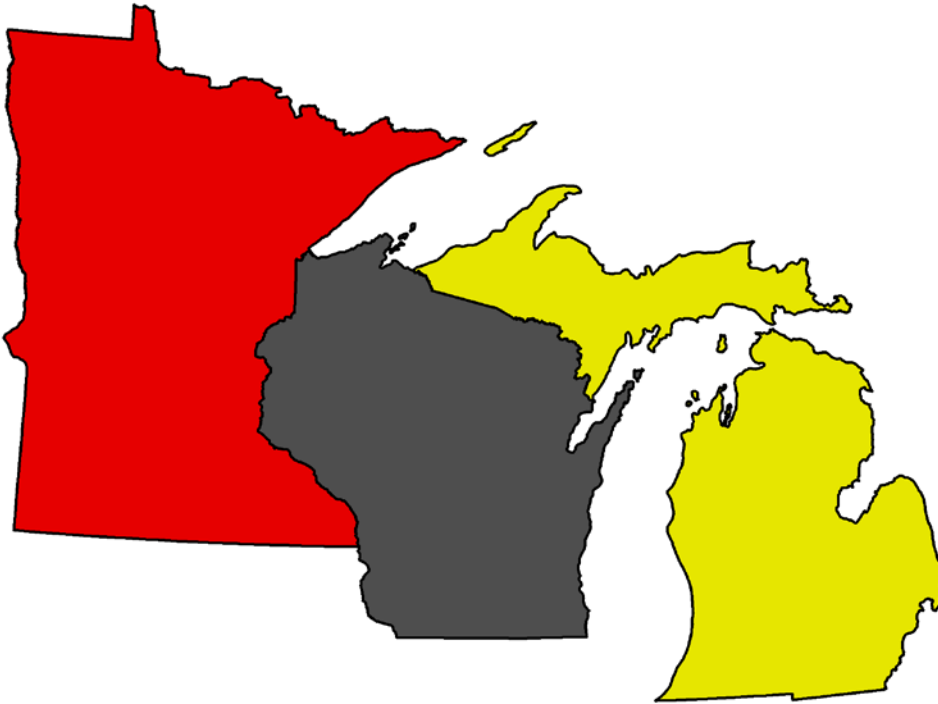


Tribal Air Resources Journal

*Accomplishments, Obstacles, Successes and Setback of
EPA Region 5 Tribes – Air Quality
2016 Edition Volume VIII*



The *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 in Indian Country. Environmental staff at these Tribes perform many tasks that are often carried out 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 they deem necessary. However, this also presents distinctive problems for 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 eighth year of publication, that this Journal will communicate the goals, achievements and issues in Indian Country 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.

In this issue:

LCO uses mold study to implement changes

Keweenaw Bay promotes Green Cleaning Kits

Lac View Desert establishing IAQ

Little Traverse installs 20Kw solar array

Fond du Lac and Bad River continue Class 1 redesignation process

Forest County establishes AQRVs

Ho-Chunk expands program to ambient air

Pokagon Band reviewing PSD permits

Leech Lake completes Small Sensor Study

Stockbridge plans for Air Program in 2017

Shakopee adds air component to GAP

Ozone at St Croix

All 35 R5 Tribes are represented in this Tribal Air Resources Journal

Preface

The Tribal Air Resources Journal has made great strides since 2008 when it was first brought forward as a concept to become what it has become today in its eighth edition. Tribes needed a platform to promote their accomplishments and successes, and share obstacles and setbacks encountered along the way not only to EPA, but across Indian Country, federal/state agencies and other areas of outreach and opportunity. It is the goal of the Journal to create awareness that: Tribes have viable Air/Environmental Programs and expertise, Tribes are leading cutting edge studies, and Tribes are great partners. Over the years the Tribal Air Resources Journal has expanded from journal entries to include location maps, contact listings and a Ceded Territory map. Each Tribal submission is capped at one page, thus creating a short summary of all the work they do and can focus only on 2016 or a specific project. Please contact the Tribe(s) with any questions or comments as this is what the Journal is designed for; to create awareness and conversation.

We, the Tribes of Region 5, thank you in taking the time to read this Journal and share the knowledge you have gained with others. With great pleasure we present you with the 2016 Region 5 Tribal Air Resources Journal.

-Region 5 Tribes

2016 Summary of Facts for EPA R5 Tribes

Clean Air Act Implementation

- 6 Tribes in R5 currently have Treatment as a State (TAS) status. One Tribe is pending for 2016. Another Tribe is in process of expanding their TAS with supplemental authorities. Of the 6, all TAS Tribes have CAA 105 reduced match and CAA 505a(2) for Title V notification. One Tribe has CAA 126 Authority and the pending Tribe will have a portion of 126 Authority when complete.
- 1 Tribe has Class 1 re-designation. 2 Tribes are in the final stages of Class 1 re-designation and plan to submit formal requests to EPA in Spring 2017. One Tribe has plans to initiate Class 1 re-designation in 2017. Multiple other Tribes are considering Class 1 in their long range plans.
- 3 Tribes in R5 are researching the feasibility of Tribal Implementation Plans.
- SIP Rule change for Wisconsin to comply with Forest County Potawatomi Class 1 Redesignation has been amended into the State SIP Rule for FCP Class 1 Area administration.

EPA Funding

- **Clean Air Act** – 16 Tribes requested \$1,855,732 for air quality project/program support from EPA. 16 Tribes were *partially* funded with R5 FY16 State and Tribal Assistance Grant (STAG) funds totaling \$1,385,048. EPA R5 Allocation was only \$1,227,8924 however, additional funds were identified to better address the Tribal need. 11 Tribes received CAA 103 grant funding and 5 Tribes received CAA 105 grant funding. 4 of the 5 105 grantees have incorporated their Air Grants into a PPG grant for FY16. R5 has implemented a 2 year workplan with a staggered funding structure for established air programs.
- **Tribal Radon SIRG Grants** – 2 Tribes were operating under Tribal radon grants in FY14. In FY15 EPA anticipates 3 grants of \$45,000 each to be available. Tribes are matching grants at 25% or 40% depending on the requirements of the Indoor Radon Abatement Act. Multiple other Tribes are utilizing their GAP, Tribal or other funding source to implement radon outreach, testing and mitigation projects.
- **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.
- **Small Sensor Study** – EPA OAQPS special project with a Tribe to assess the feasibility and usability of small sensors and their data.

Other Funding

- **Tribal Environmental Health Grants** – Cooperative Indian Health Service agreements to promote Reservation sustainability on 7 Reservations with benefits of air emission reductions.
- **Bush Foundation Grant** – Three Tribes in R5 working together to promote revitalization to traditional anishinaabeg connections to food. Practices have secondary air quality reductions.
- **American Lung Association** – Four Tribes working on IAQ projects with elders with COPD and children with asthma. Funding allowed for assessment and mitigation of the IAQ issues.
- **Supplemental Environmental Projects Funding** – Tribe in process to install a 1 megawatt photovoltaic solar array.

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

National/Regional Committees:

- Clean Air Act Advisory Committee (CAAAC) – EPA R5 Tribal Representative holds a voting seat and is a member of the Permits, NSR and Toxics Workgroup and the Port Emissions Workgroup
- Tribal Air Monitoring Support Center (TAMS) – EPA R5 has a steering committee representative
- National Tribal Air Association (NTAA) – Tribal Reps, serves as Vice Chair on Executive Comm.
- Conference of Radiation Control Program Directors (CRCPD) E-25 Committee Tribal Advisor
- National Tribal Science Council – EPA R5 Representative
- National Tribal Operations Committee (NTOC) –R5 Tribal Representatives
- Regional Tribal Operations Committee (RTOC) – Made up of R5 Tribes
- Minnesota Clean Air – Tribal participation
- LADCO- Technical Committee involvement

Workgroups:

- EPA R5 Tribal and EPA Mining workgroup
- Great Lakes Caucus of the Western Mining Action Network
- NTAA National Indoor Air Quality workgroup
- EPA R5 Tribal Indoor Air Quality workgroup
- National Tribal Air Association and EPA monthly policy/update conference calls
- NTAA VW Diesel Workgroup

Regional and National Meetings:

- Annual EPA R5 Tribal Air Meeting – held in conjunction with R5 Tribal Environmental Program Management Conference
- EPA R5 Tribal monthly air media conference calls
- Monthly NTAA/EPA/Tribal policy 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 – 2015 Forum hosted by the Nottawaseppi Huron Band of the Potawatomi

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

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Acronyms

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 (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 Station/Tower
MPCA	Minnesota Pollution Control Agency
NAAQS	National Ambient Air Quality Standard
NADP	National Atmospheric Deposition Program
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
SIRG	State and Tribal Indoor Radon Grants
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

Nathan Kilger, Air Quality Specialist
 Daniel Wiggins Jr, Air Quality Technician
 Program in Existence since – 2001
 Program Projects – PM_{2.5}, O₃, Hg, Met, Rn, IAQ
 Location – Odanah, Wisconsin

The Bad River Band started an Air Program under §103 of the Clean Air Act in 2001. The Band continues to be most concerned with the protection of human health and the sustainability of the natural environment found along the southern shore of Lake Superior.

The 16,000 acres of Kakagon and Bad River Sloughs, most recently designated a wetland of international significance by the Ramsar Convention, are a vital part of the Band's culture and subsistence. The water and air quality of the entire Bad River watershed is priority, both now and seven generations into the future.

Current PM_{2.5} and O₃ levels remain below the established NAAQS and it is the goal of the Bad River Band to protect and maintain pristine air quality. The first step towards toward this goal was achieved in 2005 when the Bad River Band received Treatment as a State (TAS) for air quality. The Bad River Band is currently working towards redesignating the Reservation from Class II to Class I as the next step in protecting not only the plant and wildlife communities that sustain the Band's cultural heritage, but also the health of the Tribal Members that call this land their home.

