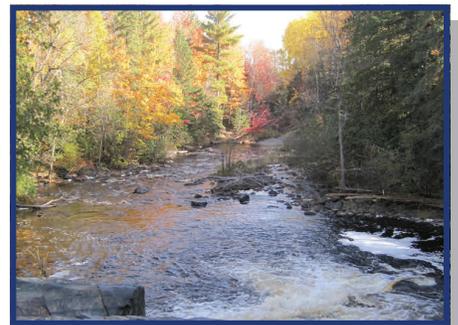
KBIC evaluates groundwater for contamination by nitrate, coliform, and other contaminants. In 2011 residential homes were sampled on the Reservation on an as needed basis or at the request of the home owner. When collection of groundwater related information is complete, data will be used to create maps to identify any groundwater quality problems.

## Uranium Survey

Uranium is a naturally occurring metal that is widespread in nature that has the potential to cause kidney damage or cancer if you are exposed to high levels over a period of time. KBIC has worked with the Indian Health Service (IHS) to complete a study of uranium levels in water from residential wells serving tribal member homes throughout the KBIC service area. Throughout the study 90 wells were tested.

## Abandoned Well Survey

Unused wells pose a risk to drinking water sources by providing a potential pathway for contaminants to be released directly to groundwater. In 2004 we received funding from the Bureau of Indian Affairs Environmental Management program to abandon unused tribal member wells on the L'Anse Reservation. To date we have 26 abandoned wells on reservation land that are no longer in use.



Silver River



Recirculating tanks in main hatchery building



Hatchery lake trout ready to be stocked into local waters



Lake sturgeon caught and released during assessment efforts in Keweenaw Bay

### Hatchery Upgrades

The hatchery facility is currently in the process of an equipment upgrade. The purpose of the upgrade is to reduce water use through recycling, reduce groundwater pumping, improve water quality and systems monitoring, and improve our alarm and backup systems. The first part of the systems upgrade was actually completed in 2010 a new backup generator transfer switch was installed. Reducing water use by 25% could reduce the amount of groundwater pumped by over 10 million gallons per year. Work in 2011 included, installation of a common water head tank and fresh water lines, tank layout and purchases, and design layout and purchasing recirculating system equipment.

### Rearing & Stocking

Approximately 78,282 lake trout, 132,035 stream brook trout, 9,029 coaster brook trout, 347,870 walleye fry and fingerlings, and 4,823,500 walleye eggs were reared and stocked in 2011. Fish and eggs are stocked into Lake Superior, Portage Lake and various Western U.P. rivers and streams on and off the Reservation.

### Lake Trout Assessment

Spring, summer and fall lake trout surveys were conducted throughout Keweenaw Bay and western Lake Superior following protocols established by GLIFWC and the Lake Superior Technical Committee. The main objective of the spring survey was to assess over winter survival of pre-recruitment lake trout. Results for 2011 surveys indicate a stable trend in abundance of this age class of lake trout. Summer surveys assessed juvenile lake trout abundance and indicate a possible decline in abundance. Fall surveys focus on spawning lake trout abundance on local reefs. Results indicate stable abundance on the reefs. During the fall surveys, eggs were collected from 14 lake trout and were fertilized and returned to the hatchery for incubation.

### Brook Trout Assessment

Brook trout abundance surveys were conducted on more than four creeks and all tributaries of the Fall River (both on and off the Reservation). Egg collections were conducted in cooperation with Ottawa National Forest in the fall at tributaries of the Jumbo River. Eggs were returned for incubation and hatching of brook trout to be added to future Brood Lot Populations for genetic diversification.

### Lake Sturgeon Research

KBIC NRD successfully captured, tagged and released over 23 juvenile lake sturgeon in Keweenaw Bay in the spring and late summer of 2011. Primary objectives of this work are to tag and recapture as many lake sturgeon as possible as recaptures are vital in increasing precision in population estimates for this imperiled species. KBIC NRD also worked cooperatively with USFWS, MIDNR, WIDNR, CORA, Bad River, Red Cliff, Ontario Ministry of Fisheries, and GLIFWC to develop and implement a Lakewide Standardized Lake Sturgeon Survey. KBNRD also expanded survey and data collection efforts at South Portage Entry and the Ontonagon River.



