CHAPTER 4:
Air Quality Division

The objective of the Air Quality Division is to maintain and protect the quality of the outdoor air in Nebraska. Thousands of tons of pollutants are emitted into the air in the state each year from industrial and other human activities. These air pollutants can affect human health, cause property damage, harm the environment, and reduce visibility. The Air Division works to maintain Nebraska's air quality by implementing state and federal air quality regulations, through permitting and compliance activities for stationary sources, and by monitoring outdoor ambient air for regulated pollutants. Nebraska's air quality rules are set forth in Nebraska Administrative Code (NAC) *Title 129 – Nebraska Air Quality Regulations* (Title 129).

Nebraska enjoys good ambient air quality, with all parts of the state in compliance with federal and state ambient air quality standards.

The regulated air pollutants of most concern are particulate matter, ozone, nitrogen oxides, sulfur dioxide, carbon monoxide, and lead. These pollutants are subject to National Ambient Air Quality Standards (NAAQS). All areas of the state are currently in attainment, meaning that the state has air cleaner than the federal limits for these pollutants. Maintaining compliance with these federal standards is important to protect the public health. NAAQS nonattainment could result in additional requirements and significant economic costs to regulated facilities and the state. The Department also regulates the emission of substances defined by the U.S. Environmental Protection Agency (EPA) as hazardous air pollutants (HAPs), which are toxic substances known to cause cancer and other serious health impacts. Title 129 does not include any requirements specifically for the control of odors.

The Air Quality Division consists of the Air Permitting Section, which issues construction permits, operating permits, and performs air dispersion modeling; and the Air Compliance Section, which maintains an ambient air monitoring network, compiles emission inventories, and conducts inspections and other compliance and enforcement activities. In addition, Planning staff work with the Division Administrator to monitor federal regulations, update state regulations and Nebraska's state implementation plans to remain in compliance with air quality standards, and inform the regulated community and the public about changes in air quality regulations.

Through an agreement with the Department and direct delegation from the EPA, three local agencies — Lincoln-Lancaster County Health Department, Omaha Air Quality Control, and Douglas County Health Department — have accepted responsibility for various facets of the air quality program within the jurisdictions of those agencies. These responsibilities include air quality monitoring, permitting, and enforcement.

Permitting Section

An air quality permit sets enforceable limits on the amounts of pollutants that a facility may emit, ensuring that facilities are constructed and operated in a manner that protects the quality of the surrounding ambient air. The Department issues two main types of air quality permits: construction

permits and operating permits. A construction permit may be required for a facility before the construction or modification of an emission unit. An operating permit may be required for an existing facility source of certain air pollutants.

Title 129 provides for three types of construction and operating permits: individual, permit-by-rule, and general. Some sources are not eligible for coverage under permit-by-rule or general permits.

Individual permits are available for all regulated sources. These permits include all requirements applicable and specific to that source and location. Because it is "tailor made" for the source, significant time and labor is required for each permit issued. The individual permit process includes a required public notice with a 30-day comment period.

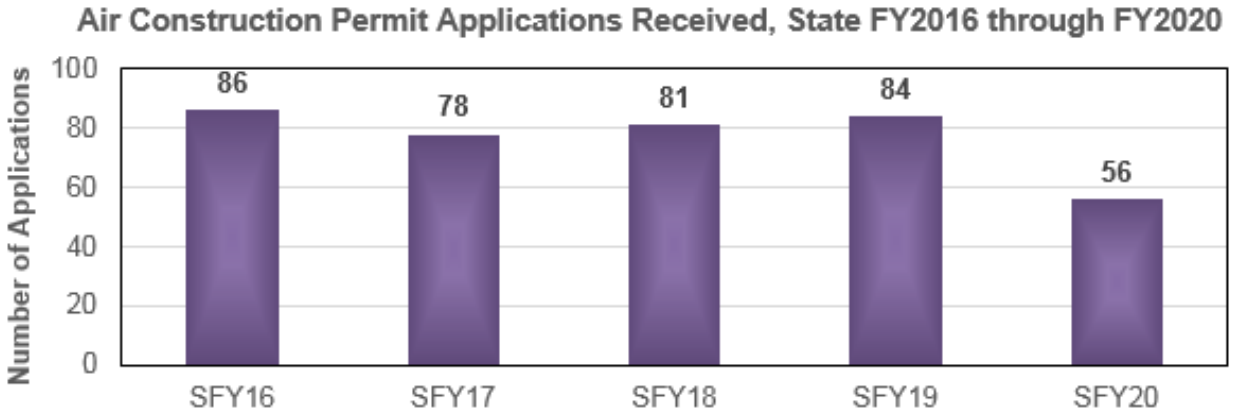
A permit-by-rule and a general permit are similar in that the rule or general permit has the same requirements for, and covers, all sources in a particular industrial category, provided that the source meets the applicability criteria and applies for and obtains coverage. The requirements for a permit-by-rule are established in Title 129. Requirements for a general permit are established in that general permit. Each general permit is issued only once (including the public notice period). Eligible applicants then apply for and obtain coverage without the need to develop an individual permit for that facility or to go through a public comment period each time coverage is approved for an eligible source under that permit-by-rule or general permit.