Ambient air monitoring has included both short and long-term projects, many made possible with support from partners: Wisconsin DNR, USGS and Northland College. Several recent and on-going projects have focused on atmospheric mercury.

There are also a multitude of indoor environmental issues due to improperly built structures, lack of maintenance and an environment that contributes to moisture and mold issues. There are nearly 500 Tribal homes located within the Bad River Reservation, including 171 housing units under the oversight of the Bad River Housing Authority. The Bad River Tribe receives State Indoor Radon Grant (SIRG) funding, which is valuable in continuing to monitor Tribal homes for high levels of indoor radon and providing services to help reduce radon levels when found above the USEPA's action level. The Air Office continues to work with the Bad River Housing Authority, Health & Wellness Center, and other Tribal Departments to address IAQ issues within Tribal housing and buildings.

Find more information on Bad River's Class I and Air Quality Program at: <http://x.co/BRair>





Bay Mills Indian Community

Dwight Sargent, GAP Coordinator
Program in Existence since – 1991
Program Projects – Sec 109, 319, IAQ
Location – Brimley, MI

The Bay Mills Indian Community is located in the northeastern Upper Peninsula of Michigan approximately 15 miles west-southwest of Sault Sainte Marie, MI. This area is within the North Lakes and Forests Eco-Region as defined by the EPA.

The people of the Bay Mills Indian Community have for generations relied heavily on their natural resources as a source of food and commerce. With this, there is a strong commitment to protect and enhance these resources. Currently the Tribe is running a very successful Clean Water Act Section 106 and 319 in an effort to increase the health of the aquatic communities as well as assisting with Indoor Air Quality efforts on the Reservation.

Visit the Bay Mills Indian Community Website www.baymills.org





Bois Forte Band of Chippewa

Vacant – Environmental Health Specialist

Program in Existence since – 2002

Program Projects – IAQ, Asthma Awareness

Location – Nett Lake and Vermillion (Tower), MN

Currently the Bois Forte Environmental Services Department no longer has an IAQ Program. Bois Forte is in the process of reevaluating and seeking out a means to reinstate the IAQ Program. The need for this Program is still prevalent for Bois Forte. Bois Forte was a trail blazer in this area. By pursuing this funding, Bois Forte can once again reach out and help those in the community who are struggling specifically, with asthma issues.

We would once again be working closely with the Bois Forte Housing Department. This work would not only be with the housing residents, but also with private homeowners. The approximate amount of homes that may need this assistance is 350.

In the past, within EPA R5, technical assistance to other Tribes was provided. The main goal of our Department was to assist with assessments and provide recommendations to remedy indoor issues. Many of the issues that trigger or exasperate asthma that assistance was provided for were HVAC, moisture and mold, to CO and filtration problems, ventilation along with pest concerns, fine particles and dust.

Although Bois Forte does not have the IAQ Program, the Environmental Services Department still provides education and awareness to the communities. The Department does receive continued calls regarding the above mention issues and does help with indoor air issues. It is anticipated that in the future, funding will be secured to assist the communities to significantly increase and enhance services once again to our communities.



Nett Lake – Spirit Island



Fond du Lac Band of Lake Superior Chippewa

Joy Wiecks – Air Coordinator

Phil Defoe – Air Quality Technician

Program in Existence Since - 1999

Program Projects –Class 1, O₃, Hg: wet & leaf litter, PM_{2.5}, Permit & Regulation Review

Location – Cloquet, MN

The Fond du Lac Band was the first Tribe in EPA R5 to have a dedicated Air Program and the first to be granted Tribal Authority to administer part of the CAA in 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 draft permits and 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 R5. Several mining projects and related industries are currently under review that will impact air quality in EPA R5, 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 Coordinator served three terms on the Clean Air Act Advisory Committee as a voting member and currently serves as the R5 alternate on the NTAA Executive Committee. In order to assess the effects of air pollution on the Reservation, the air program operates an ozone monitor, a fine particulate monitor, and a mercury wet deposition monitor. The Program has also collected data on leaf litter mercury dry deposition for four field seasons, with one additional season planned. We hope that this data can help the scientific community study and predict the fate of mercury emissions in the environment.

The Band continues to pursue Class I redesignation of the Reservation. Once approved by the EPA, we will be able to protect the Reservation's air quality to the same degree as our National Parks, National Forests, and Wilderness Areas. The Band sees this as an important step in keeping our Reservation's air quality clean and in protecting other resources, such as Reservation water quality and local flora and fauna. The Band is working to identify ways to improve energy efficiency in Reservation-owned buildings through benchmarking. The Band recently finished installing a 1 megawatt photovoltaic installation in cooperation with Minnesota Power which provides clean power to the Band's Black Bear Casino Resort. The Band has also instituted a no-idling policy for Reservation school buses which will help protect the health of our schoolchildren.

The Band has also been active in addressing indoor air quality. In the past, we have run lead abatement and radon assessment projects on the Reservation. After a major flooding event in June of 2012, Environmental staff were instrumental in helping with housing clean-up and mold prevention. Staff also distributes carbon monoxide sensors as needed.





Forest County Potawatomi Community

Natalene Cummings – Air Resources Program Manager

Joe Cebe – Air Monitoring Specialist

Program in Existence since – 2002

Program Projects – NO_x, O₃, SO₂, Acid & Hg dep, PM_{2.5}, Met

Location – Crandon, Forest County, Northeastern Wisconsin

The FCPC Ambient Air Monitoring Program instituted in 2002 provides important information that establishes baseline air quality, air pollution trends, and supports the management of the Class I airshed and protection of Air Quality Related Values (AQRVs) through the establishment of impact thresholds. The extensive monitoring program includes analyzers for O₃, SO₂, vaporous Hg, PM_{2.5}, and collectors for acid and Hg deposition. FCPC's Air Quality Specialist sits on the Tribal Air Monitoring Services (TAMS) Steering Committee as a representative for R5 Tribes.

In 2008, the FCPC Reservation was redesignated as a Class I area and in 2010 the FCPC obtained TAS. Having Class I and TAS authorities enables FCPC to participate in the air pollution permitting process and to comment on permits. These delegations come with a lot of responsibility and a need for Tribal Air Staff to be knowledgeable and capable of reviewing the complexities of an air pollution permit application.

Under its Class I authority, FCPC has established air pollutant thresholds for the Tribe's AQRVs - vegetation, water quality and visibility. These thresholds are used to determine if the proposed emissions from a new or modified facility may have an impact on the AQRVs. FCPC monitors for pollutants that could impact these AQRVs, and in the fall of 2016 FCPC joined the IMPROVE network to evaluate visibility impacts in the region.

FCPC began a strong push towards achieving energy independence and carbon neutrality in 2007, followed by the formation of an in-house Energy Work Group. FCPC conducted several energy audits at its government and enterprise facilities that resulted in retrofits and upgrades to lighting and HVAC systems. Additionally, the government switched to a four-day work week to reduce CO₂ emissions from employee vehicles by an estimated 170 tons per year. A 2.0 mW anaerobic biodigester was built with DOE grant funds on FCPC property located in Milwaukee to offset energy use at its Potawatomi Bingo Casino and more recently, a number of solar panels have been installed at Tribal facilities to offset coal-fired power. In the last year, an Energy Strategic Plan has been drafted and is awaiting approval. The Climate Change Adaptation Plan is on schedule for completion in 2017 and will guide FCPC's continued efforts towards being carbon neutral and reducing climate change impacts.

Installing equipment for the IMPROVE visibility monitor.





Grand Portage Band of Lake Superior Chippewa

Vallen Cook – Air Quality Specialist

Program in Existence since – 2003

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

Location – Grand Portage, MN

The Grand Portage Band of Chippewa Reservation is located in the most northeast point of Minnesota. We are concerned with the health and wellbeing of our people. During June of 2015 we presented at our local health fare on the subjects of indoor air quality, ambient air monitoring, and the effects of both on respiratory diseases such as asthma. We talked about the Hazecam and our Beta Attenuation Monitor (BAM) explaining the importance of what they measure for our health and the environment we live in. Our Environmental Department has been able to teach what we do in our jobs to students in grades ranging from kindergarten to fifth grade. The lessons that we teach for air quality have been about asthma, different types of pollution, haze and the tools we use.

In 2012 we applied for Treatment as a State (TAS), the process was held up due to staff changes. We have been in the process of answering questions posed about our application for the last year. We are in the final steps of obtaining TAS with the goal being this next year.

This last year we were funded for and installed a new Beta Attenuation Monitor. This helped upkeep the data in our area for particulate matter. Our old BAM was donated to the Leech Lake Band of Ojibwe to assist their program. Leech Lake has provided assistance to us in the past with training and answers to questions about developing an air program.

Over this last year we have been making progress with our Indoor Air Quality program. We have been partnering with our Housing Authority and with our staff housing to do home air assessments. Also with our staff housing we are going to begin doing pre-assessments on homes to see the how the home fares over time. During the fall of 2015 into late winter of 2016 we conducted a smoking study on our casino. The study was to measure ultrafine particulate levels, how many people were in the casino at a given time in the smoking vs. non-smoking section, how many cigarettes on average were smoked and whether or not the customers would prefer a non-smoking section. This was the second of three studies I am going to conduct as our casino is under construction. In two years when our casino is complete I would like to see if the results could be improved upon.



