

CHAPTER 7:

Environmental Assistance Division

The purpose of the Environmental Assistance Division is to provide information and assistance to the public and the regulated community, as well as to work in partnership with other agency programs to manage specific projects. Division activities include Small Business and Public Assistance, Quality Assurance, Homeland Security, Smoke Awareness, and several rebate programs aimed at reducing diesel emissions and improving air quality in Nebraska.



The annual Power Summit is organized by NDEQ and the Nebraska Public Power District.

Small Business and Public Assistance Program

The Small Business and Public Assistance program (SBCAP) was created as a result of the Clean Air Act Amendments of 1990. Although the SBCAP was created to address air quality issues, NDEQ has provided the same compliance assistance services to Water Permitting and Land Management Division stakeholders as well.

Nebraska's SBCAP is organized into four major units: the Small Business and Public Assistance (SBPA) program, the One-Stop Permit Assistance program, the Public Advocate, and the Small Business Compliance Advisory Panel. Key activities of the program include developing guidance and outreach materials, hosting information workshops, helping the regulated community understand their obligations under state and federal law, and promoting compliance and permit assistance visits to small businesses.

This year, the Environmental Assistance Division's two assistance coordinators created – with the help of the Department's permitting staff – an online tool called the "Permit Matrix." The Permit Matrix is an Excel document organized to help businesses coming to the State, or existing businesses that wish to expand their operations, understand any NDEQ permit-related issues that may affect them. The tool begins with a Frequently Asked Questions section and a matrix page that lists over 100 industrial sectors or business operations and the types of permits typically required for those activities. The tool contains links to forms or online application systems, guidance documents, program overviews, regulations, supporting NDEQ web pages, and additional local, state, regional and federal resources that may be helpful to the customer. The Permit Matrix may be viewed at <http://deq.ne.gov/publica.nsf/pages/18-011>.

The Program Coordinators continued to work with representatives of the Nebraska Public Power District (NPPD) to organize and host the annual Power Summit, which provides an opportunity to exchange information related to power production, environmental policies, programs, and issues in Nebraska. A primary objective of the Summit is to enhance the dialogue that has been established between the power industry and the associated regulatory agencies. The 2017 Power Summit was held October 31 in Lincoln, and had 73 people in attendance.

The One-Stop Permit Assistance Program was established to offer information and permit application assistance to the regulated community. It provides our customers with an initial point of contact and ensures that businesses are aware of the permits they will need, and that they understand the application process. Eight new potential business entrepreneurships have met with NDEQ this year.

This year, the Department expanded and formalized the One-Stop meeting process with the creation of the NDEQ Grow Nebraska Team. The primary purpose of the Team is to ensure constituents and stakeholders receive responses to inquiries on NDEQ regulations and policies in a comprehensive and timely manner. NDEQ seeks to “make compliance easy” for the regulated community and to provide the public with clear and understandable explanations of NDEQ regulations, policies and processes. The core members of the Team include representatives from the Air Division permitting section, the Water Permitting Division NPDES permitting section, the Land Management Division’s compliance unit, and the Public Information Office. The Team also reached out to the Nebraska Department of Economic Development, and one of their staff within their business recruitment office has also formally joined the Team.

The Public Advocate serves as the ombudsman for purposes of the Clean Air Act requirements, receiving requests for regulatory information or environmental complaints from the public and ensuring the Department is accessible and responsive to public concerns. In this role, the Public Advocate provides outreach to individuals to address specific questions and concerns. This year, the Public Advocate worked with Air Quality Division and Water Permitting Division staff regarding violations of a facility in Scottsbluff.

The Small Business Compliance Advisory Panel was established to evaluate the effectiveness of Department outreach programs, to provide feedback, and to identify program obstacles. The panel is composed of seven members: two representatives from the general public selected by the Governor, four representatives from small businesses selected by the Legislature, and one representative selected by the Director. The Panel members provided their annual report to the Governor in December 2017 and met with NDEQ staff to discuss several issues during their annual meeting in September 2018. During the September meeting, the Director informed the panel members about efforts the Department has undertaken to implement the Governor’s “Grow Nebraska” initiative, concerns that may affect the state’s agricultural sector, and efforts to streamline the Department’s waste grant procedures.