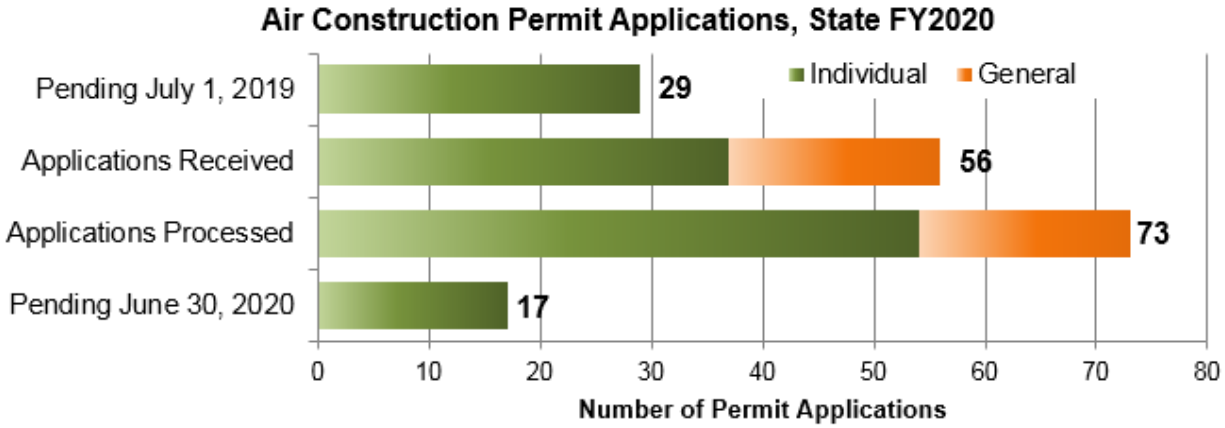
General construction permit coverage is currently available for eligible sources in nine categories (including time-sensitive construction activities), and general operating permit coverage is available for one category (small incinerators). Approval of general and permit-by-rule coverage takes much less time for the agency and for the facility than an individual permit. The permit-by-rule approval process usually takes less than 30 days. An online-only application process is used for general permit coverage, and approval may take only a few days or less.

Construction Permit Program

The Department has maintained a construction permit program for air contaminant sources since the 1970s. Facilities are required to obtain a construction permit before they construct, reconstruct, or modify any air contaminant source or emission unit where there is a net increase in the potential to emit above thresholds specified in Title 129 for particular pollutants. Only sources with potential emissions at or above these thresholds are required to obtain a construction permit. A construction permit is valid for the life of the covered emission units.

The following graph summarizes construction permit applications received, processed, and pending during the 2020 state fiscal year. (Note: the *Processed* category includes permits issued, withdrawn, denied, and determinations of no permit required.)





Nebraska's program also implements the federal construction permit program, called Prevention of Significant Deterioration (PSD). The PSD program applies to construction of new major sources or major modifications to existing sources that emit significant levels of certain types of pollutants. The purpose of the PSD program is to protect air quality in areas where the air is cleaner than the ambient air quality standards while still allowing industrial and economic growth.

For facility sources regulated under the construction permit program that emit levels of certain types of air pollutants sufficient to trigger PSD requirements, Division staff conduct additional, more rigorous reviews of the construction permit application to ensure that best available control technology will be used in order to minimize impacts on the environment. The Department must also assure that the source will not cause or contribute significantly to any deterioration of air quality or violations or exceedances of the ambient air quality standards. Three PSD construction permits were issued in State FY2020; one of which was the State of Nebraska's first ever Plantwide Applicability Limit (PAL) permit. A PAL is an emission limitation, expressed in tons per year, for a pollutant at a major stationary source that is enforceable as a practical matter and is established source-wide in accordance with NAC *Title 129 Chapter 19, Section 011*. A PAL permit places a limit (or cap) on the annual emissions of a specified pollutant from a major source of air pollution and includes monitoring, reporting, and recordkeeping requirements to ensure that the source complies with the annual emissions cap. The EPA put PAL permits into regulation in 2002. The intent was to provide major sources a voluntary option that provides the flexibility to pursue projects without undergoing a PSD review, while assuring environmental protection by locking-in the source at previously emitted pollution rates.

The PSD program also helps to protect visibility in nearby national parks and wilderness areas. The Department notifies federal land managers and nearby States and Tribes of pending PSD decisions and those authorities can express relevant concerns for potential impacts.

The economy and business activity in the state impact the number of air quality construction permit applications received each year. The following graph shows the number of construction permits received annually from state FY2016 through FY2020.

Air Dispersion Modeling

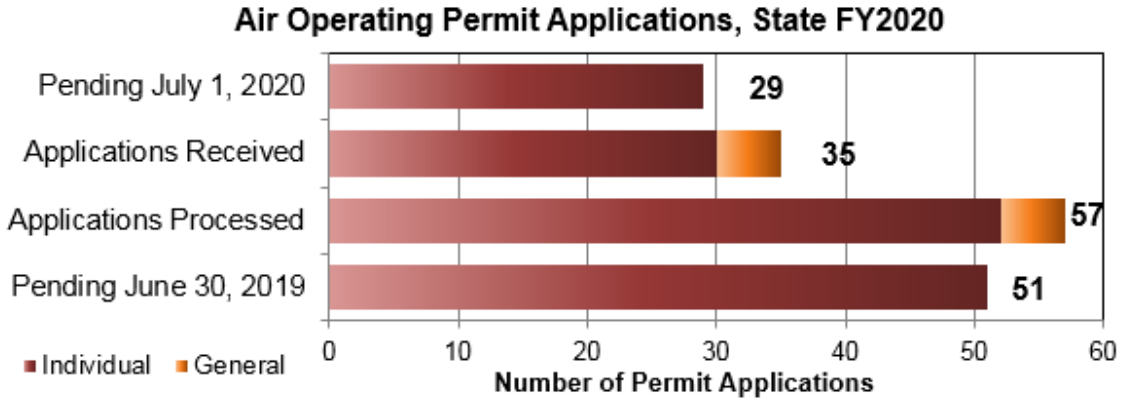
Air dispersion computer models predict how air pollutants emitted by a facility spread and disperse. These regulatory models use expected emissions, meteorological and geographical data, and other factors to estimate ground level concentrations of air pollutants at a large array of locations outside of the facility fence line. In a relatively short amount of time, a model can predict the ground-level impact of facility emissions in a standardized and cost-effective manner.