*High Falls, Grand Portage
Highest waterfall in Minnesota managed
by the Grand Portage Band*





Grand Traverse Band of Ottawa & Chippewa Indians

Kris Ingrao – Environmental Service Coordinator

Program in Existence from - 2002 to 2010

Program Projects – O₃, IAQ Inspections, Hg, Emission Inventories, Diesel Retrofit, NADP Monitoring, Rn, Burn Barrels, & Educational Outreach

Location – Peshawbeston, Michigan

The Grand Traverse Band of Ottawa & Chippewa Indians (GTB) is located in northern lower Michigan, in Peshawbeston, Michigan. GTB's Natural Resource Department (NRD) Environmental Program was established on October 1, 1997 through grant funding from the U.S. EPA and has grown to include programs for solid waste management, pollution prevention, watershed planning, great lakes management planning, environmental health, groundwater and surface water quality protection, seventh generation initiative program, wetland protection, nonpoint source pollution, soil erosion permitting, CERCLA Section 128A (brownfields, Phase 1 contamination surveys, environmental response), and green team. GTB's Environmental Program's goal is to restore and protect the natural systems upon which life depends including the integral relationship between these natural systems and the health and welfare of GTB members in the six-county service area, and arguably the 1836 ceded territory. This mission is consistent with the GTB Constitution, which states, in part, that the Constitution was adopted "to conserve and develop our natural resources."

In 2002, GTB established an Air Quality Program under the CAA 103 grant funding. The Air Quality Program began with National Atmospheric Deposition Program (NADP) Monitoring and during the eight years of existence added ozone monitoring, household radon testing, indoor air quality inspections of Tribal residences and governmental offices, mercury deposition monitoring, emissions inventories, diesel retrofit training, creation of a burn ban ordinance, and educational outreach to the Tribal Membership and the local public. The GTB Air Quality Program partnered with the Michigan Department of Environmental Quality, NADP staff, Inter-Tribal Council of Michigan, and the U.S. EPA. In 2009, GTB was working to secure Treatment as a State (TAS) and CAA 105 funding. In 2011, GTB had to discontinue its Air Quality Program based upon the fact that the partial funding available under the CAA 103 was insufficient to fully staff and administer an Air Quality Program. Although in 2015, GTB re-affirmed air quality as a Tribal priority in 2015-2019 GTB Tribal Environmental Agreement, we still lack the funds or the staff for a program. In support of the importance of Air Quality and other Tribal programs, GTB is working to donate our remaining monitoring equipment to other Tribes.

For further information, please visit our websites:

<http://www.gtbindians.org/default.asp>

<http://www.gtbindians.org/naturalresources.asp>

<http://www.gtbindians.org/environmental.asp>

GTB NRD Mission: To protect and enhance the natural resources and environment entrusted to us by the Creator & guaranteed by treaty rights, for managed & respected utilization by the Anishinabek people for past, present, and future generations.





Hannahville Indian Community

L. Scott Wieting – Environmental Specialist

Program in Existence since – 1993

Program Projects – Radon Testing, Indoor Air Quality Education

Location – Wilson, Michigan

The Hannahville Indian Community (Community) began its Indoor Air Quality Program in 1993, through the Inter-Tribal Council of Michigan/EPA Environmental Multi-Media Program which provided environmental services to 5 federally recognized Tribes within Michigan. These activities included radon testing of several Reservation homes, along with the development of information fliers which include environmental tobacco smoke, indoor wood burning, and radon. In 1997, the Community received its own EPA General Assistance Program (GAP) grant which included the continuation of indoor air quality efforts within the Hannahville Reservation.

The primary focus within the air portion of the GAP Program is radon testing in governmental buildings and Tribal residences. The Hannahville Reservation, which is mostly located in Menominee County, Michigan, is in an area of moderate potential for radon levels above 4.0 pCi/L (EPA's Map of Radon Zones – Michigan).

The Hannahville Environmental Department began testing governmental facilities in 1998. These facilities include Tribal Administration, Nah Tah Wahsh Public School Academy, Visions Center and the Tribal Health Center. The following year, voluntary radon testing was made available to Tribal residences. The Hannahville Environmental Department has continued to offer Radon testing through the GAP Program in most years since.

The Community coordinates some of its Radon Program activities with the State of Michigan, which provides Radon test kits to the Community. The State also provides education and outreach materials associated with Radon awareness and the promotion of testing homes.

The Community is committed to investigating and remediating indoor air quality issues in order to protect human health. Our Program efforts continue to provide information to Tribal Managers and residents on air quality risks so that they can make informed decisions on how to improve or maintain healthy indoor air quality.





Ho-Chunk Nation

Matt Malimanek, Air Quality Specialist

Program in Existence since – 2006

Program Projects – Ambient Air Monitoring, Rn, Asthma, & IAQ

Location – Black River Falls, WI

The Ho-Chunk Nation (Nation) is currently expanding its Air Quality Program by adding ambient air monitoring to its existing indoor air quality components. Tribal funding for the development of two ambient air monitoring stations was approved by the Nation's legislature in July, 2016. Each station will gather regulatory PM data. Public concern over possible health impacts attributed to the exponential growth of Frac Sand Mining activity near Ho-Chunk lands is the motivation for the establishment of the Nation's ambient air monitoring capabilities. The Nation has numerous Tribal Members that live within a mile or less of large Frac Sand Mines. Since very little research has been conducted on the health impacts of nearby Frac Sand Mining Operations, these monitoring sites will be focused on determining the effects that the mining is having on air quality.



Photo: A Frac Sand Mining Operation in the background of a small residential area. The type of sand being mined for use in hydro-fracking oil pumping operations is made up of silica. The inhaling of silica sand is known to cause an incurable and sometimes fatal lung disease called silicosis.

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 action level. The Nation currently provides radon testing services upon request and performs educational activities during Health Fairs and at General Council. The Nation also 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.



Inter-Tribal Council of Michigan, Inc.

Travis Maki – Environmental Specialist

Program in Existence since – 2000

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

Location – Sault Ste. Marie, 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 Quality's monitoring network. As part of the work with the MDEQ, ITCMI is uploading data to the MiAir Website.

The ITCMI staff are 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 Indoor Air Quality projects.

The ITCMI air monitoring project is funded through a CAA Section 103 grant. 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

www.itcmi.org

MiAir Website

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



Keweenaw Bay Indian Community

Katherine Kruse – Environmental Specialist
Program in Existence since – 2012

Program Projects – IAQ, Education and Outreach

Location – L’Anse/Baraga, 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 fifth year of Tribal Air Program funding. Beginning in early 2016, KBIC began offering Indoor Air Quality Assessments to all residents living on the L’Anse Indian Reservation. This Program has been well received by area residents. Working with the American Lung Association, KBIC has been able to provide products to residents that have asthma to help improve the quality of their indoor air. Products such as: vacuum cleaners, air cleaners, furnace filters and cleaning supplies have been given to homes.

Education has been an important part of our Air Quality Program. Along with providing IAQ assessments to residents, KBIC also offers “Green Cleaning Kits” to all community members during the assessment. This kit helps in the reduction of commercial cleaning products that could potentially trigger breathing attacks. The Green Cleaning kit along with educational pamphlets aid in raising awareness to the dangers that could be lurking in our homes.

KBIC residents have identified burn barrels, wood stoves and mold as areas of concern in regards to air quality. Our Air Quality Specialist attends outreach events throughout the year to provide materials to residents that address these problems. KBIC will continue building capacity to provide a well-informed Tribal Air Program for our community.

For more information regarding the KBIC Air Quality Program, please visit:
<http://nrd.kbic-nsn.gov/air-quality>



Green Cleaning Kits and products provided by the American Lung Association



Lac Courte Oreilles Band of Lake Superior Chippewa

Brett McConnell – Environmental Specialist

Program in Existence since – 2000-2005

Program Projects – Radon Monitoring/Mitigation, NADP Network, Mold

Location – Northwest Wisconsin

Over the past several years the Lac Courte Oreilles Housing Authority (LCOHA) has taken numerous steps to try and improve the indoor air quality of its rental units. The efforts have been targeted towards mold and radon mitigation efforts.

In late 2014, LCOHA initiated a study in all of its housing rental units to determine the amount of mold infestation that is present. This study was used to secure a grant through the Department of Housing and Urban Development for mold remediation. The funding is minimal but it has enabled LCOHA to identify problem areas and correct the structural issues creating an environment where mold can grow. One of the pieces of equipment that has been installed that improves the quality of indoor air is a Heat Recovery Ventilator (HRV). A HRV is ideal for homes located in colder climates, where there is excess moisture during the heating season which the system discharges. A HRV system supplies continuous fresh air from outside in the house. The heat recovery core of the unit transfers a portion of heat in the stale air being exhausted to the fresh incoming air from outside before being distributed throughout the house. The result is a continuous supply of fresh air, without unpleasant drafts, and increased comfort for the home occupants.



HRV system



Radon Fan in Attic



Radon Sump Pump Mitigation

The LCOHA has also sampled its units for radon and when higher than acceptable readings are found a passive radon mitigation system is installed that draws air from the perimeter drain tile and exhausts it to the outdoors. This is only a sample of the many structural and HVAC corrections being made to improve the indoor air quality, energy efficiencies and overall livability of its rental units.



Lac du Flambeau Band of Lake Superior Chippewa Indians

Vacant – Energy/Air Quality Program Coordinator

Program in Existence since – 2008

Program Projects – Energy Upgrades, Capacity Building, IAQ, Education and Outreach

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 PM_{2.5} concentration study, indoor air quality assessments, mold remediation, as well as educational programs and events.

The Lac du Flambeau Indian Reservation's air quality is relatively clean and has not been subjected to significant industrial pollution sources locally. This provides for a healthy environment for community members and the natural resources of the Tribe. In recent years, the Lac du Flambeau Air Quality Program has worked to maintain this clean air for the Tribe against potential harmful threats to this resource from off of the Reservation.

The Tribe will continue to value protection of its natural resources highly, with the Air Quality Program being a key component to this commitment.

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





Lac Vieux Desert Band of Lake Superior Chippewa

Beth Spedowski – Environmental

Program in Existence – 2015

Program Projects – IAQ

Location – LVD Reservation, Watersmett, Michigan

The Lac Vieux Desert Band of Lake Superior Chippewa Indians is a federally recognized Indian Tribe located in the Upper Peninsula of Michigan, near the Wisconsin border. Lac Vieux Desert has 721 enrolled members. The Reservation is composed of 1140 acres of fee land and 339 acre held in trust by the United States Government for the community. The 9-member council is an elected body, whom is selected through the election process to govern the Tribe.