Homeland Security

NDEQ has been actively involved in the state’s Homeland Security efforts, which are directed by the Lieutenant Governor. The Director represents the Department on the Lieutenant Governor’s Homeland Security Senior Advisory Committee. Department staff have participated in a number of tabletop exercises hosted by the Nebraska Emergency Management Agency. These exercises, which often have a Homeland Security component, help NDEQ identify training needs and response issues in need of attention. These exercises typically involve incidents related to operation of our

nuclear power plants, release of agricultural chemicals, pipeline releases, and responding to and mitigating spills into surface waters of the state.

Quality Assurance

The EPA has requirements for conducting quality management activities for all environmental data collected by the NDEQ, to ensure that the Department's decisions are supported by data of known and documented quality. In turn, the Department is responsible for reviewing the procedures a project will use to ensure that the samples participants collect and analyze, the data they store and manage, and the reports they write are of high quality. Quality Assurance Project Plans (QAPPs) are written documents that outline these procedures. Assistance Division staff help coordinate the review of QAPPs by appropriate personnel throughout the Department. This year, 14 QAPP reviews were completed.

Smoke Awareness Program

Prescribed burning in the Flint Hills of eastern Kansas is an annual occurrence. Each year in early to mid-spring, ranchers and land managers burn on average 2.3 million acres of tallgrass prairie in the Flint Hills to control invasive plant species and to encourage growth of pasture grass. In some years, unpredictable spring weather conditions provide only a few days of optimal weather for burning, leading to widespread prescribed fires and large amounts of smoke on those days. If the wind direction is from the south, as is common in the spring, Nebraska can experience air quality impacts (elevated fine particulates and ozone) for one to two days following these events. In addition, prescribed burning of rangeland also takes place in Nebraska on a lesser scale, which can have local smoke impacts.

In early 2018, the Department engaged with other key stakeholder agencies to establish communication and foster coordination to better predict potential air quality impacts from prescribed burning and to develop timely, cohesive, and consistent messaging to the public. Participating agencies included:

- Douglas County Health Department (DCHD)
- Environmental Protection Agency (EPA, Region VII)
- Kansas Department of Health and Environment (KDHE)
- Lincoln-Lancaster County Health Department (LLCHD) and Lincoln Mayor's Office
- National Weather Service (NWS)
- Nebraska Department of Health and Human Services (DHHS)
- Omaha Air Quality Control.

These stakeholders met in February 2018 to plan for burn season activities and again in June to review the season and the outcomes of the planned activities. In addition, NDEQ and LLCHD each installed temporary fine particulate monitors in and near Beatrice to assess potential smoke impacts from fires in Kansas.

From February 17 to April 30, 2018, a total of approximately 1,454,750 acres were burned in the Flint Hills, 37% less than the annual average. Favorable weather patterns for Nebraska were instrumental in preventing significant impacts on air quality during this period. Temperatures were cooler than normal and winds were predominantly out of the north or other directions that prevented the resulting smoke from encroaching into Nebraska.

Assistance Division staff performed a number of daily tasks during the 2018 burn season:

- Monitoring PM_{2.5} monitor levels
- Generating maps showing fire locations and smoke plumes
- Reviewing weather forecasts for the upcoming 24-48 hours
- Monitoring the smoke modeling and predicted smoke impact information provided on the Kansas Smoke Management website
- Reviewing the Flint Hills Prescribed Fire Updates and Kansas Smoke Outlook messages from KDHE and disseminating to other agencies
- Updating the NDEQ Smoke Awareness webpage with current information on smoke impacts and pollutant monitoring

On days when heavy burning was predicted, Division staff consulted with other stakeholder agencies to assess predicted smoke and air quality impacts and determine if a health advisory was warranted. On April 11, 2018, DHHS issued a Smoke Advisory for April 11-12, with update advisories on April 12 and 16.

During this burn season, Nebraska experienced a total of 27 days with an Air Quality Index (AQI) for fine particulates (PM_{2.5}) in the *Moderate* range (37% of days) and seven days with an AQI for ozone in the *Moderate* range. The *Moderate* range is characterized by pollutant levels at or above the National Ambient Air Quality Standard for a 24-hour period, which may induce health effects in those who are unusually sensitive to fine particulates or ozone. In comparison, Nebraska experiences daily AQI levels in the *Moderate* category for PM_{2.5} on about 24% of days outside of the burn season.