Modeling is required in conjunction with an air quality construction permit application when the expected increase in emissions of any regulated pollutant by a facility is greater than the emission rate specified in state or federal regulations. An air dispersion model is the primary tool used to determine if the predicted impacts from a new facility or modification will be in attainment with current air quality standards. Models are also used as a design tool to analyze the effects of different pollution control strategies. The Air Quality Division's air dispersion modeler reviews all aspects of the models that facilities provide as part of their construction permit applications. These reviews include facility emissions and meteorological data, background concentrations, the modeling protocol, and the final modeling results.

Operating Permit Program

As required by Title V of the Federal Clean Air Act Amendments of 1990, Nebraska issues operating permits for Class I (major) sources of certain air pollutants. The Department also regulates minor sources using Class II operating permits as required under Nebraska law. Application for an operating permit is required by Title 129 within 12 months of startup of a regulated air contaminant source. Title 129 provides for operating permit terms up to five years, after which the permit must be renewed. An operating permit contains all applicable requirements for emission points at a facility. For a large, complicated, growing facility, an operating permit incorporates requirements from all construction permits issued for the facility, providing the source with one permit document to help compliance with all associated air permitting requirements.

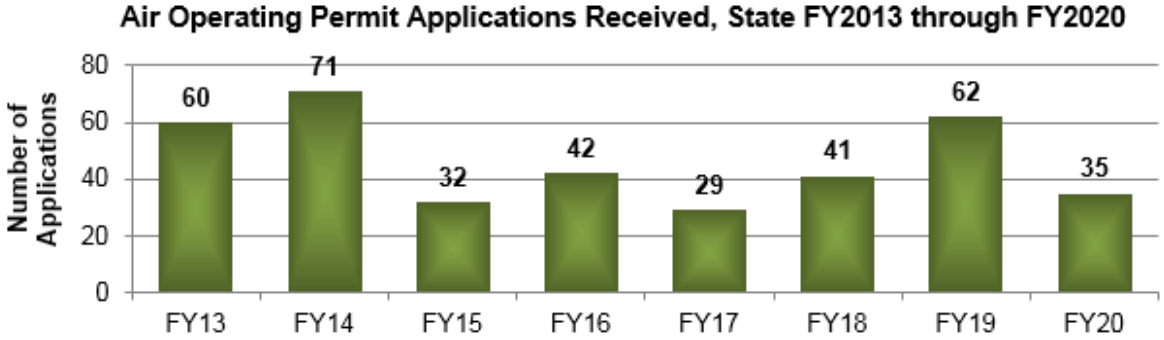
The following chart provides statistics on the number of operating permit applications received, processed, and pending during the 2020 state fiscal year. These statistics include general permit coverage approvals. The current general operating permit for small incinerators was issued in FY2018, replacing the previous five-year general operating permit that expired that year. Most of the general operating permit coverages issued in FY2020 were for applicants whose previous coverage was expiring. (The current general operating permit for small incinerators is available through an efficient online process, whereas the previous general permit required a paper application).



The Nebraska operating permit program also offers an innovative alternative for major sources that have taken measures to keep their emissions very low, called the Low Emitter Rule. To be eligible, a Title V or Class I source must document five years of actual emissions at or below the Class II or minor source threshold levels, meet other requirements established in the regulations, and not otherwise be required to obtain an operating permit. Since its inception in 1997, the Low Emitter Rule has allowed 129 sources to opt out of their major source operating permits, with no identifiable degradation of air quality in Nebraska.

The five-year renewal cycle, past delays in issuing renewals, and other factors have resulted in wide variations over time in the numbers of operating permits up for renewal each year. The chart below summarizes air quality operating permit applications received from State FY2013 through FY2020 (applications for all application types, including permit revisions, general operating permits, permit-by-rule, etc.).

Permit Program Process Improvements



Individual construction and operating permits are complex, highly technical documents that must address all emission points for various pollutants at a facility in a manner that is enforceable as a practical matter. Processing a permit application includes complex analysis with multiple steps and personnel. In FY2020, the Operating Permits Unit undertook a process improvement project on operating permit renewals and applications. The project resulted in a significant reduction in the time needed to prepare and process an operating permit renewal application. One applicant estimated an 80% reduction in their application preparation time. The Air Division documented similar savings in staff time to process the renewal.

Each construction and operating permit includes a fact sheet, which provides a technical description of the facility, applicable regulatory requirements, and a statement of basis for each permit condition. Division staff made significant fact sheet process improvements in FY2018 and will revisit permit fact sheets each year to pinpoint opportunities for streamlining. Additional improvements were made in FY2020 that continue to make these fact sheets more uniform and easier to understand, making compliance easier for facility staff, which also assists the efforts of agency compliance inspectors.

With the process improvement event that started in 2016, fact sheet project initiated in 2018, and other ongoing efforts, the average time required to reach a decision on a construction permit application improved significantly from 188 days to approximately 78 days (including online-only general construction permit coverage) at the end of FY2020. The operating permit application backlog was also significantly improved down from approximately 120 applications a few years ago to 29 applications pending at the end of FY2020, even with a steady influx of applications. Although some impacts of improvements may not be realized in the immediate future, sources with permits being issued now should see processing times significantly improved several years from now when they apply for permit renewal.

