

Catawba Indian Nation
Advance Program Path Forward
Annual Report 2019



Ozone and PM_{2.5} Advance Program

The Advance Program is a collaborative effort between EPA, states, tribes and local governments. The program encourages emission reductions in ozone and fine particulate matter (PM_{2.5}) attainment areas to continue to meet the National Ambient Air Quality Standards (NAAQS) and in order to participate in the programs, the respective jurisdiction must be in attainment for ozone and PM_{2.5}.

The current NAAQS standard for ozone is 70 ppm, and for PM_{2.5} the standard is 12.0 µg/m³ annual standard and a 35 µg/m³ 24-hour standard, which became effective on December 14, 2012. Currently the Catawba Indian Nation (CIN) is in attainment of NAAQS both ozone and PM_{2.5}.

CIN initiated discussion with EPA and formally submitted a letter to participate in the Ozone and PM_{2.5} Advance Program in 2016. Additional jurisdictions that participate in the program include Mecklenburg County NC and the state of South Carolina.

Background

In 2012 the CIN participated in consultation with EPA to request that the area within the exterior boundaries of the Reservation be classified to attainment/unclassifiable. This request was made because initial designations of the eastern part of York County was designated as nonattainment for the 2008 ozone standard. EPA upheld the request by the CIN to have the area within the jurisdictional boundaries to be designated as attainment/unclassifiable. Some of the contributing factors included the fact that there are no emission sources located on Tribal Trust land and additionally the closest air monitoring station to the Reservation was approximately 16 to 18 miles away.

Recognizing the lack of air monitoring on the Reservation and in eastern York County the CIN initiated an Air Quality Program with strong support financially and technically through EPA Region 4. The CIN Air Program has monitored ozone since 2016 and will soon be collecting PM_{2.5} data after approval of the required Quality Assurance Project Plan (QAPP). This development along with the commitment from the CIN Executive Committee for protection of air quality and human health and the environment initiated the participation in the Ozone and PM_{2.5} Advance Program and the “Path Forward”.

Catawba Indian Nation Trust Lands

The United States holds lands in trust for the Catawba Indian Nation and its members in Eastern York County, South Carolina. This area is comprised of two parcels totaling 1007 acres. However, the service area for the Catawba Indian Nation is recognized as all of South Carolina and six counties in North Carolina. The widespread service area location of these lands reflects the location of the historic Catawba's that comprise the contemporary Catawba Nation. These trust lands, which are collectively referred to herein as the Catawba Nation Trust Lands, total approximately

1007 acres. Approximately 560 of the Catawba's members live on CIN Trust Lands, and the Catawba's principal governmental, commercial, educational, health care and other communal facilities are located on those lands. Maps of the CIN Trust parcels are shown in Appendix A.

Federal enforcement of the ozone NAAQS is based on a 3-year monitor "design value". The design value is obtained by averaging the annual fourth highest daily maximum 8-hour ozone value over three consecutive years. If a monitor's design value exceeds the NAAQS (.070 ppm) the monitor is in violation of the standard and thus non-attainment.

Overview of Catawba Indian Nation Air Quality

Table 1. Summary of Highest 8-Hour Ozone Values (ppm)

8-Hour Ozone Values	2016	2017	2018
1 st Highest	.072	.069	.075
2 nd Highest	.069	.064	.071
3 rd Highest	.069	.062	.068
4 th Highest	.066	.06	.066

Catawba Indian Nation Control Measures

Some control measures are in place and being implemented by the Tribal members and governmental departments. Examples of those include: newer diesel-powered equipment in the Roads Department, Catawba Transit system, recycling efforts (residential and tribal government) and an energy efficient upgrade of the Senior Center building.

Proposed Control Measures

Selected ozone and PM_{2.5} control strategies and implementation schedule

Outreach

Strategy	Strategy Description/Impact	Implementation Date	Lead Department
Promote Transit Ridership (Catawba Transit)	Implement outreach campaign. This strategy impacts tribal and nontribal residents in the service area	June 2018	CIN Transit Dept.+
Ridership has increased, information and contact information are on each vehicle (see photo). Periodically information included in the Catawba Newsletter. Staff is working with the Transit Department to develop metrics for annual comparisons of "miles traveled" for Transit Vehicles. Total miles driven per month ranged from 7,000 to 11,000 miles.			

