NEBRASKA

Good Life. Great Resources.

DEPT. OF ENVIRONMENT AND ENERGY

Annual Report to the Legislature 2019

For more information about the Nebraska Department of Environment and Energy:

Effective July 1, 2019, the Nebraska Department of Environmental Quality became the Nebraska Department of Environment and Energy (see story, page 3).

The Agency's mailing address:

Nebraska Department of Environment and Energy
1200 N St., Suite 400
P.O. Box 98922
Lincoln, NE 68509-8922

Main phone number:	(402) 471-2186
Toll free number:	1-877-253-2603
Air Construction Permit Hotline (toll free)	1-877-834-0474
Records requests:	(402) 471-3557
Public Information Office:	(402) 471-4223

Visit our web site at **http://dee.ne.gov** to view the agency's:

- News Releases
- Calendar of Events
- Job Listings
- Topics of Interest
- Agency Information
- Rules and Regulations
- Fact Sheets and other Publications
- Program Information
- Public Notices
- Enforcement Resolutions

On the cover: The main cover photo is the Middle Loup by Halsey, photo by Marty Link; bottom left photo is Dave Bubb collecting water samples, photo by Amanda Woita; bottom right photo is of students at Pound Middle School who are participating in the school's recycling and composting program (photo provided by Lincoln Public Schools.)

Table of Contents

CHAPTER 1:
Agency Overview

The Nebraska Department of Environmental Quality (NDEQ) was originally created with the passage of the Environmental Protection Act in 1971. At that time, the agency was called the Nebraska Department of Environmental Control, and became NDEQ in 1992.

With the enactment of LB 302 on July 1, 2019, NDEQ and the Nebraska Energy Office merged into the Nebraska Department of Environment and Energy. Our mission is to protect and improve human health, the environment and energy resources. Our vision is everyone living, working and enjoying a healthy Nebraska environment. Because this report primarily focuses on activities that occurred in state fiscal year 2019 (July 1, 2018 to June 30, 2019), we will refer to the department as NDEQ through most of the report.

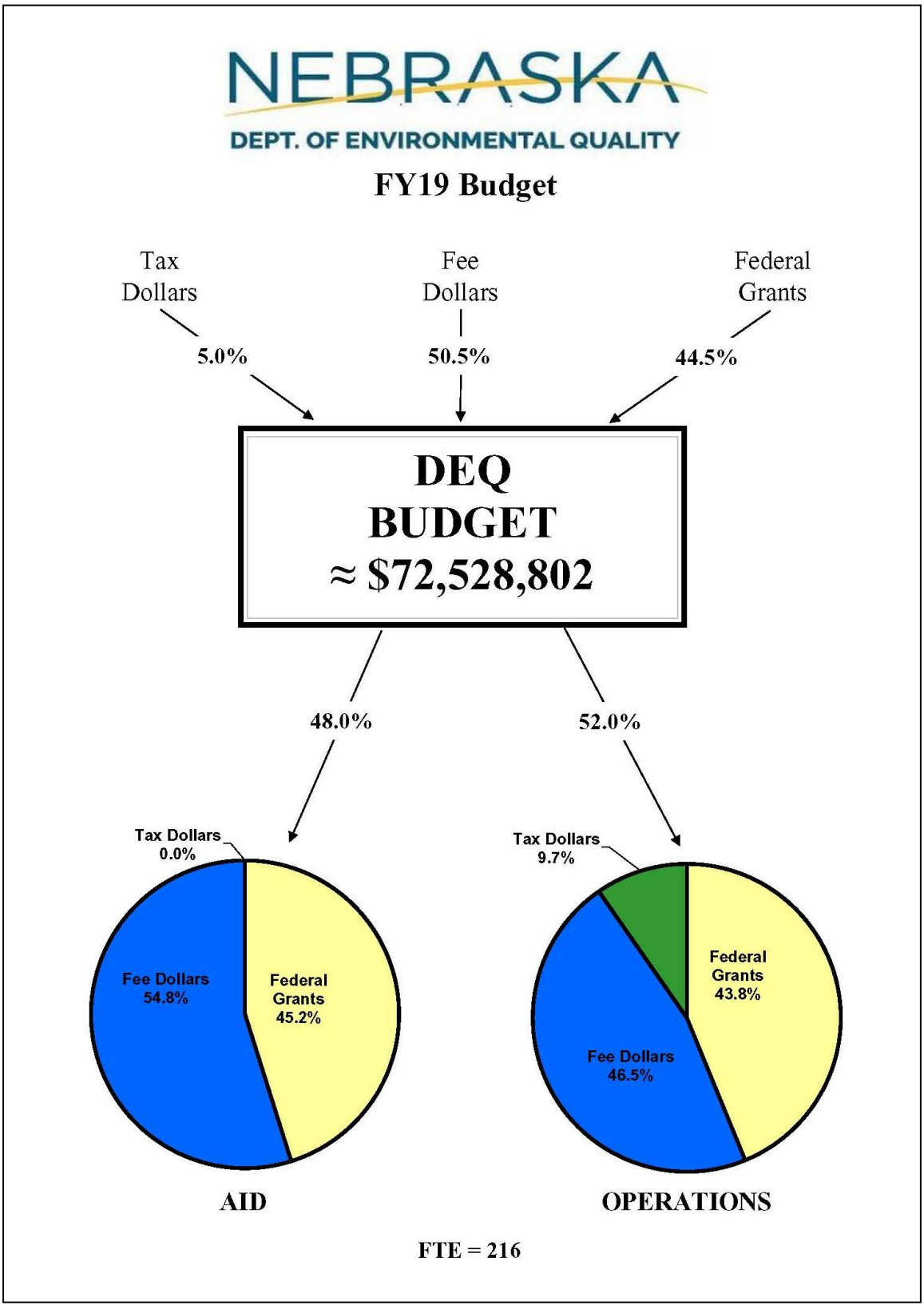
During FY2019, NDEQ was authorized for a staffing level of 216 full-time employees. Sixteen additional full-time positions were added to the agency following the merger of NDEQ and the Nebraska Energy Office. Through a memorandum of agreement with the Nebraska Department of Health and Human Services to improve coordination and Safe Drinking Water Act and Clean Water Act programs, NDEQ also has 43 DHHS employees co-located in the agency.

The NDEQ has a FY19 annual budget of approximately $72.5 million. This includes money from federal grants, state taxes and fees. Of that amount, $34.7 million is redistributed to other agencies, organizations and individuals in the form of aid (grants and loans).

The table below shows a breakdown of NDEQ funds. The columns listed as aid represent the agency's budget redistributed to other entities as grants and loans. The columns listed as operations represent amounts used for agency operation and contracts for such things as investigations and cleanups.

Funding Type	Operations: $ Amount	Percent of Operations Budget	Aid: $ Amount	Percent of Aid Budget
Federal Funds (Grants)	$16.5 million	43.81%	$15.7 million	45.15%
State General Funds (Tax $)	$3.7 million	9.68%	$0 million	0.00%
Cash Funds (Fees)	$17.6 million	46.51%	$19.0 million	54.85%
Total	$37.8 million		$34.7 million	

The following graphic depicts NDEQ's FY19 budget by funding source and percent anticipated to be expended by fund type and activity (aid or operations).

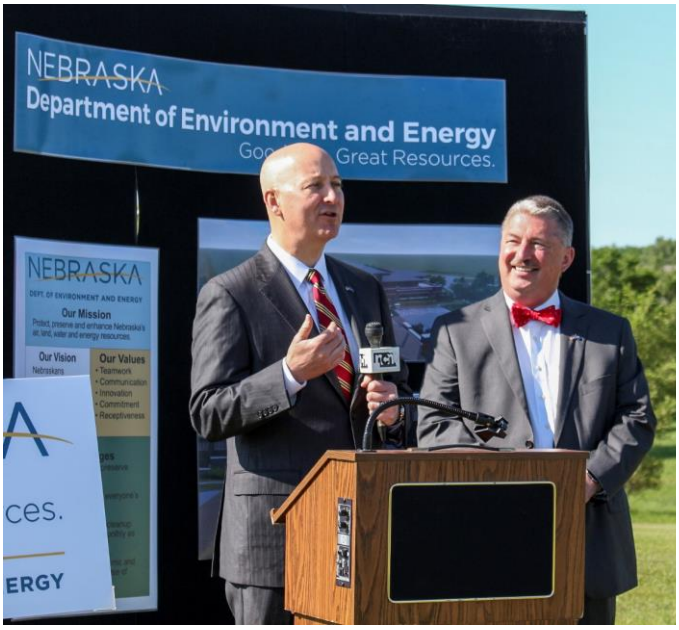


Significant Topics in 2019

The following are some of the significant topics, challenges and accomplishments that NDEE addressed in 2019:

NDEQ and NEO Merge into Nebraska Department of Environment and Energy

With the enactment of LB 302 on July 1, 2019, the Nebraska Department of Environmental Quality and the Nebraska Energy Office merged into the Nebraska Department of Environment and Energy.



Gov. Pete Ricketts and NDEE Director Jim Macy

In late June, Gov. Pete Ricketts met with NDEE officials and the media in a field in Fallbrook, next to the site where the agency's new offices will be located, to celebrate the merger of the two agencies.

"This merger will make state government services more efficient, effective, and customer-focused," Gov. Ricketts said. "The two agencies have a number of related functions and similar goals, and their services to Nebraskans will be enhanced by combining their efforts. The newly consolidated agency will be able to take a longer-term, more strategic approach to helping grow Nebraska as we work to be a good steward of our natural resources and promote energy efficiency."

NDEE Director Jim Macy explained the positive effects that will come from this merger.

"The two agencies have many common purposes, and we expect to see many positive benefits by combining and unifying our efforts," Macy said. "Merging the two agencies will create greater depth in staffing and minimize duplication of jobs. It also improves the delivery of environmental and energy programs and policies statewide."

The functions and programs of former Nebraska Energy Office are now carried out by NDEE's Energy and Assistance Division (EAD). The primary energy-related activities include conduct of the overall State Energy Program, administration of the Dollar and Energy Saving Loan Program, and administration of the federally-funded state Weatherization program. A comprehensive annual report on energy activities is required by statute and will be included in a separate report submitted to the Governor and the Clerk of the Legislature by February 15, 2020. The Nebraska Energy Office annual report for 2018 may be found at http://neo.ne.gov/info/pubs/ar/pdf/NEOAnnualReport.pdf.

Sketch of the front of the new building, to be located in the Fallbrook area of Lincoln

Construction of New Building Under Way

Work is progressing to move the department to a new location in the Fallbrook area of Lincoln. The new site will house all Lincoln employees in one location and will also have room for future expansion.

Currently, Lincoln staff and equipment are located in four buildings. The move will result in operational cost savings.

Although the date of the actual move is still to be determined, work is progressing well. The photo below from Oct. 12, 2019 shows how the work has progressed since the groundbreaking occurred.

NDEQ Flood Response

Soon after the flooding began in mid-March, NDEQ team members reported to the State Emergency Operation Center (SEOC) to staff Essential Support Function (ESF) 10. The Nebraska Energy Office also had team members working at ESF-12. Many staff from across the agency also volunteered to staff the public help line at the SEOC.

Back at the NDEQ offices, agency leadership organized an internal Incident Command System (ICS) to strategically respond to Nebraskans' needs. The department's focus areas were drinking water, wastewater, air and debris management. NDEQ also collaborated with Nebraska Energy Office staff to provide assistance regarding energy.

The Drinking Water Division partnered with the EPA to provide private well testing in eight communities. In all, 770 samples were received, with 203 testing positive for coliform and 68 testing positive for E. coli.

A total of 19 community and non-community pubic drinking water systems were forced offline because of the flood event. In response, the State Revolving Loan Fund (SRF) implemented new financing options for communities impacted by the flood. Language was drafted for the State Fiscal Year 2020 Intended Use Plan (IUP) that would allow the SRF to provide 0% interest bridge financing to communities awaiting to receive funding from the Federal Emergency Management Agency (FEMA) or Nebraska Emergency Management Agency (NEMA) for their wastewater and drinking water systems affected by flooding. The Environmental Quality Council (EQC) approved the IUP proposal and additional financing options and allowed the SRF to provide the bridge financing to communities starting July 1, 2019.

NDEQ provided technical assistance to communities whose drinking water systems were offline. The department also provided assistance to wastewater treatment facilities and livestock facilities that were damaged and/or discharging.

The Air Division worked with the State Fire Marshall's office, local fire departments and local emergency managers to modify burn permits for debris that could not be disposed of otherwise.

Waste/debris management, led by the Land Management Division, took place soon after the flood and continues months later. The most immediate need was animal carcass removal. NDEQ worked with the United States Department of Agriculture's Animal and Plant Health Inspection

Service (USDA-APHIS), to remove these carcasses when they were washed onto other residents' property. In all, more than 1,200 carcasses were collected.

NDEQ also worked with the EPA to identify, collect and dispose of orphaned containers of hazardous substances that had been washed away by flood waters. More than 2,000 containers were collected.

Through the ICS, Land Management Division team members contacted each of the 84 affected by the flooding and met in person with emergency managers from 70 counties to see what was needed and how we could help. Because floodwaters have yet to completely recede, approximately 15 counties may find more debris in the future.

Along with providing disposal guidance for items damaged by the flood such as household appliances, construction/demolition waste, household hazardous waste, treated wood, damaged grain or hay and more, the agency also created guidance for those dealing with other forms of debris that are specific to flood disasters.

Floodwaters deposited large amounts of sand onto Nebraskans' properties and presented unique challenges. NDEQ found several potential options for landowners to remove this sand, including working it into soil or taking it to a landfill. Reuse options included erosion repair, landscaping, bedding at dairy operations, road repair and more. NDEQ also provided guidelines on how to apply to the U.S. Army Corps of Engineers to push the sand back into waterways.

Petroleum Remediation Completed in Lincoln's Haymarket

Excavation using sheet piling to protect active rail line in background.

An important milestone has been reached in the cleanup and monitoring of the Lincoln Haymarket area, as the petroleum cleanup aspects at the site have now been completed.

The Haymarket area of downtown Lincoln has been a center of commerce since the 1870s. Several railroads have used that area since that time.

Light non-aqueous phase liquid (free product) was first discovered in 1986 in the West Haymarket area during subsurface exploration for a sanitary sewer line. The source of the release could have been from both underground and above ground tanks at the BNSF facility on the west edge of downtown Lincoln. NDEQ required remediation began in 1988 with recovery of free product from trench systems. Free product remediation continued through system expansion and modification until 2010 when over 11,000 gallons of diesel fuel had been recovered. At this point, the City of Lincoln voluntarily took over the remediation work to expedite property development.

In 2011, as part of the West Haymarket Arena development, additional remediation of the site was completed through soil excavation. Over 15,000 cubic yards of contaminated soil were removed, and a large amount of free product was recovered within the soils excavated during this effort. Also as part of the arena project, additional investigation and remedial work (non-petroleum related) has been completed or is ongoing in this and adjacent areas.

Free product has occurred intermittently within and near the area where historical free product remediation was performed. After years of monitoring and product recovery with a vacuum truck, the spill file is now being closed.

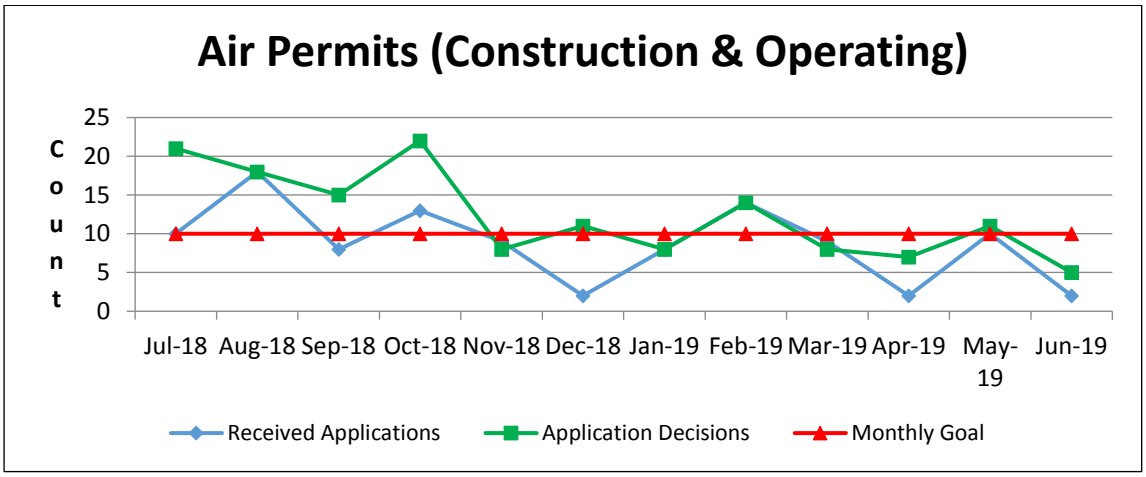
The former railyard area now contains an arena, hotels, restaurants, shops, parking garages, and several other business facilities that have all been built in the last few years. The $180 million arena has hosted numerous top name performers and other major events in addition to being the home for University of Nebraska basketball.

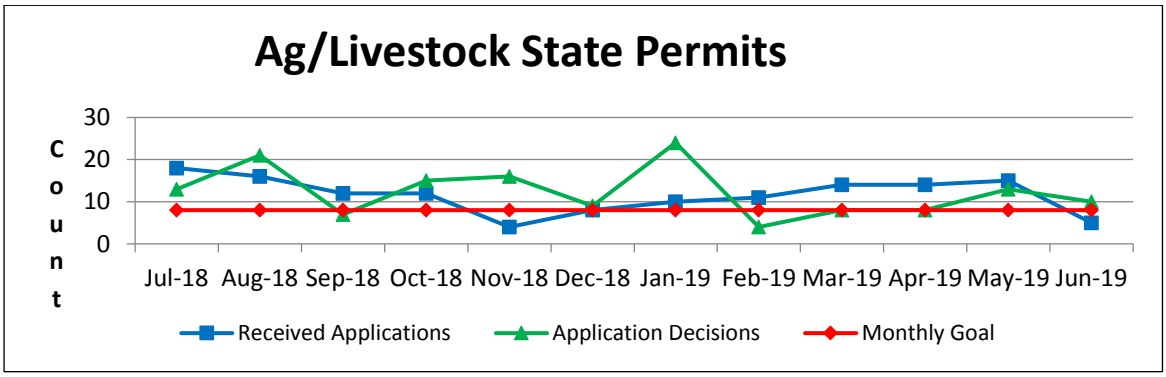
Pinnacle Bank Arena, September 2013

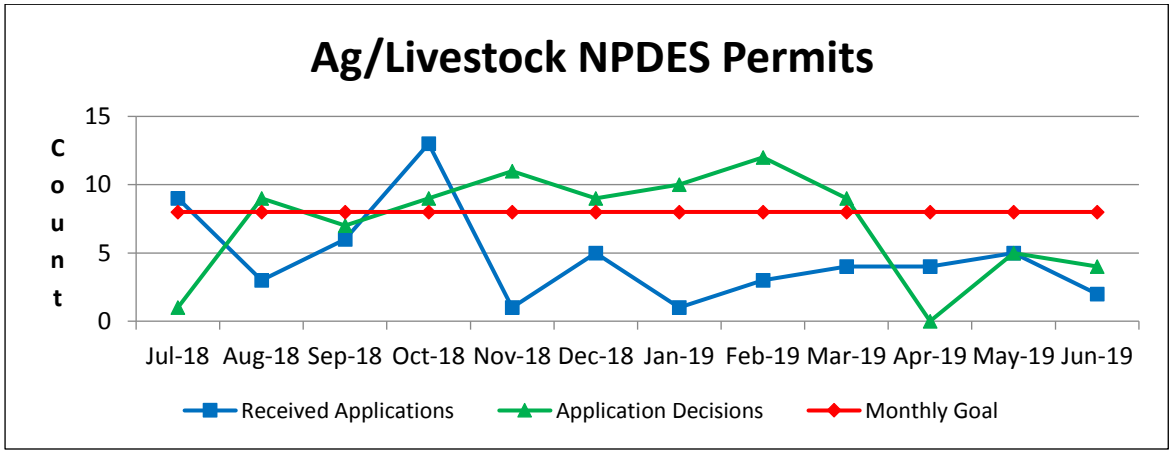
Arena and other development in Haymarket

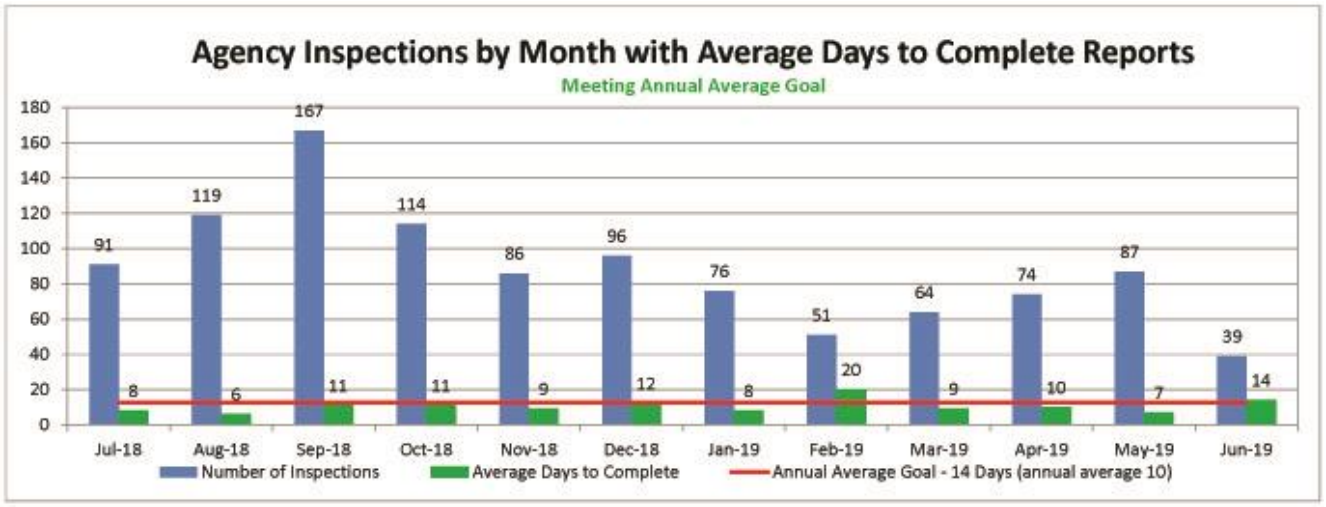
Agency Annual Statistics

The following charts show statistics from state fiscal year 2019 (July 1, 2018 to June 30, 2019) related to Air Construction and Operating Permits, Ag/Livestock State Permits and Agency Inspections. This information is updated monthly and can be found on the agency website http://dee.ne.gov by selecting the Monthly Metrics link.









2019 Legislative Summary

LB 302 – With the enactment of LB 302, on July 1, 2019, the Nebraska Department of Environmental Quality and the Nebraska Energy Office merged into the Nebraska Department of Environment and Energy. LB 302 transferred all statutory powers and duties, responsibilities and obligations, employees and assets of the State Energy Office to the combined department. The director of NDEQ becomes the director of the combined agency. The bill renamed respective cash funds but kept them segregated for their specific statutorily designated purposes.

The bill also authorizes the Department of Environment and Energy to develop a program, in accordance with rules and regulations, that may be adopted by the Environmental Quality Council to issue permits relating to the discharge of dredged or fill material into waters of the United States consistent with Section 404 of the federal Clean Water Act. The Section 404 program currently is administered jointly at the federal level by the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency and may be delegated to states that have adopted approved programs.

Finally, the bill deleted the requirement for the Environmental Quality Council to adopt regulations to carry out the Plastic Container Coding Act.

LB 307 – This legislation authorized the director of the Department of Environment and Energy to transfer money between the Drinking Water Facilities Loan Fund and the Wastewater Treatment Facilities Construction Loan Fund. Proposed transfers between the funds are to be identified in the Intended Use Plan presented the Environmental Quality Council for annual review and adoption. LB 307 also changed the upper limits of loan terms under the Drinking Water State Revolving Fund Act to 40 years for systems serving disadvantaged communities and 30 years for all other communities. The final change updated a reference to the federal Safe Drinking Water Act as it existed, from May 22, 2001 to October 23, 2018.

CHAPTER 2:
Administration/Legal/ Management Services

The Administrators, Legal and Management Services provide administrative, legal and day-to-day support services to the effective operations of the Department.

I. Administrators

The Administrators of NDEQ provide oversight and policy direction in all areas of NDEQ's activities. The Administrators include the Director, Deputy Directors, Legal Counsel, Associate Program Director and Division Administrators. The Director and Deputy Directors are responsible for the overall function and coordination of NDEQ activities.

NDEQ Administrators are responsible for coordination with other local, state and federal agencies. Staff serve on various committees within the state. The Administrators are also responsible for coordination and negotiations with the U.S. Environmental Protection Agency. A significant amount of the agency's funding derives from the EPA, and substantial coordination is required. In addition, the agency coordinates certain activities with the U.S. Department of Defense and the U.S. Army Corps of Engineers.

The Director coordinates agency activities with the Governor's Office and the Nebraska Legislature. The Director is responsible for ensuring that NDEQ effectively responds to state legislative activities and actions.

The Deputy Director of Administration serves as the manager of the Management Services Division and is largely responsible for day-to-day administrative activities and Agency operations. The Deputy Director is also given responsibility on a case-by-case basis for coordinating special activities which cross the divisional lines of responsibility.

The Deputy Directors of the Air and Land Division and the Water Divisions coordinate the various agency programmatic activities.

II. Legal Division

The Legal Division provides legal and other assistance to the Director, Agency, and Environmental Quality Council. Legal Division responsibilities include:

- Preparing administrative orders and other enforcement actions for the Agency;
- Representing the Agency in administrative proceedings;
- Preparing judicial referrals to the Attorney General;
- Serving as hearing officers for public and administrative contested case hearings;
- Drafting and reviewing proposed legislation, rules and regulations;
- Coordinating agency legislative activities, governmental liaison and outreach;
- Preparing legal opinions interpreting federal and state laws and regulations;
- Coordinating rule and regulation review and development;
- Advising the Director and Agency staff on duties and program responsibilities;
- Drafting and reviewing contracts, leases, and other legal documents,
- Reviewing other Agency documents, and
- Representing the Director and Agency as requested by the Director.

The Legal Division works cooperatively with the Attorney General, Secretary of State, Legislature, and Governor's Policy Research Office on a variety of interagency functions, including adoption of rules and regulations, litigation involving the Agency, and legislative activities.

III. Management Services

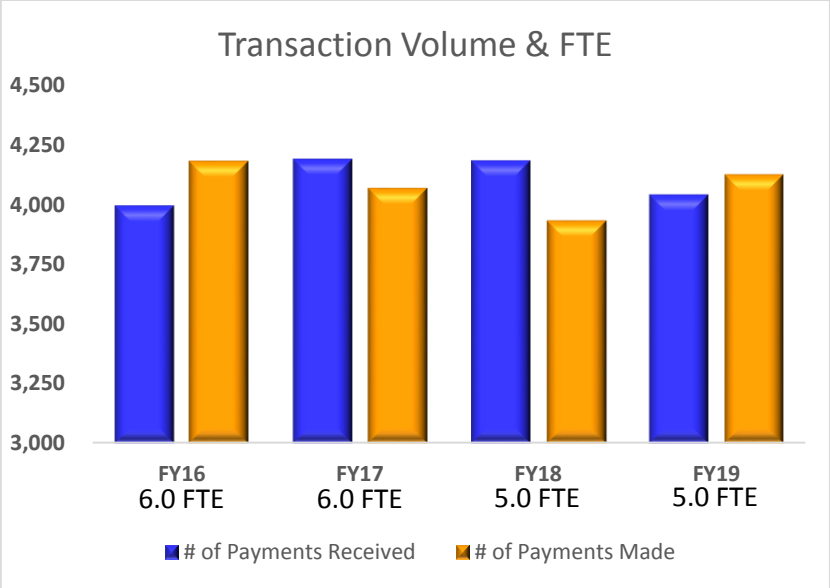
The Management Services Division provides administrative and technical support to NDEQ programs. The Deputy Director of Administration heads the division. The division's staff is divided into six areas — Fiscal Services, Human Resources, Records Management, Information Technology, Public Information, Emergency Response and Grants/Contract Coordination.

Fiscal Services

The Fiscal Services Section is responsible for agency finance and accounting functions, which includes managing NDEQ purchasing, spending, receipting, budgeting, forecasting, and auditing responsibilities. The section has five staff who offer financial advice and assistance to programs and also conduct financial reviews of grantees. The Section also provides significant staff assistance to support key programs and to serve as advisors in regards to financial planning, in addition to the collection, tracking and reporting applicable fees.

Major accomplishments during fiscal year 2019:

- Assisted in implementation of an electronic payment system working with the Electronic Content Management (ECM) platform with the ability to route, approve, and code invoices within the same ECM system and electronically store financial records. This saved the agency thousands of dollars in hard and soft savings by cutting down on paper, toner, printer, and rent as well as allowing the agency to process payments faster.
- Revamped the agency's time keeping system to place an emphasis on work activities. This emphasis will allow the agency to implement driver based budgeting in the future and focus on the cost of agency services.
- Creation of an inspection cost model for use with driver based budgeting and benchmarking.
- Enhanced the agency's expense reimbursement process to a paperless process.



Human Resources

The Human Resources Section, consisting of three staff members, administers the day-to day operations of Human Resources. The Human Resource team supports agency efforts to provide a working environment that strengthens individual and organizational performance.

Staff retention continues to be an important goal for NDEQ. Staff turnover impacts continuity in NDEQ's programs and activities, and results in additional costs for recruitment and training of replacement staff members. NDEQ strives to foster and maintain an employee-friendly workplace by offering transfer and promotional opportunities for qualified internal applicants.

NDEQ monitors diversity to encourage the receipt of applications from qualified members of protected groups by seeking to recruit members of protected groups.

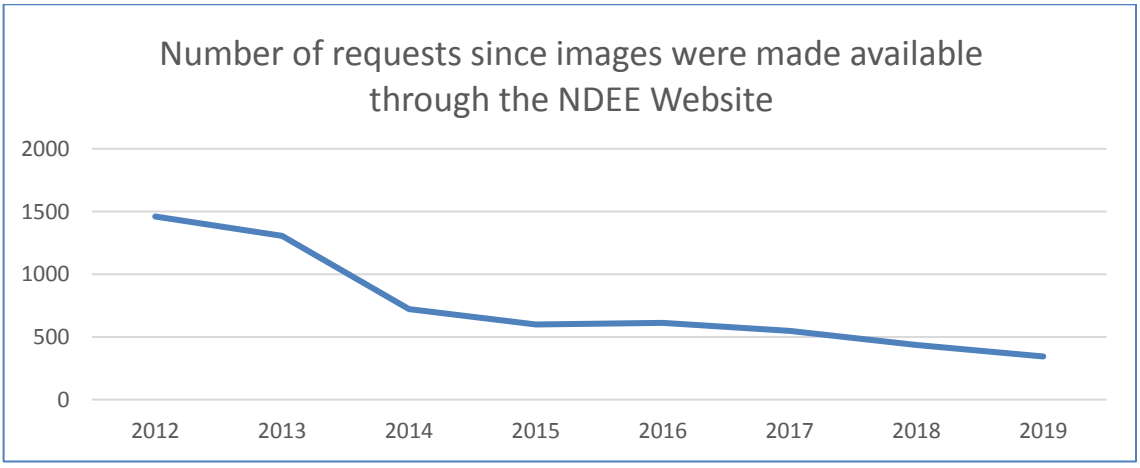
The chart below shows staffing activity for the last fiscal year:

New Hires	28
Retirements	11
Terminations	20
Transfers	3
Promotions	13

Records Management

The Records Management Section is responsible for managing the agency's paper and electronic records, centralized mail handling process, requests for public information and other support functions. In FY2019:

- Over 123,000 records were stored in the Enterprise Content Management System (ECM) utilizing OnBase software applications from Hyland Software.
- Almost 46,000 documents previously stored in paper were scanned into the imaging system and made available to the public through the agency web page.
- Staff in the Records Section responded to 733 requests for information. The number of information requests go down annually, as more information is made available online.



The Records Management Section also coordinates building and implementation of solutions in the ECM. Solutions are developed with the intention of increasing accuracy of information provided by the applicant thus reducing staff review time. In FY2019, an online application was created for applicants to complete and submit burn permit applications online. Another online application was created for installers of onsite septic systems to register systems and pay associated fees.

Information Technology

The Information Technology (IT) Section responsibilities have changed in the past year. The Nebraska Office of the Chief Information Officer (OCIO) has taken over the PC hardware and software support. OCIO will be handling the process of ordering and installing all new PCs and will surplus all old equipment.

The IT Section will continue to assist NDEE users with any problems or concerns that are not PC hardware related. We still maintain the midrange IBM Power I (AS/400) computer hardware.

Five professional staff design, develop, support and provide training for computer programs in supporting the Agency's information management needs and the administration of the Agency's computerized databases. One professional staff person is responsible for managing all of the Information Technology staff, maintaining and updating the agency technology plan and coordinating Information Technology Section activities.