The Air Quality program has consistently had a significant amount of staff turnover, leading to recurring discussions about permit decisions, regulations and other challenges. The Division established an electronic Air Quality Permitting Compendium that allows important information about existing permits — such as permit decisions, regulatory determinations, and internal procedures — to be archived, easily searched, and readily accessible to Air Quality Division Staff. In addition, the Division revamped new employee onboarding procedures. These are two examples of the significant efforts to help improve staff training and permitting consistency. This tool allows Division staff to research past permitting actions and associated publications and documents to help facilitate more rapid permit and uniform permit decisions.

At the end of FY2020, the Air Construction Permitting Program started pursuing a project to develop an online air construction permitting process. The objectives of the project are to make permit applications easier and more accessible for regulated facilities, to streamline the permitting process, and to reduce application errors. An online system will ensure applications are complete and would be received electronically by the agency. This will reduce document handling time (mailing, processing, and scanning) and deliver applications to the program staff in a timelier manner.

Compliance Section

Ambient Air Quality Monitoring Program

The Clean Air Act requires the EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment, which are called "criteria pollutants." The Act established two types of national air quality standards: primary standards, which are intended to protect public health, and secondary standards, intended to protect the environment. National standards have been established for the following six pollutants:

- Particulate Matter (PM)
  - With a diameter of 10 micrometers or less (PM_{10})
  - With a diameter of 2.5 micrometers or less ($PM_{2.5}$)
- Sulfur Dioxide (SO_2)
- Nitrogen Dioxide (NO_2)
- Carbon Monoxide (CO)
- Ozone (O_3)
- Lead (Pb)

Nebraska has an additional ambient air quality standard for Total Reduced Sulfur (TRS). The TRS standard was adopted by the Environmental Quality Council in 1997 and is a public health-based standard.

Nebraska Ambient Air Monitoring Network

The State of Nebraska operates an ambient air-monitoring network to determine compliance with the NAAQS and with state air quality standards. In addition, the Nebraska network includes a site for monitoring regional haze impacts that is part of a national program to help protect visibility in our National Parks and Monuments.

Three agencies are involved in the day-to-day operation of the network: NDEE, Lincoln-Lancaster County Health Department, and Douglas County Health Department. Omaha Air Quality Control (part of the Omaha Public Works Department) also provides technical support for network-related activities.

The Nebraska monitoring network includes sites at which air quality is monitored to evaluate attainment with the standards and other health- and welfare-associated priorities. The Department evaluates the adequacy of its monitoring network in accordance with federal regulations each year. Changes may be made to the network due to changes in monitoring regulations, updates to the ambient standards, perceived changes in pollution trends, and/or funding issues. Loss of site access is another consideration that occasionally affects the network.

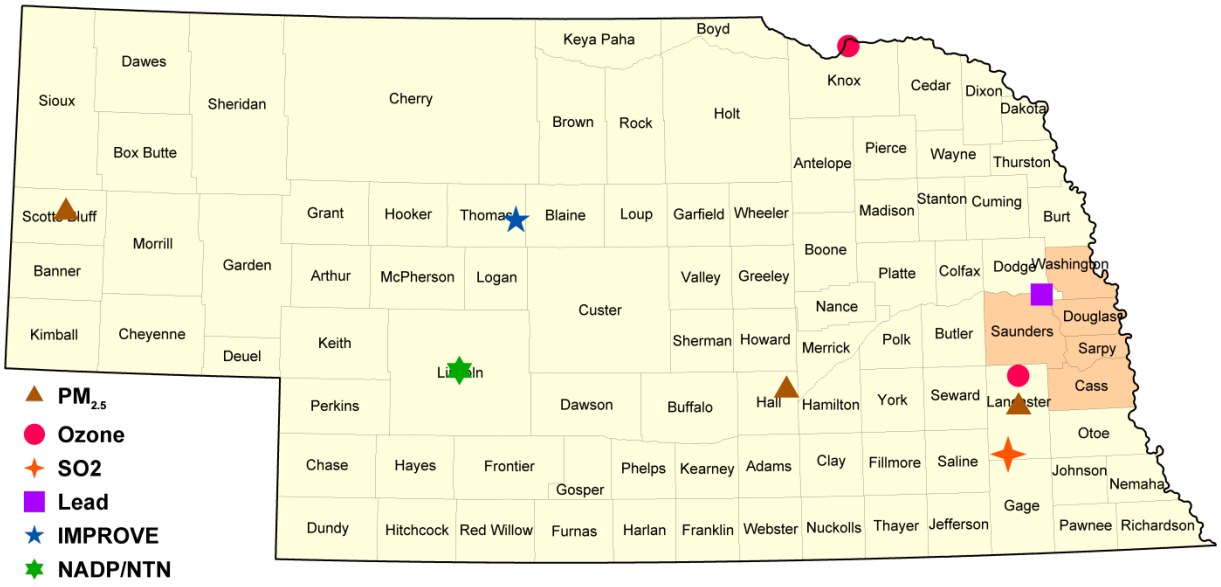
Most of the sites in the monitoring network evaluate pollutants for which standards are established *(i.e.*, $PM_{2.5}$, PM_{10}, CO, SO_2, Lead, or Ozone). Some sites monitor for more than one pollutant. The NCore site in Omaha is part of a National Core Network that monitors for nine

pollutant parameters. There are two additional types of sites in the network: Interagency Monitoring of Protected Visual Environments (IMPROVE) and National Atmospheric Deposition Program/National Trends Network (NADP/NTN) sites. See the following maps for locations.

IMPROVE monitors provide information for studying regional haze that may impact the visibility in listed federal Class I National Park and Wilderness Areas. There is one IMPROVE monitoring site at Nebraska National Forest at Halsey, Nebraska. This site provides data on pollution trends and transport.