The Lac Vieux Desert Environmental Department is currently in the process of establishing an Indoor Air Quality Program. Upon course completion and approval of the QAPP from EPA Region 5, the Air Program will be under way. Once approved, the Tribe will serve 50 homes within Reservation lands.

Some common concerns with in the Tribe include; sickness among youth and adults, mold issues within homes, and radon. The Tribe has tested for radon in the past through the Housing Department, but there needs to be a new test done on all Tribal homes.

Day of Fishing On Lake Lac Vieux Desert





Leech Lake Band of Ojibwe

Carma Huseby – Air Quality Specialist

Brandy Toft – Environmental Deputy Director

Program in Existence since – 2001

Program Projects – Hg (wet & leaf), IAQ, Met, PM_{2.5}, Rn, Diesel, Toxics, Solar, Permits/Rules, Mining, Green Initiatives, Forecasting, etc...

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 (LLAP) to protect human health, cultural and trust resources. Progress is made by monitoring, implementing voluntary programs, IAQ assessments, commenting on air rules/permits/policy, while providing education/outreach to the community.

The LLAP continues to manage an ambient air monitoring site where we collect background data for PM_{2.5}, Hg (wet deposition and leaf litter), and meteorology. In 2015-2016, a small sensor study in partnership with Sonoma Technology and EPA was completed. The study compared data between our FRM PM_{2.5} monitors and three small PM sensors. The study was released October 2016 and the information has been presented six times at various venues indicating the level of interest. Contact the LLAP for a copy of the study. This project strengthened partnerships and provided insight on the usefulness and viability of small air sensors in Indian Country.

Another focus of the LLAP in 2016 was finalizing the American Lung Association (ALA), Leech Lake Housing Authority and Community Services partnership for two IAQ projects. 15 homes for elders with COPD and 13 asthmatic homes with 18 total children were remediated. LLAP completed IAQ assessments in these homes to identify issues and LLHA or Community Services completed the remediations to reduce lung alignment triggers and create a healthier living space.

The LLAP continues our sustainability efforts by working to install 200Kw solar PV on the Reservation and implementing a large 22 building Guaranteed Energy Savings Project that could save LLBO over \$900,000 in energy savings and 9,839 metric tons of GHG emissions per year.

Other work in 2016 continues to protect and maintain LLBO's air quality as Leech Lake is surrounded by 24 Title V facilities of varying industries: coal fired EGUs, wood/paper, waste incinerators, natural gas compressor stations, and an additional six mining facilities clustered within or near our 1855 Ceded Territory. The LLR has approximately 68 minor sources that exist within the Reservation boundaries. With the review of environmental impact statements, Title V and minor permits on or near the Reservation it is important to understand the complexities of our airsheds and impacts upon them. LLBO received TAS for CAA 105, 505a in October 2007.

LLAP is engaged on local, regional, and national venues (NTAA Vice Chair) and shares that information in the form of data, education, and outreach *to* and *for* Indian Country.

Currently, the LLAP is funded by: EPA R5 105 Air grant and R5 SIRG Tribal Radon grant. 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.

Sign up for LLAP's Air Quality Forecasting Enviroflash at <http://www.enviroflash.info/signup.cfm>

Small Sensor Study



Mercury Leaf Litter Study



Solar PV installation





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 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 the USEPA. 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. This collaborative relationship benefits all involved. 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 of MI 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's Home Page
www.lrboi-nsn.gov



PM 2.5 Audit of LRBOI monitor by EPA



Little Traverse Bay Bands of Odawa Indians

Jon Mauchmar – Environmental Specialist – Air Quality

Program in Existence since – 2004

Program Projects – Climate Change Adaptation, Energy Efficiency,
Capacity Building and 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 in 2007 to a full-time Environmental Specialist. Program staff drafted an Emissions Inventory (EI) in 2007-2008, from 2009-2011 the program collected PM_{2.5} data and ozone monitoring occurred for the 2012 season. An updated EI was completed in 2013.

Climate change adaptation and mitigation is a growing concern for LTBB. Our Air Quality Program has been a leading supporter of adaptation and mitigation efforts. This year, we advanced the Tribe's renewable energy resources by using BIA funds to have a 20 kW solar array installed at the Tribal fish hatchery. The system will help native fish production while preventing the emission of ~ 316 tons of carbon in the first 25 years of operation. The Air Program also aided in the completion of level 2 energy audits at the Tribal Government Center and Judicial Buildings. Most LTBB owned/managed buildings were constructed over ten years ago and have never been through a complete energy audit. Currently, several lighting and HVAC retrofits are being planned. The retrofits will eventually pay for themselves and allow LTBB to help reduce emissions. Currently, the Tribe is using Energy Star Portfolio Manager to track energy use, cost, and emissions to document improvements in the future. Solar power and energy efficiency is part of the LTBB strategy to mitigate and adapt to climate change. This will help the Tribe meet its Kyoto Protocol resolution of 25% energy use reduction by 2020.

Indoor air quality (IAQ) will be receiving more focus and capacity building in the next few years. The goal is reducing asthma and allergies in the LTBB community. We currently offer free short term radon testing kits and would like to expand the Program to provide IAQ home assessments.



20 kW solar array at the LTBB walleye rearing ponds.



Lower Sioux Community

Deb Dirlam – Director of Environmental Programs

Amanda Wold – 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. 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 establishments. Approximately 982 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.

The Lower Sioux Community does not currently have an Air Grant through EPA. In 2016, the Lower Sioux Community did establish an Energy Advisory Committee to assist in program development including advising on topics such as Climate Resiliency.

The LSIC was also awarded a BIA grant in 2016 to commence a solar feasibility study which is expected to be completed sometime in 2017.

Air Projects/Programs for FY 2016-2017

- Host the American Lung Association for Tribal Environmental Action for Children’s Health Training attended by 6 staff including Health, Housing, and the Office of the Environment as well as two Elders.
- Completing In-Home Assessments of Children with Asthma
- Open Burning, Barrel Burning, Fire Prevention, Permitting
- Mold/Moisture Inspections
- Education on Carbon Monoxide, Rn, Mold/Moisture, Asbestos, Pests, Weatherization, Radon, fish consumption (due to mercury levels in the Minnesota River).



2016 Lower Sioux Health Fair
Air Quality Booth



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

Shawn McKenney – Environmental Specialist

Program in Existence since – 2003

Program Projects – Conservation Incentive Program, Emission Inventory, IAQ, Alternative Energy, Radon, Climate Change Adaptation Planning

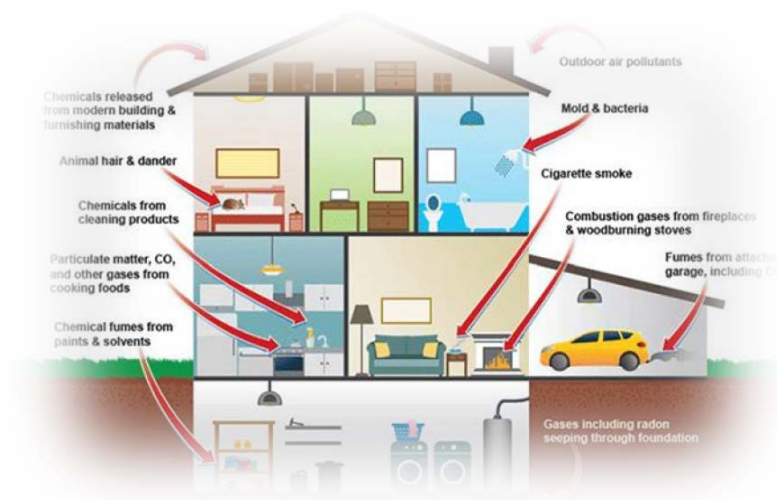
Location – Shleboville, MI

The Match-E-Be-Nash-She-Wish Band of Potawatomi Indians (Gun Lake Tribe) is a federally recognized Indian Tribe located in southwest Michigan, approximately 25 miles south of Grand Rapids. The Gun Lake Tribe has 451 members currently enrolled. The Reservation is composed of 359 acres held in trust by the United States Government for the community and possesses no exterior boundary.

The Gun Lake Tribe recently adopted an Indoor Air Quality/Quality Assurance Plan to provide indoor air quality audits to improve the overall environmental health of Tribal citizenry. The Indoor Air Quality Program, which is funded by EPA GAP, includes the following testing parameters: particulate matter, relative humidity/dew point, mold/radon, moisture testing throughout the home, and infrared readings. A general home health assessment is reported to each citizen at the conclusion of the audit.

The Gun Lake Tribe has also adopted air quality cost-share incentives into the Gun Lake Tribe's Conservation Incentive Program. These incentives assist Tribal citizens to address air quality concerns noted within their indoor air quality audit. These cost-shared air quality improvements include: bathroom ventilations fans, CO₂ monitors, crawls space insulation and vapor barriers, windows, de-humidifiers and other home retrofits. In fiscal 2016 over 41 Tribal Members participated in the Conservation Incentive Program.

In 2017, the Gun Lake Tribe Environmental Department will begin an ambient air quality assessment to address air pollution within the Tribe's Reservation boundaries. The Tribe is also beginning the implementation of its climate change adaptation plan which was adopted in in late 2015. This includes low-emission/hybrid vehicle purchasing policies, solar feasibility studies, and increasing energy efficiency practices within Tribally owned buildings.



Graphic Credit:

http://www.epa.gov/risk_assessment/expobox/media/air-so.htm



Menominee Indian Tribe of Wisconsin

Jeremy Pyatskowitz – Environmental Services Director

Program in Existence – 2000 to 2010

Program Past Projects – Rn, Hg, Acid Rain

Location – Keshena, WI

The Menominee Indian Tribe of Wisconsin (MITW) is a federally recognized Indian Tribe that inhabits 235,000 acres in northeastern Wisconsin which is 95% forested. The population within the Menominee Reservation is 4,857 (2000 U.S. Census).