The application development staff, in cooperation with the Water Quality Division/Surface Water Monitoring Section staff, have been designing and developing a comprehensive Surface water program where staff will be able to generate forms for data gathering, and input that data directly into the IIS system. They will be able to access that data and use it to generate reports and export some results directly to the public web page more quickly and with greater accuracy. The application is in full operation and the agency is realizing efficiencies in the program operation. The collected information will be shared with EPA through the Exchange Network process utilizing the Water Quality Exchange process.

Public Information Office

The Public Information Office serves as NDEQ's initial source of communication with the public and media. The services of the Public Information Office are used by all divisions of NDEQ.

A primary responsibility of this office is to handle questions from the public and media (newspaper, television, radio and web) regarding NDEQ's activities.

The Public Information Office is responsible for the writing and distribution of news releases on a wide range of environmental topics that are of importance to the public. The office is also involved in the production of a number of other publications, including this annual report, brochures, fact sheets and guidance documents.

These publications can be obtained by contacting the Public Information Office or by visiting NDEQ's website, http://dee.ne.gov**.**

An important component of the website is to promote two-way communication. As part of those efforts, the agency's main e-mail address is provided at numerous locations on our website. That e-mail address is: NDEE.moreinfo@nebraska.gov**.** The Public Information Office coordinates responses

to those e-mails. The site also features "Report a Problem," with a link to the e-mail address to report an environmental issue of concern at NDEQ.problem@nebraska.gov, The site also includes phone information and procedures relating to reporting a spill or complaint.

The agency is moving toward more standardized forms, including some that can be filled online or submitted electronically.

Emergency Response Program

Through the Emergency Response Program, NDEQ staff provide technical and regulatory assistance to those responsible for spills, leaks, and accidents that pose a hazard to the environment or public health. Assistance is also provided to those at the local level who are the first on the scene at these releases; typically this is the local fire department.

The Emergency Response Program Coordinator is responsible for training, equipping and coordinating staff who, in addition to their responsibilities to other programs, provide initial documentation, assistance and response to spills. These individuals have the responsibility to maintain an emergency response system that is on call 24 hours a day.

The Emergency Response Program assists in arranging for the disposal of harmful and potentially hazardous materials. The Program represents the environmental interests of the state at the scene of a petroleum/chemical spill or other environmental emergency. All personnel are members of the Nebraska Hazardous Incident Team (NHIT) and coordinate closely with the local, state and federal agencies involved in emergency response incidents.

The NDEQ recorded 359 reports of spills in FY 2018 (Jul 2018 – Jun 2019). Two hundred fifteen (215) of the spills involved petroleum. An additional 459 complaints were recorded. This is similar to previous year's results.

In June, the program submitted a proposal for the refurbishment of some equipment and the replacement of equipment that is outdated and no longer serviceable. Repairs and replacement will be ongoing as funding is available.

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 outlines these procedures. Assistance Division staff help coordinate the review of QAPPs by appropriate personnel throughout the Department.

Grants/Contract Coordination

The Grant Coordinator is responsible for:

- Completing federal grant applications.
- Ensuring compliance with grant conditions and requirements, particularly reporting requirements.
- Maintaining and coordinating all official record of correspondence with the Environmental Protection Agency (EPA), Region 7 grants office.

- Tracking of grant applications through the award process, and follow-up of reporting and conditions.
- Ensuring NDEQ programs meet reporting deadlines, consolidates reports and verifies they are sent to and received by EPA.
- Ensuring all required sub-awards are reported to the Federal Funding Accountability and Transparency Act Sub-award Reporting System.
- Corresponding with EPA Headquarters to ensure NDEQ stays in compliance with Federal grant guidance and new requirements.
- Providing assistance with Requests for Proposals, contract development.
- Working with the Fiscal Services Section to ensure communication regarding grants, contracts and programs.
- Working with Records Management Section to verify all agreements and contracts are in the Enterprise Content Management system (documents imaged).

Funding of Management Services

The Management Services Division provides essential administrative and technical support to the Department. Some activities in Management Services are program specific, but many are not. Funding for the Division is provided by two methods: 1) the majority of the staff salaries and activities are funded through an overhead charge to the Department's various programs; 2) Program-specific staff time and activities are charged to those programs and the grants associated with them.

CHAPTER 3:
Environmental Quality Council

The Environmental Quality Council was established through the Nebraska Environmental Protection Act as the body that adopts rules and regulations which set air, water and land quality standards in order to protect the public health and welfare of the state. They adopt regulations that guide the activities and responsibilities of NDEQ. In addition, the Governor appoints the NDEQ Director based on candidates recommended by the Council.

The Council has 17 members who are appointed by the Governor to four-year terms. Appointments require legislative approval. Council members are appointed to represent: the food manufacturing industry; conservation interests; the agricultural processing industry; the automobile or petroleum industry; the chemical industry; heavy industry; the power generating industry; crop production; labor; the livestock industry; county government; municipal government (two members, one of which represents cities not of the primary or metropolitan class); a professional engineer; a biologist; a representative of minority interests; and a doctor with knowledge about the human health aspects of air, water and land pollution.

The Council is required by statute to meet at least twice each year. NDEQ publishes notice of these meetings, together with an agenda and a description of proposed business items to be considered. The Council holds public hearings on the proposed regulations at these meetings. Any interested person may submit written comments on the proposed regulations and/or testify at the public hearing. The Council considers these comments and testimony prior to making a decision on whether to adopt, modify, or deny new state environmental regulations and amendments to existing regulations. The Council can also consider rule-making petitions submitted by the public.

Although the Council is responsible for review and adoption of rules and regulations, it does not have involvement in NDEQ's administrative functions or day-to-day responsibilities. The NDEQ Director is responsible for administration of NDEQ and the rules and regulations adopted by the Council.

Following are two tables. The first lists the council members and the second summarizes Council actions from Nov. 15, 2018 to Nov. 7, 2019.

Council Members

Representing	Council member	Term expires
Agricultural Crop Production	Rod Gangwish Shelton	June 22, 2021
Ag Processing Industry	Douglas Anderson Aurora	June 22, 2023
Automotive/Petroleum Industry	John Dilsaver Omaha	June 22, 2021
Biologist	Mark Czaplewski Grand Island	June 22, 2021
Chemical Industry	Seth Harder Plainview	June 22, 2023
City Government	James Hawks North Platte	June 22, 2023
Conservation	Norris Marshall Kearney	June 22, 2023
County Government	Vacant	June 22, 2023
Food Products Manufacturing	Michelle Bucklin Omaha	June 22, 2021
Heavy Industry	Karl Barfuss Norfolk	June 22, 2023
Labor	Robert Hall Wahoo	June 22, 2021
Livestock Industry	Alden Zuhlke Plainview	June 22, 2021
Minority Populations	Mohamed Dahab Lincoln	June 22, 2021
Municipal Government	Lance Hedquist South Sioux City	June 22, 2021
Physician	vacant	June 22, 2023
Power Generating Industry	Joseph Citta, Jr., Columbus	June 22, 2021
Professional Engineer	Dennis Grams Lincoln	June 22, 2023

Environmental Quality Council Actions
Nov. 15, 2018 to Nov. 7, 2019

Council Meeting Date	Regulation	Action
November 15, 2018	Public Hearing on the 2019 Litter Percent Allocations	Approved
	Amendments to Title 197 Amendments - Rules and Regulations for Certification of Wastewater Treatment Operators in Nebraska	Approved
	Amendments to Title 198 Amendments - Rules and Regulations Pertaining to Agricultural Chemical Containment	Approved
	Amendments to Title 133 Amendments - Litter Reduction and Recycling Grant Program	Approved
	Amendments to Title 199 Amendments - Waste Reduction and Recycling Incentive Grants Program	Approved
	Amendments to Title 120 Amendments - Rules in 401(1)a Certification	Approved
April 3, 2019	Amendments to Title 129, Nebraska Air Quality Regulations, Chapter 8	Approved
	Amendments to Title 117, Nebraska Surface Water Quality Standards	Approved
	Amendments to Title 131, Rules and Regulations for the Wastewater Treatment Facilities and Drinking Water Construction Assistance Programs	Approved
	Amendments to Title 115, Rules of Practice and Procedure	Approved
June 20, 2019	2020 Intended Use Plan and Project Priority List for Clean Water State Revolving Fund and Drinking Water State Revolving Fund	Approved
	Amendments to Title 123, Rules and Regulations for the Design, Operation and Maintenance of Wastewater Works	Approved
	Amendments to Title 195, Chemigation Regulations	Withdrawn
	Repeal of Title 196, Rules and Regulations Pertaining to Ground Water Management Areas	Approved
November 7, 2019	Public Hearing on 2020 Litter Percent Allocations	Approved
	Amendments to Title 195, Chemigation Regulations	Approved
	Repeal of Chapters in Title 135, Mineral Exploration Holes	Approved
	Amendments to Title 200, Petroleum Release Remedial Action Reimbursement Fund	Approved
	Amendments to Title 197, Certification of Wastewater Treatment Operators	Approved
	Amendments to Title 198, Agricultural Chemical Containment	Approved
	Amendments to Title 129, Air Quality Regulations	Approved

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 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 attainment 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. 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.

Three local agencies – Lincoln-Lancaster County Health Department, Omaha Air Quality Control, and Douglas County Health Department – have accepted, through agreement with the Department and direct delegation from EPA, 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 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.

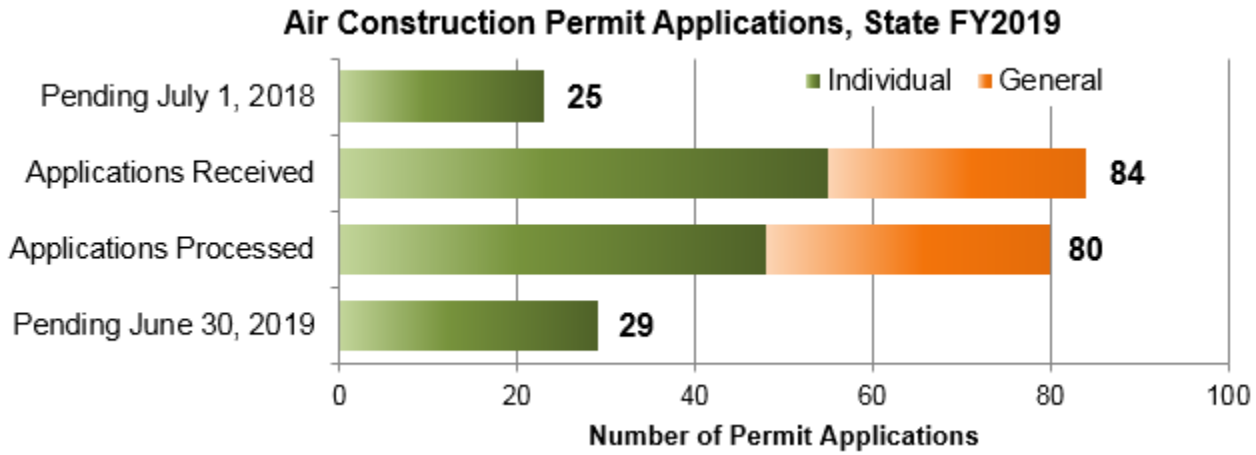
A permit-by-rule and a general permit are similar in that the rule or general permit has the same requirements for, and covers, all sources in a particular industrial category, provided that the source meets the applicability criteria and applies for and obtains coverage. The requirements for a permit-by-rule 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 chart on the next page summarizes construction permit applications received, processed, and pending during the 2019 state fiscal year. (Note: the *Processed* category includes permits issued, withdrawn, denied, and determinations of no permit required.)

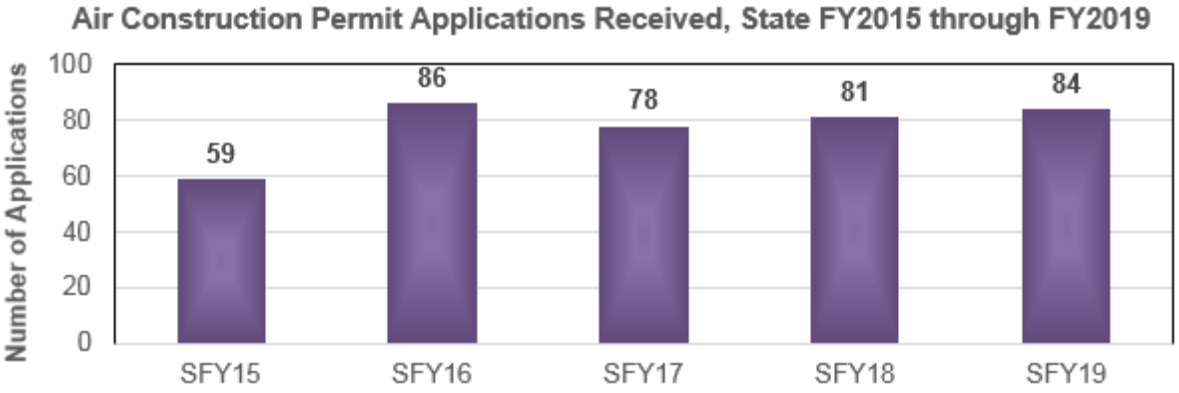


Nebraska's program also implements the federal construction permit program, called Prevention of Significant Deterioration (PSD). The PSD program applies to construction of new major sources or major modifications to existing sources that emit significant levels of certain types of pollutants. The purpose 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 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. Six PSD construction permits were issued in State FY2019.

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 graph below shows the number of construction permits received annually from SFY2015 through SFY2019.



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. A model, in a relatively short amount of time, can predict in a standardized and cost-effective manner the ground-level impact of facility emissions.

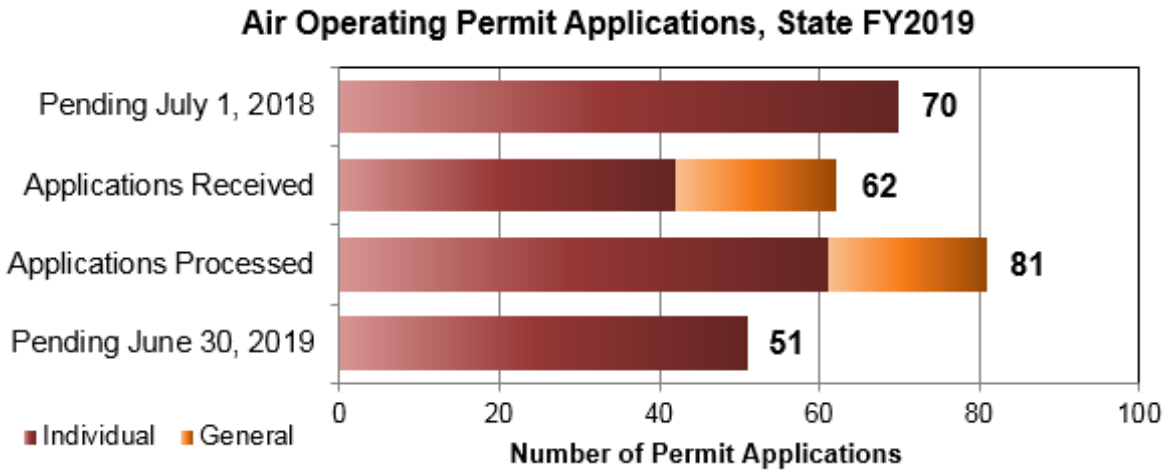
Modeling is required in conjunction with an air quality construction permit application when the expected increase in emissions of any regulated pollutant by a facility is greater than the emission rate specified in state or federal regulations. An air dispersion model is the primary tool used to determine 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.

During SFY2019, 13 Division staff completed an intensive three-day training course in air dispersion modeling. This training gave permitting and compliance staff a greater understanding of the fundamentals of the models and the interpretation of the 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 so-called 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.

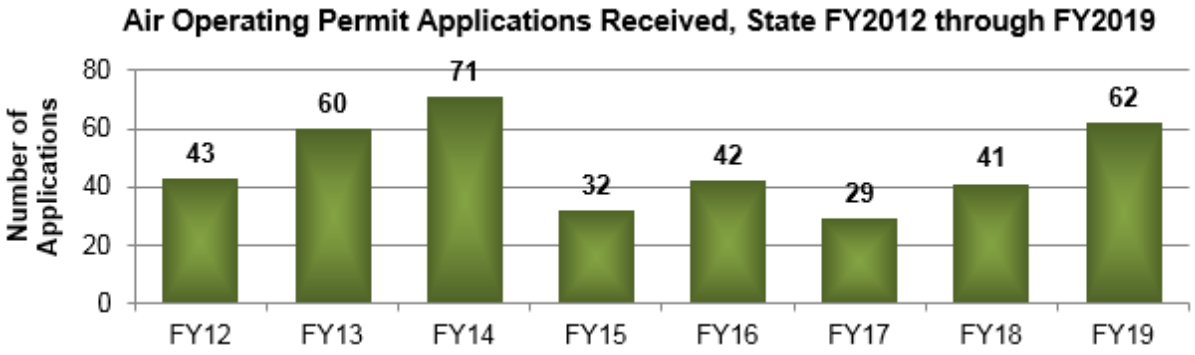
The chart below provides statistics on the number of operating permit applications received, processed, and pending during the 2019 state fiscal year. These statistics include general permit coverage approvals. The current general operating permit for small incinerators



was issued in SFY2018, replacing the previous five-year general operating permit that expired that year. Most of the general operating permit coverages issued in SFY2019 were for applicants whose previous coverage was expiring. (The current general operating permit for small incinerators is available only through an efficient on-line 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 following chart summarizes air quality operating permit applications received from State FY2012 through SFY2019 (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 state fiscal year 2019, the Operating Permits Unit undertook a process improvement project on renewals. 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 SFY 2018 and will revisit permit fact sheets each year to pinpoint opportunities for streamlining. Additional improvements were made in SFY2019 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.

The permitting section also developed and released in SFY2019 nine new potential emission (PTE) calculation spreadsheets for use by permit applicants to streamline applications and further the Department's process improvement efforts. These include an expansive spreadsheet for use by ethanol plants, along with spreadsheets for Haul Roads, Tanks, Internal Combustion Engine Driven Generators, and others.

With the process improvement event that started in 2016, fact sheet project initiated in 2018, application renewal project in 2019, and other ongoing efforts, the average time required to reach a decision on a construction permit application improved significantly from 188 days to approximately 65 days (including online-only general construction permit coverage) at the end of SFY2019. The operating permit application backlog was also significantly improved from approximately 120 applications a couple years ago to approximately 51 applications pending at the end of SFY2019, even with a steady influx of applications. Although some impacts of improvements that have been made 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. This is an example of one 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.

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
  - 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: NDEQ, 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.

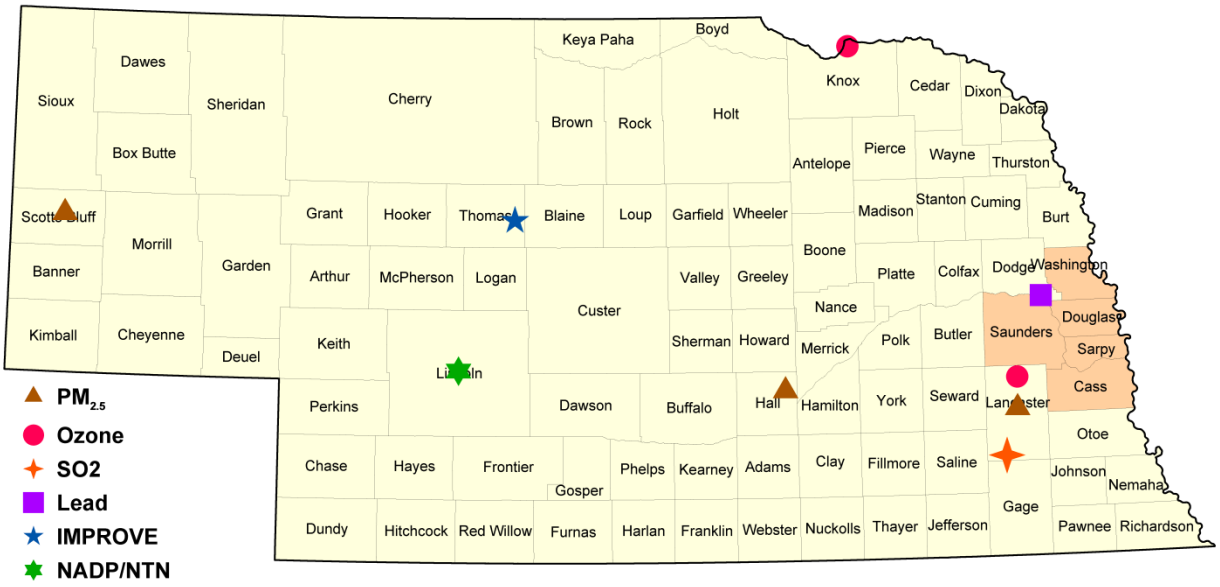
The Nebraska monitoring network includes sites at which air quality is monitored to evaluate attainment with the standards and other health- and welfare-associated priorities. The Department evaluates the adequacy of its monitoring network in accordance with federal regulations each year. Changes may 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. Both have 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 (Scottsbluff 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)

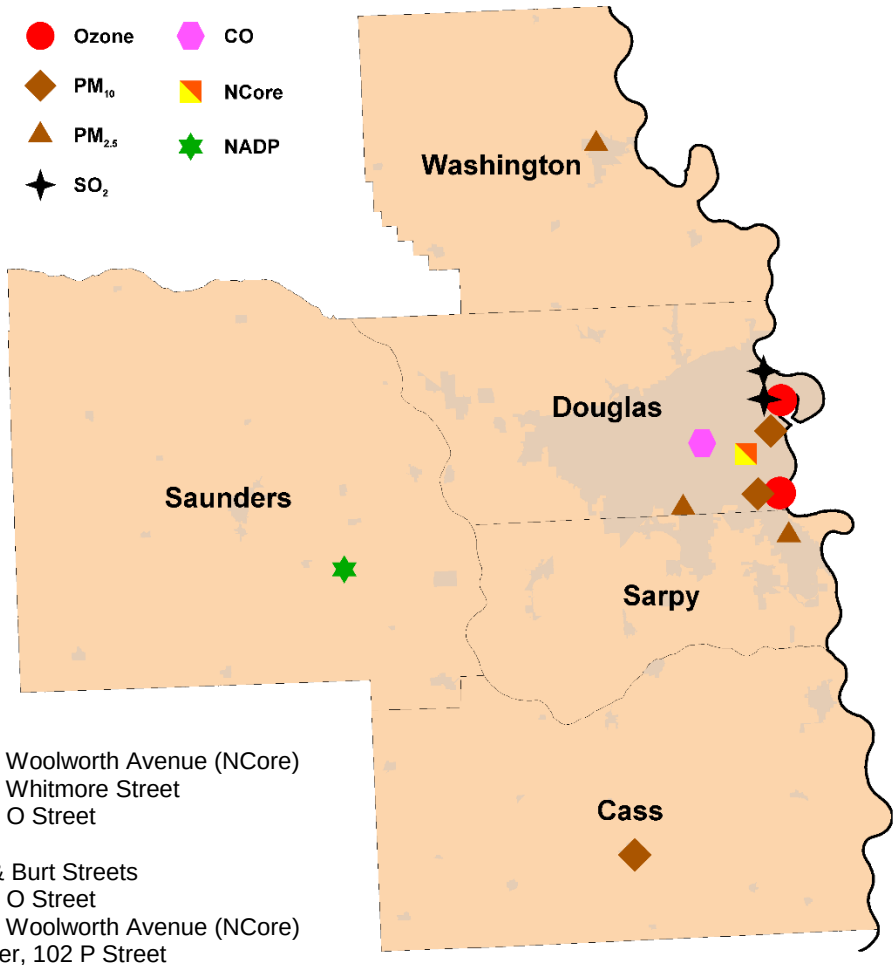
NADP/NTN
Maxwell (Lincoln County)

The Nebraska counties in the Omaha-Council Bluffs Metropolitan Statistical Area are indicated by the 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 NDEQ 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 map on the following page 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 NDEQ. 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 On-Line

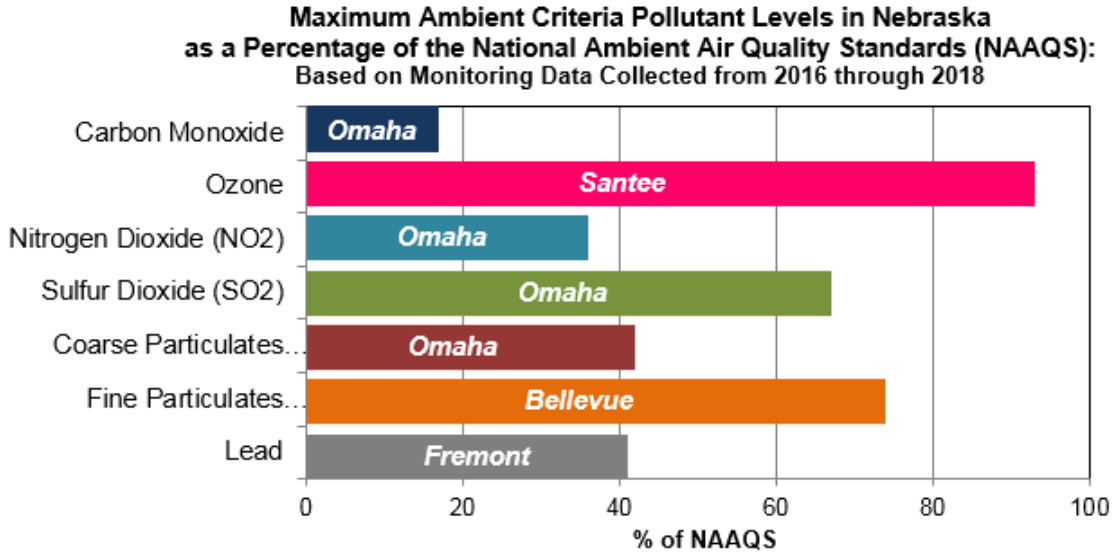
Data from continuous ozone and $PM_{2.5}$ monitors in Lincoln and Omaha are reported hourly to the EPA AirNow system, which makes current air quality information available to the public on the web at http://www.airnow.gov. EPA uses the data to calculate an hourly Air Quality Index (AQI) for each monitor 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 SFY2019 the Division began planning to replace the current $PM_{2.5}$ monitor in Grand Island (a filter-based monitor that provides average concentrations every six days) with a continuous monitor that will provide real-time data that will be available to the public via the AirNow system.

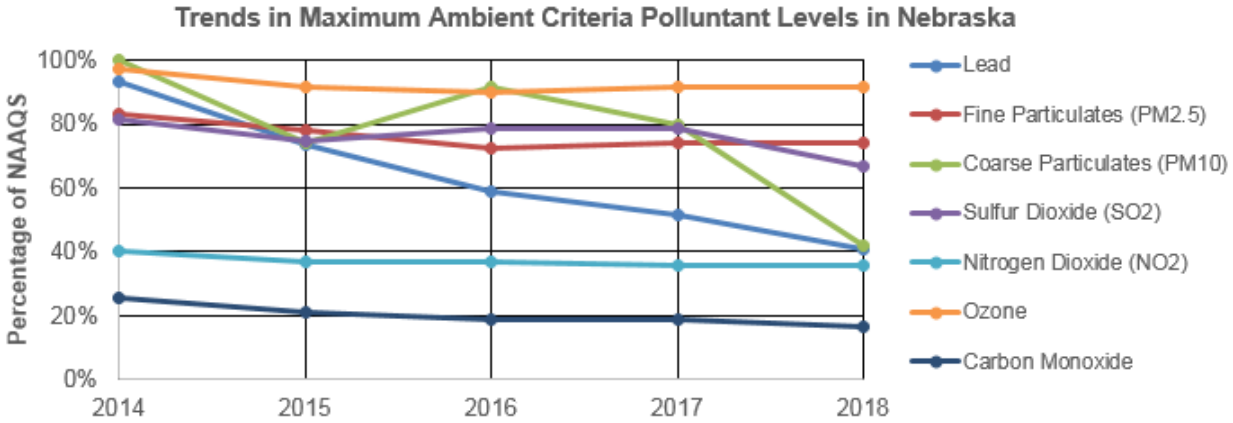
Compliance with National Ambient Air Standards (NAAQS)

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 Lancaster County, which was designated "Unclassifiable" in 2016 (due to the need for additional characterization), and Douglas County, which will be designated by the end of 2020. The latter two counties include coal-fired power plants in North Omaha and near Hallam, respectively. Two additional sulfur dioxide monitoring sites were established at the end of 2016 to provide data on the air quality at these sites and will be monitored until at least the end of calendar year 2019. Initial monitoring data indicates that sulfur dioxide levels at these locations are in attainment/compliance with the NAAQS.

The chart on the next page shows trends in the maximum measured levels of criteria pollutants in Nebraska from 2014 through 2018. The value for each pollutant and year is the maximum measured at any monitor site in the state (as a percentage of the NAAQS for that pollutant). All of the criterial pollutants show modest to significant declines in maximum levels since 2014. 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://deq.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. In certain instances, an enforcement settlement may include a Supplemental Environmental Project to further the Department's goals to protect and enhance public health and the environment. The table below lists the compliance activities conducted by the Department and by local air quality agencies during the year.

State FY2019 Compliance Activity Summary

Compliance Activity	NDEQ	LLCHD*	OAQC*
On-site Inspections	164	120	47
Facility Stack Tests Conducted On-site Observations Conducted	94 28	13 0	0 0
Continuous Emission Monitoring Audits Conducted On-site Observations Conducted	52 18	4 0	0 0
Complaints Received	89	56	46
Burn Permits Issued Burn Permits Denied Burn Permits Withdrawn	55 0 0	47 1 4	50 7 0

*LLCHD – Lincoln Lancaster County Health Department; OAQC – Omaha Air Quality Control

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 31st 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 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. Major sources of air pollution are required to pay emission fees for each ton of pollutant actually emitted during the 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 and is on the agency website. The rate for emissions generated in 2018 was $70 per ton, a reduction from $78 per ton for the previous two years.

Starting with the 2019 calendar year, facilities will submit emission inventories to the Department via an on-line electronic reporting system called State and Local Emissions Inventory System (SLEIS). A few facilities submitted their emissions inventory for 2018 electronically on a trial basis. SLEIS training workshops have been held over the course of this year and will continue to be offered along with a webinar in November 2019 and instructional videos.

Planning

The Air Quality Division is responsible for maintaining state air quality regulations and the National Ambient Air Quality Standards (NAAQS) and for providing 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. Brief information updates about important happenings in the air quality regulatory world are provided 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

NAAQS are periodically reviewed by EPA using the most recent scientific information available and are revised or retained 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 are required to submit to EPA their recommendations for attainment or nonattainment designations and State Implementation Plans (SIPs) for each new or revised standard.

Nebraska is currently designated as in attainment with all of the National Ambient Air Quality Standards. Planning activity is underway 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 that states demonstrate attainment in the areas surrounding large sources of this pollutant. To supplement the 2010 SO_2 standard, the EPA finalized the Data Requirements Rule (DRR) in 2015 to assist in implementation of the 2010 standard. This rule requires air quality agencies to characterize the air quality near sources that emit 2,000 tons per year or more of SO_2 by the use of air quality monitoring or pollutant dispersion modeling or to adopt enforceable SO_2 emission limits not to exceed 2,000 tons per year for the affected sources. Sources in Nebraska subject to this rule are coal-fired power plants and include 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 around 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. Air quality monitors were installed in 2016 near Sheldon Station and North Omaha Station and began operation in January 2017. Monitoring will continue at least through the end of 2019 and EPA is required, by court order, to complete designations by December 2020.

The DRR requires annual reporting (termed "ongoing requirements") for areas that were characterized by modeling, and this year's report was submitted in September 2019. The three facilities subject to these ongoing requirements include Whelan Energy Center, Gerald Gentleman Station, and Nebraska City Station. Emissions data from these facilities were evaluated in preparation for this report and indicated that all areas continue to demonstrate attainment with the federal standard.

Ozone

EPA issued revised ozone standards in 2015, lowering the standard from 0.075 parts per million (ppm) to 0.070 ppm. In September 2016 Nebraska submitted its designation recommendation to EPA, which designated the entire state as "unclassifiable/attainment" with respect to the 2015 ground-level ozone standard. The revised State Implementation Plan for ozone was submitted to EPA in September 2018, and EPA designation for the state is anticipated in early 2020.

Lead

EPA issued lead standards in October 2016, retaining the level of the previous primary and secondary standard of 15 micrograms per square meter (3-month rolling average) issued in 2008. Because the standard was retained without revision, a revised State Implementation Plan for Nebraska was not required.

Regional Haze

Introduction of particulates and industrial gases into the atmosphere can result in haze that reduces visibility. EPA implemented the Regional Haze Rule in 1999 to improve

visibility in national parks and wilderness areas. The rule directs state and federal agencies to work together to achieve this goal. Numerous amendments to the Rule have been issued, most recently affirming the Cross-State Air Pollution Rule (CSAPR) as an alternative to Best Available Retrofit Technology (BART) determinations for particular pollutant sources. In addition, recent guidance and technical support documents have been published to assist states in preparing State Implementation Plans (SIPs) for the second implementation period (2008-2018).

