Spirit Lake Tribal EPA Newsletter

Annual Review – Fiscal Year 2017

Spirit Lake Environmental Protection Administration
Phone: (701)766-1259
Fax: (701)766-1218

General Assistance Program

Joshua Tweeton
Environmental Director
epadir@spiritlakenation.com

Robin Knutson
Administrative Assistant
epaassist@spiritlakenation.com

Brownfields/TRP

Arthur Carmona
Brownfields Coordinator
epa-brfields@spiritlakenation.com

106 Clean Water Act Program

Craig Brown Jr.
Water Quality Coordinator
wqcoord@spiritlakenation.com

103 Air Quality Program

Melissa LaCroix
Air Quality Technician
envtech@spiritlakenation.com

Spirit Lake Brownfields Tribal Response Program

What is a Brownfields Site?

Brownfields are abandoned, idled, or underused industrial and commercial properties where expansion or redevelopment is complicated by actual or suspected environmental contamination. By investigating and cleaning up brownfields sites, many of which are abandoned properties that pose an immediate threat to the local community, development can take place without fear of environmental legal liabilities. This benefits the Spirit Lake Nation and surrounding communities by bringing jobs to the area, making abandoned property functional, and possibly preserving sites that might have historical significance to the community. The recent Brownfields projects that were completed this year include 4 abandoned homes (Figures 1,3,4) in the Wood Lake District, and an Old Post Office Building (Figure 2) that was burned by vandals, which tested positive for lead and asbestos. The Brownfields Coordinator is constantly working to add more Brownfields Sites to the inventory. Also, the public can request to our office if a potential Brownfields site should be considered for an assessment.

FIGURE 1A- BEFORE

FIGURE 1B- AFTER

2017 Brownfields Cleanup Project: Four Abandoned Homes and the Old Post Office in St. Michael, ND

FIGURE 2A- BEFORE

FIGURE 2B- AFTER

Due to the types and ages of the units the sites were found to have asbestos containing materials and/or lead based paint. The Spirit Lake Brownfields Tribal Response Program hired a certified consultant (IECIS Group) to remove and dispose the hazardous materials properly. After the debris and materials were removed and disposed, the top surface layers were scraped and soil samples were taken to ensure all hazardous materials were removed from the sites. Clean fill was brought to the sites, as the sites will now be ready for redevelopment. Also, a certified Spirit Lake Indian - Owned Business was hired as a Subcontractor to remove the non - hazardous materials/debris. This project was implemented properly and was compliant with all applicable local, state and/or federal regulations. Funding used for this cleanup was provided by the US EPA Brownfields Tribal Response Program Section 128a. For more information on these cleanups contact Brownfields Coordinator, Arthur Carmona at (701) 766-1259.

FIGURE 3A- BEFORE

FIGURE 3B- AFTER

FIGURE 4A- BEFORE

FIGURE 4B-AFTER

Spirit Lake Tribal EPA receives $200,000 Brownfields Cleanup Grant

The U.S. Environmental Protection Agency has selected the Spirit Lake Tribe to receive a $200,000 grant to clean up contaminated building in the Rolling Hills Housing. The Rolling Hills Homes located in the Community of Fort Totten, Benson County, North Dakota on the Spirit Lake Reservation were acquired by the Spirit Lake Tribe in the early 1990's to supplement the Tribe's housing needs. These homes were built in the 1970's, and like structures typical for the time-period and verified in the Phase II ASTM Environmental Site Assessment, contain asbestos (ACM) and lead based paint (LBP). With over 300 families on the housing waiting list, it is very important that these homes become a safe and healthy environment for Tribal members to reside in.

