

Tribal Air Resources Journal

*Accomplishments, Obstacles, and Setbacks of
EPA Region 5 Tribal Air Quality Programs
2013 Edition Volume V*

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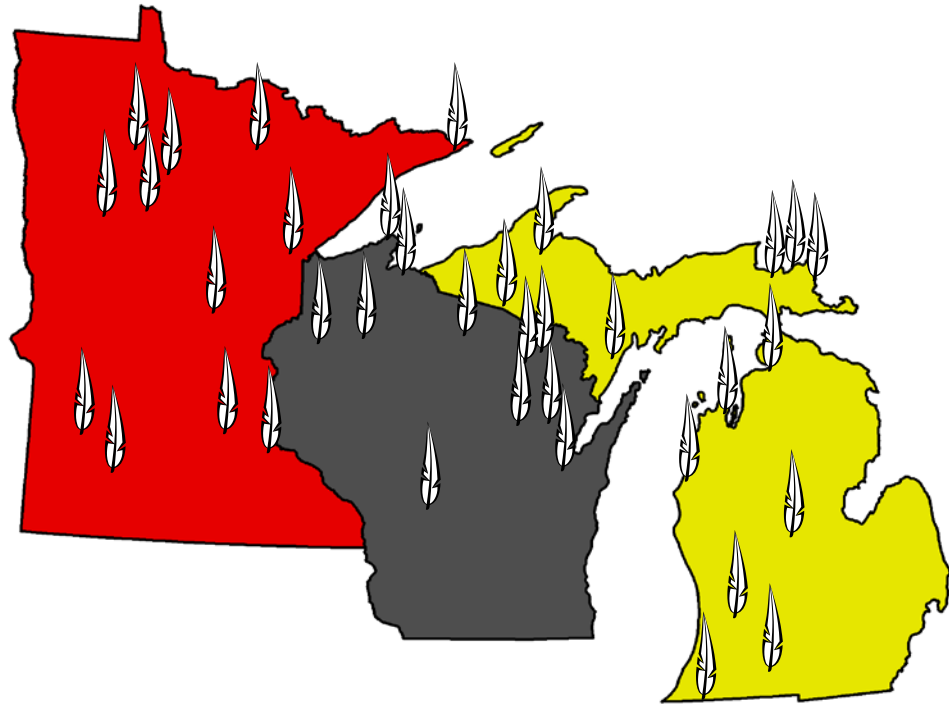
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Tribal Air Resources Journal was started by Tribes in EPA Region 5 to better publicize Tribal air quality program achievements, progression and struggles to their Tribal communities as well as the general population. Environmental staff at these Tribes perform many tasks that are often performed by multiple individuals in state and local governments. Because of this, Tribal professionals are multi-disciplinary and often understand their air quality issues better than staff working for other governments. This situation affords Tribal staff unique opportunities to manage their air resources as each sees fit. However, it also presents distinctive problems for their staff to overcome. Each Tribe is a sovereign nation that applies for, receives and is responsible for administering its own funding and is not linked to the others in terms of governance. It is our hope, in our fifth year of publication, that this Journal will better communicate the goals, achievements and issues to you, the reader.

The colors in the logo above are taken from the Native American medicine wheel to show our relationship to each other and the environment. The feathers were chosen to mark the location of the Tribes as a symbol of the air and natural resources that we are protecting.

2013 Summary of Facts for EPA R5 Tribes

Clean Air Act Implementation

- 4 Tribes currently have Treatment as a State (TAS). Additionally, 2 Tribes are in the EPA completion process for 2014 and 1 Tribal application is in review. Of the 4 all have CAA 105 reduced match and CAA 505a(2) for Title 5 notification. One has added CAA 126 Authority.
- 1 Tribe has Class 1 air status, 1 Tribe has submitted to EPA a Letter of Intent; other Tribes have it in their long range plans.
- 3 Tribes in R5 are actively researching Tribal Implementation Plans.
- SIP Rule change for Wisconsin to comply with Forest County Potawatomi Class 1 Redesignation has been completed and amended into the State SIP for FCP Class 1 Area administration.

EPA Funding

- ***Clean Air Act*** – 15 total Tribes are working under 103/105 grants. 15 Tribes requested \$1,747,641 for air quality project/program support from EPA. 15 Tribes were partially funded in FY 2013 with R5 Tribal STAG funding totaling \$1,154,000. 11 Tribes received CAA 103 grant funding and 4 Tribes received CAA 105 grant funding. 3 of the 105 grantees have incorporated into a PPG grant for FY 2013.
- ***Tribal Radon SIRG Grants*** – 3 Tribes received a total of \$100,015 in FY 2012; Tribes were awarded funding with a 25% match as the Tribes had TAS status. Other Tribes are utilizing their GAP funding to do radon outreach and testing projects.
- ***Community Scale Air Toxics Study*** – EPA Grant partnership with a Tribe, MPCA, Minnesota Department of Health.
- ***Indoor Air Quality*** – Multiple Tribes across EPA R5 do voluntary IAQ work via CAA 103/105 STAG, TOSCA, SIRG, GAP, and OECA EJ funding sources to implement a wide range of IAQ projects. EPA R5 has 2 Tribal IAQ Centers of Excellence.

There has been a drastic decrease in special purpose funds along with overall budget cuts. This can be directly correlated with the reductions in Tribal projects and funding for 2013.

Other Funding

- ***Tribal Environmental Health Grants*** – Cooperative Indian Health Service to implement composting and buy local projects on a Reservation with benefits of air emission reductions.

Tribes in EPA R5 are engaged in and serve on a wide variety of Regional and National Workgroups and Committees

National/Regional Committees:

- Clean Air Act Committee – EPA R5 Tribal Representative holds a voting seat and a member of the Permits, NSR and Toxics Workgroup
- Tribal Air Monitoring Support Center – EPA R5 has a steering committee representative
- National Tribal Air Association – 2 EPA R5 Reps, 1 serves as Vice Chair of the Executive Committee
- National Tribal Science Council – EPA R5 Rep
- National Tribal Operations Committee – EPA R5 Rep
- Air and Waste Management Association – Vice Chair of ITF-11: Indigenous Environmental Affairs
- White House Task Force on Combating and Responding to Climate Change – Tribal Chair as member
- Minnesota Clean Air Discussion – Tribal participating member on 3 workgroups

Workgroups:

- National Minor New Source Review workgroup
- EPA R5 Tribal and EPA Mining workgroup
- Great Lakes Caucus of the Western Mining Action Network
- EPA R5 Tribal Indoor Air Quality workgroup
- National Ambient Air Quality Standard Designations workgroup
- National Tribal Air Association and EPA monthly update conference calls
- Minnesota Tribal Native Atlas Workgroup

Regional Meetings:

- Annual EPA R5 Tribal Air Meeting
- R5Tribal Environmental Program Management Conference
- EPA R5 Tribal monthly air media conference calls
- Multiple EPA/Tribal consultation calls
- Minnesota Tribal Quarterly Mining Meetings with Minnesota Pollution Control Agency and Division of Natural Resources
- Quarterly Minnesota Reservation Technical Staff Environmental Council (MNTEC)
- Michigan Tribal Environmental Group (MTEG)
- Wisconsin Tribal Conservation Advisory Council (WTCAC)
- Great Lakes Region – Native American Fish and Wildlife Society
- National Tribal Forum on Air Quality – R5 Tribes attend, on planning committee, and present at conference

Refer to the R5 Tribal Areas of Interest document to contact individual Tribes for input on TV permits and other potential information sharing. The document can be found at EPA R5 or contact Brandy at air@lldrm.org 218.335.7429 for a copy.