## Disease Surveillance

KBIC submits fish samples for screening for the exotic virus Viral Hemorrhagic Septicemia (VHS). VHS has been detected in all of the Great Lakes, including Lake Superior as of 2010. Passive collection of information from the public regarding observations of potentially diseased fish (as evidenced by fish kills or fish exhibiting irregular behavior or clinical signs of sickness) is also done. This disease screening is considered important to many agencies managing the Lake Superior fishery, and KBNRD continues to assist in disease screening efforts throughout the area.

## Sea Lamprey Control

Since 2006-2007, the USFWS and GLIFWC have subcontracted KBIC to maintain and collect catch data from an adult sea lamprey trap on the Silver River Watershed. By assessing adult sea lamprey populations in the Silver River, estimates of potential larval lamprey production for the system can be generated, which in turn gives sea lamprey control experts vital information on how to most effectively eradicate larval lamprey before they can return to Lake Superior to attack more fish. The trap was checked twice a week from April 24-June 25. Five adult sea lamprey were marked and released from the Silver River trap. The Silver River Watershed trap is one of seventeen traps in the Lake Superior basin. Total catch for the seventeen traps in 2011 was 3,485 adult sea lamprey.

## Commercial Fisheries

In 2011 there were 17 active tribally licensed commercial fishermen. License year runs from May 1st of 2011 through April 20th, 2012. Total reported commercial harvest for the 2011 calendar year was 48,663lbs of lean lake trout, 58,884lbs of white fish, 1,593lbs of siscowet and 2,947lbs of herring. KBNRD staff collects monthly catch reports from licensed commercial fishers, and monitors commercial harvest throughout the year. Collected data is compiled into existing databases and forwarded to GLIFWC Commission for use in regional interagency fishery management. KBNRD communicates with GLIFWC regarding commercial harvest monitoring activities.



Checking the adult sea lamprey trap on the Silver River



Blue KBIC floy tag used for identification of research fish captured and released back into the wild



KBIC NRD staff electroshocking Jumbo River



**Bobcat caught on KBIC remote camera**

### **Wetland Wildlife & Habitat Inventory**

The wetland portion of the wildlife and habitat inventory was finalized in summer 2011. Over 1,500 acres encompassing 28 wetland complexes were inventoried on the reservation. Wildlife inventory methods included remote camera surveys with specific lures and mammal track/sign data collection throughout the reservation.

Seventeen species were targeted and 15 of the 17 were detected with the cameras and track/sign surveys in addition to several non-target species. Approximately 350 plant species were identified from 207 vegetation plots sampled. A total 135 species of birds were detected from 132 site visits. Wildlife habitat data including volume of coarse woody debris, snags per acre, percent canopy cover, and basal area of trees are also being collected at the 250 plots within the sites.

### **Upland/Riparian Wildlife & Habitat Inventory**

Fifty-one study sites were established with remote cameras on the Keweenaw Bay Indian Reservation between January 2010 and November 2011 in upland and riparian areas. Preliminary results show that a total 23 wildlife species were detected of which 13 are considered “target” carnivore and furbearer species that were the focus of the study. Study sites were also surveyed for plant and habitat characteristics around each camera location. Approximately 228 plant species and 30 tree and/or shrub species were identified within the study sites during the two year study period.

Data from this study is currently being summarized to be presented to the community through an updated KBIC Natural Resource Department website and community meetings beginning in the fall of 2012. Information gathered during this wildlife inventory will be analyzed and results will be considered as we develop a KBIC Tribal Wildlife Management Plan for the KBIC L’Anse Indian Reservation.