The Menominee Tribe originally started the Air Program in 2000 to monitor for acid rain and mercury. The Program was funded by a R5 103 air grant. We participated with the National Atmospheric Deposition Network (NADP) for laboratory work and reporting, after 2006 we no longer participated in the acid rain monitoring due to funding cuts, but we were able to keep monitoring for mercury until March 2010. Mercury was continued longer because we filled a gap within the state for collection. One of the reasons the air funding was cut was because there is not a huge issue with acid rain or mercury levels within the Reservation. There is no industry on the Reservation except a Tribally operated sawmill in the Village of Neopit.

Radon testing back in the 1980's and 1990's showed many of the homes on the Reservation with elevated radon levels. In 2009, the Tribe received a grant to do further radon testing on the Reservation. Our Program provided technical assistance to homeowners who wished to install remediation systems. With the grant we were able to test many of the Tribes housing units and remediation systems were then installed by another agency within the Tribe.

At this time there is not an Air Program within the Reservation, however the Tribe is considering obtaining TAS Authority under CAA Section 105 and will be considering applying for funding to meet this goal.



Keshena Falls





Mille Lacs Band of Ojibwe

Charles Jirô Lippert – Air Quality Specialist

Program in Existence since – 1996

Program Projects – O₃, 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 received assistance from CAA 103 grant funding through EPA. From our humble beginnings of CO monitoring, we moved to monitor for PM₁₀, then PM_{2.5} and 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. 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, work on air quality aspects of climate change, sustainability projects for energy and food independence, and waste reduction. In addition, the Tribe's Air Quality Program works closely with the Tribe's Public Health, Housing and Administrative offices to assess and monitor 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, MPCA, Minnesota Department of Health, and the Band's Air Quality Program conducted a poly-aromatic hydrocarbons (PAH) in the Phillips Neighborhoods, from 2013–2016. Additionally, since 2009, Band has been working with Environmental Initiative's Clean Air Minnesota, and MPCA's Commissioner Environmental Justice Task-force 2014–2016 to guide the State on its future air quality policies. Band is currently under EPA review for its application for TAS, will be seeking 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. Applications to the US Department of Health and Human Services, Administration for Native Americans (ANA) grant were successfully submitted but were not selected in 2012–2014 to help restore past monitoring projects for the purposes of supporting the near-future Class I redesignation.

Mille Lacs Band of Ojibwe

43408 Oodena Drive

Onamia, MN 56359

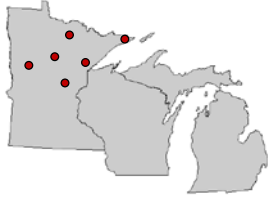
<http://www.millelacsband.com>

Chief Executive: Melanie Benjamin

Commissioner of Administration: Catherine Colrud

Executive Director of Natural Resources: Susan Klapel

Director of Environmental Programs: Perry Bunting



Minnesota Chippewa Tribe

Michael Northbird - EPA GAP Coordinator/Environmental Program
Program in Existence since – 2015

Program Projects – In development

Locations – On and Off the: Leech Lake, White Earth, Bois Forte,
Fond du Lac, Mille Lacs, and Grand Portage Reservations in Minnesota

The Minnesota Chippewa Tribe (MCT) is located throughout northern Minnesota and is a union of six (6) constituent Reservations adhering to the MCT Constitution. The Preamble states “in order to form a representative Chippewa Tribal organization, maintain, and establish justice for our Tribe and to conserve and develop our Tribal resources and common property; and to promote the general welfare of ourselves and descendants”. These Reservations are as follows: Leech Lake Band of Ojibwe, White Earth Nation, Bois Forte Band of Chippewa, Fond Du Lac Band of Lake Superior Chippewa, Mille Lacs Band of Ojibwe, and Grand Portage Band of Lake Superior Chippewa.

The MCT Environmental Program (MCT EP) is in the process of developing core Environmental Programs utilizing EPA grants. The Programs are being developed to ensure protection of MCT land both on and off the 6 component Reservations, as well as, strengthen the Tribes’ sovereignty overall. This requires protecting the quality of the water, air, and land resources by supporting the basic infrastructure of the MCT EP. While protection of air, water, and land resources are a priority, the Environmental Program also intends to assess a wide variety of potential project areas such as waste management, pollution prevention, emergency response planning, water quality management, air quality management, and education and outreach activities. Baseline needs assessments, GIS mapping, and an inventory of resources is currently in the process as well.

The MCT EP is committed to identifying which Air Programs will be most beneficial to the Tribe. Upon collecting pertinent information, through technical assistance from other Tribes and EPA, the MCT Tribal Executive Committee will determine what further action(s) will be implemented. Once a determination has been made, then the MCT EP will apply for the specific resources necessary to ensure all actions are taken, in order to protect air quality under MCT jurisdiction.



Hosted the Fall 2016 MNTEC Meeting



Nottawaseppi Huron Band of the Potawatomi

Amy Boetcher – Senior Environmental Specialist

Program in Existence since – 2001

Program Projects – IAQ, Rn

Location – Pine Creek Reservation, Fulton, Michigan

The NHBP started its Air Quality Program in April 2001 through its Environmental Department. At that time, 80% of Tribal Membership resided in counties designated with moderate to high potential radon levels. Radon testing began in 2001, with the first radon reduction system installed in a Reservation home in 2008. Since then, we have tested more than 35 homes and installed/updated 18 radon mitigation systems both on and off the Reservation and in both homes and government buildings. In 2011, we transitioned to using the more protective World Health Organization radon recommendation level of 2.7pCi/l when making our mitigation decisions.

Since 2012, our Department has worked closely with the NHBP Health and Housing Departments. Our community health nurses brought safety information to Tribal Members during radon testing appointments and included us in health-related outreach events. Our Housing Department included us during planning for new housing developments and worked with us to install effective mitigation systems at minimal cost (with help from independent contractors).

During 2016, our voluntary interdepartmental relationships were invaluable because we had staffing changes that prevented us from meaningfully participating in air quality activities. Our Housing Department carried the Tribal air quality torch in 2016, building 2 United States Green Building Council Leadership in Energy and Environmental Design Gold Certified (USGBC LEED) homes on the Reservation. In addition to air quality-sensitive features present in formerly built Reservation homes, the Housing Department ensured that the newest homes contain more efficient heat recovery ventilation (HRV) units. The HRV unit in concert with a passive mitigation system serves as each home's radon mitigation system. In previous Tribal Air Resource Journals, we reported that home occupants were turning these radon-mitigating HRV units off due to excessive noise and cost (from high propane costs). Testing revealed passive radon reduction systems alone were not reducing radon levels sufficiently. Whereas the older homes' HRV units had a simple on/off switch and were fueled by propane, the new home's HRV units allow for variable air flow and are fueled by natural gas making them much more efficient.

Please visit the NHBP Website <http://www.nhbpi.com>



USGBC LEED Gold Certified homes on the Pine Creek Reservation Fulton, Michigan.





Oneida Tribe of Indians of Wisconsin

Jeff Mears - Environmental Area Manager
 Program in Existence since – 1988 Environmental, Health & Safety
 Division established
 Program Projects – Climate Change Adaption Project Sept 2013
 Location – Oneida, WI

Asbestos abatement of windows at the Norbert Hill Center - Industrial Hygiene Program

Work Completed: The existing windows were removed from the outside of the building. The window areas abated were in the Cafeteria, 2nd floor Law Office, 3rd floor business area, Legislative Operating Committee area, Head Start area, and the basement Cannery area. All asbestos abatement of windows was performed in compliance with EPA regulations and Bureau of Indian Education requirements.

Benefits to Oneida: Most windows were original from 1954 and some were in poor condition and needed to be updated. Some existing windows did not open or close. There was asbestos around the perimeter of the windows in the caulking and mortar. Inhalation of asbestos fibers from asbestos containing material can cause significant health risks like asbestosis, lung cancer and mesothelioma. Asbestos is considered a hazardous air pollutant. All ACM was removed by asbestos certified personnel.

Nearly 40 percent of central heating is lost through inefficient windows. Quality window replacement with proper insulation ensures thermal performance and substantial energy savings.



Norbert Hill Center Asbestos Abatement





Pokagon Band of Potawatomi Indians

Jennifer Kanine - Department of Natural Resources Director

Kyle Boone – Environmental Specialist

Program in Existence since - 2000

Program Projects – Comprehensive Planning, Radon Testing, Mercury, Alternative Energy, Climate Change Planning

Location – Dowagiac, Michigan

The Pokagon Band of Potawatomi Indians (the Band) was restored to federal Tribal status through congressional act on September 21, 1994. Instead of a Reservation, the Pokagon Band was mandated a service area that consists of four (4) counties in the 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. However, there are times when land acquisitions and historic property uses influence actions taken on those properties.

In 2016, the Department of Natural Resources (PBDNR) has undertaken multiple projects to monitor indoor air quality in the service area including; handing out radon kits, testing indoor air quality, and reviewing the status of abandoned houses the Band owns. In April, the PBDNR handed out radon testing kits to tribal citizens at the annual baby celebration. In total, PBDNR gave out 25 test kits that allowed citizens to know if radon (a known gaseous carcinogen) is present in their home so they could take the necessary steps to mitigate any presence of radon. In addition, in order to protect the health and wellbeing of their employees, the Band tested the air quality of a handful of government buildings that may have had mold issues. All tests came back negative for mold spores and there are currently no mold concerns in the buildings that were tested. Lastly, the Band reviews homes that are on properties that have been purchased to determine if there are significant indoor air quality issues as well as structural issues which prevent occupancy by Tribal citizens. If these homes are deemed unsafe they are scheduled to be demolished by a licensed contractor. Asbestos in the homes is also a concern. If identified, licensed contractors file for appropriate permits and properly dispose of products containing asbestos. PBDNR works closely with the demolition crew to ensure the asbestos is disposed of properly and that the effects of removal are minimized.