Nebraska submitted the 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. This source participates in the CSAPR program, which allots each source an emissions budget for SO_2 and allows trading of allotments. Emissions to date from this source have been below the allotted SO_2 budget under CSAPR, and no additional control measures have been required.

The Department submitted the Regional Haze Five-Year Progress Report in April 2017 and provided additional clarification to EPA to demonstrate progress toward visibility goals. At present, the Division is awaiting final approval from EPA, which will effectively finalize Nebraska's obligations under the first implementation period of the Regional Haze Rule, ending in 2018.

The second implementation period of the rule began in 2018, and Nebraska's Revised SIP will be due to EPA in July 2021.

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 included three separate rulemakings: 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 Air Division has begun planning activities for implementation of this ACE Rule.

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 and NESHAP standards that have been issued by EPA and that are applicable to facilities in Nebraska. The Notebook is intended to help the regulated community and the public understand the air toxic 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. For most of SFY2019, the position of Air Toxics coordinator was vacant.

CHAPTER 5:
Land Management Division

The Land Management Division protects human health and the environment from disposal or contamination on the ground, both on the land surface, or spills that migrate below the land surface. This division regulates both solid waste and hazardous waste. The division is comprised of: Planning and Aid, which is comprised of several waste-related grant programs; Voluntary Cleanup Program (VCP) and Brownfields; the hazardous waste Resource Conservation and Recovery Act (RCRA) program; Superfund; and the Integrated Waste Management (IWM) programs.

Planning and Aid Section

Land Planning and Aid includes the following programs: the Waste Reduction and Recycling Incentive Grants Program, including Scrap Tire Grants; the Litter Reduction and Recycling Grant Program; the Illegal Dumpsite Cleanup Program; and the Landfill Disposal Fee Rebate Program.

Responsibilities of the Land Planning and Aid Section include:

- Oversight and review – The Section reviews grant submissions; performs compliance inspections; monitors the activities, budgets, and equipment purchases of grantees; and conducts quarterly performance report reviews.
- Outreach – The Section promotes the availability of grant funding, coordinates the ranking process, coordinates grant awards, and provides integrated waste management information to the public.

Online Grant Application and Reporting

In FY2014, applications for the Waste Reduction and Recycling Incentive Grants Program and the Litter Reduction and Recycling Grant Program were converted from paper-based to an online process. Applications are now filled out and submitted on NDEQ's website. The reporting and reimbursement functions for these two grant programs were converted to an online process in FY2015. These changes have resulted in time and material savings to both NDEQ and the grant program recipients. Online information is located on the Department's web site at http://dee.ne.gov. Select the "Land and Waste" tab and then select the "Waste Planning and Aid Programs" tab.

Nebraska Department of Environmental Quality/Nebraska Environmental Trust Partnership

In July 2018, the Nebraska Department of Environmental Quality and the Nebraska Environmental Trust entered into a Partnership to ensure agency resources are managed in a fiscally responsible manner by agreeing to:

- Participate in the grant review process on those projects where there is a potential for grant awards from both organizations.
- Appoint individuals that will ensure coordination occurs between our organizations.
- Commit to revising the Partnership anytime there is a personnel change, new grant programs are created, or existing programs end or are substantially modified.
- Share information on grant awards and grantees that are non-compliant with award conditions or environmental regulatory requirements.

- Meet annually as well as when critical program or project needs arise for the purpose of discussing issues of mutual concern and opportunities to enhance the Partnership.

Percentage Allocation

At the Environmental Quality Council meeting on November 15, 2018, a hearing was held to decide the 2019 Litter Percentage Allocation. Each year, the Environmental Quality Council establishes the percentage of how the funds will be allocated for each grant category. The Department's recommended percentage allocations for 2019 were based on the actual applications received:

Category	2019 Eligible Requests	
Recycling	52.50%	$1,443,698.00
Public Education	43.60%	$1,196,857.00
Cleanup	3.90%	$106,220.00
Totals	100%	$2,746,775.00

The Department asked for the ability to adjust the percentages by up to 10% for the 2019 grant year, if warranted. The Environmental Quality Council granted the Department the ability to adjust the percentages by up to 20%. Prior to the hearing, the Department received nine letters in support of flexibility from 15% to 18%. One person gave testimony at the hearing, reading one of the letters that had been previously submitted.

New Grant Application Guidance

Grant application guidance was prepared in 2018 to provide direction and set limits on grant fund expenses. The purpose is to provide fair and equitable reimbursements, especially when requests exceed the amount of grant funding available. The guidance document was discussed by a subcommittee of the Nebraska Environmental Quality Council in the fall of 2018, and accepted at the November 15, 2018 Environmental Quality Council meeting. The guidance affects grant applications received after January 1, 2019.

Alignment of the Waste Reduction and Recycling Incentive Grant Program and Litter Reduction and Recycling Grant Program grant terms to a calendar year

Beginning with 2020 awards, the Waste Reduction and Recycling Incentive grant term changed from a fiscal year to a calendar year. With this change, both the Litter Reduction and Recycling and Waste Reduction and Recycling Incentive grant programs will be on a calendar year. This change will allow our grant programs to more closely align with the grant application period of the Nebraska Environmental Trust. Scrap tire grant applicants wanting to hold a scrap tire collection event, or who plan to do construction projects (artificial turf, running tracks, or playground surfaces) will have notification of their grant award in December, rather than late spring, or early summer. To make the transition to a calendar year, the 2019 awards for the Waste Reduction and Recycling Incentive grant program (which includes Scrap Tire Grants) were awarded for a six-month grant term, from July 1 through December 31, 2019. All 2020 grant terms will be from January 1 through December 31, 2020.

Expected Service Life

The Planning and Aid Section grant programs utilize an expected service life procedure for grant-funded equipment. The expected service life determines how long the grantee is responsible for reporting equipment status to NDEQ and how long NDEQ maintains an interest in the equipment.

An expected service life is assigned to all equipment purchased with grant funds (in whole or in part) that has a value of $1,000 or more per item. Equipment costing less than $1,000 can be assigned an expected service life on a case-by-case basis. Purchase of equipment is documented at the time of purchase. At the end of the grant period, the grantee is provided a sticker to properly identify the equipment and is notified of the length of the expected service life.

Equipment Redistribution

When grant-funded equipment with an existing expected service life is no longer being used, it is made available for redistribution to other users. One redistribution of equipment and one change in ownership were made in 2019.

Waste Reduction and Recycling Incentive Grants Program

In 1990, the Nebraska Legislature passed Legislative Bill 163, the Waste Reduction and Recycling Act, which created the Waste Reduction and Recycling Incentive Grants Program.

There are three sources of revenue for this program:

- A business fee on sales of tangible personal property, which generates about $500,000 annually.
- A $1 per tire fee on the retail sale of new tires in Nebraska, which generates about $2.4 million annually;
- Fifty percent of the $1.25 per ton disposal fee on solid waste disposed of in permitted landfills, which generates approximately $1.4 million annually for grant awards.

The Waste Reduction and Recycling Incentive Fund provides grants to private, non-profit, and government organizations to assist in financing sound integrated waste management programs and projects. These programs and projects may include but are not limited to:

- Recycling systems
- Market development for recyclable materials
- Intermediate processing facilities and facilities using recyclable materials in new products
- Food waste composting
- Yard waste composting and composting with sewage sludge
- Waste reduction and waste exchange
- Household hazardous waste programs (HHW)
- Electronic waste collections
- Pharmaceutical collections
- The consolidation of solid waste disposal facilities and use of transfer stations
- Incineration for energy recovery

A portion of the grant funds are obligated to fund scrap tire recycling and/or reduction projects, and another portion of the grant funds are available to smaller cities and counties for abandoned building deconstruction.

Fund Summary Waste Reduction and Recycling Fund July 1, 2018 - June 30, 2019	
Fund Balance June 30, 2018	**$601,284**
Revenues:	
New Tire Fees	$2,397,910
Business Fees	$516,155
Solid Waste Disposal Fee	$1,384,709
Interest, Grant Returns	$21,129
Miscellaneous	$2,757
Operating Transfers Out	($960,000)
Net Collections for Year	**$3,362,660**
Expenditures:	
Administration	$296,014
Grant Funds Expended*	$2,859,163
Total Expenditures FY 2019	**$3,155,177**
Fund Balance June 30, 2019	**$808,767**

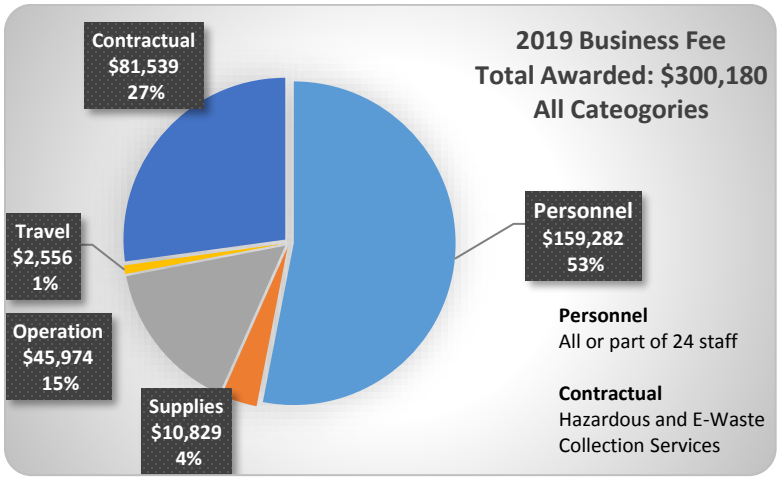
**Because grants funds are expended on a reimbursement basis, total grant funds expended in a fiscal year will differ from the amount of grants awarded in that fiscal year.*

For FY2019, NDEQ awarded $1,729,302 for Waste Reduction and Recycling Incentive Grants to 83 projects. Thirteen of these grants were awarded from the Business Fee category ($300,180), seven were awarded from the Disposal Fee category ($461,365), and 63 were awarded from the funds prioritized for scrap tire projects ($967,757).

These awards represent funding for six months. Beginning in 2020, Waste Reduction and Recycling Incentive Grants will be awarded on a calendar year, and funding will be for 12 months. The following lists indicate the locations across Nebraska that received funds.

Business Fee: $300,180 for 13 grants			
Alliance	Keep Alliance Beautiful	$61,006	Funds to operate the Alliance recycling center and provide waste reduction and recycling education programs for residents of Alliance, Box Butte County, and the surrounding area.
Chadron	Keep Chadron Beautiful	$3,186	Funds toward a one-day electronic waste recycling event for residents of Chadron and surrounding communities.
Chadron	Keep Chadron Beautiful	$25,877	Funding to collect recyclable office paper and cardboard from offices, businesses, and individuals in Chadron. Nearly 94 tons of cardboard and paper were diverted from the landfill last year.
Fremont	Keep Fremont Beautiful, Inc.	$20,225	Hold a one-day household hazardous waste collection event, one all metals market drop-site collection event, and provide recycling opportunities at public events for Fremont and Dodge County.

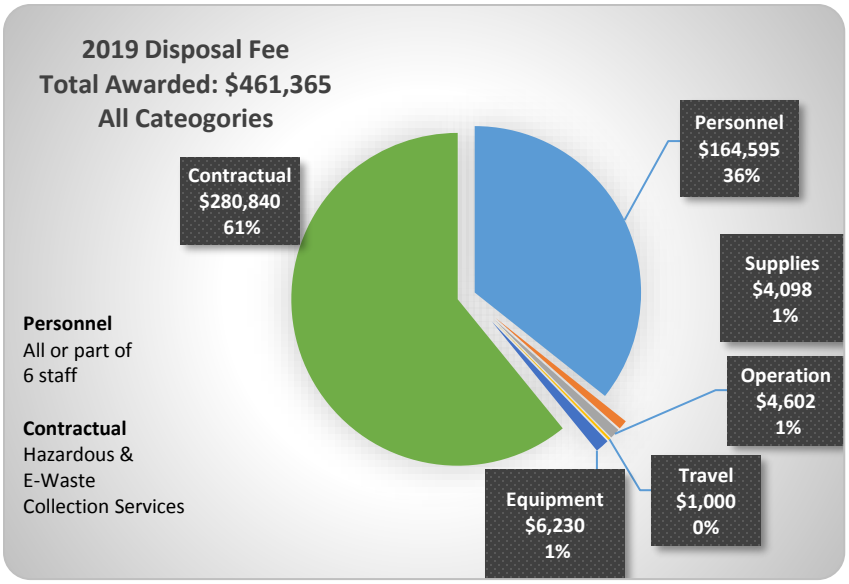
Grand Island	Grand Island Area Clean Community System	$61,562	Funds to operate the Betty Curtis Household Hazardous Waste Facility in Grand Island, serving Hall, Hamilton, Howard, Merrick, and Adams Counties.
Kimball	Keep Kimball Beautiful	$10,212	Funds to increase recycling by providing collection services to rural residents and businesses. Also provide residential alley recycling collection and recycling trailers for local towns and events.
Lexington	Lexington Area Solid Waste Agency	$16,964	Hold three household hazardous waste collection events within a 10-county area in central Nebraska.
Lincoln	Keep Nebraska Beautiful	$21,882	Funding for three statewide programs: 1) Nebraska Materials Exchange – saved landfill space by recycling nearly 5,500 tons of materials last year; 2) Nebraska Food Waste Reduction Program – encourage diversion of food from landfills through composting; and 3) Nebraska Waste Oil Collection Program – collected over 92,000 gallons of oil in 2018.
Lincoln	Lincoln Public Schools	$17,051	Continue established recycling and composting programs in Lincoln schools. Expect to divert 700,000 pounds of recyclables and 720,000 pounds of cafeteria waste during the six-month period while expanding composting programs to more schools.
Lincoln	Nebraska Recycling Council	$40,000	Create an online recycling community tool kit for elected leaders, solid waste management professionals, and environmental advocates in rural communities to achieve better recycling outcomes. Continue Hub & Spoke work in northeast and north central Nebraska.
Louisville	Keep Cass County Beautiful	$1,006	Advertising, educational materials, personnel, and travel expenses for two electronic waste recycling events in Cass County.
Oakland	Nebraska Loess Hills RC&D	$6,500	Hold an electronic waste collection event in Homer for residents of Burt, Cuming, Dodge, Dakota, Thurston, and Washington counties. Expect to collect 16,000 pounds of electronic waste.
Oakland	Nebraska Loess Hills RC&D	$14,709	Hold three household hazardous waste (HHW) events in Wisner, Oakland, and Dakota City to serve Burt, Cuming, Dakota, Dodge, Thurston, and Washington counties. Expect to collect 27,500 pounds of HHW.



Photos provided by Lincoln Public Schools, who were awarded a Business Fee grant to establish a composting program in Lincoln Schools. During the 2018-19 school year, Lincoln Public Schools collected over 1.25 million pounds of material for recycling from 67 sites and nearly 1.27 million pounds of organic material for composting from 53 sites. The above photos were taken in Pound Middle School.

Disposal Fee: $461,365 for 7 grants			
Lincoln	Lincoln-Lancaster County Health Department	$95,000	Funds to operate Lincoln's household hazardous waste facility, the HazToGo marketing plan, and toxics reduction education (including a green cleaning kit project) for residents of Lancaster County.
Lincoln	City of Lincoln – Solid Waste Management Division	$93,965	Funding for year three of the public education Recycling Right program for proper disposal of cardboard and recyclables.
McCook	Red Willow County	$80,000	Hold a minimum of 21 collection events and 10 pick-ups/disposals to collect and properly dispose of $125,000 pounds of household hazardous waste.
Nebraska City	City of Nebraska City	$7,500	Funds to rent a tree grinder to process trees, brush, and yard waste. Mulch will be used at the Arbor Day Farm, local orchards, and city parks.
Omaha	City of Omaha – UnderTheSink HHW Facility	$171,875	Year four of a five-year grant for Omaha's UnderTheSink household hazardous waste facility serving Douglas and Sarpy counties.

Thedford	Upper Loup Natural Resources District	$6,230	Funds to purchase a recycle trailer to be kept in the Village of Purdum. Will transport paper and cardboard monthly to Thedford, and then on to Broken Bow. Residents are currently burning these materials or sending them to the landfill.
Wayne	City of Wayne	$6,795	Hold one electronic waste collection event to clean up approximately 20,000 pounds of electronic waste from Wayne and surrounding areas.



Photos provided by the City of Wayne, who was awarded a Disposal Fee grant to hold one electronic waste collection event. The photos above are from this event, which was held on Sept. 14, 2019. Over 110 households and 10 businesses attended.

Deconstruction of Abandoned Buildings Grants

There were no deconstruction applications in FY 2019.

The Deconstruction of Abandoned Buildings grant program, part of the Department's Waste Reduction and Recycling Incentive grant program, provides funding to assist in the removal of abandoned

structures. Building deconstruction means the physical dismantlement of a building's components to recover the materials for reuse or recycling. The process decreases the amount of demolition material lawfully disposed of in landfills or improperly disposed of elsewhere. Nebraska cities of the second class, villages, and counties with a population of 5,000 or less are eligible to apply for funding. The buildings selected must not be on, or eligible to be on, the National Register of Historic Places.

Scrap Tire Grants

The scrap tire grants are funded by the $1 per tire fee on retail sales of new tires. In FY2019, $967,757 was awarded to 63 projects.

- Scrap tire cleanup events: 21 grants, $513,626 awarded
- Completed projects for the partial reimbursement of the purchase of tire-derived products and/or crumb rubber: 40 grants, $450,816 awarded
- Proposed projects for the partial reimbursement for the purchase of tire-derived products and/or crumb rubber: 2 grants, $3,315

Awarded Scrap Tire Cleanup Events

Funding for tire collection site cleanups for political subdivisions. Twenty-one scrap tire cleanup grants were awarded in FY2019 to political subdivisions. The grants totaled $513,626 and proposed to clean up 4,125 tons of scrap tires.

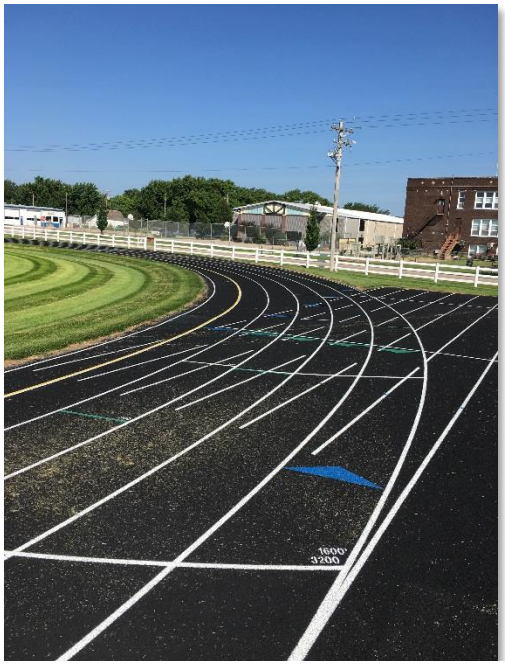
Photos provided by the Cass County Dept. of Roads, from their 2019 scrap tire cleanup event located in Weeping Water, NE.

Scrap Tire Cleanup Events: 21 grants, $513,626 awarded			
Atkinson	City of Atkinson	$23,662	Proposed 200-ton scrap tire cleanup near Atkinson for Holt County.
Center	Knox County	$12,538	Proposed 100-ton scrap tire cleanup in Center for Knox County.

Chadron	Solid Waste Agency of Northwest Nebraska	$15,716	Proposed 100-ton scrap tire cleanup for Dawes, Sioux, and Sheridan counties.
Columbus	City of Columbus	$26,352	Proposed 250-ton scrap tire cleanup in Columbus for Platte County.
Curtis	Frontier County	$12,891	Proposed 100-ton scrap tire cleanup near Eustis for Frontier County.
Fremont	City of Fremont	$33,132	Proposed 400-ton scrap tire cleanup in Fremont for Dodge and parts of Saunders, Douglas, and Washington counties.
Grand Island	Hall County Highway Department	$18,404	Proposed 150-ton scrap tire cleanup in Grand Island for Hall County.
Hartington	Cedar County	$32,521	Proposed 275-ton scrap tire cleanup in Hartington for Cedar County
Hubbard	Dakota County Road Department	$10,377	Proposed 80-ton scrap tire cleanup in Hubbard for Dakota County.
Kimball	City of Kimball	$19,108	Proposed 150-ton scrap tire cleanup in Kimball for Kimball County.
Nelson	Nuckolls County	$14,700	Proposed 120-ton scrap tire cleanup in Nelson for Nuckolls County.
North Platte	City of North Platte	$12,778	Proposed 100-ton scrap tire cleanup in North Platte for Lincoln County.
Ogallala	Keith County	$32,000	Proposed 250-ton scrap tire cleanup in Ogallala for Keith County and the surrounding area.
Omaha	City of Omaha	$61,264	Proposed 300-ton scrap tire cleanup in Omaha for Douglas County.
Ord	Lower Loup Natural Resources District	$42,804	Proposed 350-ton scrap tire cleanup in Burwell for 13 counties: Blaine, Boone, Custer, Garfield, Greeley, Holt, Howard, Loup, Rock, Sherman, Thomas, Valley, and Wheeler.
Pawnee City	Pawnee County	$6,426	Proposed 75-ton scrap tire cleanup in Pawnee City for Pawnee County.
Tecumseh	Johnson County	$7,027	Proposed 75-ton scrap tire cleanup in Tecumseh for Johnson County.
Tekamah	Papio Missouri River NRD	$84,800	Proposed 600-ton cleanup in Arlington for 10 counties: Burt, Colfax, Cuming, Dakota, Dodge, Douglas, Sarpy, Stanton, Thurston, and Washington.
Wahoo	Saunders County Highway Dept	$15,026	Proposed 150-ton scrap tire cleanup in Wahoo for Saunders County.
Weeping Water	Cass County Department of Roads	$15,690	Proposed 150-ton scrap tire cleanup in Weeping Water for Cass County.
Wilber	Saline County	$16,410	Proposed 150-ton scrap tire cleanup near Dorchester for Saline County.

Scrap Tire Partial Reimbursement for Purchase of Tire-Derived Products and/or Crumb Rubber Grants

In fiscal year 2019, $454,131 was awarded to 42 projects, to partially reimburse the purchase of tire-derived products and/or crumb rubber. Of the completed projects, 1,801,856 pounds of Nebraska recycled tire rubber were used, representing over 90,000 passenger tires.



Photos provided by McCool Junction Public School, who were awarded partial reimbursement of the installation of an athletic track base mat at the high school, which was made from 56,000 pounds of recycled tire rubber.

Photos provided by Perkins County Schools, who were awarded partial reimbursement of the purchase of 118,950 pounds of rubber playground mulch and 23 swing mats, made from 1,730 pounds of recycled tire rubber, for the elementary playground.

Partial Reimbursement for the Purchase of Tire-Derived Products and/or Crumb Rubber-Completed Projects: 40 grants, $450,816 awarded			
Alliance	Keep Alliance Beautiful	$6,473	50% reimbursement for 39,000 lbs. of rubber mulch for Box Butte County residents and businesses.
Arlington	Arlington Public Schools	$10,788	25% reimbursement for 3,000 sq. ft. of bonded rubber playground surfacing made from 39,000 lbs. of recycled tire rubber.

Bartley	Southwest Public Schools	$393	25% reimbursement for 5,850 lbs. of rubber mulch for the playground at Southwest Elementary School in Indianola, NE.
Bloomfield	Bloomfield, City of	$11,084	50% reimbursement for 52,267 lbs. of rubber mulch and 25% reimbursement of 6 picnic tables made from 810 lbs. of recycled tire rubber.
Broken Bow	Broken Bow Schools	$4,462	50% reimbursement for 33,150 lbs. of rubber mulch for playgrounds at Custer and North Park Elementary Schools.
Crete	Doane University	$60,137	25% reimbursement for an athletic track surface using 26,000 lbs. of recycled tire rubber.
Elkhorn	Lord of Life Lutheran Church	$3,396	25% reimbursement for 1,512 sq. ft. of rubber tiles for the playground made from 8,278 lbs. of recycled tire rubber.
Elwood	Hope Lutheran Church	$2,200	50% reimbursement for 15,600 lbs. of rubber mulch for the playground at Hope Lutheran Church in Smithfield, NE.
Fairbury	Fairbury, City of	$2,875	50% reimbursement for 19,500 lbs. of rubber mulch for the playground in McNish Park.
Fairbury	Faith Lutheran Church	$4,125	50% reimbursement for 38,000 lbs. of rubber mulch for the playground.
Fremont	Fremont Public Schools	$4,237	50% reimbursement for 34,000 lbs. of rubber mulch for the Bell Field Elementary School playground.
Gibbon	Gibbon Baptist Church	$1,575	50% reimbursement for 11,700 lbs. of rubber mulch for the playground.
Grand Island	Cedar Hollow School Parent Teacher Organization	$2,887	50% reimbursement for 21,450 lbs. of rubber mulch for the playground at Cedar Hollow School.
Grant	Perkins County Schools	$13,069	50% reimbursement for part of 118,950 lbs. of rubber mulch and 25% reimbursement of 23 swing mats made from 1,730 lbs. of recycled tire rubber for the elementary playground.
Greeley	Central Valley Public School	$7,672	50% reimbursement for 56,500 lbs. of rubber mulch and 25% reimbursement of 12 swing mats made from 902 lbs. of recycled tire rubber for playgrounds in Wolbach and Scotia.
Hebron	Hebron, City of	$12,535	50% reimbursement for 85,000 lbs. of rubber mulch and 25% reimbursement of 7 swing mats made from 525 lbs. of recycled tire rubber for the playground.
Hershey	Hershey Public Schools	$3,412	50% reimbursement for 25,350 lbs. of rubber mulch for the K-3 playground.
Humboldt	Humboldt, City of	$9,400	50% reimbursement for 64,000 lbs. of rubber mulch for a city playground.
Kearney	Bowman, Mary	$562	50% reimbursement for 3,900 lbs. of rubber mulch for a playground.
Kearney	First Baptist Preschool	$18,007	25% reimbursement for 4,890 sq. ft. of rubber playground tiles for the playground, made from 37,907 lbs. of recycled tire rubber.
Kearney	Timm Grandview, LLC	$5,250	50% reimbursement for 39,000 lbs. of rubber mulch for a playground.
Lewiston	Lewiston Consolidated Schools	$3,200	50% reimbursement for part for 46,000 lbs. of rubber mulch for a playground. Expenses were partially reimbursed in 2018.
Lincoln	Lincoln Christian School	$11,348	25% reimbursement for an athletic track maintenance coating system, using 6,000 lbs. of recycled tire rubber.

Lincoln	Loving Hearts Child Development Center	$3,172	25% reimbursement for 1,340 sq. ft. of bonded rubber playground surfacing made from 6,500 lbs. of recycled tire rubber.
Lincoln	University of Nebraska Athletics	$89,700	25% reimbursement for artificial turf for the Gass practice field, using 223,432 lbs. of recycled tire rubber.
Loomis	Loomis High School	$12,075	50% reimbursement for 89,700 lbs. of rubber mulch for the elementary playground.
McCook	McCook Elementary School	$652	50% reimbursement for 3,900 lbs. of rubber mulch for the school playground.
McCool Junction	McCool Junction Public School	$19,002	25% reimbursement for an athletic track base mat at the high school, made from 56,000 lbs. of recycled tire rubber.
North Platte	North Platte Public School District	$2,100	50% reimbursement for 15,600 lbs. of rubber mulch for the playground at Lincoln Elementary School.
Omaha	College of St. Mary	$67,782	25% reimbursement for an artificial turf soccer field, using 262,000 lbs. of recycled tire rubber.
O'Neill	St. Mary's Catholic School	$17,183	50% reimbursement for 122,835 lbs. of rubber mulch for the playground.
Oshkosh	Garden County Schools	$1,969	50% reimbursement for 13,650 lbs. of rubber mulch for the elementary playground in Oshkosh, NE.
Oxford	Southern Valley Schools	$2,300	50% reimbursement for 10,000 lbs. of rubber mulch for the elementary playground.
Palmer	Palmer Public School	$1,125	50% reimbursement for 7,800 lbs. of rubber mulch for the preschool playground.
Plattsmouth	Beaver Lake Association	$3,750	50% reimbursement for 23,880 lbs. of rubber mulch for the playground.
Polk	High Plains Community Schools	$1,734	50% reimbursement for 11,700 lbs. of rubber mulch for the elementary playground in Clarks, NE.
Ralston	St. Gerald Catholic School	$6,650	50% reimbursement for 44,000 lbs. of rubber mulch for the playground.
Ravenna	Ravenna Public Schools	$21,346	25% reimbursement for an athletic track surface, using 78,000 lbs. of recycled tire rubber.
Trenton	Hitchcock County Agriculture Society	$799	25% reimbursement for four picnic tables made from 540 lbs. of recycled tire rubber for the fairgrounds in Culbertson, NE.
Wilber	Gingerbread House, The	$390	50% reimbursement for 1,950 lbs. of rubber mulch for the playground.

Partial Reimbursement for the Purchase of Tire-Derived Products and/or Crumb Rubber- Proposed Projects: 2 projects, $3,315 Awarded			
Omaha	Faith Westwood United Methodist Church	$765	Proposed 50% reimbursement for 3,900 lbs. of rubber mulch for the Love and Learn Child Development Center playground.
Potter	Potter, Village of	$2,550	Proposed 50% reimbursement for 17,550 lbs. of rubber mulch for the Railroad Park playground.

Litter Reduction and Recycling Grant Program

The Litter Reduction and Recycling Grant Program has been in existence since 1979. Its purpose is to provide funds to support programs to reduce litter, provide education, and promote recycling in Nebraska.

Funds from this program are provided from an annual fee assessed to manufacturers, wholesalers, and retailers having gross receipts of at least $100,000, on products that commonly contribute to litter. For manufacturers, the annual litter fee is $175 for each million dollars of products manufactured. The annual litter fee for wholesalers and retailers is $175 for each million dollars of sales made in the state. Approximately $2 million is received annually.

The annual litter fee is imposed on products in the following categories:

- Food for human consumption, beverages, soft drinks, carbonated water, liquor, wine, beer and other malt beverages, unless sold by retailers solely for consumption indoors on the retailer's premises;
- Food for pet consumption;
- Cigarettes and other tobacco products;
- Household paper and household paper products;
- Cleaning agents; and
- Kitchen supplies.

Fund Summary
Litter Reduction and Recycling Fund
July 1, 2018 - June 30, 2019

Fund Balance as of June 30, 2018	**$ 906,646**
Revenues	
Litter Taxes Collected	$2,263,848
Interest, Grant Returns	$37,834
Miscellaneous	$0
Operating Transfer Out	($720,000)
Net Collections for FY 2019	**$1,581,682**
Expenditures	
Administration	$366,499
Grant Funds Expended*	$1,070,280
Total Expenditures FY 2019	**$1,436,779**
Fund Balance June 30, 2019	**$1,051,549**

**Because grants funds are expended on a reimbursement basis, total grant funds expended in a fiscal year will differ from the amount of grants awarded in that fiscal year.*

Grant Allocations - Litter Reduction and Recycling Fund

In FY2019, $1.3 million was awarded to 49 Litter Reduction and Recycling Grant recipients. Grant funding is awarded to several types of programs, including non-profit groups, public and private entities, and over 20 Keep America Beautiful affiliates. Many of these programs utilize the Litter Reduction and Recycling Grant Program funds to leverage additional dollars for a comprehensive, statewide approach to litter reduction and recycling.

The breakdown is as follows:

Public Education	(64%)	21 grants	$	826,761
Cleanup	(4%)	11 grants	$	49,716
Recycling	(32%)	17 grants	$	423,523
Totals	**100%**	**49 grants**	**$**	**1,300,000**

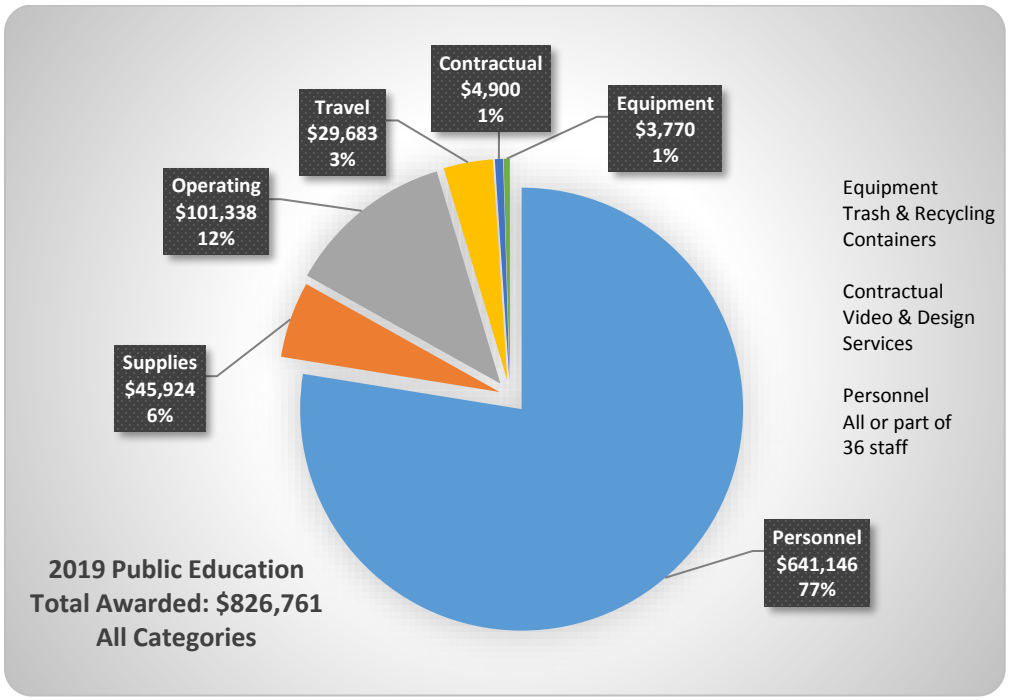
Public Education

In FY2019, 21 grants totaling $826,761 were awarded under the category of Public Education. The Public Education programs educate citizens in the areas of litter reduction, cleanup, and recycling through a variety of individual and community activities. The following list indicates the locations that received funds.