The National Trends Network (NTN) of the National Atmospheric Deposition Program (NADP) is a nationwide network of sites that monitor for pollutants deposited by precipitation. The deposition constituents examined include acidity, sulfates, nitrates, ammonium chloride, and base-cations (e.g., calcium, magnesium, potassium, and sodium). There are two NADP/NTN sites in Nebraska: one near Mead and one near North Platte, which have both been operational for over 20 years. These sites are operated by the University of Nebraska, with analytical and data development support from the NADP. The Mead site was upgraded to include mercury (Hg) deposition monitoring and is part of the NADP/Mercury Deposition Network (MDN). Both sites maintain the NADP monitoring. Additional information about the NADP/NTN can be found at http://nadp.slh.wisc.edu.

Nebraska Monitoring Sites Outside of the Omaha Metropolitan Statistical Area



$PM_{2.5}$
Lincoln (Lancaster County)
Grand Island (Hall County)
Scottsbluff (Scotts Bluff Cou

Ozone
Davey (Lancaster County)
Santee (Knox County)

Sulfur Dioxide (SO_2)
Sheldon Station (Lancaster (

$PM_{2.5}$
Lincoln (Lancaster County)
Grand Island (Hall County)
Scottsbluff (Scotts Bluff County)

Ozone
Davey (Lancaster County)
Santee (Knox County)

Sulfur Dioxide (SO_2)
Sheldon Station (Lancaster County)

Lead
Fremont (Dodge County)

IMPROVE
Nebraska National Forest (Thomas County)

NADP/NTN
Maxwell (Lincoln County)

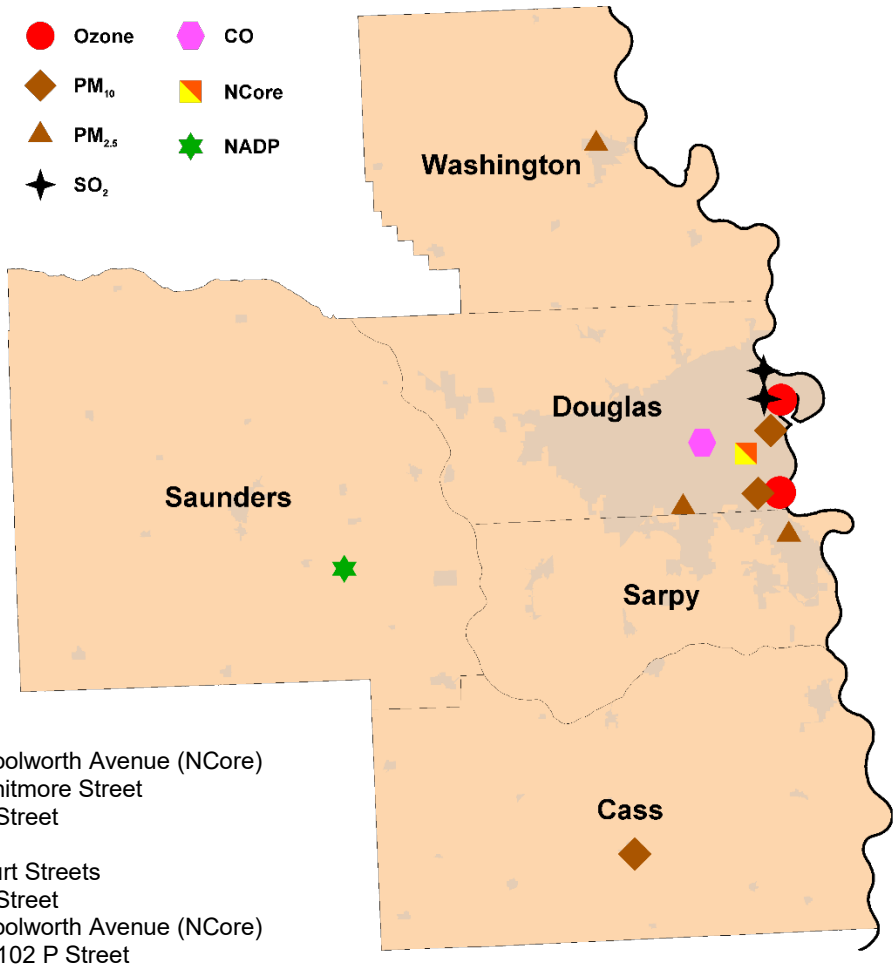
The Nebraska counties in the Omaha-Council Bluffs Metropolitan Statistical Area are indicated by orange shading.

The state map above shows the nine monitoring sites that are located outside of the Omaha-Council Bluffs Metropolitan Statistical Area (counties shown in orange). Three of these sites are operated by the Department, either directly or under contract. The three sites in Lancaster County are operated by the Lincoln-Lancaster County Health Department with NDEE oversight. The National Atmospheric Deposition Program site near North Platte is operated by the

University of Nebraska. An additional ozone site near Santee in northeast Nebraska is operated by the U.S. EPA.

The following map shows the location of the monitoring sites in the Nebraska portion of the Omaha-Council Bluffs Metropolitan Statistical Area (two sites monitor two pollutants and are represented by overlapping pairs of symbols). Nine of these sites, located in Douglas, Sarpy, and Washington Counties, are operated by the Douglas County Health Department with oversight by the Department. A PM_{10} site in Weeping Water in Cass County is operated by NDEE. The National Atmospheric Deposition Program site at Mead is operated by the University of Nebraska.