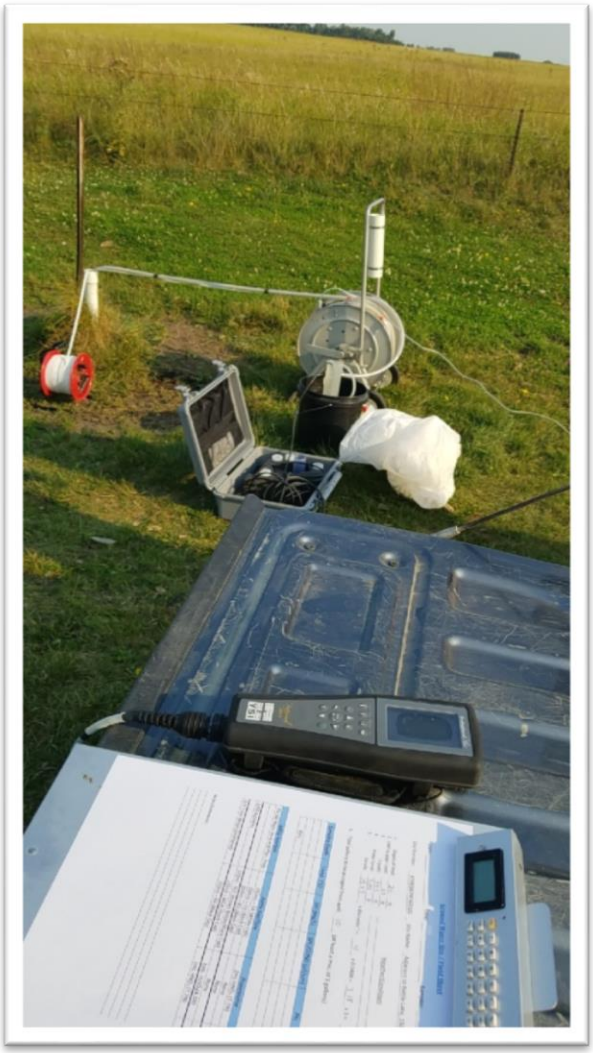
Proposed Hog Farm

A factory hog operation has been proposed less than a mile from the shore of Devils Lake, North Dakota. Yearly, this facility would house more than 100,000 pigs and produce more than 3.5 million gallons of waste. The proposed permit application for an animal feeding operation that is to be located in the southeast quarter of Section 24 of Pelican Township in Ramsey County, which is North of Grahams Island State Park as well as the Spirit Lake Reservation. This raises concerns with the potential contamination to the lake and groundwater. High levels of nitrates and phosphates could enter the lake and aquifer if not properly contained at any point which would lead to bigger problems for future generations. Water is an important natural resource to Spirit Lake Tribal members as they depend on it daily, not only for drinking but for cultural and recreational uses. This operation is projected to use 20,000 gallons daily that will come from the same aquifer Tribal members and local residents use each and every day. We are also concerned that the air quality will be effected from this operation. A main concern is the excretion of excess dietary nitrogen by the animal and the release of atmospheric ammonia. As a Tribe we feel that this is environmental injustice; being there is no positive outcomes but only negatives impacts such as pollution and health problems for current and future generations. SLT EPA staff and Tribal Council have attended public hearings, seminars, and several meetings with Lake Region Concerned Citizens as well as North Dakota Department of Health and ND Governor Doug Burgum to try to find a solution that will work for everyone. Spirit Lake Tribe would like to see this animal feeding operation not permitted in its proposed location due to what effects it could have on the water quality of Devils Lake, air quality of nearby residences including Tribal members, recreation and tourism, and the even higher risk of flooding due to the outlets being shut off from insufficient water quality being sent down stream. We look forward to collaborating and working together to resolve and overcome the above serious issues for the development of a fair and equitable partnership as well as to protect the environment, health and welfare of our people.

106 Clean Water Act Program

The CWA 106/ Water Quality Program is designed to characterize the water quality of the Spirit Lake Nation. Ongoing monitoring conducted over the years will allow the Tribe to begin to track changes in the water quality over time and to assess potential future environmental impacts to the Reservation's waters. The long-term use of the water monitoring program is to provide information to help the Tribe establish water quality standards and other tribal regulations and ordinances for the Spirit Lake Reservation to reduce further degradation.