There were no days during the 2018 burn season in which the AQI values in Nebraska were in the *Unhealthy for Sensitive Groups* or *Unhealthy for All* categories. Burn seasons in previous years (2010-2017) averaged about one day per year in the *Unhealthy for Sensitive Groups* category.

The activities conducted with other agencies in 2018 resulted in timely health advisories and notification to the public of potential air quality impacts from prescribed burning. Predictions of potential impacts, while guarded, were fairly accurate. The flow of information was acceptable but will be improved upon in subsequent years.

Nebraska Clean Diesel Rebate Program

NDEQ established the Nebraska Clean Diesel Program in 2008 to distribute funding received from the EPA to reduce diesel emissions, as authorized by Congress in the Diesel Emissions Reduction Act (DERA). The DERA program provides funding annually to states for the establishment of grant, rebate, and loan programs for the early replacement of diesel engines and vehicles and the installation of diesel emission controls. Within DEQ, this program is jointly administered with the Air Quality Division.

From 2013 through 2016, the Nebraska Clean Diesel Program reduced emissions by providing rebates to Nebraska school districts for the early replacement of older diesel school buses. These rebates reimbursed up to 25% (the maximum amount allowed under the federal grant guidelines) of the cost of a new, cleaner-burning diesel or alternative-fuel school bus. Replaced buses were scrapped to eliminate their harmful emissions of nitrogen oxides, particulates, hydrocarbons, and carbon monoxide.

For the Clean Diesel Rebate Program funding cycle that opened in October 2017, NDEQ received a base award from EPA of \$228,201. The Department chose to match or overmatch that amount using funds from the *Volkswagen Diesel Emissions Environmental Mitigation Trust* (see next section), thereby earning an additional \$114,100 in federal funds, for a total of over \$570,000. In this program cycle, NDEQ has awarded rebates for diesel replacements in three categories: school buses, refuse trucks, and irrigation engines. The school bus and refuse truck replacement rebates reimburse up to 25% of the cost of a new diesel vehicle, or up to 35% for a new vehicle meeting emission standards for nitrogen oxides that are stricter than the current EPA standard. The irrigation engine rebates are for replacement of the diesel irrigation engine with an electric motor (to power a surface pump) or for connecting an existing submersible pump directly to the electric grid. The rebate reimburses up to 60% of the cost of the electric equipment, installation, and required extension of electric service lines. All replaced diesel vehicles and engines must be scrapped in order to eliminate their emissions. A total of \$579,924 in rebates have been awarded or are anticipated to be awarded in this program cycle. The recipient shares of the project costs will total approximately \$1,013,847.

2017-2018 School Bus Replacement Rebates: \$113,666

Name	Location	Replacement	Rebate Amount
Ainsworth Community Schools	Ainsworth	Diesel School Bus	\$20,475
Bishop Neumann Central High School	Wahoo	Diesel School Bus	\$20,409
Boone Central Schools	Albion	Diesel School Bus	\$21,000
Johnson County Central Public Schools	Tecumseh	Diesel School Bus	\$21,000
Loomis Public School	Loomis	Propane School Bus	\$30,783

2017-2018 Refuse Truck Replacement Rebates: \$373,000

Name	Location	Replacement	Rebate Amount
Gretna Sanitation	Gretna	1 CNG Refuse Truck	\$105,000
S2 Rolloffs	Fremont	2 Diesel Refuse Trucks	\$128,000
Waste Connections	Papillion	2 Diesel Refuse Trucks	\$140,000

2017-2018 Irrigation Engine Replacement Rebates: \$93,253

Name	Location	Replacement	Rebate Amount
James Riley	Wood River	Electric motor	\$16,200
Mike Phillips	Lisco	Electric motor	\$16,200
Frederick T. Schultz	Clearwater	Electric motor	\$12,253
Robert Fuchtman	Creighton	Electric power to submersible pump	\$16,200
Cockerill Fertilizer	Logan County	Electric motor	\$16,200
Thies Farms Central	Merrick County	Electric power to submersible pump	\$16,200