**Volunteer Valoree Gagnon securing a remote camera to a tree**

### **Endangered Species**

Funds were received by KBNRD for data collection pertaining to endangered species on the reservation and development of a Tribal Wolf Management plan. In 2011, KBNRD hired temporary staff during winter to collect wolf track field data. Remote cameras were also deployed to detect wolves that inhabit the Reservation. A KBIC Wolf Management Plan is scheduled for completion by the end of 2012.

### **Circle of Flight Waterfowl Nest Boxes**

Each winter waterfowl nest boxes throughout the reservation are checked for signs of use by wood ducks and other wildlife. Annual checks of the boxes have revealed use by wood ducks (~20%), flickers, wasps, other waterfowl (mergansers), and small mammals.



**Wolf caught on KBIC remote camera**

### Circle of Flight Waterfowl Surveys

In 2011, waterfowl surveys took place weekly for 13 consecutive weeks at the Head of Keweenaw Bay, 12 weeks at Mud Lakes and Sand Point, and 9 weeks at Huron Bay. A total of 2,315 waterfowl of 19 different species were observed during the 13 week surveillance period. Consistent with previous years, the greatest numbers of waterfowl seen in 2011 were at Keweenaw Bay and included species such as mallards, Canada geese, common mergansers, and green wing teal, and trumpeter swans. Some uncommon visitors that were observed this year were some horned grebes and ruddy ducks on Keweenaw Bay.

### Annual Midwest Crane Count

Every year KBIC NRD employees in cooperation with community volunteers participates in the Baraga County crane count. In 2011, 22 counters surveyed 10 sites in Baraga County and counted a total of 34 cranes (11 breeding pairs). Three prospective sites were surveyed the day after the official count for possible inclusion as index sites in the future.

### Frog & Toad Surveys

Surveys for frogs and toads are conducted during the breeding period which usually spans from April through June. Species detected in 2011 include spring peeper, wood frog, Cope's gray treefrog, leopard frog, green frog, and American toad. Survey areas include Menge Creek, Falls River, Sand Point sloughs, Pequaming bog, Mud Lakes, and Indian Cemetery road.

### Turtle & Salamander Surveys

With the help of the summer Youth Conservation Crew (YCC), KBNRD staff initiated turtle and salamander surveys at several locations throughout the Reservation. The surveys were prompted by the Lake Superior year of intensive monitoring under the Lake Superior Lakewide Management Plan. The year of monitoring included surveys of reptiles and amphibians throughout the Lake Superior Basin. KBIC NRD plans to establish turtle and salamander monitoring locations to be surveyed annual by the YCC.

### Disease Surveillance

KBIC NRD is working with GLIFWC, Wisconsin and Michigan Department of Natural Resources and the BIA to cooperatively formulate Chronic Wasting Disease (CWD) management plans for our area and educate the public. KBNRD collects deer heads for CWD testing each year. A total of 115 deer heads were collected during the 2011 hunting season. A total 277 deer have been tested for CWD between 2007 and 2010 hunting seasons with all results being negative for the disease. Specimens were submitted to a diagnostic Veterinary lab in February 2012 for the 115 heads collected in 2011.



Sandhill crane pair observed during 2011 crane count



Red-backed salamander observed during summer survey



KBIC NRD, GLIFWC, and USDA-APHIS staff removing lymph nodes from deer heads for CWD testing back in 2008



Plants in greenhouse ready for transplanting



One-acre native plant garden at Sand Point



KBIC NRD Plant Technician using chemicals to control Japanese barberry

### Greenhouse

In 2010, a tribal green house was built as part of The Zaagkii Project, a cooperative pollinator project with The US Forest Service and The Cedar Tree Institute. In 2011 close to 30 species were grown with additional native seeds were collected in the spring and fall. Species included tobacco, sweet grass, white sage, big bluestem, black-eyed susan, wild columbine, ginger, and yellow aven.