Public Education Awards: $826,761 for 21 grants			
Alliance	Keep Alliance Beautiful	$62,404	Provide litter/waste reduction and recycling education for elementary and middle schools in Box Butte County.
Beatrice	Keep Beatrice Beautiful	$40,805	Partner with local government and organizations to educate on what and where to recycle, and the importance of buying recycled content products. Promote "Use Less Stuff" in schools. Coordinate litter-free events.
Burwell	Loup Basin RC & D/ Keep Loup Basin Beautiful	$46,706	Public education program for youth and adults in central and north central Nebraska on recycling, litter prevention, and proper waste disposal.
Chadron	Keep Chadron Beautiful	$49,773	Public education to establish new attitudes and behaviors toward litter reduction and recycling. Present information to public and home schools, local clubs, and civic organizations.
Columbus	Keep Columbus Beautiful	$33,543	Provide public education for increasing recycling and to raise awareness for litter prevention in Columbus and Platte County.
Fremont	Keep Fremont Beautiful	$58,467	Public education on proper waste handling practices. Sponsor material collection events and a local campaign to reduce litter and increase recycling. Respond to population/demographic changes that may occur with construction of new area poultry plant.
Grand Island	Grand Island Area Clean Community System	$38,728	Provide education to schools and at public events on how to recycle, reuse/repurpose. Education on proper disposal and alternatives to home chemicals. Provide recycling containers at local events.

Grand Island	Literacy Council of Grand Island, Inc	$26,850	Implement an environmental literacy project with 600 English learning students and the greater community. Coordinate an Earth Day Festival and conduct a public education campaign about composting and recycling.
Kimball	Keep Kimball Beautiful	$21,360	Provide environmental education for Kimball and the surrounding area on litter prevention and waste management. Work with Kimball Public Schools to educate on waste diversion and how a landfill works.
Lexington	Keep Lexington Beautiful	$15,703	Provide recycling and litter education to one middle and four elementary schools, two nursing homes, and two assisted living facilities. Provide recycling trailers for local community events.
Lincoln	Lincoln-Lancaster County Health Department	$75,021	Education program to promote litter reduction and an increase in recycling. Purchase nine ashtray receptacles.
Lincoln	University of Nebraska-Lincoln	$7,741	Increase recycling education at UNL. Purchase 30 recycling containers for outdoor events. Volunteers will hand out recycling bags to tailgaters and return to pick up the bags to put in recycling containers.
Louisville	Keep Cass County Beautiful	$40,710	Promote waste reduction, the importance of litter prevention and of reducing, reusing, repurposing, and recycling in Cass County. Will provide recycling bins and cigarette receptacles at local community events.
Nebraska City	Keep Nebraska City Beautiful	$22,019	Educational program for students and adults on the harmful effect of litter in the community. Provide waste reduction tips, including food waste and the importance of recycling.
Norfolk	Keep Norfolk Beautiful	$17,683	Public education to promote litter reduction and recycling through school and community presentations. Provide recycling containers at public events and organize litter-free events and cleanups.
North Platte	Keep North Platte and Lincoln County Beautiful	$62,194	Public education program to encourage waste reduction and a litter-free environment. Help non-recyclers to recycle and seek out environmental stewards and passionate volunteers to make the community a cleaner place with less waste going to the landfill.
Ogallala	Keep Keith County Beautiful	$51,494	Public education program including source reduction, recycling right, food waste elimination, and sustainable waste management, for residents and visitors in six counties. The mission is to eliminate litter and increase recycling.
Omaha	Keep Omaha Beautiful	$73,344	Environmental education on litter prevention, waste reduction, and recycling. Conduct activities at local schools and events. Mark storm drains with "No Dumping" decals. Coordinate a "Recycle Right" campaign.
Scottsbluff	Keep Scottsbluff Gering Beautiful	$28,816	Provide public education on waste reduction, litter prevention, and recycling. Partner with NRD's, local govt., the Nat'l Park Serv., and schools to promote a litter-free community and reduce materials going to the landfill. Host household hazardous waste and pharmaceutical take-back events.

Sidney	Keep Sidney Beautiful	$13,983	Partner with business and community members to provide public education on recycling and waste reduction. The goal is to keep the community clean for prospective businesses to come to the city.
South Sioux City	Keep Northeast Nebraska Beautiful	$39,417	Educational programs to students, businesses, and residents of an 11-county area. Stress the importance of litter reduction and participating in recycling and cleanup programs, including the annual Missouri River cleanup for area school children.



Photos provided by Keep Fremont Beautiful, who was awarded a public education grant to promote public education on proper waste handling practices and sponsor material collection events and a local campaign to reduce litter and increase recycling. The photo on the left was taken at the Fremont area Eco-Fair, for 4th grade students. The photo on the right was taken during a 2nd grade presentation on "Is it Recyclable?"

Cleanup

In FY2019, 11 grants totaling $49,716 were awarded under the category of Cleanup. The cleanup programs utilize Nebraska residents of all ages to pick up litter and debris along Nebraska's highways, waterways, recreation lands, urban areas, and other public-use areas within the state. The Cleanup grants will clean up litter from 715 road-side miles and 679 acres of public areas. The following list indicates the locations that received funds.

Cleanup Awards: $49,716 for 11 grants			
Beatrice	Keep Beatrice Beautiful	$6,000	Clean up 100 roadside miles and 60 acres in Gage County.
Chadron	Keep Chadron Beautiful	$5,060	Clean up 100 roadside miles in Dawes County through a mini-grant program.
Crofton	City of Crofton	$790	Clean up 9 roadside miles and 34 acres in Crofton.
Grand Island	Grand Island Area Clean Community System	$6,000	Clean up 95 roadside miles and 75 acres in Hall, Hamilton, and Merrick counties through a mini-grant program.
Lincoln	Lincoln-Lancaster County Health Department	$6,000	Clean up 100 roadside miles and 100 acres in Lancaster County. Some cleanup will be done by Lancaster Co. Corrections inmates; other projects include mini-grants done through high school litter projects.
Louisville	Keep Cass County Beautiful	$1,600	Clean up 16 roadside miles and 80 acres in Cass County through a mini-grant program.
North Platte	Keep North Platte and Lincoln County Beautiful	$6,000	Clean up 120 roadside miles in Lincoln County through a mini-grant program.
Ogallala	Keep Keith County Beautiful	$2,800	Clean up 50 roadside miles and 30 acres in Keith County through a mini-grant program.
Omaha	Keep Omaha Beautiful	$6,000	Clean up five roadside miles and assist in 475 cleanup events and programs.
Scottsbluff	Keep Scottsbluff Gering Beautiful	$5,466	Clean up 100 roadside miles in Scotts Bluff County through an adopt-a-spot mini grant program, including trails along the Scotts Bluff National Monument.
Wakefield	Education Service Unit #1	$4,000	Clean up 20 miles and 300 acres in Cedar, Dakota, Dixon, Knox, Thurston, and Wayne counties. Work will be done by special education students from 24 school districts.

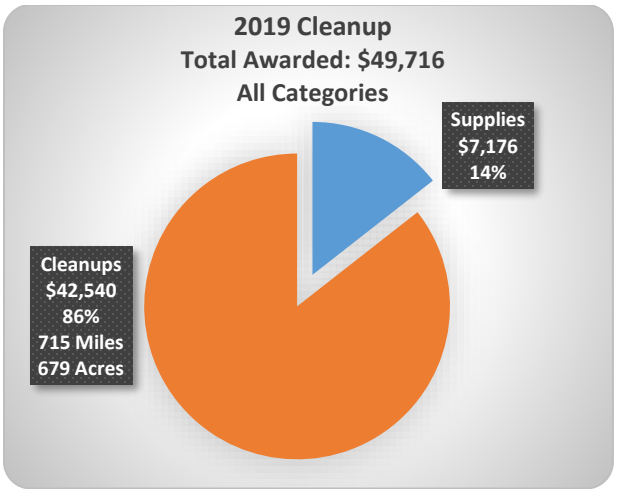


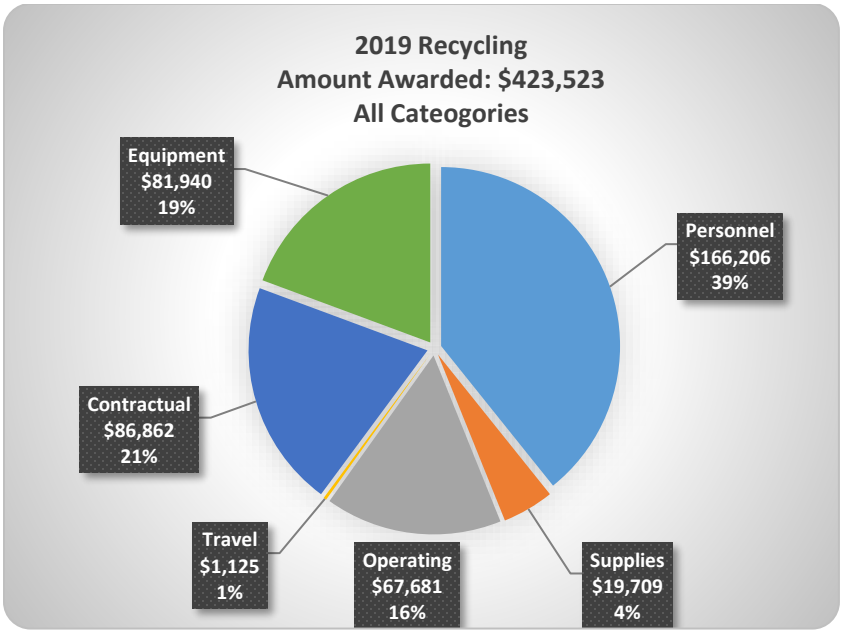
Photo provided by Keep Chadron Beautiful, who was awarded a cleanup grant to clean up 100 roadside miles in Dawes County, through a mini grant program.

Recycling

In FY2019, 17 grants totaling $423,523 were awarded under the category of Recycling. The recycling programs provide an alternative to the disposal of solid waste in Nebraska's landfills. The programs recycle more than just aluminum, paper, glass and plastic. Materials such as electronic computer components, paint, aerosol cans, fertilizer, pesticides, and household hazardous waste are collected. Materials are either reprocessed to be used again or are disposed of in an environmentally friendly manner. The following list indicates the locations that received funds.

Recycling Awards: $423,523 for 17 grants			
Alliance	Keep Alliance Beautiful	$37,922	Funds to operate the recycling center in Alliance serving Box Butte County and surrounding area.
Chadron	Keep Chadron Beautiful	$4,539	Hold a one-day electronic recycling event for Chadron residents. An estimated 15,000 lbs. of electronic waste will be collected.
Hebron	Trailblazer Resource Conservation and Development	$12,481	Hold four household hazardous waste collections for Clay, Thayer, Nuckolls, Webster, Franklin, Fillmore, and Harlan County residents.
Kimball	Keep Kimball Beautiful	$27,689	Funds to operate the Kimball Recycling Center, the only recycling option for households within a 50-mile radius. Have diverted 250 tons of material from the landfill in the past two years.
Lexington	Keep Lexington Beautiful	$2,972	Purchase four replacement bins for Lexington's recycling trailers and perform recycling trailer maintenance.

Lincoln	Nebraska Recycling Council	$43,595	Provide waste reduction, reuse, and recycling programs for communities, recyclers, processors, and individuals across Nebraska. Provide zero waste training and consultation, offer live educational webinars on current topics, and maintain the Nebraska Recycling Guide.
Lincoln	City of Lincoln	$77,353	Purchase thirteen food and beverage replacement recycling containers for Lincoln and the surrounding area.
North Platte	Keep North Platte and Lincoln County Beautiful	$18,139	Work on drop-off, residential curbside, school, and business recycling program to reduce waste generated and increase recyclables collected through reputable end-markets.
Ogallala	Keep Keith County Beautiful	$6,324	Funds to collect and process materials from 10 recycling containers located around Lake McConaughy during the summer. Over the 2018 Fourth of July weekend, 30 tons of recyclables and 70 tons of trash were collected at the lake, representing a 30% recycling rate.
Ogallala	Western Resources Group	$43,622	Maintain and expand recycling programs in Keith County. Make and sell animal bedding made from recycled cardboard and newspaper. 500 tons of cardboard sold yearly.
Omaha	Angels on Wheels, Inc dba Cross Training Center	$48,597	Hold 10 electronic collection events at Omaha-area schools. Distribute printed classroom curriculum to teachers on how to reduce, reuse, and recycle.
Omaha	Habitat for Humanity of Omaha	$4,022	Purchase 7,000 reusable tote bags to give to customers at the two Habitat ReStore outlets in Omaha. The totes will reduce litter produced by one-time plastic bags. The stores in Omaha sell over 300,000 items to 15,000 consumers annually.
Rushville	City of Rushville	$38,518	Funds to crush up to 9,000 tons of concrete and use it for maintenance of Rushville's gravel roads, parking lots, and alleys.
Schuyler	Keep Schuyler Beautiful	$23,884	Operating expenses for the Colfax County recycling facility. The facility accepts materials from Schuyler and Colfax counties, and parts of Butler, Platte, and Dodge counties.
Scottsbluff	Keep Scottsbluff Gering Beautiful	$17,871	Hold a pharmaceutical collection event, Earth Day celebration, "Recycle your Cycles," and Christmas tree recycling to promote proper disposal, recycling, and reuse of unwanted materials.
Tekamah	Papio Missouri River NRD	$13,080	Conduct four electronic waste collections in Washington, Burt, Thurston & Dakota Counties to collect an estimated 65,000 lbs. of e-waste. Over 95% of materials will be recycled or reused. Collection promotions will educate the public about the benefits of recycling and hazards of improper disposal.
Wood River	Crane Trust	$2,915	Purchase a bottle filling station to reduce disposable plastic and encourage use of reusable bottles. Also buy two hand dryers for the restrooms to reduce paper towel waste. 35,000 visitors during the spring migration now produce four bags of trash/day.



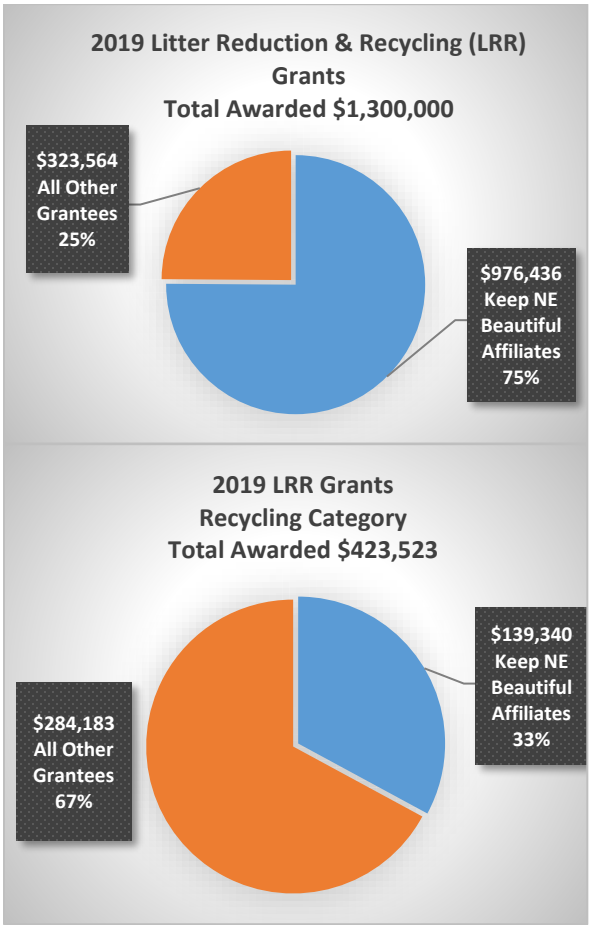
Pictured is the Colfax County Recycling facility. Photos provided by Keep Schuyler Beautiful, who was awarded a recycling grant for operating expenses for the recycling facility.

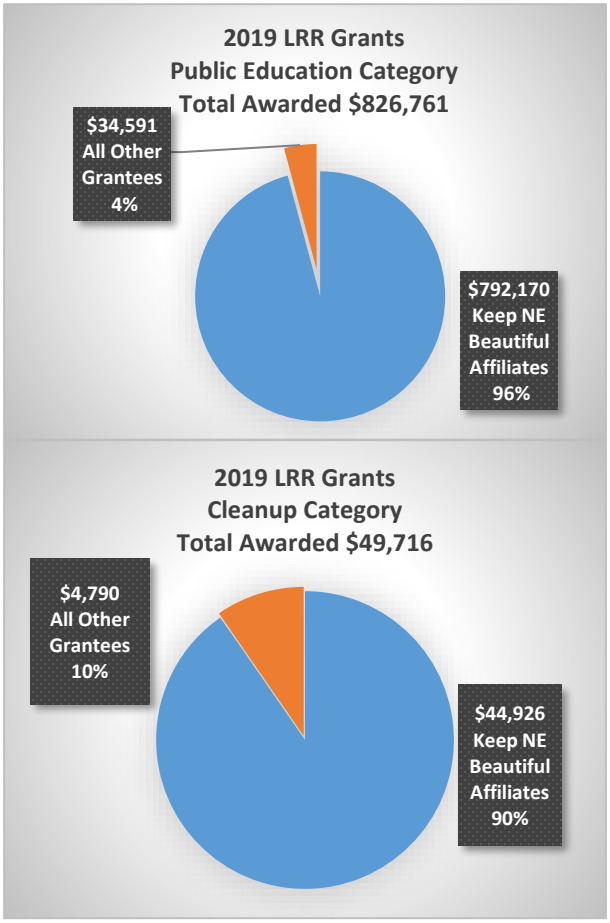
Keep America Beautiful Nebraska Affiliate Funding for 2019

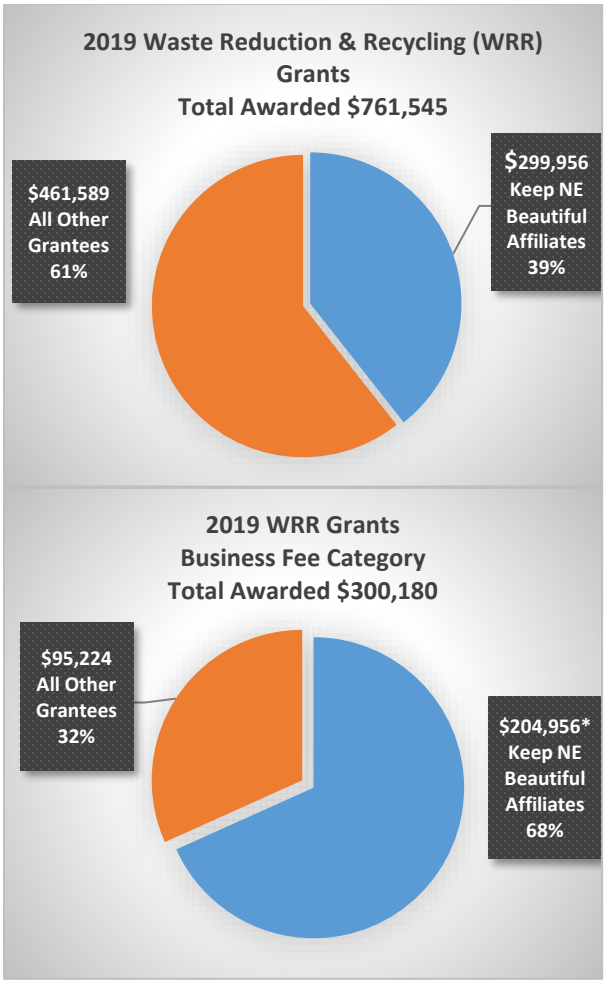
Keep America Beautiful (KAB) is a national non-profit public education organization. Keep Nebraska Beautiful is a statewide affiliate of KAB. There are 20 local KAB affiliate communities in Nebraska.

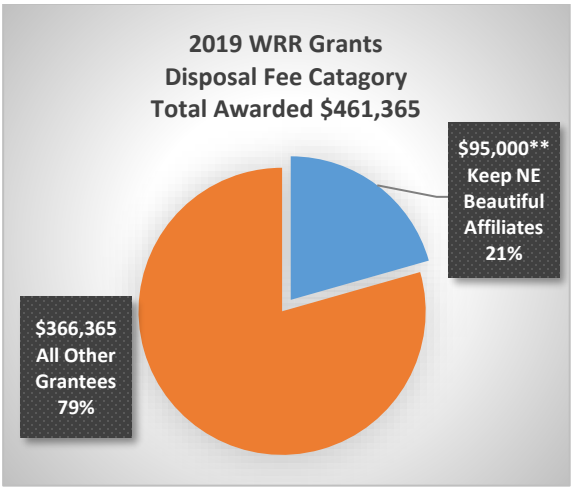
Many of the KAB affiliates receive grant funding from the Litter Reduction and Recycling grant program under the public education category to cover expenses such as personnel and operating expenses. The affiliates teach the importance of reuse, recycling, and reducing waste and litter through school and community-wide education programs.

The Litter grant program also includes the cleanup category, which covers expenses to pick up litter along roadways and in public areas. Recycling is the third category under the Litter grant program, and is similar to the Business Fee category of the Waste Reduction and Recycling Incentive Grant Program. Through these last two categories, the KAB affiliates have received funding to operate recycling facilities and household hazardous waste (HHW) facilities. They have also held HHW, electronic waste, and pharmaceutical collections. These events are important because they make sure the materials collected are managed and/or disposed of properly. Although they are not eligible for direct grant funding, some KAB affiliates have worked with local political subdivisions (cities and counties) to organize scrap tire cleanup events.

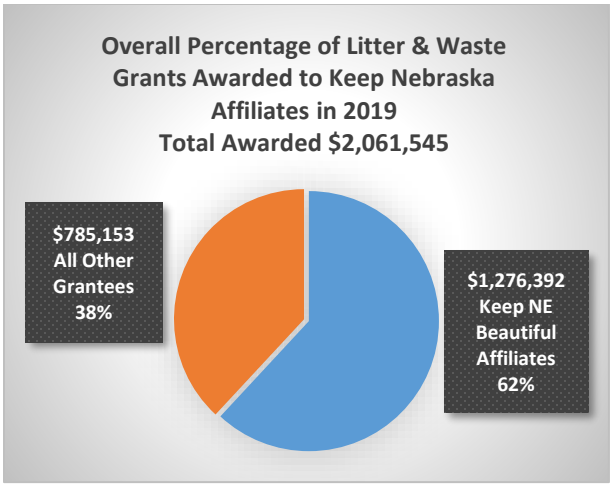






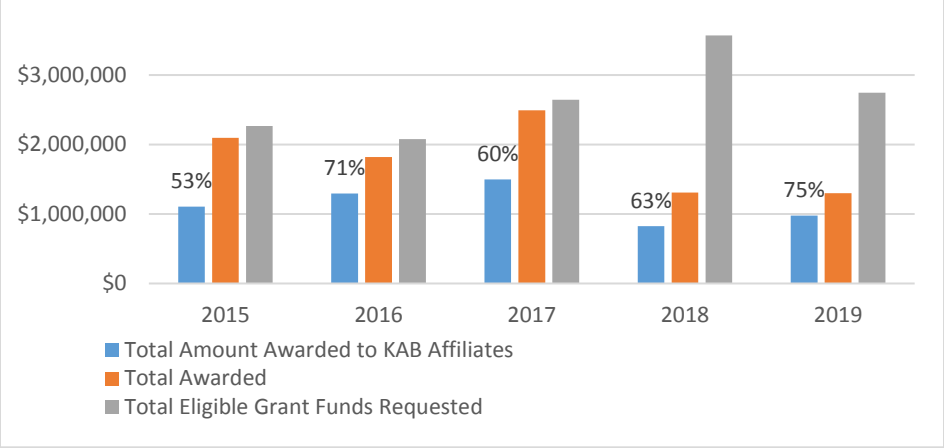


* The Business Fee Category award included a $61,562 grant to the Grand Island Clean Community System to operate the Household Hazardous Waste Facility in Grand Island.
** The Disposal Fee Category amount included a $95,000 grant to the Lincoln Lancaster County Health Department to operate the Household Hazardous Waste Facility in Lincoln.



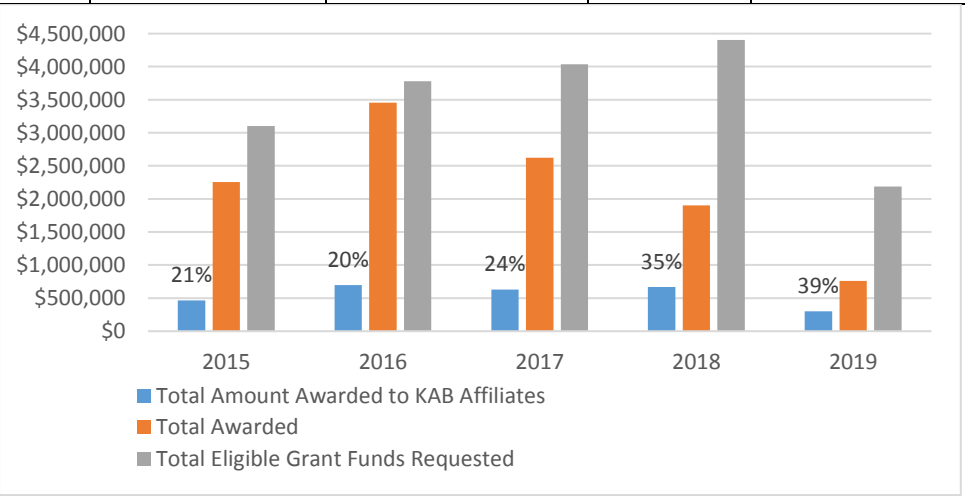
2015-2019 Awarded Litter Reduction and Recycling Grants to Keep America Beautiful (KAB) Nebraska Affiliates

Grant Year	Total Amount Awarded to KAB Affiliates	Percent Awarded to KAB Affiliates	Total Awarded	Total Eligible Grant Funds Requested
2015	$1,106,901	53%	$2,095,864	$2,266,267
2016	$1,294,329	71%	$1,821,055	$2,079,033
2017	$1,499,123	60%	$2,491,087	$2,644,088
2018	$823,506	63%	$1,306,370	$3,571,584
2019	$976,436	75%	$1,300,000	$2,746,775



2015-2018 Awarded Waste Reduction and Recycling Incentive Grants to Keep America Beautiful (KAB) Nebraska Affiliates

Grant Year	Total Amount Awarded to KAB Affiliates	Percent Awarded to KAB Affiliates	Total Awarded	Total Eligible Grant Funds Requested
2015	$466,234	21%	$2,257,791	$3,101,500
2016	$696,947	20%	$3,454,825	$3,781,465
2017	$627,484	24%	$2,623,217	$4,036,801
2018	$668,415	35%	$1,900,000	$4,402,481
2019	$299,956	39%	$761,545	$2,188,344



Illegal Dumpsite Cleanup Program

The Illegal Dumpsite Cleanup Program, established in 1997, is a cleanup program that provides funding assistance to political subdivisions for the cleanup of solid waste disposed of along public roadways or ditches. Through this program, household waste, white goods, construction and demolition waste, tires, furniture, yard waste, and some hazardous wastes are removed from the illegal site and disposed in a permitted facility or recycled.

Funding for this program is limited to five percent of the total revenue from the disposal fee collected from landfills in the preceding fiscal year. NDEQ encourages municipalities, counties and other political subdivisions to submit applications for the reimbursement of cleanup efforts. In FY2019, the program provided 21 grants, totaling $14,935.74. In FY2019, funds were provided to:

Illegal Dumpsite Cleanup Awards		
City of Lincoln - 11	City of Omaha – 3	Seward County - 3
Red Willow 1	Washington County - 3	

Landfill Disposal Fee Rebate Program

The Landfill Disposal Fee Rebate Program was created as an incentive to political subdivisions to support and encourage the purchasing of products, materials, or supplies that are manufactured or produced from recycled material. Funding for the program is from the Waste Reduction and Recycling Incentive Fund.

Under the program, which was created in 1994, any municipality or county may apply for a rebate if they have a written purchasing policy requiring a preference for purchasing products, materials or supplies that are manufactured or produced from recycled material. If the policy is approved by NDEQ, the applicant may receive a 10-cent rebate from the $1.25 per ton disposal fee. Rebates are provided no more than quarterly and no less than annually.

In FY2019, the program provided $91,630 to five counties and six cities participating in the program. Eight of the eleven participants processed their requests through email. This option helps to meet our agency's goals for waste reduction efforts and process improvement.

Landfill Disposal Rebate Recipients					
Buffalo County	$ 5,482	Butler County	$ 3,317	City of David City	$ 240
City of North Platte	$ 3,683	City of Lincoln	$26,142	Saline County	$ 2,861
City of Omaha	$ 47,291	South Sioux City	$ 615	Jefferson County	$ 554
Seward County	$ 1,335	City of Grant	$ 110		

Ten-Year Grant History of Amounts Awarded and Requested

Amounts Awarded and Requested for Litter Reduction and Recycling Grant (LRR) Categories

Grant Year	Awarded Recycling	Awarded Public Education	Awarded Cleanup	Total Awarded (All LRR Categories)	Total Eligible Grant Funds Requested (All LRR Categories)
2010	$1,269,074	$547,595	$76,575	$1,893,244	$3,317,183*
2011	$1,125,000	$323,789	$60,000	$1,508,789	$3,730,926*
2012	$852,500	$620,003	$81,675	$1,554,178	$2,044,451*
2013	$821,092	$751,559	$109,937	$1,682,588	$2,499,447*
2014	$1,052,402	$887,141	$67,164	$2,006,707	$3,083,431*
2015	$1,176,580	$821,346	$97,938	$2,095,864	$2,266,267*
2016	$892,975	$819,597	$108,483	$1,821,055	$2,079,033*
2017	$1,326,206	$1,037,895	$126,986	$2,491,087	$2,644,088
2018	$603,867	$651,968	$50,569	$1,306,404	$3,571,584
2019	$423,523	$826,761	$49,716	$1,300,000	$2,746,775
			Total Amounts	**$17,659,916**	**$27,983,185***

**Estimate*

Amounts Awarded and Requested for Waste Reduction and Recycling Incentive Grant (WRR) Categories

Grant Year	Awarded Disposal Fee	Awarded Business Fee	Total Awarded (Both WRR Categories)	Total Eligible Grant Funds Requested (Both WRR Categories)
2010	$1,019,827	$423,075	$1,442,902	$4,473,857*
2011	$791,488	$349,395	$1,140,883	$2,446,958*
2012	$916,461	$774,715	$1,691,176	$2,387,797*
2013	$816,990	$549,524	$1,366,514	$2,388,515*
2014	$1,012,371	$1,107,888	$2,120,259	$3,083,431*
2015	$1,435,558	$822,233	$2,257,791	$3,101,500*
2016	$2,116,399	$1,338,426	$3,454,825	$3,781,465
2017	$1,789,483	$833,734	$2,623,217	$4,036,801
2018	$964,113	$935,887	$1,900,000	$4,402,481
****2019**	$461,365	$300,180	$761,545	$2,188,344
		Total Amounts	**$18,759,112**	**$32,291,149**

**Estimate*
*** FY2019 Grant awards were for a 6-month grant term.*

Amounts Awarded for Deconstruction, Illegal Dumpsite, and Landfill Disposal Rebates

Grant Year	Awarded Deconstruction Grants	Awarded Illegal Dumpsite	Awarded Landfill Disposal Rebate
2010	$58,800	$60,065	$74,017
2011	$10,080	$83,533	$82,653
2012	$291,500	$42,468	$118,662
2013		$44,841	$108,674
2014		$49,792	$101,810
2015		$28,058	$94,859
2016		$162,536	$80,872
2017		$75,599	$100,892
2018		$40,433	$99,341
2019		$14,935	$91,630
Total	**$360,380**	**$602,260**	**$953,410**

Nebraska Voluntary Cleanup Program

The Remedial Action Plan Monitoring Act (RAPMA), initially created in 1995, established the Nebraska Voluntary Cleanup Program (VCP). The Voluntary Cleanup Program provides property owners and parties responsible for contamination with a mechanism for developing voluntary environmental cleanup plans that are reviewed and approved by NDEQ. The voluntary cleanup program provides an avenue for businesses to proceed with cleanup of property and an opportunity for regulatory review and oversight that may not be available at the federal level. In addition, the program serves as an alternative cleanup program to the more traditional federal cleanup programs like Superfund or RCRA.