Air Quality Poster Contest	Promote art contest with air quality theme at CIN Head Start (80 students)	Earth Day Annual	Head Start and Catawba Boys and Girls Club
Direct Community Outreach	Display Air Quality Information in Newsletter and Health Fair	Ongoing	CIN Environmental Services
Efforts are continually being made to provide Tribal Citizens with Air Quality information. Two unique ways this information and specifically the AQI are used is guiding teachers at Camp Kick A Wah with activity levels for children during days (Yellow and Orange) with poorer AQI and our Spirit Sprinter (Tribal Running Program) with information on high AQI days .			
Tree Power	Implement program to inform and promote the benefit of trees to the environment, air quality. 200 (estimated) seedlings will be provided community events. Trees reduce/absorb air pollution and help reduce energy consumption	Ongoing (focused on spring plant date)	CIN Environmental Services
Approximately 40 trees were planted over the year, planning continues to increase the number of tree plantings in the future.			
Utility Consumption Report	Monthly energy consumption will be posted in each building that participates to create awareness of energy use in the building	Ongoing	CIN Environmental Services
Five buildings are tracked through Energy Star Portfolio Manager, this program is slated to be implemented in 2020.			
Air Quality Flag Program	Three Tribal facilities participate: Head start, Little Peoples and Catawba Health Clinic. Promote awareness to air quality (specifically ozone and PM _{2.5}) forecasts and human health protection.	Ozone season (March through October) and year-round for PM _{2.5}	Head start, Little People Academy and Catawba Health Clinic
CIN Earth Day	Promote air quality outreach and	Earth Day	Primarily Head start and Tribal Community

	protection, appreciation strategies		
Staff participated in an April 22, 2019 Earth Day event, approximately 80 students and teachers participated (see photos).			

Selected ozone and PM_{2.5} control strategies and implementation schedule

Energy Reduction

Strategy	Strategy Description/Impact	Implementation Date	Lead Department
Develop alternative energy production opportunities that are financially viable for CIN	Photovoltaic solar farms, biomass to energy and others; Clean energy sources reduce the volume of fossil fuel burning required for power generation	Ongoing	Economic Development/ Environmental Services
Green Building Review	Evaluate and recommend feasible opportunities for energy, water and solid waste consumption in new and retrofit of tribal buildings. This activity reduces electricity consumption, water usage and solid waste production	Ongoing	CIN Environmental Services and other Tribal Departments
Catawba has not experienced a lot of new construction. The most recent building is a multi-use building serving the Roads Department, Environmental Services and functioning as an Emergency Operation Center. This building features the latest in building envelop tightness and is one of the buildings tracked in the Energy Star Portfolio Manager Program. The other building worth mentioning is our Senior Center that has gone through renovation implementing recommendations from a previous energy audit. This building is also energy benchmarked and shows a reduction in energy use after energy conservation improvements. We have also implemented a number of buildings with the programable thermostats and respective phone apps for energy efficiency.			
Local Food Access Program	Inform community on benefit of sourcing food locally, reducing miles traveled by food and consumers	Ongoing	Wellness Program
In 2019 our Food Sovereignty Committee has been meeting to discuss promoting and implementing programs to enhance locally produced vegetables. We will continue to work toward those goals in 2020.			

Purchase ENERGY STAR Equipment	Energy efficient products are procured and installed. This strategy reduces energy consumption.	Ongoing	All Departments
Policies for purchase of Energy Star equipment vary, staff will continue to work with departments to promote purchasing of Energy Star equipment.			
Green and energy efficiency initiatives	Evaluate CIN government departmental recycling practices in place and evaluate opportunities to improve/expand. This strategy reduces solid waste and operating costs.	Annually	All Departments
Currently all departments are recycling, however, our recycling programs have experienced some change this year, in part due to recycling markets and increase cost at the York County Recycling Center. Although we recycle cardboard, plastics we have a direct source to a cardboard recycler even though the price is 0 - \$ 10 per ton for us we continue to promote recycling and are hopeful the markets will improve.			

Selected ozone and PM_{2.5} control strategies and implementation schedule

Transportation

Strategy	Strategy Description/Impact	Implementation Date	Lead Department
Fleet Management	Implement efforts to minimize unnecessary idling of vehicles. This strategy reduces NO _x emissions	On going	All Departments
Idling is considered by all departments; Idle time is minimized and is considered as a metric. Planned drive time which helps reduce idling for the Transit Department. Head Start and Little People Academy transport children daily, they minimize idle time and in the future staff will discuss time to warm or cool vehicles in designated areas.			

Alternate Fuel/Hybrid Vehicle Equipment	When feasible and decisions for vehicle replacement are considered. Evaluate alternate fuel/hybrid vehicle replacement. This strategy reduces NO _x emissions.	On going	All Departments
Currently there are 2 Flex Fuel vehicles in the fleet, consideration for these types of replacements is made and will continue to be a consideration in the future. Most departments are purchasing vehicles for specific purposes, like Public Works for hauling equipment. There has been some discussion about hybrid and electric vehicles. In the future feasibility of such vehicles and the respective charging stations will need to be evaluated.			



Catawba Transit Vehicles



Catawba Senior Center Garden



Fall Vegetables at the Catawba Longhouse



Catawba Head Start Earth Day April 22, 2019