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Abbreviations

| | |
|-------------------|---|
| CAA | Clean Air Act |
| CAA 103 | Clean Air Act Section 103 Funding |
| CAA 105 | Clean Air Act Section 105 Funding |
| CO | Carbon Monoxide |
| CO ₂ | Carbon Dioxide |
| EI | Emissions Inventory |
| EPA R5 | Environmental Protection Agency Region 5 |
| ETS | Environmental Tobacco Smoke |
| GAP | General Assistance Program |
| Hg | Mercury |
| HUD | Housing and Urban Development |
| HVAC | Heating, Ventilation and Air Conditioning |
| IAQ | Indoor Air Quality |
| ITEP | Institute for Tribal Environmental Professionals |
| MET | Meteorology; Meteorological |
| MPCA | Minnesota Pollution Control Agency |
| NAAQS | National Ambient Air Quality Standard |
| NO _x | Oxides of Nitrogen |
| MNSR | Minor New Source Review |
| NSR | New Source Review |
| NTAA | National Tribal Air Association |
| O ₃ | Ozone |
| pCi/L | picocuries per liter |
| PM | Particulate Matter |
| PM ₁₀ | Particulate Matter with a diameter of less than 10 micrometers |
| PM _{2.5} | Particulate Matter with a diameter of less than 2.5 micrometers |
| ppm | parts per million |
| PSD | Prevention of Significant Deterioration |
| Rn | Radon |
| RPO | Regional Air Planning Organization |
| SGI | Seventh Generation Initiative |
| SO ₂ | Sulfur Dioxide |
| TAS | Treatment as a State |
| TSP | Total Suspended Particulates |
| TAMS | Tribal Air Monitoring Support Center |
| VOC | Volatile Organic Compounds |



Bad River Band of Lake Superior Chippewa Indians

Nathan Kilger – Air Quality Specialist
Dan Wiggins – Indoor Air Quality
Program in Existence since – 2001
Program Projects – PM_{2.5}, O₃, MET, Rn, IAQ
Location – Odanah, WI

Bad River started its Air Program under the CAA 103 grant funding in 2001. The Tribe continues to be most concerned in the maintenance of the pristine environment found along the southern shore of Lake Superior and the protection of human health.

Priorities include protecting the 16,000 acres of Kakagon & Bad River Sloughs, most recently designated a wetland of international significance by the Ramsar Convention, and a vital part of the Tribe's culture. The health of the entire Bad River watershed is also a shared priority for both air and water quality, now and seven generations into the future.

Ambient air quality affects not only the plant and wildlife communities that sustain this culture, but also the 1,200 Tribal Members living on the Reservation. Challenges include dust from unpaved roads, burn barrel usage, a major highway that bisects the Reservation, and other nearby pollution from large sources located only a few miles from the Reservation's boundary.

Despite these challenges, current levels of O₃ and PM_{2.5} matter remain below the established National Ambient Air Quality Standards and it is the goal of the Bad River Natural Resource Department to protect and maintain pristine air quality for current and future generations. The first step towards this goal was achieved in February 2005 when the Bad River Band of Lake Superior Chippewa received TAS.

There are also a multitude of indoor environmental issues due to aging and improperly built housing and buildings, poor drainage designs, and clay soils. There are 171 housing units under the Bad River Housing Authority and an additional 300 plus Tribal private homes within the Bad River Reservation. IAQ and Rn assessments are ongoing and to date 100% of housing units have been tested for Rn, contributing to a total of 54% of Tribal homes tested.

The IAQ Program will continue to work with the Bad River Health & Wellness Center, Housing Association and other Tribal Departments on IAQ & Rn assessments, along with other Home Assessments conducted by additional Programs, to completely address the multiple factors related to indoor environmental health issues. Working in correlation with other Tribal Programs will assure the Tribe of the indoor environmental issues and concerns within Tribal homes and assist them in their home improvement plans. <http://www.badriver-nsn.gov/natural-resources>



Bad River Air Monitoring Site, May 2012



Bois Forte Band of Chippewa

Troy King – Environmental Health Specialist

Program in Existence since – 2002

Program Projects – IAQ, asthma awareness, R5 IAQ assistance

Location – Nett Lake and Vermillion (Tower), MN

The Bois Forte Environmental Services Department/IAQ Program, currently in its 12th year of EPA and CAA funding, provides environmental services to the Bois Forte Band Members as well as assisting other IAQ programs within EPA Region 5.

Locally our IAQ program works closely with the Bois Forte Housing Department, which manages approximately 150 homes. We also respond to IAQ requests from private homeowners of which there are about 150 within the Bois Forte Reservation. Our program also strives to maintain working relationships with Bois Forte's Health, Human & Family Services departments to provide the necessary IAQ assessments and project supervision for its tenants, homeowners and Tribal Government building staff.

In maintaining our relationships with other departments within the Bois Forte Reservation, it gives the Environmental Services Department a great opportunity to further assist the Reservation with participation in other departmental conferences by providing outreach and education.

Within EPA Region 5, our Department offers technical assistance to other Tribes by providing site visits for IAQ investigations and recommendations. Both locally and within the region, our goal as a Department, with assessments and recommendations, is to remedy all indoor issues as they arise. This can be anything from moisture & mold issues to CO, HVAC and ventilation/filtration problems or dust & fine particle, asthma triggers and pest concerns.

Bois Forte IAQ Program's Year-to-date Accomplishments

While the Bois Forte IAQ program closed out its "Clean & Healthy Tribal Casinos" grant, we have continued to share the information locally, regionally & nationally that was provided/gathered from the conference held in Grand Portage. We provided IAQ outreach & education at several opportunities which came about in this past year from other local departments. Our IAQ program did provide two EPA Region 5 IAQ program site visits, one with a major mold & moisture issue within one of their Tribal government buildings. And of course, we have had our fair share of local IAQ issues ranging from asthma triggers in the home to a bat abatement issue within a Tribal government building.

Although the Bois Forte Environmental Services Department & Indoor Air Quality program have had employee turnover in the past couple of years, it is our goal as a department to seek out the necessary training to provide the technical support that has been there in years past. We would also like to reestablish ourselves within the EPA Region 5 IAQ community to attempt to maintain the honorable designation of "Center of Excellence" program so that we may better assist other programs in tackling IAQ issues within our Region.



Fond du Lac Band of Lake Superior Chippewa

Joy Wiecks – Air Quality Technician

Alex Jackson – Air Program Coordinator

Program Projects – Ambient Air Monitoring O₃, Hg Deposition, Permit and Regulation Review, etc.

Location – Cloquet, MN

The Fond du Lac Band of Lake Superior Chippewa was the first Tribe in EPA Region 5 to be granted Tribal authority to administer parts of the CAA on January 7, 2004. The Program provides the Band with expertise on environmental issues related to air quality and climate change. In order to protect Fond du Lac resources, the program reviews permits, regulatory actions, and provides education and outreach to Band members. The Band has been able to develop its Program, assert its sovereignty, and achieve an excellent working relationship with the Minnesota and Wisconsin permitting agencies, and with EPA Region 5. Several mining projects and related industries are currently under review that will impact air quality in EPA Region 5 and program staff intends to ensure both local and federal clean air objectives are met. Staff also review draft regulations as proposed by both the EPA and the Minnesota Pollution Control Agency and provide comments. Our Air Technician continues to serve on the Clean Air Act Advisory Committee.

Fond du Lac is currently hosting its second Green Corps Member, who is helping the Band to reduce its carbon footprint. Our first Member gathered data on the Band's electrical and fuel usages and entered the data into an energy benchmarking program that compares these usages with other buildings of similar size and use characteristics. This helped the Band see where energy usage was too high and should be reduced. Our current Member is exploring ways to make these reductions happen. Both Green Corps Members have carried out education and outreach activities to explain their work to the public and to other Tribes.

In order to assess the effects of air pollution on the Reservation, the Air Program operates an ozone monitor and a mercury wet deposition monitor. The Program has also collected data on leaf litter mercury dry deposition for one field season, with four additional seasons planned. We hope that this data can help the scientific community study and predict the fate of mercury emissions in the environment. Over the past year, Fond du Lac's Air Coordinator and Environmental Specialist have been involved with an organization called Sustainable Twin Ports. This is a group comprised of local businesses who are exploring ways to operate in a more sustainable fashion.

Fond du Lac has also been active in IAQ. In the past we have run lead abatement and radon assessment projects on the Reservation. After a major flooding event in June, 2012, Environmental staff were instrumental in helping with housing clean up and mold prevention. Staff distributes carbon monoxide sensors as needed. Air staff are also working on an anti-idling policy for the Reservation, along with a related curriculum component for the Band's Ojibwe School.





Forest County Potawatomi Community

Natalene Cummings – Air Resources Program Director

Joe Cebe – Air Monitoring Specialist

Program in Existence since – 2002

Program Projects – NO_x, O₃, SO₂, Vap. Hg, Acid & Hg dep, PM_{2.5}, MET

Location – Forest County, WI

In an effort to protect the natural and cultural resources of the Forest County Potawatomi Community from degradation from pollution sources located outside of the Reservation, the Tribe applied for redesignation of its airshed to Class I in 1994. By 2002, the Tribe had established an Ambient Air Monitoring Program to establish the baseline for air quality on the Reservation. Beginning first with O₃, SO₂ and particulates, the Program now also includes nitrogen oxides, vaporous Hg, continuous PM_{2.5}, acid and Hg deposition, and is working towards the addition of IMPROVE sampling for visibility in 2013/14.