NDEQ has a Memorandum of Agreement with EPA Region 7, which provides federal approval of voluntary cleanup programs. Under this agreement, any site that joins the voluntary cleanup program and successfully completes the cleanup action is assured that EPA will not pursue federal enforcement under CERCLA.

To date, 58 sites have entered the voluntary cleanup program. Currently, 20 sites are active in the voluntary cleanup program. Two sites have been referred to the EPA Superfund program. Six sites withdrew from the program. Five sites have been terminated from the program due to lack of activity in completing the investigation and/or cleanup. Twenty-five sites have successfully completed cleanup requirements and have received "No Further Action" letters from NDEQ.

NDEQ continues to have significant interest from applicants enrolling properties or sites into the voluntary cleanup program. A new applicant includes the Former Farmland Industries UAN Terminal in Doniphan. Investigation activities are ongoing at the J.A. Woollam, Co. site in Lincoln, the Former Citizens Gas FMGP (former manufactured gas plant) site in McCook, the International Sensor Systems, Inc. site in Aurora, and the former Bladen, Bradshaw, Eustis and York USDA grain bin sites. Cleanup activities are ongoing at the Archer Daniels Midland facility in Lincoln, the Beatrice FMGP site, the Dettmer Lease property in Auburn, Hoover Manufacturing in Beatrice, the Lynch Park FMGP site in Omaha, the former Nebraska Solvents Company site in Grand Island, the Vishay Dale Electronics site in Norfolk, the Appleton Electric site in Columbus, and the former Murdock and Utica USDA grain bin sites. Cleanup plans were approved at the Omaha Steel Castings site in Omaha. Cleanup activities were completed at the Nebraska Machine Products site in Omaha, the

Excavation of contaminated soil impacted by coal tar waste in the below grade gas holder at the FMGP site in Beatrice.

West Haymarket Redevelopment Site South in Lincoln, and the Magnus Farley site in Fremont. Post-remediation monitoring is ongoing at the Lynch Park FMGP site in Omaha. Issuance of "No Further Action" letters are anticipated to be completed next year at the Beatrice FMGP site and the Omaha Steel Castings site in Omaha. The work completed to date on the Beatrice FMGP site is an excellent example of efficiently completing cleanup in a streamlined State program in lieu of listing the site on the Superfund National Priorities List. The City of Beatrice and Centel, the applicants conducting the cleanup at the site, are to be commended for their significant commitment to protection of human health and the environment. One site – Former Textron Turf Care and Specialty Products – withdrew from the program.

The application fee to participate in the program is $2,000, and the initial deposit to pay for state oversight costs is $3,000.

Voluntary Cleanup Program Sites and Status			
KN Energy	Holdrege	4/3/95	Completed 5/01/97
Garvey Elevator	Hastings-West	4/13/95	Deferred to EPA Superfund
ASARCO	Omaha-Riverfront	1/8/96	Completed 10/11/01
BNSFRR	Lincoln-N. Havelock	1/17/96	Terminated 12/4/06
Union Pacific RR	Omaha-N. Downtown	1/17/96	Withdrawn 3/7/03
Farmland Industries	Scottsbluff	2/26/96	Completed 7/2/09
Lincoln Journal Star	Lincoln-Downtown	2/26/97	Terminated 1/28/09
Farmland Industries	Hastings-East	6/25/97	Completed 9/2/03
Hastings Area wide	Hastings	12/17/97	Withdrawn 6/23/00
Lincoln Plating Co.	Lincoln	8/17/98	Completed 7/26/12
Witco Corporation	Omaha-North	1/20/99	Completed 6/29/99
BNSFRR	Lincoln-Lot 9 Havelock	4/28/99	Completed 2/20/01
Dana Corporation	Hastings-West	9/27/99	Deferred to EPA Superfund
Ballpark Complex	Lincoln-Haymarket	11/9/99	Completed 9/1/06
Progress Rail Services	Sidney-North	11/22/99	Completed 1/3/06
Brownie Manufacturing	Waverly-Highway 6	4/25/00	Withdrawn 7/19/01
BNSFRR	Lincoln-Havelock Yards	10/26/00	Terminated 12/4/06
New Holland	Grand Island-Southwest	11/9/00	Active
Owen Parkway East	Omaha-Abbott Drive	12/13/00	Withdrawn 11/26/02
Omaha Riverfront Redevelopment	Omaha-Riverfront - 3 sites	5/18/01	Completed 6/18/03, 12/9/03, 11/9/04
Sanford & Son	Lincoln-North	1/22/02	Terminated 4/18/07

Voluntary Cleanup Program Sites and Status			
Union Pacific RR Child Development Center	Omaha-N. Downtown	3/5/04	Completed 1/13/12
Vishay Dale Electronics	Norfolk	11/13/06	Terminated 4/20/09
Union Pacific RR Nebraska Solvent Site	Grand Island	2/23/07	Active
Archer Daniels Midland	Lincoln	11/3/08	Active
Plaza North Station LLC	Omaha	7/14/09	Completed 2/11/14
Former Pfizer Facility	Omaha	7/28/09	Completed 5/18/16
CVS Pharmacy	Lincoln	10/13/10	Completed 1/28/15
West Haymarket Redevelopment Site North	Lincoln	10/27/10	Completed 12/29/16
Izaak Walton Trap Range	Fremont	10/28/10	Completed 4/6/12
Magnolia Metal Corporation	Auburn	3/9/11	Completed 10/31/13
Dettmer Lease Property	Auburn	4/7/11	Active
Hoover Manufacturing	Beatrice	5/27/11	Active
Blair FMGP	Blair	6/28/11	Completed 4/4/16
Plattsmouth FMGP	Plattsmouth	6/28/11	Completed 4/4/16
Former USDA CCC Grain Bin Sites	Multiple Sites (Bladen, Bradshaw, Eustis, Murdock, Utica, York)	3/16/12	Active – 6 sites
Vishay Dale Electronics	Norfolk	4/2/12	Active
Lewis and Clark Landing	Omaha	4/20/12	Completed 12/29/16
West Haymarket Redevelopment Site South	Lincoln	6/11/12	Completed 9/18/18
Quality Analytical Services	Omaha	8/2/12	Withdrawn 6/3/14
Nebraska Machine Products	Omaha	9/18/12	Completed 3/26/18
Lynch Park FMGP	Omaha	11/20/12	Active
Appleton Electric	Columbus	3/1/13	Active
Magnus Farley	Fremont	8/14/14	Completed 8/28/18
Beatrice FMGP	Beatrice	11/17/15	Active
Omaha Steel Castings	Omaha	4/26/16	Active

Voluntary Cleanup Program Sites and Status			
Former Textron Turf Care and Specialty Products	Lincoln	10/26/16	Withdrawn 6/11/19
International Sensor Systems, Inc.	Aurora	3/2/17	Active
J.A. Woollam Co., Inc.	Lincoln	2/26/18	Active
Former Citizens Gas FMGP	McCook	6/4/18	Active
Former Farmland Industries Doniphan UAN Terminal	Doniphan	10/9/2018	Active

Brownfields Assessments and Cleanups — A Brownfields site is a vacant or under-used industrial or commercial property where expansion or redevelopment is complicated by unresolved contamination concerns. The Section 128(a) Brownfields Program performs assessments and cleanups at Brownfield sites in Nebraska. These assessments and cleanups are performed by NDEQ, typically with federal funds, at no cost to interested parties in Nebraska communities. A Brownfields assessment is a preliminary investigation to evaluate the environmental conditions at a property, similar to a Phase I and Phase II Environmental Site Assessment. The Brownfields assessment can also include surveys of existing building structures on the property for the presence of lead-based paint or asbestos. Cleanups consist of asbestos abatement and can also involve a variety of measures that are implemented to contain and reduce contamination at a site. During the past year, NDEQ has performed eight Phase I assessments, six Phase II assessments, seven asbestos surveys, and four lead-based paint surveys. NDEQ received two applications this year for partial cleanup assistance for removal of asbestos prior to building renovation or demolition.

NDEQ used Section 128(a) Brownfields funding to complete a Phase I and Phase II Environmental Site Assessment and an Asbestos-containing Materials (ACM) Survey at the former fire hall building in the Village of Walthill. After the assessments were completed, additional funding was used to assist the village in properly removing and disposing of all ACM identified in the building. Having all of the environmental hurdles and uncertainties resolved allowed the small village to move forward and raise money for their new public library project.

Brownfields Program Enhancement and Public Outreach — Program enhancement and public outreach are key components that serve to educate the public on what a brownfield is and promote how our program can be used by communities for economic development. Workshops are arranged with a goal to increase knowledge and understanding of the environmental stigma attached to brownfield properties and how our resources can serve as a catalyst to bring these properties back to productive reuse. These workshops serve to connect stakeholders of Nebraska communities with resource providers and consist of presentations from a variety of people that play an important role in economic development.

NDEQ's Brownfields Coordinator, Taryn Serwatowski, speaks with the Executive Director of Main Street Beatrice (a local non-profit organization) during a Resource Providers Information Session in Beatrice. Photo courtesy of the Beatrice Daily Sun.

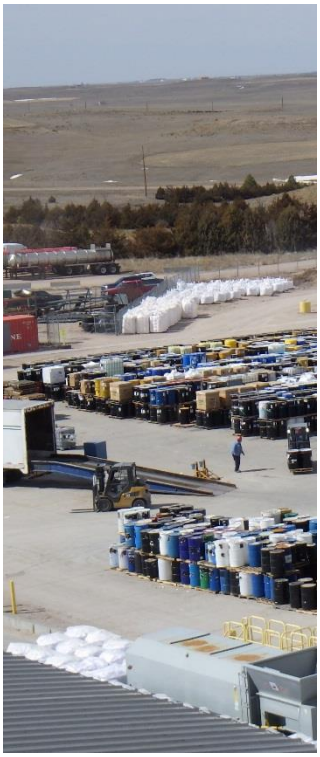
In the past year, NDEQ organized and held workshops in Scottsbluff and Wood River. The Brownfields Coordinator was invited to speak at the Mayor of Lincoln's Environmental Task Force Round Table meeting and presented at the Nebraska Economic Developers Association Conference in Wayne. In addition to NDEQ workshops and speaking engagements, conferences and training events provide a great opportunity to network and gain knowledge that can help enhance the program. The Brownfields Coordinator attended and participated in a Resource Providers Information Session at Southeast Community College in Beatrice; the EPA Region 7 and 8 Tribal Response Program Workshop in Omaha; the Connecting Entrepreneurial Communities Conference in Beatrice; and sponsored an informational booth at the Nebraska Planners Conference in Kearney. The Coordinator is a member of the NDEQ-NPPD Partnership and was actively involved in one partnership meeting and attended the annual NPPD Power Summit. The Coordinator is also the Region 7 representative for the ASTSWMO Brownfields Focus Group and actively participates in monthly conference calls, creating educational materials to share with the public, and organizing national meetings and symposiums. Specific activities for this year included working on the ASTSWMO Sec 128(a) Research Tool project, planning and moderating a session on Brownfields Pioneers at the ASTSWMO joint Superfund/Brownfields Symposium in Jacksonville, FL, and attending and participating in the ASTSWMO Mid-year Meeting in New Brunswick, NJ.

Other program enhancement activities included completing the updated Voluntary Cleanup Program Guidance Document, an internal Institutional Control Guidance Document for conducting audits at sites that have institutional control in place, and creation of new poster boards for future informational booths and sessions. Ongoing activities include developing a new guidance document on management strategies for addressing free product at cleanup sites, drafting a fact sheet for the public that will provide information on next steps for property redevelopment after completing a Phase II Environmental Site Assessment, and creating new banners, pamphlets, and other outreach materials.

Resource Conservation and Recovery Act (RCRA) Program

NDEQ was authorized in 1985 by EPA to administer portions of the Resource Conservation and Recovery Act (RCRA) program. RCRA regulations are incorporated in NDEQ Title 128 - Nebraska Hazardous Waste Regulations, which is updated as the Federal RCRA regulations change.

The purpose of the RCRA program is to ensure proper management of hazardous wastes from the point of generation until final disposal. Activities performed under the RCRA program include:



- helping hazardous waste generators maintain compliance through a Compliance Assistance Program,
- performing compliance inspections and enforcement actions,
- investigating complaints,
- reviewing groundwater contamination monitoring and remediation systems,
- reviewing permit applications and determining whether permits should be issued for proposed treatment, storage, and disposal (TSD) facilities,
- reviewing/approving closure and post-closure plans for hazardous waste storage areas and disposal sites,
- permitting and regulating through the RCRA Corrective Action program, the clean-up of hazardous waste that has been released to the environment,
- maintaining data systems to support decision-making and making information available to the public.

The Compliance Assistance Program helps Nebraska businesses, governmental entities, and private citizens comply with hazardous and solid waste regulations in a non-enforcement mode. This program works with the regulated community in a partnership promoting hazardous waste minimization and pollution prevention to help waste generators actually reduce the amount of hazardous waste being generated in the state. An additional product of these efforts is to ultimately reduce the amount of regulatory requirements on our industries by helping to bring hazardous waste generators into lower RCRA threshold levels.

Compliance and enforcement activities include investigating complaints and the inspection of hazardous waste generators and transporters, hazardous waste treatment, storage and disposal facilities, and used oil marketers and burners. Other compliance and enforcement activities include conducting comprehensive groundwater monitoring evaluations, and operation and maintenance inspections of sampling and analysis procedures at RCRA sites to ensure that useful and representative data is being collected.

The RCRA program also conducts extensive permitting and closure activities to minimize and prevent the release of hazardous material into the environment. Closure actions are required for treatment, storage or disposal facilities that are discontinuing operations or that have operated without a permit. Permits are required for operating treatment storage and disposal facilities. Post-closure

permits are required for treatment storage and disposal facilities that have gone through closure and have remaining contamination.

There is one operating hazardous waste storage and treatment facility in Nebraska: the Clean Harbors Environmental Services, Inc. incinerator near Kimball. This facility has undergone annual performance test burns to demonstrate proper operation since hazardous waste treatment began in 1994. Operational and physical changes at the Clean Harbors incinerator, made to improve the performance of the facility and ensure compliance with applicable regulations, have resulted in numerous permit modifications. In addition, Nebraska oversees two active hazardous waste storage facilities which do not treat hazardous waste.

Corrective action is an important part of the RCRA program and addresses past and present activities at RCRA facilities that resulted in hazardous waste and hazardous constituents being released into soil, groundwater, surface water, and air. Corrective action requires investigation and remediation of the release of hazardous constituents from regulated facilities. These regulations make current and former owners of a property responsible for past mismanagement of hazardous waste. NDEQ has administered the RCRA Corrective Action Program since January of 2017. Significant corrective action accomplishments during FY2019 include:

- Completed interim soil cleanup work and remedial investigation at Loveland Products, Inc.
- Completed remedial investigation at Snyder Industries.
- Reached agreement with Tenneco to complete site investigation and remedy selection under the RCRA FIRST, a process improvement initiative.
- Completed institutional control audits, which are equivalent to EPA's long term stewardship (LTS) inspections, at two facilities.

EPA developed an e-manifest module that is part of the national RCRAInfo database. Nebraska sees the new e-manifest system as providing an efficient way for tracking the shipment of hazardous waste in an electronic process. It provides a notification system so that those in the chain (generator, transporter and disposal facility) can see and manage the movement of wastes, as well as for States and EPA to lessen the time spent reviewing paper manifests. The reduction in the use of paper as the system is implemented will ultimately reduce costs and this provides multiple benefits including less chance to lose copies, less solid waste and a reduction in the need to have storage space for all that paper. The public also will benefit as it will be able to have a clearer understanding of wastes generated and disposed and the process it followed to disposal. The Land Management Division conducted three public training sessions on the new e-manifest system.

Also developed by EPA is the myRCRAID module, also within the national RCRAInfo database. Nebraska has opted in to allow the facility hazardous waste managers to request permission to prepare their 8700-12 Hazardous Waste notification form electronically. We currently have 381 facilities that

have requested and received permission to file electronically. NDEQ approves the requests electronically saving NDEQ and the hazardous waste facilities time, which equates to money saved.

As a process improvement plan, the RCRA Section has been emailing confirmations to 8700-12 Hazardous Waste notification changes and to contingency plan submittals. In the past, a formal letter was prepared and mailed certified for each request. To date we have saved around $4,700 in postage alone. Additional savings are in time and supplies used.

Program Funding

Funding for RCRA program activities is provided by an EPA grant, which requires a 25% state match.

Additionally, the Department can charge proposed commercial hazardous waste management facilities a fee to cover expenses for facility siting committee activities. One new hazardous waste treatment facility was proposed in 2017. The facility, near Alda, has completed the siting committee activities but has yet to submit a RCRA permit application.

The RCRA program collects a yearly fee from commercial hazardous waste treatment and disposal facilities. Currently, one facility in Nebraska performs hazardous waste treatment and disposal. The fees are based on the total yearly volume or weight of hazardous waste treated or disposed. Fees are due March 1, and are remitted to the state general fund.

Currently, the RCRA Program oversees the following active sites:

82 Large Quantity Generators (greater than 2200 pounds of hazardous waste generated per month)

316 Small Quantity Generators (between 220 and 2200 pounds generated per month)

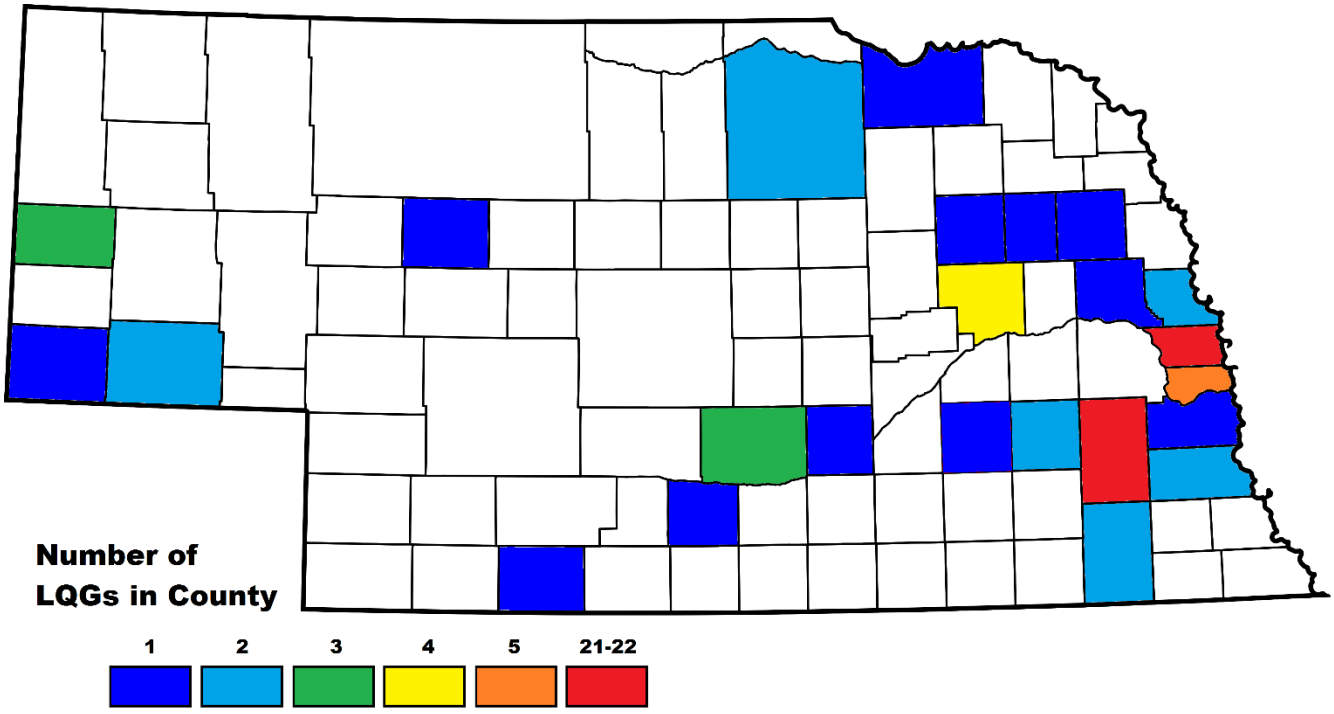
948 Conditionally Exempt Small Quantity Generators (less than 220 pounds generated per month)

1 Hazardous Waste Incinerator Facility

3 Treatment, Storage or Disposal Facilities

18 Hazardous Waste Transporters

Location by County of Large Quantity Generators in Nebraska Regulated Under RCRA			
Buffalo 3	Gage 2	Lancaster 22	Sarpy 5
Cass 1	Hall 1	Madison 1	Scotts Bluff 3
Cuming 1	Hooker 1	Otoe 2	Seward 2
Cheyenne 2	Holt 2	Phelps 1	Stanton 1
Dodge 1	Kimball 1	Platte 4	Washington 2
Douglas 21	Knox 1	Red Willow 1	York 1

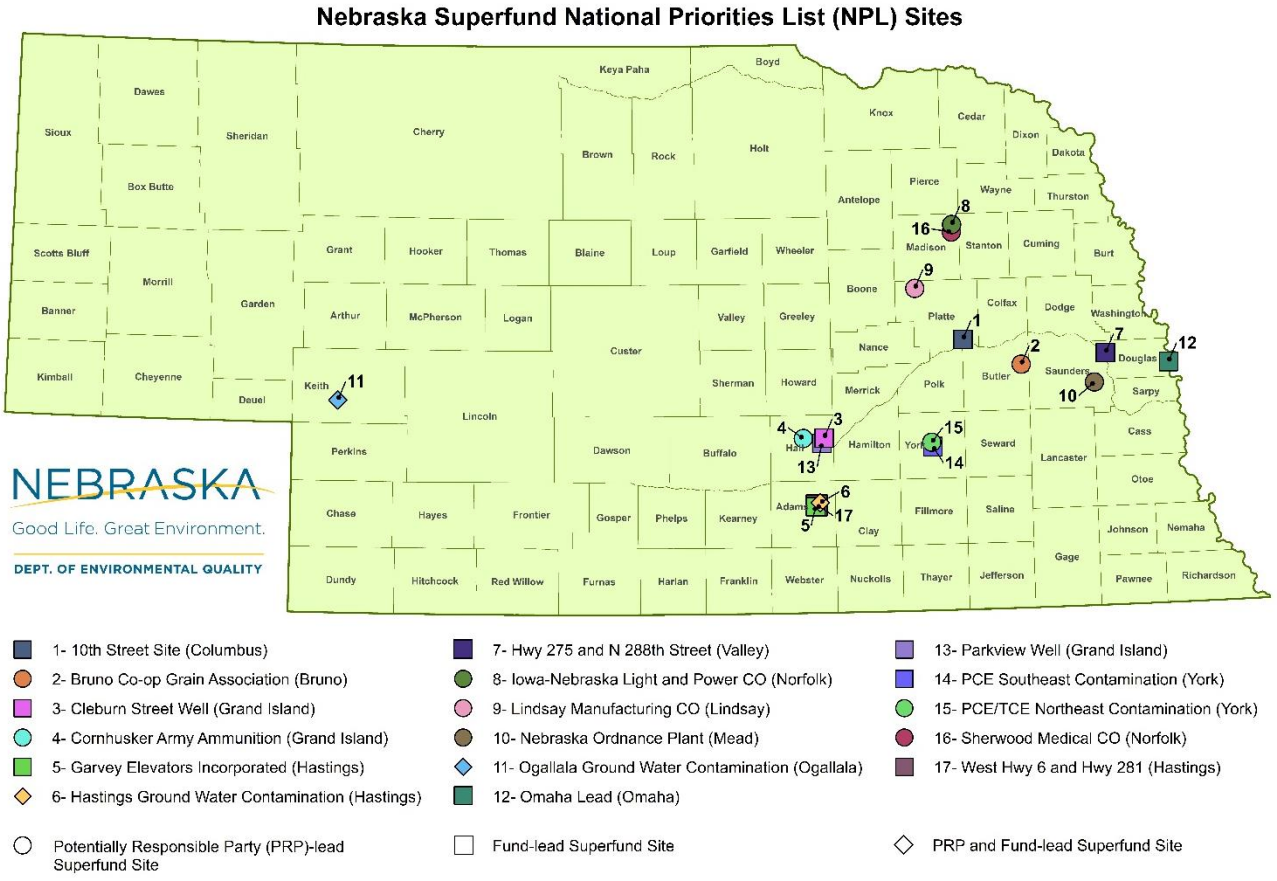


Summary of FY2019 Activities		
Compliance Assistance	**State**	**EPA**
On-site Visits	2	*
Direct Assistance Contacts	723	*
Public Outreach Presentations (total 325 in attendance)	7	*
RCRA Inspections		
Land Treatment Facilities	0	0
Treatment, Disposal and Storage Facilities	0	1
Comprehensive Groundwater Monitoring Evaluations	0	0
Operation and Maintenance Inspections	0	0
Facility Self-Disclosure	0	0
Large Quantity Generator	6	1
Small Quantity Generator	9	4
Conditionally Exempt Small Quantity Generators	6	1
Transporters	0	0
RCRA Permitting		
Closure Plans Finalized	1	0
Permits Issued/Renewed	0	0
Modifications	4	0
EPA Corrective Action Orders	1	0
RCRA Record Reviews		
Financial Assurance Closure/Post Closure	27	0
Corrective Action	2	0

***** *Data not available*

Superfund Program

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) became federal law in 1980. CERCLA established what has commonly become known as Superfund to deal with known or suspected contamination at inactive commercial/industrial/military facilities or so-called "uncontrolled hazardous waste or abandoned sites." The nation's most contaminated sites are listed on the Superfund National Priorities List. Nebraska has 17 active National Priorities List sites. One site, the Waverly Groundwater Contamination Site, was removed from the National Priorities List on November 20, 2006 as the cleanup goals for the site have been achieved. Thirteen of the sites are in the cleanup phase and four sites (York PCE/TCE Northeast Contamination site, York PCE Southeast Contamination site, Iowa-Nebraska Light and Power Co. site in Norfolk, and the Old Highway 275 and North 288th Street site in Valley) are relatively new to the National Priorities List and are in the site study stage.



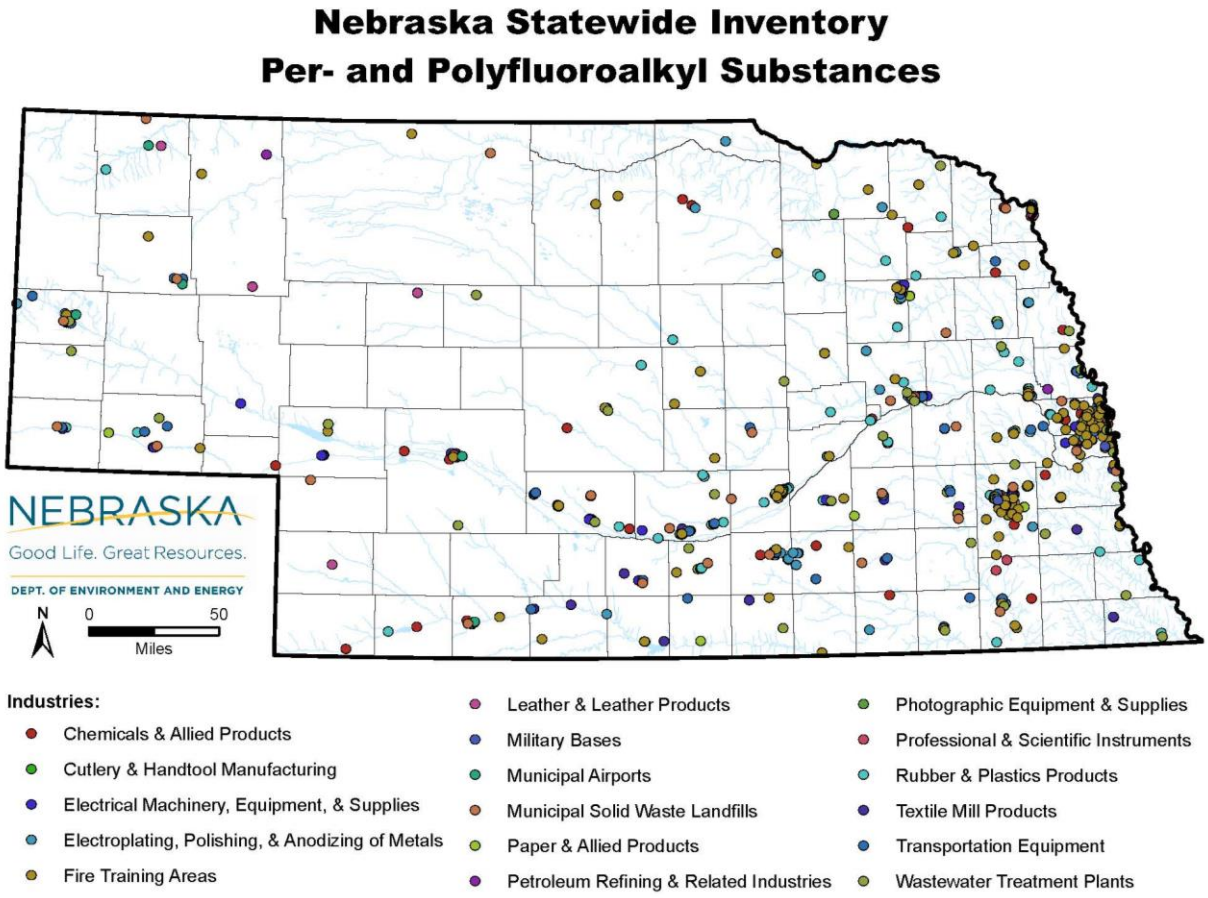
Numerous other non-National Priorities List sites with known or suspected releases of hazardous substances exist in the state, but are not being addressed through the federal Superfund process.

The investigation and remediation of contaminated sites under CERCLA are the primary responsibility of the EPA and other federal agencies. NDEQ participates in the Superfund process by serving as a technical support agency to the EPA and as the environmental representative for the State of Nebraska. Activities in the Superfund Program include:

Site Assessment — The Superfund Site Assessment program identifies, assesses and characterizes sites where hazardous substances are known or suspected to pose a threat to public health and/or the environment. Currently, the sites investigated in Nebraska consist primarily of areas where groundwater contamination has been detected in municipal and private drinking water supply wells or where there is a significant potential for groundwater contamination.

The first site assessment step is called a pre-screening assessment. This step is a review of existing information on a potential site to determine whether a release has occurred that should be evaluated further through the Superfund process. The next site assessment step is called an abbreviated preliminary assessment. This step involves the collection of background information such as property ownership, operational history and geology/hydrogeology, and performing a site reconnaissance. The third step is called a site investigation, which involves sampling environmental media, such as soil, soil gas and groundwater, and evaluating vapor intrusion into indoor air of building structures. In some situations, the preliminary assessment step and the site investigation step are combined. For large and/or complex sites, an expanded site investigation may also be performed to collect additional soil and groundwater samples to further define the extent of contamination. In addition, some sites that have been investigated in the past may be reassessed if new information is obtained that indicates that a threat to public health and/or the environment may exist.

During the past year, NDEQ has performed work on seven pre-screening assessments, one abbreviated preliminary assessments, two site investigations, one expanded site investigation, and one site reassessment. Based on NDEQ's 2017 Statewide Inventory of per- and polyfluoroalkyl substances (PFAS), such as perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), which are



considered emerging contaminants that can have adverse health effects if found in drinking water supplies, three of the pre-screening assessments consisted of sampling private wells for PFAS compounds. Results of this sampling did not show PFAS compounds above levels of concern. Two of the three PFAS private well sampling projects were conducted at the Grand Island and Kearney municipal airports. Airports commonly use firefighting foams for fire suppression which contains PFAS. NDEQ also initiated pre-screening assessments at municipal airports in Alliance, North Platte and Scottsbluff and has plans for future pre-screening assessments at municipal airports in Chadron, Lincoln, McCook and Omaha. NDEQ has coordinated with the Nebraska Department of Transportation – Aeronautics Division on the PFAS sampling at municipal airports related to the historical use of firefighting foam and to assist with communication and outreach to the airports on NDEQ sampling activities. NDEQ has also formed an internal PFAS Coordination Team consisting of various regulatory programs within the Agency to communicate and share information on PFAS activities occurring in the State and at a national level.

NDEQ also requested federal assistance from the EPA Region 7 Superfund Removal program to install vapor mitigation systems at several commercial properties near a former dry cleaner in Holdrege where a release of tetrachlorethylene (PCE), which was commonly used in the dry *cleaning* industry, was found

What is Vapor Intrusion?

Photo courtesy of the Minnesota Pollution Control Agency

Volatile organic compounds, or VOCs, are a class of chemicals that are volatile (evaporate easily) and form a vapor in the air. Vapor intrusion is a way that these volatile chemicals in soil and groundwater near and under buildings can enter and build up inside the buildings, similar to how radon can enter a home. Common uses of VOCs included dry cleaning, treatment of stored grain, and industrial operations. Breathing in certain VOCs at elevated levels can cause adverse health effects based on overall age and health, the length of exposure, and the type of chemical.

Pictured right: An installed vapor mitigation system at a residence; view is of the installed fan (top) and protective cover (bottom).

in soil and groundwater at the site. The vapor mitigation systems are being installed due to unacceptable levels of PCE) in the indoor air of building structures. Vapor mitigation systems are similar to radon control systems where the system captures and redirects the vapor from below the building foundation before it enters the indoor air.