PBDNR has also been actively reviewing prevention of significant deterioration (PSD) permits to ensure that outdoor air quality in the Band's service area is not degraded. PBDNR attended and participated in a public meeting in April regarding an addition to Lyons Industries in Dowagiac, MI. Future endeavors regarding air quality include the installation of outdoor air quality monitors and continuing to review indoor air quality issues as the Band secures new properties.





Prairie Island Indian Community

Libby Wanner – Air Quality Specialist

Program in Existence since – 1993, Air Program since June 2014

Program Projects –IAQ, Radiological Monitoring, Outreach/Education

Location – Welch, MN

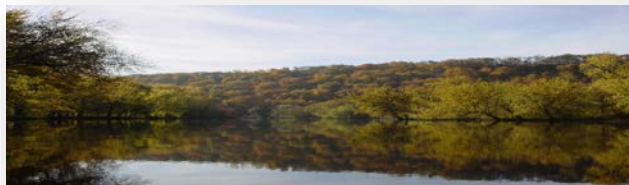
Prairie Island Indian Community (PIIC) is located between the Mississippi River and Vermillion River in southeastern Minnesota, approximately 45 miles downstream of the Twin Cities. The area was named Prairie Island because it is surrounded on all sides by water, and was once dominated by native prairie and oak savanna habitats. Prairie Island is now composed of more than 3,000 acres of mixed use area.

Emissions Inventory In 2014, PIIC established an Air Quality Program under the CAA 103 grant funding. Since then, projects implemented under this funding include indoor air quality inspections, radon testing, and outreach/education. Additionally, a Level 4 Emissions Inventory is being completed, with a Level 3 inventory of Tribal sources planned to be conducted in 2017.

IAQ The Indoor Air Quality Program was initiated in order to provide community members with indoor air quality inspections of Tribal residences along with government offices. Due to Tribal land being located in a high risk zone for radon and moisture problems, it is important that we combat mold growth as soon as possible. Acquiring funding for remediating these issues needs to be addressed. PIIC's Treasure Island Casino is working on creating more smoke-free zones, increasing ventilation, and smoke removal in the building. Smoke in the casino is a large concern, so this is an important project in remediating the issue.

Outreach Our Land and Environment Department has played a pivotal role in teaching what we do in our jobs to students in grades ranging from 3rd- 12th grade. The lessons that we teach for air quality include outdoor and indoor air quality issues, asthma, and practices to limit indoor air pollutants. The Air Program also partners heavily in hosting outreach events for the community and general public. The community also works closely with the State of Minnesota to provide radon test kits and services upon request. The EPA helps to provide outreach materials and education associated with radon awareness and the encouragement to test your homes.

Radiation Xcel Energy's Prairie Island Nuclear Generating Plant is located just three blocks away from the community with spent fuel casks stored on-site and is a high priority concern for the community. Spring of 2015, a new air sampling unit was installed to monitor environmental radiation in order to address concerns from community members. PIIC has been monitoring radiological components through cooperative work with EPA's Office of Radiation and Indoor Air National Analytical Radiation Environmental Laboratory (NAREL) since 1993. The Program is looking to increase its capacity for monitoring a wider range of air quality concerns for the future, including the use of air monitors to collect baseline ambient air data.



*Mississippi River
bordering the PIIC*



Red Cliff Band of Lake Superior Chippewa

Ernie Grooms, Air Program Manager

Program in Existence since – 2010

Program Projects – IAQ-Basic Source Emissions Inventory

Location – Bayfield, WI

The Red Cliff Band of Lake Superior Chippewa (Band) is located on the Bayfield peninsula in the Northern most point of Wisconsin. We are surrounded on three sides by the life giving water of Lake Superior, enjoy a relatively undeveloped forest of hardwood and pine to our South, with just a few farm lands mixed in. As we are located so far to the North, the lack of heavy industry makes our area not only unique, but also an area much sought after for the nature enthusiast, with hiking, boating, and fishing in the summer months, to snowshoeing, skiing, and leisure during the winter. More importantly, the beauty within and around Red Cliff is due to our near “pristine” air quality. It is the goal of the Band to protect and maintain ALL aspects of our environment while promoting responsible future development.

The Band’s Air Quality Program is in its sixth year and housed under the Treaty Natural Resources Division/Environmental Department. This Program focuses on the completion of IAQ assessments for basic residential, office, and school buildings located within Tribal boundaries. These assessments are used to determine “problem areas” within a given structure and suggested methods to remedy most basic issues are provided. Air samples are taken for CO, CO₂, NO₂, H₂S, TVOC, O₂, RH% , PM (0.3, 0.5, 1.0, 2.5, 5.0, and 10.0 microns), and WME% (wood moisture equivalent %). This information is documented “per room” to give an accurate indication of problems and their sources. The exterior walls/ceiling are photographed using a FLIR Thermal Imager to find any issues of sagging, wet, or inadequate insulation to give the home owner/business a “visual” representation for any necessary repairs. This unit also finds “hot” wires within walls where the electrical demand (or short) exceeds product recommendations, which can help prevent a dangerous situation. Homeowner and office management education is also carried out by the information provided in their copy of the report, along with a “walkthrough” of their building/residence to better explain any areas needing attention. Pamphlets and other educational materials are readily available to the community to increase knowledge/awareness of indoor air quality, safety, and energy efficiency through the Energy Star/Yardstick program.

The Band’s Health Clinic recognizes the increase of asthma and allergies within our community, especially among our children. Proper management of moisture, air flow and insulation is a benefit to both health and energy costs. As many of our homes were constructed prior to 1980, IAQ assessments can aid in planning for upgrades and rehabilitation.

The Band is also very interested in attaining Ambient Air Quality Standards. Our first level III Emissions Inventory is currently under EPA review. The Program has received continued funding through CAA – 103. This endeavor will not only facilitate participation in regional issues, but further our ability to protect our people and our way of life.

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





Red Lake Band of Chippewa Indians

Jennifer Malinski – Air Quality Specialist

Program in Existence since – 2007

Program Projects – CASTNET, PM_{2.5}, Met, Hg Litterfall, Outreach

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 R5, 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. Preserving the Reservation's abundance of natural resources is critical to Band members' health, welfare, traditional ways of life and economic viability.

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 approval of its TAS application, the Program transitioned to CAA 105 funding in 2014.

Some of the program's most notable achievements include: approval of TAS application for CAA Sections 105 and 505(a), completion of an Emissions Inventory (EI), acquisition of a Beta Attenuation Monitor (BAM), partnerships with EPA (School Air Toxics Monitoring) and Minnesota Pollution Control Agency (Air Toxics Monitoring), participation in Litterfall Mercury Project (National Atmospheric Deposition Program), operation of Clean Air Status and Trends Network (CASTNET) small footprint site and collaborative projects with the American Lung Association (ALA). Other achievements include representation on TAMS Steering Committee, weather station installation, educational outreach at annual events (Health Fair, Water Festival, etc.) 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 homes and increasing radon awareness through outreach events. We no longer have radon funding due to difficulty acquiring the required in-kind match.

Current priorities and projects include: working with CASTNET and the Ammonia Monitoring Network (AMoN), PM_{2.5} continuous monitoring with assistance from the MN Pollution Control Agency (MPCA), continued participation in the Litterfall Mercury Project, finalizing an SMP, IAQ assessments for Band Members, implementing the School Flag Program, updating the EI, hosting and/or participating in local community events. Air quality issues we are most concerned with include mold in homes and smoke from prescribed burns and wildland fires. We are always looking for partnership opportunities that allow us to gain and share knowledge and experience.



Red Lake DNR Website <http://www.redlakednr.org>



Saginaw Chippewa Indian Tribe of Michigan

Sally Kniffen – Environment Specialist

Program – Currently working with ITCM

Program Projects – Climate Change, EI, IAQ, Air Quality concerns for petroleum extraction operations

Location – Mt. Pleasant, Michigan

The Saginaw Chippewa Indian Tribe of Michigan (SCIT) is progressing in developing their Air Program. The Tribe intends to apply for Air Funding in April 2017.

The Saginaw Chippewa Indian Tribe's Environmental Team and Housing Department hosted an indoor air quality training the week of October 17, 2016. The training was provided by Indian Tribal Environmental Professionals (ITEP) and The Inter-Tribal Council of Michigan (ITC).

On Thursday, October 20, 2016 during the Housing Department's Financial Workshop the trainers for ITEP and ITC conducted an overview of ways to make our homes "Healthy Homes". April Borton, Housing Manager, said, "My goal for the Housing Department is to ensure our community members live in homes with good quality air so they remain healthy".

"Indoor air quality is always important, but even more so during the colder weather months when we tend to spend more time indoors." Sally Kniffen, Environmental Specialist said. The Financial Workshop participants learned about weatherization, furnace maintenance, wood stove smoke, pet dander control, "green" cleaning options and asthma. Participants also learned about some of the diagnostic tools professional air quality assessors use to measure things like radon and carbon monoxide. Sherrill Kennedy, Housing Department, Credit and Home Buyer Councilor said, "The purpose of the Financial Workshops is to provide ways for the members and employees to save money and furnace maintenance and good insulation do that."





Sault Ste. Marie Tribe of Chippewa Indians

Robin Bouschor – Environmental Specialist

Program in Existence since – 2016

Program Projects – Wood Stove Heating Assessment, DERA, Bio

-Diesel study, Outreach, Ambient Air Monitoring

Location - Sault Ste. Marie, Michigan

The Sault Tribe of Chippewa Indians is located in the eastern Upper Peninsula of Michigan. The Sault Tribe Environmental Program is near completion of our first project under CAA 103 funding. The Program is working to build the Tribes capacity on air quality issues and has applied for another year of funding through the CAA 103.