Monitor Locations in the Nebraska Portion of the Omaha-Council Bluffs Metropolitan Area



Ozone
Omaha, 4102 Woolworth Avenue (NCore)
Omaha, 1616 Whitmore Street
Omaha, 2411 O Street

PM_{10}
Omaha, 19th & Burt Streets
Omaha, 2411 O Street
Omaha, 4102 Woolworth Avenue (NCore)
Weeping Water, 102 P Street

$PM_{2.5}$
Omaha, 4102 Woolworth Avenue (NCore)
Omaha, 9225 Berry Street
Bellevue, 2912 Coffey Avenue
Blair, 2242 Wright Street

Sulfur Dioxide (SO_2)
Omaha, 4102 Woolworth Avenue (NCore Trace Monitor)
Omaha, 1616 Whitmore Street
Omaha, OPPD North Omaha Station

Carbon Monoxide
Omaha, 4102 Woolworth Avenue (NCore Trace Monitor)
Omaha, 7747 Dodge Street

NCore
4102 Woolworth Avenue

NADP/NTN
Mead, Saunders County

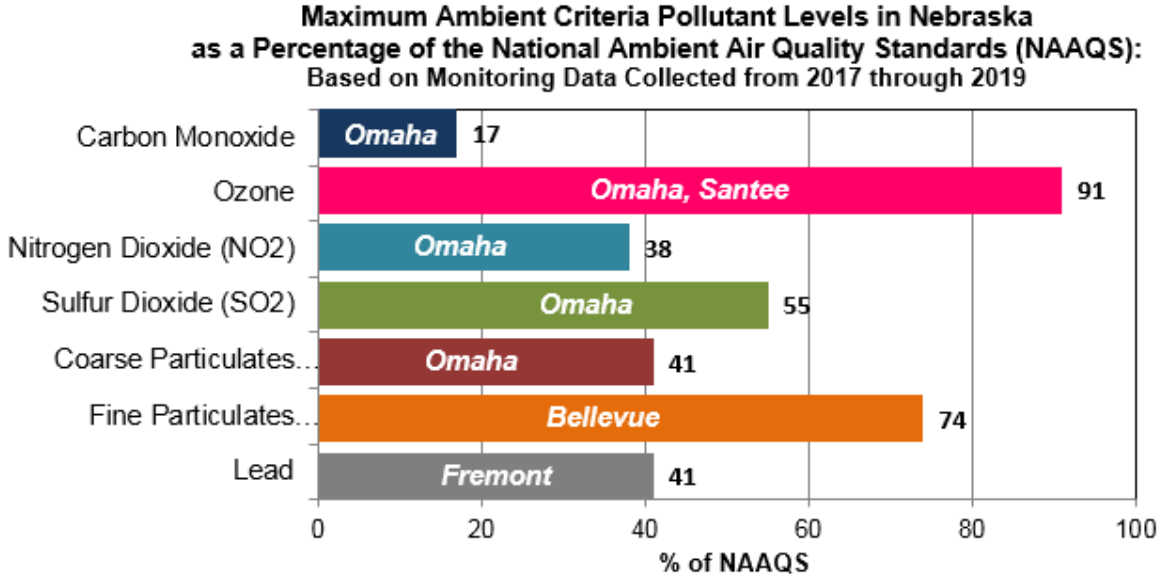
Monitoring Information Online

Data from continuous ozone and $PM_{2.5}$ monitors in Lincoln and Omaha are reported hourly to the EPA AirNow system, which makes current air quality information available to the public on the web at http://www.airnow.gov. EPA uses the data to calculate an hourly Air Quality Index (AQI) for each monitor location. The AQI is a numeric rating of the current air quality that provides the public with a quick and simple means to evaluate current air quality in each metro area. The Douglas County Health Department and Lincoln-Lancaster County Health Department websites provide links to current AQI values for their cities. The Douglas County Health Department also participates in the ENVIROFLASH program that allows members of the public to sign up to receive air quality alerts via email.

During FY2020, the Division replaced $PM_{2.5}$ monitors in Grand Island and Scottsbluff (which were filter-based monitors that provide average concentrations every three days) with continuous monitors that provide real-time data that will be available to the public via AirNow.

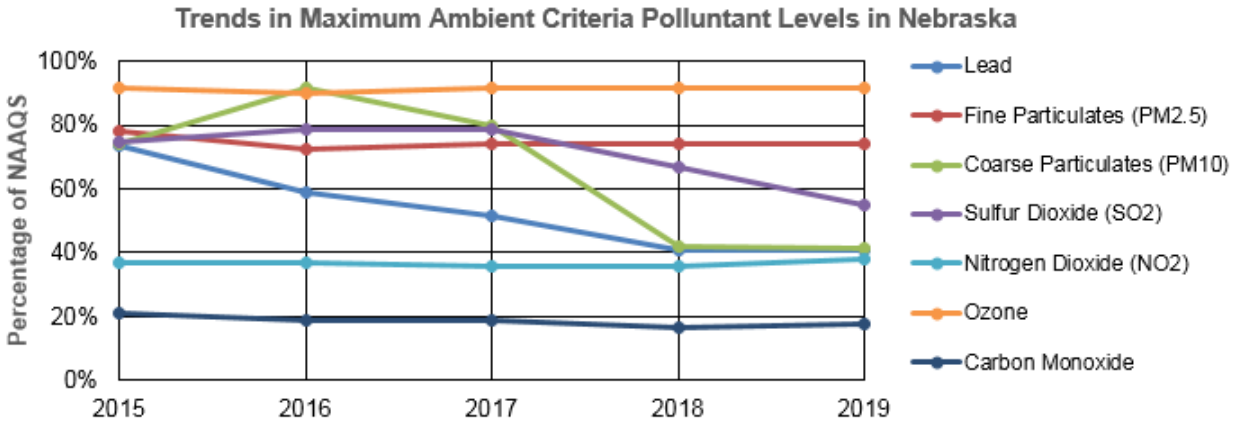
Compliance with National Ambient Air Standards (NAAQS)

Current air quality monitoring data shows that all areas of Nebraska are in attainment (in compliance) with the NAAQS. The chart below shows where the highest air pollutant levels are being detected in Nebraska for each criteria pollutant and how their levels compare to the NAAQS. A reading of greater than 100% would mean that the NAAQS standard was exceeded, but the highest readings for all criteria pollutants are well below 100%.