The former B&T Metals site in Gering was also referred to the EPA Region 7 Superfund Removal program. The City of Gering utilized an EPA Brownfields Assessment Grant to characterize the extent of soil and groundwater contamination at the site with the intent to purchase and redevelop the property. Based on the results of the characterization, significant levels of lead contamination in soil were found that would require cleanup. Neither the current property owner nor the City of Gering had the resources to perform the cleanup so the site was referred to the EPA Region 7 Superfund Removal program.

NDEQ also reviewed numerous site assessments conducted by EPA in the state and provided recommendations on the need for follow-up action.

Metal scrap and debris at the B&T Metals site in Gering.

NPL Site Management Assistance — The Superfund Management Assistance program provides management and technical support to the EPA at Superfund National Priorities List sites in Nebraska. This assistance includes reviewing technical documents and participating in the Superfund remedy selection process. As the most heavily contaminated sites in the nation, National Priority List sites are generally large and complex, because they often involve more than one contaminated media and have multiple sub-units with varying contaminants. The investigation and cleanup activities at these sites are organized into several phases, including remedial investigations, groundwater modeling, baseline risk assessments, feasibility studies/engineering cost evaluations, field-scale pilot studies, remedy design/construction, and remedy operation and maintenance. NDEQ also participates in public meetings with citizens and local officials in the development of cleanup plans.

The Superfund law seeks to identify those responsible for contamination to pay for the cleanup. If it is not possible to identify the responsible party, or if the responsible party is insolvent, cleanup is paid for by a combination of Federal and State funds. Of the 17 active sites on the National Priorities List, seven are being addressed by the responsible party and eight are being addressed as fund lead by Superfund dollars, and two are being addressed as both responsible party and fund lead. For fund lead sites, the State of Nebraska enters into contracts with EPA and agrees to pay 10% of the capital costs of constructing the cleanup system, 10% of initial startup operation costs, and 10% of on-going operation and maintenance costs for the first 10 years of the project. After the initial 10 years, the State pays 100% of the operation and maintenance costs. Initially, NDEQ funded these costs with Legislative appropriations of general funds. During 2004-2007, NDEQ received Nebraska Environmental Trust grant funding to pay these costs. Beginning in FY18, NDEQ was authorized to fund these costs through a transfer of up to $1.5 million from the Petroleum Release Remedial Action Cash Fund into the Superfund Cost Share Cash fund. For FY19, a total of $1,030,454 was transferred to pay for these costs. Future projections of these costs range from approximately $1,115,000 in FY20, $1,172,000 in FY21 and $2,218,000 in FY22.

During the last two years, the State has paid 10% of the costs for the capital construction and operation and maintenance costs for the in-situ thermal source control remedy at the Cleburn Street site in Grand Island. In-situ thermal treatment utilizes heat to vaporize and remove chemicals in soil and groundwater. This site is the first use of an in-situ thermal remedy in the State and was successfully completed this year. NDEQ believes this remedy will save the State a significant amount of future operation and maintenance costs to achieve the cleanup goals for the site.

What is In Situ Thermal Treatment?

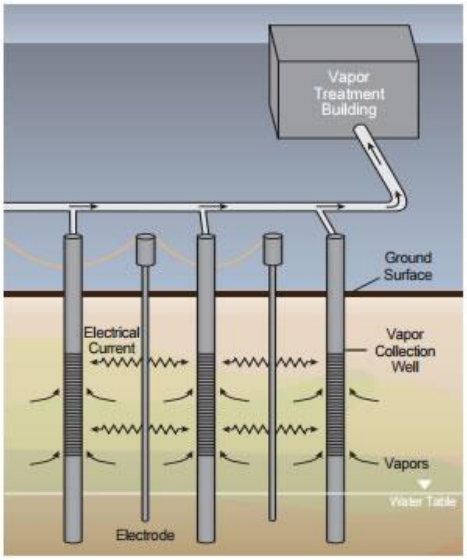


Photo courtesy of the EPA

In-situ thermal treatment uses heat to mobilize chemicals in soil and groundwater. Some chemicals are destroyed underground by the heating process. The remaining chemicals will move toward wells, where they are collected and treated aboveground using other methods.

Pictured right: Photos of the in-situ thermal remedy at the Cleburn Street site in Grand Island. During the remedial action, part of the thermal system was installed beneath Eddy Street (top). The installation included electrode wells, temperature wells, extraction wells, and monitoring wells. Heat is generated by the passage of electrical currents between the electrodes (bottom).

The State began paying 100% of the operation and maintenance costs for the 10th Street Site in Columbus in January, 2016, the Ogallala Groundwater Contamination Site in December 2016, and the Hastings Second Street subsite of the Hastings Groundwater Contamination Site in June, 2017. For the Columbus 10th Street site, NDEQ has entered into an Intergovernmental Agreement with the City of Columbus for City personnel to operate and maintain the groundwater extraction and treatment system and beneficially reuse the treated water for City of Columbus drinking water. NDEQ's annual costs under this agreement have decreased from approximately $195,000 to $135,000 under the new two year agreement beginning July 1, 2019.

What is Groundwater Extraction and Treatment?

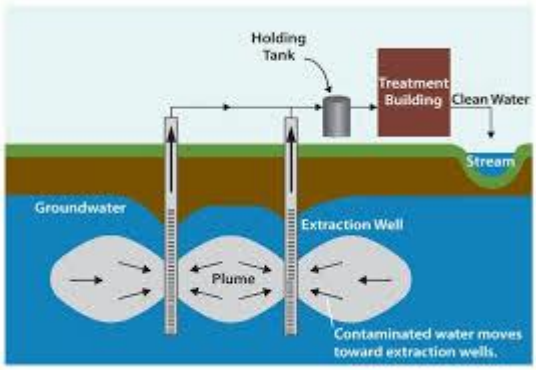


Photo courtesy of the EPA

Groundwater extraction and treatment uses extraction wells to pump groundwater to an aboveground treatment system. Once treated water meets regulated standards, it is discharged for disposal or further use.

Pictured right: The remedy at the Columbus 10th Street site includes a groundwater *extraction and treatment system. Treated groundwater is then either beneficially reused as a municipal drinking water supply, or discharged to the Loup River.*

Below is a list of the 17 active National Priorities List sites. Below each name is an EPA web address that provides more detailed information about the site.

Active National Priorities List Sites in Nebraska
Cornhusker Army Ammo Plant (Grand Island) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0702020
Hastings Groundwater Contamination (Hastings) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0701973
Lindsay Manufacturing Co. (Lindsay) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0701913
Nebraska Ordnance Plant (Mead) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0702031

10th Street Site (Columbus) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0702001
Cleburn Street (Grand Island) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0701986
Ogallala Groundwater Contamination Site (Ogallala) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0702287
Bruno Coop Association (Bruno) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0702000
Sherwood Medical (Norfolk) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0702086
Omaha Lead Site (Omaha) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0703481
Parkview Well Site (Grand Island) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0704456
Garvey Elevator (Hastings) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0704351
West Highway 6 & 281 (Hastings) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0704738
York PCE/TCE Northeast Contamination https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0706105&msspp=med
York PCE Southeast Contamination https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0706200&msspp=med
Iowa-Nebraska Light and Power Co. (Norfolk) https://cumulis.epa.gov/supercpad/CurSites/csitinfo.cfm?id=0702377&msspp=med
Old Highway 275 and North 288th Street (Valley) https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0704272&msspp=med

During the spring 2019 bomb cyclone and subsequent flooding disaster, many rivers in the state were at record flood stage levels. In response to this flooding, NDEQ evaluated the above Superfund NPL sites for flood inundation that could potentially impact the constructed cleanup systems, mobilize contaminated groundwater, and increase potential human exposure pathways. Flood inundation maps were overlain with the locations of the NPL sites to evaluate these potential impacts. Two pathways for potential human exposure could occur from the flood inundation: (1) the intrusion of contaminated groundwater into area structures, causing a direct contact or inhalation risk; and (2) the potential mobilization of contaminated groundwater, causing impacts to public and private drinking water wells.

Only one site, the Old Highway 275 and North 288th Street site in Valley appeared to have been inundated by flood waters. EPA Region 7 Superfund Program personnel conducted indoor air sampling at several residential structures impacted by flood waters and did not detect contaminants exceeding health-based levels. Although not inundated by flood waters, the constructed groundwater extraction

and treatment system at the former Nebraska Ordnance site in Mead was shut down for three days to mitigate the contribution of treated groundwater discharged to overflowing nearby creeks. Other sites were impacted by standing water as a result of precipitation and snow melt, or had impacts to access roads and highways to the sites. Long-term evaluation of groundwater monitoring data will need to be performed to evaluate any potential mobilization of contaminated groundwater from the flooding event.

Federal Facilities — The Superfund Federal Facilities program provides technical assistance and regulatory oversight to the U.S. Army Corps of Engineers in support of site assessment and cleanup activities and military munitions response activities at Department of Defense active facilities and formerly used sites. Active Federal installations include the Lincoln Air National Guard Base in Lincoln, Offutt Air Force Base in Bellevue and Cornhusker Army Ammunition Plant in Grand Island. One hundred known formerly-used defense sites exist in Nebraska that include small former defensive surface-to-air missile sites, bomber target sites, radar and communications sites and other formerly occupied Department of Defense properties. Under the current Defense-State Memorandum of Agreement, investigation and cleanup activities are being performed or planned to be performed at three active sites and 12 formerly used defense sites. Military munitions response activities are being performed at five sites. A military munitions response site is a site that may have the potential for unexploded ordnance, discarded military munitions, or munitions constituents in soil and groundwater that may pose an explosive hazard or threat to the environment.

During the last year, PFAS sampling was conducted at both the Lincoln Air National Guard Base and Offutt Air Force Base. Significant levels of PFAS compounds were detected in soil, groundwater, surface water and sediment at both sites. NDEQ requested that the Air Force conduct private drinking water well sampling near the bases to determine any impacts to drinking water.

For the Lincoln Air National Guard Base, the Air Force declined to perform this sampling as they did not believe any wells were at risk of contamination. NDEQ, in coordination with the Lincoln-Lancaster County Health Department conducted sampling of eighteen private wells in the area, as well as surface water and sediment samples from Oak Creek and a tributary to Oak Creek. PFAS chemicals were not detected in any of the private wells above the EPA Health Advisory Limit of 70 parts per trillion for PFOA/PFOS. PFAS chemicals were detected in the surface water and sediment samples, however, there are no regulatory standards for comparison at this time. Future site investigation to further characterize the extent of PFAS contamination at this site will be conducted by the Air Force, however, this site will be a low priority nationally for the Air Force as there are no threats or impacts to any public or private drinking water supplies.

NDEQ's contractor collects a sediment sample from Oak Creek (west of I-80 in Lincoln) for the analysis of PFAS.

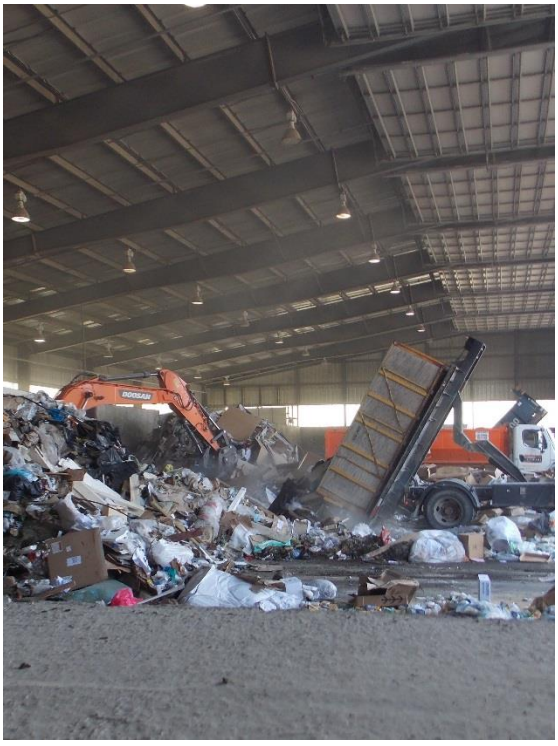
The Air Force has committed to conducting private well sampling at Offutt Air Force Base and will prioritize this site as a higher priority site for further site investigation. As a result of the ongoing flooding along the Missouri River, the residences with private wells are currently uninhabitable and do not have any power to the residence. The Air Force has committed to performing the private well sampling as soon as the residences are inhabited and power is restored.

Solid Waste Program

Solid Waste regulations are incorporated in NDEQ *Title 132 - Integrated Solid Waste Management Regulations.* The purpose of the program is to ensure proper management of solid waste. Solid waste includes municipal solid waste typically collected and disposed in municipal landfills, and other non-hazardous waste. The regulations provide technical criteria for land disposal areas and solid waste processing facilities.

Duties assigned to this program include:

1. Permit issuance, renewal and modification;
2. Response to inquiries related to facility operations;
3. Compliance inspections and enforcement actions;
4. Investigation of citizen complaints;
5. Alternate waste management method approvals;
6. Groundwater investigations and groundwater/soil remediation projects for permitted and non-permitted facilities;
7. Gas emissions monitoring related to landfills and other permitted sites;
8. Closure inspections and monitoring of closure and post-closure activities;
9. Conducting public information sessions and hearings related to permits;
10. Financial assurance review and monitoring compliance; and
11. Assisting regulated facilities and the general public in recycling, re-use and proper management of waste-like materials.



The program regulates municipal solid waste disposal areas (landfills), construction and demolition disposal areas, fossil fuel combustion ash disposal areas, industrial and delisted hazardous waste disposal areas, and land application sites for repeated disposal or treatment of special wastes. In addition, solid waste processing facilities, such as compost sites, material recovery facilities, and transfer stations, are regulated by this program.

Permit modification requests are regularly submitted by permitted facilities. Response to the modification requests are particularly time-critical since the facility may need to expand or construct new cells in order to meet their disposal capacity needs and continue operations.

The waste management program coordinates with other NDEQ programs to ensure that permits issued include adequate protection of all environmental media. The requirements in solid waste permits include protection against excessive emissions of landfill gas to the atmosphere, storm water runoff controls and restrictions on accepting hazardous waste for disposal at a landfill.

Currently, the Solid Waste Program oversees the following facilities, by type:

Total Permitted Facilities in FY2019	
Municipal Solid Waste Disposal Areas (Landfills)	23
Solid Waste Compost Sites	8
Transfer Stations	36
Materials Recovery Facilities	4
Construction & Demolition Waste Disposal Areas	32
Delisted Waste Disposal Area	1
Processing Facility	2
Fossil Fuel Combustion Ash Disposal Areas	8
Total	114

The following table indicates the number of inspections, complaints and permitting-related activities that the program was involved with in FY2019:

Summary of FY2019 Activities	
Compliance Assistance	
Facility Inspections (General)	120
Facility Closure Inspection	1
Facility Construction Inspections	9
Facility Comprehensive Renewal Inspections	18
Complaints Received	196
Complaints Investigated	196
Complaints Closed or Referred	180
Permitting	
New Permits Issued	1
Permit Renewals	18
Major Permit Modifications	6
Public Hearings	2
Permits Transferred	1
Financial Assurance Reviews	174
Facilities Closed	1

Assessment Monitoring and Remedial Measures

All solid waste disposal areas (facilities) accepting municipal solid waste, industrial waste, delisted hazardous waste and fossil fuel combustion ash are required to conduct groundwater monitoring. The purpose of the groundwater monitoring is to detect any release of contaminants from the facility that may impact groundwater quality. A phased approach is used from the initial detection of a potential release to making decisions on cleanup actions after groundwater contamination has been fully investigated.

The first phase is detection monitoring. During this phase, a facility will monitor for a discrete number of contaminants that would be indicative of a potential release from the facility. If one or more of the parameters being monitored exceed background levels, the facility then begins assessment monitoring. During assessment monitoring, the facility will monitor for a more extensive list of contaminants. During FY2019, 16 operating facilities (11 landfills and 5 coal ash disposal areas) and 3 closed landfills conducted assessment monitoring.

If during the assessment monitoring phase, contaminant concentrations are detected above a groundwater protection standard, the landfill may then be required to characterize the nature and extent of the release and if necessary assess and conduct remedial measures. In FY 2019 remedial measures continued at two active and one closed landfills.

Title 118 Groundwater Investigations and Remedial Actions

Several municipal solid waste disposal areas that closed prior to 1993 have conducted groundwater investigations and remedial actions pursuant to NDEQ *Title 118 – Groundwater Quality Standards and Use Classification*. In FY2019, groundwater investigations continued at two sites, and remedial actions continued at eight sites.

Financial Assurance and Fees

All permitted solid waste landfills are required to provide financial assurance for closure and post-closure maintenance and monitoring. All privately owned permitted solid waste processing facilities are required to provide financial assurance for closure.

Program Funding

The Waste Management Section collects permit fees and annual operating fees for all solid waste management facilities. Quarterly disposal fees based on cubic yards or tonnage are collected from all

municipal solid waste landfills as well as transfer stations moving waste for disposal out of state. Fifty percent of the quarterly disposal fees are redistributed as grants and for administration of the Waste Reduction and Recycling Incentives Grants Program and fifty percent of the quarterly disposal fees are utilized for costs of administering the solid waste program and for investigation and remediation of contamination from solid waste facilities and for other statutorily authorized activities.

Waste Tire Management Program

NDEQ also administers the waste tire management program. Approved beneficial uses of waste tires are outlined in NDEQ regulations. Waste tire haulers are required to obtain individual permits annually and are required to post financial assurance. Financial assurance is designed to provide adequate funds to clean up any waste tires that are illegally disposed by the transporter.

Waste tire management facilities (except tire dealers) are allowed to accumulate up to 500 tires without further requirements, other than mosquito control and fire prevention measures. Speculative accumulation of more than 500 waste tires is prohibited.

Compliance assistance is an important aspect of this program. Program activities include responding to telephone inquiries, letters and contacts from other states, developing guidance documents, conducting site visits and providing technical advice. NDEQ has developed guidance documents to explain the proper use of waste tires for blow-out and bank stabilization. Direct financial assistance is also available through the Waste Reduction and Recycling Incentives Grant program, which is described later in this chapter.

Waste Tire Permit Totals, FY2019 Permitting	
Renewed Hauler Permits	23
New Permits Issued	1
Financial Assurance Reviews	11

The waste tire compliance assurance program includes facility inspections, complaint investigations, and appropriate enforcement actions. Compliance activities are included in the summary of activities for the Solid Waste Program.

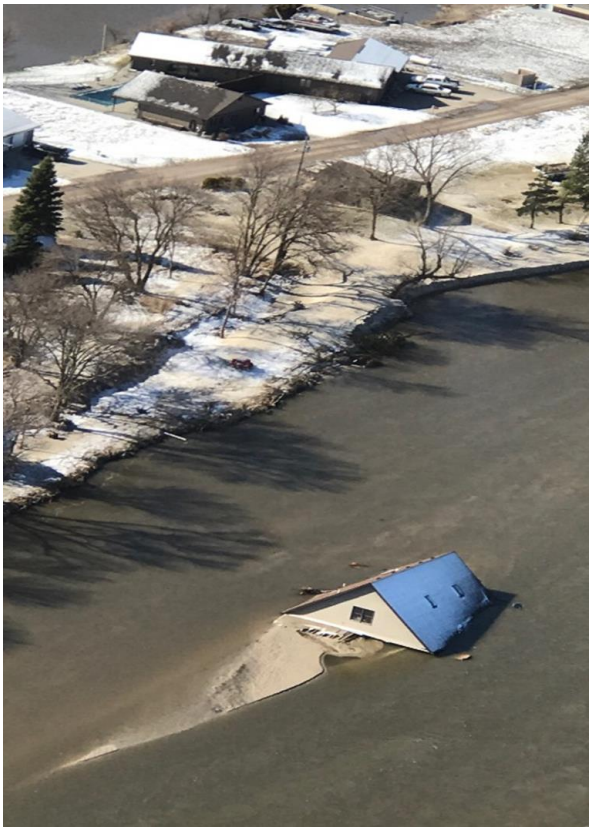
Significant Accomplishments

Significant accomplishments in the Solid Waste Program during FY2019 included the following:

- NDEQ allowed 2 coal ash disposal facilities, during their 5-year permit renewals, to revise their groundwater monitoring requirements to reflect their voluntary compliance with portions of the 2015 Coal Combustion Residuals (CCR) Rule

- NDEQ provided assistance to local emergency managers, NEMA and FEMA and local officials as part of flood response activities to the largest flooding experienced in the State. This included providing emergency managers with situation reports for activities occurring in their counties and communities and specific compliance assistance in order to help them deal with debris, sand, carcasses, orphan containers and other miscellaneous activities related to cleanup.

- NDEQ participated in numerous Nebraska Department of Agriculture and Nebraska Emergency Management activities related to the planning and preparation for Animal Disease response on the potential carcass disposal from disease.



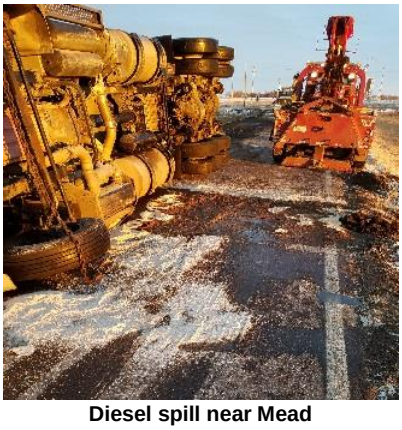
CHAPTER 6:
Water Programs

The goal of the Water Programs is to protect the surface and groundwater resources for all purposes in Nebraska. This chapter describes the programs administered by the Water Divisions, including: petroleum remediation programs, surface water and groundwater monitoring and assessment programs, water quality planning, agriculture programs, wastewater permitting and certification programs, financial assistance programs, and drinking water programs.

Petroleum Remediation Program

Activities regarding the Petroleum Remediation Program involve two interrelated areas:

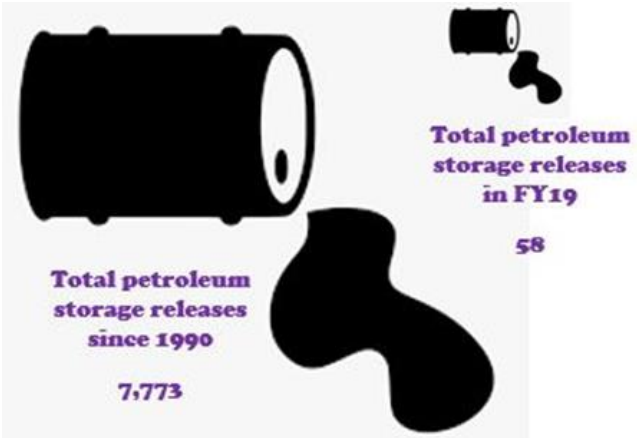
1. Overseeing the **investigation and cleanup** of petroleum contamination resulting from leaking above-ground and underground storage tanks as well as other sources such as pipeline leaks and transportation spills; and
2. Administering a **financial assistance program** for persons responsible for investigation and cleanup costs due to petroleum releases from tanks.



Diesel spill near Mead

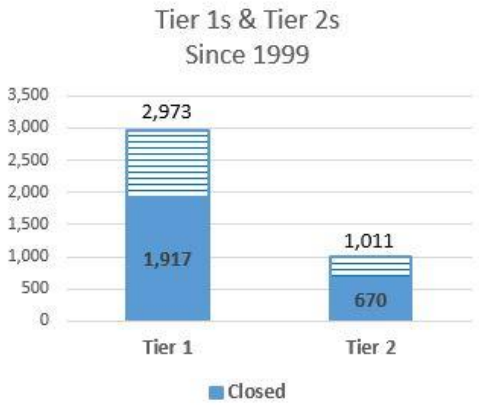
Investigation and Cleanup

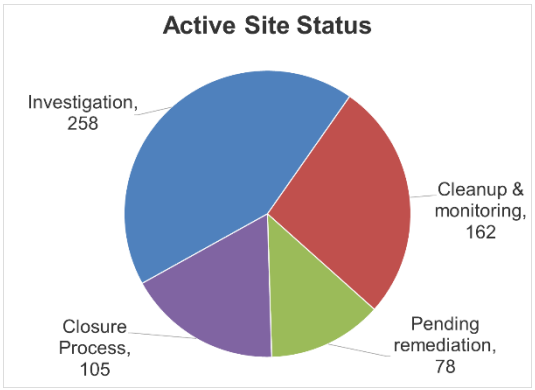
The first step in the Petroleum Remediation Program is the review of tank removal assessment reports or other documentation to determine whether contamination exists. If contamination is present, NDEE decides whether more investigation and cleanup are required. NDEE also determines whether parties who caused the contamination are available and financially capable of assuming responsibility.



In the event these reports indicate a threat to health, safety, or the environment, NDEE requires a detailed study of the affected groundwater and soil to discover the severity of the contamination, direction of groundwater flow, and potential water supplies or other points of exposure that may be impacted. Program staff review these reports to determine if cleanup is needed and issue a public notice of their decision. Staff review remedial actions throughout the project and determine when sufficient cleanup has been accomplished.

The program has incorporated Risk-Based Corrective Action (RBCA) procedures into regulations and accompanying guidance. The RBCA process allows for the evaluation of all petroleum release sites based on the risk they pose to human health and the environment. Those that pose no significant risk are closed; those that pose significant risk are prioritized for further work. Since 1999, the program has been collecting site-specific information needed for Tier 1, the first step in the RBCA process. Sites that fail Tier 1 are activated for Tier 2, which is a more detailed investigation and the next step in the RBCA process. In FY19, 138 Tier 1 investigations and 21 Tier 2 investigations were initiated. If sites fail Tier 2, they are normally scheduled for cleanup.





Financial Assistance – Petroleum Release Remedial Action Reimbursement Fund

When contamination has been found at a site, and the NDEE has determined that more investigation and/or cleanup is required, NDEE will also determine the "responsible person." This term refers primarily to those who owned or operated the tank or other source when the leak occurred. Those who are determined to be a responsible person may be eligible for reimbursement through the Petroleum Release Remedial Action Reimbursement Fund.

Massive excavation in Superior

The Fund was created by the Legislature in order to help tank owners pay for the costs associated with assessing and cleaning up any petroleum releases from tanks as well as meet the $1 million financial responsibility requirement established for underground storage tanks. Costs for both underground and above-ground tank releases are eligible for reimbursement. The program's activities in this area include receiving and processing applications for reimbursement from the fund and subsequently issuing reimbursements for eligible costs. To assist applicants, the program developed a guideline entitled "Reasonable Rates Schedule and Reimbursement Guidance Manual" which is available on the web site.

No. of Sites that have reached the $1M statutory cap: **16**

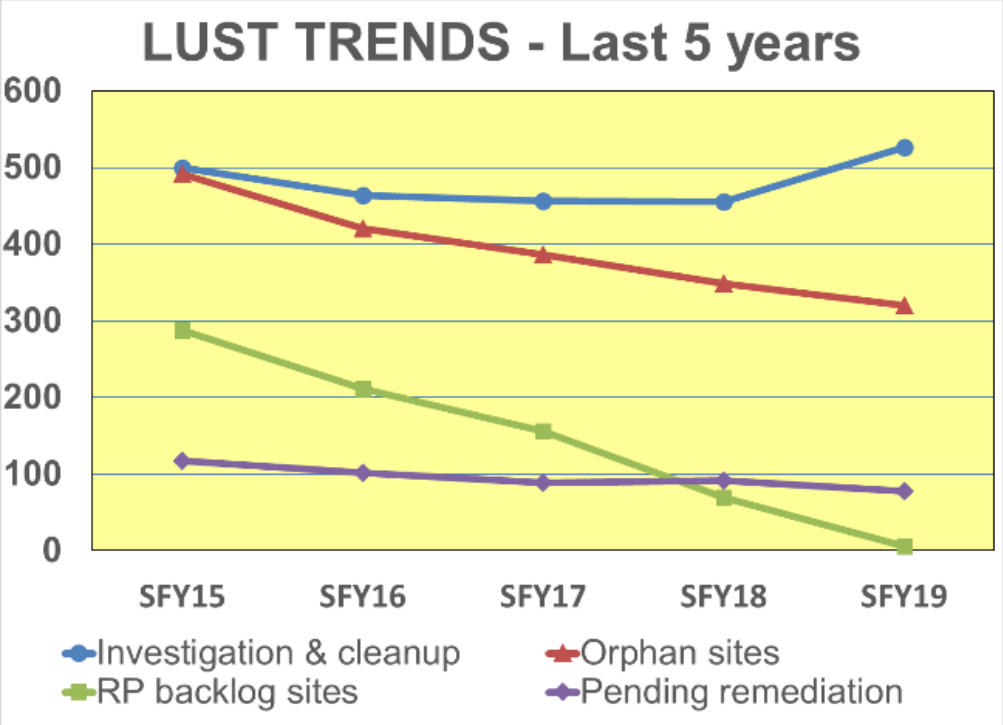
Revenue was just over $12 million in FY19. During the year, NDEE reimbursed about $3.2 million to responsible persons for work done at 168 different sites, and $4.3 million was spent to clean up orphan sites. An additional $1.2 million of revenue was

transferred to NDEE's Superfund program according to legislation passed last year. As of June 30, 2019, over $236 million has been disbursed since the program began.

Responsible Person Sites

Active leak in Chadron

For the last several years, there have been hundreds of sites where the responsible person is known, but NDEE did not require work to begin. These were lower priority sites, and there was not sufficient funding to reimburse potential costs under the Reimbursement Fund. The sites were placed on a waiting list (backlogged) until funding was available. NDEE has worked steadily in the last several years to bring that list to zero. By November 2018, there were no more responsible person sites waiting on NDEE to require and approve work. Now when new spills are reported, they are worked on immediately with no waiting required. This helps speed property transactions and redevelopment.



"Orphan" Sites

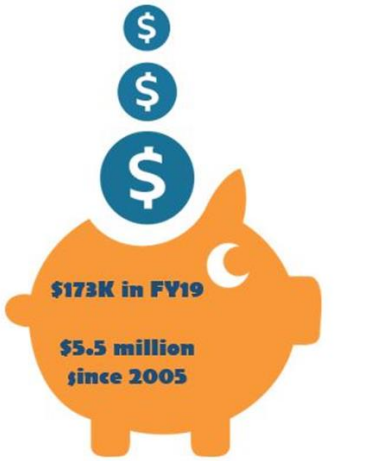
In situations involving "orphan" sites (sites where there is no viable responsible person), investigation and remediation costs are paid with federal and/or state funds. In FY2019, 48 orphan sites were activated for investigation and/or cleanup using State contractors. At the end of FY19, there were 320 orphan sites backlogged and not yet investigated.

Large orphan site excavation in Minatare

Equipment Reuse

As sites are undergoing cleanup, NDEE pays for the purchase of remediation equipment. When sites are cleaned up and closed, NDEE seeks to reuse that equipment at other sites. Since June 2005, NDEE has reused hundreds of pieces of equipment, thus greatly reducing the need to buy new equipment. This reuse program has saved Nebraska taxpayers over $5.5 million in new equipment costs and allowed that money to be used for cleanup of additional sites.

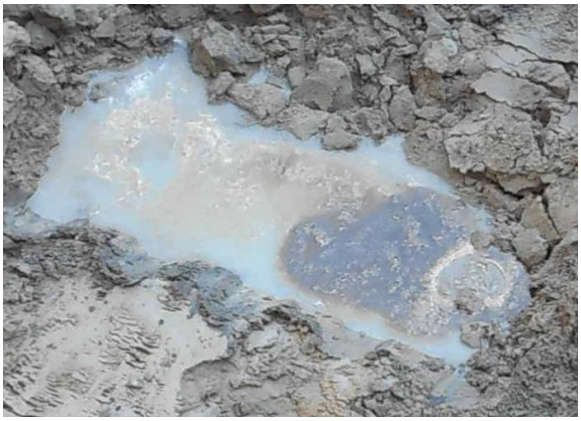
Some of the inventory of remediation trailers waiting to be reused



Amount saved from reused equipment

Voluntary Remedial Action

Responsible persons are able to perform voluntary remedial action prior to NDEE's approval of their plans and still be eligible for reimbursement consideration in the future. This allows sites to move forward on their own initiative. To date, 234 suspended or backlogged leaking underground storage tank sites have been closed based on voluntary submittals.



Petroleum on ground water in tank excavation in Lincoln's developing Telegraph District

Water Quality Monitoring and Assessment Programs

Surface Water Assessment Programs

Canoeing at Holmes Lake, Lincoln

Staff working with the Surface Water Monitoring and Assessment programs collect physical, chemical, and biological water quality samples from streams and lakes, implement surface water improvement projects, and prepare surface water quality reports. Some monitoring programs collect stream and lake samples throughout the state; however, most monitoring is focused in one to three major river basins each year in conjunction with a rotating basin monitoring strategy. Monitoring data are used to document existing water quality conditions, assess the support of beneficial uses (such as aquatic life, recreation, and public drinking water supply), and prioritize water quality problems. Current monitoring partners include the Natural Resources Districts (NRDs), Nebraska Public Power District (NPPD), U.S. Army Corps of Engineers (USACE), Nebraska Game and Parks Commission (NGPC), University of Nebraska-Lincoln (UNL), Central District Health Department (CDHD), and United States Geological Survey (USGS).