This year (2017) the Water Quality Coordinator, Craig Brown Jr, and the Water Quality Technician, Melissa LaCroix, acquired samples from two surface water locations; Wood Lake, Battle Lake, two sites on the Sheyenne River, and four groundwater wells adjacent to the Wood and Battle Lake. Samples from each location are field tested for temperature, pH, dissolved oxygen, conductivity, and turbidity. Ecoli Fecal is tested at the Spirit Lake Tribal EPA office otherwise all other field samples taken from each site are sent to be analyzed for metals, hardness, anions, total dissolved solids, and alkalinity. The 106 program has produced a sampling report analyzing past year's data. We plan to produce a report each year of the past year's data. These reports show and analyze the data and compare the data to safe and acceptable values for the environment and the community.



The CWA 106/ Water quality program also participated in EPA's National Lakes Assessment 2017 (NLA 2017). The National Lakes Assessment (NLA) is a statistical survey of the condition of our nation's lakes, ponds, and reservoirs. It is designed to provide information on the extent of lakes that support healthy biological condition and recreation, estimate how widespread major stressors are that impact lake quality, and provide insight into whether lakes nationwide are getting cleaner.

The CWA 106/ Water Quality Program is looking to expand their current efforts in monitoring water quality. The program has begun developing Quality Assurance Project Plans (QAPP) for mercury in fish tissue and macroinvertebrates as well as water and sediments. Fish spend their entire life in a particular water body, therefore they can be important indicators of water quality, especially toxic pollutants (e.g., pesticides and trace elements). Toxic pollutants which may be present in the water column or sediments at concentrations below our analytical detection limits may be exhibited in fish tissue analysis due to bioaccumulation. With fish being a common

meal for Spirit Lake and local residents, this will also give us a better understanding of how much fish is safe to eat at one time. We are also proposing to sample benthic macroinvertebrates which inhabit the sediment or live on the bottom substrates of streams. This group of organisms is an important component for measuring the overall biological condition of an aquatic community. Populations in the benthic assemblage respond to a wide array of stressors in different ways. By monitoring assemblage status, it is possible to detect trends in ecological condition and often determine the type of stress that has affected a macroinvertebrate community. Because many macroinvertebrates have life cycles of a year or more and are relatively immobile, the structure and function of the macroinvertebrate assemblage is a response to exposure of past or present conditions.

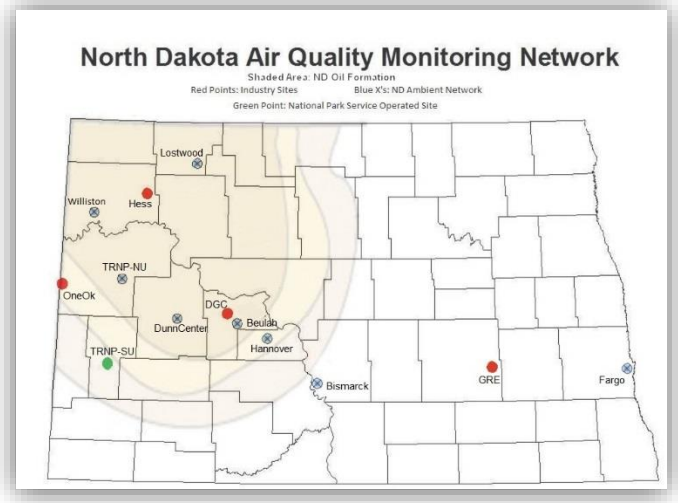
Title 16: Environment, Health and Sanitation Code

The Title 16: Environment, Health and Sanitation Code was adopted in January of 2015 after being reviewed by a tribal attorney and read to the public in its entirety at two General Assembly meetings. Citation forms have been developed as well as a penalty matrix. Circuit Rider, Mickey Hartnett was invited to conduct a Solid Waste Code implementation training. Tribal Council, Tribal EPA, Tribal Court, BIA Police Department, Tribal Health and the Environmental Quality Commission were all invited to this training. Twelve "No Dumping or Littering" signs were developed and purchased by Tribal EPA to put along major roadways as a reminder that this is now a violation of the Spirit Lake Tribe Law and Order Code. A Compliance Officer position was created to implement and enforce the new Solid Waste Code daily. Currently Robert Charboneau and Wade Longie are doing the enforcement.