Volkswagen State Trust Activities

In September 2017, NDEQ was designated by Governor Ricketts as the lead agency to administer funds allocated to Nebraska from the *Volkswagen Environmental Mitigation Trust for State Beneficiaries, Puerto Rico, and the District of Columbia* (“VW State Trust”). The VW State Trust was established as part of a series of court settlements with Volkswagen AG and its subsidiaries to resolve charges that their diesel passenger vehicles were equipped with devices to circumvent emissions testing and allow them to emit excess nitrogen oxide gases in normal operation, in violation of the Clean Air Act. The initial allocation to Nebraska from the VW State Trust is approximately \$12.25 million. As directed by the Trust Agreement, these funds are to be used to undertake authorized actions to reduce nitrogen oxide (NOx) emissions in Nebraska.

The VW State Trust will have a 15-year time span. Nebraska may request no more than one-third of its initial allocation in the first year of the Trust and no more than two-thirds of its initial allocation in the first two years. Each state beneficiary must expend at least 80% of its initial allocation by October 2, 2027, otherwise the unexpended funds will be reallocated to other beneficiaries that have complied with that guideline.

Nebraska Beneficiary Mitigation Plan

The Trust Agreement requires each state beneficiary to submit a Beneficiary Mitigation Plan that summarizes how the beneficiary intends to use the funds allocated to it under the Trust. In response to this requirement, NDEQ created a web page providing an overview of the available mitigation actions and solicited public comment on these potential actions. Public information meetings were held in Lincoln on October 16, 2017 and in North Platte on October 18, 2017. Written comments were accepted at these meetings and also through a web portal and via e-mail from September 21 through November 3, 2017.

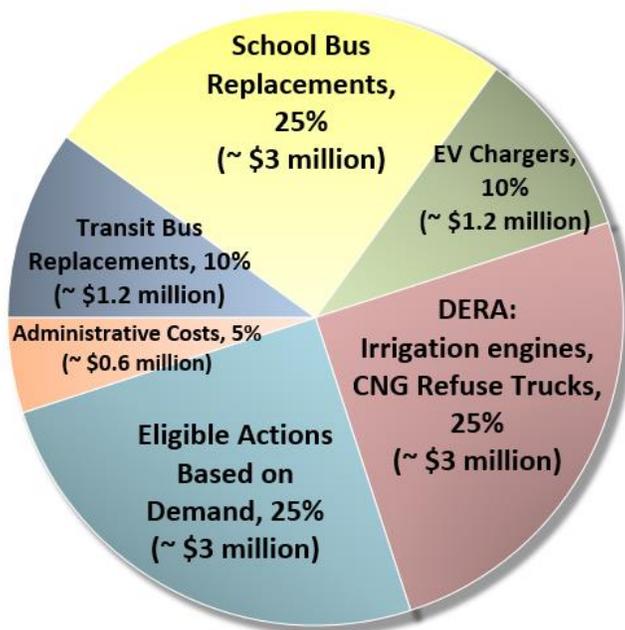
After reviewing the public comments and consulting other state agencies and the Governor’s office, NDEQ finalized and posted Nebraska’s initial Beneficiary Mitigation Plan on January 5, 2018. The plan is available on the agency’s Volkswagen Environmental Mitigation Trust Fund web site (<http://deq.ne.gov/NDEQProg.nsf/OnWeb/AirVW>). The plan’s overall goal is to achieve significant, sustainable, and cost-effective reductions in NOx emissions to improve air quality in the state. Other goals of the plan include:

- Achieving reductions in diesel engine emissions especially in areas of the state that bear an undue share of the impact of NOx emissions, while also providing funding for emission reduction projects in other areas of the state;
- Achieving reductions in ground level ozone, for which NOx is a precursor, and which occurs in some areas of the state at levels approaching those that would violate federal ambient air quality standards;
- Providing project funding to both public and private entities;
- Spurring investment in cleaner alternative-fuel vehicles and infrastructure;
- Supporting long-term investments in the zero-emission transportation sector in Nebraska.