By 2008, the USEPA had redesignated the Reservation to Class I, providing the Reservation with tighter limits on allowable pollutant levels in air pollution permits issued for sources locating nearby than in other (Class II) areas in the country. Class I also provides the Tribe a voice in the air pollution permitting process. Since redesignation, the Tribe has been working with the State of Wisconsin on the establishment of Air Quality Related Values (AQRVs) and pollutant thresholds for O₃, PM and Hg, S, and N deposition as they relate to impacts to vegetation, water quality and visibility, in accordance with the 1999 Class I Agreement between the two sovereigns.

In 2010, the Tribe obtained TAS, enabling the Tribe to receive notices from the state's operation permits being issued/re-issued, and providing "clout" to any comments or concerns the Tribe may have over a permit.

Having Class I and TAS authorities to participate in the air pollution permitting process and to comment on permits requires that the Tribe have the knowledge and ability to review permit applications and the permits themselves and insure they contain the proper controls and protections. While FCPC currently contracts with environmental consultants to review the larger, more complicated permits/applications, FCPC staff are working to develop the skills and experience to review smaller, less complicated permits. Air pollution modeling is becoming important to understanding air pollution permits and impacts.

Providing input on proposed rulemaking on both the federal and state level continues to be another important aspect of the FCPC Air and Legal Programs.

FCPC Air Monitoring Buildings





Grand Portage Band of Lake Superior Chippewa

Stuart Oberg – Air Quality Specialist

Program in Existence since – 2003

Program Projects – PM_{2.5}, IAQ, Asthma Outreach, Regional Haze, Renewable Energy, Environmental Education, Climate Change

Location – Grand Portage, MN

The Grand Portage Band of Lake Superior Chippewa is concerned with maintaining clean air to protect the health of humans, our supporting biosphere and to preserve and protect the traditional resource-dependent lifestyle that is crucial to the spiritual and cultural health of the Anishinaabe people.

Although Grand Portage is at the far northeastern corner of the State, the Treaty of 1854 gives us the rights to hunt, fish and gather over millions of acres adjacent to our Reservation so any threat to the environmental health of the region affects us directly. In recent years new mining projects have been proposed in the Ceded Territories, and these non-ferrous mines could pose a threat to air and water quality. Elevated mercury levels have been found on the Reservation, and the Air Program is planning to begin testing leaf litter for mercury to better understand how it is entering the ecosystem. In order to expand the capabilities of the Air Program to deal with these threats Grand Portage has applied to the EPA for Treatment as a State (TAS) designation which would put us on equal footing with Minnesota when commenting on these new mines.

The Air Program monitors ambient air for PM_{2.5} and haze for both baseline data and to alert the local public if air quality has deteriorated enough to affect the health of sensitive people. We alert the local clinic to advise these individuals to stay indoors and avoid strenuous activities along with the local radio station as well as through mass e-mails and posts to social media. This is part of our larger outreach and education program which promotes clean air and a healthy environment through programs at the Oshki Ogimaag School (K-6) and through posters and programs for the public at large.

Indoor air quality (IAQ) is of great concern for the Program, particularly with the large number of asthma patients on the Reservation. The Air Program works together with the Tribal Housing Authority and Tribal health Services to identify and improve indoor air in homes, apartments and public buildings.

The Tribal Council has been active in pursuing alternative energy sources for the Reservation and is looking at both wind power and biomass as possible sources to make the power grid more reliable and reduce our production of greenhouse gasses. Climate change is a very real threat to our natural resources. Lake Superior is rapidly warming and our moose numbers are declining which will impact our management strategies both now and in the future.

Air Quality Blog: <http://gpairquality.blogspot.com>

Portion of Grand Portage Shoreline





Ho-Chunk Nation

Kevin Gunderson – Environmental Specialist

Program in Existence since – 2006

Program Projects – Rn and Mitigation, Asthma, & IAQ

Location – Black River Falls, WI

The Ho-Chunk Nation Indoor Air Program began in 2006 with a focus on asthma and expanded to include radon and other indoor air contaminants. The Nation added radon testing in 2009 when a testing project was implemented in the Wittenberg area. The Nation identified numerous homes with excessive levels of radon. Funding was received and the Nation mitigated every home above the radon action level. The Nation currently provides radon testing services upon request and performs educational activities during health fairs and at General Council.

The Nation continues to provide services for the Asthma Program by performing site visits surveying homes for asthma triggers such as mold, environmental tobacco smoke, and dust mites. Homeowners are provided with recommendations to correct the issues identified and in some cases with supplies to address specific issues. These two activities comprise the majority of the Nation's Indoor Air Program activities.

The Ho-Chunk Nation has also become aware of air quality concerns related to the Frac Sand industry. The Nation has numerous Tribal Members that live within a mile or less of large Frac Sand Mines. The Nation is evaluating potential impacts and will be participating in an Indoor Air Quality Study being implemented by the Wisconsin Farmers Union. The Nation's hope is that potential air quality impacts can be identified and mitigated for the safety of the Nation's Members.



Frac Sand Mine in Wisconsin.



Inter-Tribal Council of Michigan, Inc.

Travis Maki – Environmental Specialist

Program in Existence since – 2000

Program Projects – PM_{2.5}, MET, O₃ and Regional Haze monitoring

Location – Sault Ste. Marie, MI and Bay Mills, MI

Since 2000 ITCMI has been assisting the Sault Tribe of Chippewa Indians and the Bay Mills Indian Community with a unique transboundary air pollution problem. Currently ITCMI's monitoring efforts are focused on PM_{2.5}, Haze, Ozone and meteorological data and these efforts are also in coordination with the Michigan Department of Environmental Qualities (MDEQ) monitoring network. As part of the work with the MDEQ, ITCMI is now uploading data to the MiAir Website.

The ITCMI staff is also working with the Saginaw Chippewa Indian Tribe and the Lac Vieux Desert Band of Lake Superior Chippewa Indians on emission inventories, ambient air monitoring and other air quality projects.

The ITCMI air monitoring project is funded through a CAA Section 103 grant and with this funding the air monitoring project pursues the goals of: tribal education, pollution reduction within the Tribal community and ultimately improving and securing the health and welfare of the residents.



ITCMI Website

<http://www.itcmi.org/services/environmental-services>

Sault Ste. Marie, MI Haze Camera

<http://www.mwhazecam.net/stmarie.html>

ITCMI TREX Network Page

http://trexwww.ucc.nau.edu/cgi-bin/daily_summary.pl?cams=901

MiAir Website

<http://deqmiair.org/monitoringdata.cfm?site=4130>



Keweenaw Bay Indian Community

Lauren Nenadovich – Air Quality Specialist

Program in Existence since – 2012

Program Projects – Air Quality Assessment, Inventory Preparation Plan

Location – Baraga/L'Anse, MI

The Keweenaw Bay Indian Community (KBIC) is located in the Western Upper Peninsula of Michigan in a rural and pristine area. The Reservation encompasses over 55,000 acres, 17 miles of Lake Superior shoreline, 80 miles of streams and rivers, 15,000 acres of lakes, and 3,000 acres of wetlands. It borders the Village of L'Anse and encompasses the Village of Baraga.

The Keweenaw Bay Indian Community is currently working under its second year of Tribal Air Program funding. As we near the end of the second grant cycle, much has been accomplished. A basic air quality assessment was completed in Fall 2012. An air quality survey was mailed to local Tribal Members in late 2012. Results from the returned surveys provided important data and insight into local air quality issues. A quality assurance project plan has been developed and approved and preliminary work has begun on the KBIC Emissions Inventory. Within this time, the Natural Resources Department has also developed a website. This has been an excellent tool for education and outreach information as well as providing platform where community members can electronically submit air quality concerns and complaints.

During Summer 2013, KBIC was loaned ozone monitoring equipment by the TAMS Center. The TAMS center sent a professional to the Natural Resources Department to aid in the installation and training on the ozone equipment. The data collected from the ozone monitoring project has been very valuable in obtaining a baseline and understanding ozone concentrations in our area. KBIC is hoping to continue building the Air Program and obtain further delegation of the CAA.

For more information visit <http://nrd.kbic-nsn.gov/>



Keweenaw Bay, Lake Superior



Lac Courte Oreilles Band of Lake Superior Chippewa

Dan Tyrolt – Environmental Engineer

Program in Existence since – 2000-2005

Program Projects – Radon Monitoring/Mitigation, NADP Network

Location – Northwest Wisconsin

In the past, the Lac Courte Oreilles (LCO) Tribe was involved in the National Atmospheric Deposition Program (NADP) under the EPA Section 103 Program. Funding for LCO was terminated in March of 2005. The LCO Tribe applied for funding to continue their NADP site and became a part of the Mercury Deposition Network (MDN), but did not receive federal funding to continue.

