

Air Quality in North Dakota

North Dakotans share a positive attitude and have expectations of a healthy environment in which to live and raise their families.

North Dakota is one of only a handful of states that meet all national and state air quality standards.

This brochure provides information about the quality of North Dakota air and the role of the North Dakota Department of Health, Division of Air Quality, in keeping the air clean and healthy.

Federal Clean Air Act Established Standards

The Clean Air Act, a federal law designed to improve air quality, limits the amount of pollutants in the air throughout the nation.



This ensures that all Americans have the same basic health and environmental protections. The law also allows individual states to have pollution control requirements that are more stringent than those set for the whole country.

State Governments Provide Key Enforcement

Although the Clean Air Act is a federal law, the states do much of the work to enforce it. It makes sense for states to take the lead because pollution control issues often require site inspections and a special understanding of local industries, geography, weather patterns, etc. Since the original Clean Air Act was passed in

1970, the United States has made impressive strides in improving and protecting air quality.

Sources of Emissions

Sources of pollutants are grouped into two categories: mobile sources and stationary sources. Nationally, more than half of all air pollution comes from mobile sources like cars and trucks. Stationary sources generate air pollutants mainly by burning fuel for energy and as byproducts of industrial processes.

Regulating Industry

The Division of Air Quality does the following to regulate industry:

- Reviews pollution control techniques, methods, and equipment
- Conducts computer modeling to predict the concentration of pollutants in the air
- Issues construction and operating permits for industrial sources
- Inspects sources to ensure that operations are in compliance with regulations
- Requires large sources to install continuous emission monitors that continuously record the amount of pollutants exiting the stack
- Operates an ambient air (the air we breathe) quality monitoring network that collects samples to determine the level of pollutants at several locations across the state
- Initiates enforcement actions when necessary to correct violations of air pollution control requirements

- Responds to citizen complaints regarding emissions from sources
- Regulates open-burning and aerial spraying activities
- Conducts public education and outreach

Results of Ambient Monitoring

Monitoring levels of air pollution at various locations throughout the state consistently show compliance with all national and state air quality standards.



Ambient Monitoring Sites

Pollution Control at Electrical Generating Stations

All of the electrical generating stations in North Dakota have some level of pollution control. For example, all of the plants control particulate (soot) emissions, some operate burners designed to limit nitrogen oxide emissions, and some have sulfur dioxide scrubbers. As the plants were constructed, each was subject to federal regulations that became more stringent over time.

While all of our plants have some level of pollution control, a new plant would be required to install the best available control technologies at the time it is built and would be considerably cleaner than any of the existing plants.

Any new power plant built in North Dakota will be subject to stringent emission limitations as part of its permitting process.



Coal-Fired Electrical Generating Plant

Air Quality Goals

Two broad goals exist concerning clean air regulations:

- The first goal requires that ambient air quality standards be met. The ambient air quality in North Dakota is excellent!
- The second goal aims to prevent air quality from getting significantly worse than it was at the “baseline” date. The Prevention of Significant Deterioration (PSD) program requires sources to use best available control technology that limits any increase in ambient concentrations of air contaminants. It also protects air quality values such as visibility, plant and animal life, and soils.

The Division of Air Quality uses a variety of methods to meet these clean air goals including:

- The use of computer dispersion modeling to predict pollution levels
- A rigorous permitting and inspection program

to ensure compliance with permitted emission rates

- Operation of a statewide ambient monitoring network to measure actual pollutant concentrations to ensure compliance with air quality standards

Future Considerations

Fortunately, North Dakota is rather unique. Unlike many other states struggling to improve the quality of their air, our air is already very clean. Our challenge is to keep it that way and to continue to make improvements where possible.

Future federal regulations (concerning regional haze, multi-pollutant legislation, etc.) will further reduce emissions at existing facilities. Implementation of these regulations will require additional permitting, monitoring and oversight. In the meantime, ambient air quality monitoring continues to show exceptionally clean air in North Dakota.

We can all be proud that North Dakotans are working together to keep our air clean!

For information concerning indoor air quality visit: <http://www.ndhealth.gov/AQ/IAQ>



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