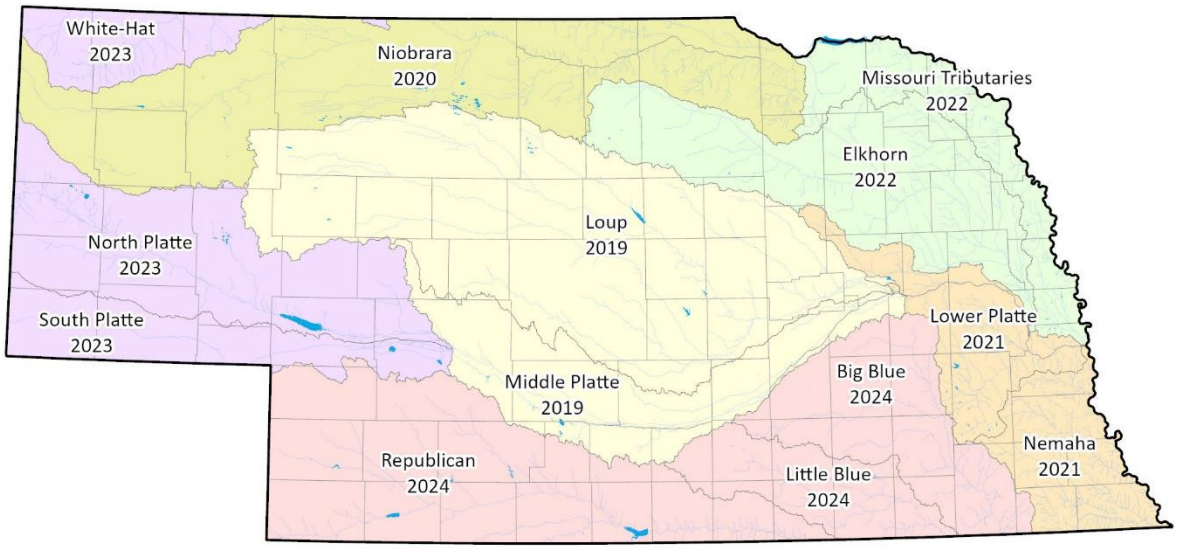
Each year, surface water samples are collected at hundreds of locations across the state resulting in over 36,000 individual field measurements and laboratory analyses.

NDEE's surface water monitoring programs have different purposes. Brief descriptions of the basin monitoring strategy, as well as other water quality monitoring programs, are provided below. Additionally, a more detailed overview of the programs are provided in the Department's annual publication Water Quality Monitoring Report available online.

Basin Rotation Monitoring Program

- One to three river basins per year;
- Intensive monitoring of flowing waters (rivers and streams);
- In 2019, the Loup and Middle Platte River basins were sampled;
- Typically 30-45 sampling locations, weekly during the summer.

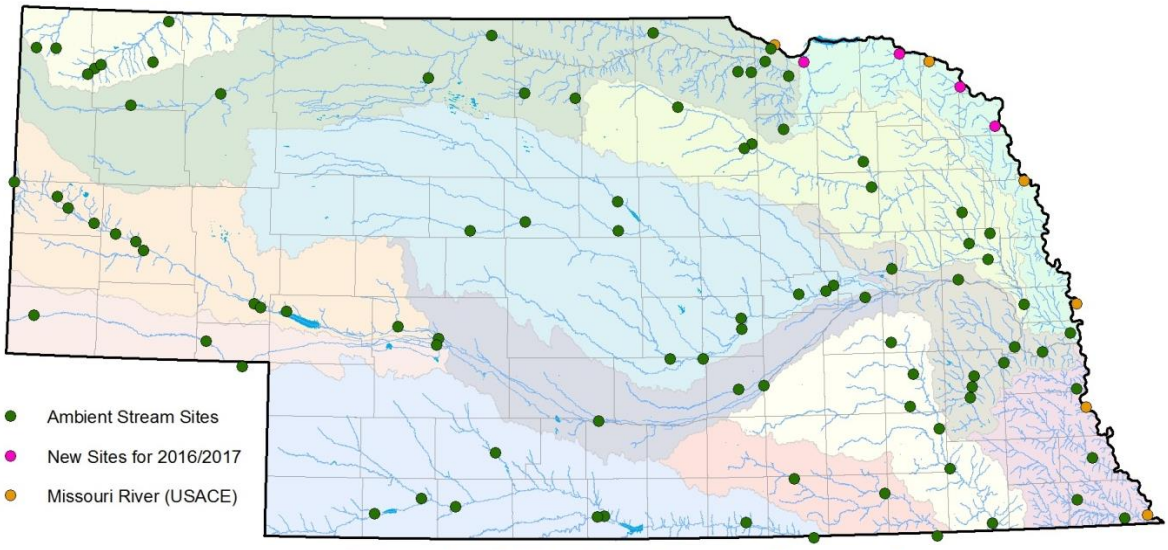
Six-year basin rotation monitoring schedule



Ambient Stream Monitoring Program

- Network of 101 fixed stations;
- Main stem and tributary streams;
- Thirty-four parameters analyzed at each network location during each sampling event;
- Collected monthly, year round.

Locations of NDEQ Ambient Stream Monitoring Program sites



Public Beach Monitoring Program —

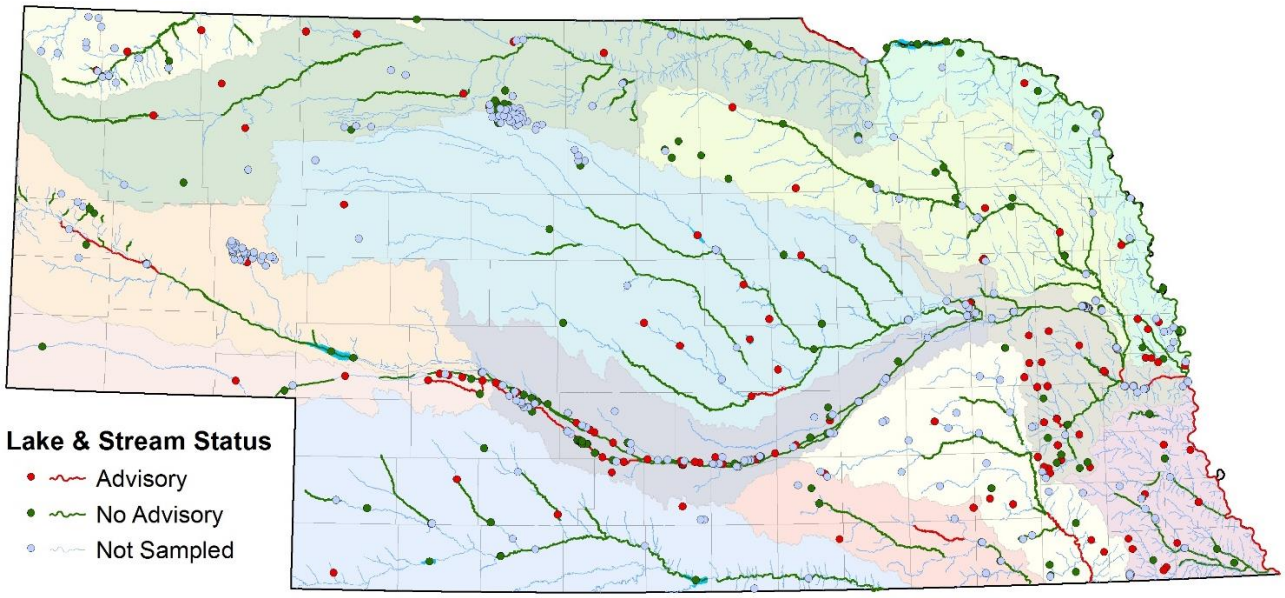
- Nebraska is on the forefront of national sampling and public notification for Harmful Algal Bloom (HAB) events;
- Also known as blue-green algae;
- Up to 54 public beaches sampled weekly during the summer months;
- Samples analyzed for *E. coli* bacteria and the microcystin toxin;
- Risks to humans come from external exposure (prolonged contact with skin) and from swallowing the water;
- Symptoms from ingestion can include headaches, nausea, muscular pains, central abdominal pain, diarrhea and vomiting. Severe cases could include seizures, liver failure and respiratory arrest. The severity of the illness is related to the amount of water ingested, and the concentrations of the toxins;
- Children, because of their smaller body size, are at risk for more intensive symptoms;
- Results and beach alerts are issued each week during the summer on a Listserve and NDEE's web site. Signs are posted at affected beaches

Harmful Algal Bloom (HAB) at Willow Creek Reservoir, Pierce County

Fish Tissue Monitoring Program

- Assess fish tissue for toxins, such as mercury and polychlorinated biphenyl compounds (PCBs);
- Current fish tissue consumption advisories at 139 locations;
- Most recent report on-line.

Lake and Stream Fish Consumption Advisory Locations in Nebraska Through 2018



Stream Biological Monitoring Program

- Stream sites assessed for the overall health of the streams;
- Diversity and numbers of resident aquatic macroinvertebrate and fish communities evaluated;
- Sites chosen with a probabilistic sampling design;
- Typically ~30 sites in the basin being monitored in the Basin Rotation Monitoring Program'

Ambient Lake Monitoring Program

- Twenty-six lakes and reservoirs sampled monthly during summer months;
- Evaluate water quality suitability for fish and aquatic organisms to survive and reproduce;
- Long-term effects can be assessed.

Fish Kill and Citizen Complaint Investigations

- Dead fish and other surface water concerns are relayed to NDEE throughout the year;
- On-site investigations and water quality sampling performed at many of the complaints;
- Four fish kills investigated (July 1, 2018 to June 30, 2019): two were from low dissolved oxygen levels and two resulted from disease;
- Eighty complaints were taken by the Surface Water Unit in the last year, many were forwarded to other NDEE programs or other agencies.

Stream Nutrient Assessment Pilot Study

- Patterned after a similar program at the State of Ohio's Stream Nutrient Assessment Protocol (SNAP);
- Assess the impacts of nutrients on the biology of Nebraska's streams, and determine if local degradation occurs due to elevated nutrient loads;
- Streams chosen are also sampled as part of the Basin Rotation Monitoring Program;
- Typically, 7-10 streams are sampled in the same basin as the Basin Rotation Monitoring Program;

National Rivers and Streams Assessment

- An EPA grant was received in 2018 to assist in the National Rivers and Streams Assessment (NRSA);
- National program designed to determine the extent to which rivers and streams support a healthy biological condition and extend of stressors that affect them;
- Thirty-four waterbodies sampled in 2019;
- Monitoring included collections of water, fish, benthic macroinvertebrates, and observations of habitat, vegetation, and disturbance.

Integrated Report —States are required by the federal Clean Water Act to prepare a biennial water quality report called the Integrated Report, The Integrated Report provides a comprehensive summary of the status and trends of surface water quality in Nebraska and includes a list of impaired surface waters that do not support their assigned beneficial uses. The 2018 Water Quality Integrated Report, which was approved by the EPA in April 2018, is available on NDEE's web site http://deq.ne.gov. The report's direct URL is: http://deq.ne.gov/Publica.nsf/Pages/WAT234

Antelope Creek Lincoln

Groundwater Assessment Programs

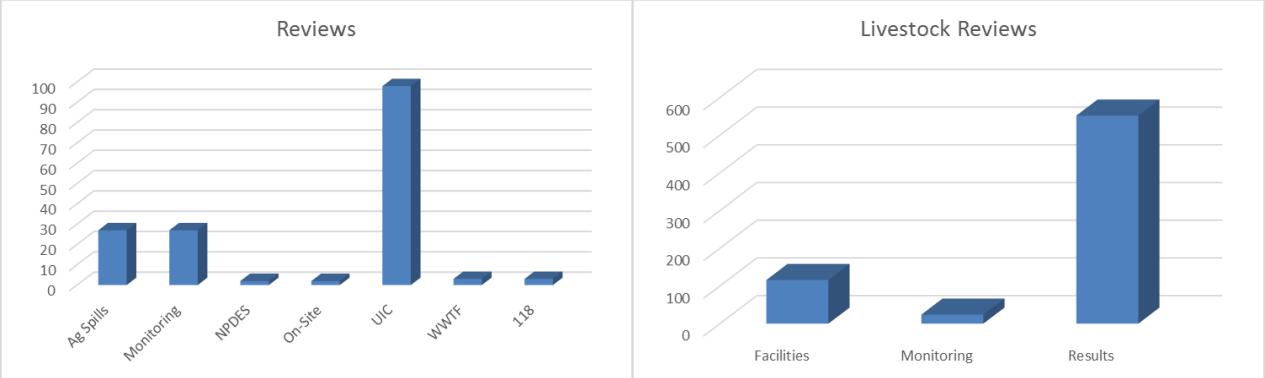
Groundwater Quality Monitoring Report

The Groundwater Quality Monitoring Report summarizes the water quality monitoring efforts of the Natural Resources Districts, NDEE, and other state, local and federal agencies. This year the reports were only presented in an electronic format, and can be found on NDEE's web site, http://dee.ne.gov. (Select Publications & Forms, then select Groundwater Program, then select Annual Reports.) The direct URL to the 2018 Groundwater Quality Monitoring Report is: http://deq.ne.gov/publica.nsf/PubsForm.xsp?documentId=B8F8D47840E9665886258360005B61CF&action=openDocument. Statistics and maps showing nitrate-nitrogen groundwater monitoring results as well as statistics for three of the 241 agricultural chemicals detected in the state are presented. The report uses data from the Quality-Assessed Agrichemical Contaminant Database for Nebraska Groundwater, developed cooperatively by the Nebraska Department of Agriculture, University of Nebraska-Lincoln, and NDEE. These data are accessible to the public on the Nebraska Department of Natural Resources web site, https://dnr.nebraska.gov.

Hydrogeologic Studies and Reviews

The Groundwater Unit is responsible for hydrogeologic review of various NDEE projects and programs to determine possible effects on groundwater quality and to recommend possible courses of action. Programs for which this review is performed include leaking underground storage tanks, surface spills, underground injection control, wastewater treatment facilities, septic systems, NPDES permits, livestock waste control facilities, the Natural Resources Districts' Groundwater Management Plans, and others.

In addition, the Groundwater Unit performs reviews and oversees remediation if a situation does not fall under another agency program and is of environmental significance. Unit personnel continue to take responsibility under Title 118 — Groundwater Quality Standards and Use Classification for many site investigations, and have sampled and supervised site cleanups.



Underground Injection Control (UIC)

The Underground Injection Control (UIC) program reviews and issues permits, conducts inspections, and performs compliance reviews for wells used to inject fluids into the subsurface. There are six classes of injection wells:

- Class I injection wells are for the injection of wastewater below the lowermost underground source of drinking water.
- Class II wells are associated with oil and gas production, and are regulated by the Nebraska Oil and Gas Conservation Commission.
- Class III wells are used to inject fluids for the purpose of extracting minerals.
- Class IV wells are associated with the injection of hazardous waste, are illegal, and have never been allowed in Nebraska.
- Injection wells not included in the other specific classes are considered to be Class V wells. Common examples of Class V wells include: open-loop heat pump systems, large capacity septic systems, and sub-surface drip irrigation systems
- Class VI wells are associated with the injection of carbon dioxide for permanent disposal. This class of wells is currently regulated by the EPA.

Currently the State of Nebraska has four permitted Class I wells. Two of these are issued to Crow Butte Resources, Inc. (near Crawford, NE). The other two are issued to the City of McCook, NE and Kugler Oil Company (Culbertson, NE). The only Class III wells in the state are at the Crow Butte Resources, Inc. uranium facility near Crawford. Class V wells are located throughout the state and make up the majority of Nebraska UIC wells.

Mineral Exploration Program

The Mineral Exploration program issues and reviews permits, conducts inspections, and performs compliance reviews for holes drilled, driven, bored, or dug for the purpose of mineral exploration. These permits are issued to persons exploring for potential mineral resources such as consolidated rock; sand and gravel; or material commingled, in solution, or otherwise occurring beneath the surface or in waters of the State, and are regulated under Title 135 – Rules and Regulations for Mineral Exploration Holes. This type of exploration specifically excludes oil and gas exploration, which is regulated by the Nebraska Oil and Gas Conservation Commission.

Wellhead Protection

The State Wellhead Protection program is a voluntary program, which assists communities and other public water suppliers in preventing contamination of their water supplies. State Wellhead Protection Program activities include delineating the zones of influence which may impact public supply wells, training communities on how to inventory all potential sources of pollution within these vulnerable zones, working with the local officials to identify options to manage these potential pollution sources, working on monitoring plans, and helping develop contingency plans to provide alternate water supplies and site new wells. One hundred eighteen community water supplies have approved Wellhead Protection plans as of June 30, 2019.

In 2018, NDEE began using the Groundwater Evaluation Tool (GET) to model WHP areas for Nebraska's Community Drinking Water Systems. GET is a web based subscription service which utilizes seven regional numeric groundwater models to run reverse particle tracking which creates time-of-travel capture zones. Statewide models cover 511 of the 522 community groundwater PWS that produce their own water. This tool has allowed NDEE to become more efficient in updating WHP areas throughout the state while increasing the quality of models and reports it produces for Nebraska communities. GET can

also be used to assist communities in understanding the water quality in areas where new wells may be placed.

Source Water Assessment and Protection

Source Water Protection funds have been distributed to complete 100 separate Source Water Protection projects throughout the state since 2004. In SFY2019, Source Water Protection funds were distributed to the following public water systems: Gordon, Syracuse, and Wilber. The total amount available to award was $150,000.

NDEE is coordinating with our CWA 319 program to engage Nebraska's communities and producers and develop Drinking Water Protection Management Plans (DWPMP) that proactively address nonpoint source contamination. SWP grant funds are used to develop the plans, encourage community involvement through stakeholder groups and put on public meetings to promote the projects. The plans are alternative 9-element watershed management plans that, when accepted by EPA, make communities eligible for CWA 319 funding. This funding pool provides more funding and longer term grants (5 years) that the Source Water Protection Grants are not able to do. These plans bring together NRDs, NRCS, and local stakeholders to increase on-the-ground agricultural best management practices and increase outreach and education efforts in Nebraska's communities. The first Drinking Water Protection Management Plan in the nation, was accepted by EPA in the summer of 2018 for the Bazile Creek area in northeastern Nebraska. One additional plan has been accepted and six are in various states of development.

The 2018 Farm Bill has dedicated 10% of total funds available for conservation programs (with the exception of Conservation Reserve Funds) each year, to be used for source water protection. NDEE is working with NRCS to develop the priority areas in Nebraska where funds will be focused. This effort is meant to address excessive nutrients, and other impairments of drinking water. For Nebraska, this effort will primarily focus on groundwater as it is the predominant source for drinking water in the state. The highest priority areas include community public water systems WHP areas and phase 2, 3, and 4 groundwater management areas that include WHP areas. Best management practices incentive payments will go to the NRCS - EQIP eligible owner/operators of agricultural land who install conservation practices relating to water quality and quantity. The importance of this change in the farm bill cannot be understated. Many Nebraska communities don't have the staff, time, or money to do the above mentioned Drinking Water Protection Management Plans and the new priority in funding from NRCS may ensure that all community public water systems have on-the-ground practices that work to reduce nitrates in source water protection areas.

Testing Ag Performance Solutions (TAPS)

Several DEE employees formed the "Grow Corn Grow" team and participated in the University of Nebraska – Lincoln TAPS competition for the 2018 growing season. The goal of TAPS is to promote efficiency and profitability while providing interaction among all those involved in the production and/or the business of agriculture production. The team made decisions about a 0.4-acre area, which is then extrapolated to a 3,000-acre corn farm in Lincoln County, Nebraska. In reality, UNL-West

Central Research and Extension Center does all the farming and the hard work. A multitude of high-tech instruments and services are available to teams to help make decisions. Each team makes cost and timing decisions on: • Insurance • Nitrogen Management • Corn Hybrid Selection • Seeding Rate • Irrigation Management • Grain Marketing. The DEE team place first in the "Most Profitable Farm" category and second in the "Highest Input Use Efficiency" category.

Water Well Standards and Contractors' Licensing Program

In July 2018 the Water Well Standards program was brought to the NDEE through a Memorandum of Agreement with the Nebraska Department of Health and Human Services. Program personnel include three inspectors and one administrative assistant. This program is tasked with inspecting all domestic wells and 25 percent of all other wells drilled in the previous calendar year. The program is also responsible for licensing and regulating over 800 licensed water well professionals which includes administering examinations on a quarterly basis. In addition, the program answers various questions and complaints from both the public and the regulated community. The program also has a 10 member board which meets quarterly.

Water Quality Planning

Surface Water Quality Standards

NDEE develops surface water quality standards which are found in Title 117 – Nebraska Surface Water Quality Standards. The state's waterbodies have been assigned beneficial uses in one of the following categories:

- Public water supply,
- Aquatic life,
- Agriculture,
- Industry,
- Recreation, and
- Aesthetics.

Each beneficial use has water quality criteria for chemical and physical parameters that are developed to be protective of that use. For example, criteria for nitrogen are different for waters assigned to public water supply use than those which have an industrial beneficial use. These criteria form the basis of water quality protection for all surface water quality programs conducted by NDEE. The federal Clean Water Act (CWA) specifies that states review their water quality standards and revise where appropriate once every three years (triennial review).

Nebraska's triennial review was formally initiated with a public hearing to take testimony from any interested party regarding changes sought for Title 117. A list of potential changes was formed and draft mark-up was prepared for Departmental and Administration consideration. Title 117 was signed by the Governor on June 24, 2019 and approved by EPA on September 5, 2019.

The updated standards are available on NDEE's website. In addition to developing the standards, staff develop and implement procedures for applying the standards to surface water quality programs, such as NPDES permits.

Section 401 Water Quality Certification

The Water Division CWA404 Section administers the Water Quality Certification Program in accordance with Section 401 of the CWA. This program evaluates applications for federal permits and licenses that involve a discharge to Waters of the U.S. and determines whether the proposed activity complies with Nebraska Surface Water Quality Standards. If the activity is likely to violate the standards, conditions for complying with the standards will be issued with the certification, or certification will be denied. The U.S. Army Corps of Engineers Section 404 Dredge and Fill Permits and Federal Energy Regulatory Commission licenses are examples of federal regulatory programs that require State Water Quality Certification before federal permits or licenses can be issued. NDEE reviews approximately 400 Section 404 permit applications annually.

Impaired Waters and Total Maximum Daily Loads (TMDLs)

The Federal CWA, Section 303(d), requires states to prepare a list of impaired surface waters – waters that do not support the assigned beneficial uses as listed in Title 117 - Nebraska Surface Water Quality Standards. From this list, states are to prepare TMDLs that include the pollution control goals and strategies necessary to improve the quality of these waters and remove the identified impairments so these waters may meet their assigned beneficial uses.

As in previous years, NDEE has opted to combine the required CWA Section 303(d) list with the Section 305(b) report on the general status of water quality in the state. This combination is referred to as the Integrated Report. The 2018 Integrated Report was approved by EPA in April 2018 and is available on NDEE's web site. Work on the 2020 Integrated Report is underway.

The following table summarizes NDEQ's work in this area.

TMDL Category	TMDL Name	# of Waterbodies	Pollutant	Status
4a				
	Republican River Basin	26	*E.coli*	NDEQ Developing Draft
5-alt				
	Elkhorn River Basin WMP	9	*E.coli*	LENRD Developing Draft
	Nemaha River Basin WMP	7	*E.coli*	NNRD Developing Draft
	White River Basin WMP	5	*E.coli*	UNWNRD Developing Draft
	Lewis and Clark NRD WMP	7	*E.coli*	LCNRD Developing Draft
	Lower Platte South NRD WMP	10	*E.coli*	LPSNRD Developing Draft

This table includes updated Phase II TMDLs and Protection TMDLs on waterboides without the Recreation Use to protect downstream uses.

(LENRD = Lower Elkhorn NRD; NNRD = Nemaha NRD; UNWNRD = Upper Niobrara White NRD; LPSNRD = Lower Platte South NRD; LCNRD = Lewis & Clark NRD)

Nonpoint Source Management Program

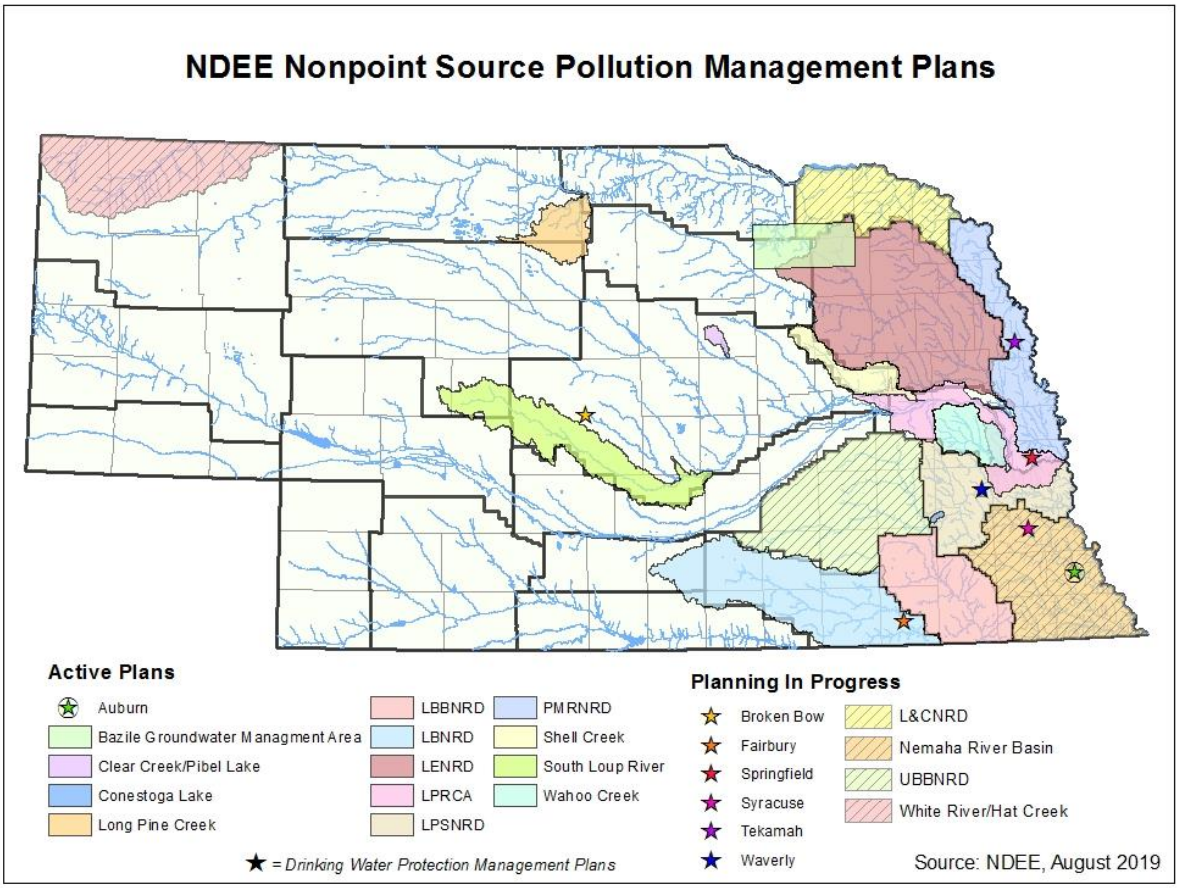
The goal of the Nebraska Nonpoint Source Management Program is to protect and improve water quality impacted by nonpoint source pollution through an integrated statewide effort. The program is of particular significance because nonpoint source pollution is the most prevalent, widespread cause of water quality degradation in Nebraska and is associated with runoff and percolation from agricultural and urban areas. The program is largely funded by the Environmental Protection Agency (EPA) through Section 319 of the federal CWA and involves key federal, state and local partners.

State nonpoint source problems and priorities are defined in the Nonpoint Source Management Program: "Strategic Plan and Guidance for Implementing the Nebraska Nonpoint Source Management Program 2015-2030," available online. The program emphasizes watershed and groundwater management area planning, targeting of 303(d)-listed impaired waters, and community participation in water quality management plan development. Projects emphasize implementation of 9-Element watershed management plans or Alternative to 9-Element plans in the case of groundwater quality plans.

Storm water infrastructure tour, Omaha

Included in the major program highlights this year is the acceptance by EPA of three 9-Element watershed management plans: Lower Elkhorn NRD Water Quality Management Plan (WQMP), Lower Platte River WQMP, and Lower Platte South NRD WQMP. In addition, the NPS program has continued to emphasize groundwater quality planning through development of Drinking Water Protection Management Plans with the communities of Broken Bow,

Fairbury, Springfield, Syracuse, Tekamah and Waverly. Once completed, these communities will be eligible for 319 project funds for plan implementation.



Water Quality Data Handling and Storage

NDEE continues adding Nebraska surface water quality information to the EPA's Water Quality Exchange (WQX) electronic storage system for water quality data. This will make Nebraska surface water quality information available to anyone who has an internet connection. The web site for this information is https://www.epa.gov/waterdata. During FY2019, NDEQ continued to add surface water monitoring results to the WQX database. NDEE has developed a new internal database application which has increased the efficiency of processing surface water monitoring data resulting in significant time savings.

Agriculture Section

The Agriculture Section programs consist of the Livestock Waste Control Program, the Chemigation Program, and the Agricultural Chemical Containment Program.

LIVESTOCK WASTE CONTROL PROGRAM

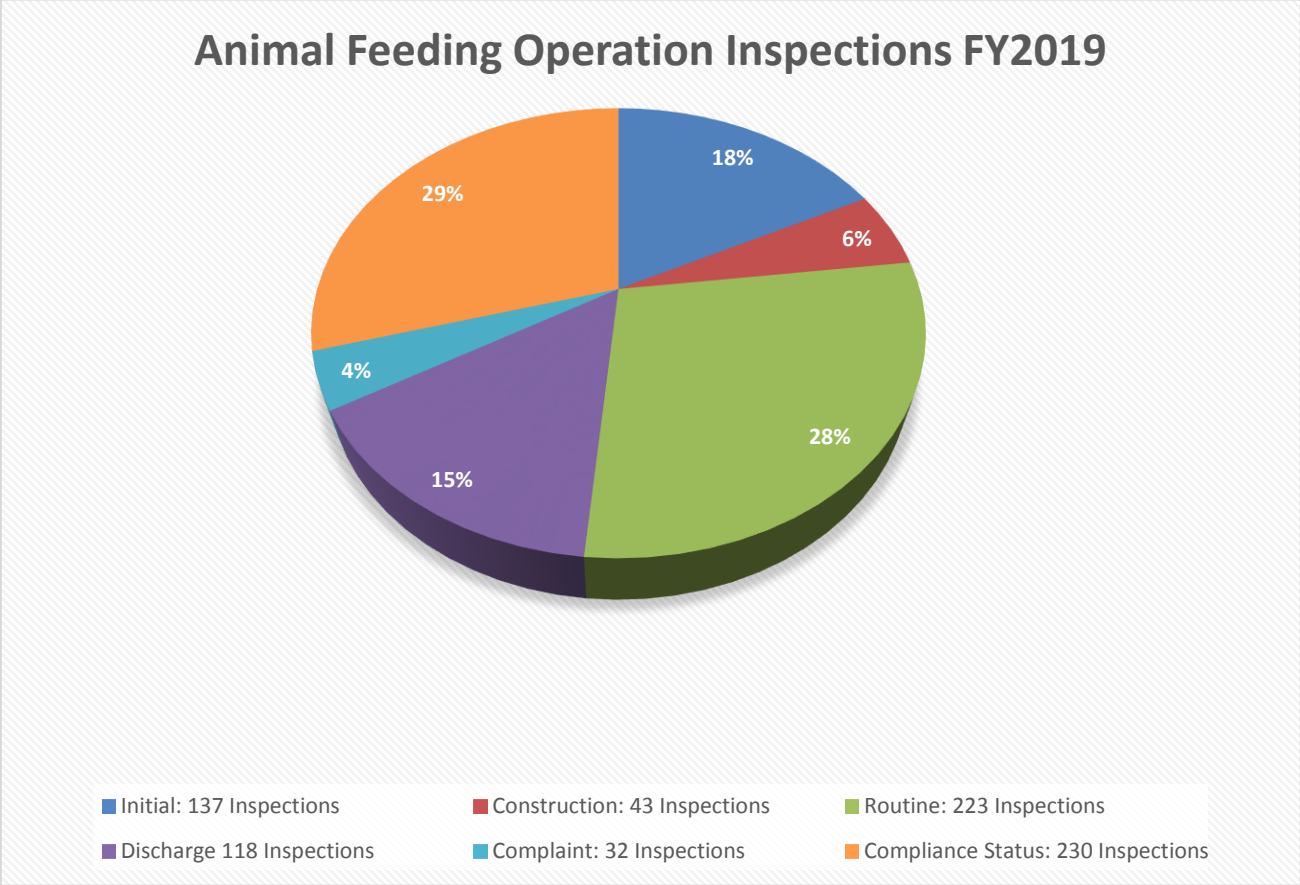
Overview

The Livestock Waste Control Program (LWC) is charged with the overall responsibility to protect Nebraska's surface water and groundwater from discharge of livestock waste from any of the thousands of Animal Feeding Operations (AFOs) in Nebraska.