The Lac Courte Oreilles Tribe exercises their treaty rights each year by spearing and netting fish in the upper-third of WI and parts of Eastern Minnesota. This subsistence way of life is deeply rooted in the LCO culture. All of the lakes in this region, to a degree, have fish-consumption advisories due to elevated mercury levels in fish tissue. It is a priority for the LCO people to understand why the fish they are eating are becoming contaminated and to gather data that may help in the future to control mercury emissions. The LCO Conservation Department feels that the NADP and MDN Networks provide a solid framework in collecting sound data to hopefully help government control mercury, sulfate and nitrate emissions in the future.



Billy Boy Flowage Rice Beds on LCO





Lac du Flambeau Band of Lake Superior Chippewa Indians

Bryan Hoover – Energy/Air Quality Program Coordinator

Program in Existence since – 2008

Program Projects – EI, Capacity Building, Community Outreach and Education, Energy Upgrades

Location – Lac du Flambeau, WI

The Lac du Flambeau Tribe is dedicated to clean land, water, and air as these are vital to sustaining the diverse wildlife and fisheries resources of the Tribe and vital to the health of Tribal community members.

The Tribe's Energy/Air Quality Program was established in 2008 and operates under the guidance of the Tribe's IRMP and Strategic Energy Plan. The Tribe has established important goals within these plans to protect the Tribe's air quality and to address the energy situation of the Tribe with sustainability. The Program has conducted various projects since implementation began including energy efficiency and HVAC upgrades in Tribal facilities, renewable energy system deployment, a Reservation PM2.5 concentration study, indoor air quality assessments, mold remediation, as well as educational programs and events.

The Tribe has also involved the Program in the planning and execution of new construction projects. In 2011, the Tribe constructed a new facility for the Tribal Natural Resources Department. The Energy/Air Quality program worked to ensure that the new facility was built with an approach of sustainability. The building received a LEED certification in 2012 for characteristics related to low-energy design and renewable energy, indoor air quality, storm-water management, recycled materials and construction waste, locally sourced materials, and educational tools.

For more information, please visit www.ldftribe.com/naturalresources





Leech Lake Band of Ojibwe

Brandy Toft – Air Quality Specialist
Sydney Harper – Air Quality Technician
Program in Existence since – 2001

Program Projects – Hg, IAQ, MET, PM_{2.5}, Rn, Diesel, Solar, Permit Review
Location – Leech Lake Reservation, HQ located in Cass Lake, MN

The Leech Lake Band of Ojibwe (LLBO) continues to build program capacity, develop and enhance its Air Quality Program to protect human health and trust resources for the LLBO. This is strived for and attained by monitoring, implementing a variety of voluntary programs, IAQ assessments and policy, commenting on rules/permits/policy, and providing education and outreach to the community and at all levels of governments. Understanding the complexities of our LLBO airsheds and impacts to them is increasingly important in the review of environmental impact statements, Title V and minor permits on or near the Reservation. The Leech Lake Air Program (LLAP) has reason to be concerned and protective since the Leech Lake Reservation (LLR) is surrounded by 14 Title V facilities of varying industries with 23 additional existing or proposed mining facilities clustered within or near our Ceded Territories. The Title V facilities include: coal fired EGUs, wood/paper facilities, waste incinerators, natural gas compressor stations, mining/steel facilities, and ethanol plants. The LLR also has over 68 minor sources that exist within the boundaries of the Reservation. We will work with EPA R5 to identify and inventory minor sources for future potential delegation of the MNSR. LLBO is also converging with Housing and Community Services on an expanding IAQ problem that directly affects community members and employee health on a daily basis.

LLAP is engaged on local, regional, and national venues (ie NTAA Vice Chair) and shares that information in the form of data, education, and outreach to the LLBO communities, Tribes and related agencies. We continue to expand and leverage resources within and outside the Reservation to create and foster partnerships to better serve the Leech Lake Reservation.

The LLAP has set into motion several voluntary programs on and around the Reservation including: Rn testing (1,216), mitigations (77), Rn resistant new construction (69), IAQ assessments (70), diesel retrofitting (65 school buses and 34 on/off road vehicles), burn barrel removal (89 barrels), passive solar heating (8 residential, 2 large government buildings), wind feasibility study, large scale composting (5), and leading the Green Team. These are stepping stones to bigger and better projects for the future. The LLAP fills a gap in north central Minnesota by providing sample data for PM_{2.5}, Hg, and Meteorological data. In the past we have performed PUF sampling for toxics, dioxins and minivol PM_{2.5} sampling. Currently, the LLAP is funded by: EPA R5 105 Air grant, EPA R5 Tribal Rn grant, and Indian Health Service grant for Reservation resilience. The LLAP looks forward to potential delegation of the MNSR, building and expanding capacity to better serve LLBO, and working with partners to leverage resources. The Leech Lake Band received TAS in October 2007 and the Specialist was the Virgil Masayesva Excellence Award recipient in 2012.

Like us on facebook at Leech Lake Environmental and visit our website at www.lldrm.org



**Leech
Lake
Billboards**





Little River Band of Ottawa Indians

Thomas Shepard – Air Quality Specialist
Program in Existence since – 2005
Program Projects – O₃, PM_{2.5}, MET
Location – Manistee, MI

Little River Band of Ottawa Indians (LRBOI) began its Air Quality Program in September of 2005 utilizing CAA 103 grant funding. The Tribe was concerned that Ozone or O₃ transport up the Lake Michigan shoreline was adversely affecting air quality in Manistee County, Michigan. Since 2005, the transport issue has been documented and acknowledged by the State of Michigan and EPA. LRBOI continues to monitor ozone to gather additional information and to support trend analysis.

LRBOI also operates a PM_{2.5} monitoring station. LRBOI has an agreement with the State of Michigan for air monitoring assistance. They provide laboratory and quality control services. Thus far, this has been a symbiotic relationship benefiting both sides. The Tribe hopes this relationship continues well into the future.

In addition to air monitoring, the Air Quality Specialist has over two decades of environmental management experience. He is very familiar with state and federal air quality programs, rules and requirements. He has significant experience with the Title V air permitting system and the resources available online. His knowledge of other environmental programs, such as the Toxics Release Inventory (TRI) program or Form R reporting, is exceptional and will help build the Tribe's Air Quality Program's capacity.

LRBOI plans to elevate its education and outreach of air quality-related issues. The Tribe will raise air quality awareness in both tribal and non-tribal citizens. This increased awareness will help others better understand air quality issues and hopefully enable them to make more informed quality of life decisions.

LRBOI Home Page

<https://www.lrboi-nsn.gov>



Working to improve air quality for our Tribe, our community and our world.



Little Traverse Bay Bands of Odawa Indians

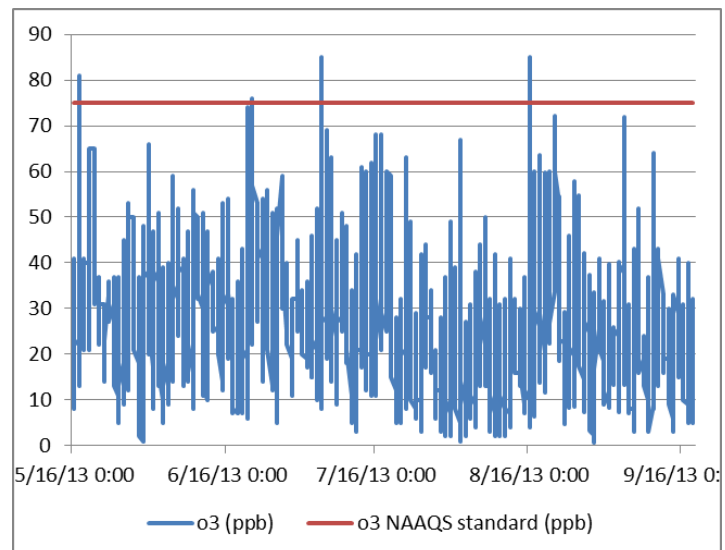
Jonathan Mauchmar – Environmental Specialist – Air Quality
Christina Coger – Environmental Services Coordinator
Program in Existence since – 2004
Program Projects – EI, O₃, Capacity Building, Community Outreach
Location – Harbor Springs, MI

On September 21, 1994 the Little Traverse Bay Bands of Odawa Indians (LTBB) was federally reaffirmed with the signing of Public Law 103-324. The LTBB Reservation area encompasses approximately 336 square miles of land in the northwestern part of Michigan’s Lower Peninsula and is bordered by Lake Michigan to the north and west.

In 2002, LTBB initiated an Air Quality Program that was focused on educational outreach and home radon monitoring. In 2004, the Program was expanded to include a part-time Air Quality Specialist and again in 2007 to a full-time Environmental Specialist. Program staff drafted an Emissions Inventory (EI) in 2007-08. From 2009-2011, the Program collected PM_{2.5} data. In 2012, an EI QAPP and draft EI were completed.