Outreach is an active competent in our Air Program. The Air Specialist attended a total of five pow wows throughout the Tribes' outlying Reservations to provide Community Members with material on topics such as radon, mold, woodstove heating and gave coloring books about air to children. The Air Specialist participated in a two-day environmental camp on Sugar Island, MI. The camp covered a variety of environmental topics along with air quality issues. Two experiments were conducted with the children to give them a visual of air pollution by using air traps, and white socks over car mufflers.

We are conducting a woodstove heating assessment program for Tribal Members for a possible woodstove change out program. The Air Specialist underwent IAQ training through ITEP and will be adding indoor air assessments for Tribal housing for next year to build a closer relationship with our Housing Authority.

The Air Specialist is working on a bio-diesel feasibility study for a department vehicle. The Air Specialist has been working on collecting information on bio-diesel cooking oil operations through CORA and other resources. If it is proved to be attainable we plan to obtain a diesel vehicle for our Department to use in regards to our employee's field work.

Currently we do not operate our own ambient air monitoring equipment but work with the Inter-Tribal Council of Michigan staff with their ambient air monitoring equipment on top of Lake Superior University Cisler Center. Once we build our air capacity we plan to have a more involved participation with this air monitoring equipment.

The Air Specialist has gathered information on all Tribal owned diesel vehicles to compete for DERA funding. Unfortunately, we were not able to meet DERA requirements and did not apply for funding. We do plan on using all the information collected to pursue VW funding once it is available.





Shakopee Mdewakanton Sioux Community

Simeon Matthews – Industrial Hygienist

Stan Ellison – Director of Land & Natural Resources

Program in Existence – Since 2011

Program Projects – IAQ, Alternative Energies, Composting, Tribal NSR

Location – Prior Lake, Minnesota

The SMSC was formally organized under federal Reservation status in 1969. Since then it has grown to include more than 4,200 acres of land in fee & trust, south of Minneapolis. In 2016 we introduced an Air Program component to our GAP work plan for the first time. We also joined the National Tribal Air Association (NTAA) in order to better protect air quality, through the collaboration and tools that it continually develops. Some of our activities are described below and we plan to expand our air quality work in 2017.

IAQ

Typical IAQ concerns at SMSC have been mold/ mildew/ mustiness & allergens. The Tribal Healthy Homes Network, ITEP, and our GAP grant really helped us address these concerns in 2016. We plan to begin long-term radon tests in 2016/2017 winter, as soon as our Quality Assurance Project Plan is approved by EPA.

Traffic Congestion

Despite the many benefits of our location near St. Paul & Minneapolis, air pollution from mobile sources has grown with increasing traffic. In 2016 we began highway reconstruction with additional roundabouts, which will reduce the CO, NOx, PM and other emissions from traffic.

Reduced Electrical Utility Use

Solar panels, a wind turbine, and commercial buildings with geothermal heating & cooling have reduced electrical consumption from our grid's air polluting coal-fired, natural gas-fired, and nuclear power plants. In 2016, a switch to LED lighting will reduce our usage even more.

Composting

In spring of 2016 we began composting more of the food wastes from our Tribal farms, grocery store, and daycare center/ restaurant with the help of our GAP grant. The wastes are recycled into compost at the SMSC Organics Recycling Facility, reducing the methane emissions (a potent greenhouse gas) of landfilled food wastes.

NSR Minor Sources

From 2012-2016 the SMSC has received several air permits under EPA's Tribal Minor New Source Review (NSR) program. The program allows us to evaluate air quality impacts at the earliest stages of construction planning on the Reservation, and its permits ensure that emission sources are maintained and monitored for the protection of our ambient air quality.





Sokaogon Chippewa

Tina Van Zile – Environmental Programs Manager

Nathan Podnay - Hydrologist

Program in Existence since – No formal program

Program Projects – Building CAA 103 program

Location – Mole Lake, Wisconsin

The Sokaogon Chippewa Reservation is located in the northeastern portion of Wisconsin and is home to approximately 450 members. Although small, roughly 5,000 acres, the Sokaogon Tribe is keenly aware of how essential clean air is to the people and surrounding natural resources of the Reservation.

As of now the Sokaogon Chippewa Community does not have a federally funded air program in place, but hopes to institute one in the near future. The Tribe's main concerns related to air quality can be broken into two categories: indoor and outdoor. The key indoor air quality concerns center around mold, radon and smoking. Radon is of particular concern, stemming from naturally elevated levels in the region and their relation to lung cancer. Outdoor concerns include but are not limited to: wood burning stoves, dust from unpaved roads, deposition of mercury and impacts stemming from climatic change. Mercury deposition is of paramount concern due to the significance of fish in Community Member's diets.

The Tribe is currently installing a weather station to better support their water quality program and hopes that it will be the foundation of a CAA 103 program in the near future.





St. Croix Chippewa Indians of Wisconsin

Jonathan Knight – Air Quality Specialist

Program in Existence since – 2004

Program Projects – Indoor and Ambient Air Quality

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

Through the years the St. Croix Chippewa Indians of Wisconsin have received intermittent funding to maintain an Indoor Air Program and in the years that funding was not available, GAP funds were used to maintain basic services to Tribal Community Members. With the funding provided by EPA, St. Croix has been able to provide indoor air quality assessments and education to Tribal Members for several years now.

The Indoor Air Program continues to maintain a close relationship with our St. Croix Tribal Housing Authority, which has allowed a combination of resources and expertise to ultimately advance the Indoor Air Program with rehabilitation recommendations implemented by the Housing Authority. The main focus of the assessments moisture and leak issues that result in mold concerns. As a result, staff are mainly focused on building science relating to home construction and maintenance. Several areas are periodically called upon for testing including CO, radon, VOC's, ETS, sewer gases, asthma triggers and pests. The Safety Team that includes Environmental, Housing and Clinic staff has continued to operate with excellent communication throughout.

We are continuing expand our efforts to grow the capacity of the Tribe's Ambient Air Program. We have an ozone monitor in our possession from ITEP's equipment loan program and have begun to monitor ozone levels to see what the baseline data is for the area and to discover if further monitoring is necessary. This monitoring project is the first of its kind at St. Croix and we are ecstatic at this new development in the Program. We hope that this is the first of many steps taken by the Ambient Air Program to expand in the area of monitoring. St. Croix has no baseline data to go on as far as the current state of the air they breathe. The Tribe's emissions inventory level 4 is completed, but continually reviewed for changes as necessary. We are also continuing in the task of permit reviews for facilities that are in the immediate area of the Reservation that may have an impact on the surrounding air quality. Ambient air quality is an issue that has continued to be a high priority for St. Croix due to four major highways bisecting the Reservation lands, as well as burn barrels, unpaved roads and frac sand mining that has taken place closer and closer to Tribal lands. Through trainings and the use of the program TEISS, ITEP has been an excellent resource we have used to expand our knowledge base and our overall Ambient Air Program. TEISS has been really helpful in helping us locate and keep track of the known and even previously unknown emitters in our area that have substantial effect on the air shed that the Reservation is located and relies on.

The CAA 103 funding has allowed growth of the Program by retention of qualified staff who serve as a resource for the St. Croix communities. Involvement in active R5 initiatives, such as participation in regional dialogue on conference calls, attending regional meetings, performing home assessments and working cooperatively with the Tribal Housing Department to help rehabilitate homes are all major focuses of the Air Quality Staff.

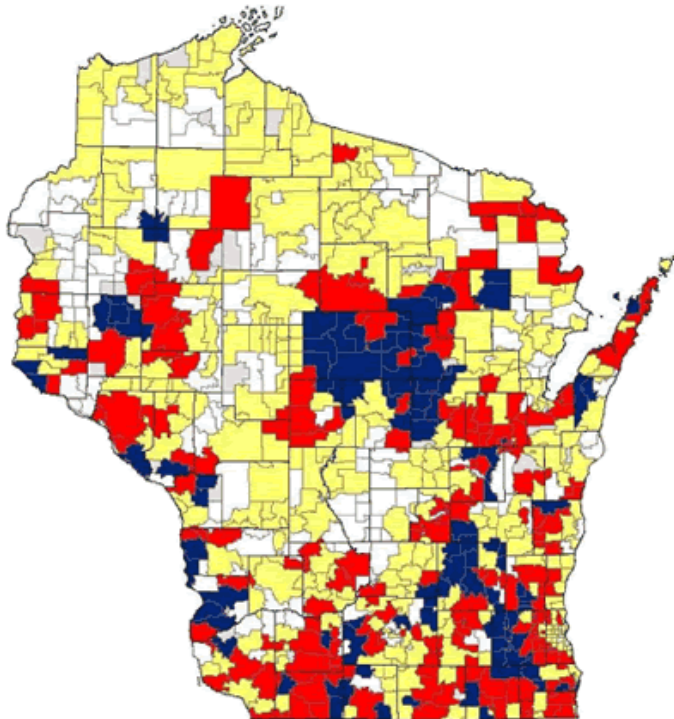




Stockbridge-Munsee Community A Band of Mohican Indians

Greg Bunker – Environmental Department Manager
 Program in Existence since – No formal program
 Program Projects – IAQ, Develop IAQ Program
 Location – Wisconsin, between Green Bay and Wausau

The Stockbridge-Munsee Tribe is committed to formalize an Indoor Air Quality program in 2017. This will include investigations and suggested remediation techniques on mold, asbestos and radon in homes and government buildings. The General Assistance Program (GAP) funding is critical to this effort. Currently we do not have any Air Program funded by specific air grants. Due to the Tribal Council requesting a Radon Program be drafted along with expanding confined animal feeding operations (CAFOs) near our Reservation borders, we do anticipate future needs in funding and manpower. We have not received any complaints about outdoor wood boilers, however we would like to be proactive and propose updates to the Tribal Air Pollution Control Law before this becomes an issue. There are a few minor air pollution sources on the Reservation, electric generators and a gas station, and assistance to register these in the EPA database has been offered.