NDEQ assessed the mitigation actions allowed by the VW State Trust in the context of Nebraska’s air pollution issues, population distribution, existing transportation infrastructure, estimated cost-effectiveness, potential public health benefits, and public comments. The table and

figure on the next page present the project types initially selected for funding in Nebraska and the percentage of funds expected to be allocated to each type.

Initial Allocations of VW State Trust Funds by Mitigation Action



Action	Percent	Dollars
Transit Bus Alternative Fuel Replacements	10%	\$1,224,834.75
School Bus Diesel & Propane Replacements	25%	\$3,062,086.87
Zero Emission Vehicle (ZEV) Charging Infrastructure	10%	\$1,224,834.75
DERA: Irrigation engines, Refuse Trucks	25%	\$3,062,086.87
Eligible Actions Based on Demand	25%	\$3,062,086.87
Administrative Costs*	5%	\$612,417.37
TOTAL	100%	\$12,248,347.48

* The State Mitigation Trust agreement allows reimbursement of administrative costs up to 15% of each funded project.

Nebraska's Beneficiary Mitigation Plan is intended to provide the public with insight into the Department's intentions for the use of the mitigation funds and information about the specific uses for which funding is expected to be requested. Nothing in the plan is binding, and Nebraska may adjust its goals and specific spending plans at its discretion by providing an updated Beneficiary Mitigation Plan to the Trustee. Since the publication of the Beneficiary Mitigation Plan, the Department has set a goal of expending Nebraska's share of the funds in approximately five years.

VW State Trust Funding for the Nebraska Clean Diesel Rebate Program (DERA)

NDEQ plans to use 25% of the available VW State Trust funds for projects in the Nebraska Clean Diesel Rebate Program (DERA category in the table and chart above).

The first use of funds from the VW State Trust in Nebraska was for projects in the Nebraska Clean Diesel Rebate Program that opened in October 2017. Trust funds are being used for reimbursement for the replacement of three diesel refuse trucks (\$198,000) and four diesel irrigation engine replacements (\$60,853) for a total of \$258,853. All of these projects are expected to be completed by the end of CY2018.

Nebraska Diesel Emission Mitigation Program

NDEQ has established the Nebraska Diesel Emission Mitigation Program to undertake other mitigation actions using funds from the VW State Trust. Two funding opportunities were initiated under this program during this fiscal year: Transit Bus Alternative Fuel Replacements and School Bus Replacements.

Transit Bus Alternative Fuel Replacements

Applications were opened in May 2018 for Transit Bus Alternative Fuel Replacements. Lincoln StarTran and the Transit Authority of Omaha (Metro) will each replace two diesel transit buses. StarTran will receive \$489,934 (about 29%) toward the purchase of two new battery-electric transit buses. Omaha Metro will receive \$734,901 (about 42%) toward the purchase of two new buses (fueled by compressed natural gas) that will operate as part of the new Omaha Rapid Bus Transit (ORBT) service beginning in fall 2019. Federal grant funds obtained by these agencies are also being used in these purchases. NDEQ expects these projects to be completed by August 30, 2019.

School Bus Replacement Rebates

Applications were opened on June 1, 2018 for School Bus Replacement Rebates. For each applicant NDEQ offered to pay 50% of the cost (up to \$42,000) for a new diesel public school bus or 60% of the cost (up to \$57,000) for a new propane-fueled public school bus meeting NOx emission standards stricter than the federal standard. Applications were received from 42 school districts, and the Department has elected to fund all applicants at an anticipated cost of approximately \$1,800,000. These projects are expected to be completed by August 30, 2019.

Planning for Additional Mitigation Actions

Nebraska has allocated 10% of its VW State Trust funds, or approximately \$1.2 million, for Electric Vehicle (EV) Charging Infrastructure. NDEQ Environmental Assistance staff have initiated ongoing discussions with representatives of electric utilities (Nebraska Public Power District, Lincoln Electric System, and Omaha Public Power District), the Nebraska Department of Transportation, Nebraska Energy Office, and other stakeholders in order to learn about the technical and economic issues surrounding electric vehicle charging and to determine the types of charging infrastructure that would do the most to encourage adoption of battery-electric and plug-in hybrid vehicles in the state.