An increasing concern on the Reservation is ozone and its transport up the Lake Michigan shoreline. LTBB partnered with the Tribal Air Monitoring Support (TAMS) Center in 2013 to establish a short-term ozone monitoring project. The monitor was installed at the Natural Resource Department Building in Harbor Springs in mid-May 2013 and data was collected through mid-September 2013. Preliminary monitoring data is included in the graph below. Once data analysis is complete, we hope to better understand the impact and potential impact of ozone pollution on the Reservation.

The lack of regional air support for Tribes, both technical and financial, has made it difficult to build capacity of the Tribe’s Air Program and maintain professional staff. We are continually looking to expand our Program to include energy efficiency, climate change and to secure long-term funding.





Lower Sioux Community

Deb Dirlam – Director

Jesse Anderson – Environmental Specialist

Department in Existence since – Since 1992

Program Projects – IAQ, Ambient Air Quality, Education

Location – Morton, MN

The Lower Sioux Indian Community (LSIC) is located along the Minnesota River in Morton, Minnesota. The Reservation is comprised of 1,743 acres of “trust” land held for the Tribe and an adjacent 120 acres of fee land purchased in 2009. The Community contains mostly flat agricultural land along with approximately 250 acres of timber and brush and Minnesota River escarpment. The Tribal commercial center sits on the uplands and is surrounded by agricultural land, prairie pothole wetlands and Tribal housing. The Tribe is governed by the elected five-member Lower Sioux Community Council. The Tribe operates business enterprises such as a casino/hotel and other businesses. Approximately 600 Tribal members live on the Reservation in 150 single family dwellings. The regional land use is predominantly agricultural and several Tribal Members hold assignments to farm.

In 1992 the Lower Sioux Indian Community and the Upper Sioux community, acting as a consortium within their governmental powers, established the Office of the Environment (OE) for the purposes of obtaining an EPA Multi-media grant to ensure compliance with federal and Tribal environmental laws; to educate and advise government and Tribal membership on environmental issues; and to develop environmental Programs. In FY 2006, the Tribal Governments agreed to dissolve the Consortium and conduct separate Environmental Programs.

Air Projects/Programs for FY 2014-2015

- Title V Reviews within a 50 mile radius of the LSIC Reservation boundaries
- Open Burning, Barrel Burning, Fire Prevention, Permitting
- Mold/Moisture Inspections
- Education on Carbon Monoxide, Rn, Mold/Moisture, Asbestos, Pests, Weatherization



IAQ assessment in a Tribal Member home.



Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians

Shawn McKenney – Environmental Specialist

Program in Existence since – 2005 (GAP funding)

Program Projects – Waste Management, Alternative Energy, Air Quality, Climate Change, Water Quality

Location – Dorr, MI

In 2013 the Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians (Gun Lake Tribe) Environmental Department introduced the Conservation Incentive Program (CIP) for Tribal Citizens. The goal of CIP is to reduce energy use within Tribal Members homes lowering their energy bills and reducing greenhouse gas emissions.

The Conservation Incentive Program provides incentive payments for Tribal Members to:

- Purchase energy star qualified appliances to reduce energy consumption.
- Complete home energy audits.
- Install home energy saving retrofits based upon recommendations from home energy audits in order to reduce energy consumption in Tribal Members' homes.
- Incentivized retrofits include attic and exterior wall insulation, exterior door replacement, window and door sealing and high efficiency windows.
- Purchase/lease highly efficient vehicles to reduce vehicle emissions.
- Install low flow toilets and showerheads to improve water conservation practices.
- Install rain barrels to reduce water demands and implement water conservation practices.

The Conservation Incentive Program has been well received by Gun Lake Tribal Citizens and is supported by Tribal Council. In our first 9 months of the program, the Environmental Department has processed over 30 applications ranging from home energy audits to car incentives. This Program is helping to improve air quality one home at a time.



Booth Bay Register/Thermal imaging



Menominee Indian Tribe of Wisconsin

Jennifer Hill-Kelley – Environmental Services Director

Heather Pyatskowitz – Water Resource Specialist

Program in Existence – 2000 to 2010

Location – Keshena, WI

The Menominee Tribe originally started the Air Program in 2000 to monitor for acid rain and mercury. We participated with the National Atmospheric Deposition Network for laboratory work and reporting. After 2006 we no longer participated in acid rain because of funding cuts. The Program was funded by an EPA R5 103 air grant from 2006 – March 2009. We were able to keep the basic site operable for another year by running just the mercury collector and rain gage. This was done by using leftover money from the last grant. As of March 2010 we no longer have an outdoor Air Program.





Mille Lacs Band of Ojibwe

Charles Jirô Lippert – Air Quality Technician

Program in Existence since – 1996

Program Projects – O₃, PAH, IAQ

Location – East/Central MN

The Tribe began its Air Quality Program in September of 1996 with the constitutional reform of the Mille Lacs Band of Ojibwe. In the beginning, our elders knew of what the Air Program should address and made it part of the Tribe's statutes, but had no way of addressing our concerns, only hoping our vision would come together in the future. At the same time, Minnesota was under pressure to provide a determination for Carbon Monoxide (CO) and asked for partnership with the Tribe. From this partnership, the Tribe eventually got assistance from Clean Air Act (CAA) Section 103 grant funding through the Environmental Protection Agency (EPA). From our humble beginnings of CO monitoring, we moved to monitor for PM₁₀, then for PM_{2.5} and Ozone (O₃), only to find we were down-wind transport recipient of metropolitan Minneapolis-St. Paul's air pollution. This led the Tribe to begin monitoring for meteorological conditions, monitor for speciated PM_{2.5} and for Mercury (Hg). Today, the Tribe's Air Quality Program continues to monitor for O₃ and other air pollutants under a partnership with the Minnesota Pollution Control Agency (MPCA), assess PSD air permits issued by them that may impact our peoples and natural resources. In addition, the Tribe's Air Quality Program works closely with the Tribe's Public Health, Housing and Administrative offices to assess and monitor indoor air quality (IAQ) for domestic and industrial safety and hygiene.

In order to holistically achieve air quality protection, the Air Quality Program actively engages addressing air quality improvements both on regional and international levels. Together with the Water Quality Program, the Air Quality Program participated in the National Pollution Prevention Roundtable (NPPR) and was awarded to implement the Seventh Generation Initiative (SGI) in the Phillips Neighborhoods of Minneapolis, MN, from 2009–2012. Though those efforts and additional needs identified, in partnership with MPCA and the Minnesota Department of Health, Band's Air Quality Program has been awarded a 3-year long Community Scale Air Toxics grant to study poly-aromatic hydrocarbons (PAH) in the Phillips Neighborhoods.

Air Quality Program is currently seeking Treatment as an Affected Sovereign, seek redesignation as Class I air-shed, and restore Hg, Met, continuous and speciated PM_{2.5} monitoring to characterize, model and inventory air pollutants affecting the Tribe's air-shed. A grant application to the US Department of Health and Human Services, Administration for Native Americans (ANA) was successfully submitted in January, 2012, to help restore past monitoring projects for the purposes of supporting the near-future Class I redesignation. However, though the ANA grant was successfully submitted and was selected, it was not funded; it was resubmitted in the automatic reconsideration for ANA's 2013–2014 granting award cycle.

Mille Lacs Band of Ojibwe
43408 Oodena Drive
Onamia, MN 56359
<http://www.millelacsband.com>

Chief Executive: Melanie Benjamin
Acting Commissioner of Natural Resources: Michelle Palomaki
Executive Director of Natural Resources: Bradley Kalk
Environmental Programs Manager: Scott Hansen



Nottawaseppi Huron Band of the Potawatomi

Amy Boetcher – Air Quality Contact

Program in Existence since – 2001

Program Projects – IAQ, Rn, Asthma

Location – Pine Creek Reservation, Fulton, MI

The NHBP began their Air Quality Program in April 2001 with help from a State of Michigan Indoor Radon grant and later with a CAA 103 grant. The Tribe is especially concerned about radon because 80% of membership residents live in counties designated as having moderate to high potential for radon levels above the recommended WHO guideline (2.7pCi/l). We installed our first radon reduction system in a Reservation home and hosted a mitigation workshop in 2008. In 2009 and 2010, we continued to monitor Tribal Community Member's homes on and off Pine Creek Reservation for indoor air quality with a special emphasis on radon gas. In 2011, we began using the World Health Organization's recommended guideline for radon gas (2.7pCi/l). The WHO recommended level is more stringent in protecting human health than the EPA level that accommodates economic feasibility into its recommended level.