### Sand Point Restoration

Sand Point is a brownfield site, impacted by historic copper ore processing waste. The Sand Point restoration project, which began in 2006 with placement of a soil cover over stamp sands, is moving ahead with GLRI funds received in 2010. New work in 2011 included addition of more soil, gardens, soil mounds, and native plantings. Soil mounds and native seed plots have been installed. A one acre demonstration garden has been planted with approximately 48 species of native herbaceous plants and seven different species of trees and shrubs. New plantings have been irrigated. A fall planting with cover crop was completed at the end of September. Additional work will begin in spring 2012.

### Wild Rice

KBIC NRD has planted thousands of pounds of wild rice at more than 13 sites within Baraga County. Huron Bay has a possible 35 acres of wetlands with favorable conditions for wild rice, the largest site bordering the reservation. In 2011 there weren't as many plants but we had unusual seiche activity which may have uprooted many of the plants. This continues to be a promising area which we will plant in 2012.

### Ash Seed Collection

Ash has cultural and historical significance for the Anishinaabe. As part of the preservation of ash trees for future generations, KBIC NRD is part of a cooperative effort with BIA Forestry and USDA Natural Resources Conservation Service for collecting ash seed. In 2011 seed was collected from 49 trees. An agreement with the USDA Agricultural Research Service in Colorado provides for long term cold-storage of ash seed collected from KBIC lands.

### Invasive Plant Species

In 2011 staff continued with monitoring, locating, and working on controlling non-native invasive plant species on the reservation. In summer and into the fall, attention was focused on four invasive species: purple loosestrife, Japanese barberry, spotted knapweed and Eurasian watermilfoil. Actions are being taken to control these species on the reservation including cutting, pulling, and in some case use of herbicides (Japanese barberry). KBIC collaborates with ~9 other agencies/groups in an effort to protect our natural resources from invasive species. U.S. Forest Service, Great Lakes Indian Fish and Wildlife Commission, Midwest Invasive Plant Network (MIPN), and Baraga Conservation District are a few of our partner organizations. Other species of concern include exotic honeysuckle, marsh thistle, giant knotweed and common and glossy buckthorn.



## Great Lakes Restoration Initiative Capacity Funding

The Lake Superior Program Coordinator was hired to fill several gaps in capacity and is providing active and regular participation in the Binational Program and the Lakewide Management Plan (LaMP) process, additional outreach and education for the community and for tribal youth, helping develop a plan to address issues of Climate Change on the Reservation, and link KBIC activities in natural resource management to related activities throughout the basin. Some of the activities completed by the new Lake Superior Program Coordinator position include:

- Lake Superior Day Beach Clean-up
- Development of KBIC Natural Resources Department Quarterly Newsletter, *Babaamaajimowin Akiing*
- Participation in Binational Program activities through the Superior Work Group and subcommittees
- Press releases and newsletter articles to keep the community informed of KBIC NRD activities and events
- Creation of informational brochures for invasive plant species on the reservation
- Attending local, regional, and international conferences, meetings and trainings

Since 2004 mineral exploration activities have been increasing within our ceded territories and on our L'Anse Reservation. Mining and related activities have the potential to significantly impact our treaty rights, our treaty reserved resources, area ecosystems, and the health and welfare of our community and future generations.

Before Great Lakes Restoration Initiative (GLRI) program assistance was available, KBIC lacked adequate capacity to comprehensively track mining exploration and potential mining activity within our ceded territory and within our Reservation boundaries, compile technical and scientific data, outreach to the community, and assist KBIC Government in decision making processes related to mining. In June 2011 a Mining Technical Assistant was hired to help fill these gaps. Some of the activities of the Mining Technical Assistant include:

- Participation in mining related working groups and conference calls
- Assisting KBIC in review of mining related permit applications
- Collecting and compiling information related to mining on the Reservation and within the ceded territory
- Organizing outreach/education opportunities including a monthly mining film series
- Attending local, regional, national and international conferences, meetings and trainings



Lake Superior



Ash seed collection



Acid mine drainage demonstration with KBIC NRD mining technical assistant, Jessica Koski



2011 YCC members and mentors

## Tours

KBIC NRD provides tours to many groups throughout the year. Some of these groups include MTU staff/students, local grade school classes, visiting college students and instructors, federal, state and NGO agency employees, the Michigan Tribal Environmental Group, Youth Conservation Crew, community members, and many others. Tours can be scheduled at any time, but may be dependent on season and happenings around the hatchery buildings.