The U.S. EPA has designated all of Nebraska as "Attainment/Unclassifiable" with respect to the NAAQS for sulfur dioxide except for Douglas and Lancaster Counties. Lancaster County was designated "Unclassifiable" in 2016 (due to the need for additional characterization), and Douglas County was not designated at that time. EPA has proposed that Douglas County be designated as "Attainment/Unclassifiable" and Lancaster County be re-designated to "Attainment/Unclassifiable" by the end of 2020. These counties include coal-fired power plants in North Omaha and near Hallam, respectively. Designations for these areas are based on data from two source-specific sulfur dioxide

monitoring sites operational from 2017-2019, which demonstrate that sulfur dioxide levels at these locations are in attainment/compliance with the NAAQS.



The chart above shows trends in the maximum measured levels of criteria pollutants in Nebraska from 2015 through 2019. The value for each pollutant and year is the maximum measured at any monitoring site in the state (as a percentage of the NAAQS for that pollutant). All of the criteria pollutants show modest to significant declines in maximum levels since 2015. Ozone is the criteria pollutant of most concern, as maximum levels have remained above 90% of the NAAQS at a number of urban and rural monitor sites in Nebraska as well as in the adjacent states.

The Division compiles an annual Ambient Air Monitoring Network Plan that provides a more detailed analysis of ambient air monitoring data, pollutant trends through time, and NAAQS compliance. These reports are available on the agency website: http://dee.ne.gov/Publica.nsf/Pubs_Air_Amb.xsp.

Inspections and Facility Compliance

The Compliance Program is responsible for conducting compliance inspections of air pollution sources, responding to citizen complaints, observing and evaluating emission tests, and the acid rain program. Consistent with the Nebraska Environmental Protection Act, the Air Quality Division attempts to obtain compliance with environmental regulations first through voluntary efforts. Voluntary compliance has helped bring about a better working relationship with the regulated community without sacrificing environmental quality. However, enforcement actions are pursued by the Department when compliance issues are serious, chronic or cannot otherwise be resolved.

When the Covid-19 pandemic hit, the Air Quality Division had to adjust how inspections were conducted. In early June 2020 the Division implemented a virtual inspection process that was able to meet the EPA compliance monitoring strategy (CMS) requirements. The table on the next page lists the compliance activities conducted by the Department during the year.

State FY2020 Compliance Activity Summary

Compliance Activity	NDEE
On-site Inspections	132
Facility Stack Tests Conducted On-site Observations Conducted	107 32
Continuous Emission Monitoring Audits Conducted On-site Observations Conducted	55 13
Complaints Received	74
Burn Permits Issued Burn Permits Denied Burn Permits Withdrawn	91 0 0

Emission Inventory and Emission Fees

Each year the Department conducts an inventory of emissions from major industrial sources and a representative sample of lower-emitting minor industrial sources. Emission inventories are due on March 31 each year for the previous calendar year. Every three years, the Department assists the EPA in preparing a comprehensive national inventory of emissions. The next national inventory compiled will include emissions reported by our sources for 2018, 2019, and 2020. The emissions inventory is used to support the planning efforts for national rulemaking and to assess trends in emissions through time.

The Department also uses the emission inventories to determine the assessment of annual emission fees. Facilities that emit major sources of air pollution are required to pay emission fees for each ton of pollutant emitted during the previous calendar year. The maximum emission for which a fee is assessed is 4,000 tons per pollutant. For electrical generating facilities with a capacity between 75 and 115 megawatts, the maximum emission for which a fee is assessed is 400 tons per pollutant. The Department attempts to set the fee rate at the minimum level needed to pay reasonable direct and indirect costs of developing and administering the air quality permit program. An analysis detailing how the Department arrived at the fee rate is made available to fee payers. The rate for emissions generated in 2019 was $65 per ton, a reduction from $70 per ton for the 2018 calendar year.

Facilities submitted emission inventory reports for the calendar year 2019 for the first time through the online reporting system called State and Local Emissions Inventory System (SLEIS). Training sessions for SLEIS users conducted during 2019 are still being held in 2020 via video conferencing platforms.

Planning

The Air Quality Division maintains Nebraska's air quality regulations, implements the National Ambient Air Quality Standards (NAAQS), and provides expert information on the National Emissions Standards for Hazardous Air Pollutants (NESHAP) and New Source Performance Standards (NSPS). The Division also provides support and training resources to the regulated community and the general public. Air program and regulatory updates are communicated to interested parties via email through the AirNews listserv. The Air Division also administers local agreements with Lincoln-Lancaster County Health Department, the City of Omaha Air Quality

Control division, and the Douglas County Health Department for their delegated functions in air quality permitting, compliance, and planning.

Planning for Air Quality Issues in Nebraska

EPA periodically reviews the NAAQS using the most recent scientific information available and revises or retains the standards as appropriate. When a new, revised or retained standard is issued, states must determine if they are in attainment with the standard and, if they are not, take the necessary corrective action. States must also submit to EPA their recommendations for attainment or nonattainment designations and State Implementation Plans (SIPs) for each new or revised standard. A State Implementation Plan describes how the department will implement, maintain and enforce a standard.

At the present time, Nebraska is in attainment with all of the NAAQS. Planning activities are currently in progress to address regulatory issues concerning sulfur dioxide, Regional Haze, and the Affordable Clean Energy (ACE) Rule.