Our efforts since 2011 have been not only to continue testing Tribal Member homes and government buildings, but also to mitigate those on the Reservation that showed elevated levels. We have tested 21 homes and 4 government buildings on the Pine Creek Reservation, and installed 20 radon reduction systems. The five newest LEED Gold certified Tribal homes adjacent to the Reservation have heat recovery ventilation (HRV) units, touted as radon reduction devices. Our short term results for these homes revealed that the active HRV units reduced 4 out of 5 of the homes below the EPA recommended level, and only 2 out of 5 below the WHO recommended level. Understandably, many residents prefer not to use the HRVs because of the cost of propane. We are currently awaiting long term results and will coordinate mitigation with our Tribal Housing Department in 2014.

In addition to home monitoring, we also keep track of radon levels in our government work spaces. In 2013 we renovated our Tribal Health Building and built new public works and government center buildings, the latter of which was built with an active radon reduction system.

NHBP Website <http://www.nhbpi.com>



The Nottawaseppi Huron Band of the Potawatomi government headquarters is nestled in a landscape of forest and agriculture on The Pine Creek Reservation.



Oneida Tribe of Indians of Wisconsin

Environmental Area Manager – Jeff Mears

Program in Existence since – 1985

Program Projects – IAQ

Location – Northeastern WI

The Oneida Compliance Assistance Program (OCAP) works with all federally regulated underground storage tanks (UST) within the Oneida Reservation. 100% of facilities are in compliance. Shawn Suri, Environmental Compliance Inspector, has federal and state of WI UST inspector credentials.

This past July, OCAP hosted training for 19 Owner/Operators (O/O) of USTs on reservations in Wisconsin, Minnesota and Michigan.

During this training, the Federal Minor New Source Review Program in Indian Country was presented as it applies to gas stations. The training included a demonstration of the EPA's calculator of emissions. By utilizing the calculator Owner/Operators could determine if they need to register as a "Minor New Source".

Some of the material and topics that was covered included:

- Minor New Source Review
- Demonstration of a fuel system tank leak test.
- Basic overview from first line employee to managerial responsibilities.
- Fuel system components.
- Emergency response spill procedures.
- UST inspection process and preparedness.
- UST installation process.
- UST installation plan review.
- Bio-fuel system compatibility.
- Federal regulatory requirements and proposed changes.
- Improved compliance with federal underground storage tank regulations.



UST Course and field trip hosted by Oneida in July 2013.



Pokagon Band of Potawatomi Indians

Mark Parrish – Director, Department of Natural Resources
Program in Existence since - 2000
Program Projects – Comprehensive Planning, Radon
Location – Dowagiac, Michigan

The Pokagon Band of Potawatomi Indians was restored to federal Tribal status through act of Congress on September 21, 1994. Instead of a Reservation, the Pokagon Band was mandated a service area that consists of four (4) counties in southwest lower Michigan and six (6) counties in north central Indiana. The Band is the only federally recognized Tribe in the state of Indiana.

Our Resource Protection Programs are integrated into Tribal development activities through comprehensive planning. The goal is to mitigate potential direct and indirect impacts to air and water qualities up-front, rather than confront issues later. A few examples are provided to illustrate these relationships. Our approach and success have gained numerous accolades.

Consolidated Tribal land holdings exist within historic and contemporary Tribal Citizen population centers which are the Hartford and Dowagiac, Michigan areas and the South Bend, Indiana area. Transportation planning is an implicit method of mitigating impacts to air. Tribal villages are being constructed within each consolidated land holding area which provides a place to live, work, and recreate. This will reduce lengthy commutes to the workplace. Additionally, the Band completed a study to integrate our rural, regional Tribal transportation needs into the surrounding communities' public transportation networks.

Our Nation's development has been fostered through the use of Low Impact Development (LID) techniques and the LEED system. Many of the LID Best Management Practices serve multiple functions. In lieu of turf, large-scale restoration of a native landscapes into a neighborhood for stormwater management and aesthetics relieves a need to mow and mitigates the associated emissions. Native plants also sequester more carbon. Through reduction of electrical energy demand we not only save money, we also reduce our share of emissions to the atmosphere. This is important since 70% of our purchased electricity is produced by coal-fired power plants.

The Band, in 2000, received a grant from the EPA to conduct a Section 10 Radon project. Tribal dwellings were screened for the presence of radon gas; outreach and education activities were performed, and mitigation recommendations were provided. This project also led to radon-resistant techniques being integrated into new housing construction.

The long-term plan for department growth involves development of an Ambient Air Quality Program. The Tribal lands are situated downwind of the Milwaukee-Chicago-Gary Industrial corridor, thus the Band can benefit from an active role that an air program can provide.



Prairie grass landscape BMP at Pokagonek Edawat Tribal village



2007 - Fmr EPA Adm Johnson & Congressman Upton visit Pokagonek Edawat Tribal village





Prairie Island Indian Community

Gabe Miller– Environmental Specialist/Conservation Biologist

Apryl Carlson – Environmental Technician/NPS Coordinator

Program in Existence since – 1993

Program Projects – Radiological Monitoring, Outreach Education

Location – Welch, MN

The Prairie Island Indian Community (PIIC) is located between the Mississippi River and Vermillion River in southeastern Minnesota, approximately 45 miles downstream of the Twin Cities. The Community is in the area known as Prairie Island as it is surrounded on all sides by water and was once dominated by oak savanna and native prairie habitats. Members of the Mdewakanton Dakota traditionally utilized Prairie Island as a temporary summer encampment due to its richness in aquatic and terrestrial resources.

The primary factors of concern regarding air quality at PIIC are airborne particulates, regional haze, ground level ozone, ammonia, atmospheric deposition including mercury, and indoor air quality, especially radon. An additional special issue of concern for PIIC is radiological airborne particulates from the neighboring Prairie Island Nuclear Generating Plant (PINGP) run by Xcel Energy (formerly NSP), which was just relicensed for an additional 20 years of operation in 2013. PIIC has been monitoring radiological components through cooperative work with EPA's Office of Radiation and Indoor Air National Analytical Radiation Environmental Laboratory (NAREL) to assess concerns to Tribal Members since 1993.

The Tribe is pursuing to increase its capacity for monitoring a wider range of air quality concerns including regional haze, ground level ozone, atmospheric deposition, and ammonia. We also seek to address IAQ issues, specifically radon (Rn). Radon is a particularly high priority concern on PIIC due to high Rn levels in the region and the Rn-permeable soil types. Long-term local meteorological data is another goal. Effects on livelihood of community members, whether it be through their homes or environmentally, are important factors leading us to pursue this capacity building. To address these IAQ and environmental air concerns, we applied for CAA 103 Air Program funding for the new 2014 Fiscal Year and are hopeful to expand our current efforts as a result.



PIIC Land & Environment Department booth at the 2013 Community Health Fair



Red Cliff Band of Lake Superior Chippewa

Melonee Montano – Environmental Director

Mike Balber – IAQ Project Manager

Program in Existence since – 2010

Program Projects – IAQ, Basic Source Emissions Inventory

Location – Bayfield, WI

Red Cliff is located on the northern most point in Wisconsin on the Bayfield peninsula; it is surrounded on three sides by expanses of Lake Superior water and to the south relatively undeveloped forest or farm lands. The lack of heavy industries nearby means Red Cliff enjoys near pristine air quality. It is the goal of the Red Cliff Tribe to protect and maintain all aspects of our environment while promoting responsible future development. This year's projects are a continuation of IAQ assessments and the basic source Emissions Inventory.

The Red Cliff Tribes' Indoor Air Quality (IAQ) Program is an established program in its third year and falls under the Treaty Natural Resource Division, Environmental Department. The Program focuses on the completion of basic residential assessments to determine the need for insulation, ventilation and moisture control measures. Problem moisture, source, insulation, and ventilation areas are identified and documented. Homeowner and office management education is carried out in order to increase the community knowledge on basic measures that can be taken to control indoor air quality (moisture control, additional ventilation, piping insulation, etc.). When feasible, the information is utilized to fix the problems in each home.

The benefits are twofold; better overall indoor air quality and better energy efficiency. Better indoor air quality should decrease the number of asthmatic episodes for asthma sufferers and increase well-being for all. Better energy efficiency will decrease the amount each household pays out in energy bills on a yearly basis.

The Red Cliff Tribe recognizes that the incidence of asthma and allergies is increasing, especially among our children. Proper management of moisture, air flow and insulation results in a benefit to both health and cost for heating and cooling a home.

A good number of homes on the Reservation were built prior to 1980 and have serious moisture intrusion problems additionally members have recently purchased over 45 FEMA Trailers many with severe roof leaks and insulation issues. The Red Cliff Health Center has many patients that are suffering from respiratory problems that are exacerbated by poor indoor air quality in their homes.