## Youth Conservation Crew

In the summer of 2011 we worked with Superior Watershed Partnership to provide opportunities for tribal youth by coordinating summer activities for a tribal youth conservation crew (YCC). YCC activities included hatchery cleaning and maintenance, native plantings and gardening, beach and road cleanup projects, habitat rehabilitation, invasive species control, lamprey assessment, fish stocking, stream and fishery assessments, and turtle and salamander surveys.



Fisher kid with his big catch of the day

## Annual Kid's Fishing Derby

For the past eight years the KBIC NRD has hosted the KBIC Kid's Fishing Derby at Sand Point near the Lighthouse Pond in Baraga. Activities include pond fishing contest, inner tube casting, Velcro fishing, big trout tank fishing, moon walks, and other small games. Prizes are given away for the most fish, biggest fish, and catching a tagged fish.

## Annual Environmental Fair

The KBIC NRD held the second annual Environmental Fair to celebrate Earth Day on April 22nd. The event provided environmental education to area schools and community members. Attending the event were approximately 300 kids from L'Anse, Sacred Heart, Baraga, and Arvon schools and over 45 community members.

## Volunteers

There are a number of volunteer opportunities available throughout the year with the KBIC NRD. These opportunities include greenhouse planting and transplanting to Sand Point, fish tagging, wildlife camera checks, invasive plant control, and KBIC sponsored events such as the Kid's Fishing Derby and Lake Superior Day beach clean-up. In 2011 we had two outstanding volunteers: Valorww Gagnon and Shelly Danielson. In addition to taking care of their families, Valerie and Shelly also juggle school, jobs, and other personal responsibilities these women still found time to put in hundreds of hours of volunteer time with the KBNRD in 2011. We thank Valoree and Shelly and all of our volunteers for giving so generously of their time. We hope others will consider volunteering in the future.



Students at the 2011 Environmental Fair



## Tree Give-away

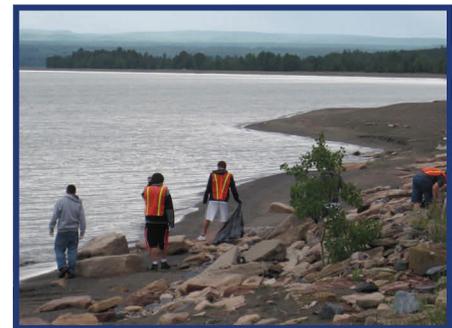
The 10th annual tree giveaway was held by lottery in 2011. There were more than 100 plants for the give-away including blueberries, asparagus, strawberries, roses, lilacs, raspberry, blackberry, strawberry, grapes, rhubarb, tomatoes, peppers, herbs, apple and pear trees.

## Lake Superior Day

The KBIC NRD organized a beach cleanup on July 15th in celebration of Lake Superior Day. About 30 people including NRD staff, tribal youth crews, and area community members cleaned approximately 5 miles of Lake Superior beaches from Assinins/Sand Point all the way around the head of the Bay and up the eastern shoreline to Pequaming. An estimated 40 bags of trash were collected off the beaches and properly disposed of. Lake Superior Day, which was created in the early 1990's by the Binational Forum, is officially the third Sunday in July. KBIC will continue to hold annual events in honor of Lake Superior Day.



**KBIC NRD staff teaching local youth about invasive species**



**Volunteers collecting trash along the Lake Superior shore for Lake Superior Day**



**YCC planting at Sand Point**



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