RADON IN HOMES

The populated area of the Stockbridge-Munsee Reservation lies within the highest zones of radon in the county and state. Statistics for the county indicate over 43% of the homes are above the EPA's limit and most of the county is zone 3. Most of the Tribal Members live in Zone 1 and 2. Most homes tested thus far have been above EPA limits for radon.

- Zone 1 – Highest Potential
- Zone 2 – Moderate Potential
- Zone 3 – Lower Potential
- Zone 4 – Low Potential





Upper Sioux (Dakota) Community - Pezihutazizi Oyate

JoLisa Bahr – Environmental Director

Megan Moudry – Environmental Specialist

Program in Existence since – No formal program

Program Projects – IAQ assistance to Tribal Members, Renewable Energy

Location – Granite Falls, MN

The Upper Sioux Community (USC) is one of four Dakota Communities located within Minnesota. The community is located upon the Minnesota River valley.

There is an ongoing need for the USC to develop an Air Program to address both indoor and ambient air quality. Our Community is surrounded by conventional 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 top soil sediment from plowed fields.

Monitoring would be ideal to detect and create a baseline of USC air quality.



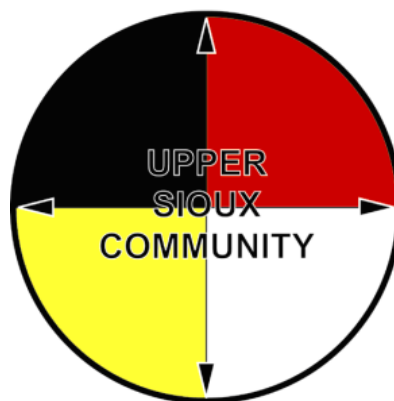
"Dust" Storm – Topsoil in spring windstorm



Hazel Creek – a tributary of the Minnesota

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.





White Earth Band of Ojibwe (Gaa-waababiganikaag)

Richard Jackson – GAP Coordinator

Program in Existence since – No formal program

Program Projects – Radon, Wind Energy, Outreach & Education

Location – Mahnomen, MN

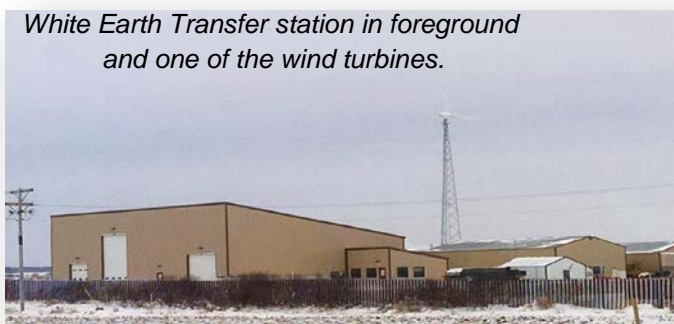
The White Earth Band of Ojibwe (Gaa-waababiganikaag), a sovereign nation, is entrusted to protect the land base, natural resources, treaty rights, and the culture and identity of our Members. The White Earth Reservation, located in Northwestern Minnesota, was established in 1867 by a treaty with the 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;
- The Reservation Housing Authority radon testing and yearly inspections for IAQ concerns;
- Addition of wind energy turbines to the White Earth Reservation.

Ten years ago, the White Earth Nation took initial steps in creating a renewable wind energy resource on the Reservation. Currently, White Earth is home to three wind turbines, with the plan of scattering multiple others across the Reservation. Also, the White Earth Department of Natural Resources has currently distributed 600 radon test kits throughout the White Earth Reservation. There will be an ongoing distribution of radon test kits along with continued outreach efforts on the issue. White Earth will also be implementing a climate change adaptation plan in the near future, as well as, gaining lead and asbestos certification to inspect Tribally owned homes. White Earth has been extremely involved in outreach events raising awareness about the concerns of indoor air quality and will continue to do so for the years to come.



White Earth Transfer station in foreground and one of the wind turbines.





1854 Treaty Authority

Darren Vogt - Environmental Director
 Program in Existence since – No Formal Program
 Program Projects – Environmental and Permit Review, Policy Review,
 Climate Change, Education and Outreach
 Location – Duluth, MN

The 1854 Treaty Authority is an inter-Tribal resource management agency governed by the Bois Forte Band of Chippewa and Grand Portage Band of Lake Superior Chippewa. The Organization is charged to preserve, protect, and enhance treaty rights and related resources in the 1854 Ceded Territory. This Ceded Territory covers 5.5 million acres across present-day northeastern Minnesota.

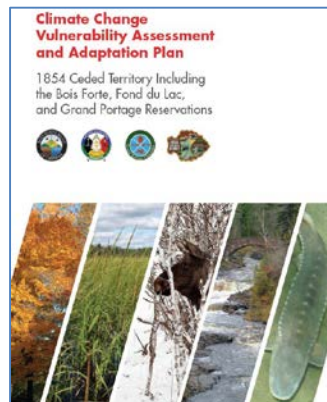
Bands retain treaty rights to hunt, fish, and gather in the 1854 Ceded Territory. Due to these rights, the 1854 Treaty Authority is concerned about the availability and health of the resources. An important issue is mercury deposition and the impacts to fishery resources. Many Band Members consume a diet high in fish and may face health risks when mercury levels are elevated. Consumption advisories are not a solution to the problem, instead fish must be made safe to eat for both nutritional and cultural benefits.

The 1854 Treaty Authority looks to track air impacts to the 1854 Ceded Territory from sources such as power generation units, mining, and other industrial facilities. The 1854 Treaty Authority coordinates with federal and state agencies in the environmental review and permitting processes. Time is also spent reviewing and commenting on policies that may affect the air quality within the 1854 Ceded Territory.

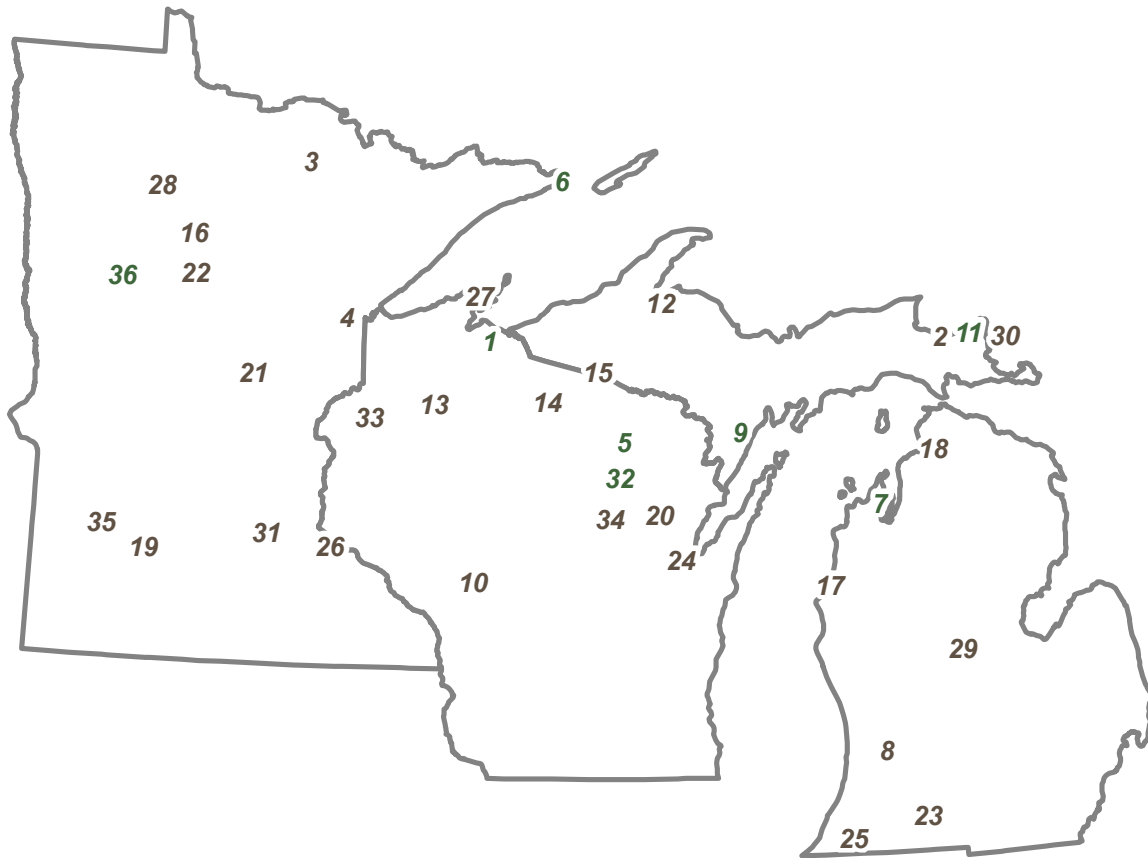
Working in partnership with the Bois Forte, Fond du Lac, and Grand Portage Bands a “*Climate Change Vulnerability Assessment and Adaptation Plan*” was completed in 2016. A portion of the plan was dedicated to potential climate change impacts to air quality. The 1854 Treaty Authority is working to implement adaptation strategies from the plan, and pursue opportunities with other partners on climate change monitoring activities.

The 1854 Treaty Authority does not have a formal Air Program, but addresses air issues (to some degree) under activities of the Environmental Program as it works to protect human health and the environment. Additional support for training, staff time, etc. would help to develop an Air Program and become more engaged in issues.

Climate Change Vulnerability Assessment and Adaption Plan – 1854 Ceded Territory



US EPA Region 5 Tribes



- | | |
|-----------------------------------------------------------|-----------------------------------------------|
| 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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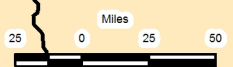
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Region 5 Ceded Territories



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, USGenWeb Archives, Library of Congress, Leech Lake DRM 12/17/2013, UTM Zone 15N