The Tribe is also interested in air quality as a natural resource and environmental health issue that has not yet been fully explored. Therefore, the Tribe is in the process of applying for additional funds to complete an emissions inventory for the Reservation and surroundings as a first step in developing capacity in air quality. Ambient air quality has potential to affect the health of Tribal Members in several ways either directly and/or through the consumption of fish, for example. Therefore, it is important that the Tribe have the capability to participate in regional issues affecting air quality.

Red Cliff Band of Lake Superior Chippewa web page
<http://redcliff-nsn.gov/>

Fall colors of Chicago Creek





Red Lake Band of Chippewa Indians

Jennifer Malinski – Air Quality Specialist

Program in Existence since – 2007

Program Projects – MET, IAQ, Rn, EI, Community Outreach & Education

Location – Red Lake, MN

The Red Lake Reservation is a federally recognized closed Reservation encompassing over 835,000 acres of north-central Minnesota. The Reservation is the largest within EPA Region 5, comprising greater than 59% of the Federal Indian Trust Land of the Region. The Tribe currently has 11,500 enrolled members, of whom about 6,500 reside on the Reservation. Primary sources of livelihood for those living on the Reservation include hunting, fishing and subsistence natural resource harvesting. Preserving the Reservation's abundance of natural resources is critical to Band members' health, welfare, traditional ways of life and economic viability.

In order to understand and improve the Red Lake's air resource, the Red Lake Department of Natural Resources (RL DNR) began an Air Quality Program in December of 2007 with GAP funding and in the spring of 2009 secured CAA 103 funding. With the recent completion of its Treatment as an Affected Sovereign/State (TAS) application, the Program plans to transition to CAA 105 funding, beginning in FY 2015. The Air Quality Program fits within the Environmental Department of the RL DNR with Cody Charwood as the Environmental Director, who herself worked in the Air Quality Program before becoming Director.

Some of the most notable achievements for the Program since it began include: submittal of TAS application to EPA for CAA Sections 105 and 505(a), completion of Emissions Inventory (2007), partnerships with EPA School Air Toxics Monitoring and Minnesota Pollution Control Agency air toxics monitoring, smoke management collaboration with the RL DNR Forestry Program, representation on TAMS Steering Committee, weather station installation, and radon program activities including hosting Measurement & Home Diagnostics and Hands-On Mitigation trainings (with the University of Minnesota, Midwest Universities Radon Consortium), working with Red Lake Housing Authority to test and mitigate homes, and increasing radon awareness through outreach events.

Current priorities and projects include: working with the Clean Air Status and Trends Network (CASTNET), updating the Emissions Inventory, Smoke Management Plan development, continuing to test homes for radon and mitigating when necessary, indoor air quality assessments for Band Members, hosting and/or participating in local community events. Air quality issues we are most concerned with include mold in homes, smoke from prescribed burns and burning of trash at dump sites. We are always looking for partnership opportunities to gain and share knowledge and experience.





Sault Ste. Marie Tribe of Chippewa Indians

Kathleen Brosemer - Environment Program Manager

Program in Existence since – No formal program

Program Projects – Rn testing, IAQ, TV Review

Location - Sault Ste. Marie, Michigan

The Sault Tribe Environment Program does not yet do much work on air resources, though we have plans to expand. None of our staff has responsibility for air except for some work on indoor air quality and transportation issues through the IGAP workplan.

However, our service area includes airsheds that vary between pristine air quality (national forests in the eastern Upper Peninsula of Michigan) and quite impacted (coke ovens at Essar Steel, across the border in Canada). In addition, the bedrock geology of this area contributes radon gas to homes and other buildings throughout our region, woodstoves are common sources of heat, and housing is subject to mold, environmental tobacco smoke, and other contaminants.

The Sault Tribe Environment program provides radon test kits and mold advice, as well as outreach on all the indoor air quality issues for Tribal Housing and off-Reservation Tribal Members in the seven county service area. Mold in particular brings us many questions from residents who understand the health issues it presents. As a result, two of our staff have acquired certification from Building Science Academy, to assist our Members in making their homes healthier through proper air-sealing and humidity control techniques.

Essar Steel, the large integrated steelmaker in Sault Ste. Marie Ontario, presents challenges. Cokemaking in large coke oven batteries results in fugitive emissions of carcinogens benzene and benzene derivatives such as benzo-a-pyrene and other polyaromatic hydrocarbons along with PM_{2.5} that can lodge deeply in the lungs and create cancer risk. Despite this polluter located in Canada, we serve on its Citizens Liaison Committee and use that seat to bring a voice to upgrading their equipment. Essar has recently filed paperwork to replace their old coke oven battery with new technology, which can only improve matters.

Recent proposed industrial development in otherwise pristine airsheds of the eastern UP has led us to conclude that we must take steps to guard our ambient air quality throughout our service area. We are preparing to apply for an EPA air grant and studying what to do about Class I air designations and TAS for air. A bioethanol refinery was proposed a few years ago, to be sited directly adjacent to one of our largest housing sites. It was subsequently cancelled, however the process for its approvals made it clear that we need to be proactive in protecting our air quality and our community's health.

Similarly, a large coal-fired lime kiln is on the drawing boards for a nearby community. We want to be prepared and have the capacity to enter into consultations with Michigan and EPA on air quality issues should this ever reach a permitting stage.

We've spent the past three years growing the Environment Program with Great Lakes issues, terrestrial ecology, and Brownfields staff. Ambient air is next on the agenda.



St. Croix Chippewa Indians of Wisconsin

Sarah Slayton – Indoor Air Quality Specialist

Jonathan Knight – Outdoor Air Quality Specialist

Program in Existence since – 2004

Program Projects – IAQ, Ambient, EI, Mining

Location – Scattered throughout Burnett, Polk and Barron Counties, WI

St. Croix started its Air Program under CAA 103 grant funding in 2004. Through the years the Tribe has received intermittent funding to try to maintain an Indoor Air Program and in the years funding is not available, General Assistance Program (GAP) funds have been used to try to maintain very basic services to the Tribe. With the EPA funding, St. Croix has been able to provide indoor air quality assessments and education to our Tribal Members for several years.

Our Indoor Air Program staff continues a close relationship with our St. Croix Tribal Housing Authority, which has allowed a combination of resources and expertise to ultimately advance the Program with rehabilitation recommendations being implemented by the Housing Authority. The majority of concerns that we receive have to do with moisture issues resulting in mold concerns. As a result the main focus of the Indoor Air Quality staff has been home science relating to home maintenance and construction. With the help of our Housing Department we have been able to recently acquire a blower door system and use this to assess our homes more thoroughly. Several other areas are periodically called upon for testing including CO, radon, VOC's, ETS, sewer gases, asthma triggers, and pests.

With our current funding we have also begun to develop an Outdoor Air Program beginning with the development of an emissions inventory. Ambient air quality is an issue that has become a priority for St. Croix due to four major highways bisecting the Reservation along with burn barrels, unpaved roads and recent mining operations that are becoming closer and closer to the Reservation. Over the last year St. Croix's goal has been to protect and maintain pristine air quality for its Tribal Members by developing an Outdoor Air Program. With permission through ITEP, their program called TEISS has been downloaded and used to start to pinpoint the local emission sources near the Tribal lands for use in St Croix's Emissions Inventory. Once this inventory has been completed, it will be used to identify and keep track of the pollutants and polluters that have an impact on the ambient air quality for the Tribe. Frac sand mining is a concern for our Tribe due to the rapid increase in mining and the little research done on what it is and the environmental effects it has, as well as the limited permits that have been issued.

The CAA 103 funding has allowed programmatic growth by retaining qualified staff to serve as a resource for the St. Croix communities and to create a Programs active in Region 5 initiatives, such as participating in regional dialogue on conference calls, attending regional meetings, performing home assessments and working with the Tribal Housing Department by being a resource during the planning process to rehabilitate and promote healthy homes.

Please visit the St Croix Departmental Website
<http://www.stcciw.com/stcroixepa/staff.html>





Stockbridge-Munsee Community
A Band of Mohican Indians

Greg Bunker – Environmental Department Director
Program in Existence since – No formal program
Program Projects – IAQ assistance to Tribal members
Location – Bowler, WI

Currently the Stockbridge-Munsee Tribe does not have a formal Air Program funded by the EPA or by Tribal sources. We are however very concerned about what is in our air, both indoors and out. Informally we watch and monitor outdoor wood-burners and burning barrels are outlawed. At this time we have not received complaints about either of those sources. A monitoring program that took place in the late 1980s did not find any exceedance of the PM_{2.5} standards. Radon is a concern and measurements have been recorded in homes as much as fifteen times the action level recommended by the EPA.