103 Clean Air Act Program

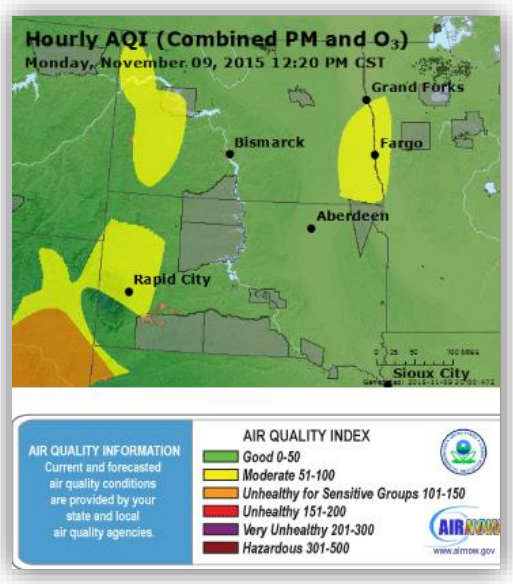
Update: The Spirit Lake Tribal EPA has been investigating and working towards expanding our program to begin conducting ambient air quality monitoring. Monitoring ambient air quality is becoming a major priority for the Tribal EPA and Tribal Council. Located in Fort Totten, Sioux Manufacturing Corporation is a major polluting source. Currently, there is a hog farm that is being proposed to be built across the lake. This would be within the 15 mile radius of the reservations boundaries. If the hog farm were to be built, it would be another major polluting source for air and water. Therefore, it is in the best interest of the Tribe to begin recording baseline measurements to allow us to monitor for degradation for future generations.

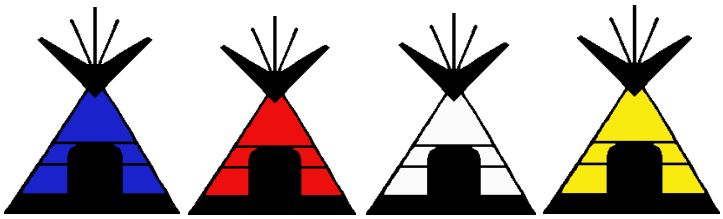
To begin monitoring ambient air quality we will need to first apply for Treatment as State (TAS). Tribal Council and EPA will first need to determine which designations we are applying for and then submit an application to US EPA for review. Once, received by US EPA they will begin a review process and then send the application back to the Tribe with their comments within 30 days that it is submitted. At this time, the Tribe will review comments and may provide responses. Lastly, US EPA makes TAS Eligibility Decision and notifies the Tribe. The TAS application process can be lengthy, typically taking one to three years to hear from US EPA on a final decision. Currently only 49 Tribes have acquired TAS.



The benefits of acquiring TAS qualifies the Spirit Lake Air Quality Program to administer the Clean Air Act throughout the Reservation, including lands owned by non- Indians. A Tribal Regulatory program approved under the Clean Air Act would also be enforceable (against pollution sources) by EPA and citizens, as well as the Tribe. Also, it would qualify the Tribe to be treated as an "affected State" under the operating permits program, which would allow the Tribe to receive notice and an opportunity to comment when neighboring States issue permits to facilities having the potential to impact Tribal land. It would also reduce the "matching" requirement from 40% to 5%.