Sulfur dioxide (SO_2)

The 2010 sulfur dioxide (SO_2) standard requires states to demonstrate attainment in the areas surrounding large sources of the pollutant. EPA finalized the Data Requirements Rule (DRR) in 2015 to assist in implementation of the 2010 standard, requiring state air agencies to characterize the air quality near sources that emit 2,000 tons per year or more of SO_2. Nebraska chose to comply with this requirement using both air quality monitoring and pollutant dispersion modeling. Sources in Nebraska subject to this rule include coal-fired power plants, specifically Whelan Energy Center (Adams County), Sheldon Station (Lancaster County), North Omaha Station (Douglas County), Gerald Gentleman Station (Lincoln County), and Nebraska City Station (Otoe County).

Areas surrounding Gerald Gentleman Station and Nebraska City Station were characterized by modeling, and EPA designated them as “Unclassifiable/Attainment” in 2016. The area surrounding Whelan Energy Center was also characterized by modeling that demonstrated attainment with the standard and was designated as “Attainment/Unclassifiable” by EPA on April 9, 2018. (Starting in 2018, EPA changed the designation “Unclassifiable/Attainment” to “Attainment/Unclassifiable” to emphasize that these areas are in compliance with current air quality standards.) The remaining areas around Sheldon Station (Lancaster County) and North Omaha Station (Douglas County) were characterized using monitoring. These source-specific monitors were operational from 2017 through 2019, and EPA has proposed designations of “Attainment/Unclassifiable” for both areas; final designations will be promulgated by December 31, 2020.

The DRR requires annual reporting (termed “ongoing requirements”) for areas that were characterized by modeling, and this year’s report was submitted in June 2020. Two facilities are subject to these ongoing requirements: Whelan Energy Center and Gerald Gentleman Station. Facility emissions data indicate that both areas continue to demonstrate attainment with the federal standard.

A State Implementation Plan revision addressing interstate transport of SO_2 is in progress, and demonstrates that emissions from Nebraska sources do not interfere with adjacent states’ ability to maintain or comply with the NAAQS.

In April 2019, EPA retained the current primary (health-based) SO_2 NAAQS.

Ozone

EPA issued revised ozone standards in 2015, lowering the standard from 0.075 parts per million (ppm) to 0.070 ppm. In November 2017 EPA designated the entire state of Nebraska as “Unclassifiable/Attainment”. A revised State Implementation Plan for ozone was submitted to EPA in September 2018 and was approved in April 2020. In August 2020, following a review of the standard, EPA has proposed to retain the current NAAQS.

Particulate Matter

In April 2020, EPA proposed to retain the current NAAQS for particulate matter (PM), including both fine particles ($PM_{2.5}$) and coarse particles (PM_{10}). A final rule is expected in late 2020.

Regional Haze

Regional Haze refers to impaired visibility caused by particulates and industrial gases in the atmosphere. EPA issued the Regional Haze Rule in 1999 to improve visibility in national parks and wilderness areas. The rule requires that state and federal agencies work together to achieve this goal. Numerous amendments to the Rule have been issued addressing the Cross-State Air Pollution Rule (CSAPR) as an alternative to Best Available Retrofit Technology (BART) for particular pollutant sources, and regulatory requirements for state implementation plans. In addition, recent guidance and technical support documents are available to assist states in preparing State Implementation Plans (SIPs) for the second implementation period (2018-2028).

Nebraska submitted its Regional Haze SIP for the first implementation period (2008-2018) in July 2011; in 2012, EPA issued a partial approval/partial disapproval of the SIP. The disapproved portions include the BART determination for sulfur dioxide for Gerald Gentleman Station and the state's long-term strategy for regional haze insofar as it relied on the BART determination. The disapproved portions will be addressed in the forthcoming SIP revision. This source participates in the CSAPR trading program, which allots each source an emissions budget for SO_2 and permits trading of allotments. Emissions to date from this source have been within the allotted SO_2 budget under CSAPR, and no additional control measures have been required.

The Department submitted its Regional Haze Five-Year Progress Report in April 2017. At present, the Division is developing its SIP revision for the second implementation period, which is due to EPA in July 2021. This SIP revision will address portions of the initial SIP and progress report, as well as state obligations for the current implementation period.

Affordable Clean Energy Rule

In July 2019, EPA finalized the Affordable Clean Energy (ACE) Rule as a replacement for the Clean Power Plan. This rule includes three separate rule-makings: 1) repeal of the Clean Power Plan; 2) establishment of emission guidelines for states to use when developing plans to limit greenhouse gas emissions at power plants and 3) determination that heat rate improvement is the best system for reducing greenhouse gas emissions from coal-fired power plants. The ACE rule did not provide much specificity on how to implement and was left up to the states to develop their own plan within the confines of the rule. The Air Division has begun developing the implementation plan required by this rule and identified seven power plants with a combined 12 units that this rule affects. Several meetings are scheduled in SFY 2021 to have an open dialogue between the power plants and NDEE to address a consistent and EPA approvable plan. Plans must be submitted to EPA in July 2022.

Air Toxics Program

EPA currently lists 187 substances as hazardous air pollutants, or air toxics, which are air pollutants known to cause cancer and other serious health impacts. The Division developed the Air Toxics Notebook on the Department website as a reference on the air toxics program. In addition, the Department also developed another set of web pages for the New Sources Performance Standards (NSPS), which are federal rules that apply largely to new stationary sources. Both sets of rules have been issued by EPA. The Notebooks are intended to help the regulated community and the public understand the air toxic and NSPS regulations. For each standard the Notebook has a page that provides applicability information, regulatory citations, amendment dates, guidance documents, forms, and a listing of sources in the Department's jurisdiction that are subject to each NESHAP or NSPS rule.