The Environmental Department has assisted Tribal Members with IAQ concerns for well over a decade. Investigations for mold, radon and asbestos have been done with follow-up recommendations of how the buildings problems can be resolved. We have worked with Tribal Members in their private homes to plan remediation efforts for IAQ issues in order to prevent the negative health effects that may otherwise arise. We consider this to be a part of a good public health practice within the Reservation.





Upper Sioux (Dakota) Community - Pezihutazizi Oyate

Scott Wold – Environmental Department Director

Program in Existence since – No formal program

Program Projects – IAQ assistance to Tribal Members

Location – Granite Falls, MN

There is a growing need for the Upper Sioux Community (USC) to develop an Air Program to address indoor and ambient air quality. Some of the known industrial sources of concern are:

- Granite Falls Energy, LLC – Ethanol Plant
- Martin Marietta Aggregates, Yellow Medicine Quarry – rock mining and crushing
- Northern States Power/Xcel Energy – Minnesota Valley Plant coal-fired power plant (online 1953-2004, coal fly-ash and bottom-ash ponds removed 2010)

Each of these sources is within 4 miles of the USC.

The Big Stone coal-fired Power Plant, which has been online since 1975, is located about 70 miles upstream at the headwaters of the Minnesota River near Milbank, SD.

Our Community is surrounded by small-scale farming and industrial agriculture which emit several pollutants of concern including various odors, anhydrous ammonia, fine particulate matter, and pesticides. High winds in recent years have created ‘dust storms’ which turn the sky dark gray with the loose topsoil sediment.



There are indoor air quality concerns with radon, mold, and smoking. Some homeowners still use open burn barrels/pits within close proximity to the USC.

We have Community Members of all ages with asthma, allergies, and other respiratory disorders. Within the past several decades there has been an increase in the prevalence of these illnesses within the younger generations.





White Earth Band of Ojibwe (Gaa-waababiganikaag)

Monica Hedstrom – Environmental Affairs Manager
Program in Existence since – No formal program
Program Projects – Rn, Community Outreach & Education
Location – Mahnomen, MN

The White Earth Band of Ojibwe (Gaa-waababiganikaag), a sovereign nation, is entrusted to protect the land base, natural resources, treaty rights, and the culture and identity of our Members. The White Earth Reservation, located in Northwestern Minnesota, was established in 1867 by a treaty with the United States Government and the Mississippi Band of Ojibwe. Status as a Tribal Government provides the White Earth Reservation with broad powers, ensuring various immunities for the Tribe and its individual Members. The boundaries include 36 townships which encompass all of Mahnomen County and portions of Becker and Clearwater Counties. The area includes five incorporated cities and five major villages.

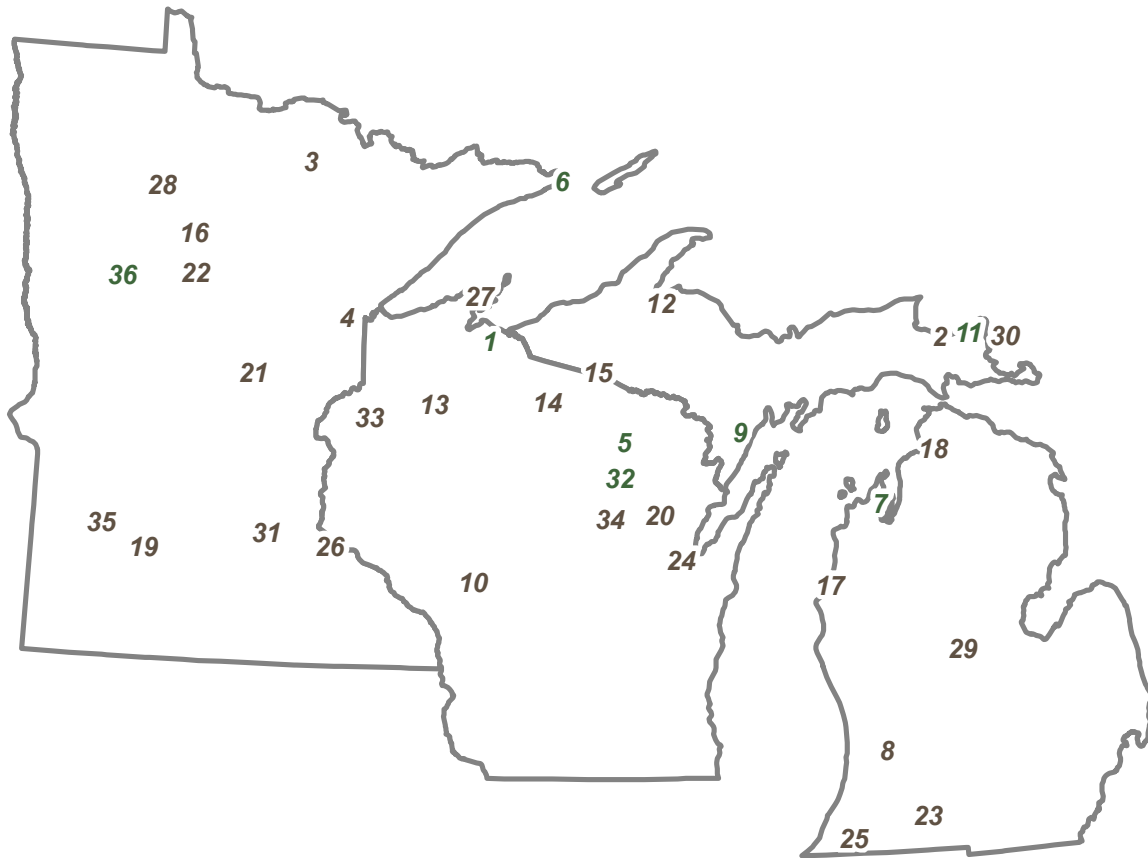
The Natural Resource Department was established to protect, manage and enhance the resources of the Reservation and is responsible for daily management and monitoring of Tribal resources. Air Quality is of great importance to the White Earth Band. IAQ, burn barrels, unpaved roads and wood smoke contribute to some of the concerns in White Earth. While a formal Air Quality Program hasn't been established, we have begun the process of building the foundation for the future.

White Earth Environmental Program Projects include:

- The development of an Air Quality Ordinance (EPA-GAP);
- Radon testing in privately owned homes (EPA-GAP);
- Outreach to Band Members regarding air quality and how it affects health; along with
- The White Earth Reservation Housing Authority radon testing and yearly inspections for IAQ concerns.



US EPA Region 5 Tribes



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| 1 Bad River Band of Lake Superior Chippewa | 19 Lower Sioux Indian Community |
| 2 Bay Mills Indian Community | 20 Menominee Indian Tribe of Wisconsin |
| 3 Bois Forte Band of Chippewa | 21 Mille Lacs Band of Ojibwe |
| 4 Fond du Lac Band of Lake Superior Chippewa | 22 Minnesota Chippewa Tribe (Consortia) |
| 5 Forest County Potawatomi Community | 23 Nottawaseppi Huron Band of the Potawatomi |
| 6 Grand Portage Band of Lake Superior Chippewa | 24 Oneida Tribe of Indians of Wisconsin |
| 7 Grand Traverse Band of Ottawa & Chippewa | 25 Pokagon Band of Potawatomi |
| 8 Gun Lake Band of Potawatomi Indians | 26 Prairie Island Indian Community |
| 9 Hannahville Indian Community | 27 Red Cliff Band of Lake Superior Chippewa |
| 10 Ho-Chunk Nation | 28 Red Lake Band of Chippewa Indians |
| 11 Inter-Tribal Council of Michigan, Inc. (Consortia) | 29 Saginaw Chippewa Indian Tribe |
| 12 Keweenaw Bay Indian Community | 30 Sault Ste. Marie Tribe of Chippewa Indians |
| 13 Lac Courte Oreilles Band of Ojibwe | 31 Shakopee Mdewakanton Sioux Community |
| 14 Lac du Flambeau Band of Lake Superior Chippewa Indians | 32 Sokaogon Chippewa Community |
| 15 Lac Vieux Desert Band of Chippewa | 33 St. Croix Chippewa Tribe of Wisconsin |
| 16 Leech Lake Band of Ojibwe | 34 Stockbridge-Munsee Community |
| 17 Little River Band of Ottawa Indians | 35 Upper Sioux Community |
| 18 Little Traverse Bay Bands of Odawa Indians | 36 White Earth Band of Chippewa |

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Region 5 Ceded Territories



Boundaries for Ceded Territories are for illustration purposes only. The boundaries were digitized at a very coarse scale. Not for legal use. Years may not be accurate.

Sources: C. Lippert, USG enWeb Archives, Library of Congress, Leech Lake DRM 12 17 2011, UTM Zone 15N