For the last few years the Spirit Lake Tribal EPA has been awarded the 103 Clean Air Act grant and with that we have been developing an Indoor Air Quality Program to help meet the Tribes everyday needs. What we focus on is ensuring the safety of the indoor air quality of the residents on the Reservation. According to the US EPA Indoor Air website, "Americans, on average, spend approximately 90 percent of their time indoors, where the concentrations of some pollutants are often 2 to 5 times higher than typical outdoor concentrations." More specifically, the people who are often more susceptible to the effects of poor indoor air quality (young children and elders) are the ones who tend to spend the most time indoors. To monitor and help assist our residents, we have purchased an indoor air quality meter that tests carbon monoxide, carbon dioxide, relative humidity, temperature, and barometer. If requested, our Air Quality Coordinator can come out and do a quick 15-20 minute inspection of your home or building. After the inspection you will then be notified of any unsafe findings and be given our recommendations to solve your indoor air problems to keep you and your family safe and healthy. It is highly recommended that you do not put anyone at risk and have your home inspected. Being exposed to high levels of Carbon Monoxide and/or Carbon Dioxide can be very dangerous. They are both colorless and odorless gases so it can very easily go unnoticed which is why it is important to have your home inspected; especially if you ever start experiencing symptoms of high levels of exposure. The most common symptoms of CO and CO2 poisoning are headache, dizziness, weakness, nausea, vomiting, chest pain, trouble breathing, increased blood pressure and confusion. High levels of CO and CO2 inhalation can cause loss of consciousness and death. Mold is another major concern that Spirit Lake has had to deal with. Mold has the potential to cause health problems; producing allergens, irritants, and in some cases, potentially toxic substances. If mold is present in your home, it is important that it is cleaned up immediately with detergent and water, and dried completely. Mold spores will not grow if moisture is not present. Often times, controlling the relative humidity, plumbing leaks, or water damaged areas can fix the mold issue so it will not come back. There are many other concerning indoor air quality issues that you may be exposed to as well. Pollutant sources and amount of ventilation in a home are often the main causes of indoor air problems. If you ever have any questions or concerns regarding your indoor air quality or would like tips on how to make your indoor air better, feel free to contact our office.





Spirit Lake Tribal
Environmental Protection
Administration Office
816 3rd Ave N
PO Box 99
Fort Totten, ND 58335

Place
postage
here

If you would like a copy of this newsletter emailed to you, send an email to epadir@spiritlakenation.com

Tribal EPA Mission Statement

THE SPIRIT LAKE DAKOTAH NATION TRADITIONALLY AND HISTORICALLY HAVE RESPECT FOR MOTHER EARTH AND ALL LIFE. UNDERSTANDING POLLUTION KNOWS NO POLITICAL BOUNDARIES, WE MUST MUTUALLY DEVELOP PARTNERSHIPS AND AGREEMENTS, TO PROTECT ALL HUMAN HEALTH, WATERS, AIR AND ECOSYSTEMS WITHIN OUR SPIRIT LAKE NATIONS BOUNDARIES.

TO SCIENTIFICALLY COLLECT DATA ON OUR WATERS AND NATURAL RESOURCES, EXCHANGE AND SHARE INFORMATION TOBETTER SERVE OUR PEOPLE, THEREBY COLLECTIVELY PROTECTING OUR ENVIRONMENT, FOR PRESENT AND FUTURE GENERATIONS USE AND ENJOYMENT.

TOGETHER: PLAN, DEVELOP, DESIGN, PROMOTE, PROTECT AND ADMINISTER SOUND ENVIRONMENTAL PROGRAMS AND REGULATIONS WHILE SAFEGUARDING OUR INHERENT SOVEREIGN AUTHORITY.

THE ULTIMATE INTENT OF THE TRIBAL EPA OFFICES IS TO BUILD COMPREHENSIVE ENVIRONMENTAL PROGRAMS TO HELP PROTECT THE SPIRIT LAKE DAKOTAH NATION.