To accomplish this responsibility, the program administers *Title 130 - Livestock Waste Control Regulations*. The LWC program primarily focuses on the 1,230 active large Concentrated Animal Feeding Operations (CAFOs) required to have permits, but also works with approximately 2,183 Medium AFOs. The LWC Program uses inspections, permitting, and periodic monitoring to fulfill this responsibility. The program also implements the National Pollutant Discharge Elimination System (NPDES) program for CAFOs.

Amendments to Title 130 became effective October 4, 2011 to reflect changes in the U.S. Environmental Protection Agency (EPA) CAFO Rule for NPDES permitting, which primarily involved who needs to apply for NPDES permit coverage. The changes were necessary to ensure the Department would continue to administer the NPDES permit program for EPA. As a result, only CAFOs that discharge are required to apply for NPDES permit coverage.

Inspections



The LWC Program staff conducted a total of 783 livestock waste control inspections and investigations in FY2019 (including complaint and discharge investigations). The chart above illustrates the breakdown by type of inspection or investigation. A concerted effort was made during the fiscal year to revisit many medium-sized operations to ensure that they were in compliance with Title 130 and the EPA CAFO Rule.

The flooding in March of 2019 caused a significant amount of discharges. About 100 discharges were reported from that event alone. There were 101 more discharge investigations in FY2019 than the previous year.

A short description of each type of inspection and investigation follows:

Initial Inspection: Before constructing a new operation or expanding an existing operation, all medium and large AFOs – whether or not the operation currently is permitted -- must request an initial inspection by LWC Program staff. The reason for this inspection is to determine if livestock waste control facilities (LWCF) must be constructed, expanded, or modified to prevent a discharge and to properly manage the livestock waste generated by the operation.

Post Construction Inspection: Upon completion of any required construction of a LWCF, program staff conduct a post-construction inspection to verify the waste control facility was constructed as approved by the Department.

Routine Inspections: Once a CAFO or an AFO has received a permit, and the Department has approved operation of the LWCF, program staff will conduct periodic, routine inspections to monitor operation of the livestock waste control facilities, management of the operation's livestock waste,

and the records these CAFOs and AFOs are required to maintain. Routine inspections are regularly scheduled with an AFO, involving a detailed, extensive review of the operation's recordkeeping and waste management at the operation.

Discharge Investigations: Discharge investigations are conducted when livestock waste control facilities discharging are reported. Sometimes these discharges are not recorded as complaints because the AFO does self-reporting, as required by the regulations.

Complaint Investigations: When a complaint is received, LWC Program staff will investigate and may conduct an on-site investigation.

Compliance Status Inspections: Generally conducted to verify the AFO's operating status or level of compliance with a specific requirement; these inspections are usually less urgent, non-emergency situations.

State Permitting

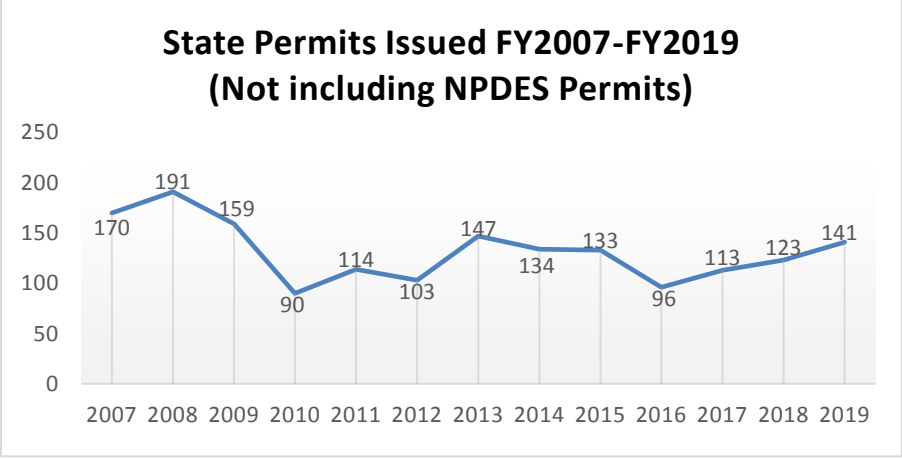
After conducting an initial inspection, the Department may require the AFO to submit an application for a Construction and Operating Permit – the state permitting process for livestock waste control facilities – prior to construction of livestock waste control facilities.

The Department received a total of 150 permit applications and issued 141 permits during FY2019, as shown in the table to the right.

Construction and Operating Permits – FY2019

Type of Application or Permit	Applications Received	Permits Issued
New permits	77	76
Modified permits	54	47
Transfer permits	19	18
TOTAL	**150**	**141**

The totals do not include applications received or permits issued for any NPDES permits. The chart below shows the total number of state permits issued annually for livestock waste control facilities since FY2007. The Department updated some existing Construction Permits, Construction Approvals and Operating Permits to Construction and Operating Permits if the AFOs updated their nutrient management plans (NMP) to current Title 130 standards. The NMP updates were mainly in conjunction with NPDES Permit renewals or transferred permits.



Once a permitted AFO has completed its construction project, the Department conducts a post-construction inspection. If the post-construction inspection shows the construction was completed as approved, the Department notifies the AFO that operation of the new livestock waste control facility is approved. In FY2019, the Department gave approval to 62 AFOs for operation of their new or expanded LWC facilities. `

National Pollutant Discharge Elimination System (NPDES) Permit

The LWC Program also oversees the NPDES permitting process for livestock, issuing coverage under individual NPDES permits to CAFOs, as well as coverage under an NPDES General Permit for Concentrated Animal Feeding Operations Confining Cattle. Both permits expire every five years, and permittees are required to submit a reissuance application to continue NPDES permit coverage.

The table below summarizes the number of NPDES applications received and permits issued for livestock waste control facilities in FY2019.

NPDES PERMITS – FY2019

Type of NPDES Application/Permit	Applications Received	Permits Issued
GENERAL PERMIT FOR CAFOS CONFINING CATTLE		
New Coverage	14	3
Modified or Transferred	25	11
Reissued	1	54
SUBTOTAL GENERAL PERMIT:	**40**	**68**
INDIVIDUAL PERMITS		
New Coverage	3	4
Modified or Transferred	2	2
Reissued	12	6
SUBTOTAL INDIVIDUAL PERMIT:	**17**	**12**
NPDES TOTALS:	**57**	**80**

Fees

The annual fee is assessed on all permitted Large CAFOs and all CAFOs covered under an NPDES permit. The fee is determined based upon the number of head of livestock for which the operation has a permit. The fees provide 20% of the Department's costs to administer the livestock waste control program, as required by statute. The Department received $263,562 in annual permit fees. In addition, the Department received $48,618 in initial inspection fees, $38,585 in permit application fees, and $1,900 in late payment fees, for a total of $352,665 in fees.

General information about the Livestock Waste Control Program, including applications, fact sheets, forms, guidance documents, copies of the NPDES General Permit and the four general permits, Title 130 regulations, and public notices of permit issuance or denial, can all be found on the Department's website at: http://dee.ne.gov.

Costco

The livestock program began receiving new chicken barn applications from producers under contract with Costco in FY2018. These chicken producers are not required to obtain permits because their waste product is considered dry manure. However, Costco is requiring their contract chicken producers to apply and obtain the same permit that cattle or hog producers apply for. There have been 34 Construction and Operating permits issued for Costco producers through FY2019. More Costco chicken barn applications are expected in the next year.

Livestock Growth

Livestock continues to grow in Nebraska. In FY2019 the state saw an increase of 37 large operations from FY2018. The state also saw an increase of 30 medium operations from FY2018. With this growth there was an increase of 34 new Construction and Operating Permits issued from FY2018.

CHEMIGATION PROGRAM

The Chemigation program, which functions in cooperation with Nebraska's 23 Natural Resources Districts (NRDs), works to ensure that users of irrigation systems applying fertilizers and pesticides do not contaminate the sources of irrigation water. These regulations are contained in *Title 195 – Chemigation Regulations.*

Since 1987, the NRDs have inspected irrigation systems used for chemigation for functioning safety equipment and issued site permits. Chemigation permits are issued annually, and are reported to the Department on a calendar year basis. The 27,727 chemigation permits issued in 2019 constituted a 5% increase in permits issued compared to 2018 (26,835 permits).

A chemigation applicator must be certified by the Department every four years. To receive certification, an applicator must complete training and testing, which is provided under contract with the University of Nebraska Cooperative Extension. Applicator certifications also are reported on a calendar-year basis.

In calendar year 2019, 2,037 applicators have been trained, tested and certified, bringing the current number of certified chemigation applicators to 5,588 applicators. Information about chemigation applicator training dates and certified applicators is available after January 1 of each year on the Department's web site, http://dee.ne.gov.

AGRICULTURAL CHEMICAL CONTAINMENT PROGRAM

The Agricultural Chemical Containment program regulates the construction and use of commercial and private facilities for the storage, loading, and rinsing activities of bulk liquid fertilizers and bulk liquid and dry pesticides. These regulations are contained in *Title 198 - Rules and Regulations Pertaining to Agricultural Chemical Containment*.

The regulations administered by this program provide specific requirements for design by a Nebraska Registered Professional Engineer, construction materials, containment capacities and maintenance. Although no permit or registration is required, the operation must have a construction plan for the facility and a management program.

The Department and the Nebraska Department of Agriculture have a cooperative agreement that outlines the procedure for coordinating inspection activities between the two agencies. The agreement enhances the communication between the agencies and provides specific protocols to be followed when investigating Agricultural Chemical Containment complaints.

Water Permitting and Certification Programs

There are a number of certification and permitting programs relating to wastewater treatment facilities, ranging from certification of those who work on septic systems to the permitting of large municipal facilities. These programs include:

- **Onsite Wastewater Treatment Facilities Program** – This program administers system design, professional certification and system registration requirements that affect mostly smaller wastewater treatment or storage systems, such as septic systems, household lagoons, and holding tanks, and anyone doing work on these types of facilities.

- **Wastewater Treatment Facility Operator Certification Program** – This program administers the certification program for wastewater treatment facility operators to ensure proper operation and maintenance of these facilities.

- **Sanitarian Program** - The Sanitation Program inspects the following types of facilities: public swimming pools, recreational camps and mobile home parks. The Sanitation Program also performs well and septic inspections upon request for property transfers. The DHHS has a Memorandum of Understanding with the Nebraska Department of Agriculture to perform food inspections at the following facilities: schools, college food service (room and board for students), senior centers, and child care centers (upon referral from the DHHS Licensure Unit).

- **Wastewater Engineering Program –** The wastewater engineering program reviews and issues permits for commercial, industrial, and municipal wastewater facilities that are planned for construction. The program also maintains regulations for the operation and maintenance of wastewater facilities and for the proper abandonment of facilities when they are removed from service.

- **Drinking Water Engineering Program -** The drinking water engineering program provides engineering plan review; issuance of construction permits; inspection of newly constructed projects for issuance of approvals for placement into service; technical assistance and advisory contacts with owners/operators of public water systems, consulting engineers, state, federal and local officials, organizations, and the general public in matters relating to siting, design, construction, maintenance, and operation of public water systems. In addition to public water systems, the program provides similar services for all new and substantially modified public swimming pools and spas.

- **The National Pollutant Discharge Elimination System (NPDES) Program** – This program is responsible for regulating discharges of pollutants to Waters of the State to maintain and protect the water quality of Nebraska's streams, lakes, rivers, and groundwater.

- **The Nebraska Pretreatment Program** -- This program functions to protect municipal wastewater collection and treatment systems from damage or overloading by industries.

Onsite Wastewater, Sanitation and Operator Certification Program Accomplishments and Challenges

On February 14, 2019, NDEE and the Nebraska Department of Health and Human Services (DHHS) announced a Memorandum of Agreement. Through the agreement, the DHHS Sanitation

Program and staff moved to the NDEE Onsite Section. The goal is to have the programs integrate into a team to better serve the communities and citizens of the state. The move has been successful and the programs are working together well. Soon after the integration of the Sanitation program occurred, a significant remainder of FY2019 was spent responding to the catastrophic flooding events. The Onsite Wastewater Section assisted Drinking Water Section staff with staffing collection sites for individuals who wanted their flood impacted private drinking water well sampled. The program took this opportunity to educate homeowners on managing septic systems after a flood event. In addition to the flood response an additional significant accomplishment for the Section was successfully negotiating an inter-governmental agreement between NDEE and the University of Nebraska-Lincoln. The agreement provides UNL funding to implement professional development trainings and education resources for Onsite Wastewater professionals. Another accomplishment for the Section was launching online system registration. Each year the Section processes roughly 1,600 paper registrations and applicable fees associated with the registration. The online system registration portal allows certified professionals to register systems online and pay via credit card, or print a receipt and pay with a traditional check. Over the next year the Section will promote online system registration. Lastly, program staff attended and presented at the annual Nebraska Onsite Waste Water Association Annual Convention. The annual convention is held each year in February in Kearney and is the best opportunity to discuss changes in the industry with certified installers, manufacturers, and other regulators.

Onsite Wastewater Treatment Facilities Program Overview

The requirements administered by the Onsite Wastewater Program cover septic systems, wastewater holding tanks, individual household wastewater lagoons, and other decentralized wastewater treatment systems not connected to municipal wastewater treatment systems. The majority of onsite systems are for single households. However, there are onsite or decentralized systems that provide wastewater treatment for multiple houses (these systems are sometimes called cluster systems), mobile home parks, churches, recreational facilities, camper trailer parks, a variety of businesses with high strength wastes (such as restaurants, butcher shops, and wineries), equipment maintenance buildings, and other commercial or industrial facilities. The U.S. EPA estimates that nearly one in four households depend on onsite systems for wastewater treatment.

NDEQ Staff at a Mound System Installation Workshop

The *Private Onsite Wastewater Treatment System Contractors Certification and System Registration Act* (Act) passed in 2003 required that anyone doing work associated with onsite wastewater systems be certified by the State of Nebraska. The Act provided for the registration of all onsite wastewater systems constructed, reconstructed, altered, or modified. The law also provided for certification and system registration fees to support the program. The Act was amended in 2007 to provide for application fees for permits and subdivision approvals as well as waiving fees for government inspectors. A certification by examination is required for professionals to obtain initial certification. Currently, 512 people hold onsite wastewater certificates. Some

professionals obtain certification in multiple categories. The categories of certification are: Installer (Master and Journeyman), Pumper (Master and Journeyman), Inspector, and Soil Evaluator. Current certificates expire December 31, 2019, and may be renewed via continuing education requirements or re-examination. Certificates must be renewed every two years.

The registration requirement for onsite wastewater systems provides a statewide inventory of new or modified onsite systems. Since registrations began in 2004, over 23,000 systems have been registered, with 1,271 systems registered in FY19.

The Section receives a large number of complaints. There were 128 new onsite-related complaints in FY19 and program staff resolved a total of 62 complaints, which includes both old and new complaints. Typical types of complaints that are investigated include: failed systems that have a surface discharge, and which may pose a threat to public health or the environment, and systems installed by individuals who are not certified by NDEE. In addition, the Section fields approximately 4000 calls annually seeking compliance assistance.

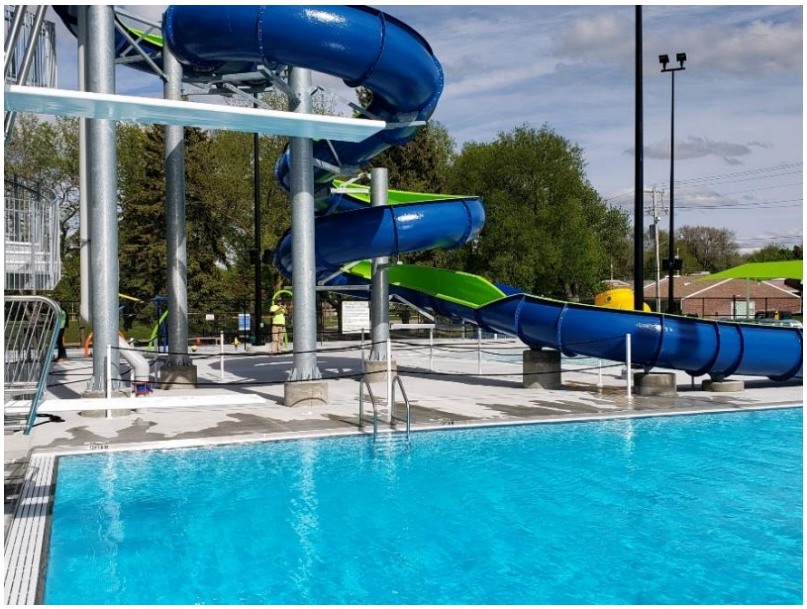
The regulations set minimum design standards for all onsite wastewater treatment systems and include an “Authorization by Rule” provision which allows for the installation of typical onsite systems by a certified professional and subsequent operation by the owner without a site-specific construction or operating permit. These standard conforming systems constitute the vast majority of all new and replacement onsite systems.

Title 124 requires Department approval prior to construction of any subdivision with any lot less than three acres where onsite wastewater treatment is proposed, or if design standards cannot be achieved. Common examples are if a system cannot meet setback distances or the 4-foot groundwater separation distance prescribed in the regulation. Department engineers review construction/operating permit applications. In the past year, the program received 36 applications for construction/operating permits and 17 applications for subdivision review and approval.

Sanitarian Program

The Sanitarian Program staff inspect all public swimming pools/spas located at hotels, apartments, municipalities and recreational facilities. During inspections staff check water chemistry, safety equipment, personnel training and mechanical areas. Recreation camps and mobile home parks are inspected to assure conditions are safe, sanitary and comply with Title 178. The DHHS has a Memorandum of Understanding with the Nebraska Department of Agriculture to perform food inspections at the following facilities: schools, college food service (room and board for students), senior centers, and child care centers (upon referral from the DHHS Licensure Unit). Lastly, sanitarians conduct evaluations of domestic water supplies and onsite wastewater treatment systems at the request of home owners, purchasers, or mortgage lending institutions. Many lenders require an inspection of the onsite water and wastewater treatment systems for compliance with applicable State of Nebraska regulations prior to granting a loan. During the evaluation, staff visually inspect the water well and the onsite wastewater treatment system and collect water samples to test for bacteria and nitrates.

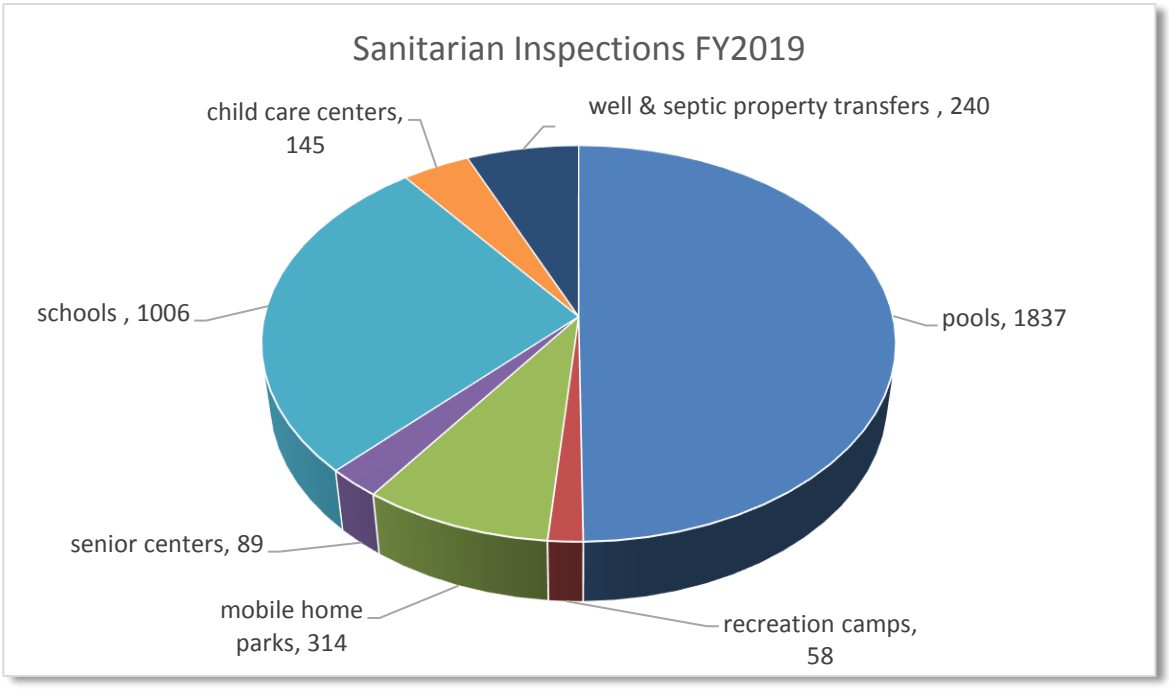
Sign temporarily closing an apartment pool



Ord Community Pool

The DHHS has partnerships with Douglas County Health Department, Lincoln-Lancaster County Health Department, Central District Health Department and the City of Norfolk to perform inspections at public swimming pools in their jurisdictions.

During FY2019, the seven sanitarian program staff completed 3,449 inspections at 2,514 pools, camps, parks, child care and senior centers, and schools. There were an additional 240 well and septic evaluations completed for property transfers. The chart below shows a breakdown of FY2019 inspections:



Wastewater Treatment Facility Operator Certification Program

Competent and qualified operators are a critical component to ensure that wastewater treatment plants are well run and protect the environment. The life span of treatment facilities can be prolonged and proper operation and maintenance programs can protect the owner's substantial financial infrastructure investment. The Wastewater Treatment Facility Operator Certification Program was established to help accomplish this. The program administers the operator certification program, which includes administering certification exams, issuing certificates, evaluating continuing education programs, tracking certificate compliance, processing certificate renewals, and conducting facility ratings to determine operator needs, in addition to continuing to evaluate ways to help wastewater treatment facility operators obtain continuing education to maintain their certification and help them do their jobs.

This program administers nationally accredited certification exams to new wastewater operators, or to operators wishing to advance their credentials, and issues certification renewals for operators who have obtained the necessary Department-approved continuing education as provided for in *Title 197 – Rules and Regulations for the Certification of Wastewater Treatment Operators in Nebraska*. Staff will continue to monitor those facilities that are required to have certified operators and work with them to help them comply with the regulations.

Municipal, commercial, compatible industrial facilities, and non-compatible industrial facilities are required to employ certified operators based on the point rating assigned to each facility by NDEE. The point rating for each facility is based on the design flow, type of treatment, instrumentation and control systems, and laboratory analysis requirements at each location. Certified Operators for municipal, commercial, and compatible industrial facilities are classified under the following categories: Class L (lagoons), Class I, Class II, Class III, and Class IV, according to the type of facility and its point rating. Certified operators for non-compatible industrial facilities are classified under the following categories: Industrial I, Industrial II, Industrial III, and Industrial IV, according to the type of facility and its point rating.

The Wastewater Operator Certification Program currently has 818 operators with municipal/compatible certificates. In addition, there are currently 100 certified operators with industrial certificates.

NDEE also reviews applications and issues operator certification exemptions for towns and other entities that have full-retention non-discharging lagoon wastewater treatment facilities that may not require qualified operators due to very limited maintenance and operational needs. The exemption is for a fixed four-year period and the period under current review will end at the end of 2020. NDEE has contacted approximately 300 facilities potentially eligible for the exemption and, of these, issued four-year operator exemptions to 216 facilities.

The Department contracts with the Association of Boards of Certification (ABC) for testing services for the Operator Certification Program. Starting in 2019 ABC issued a new exam series for Class 1 through 4. Since the Department began using this exam series the pass rate for exams has declined sharply. The Department is evaluating this issue and is working with ABC and our education providers to find the cause of the decline in pass rate.

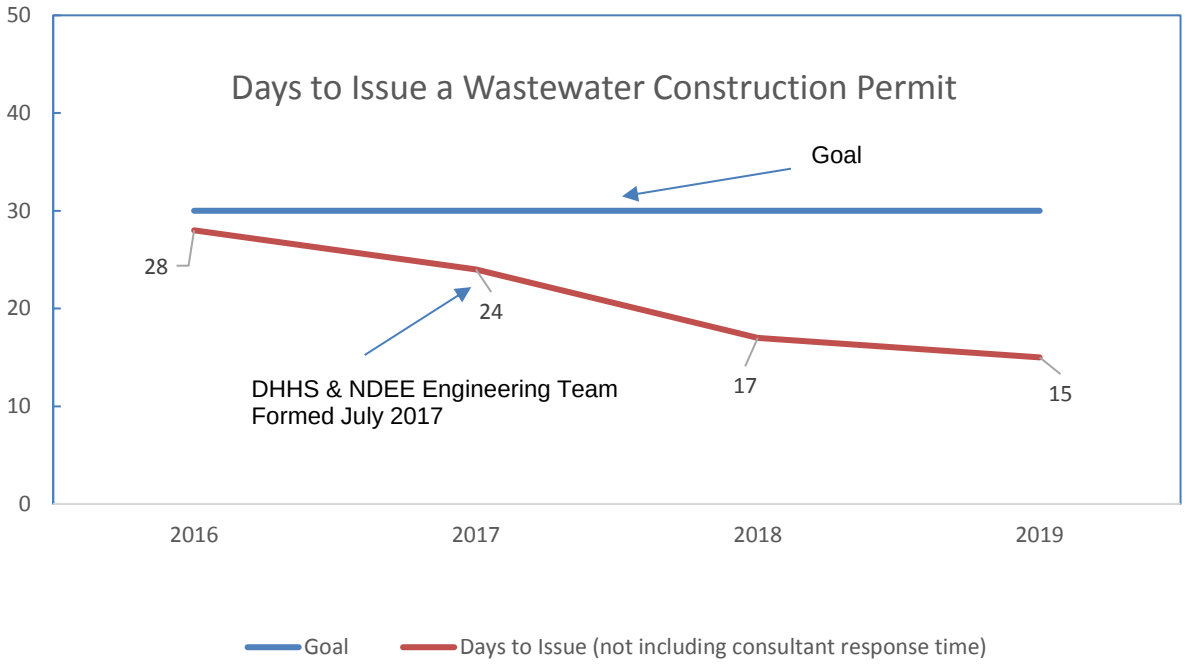
Engineering Programs

In July 2017, NDEE and the Nebraska Department of Health and Human Services (DHHS) announced a Memorandum of Agreement to improve coordination of Safe Drinking Water Act and Clean Water Act programs. Through the agreement, 8 DHHS staff in the engineering program were moved to shared office space with NDEE wastewater engineering staff. The goal is to have the two

engineering programs integrate into a team to better serve the communities and citizens of the state. The focus of this re-location of the Drinking Water engineering staff has been to enhance communication and integrate the state's services to communities. Locating staff together better serves Nebraska communities in addressing their water and wastewater infrastructure needs by enhancing state agency coordination. The agencies have focused on cross-training staff between the NDEE and DHHS engineering programs to build resiliency and ensure complete and timely review of applications and coordinated site assistance.

Wastewater Engineering

The engineers in the wastewater division administer Nebraska's construction permit program for wastewater facilities built in the state. Industries, commercial facilities, and municipal utilities are required to submit the plans and specifications for their projects to NDEE for review and approval. The construction documents are reviewed to make sure that the collection systems and treatment facilities will function properly and protect the public and the environment from adverse effects. During FY2019, 236 applications for wastewater projects were received and 239 projects were approved. There was one application withdrawn. The cross-training between NDEE and DHHS engineers has improved timeliness of wastewater construction permits as pictured in the graph below:



Nebraska's design standards for wastewater facilities are found in NDEE *Title 123 -- Rules and Regulations for the Design, Operation and Maintenance of Wastewater Works*. These standards are updated periodically to keep Nebraska in agreement with regional standards. The state's design standards are written to encourage the use of proven technologies, but have also allowed the use of innovative designs where they are appropriate. In June 2019, the NDEE proposed updates to Title 123 to the Environmental Quality Council. The majority of the proposed changes were to eliminate duplicative language and provide clarity to the reader. One exemption was removed which did not require a construction permit for pretreatment facilities if the facility discharged to a public owned treatment works in another state.

Drinking Water Engineering

The Drinking Water Engineering Section provides engineering plan review; issuance of construction permits; inspection of newly constructed projects for issuance of approvals for placement into service; technical assistance and advisory contacts with owners/operators of public water systems, consulting engineers, state, federal and local officials, organizations, and the general public in matters relating to siting, design, construction, maintenance, and operation of public water systems. In addition to public water systems, the program provides similar services for all new and substantially modified public swimming pools and spas.

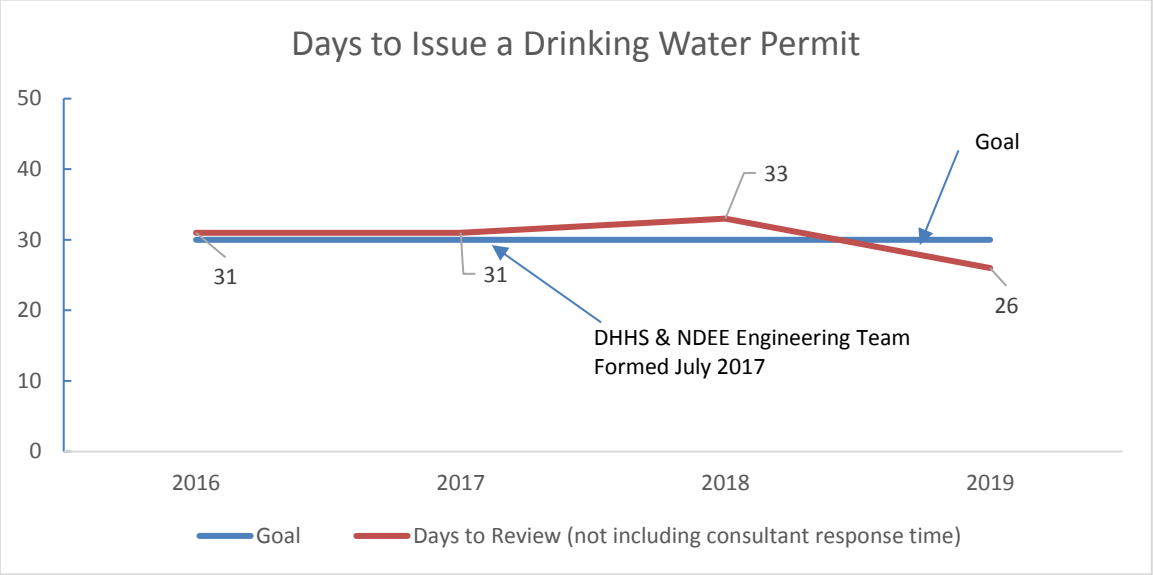
Alliance water tower

On April 4, 2010, Title 179 NAC 7, Siting, Design and Construction of Public Water Systems -- became effective. As a result, public water systems can enter into a 3-year agreement to construct water distribution main projects without having to submit plans and specifications to DHHS for review and approval. These systems are subject to an annual audit by the Drinking Water Engineering Section as a condition of the agreement. As of December 31, 2018, a total of 23 public water systems had entered into a 3-year agreement with the DHHS.

The table below details the drinking water engineering activities for FY2019:

Drinking Water Engineering Activities	Number
Water Projects Received for Review and Approval	171
Water Projects Inspected	124
Engineering Reports for Water System Improvements Evaluated	23
New Water Well Sites Evaluated	7
Three-Year Agreements for Distribution Main Projects—Annual Audits Completed	26
New/Modified Swimming Pool/Spa Projects Received for Review and Approval	66
Pool/Spa Construction Projects Inspected	46

As with the wastewater engineering program, the drinking water engineering program has experienced improved timeliness as a result of the cross-training between NDEE and DHHS engineers:



National Pollution Elimination System (NPDES) and Related Programs

The Water Permits Division administers permitting programs that regulate point source dischargers of water pollutants, including:

- **The National Pollutant Discharge Elimination System (NPDES) Program**, which is responsible for regulating discharges of pollutants to Waters of the State in order to maintain and protect the water quality of Nebraska's streams, lakes, rivers, and groundwater. NPDES programs also include:
    - **Combined Sewer Overflows**, which addresses those municipalities that have combined storm water and wastewater sewer systems. Currently, the City of Omaha is the only municipality operating a combined sewer in the State.
    - **Wastewater Treatment Sludge and Bio-solids Disposal**, which are requirements for treatment and disposal of municipal and industrial wastewater sludges and bio-solids.
    - **Storm Water Permit Program** – This permit programs involves: 1) Construction sites of a specific size; 2) the Municipal Separate Storm Sewer System permits for medium and large municipalities; 3) Industrial facilities.

- **The Nebraska Pretreatment Program** functions to protect communities' collection and treatment system assets from damage or overloading by industries**.**

Activities include issuing permits to minimize, monitor, and limit pollutants in wastewater and storm water discharges, and evaluate compliance with the permits and other applicable regulatory requirements of the programs and provide assistance to the regulated community.

NPDES Permits

Anyone who directly discharges pollutants to Waters of the State is required to obtain a permit. NPDES permits control pollutant discharges by establishing wastewater limitations for pollutants and/or requiring permittees to maintain certain operational standards or procedures. Permittees are required to verify compliance with permit requirements by monitoring their wastewater, maintaining records, and/or filing periodic reports.

NDEQ is responsible for developing and issuing NPDES permits, and for ensuring that permitted facilities comply with permit requirements. The regulatory basis for this program is through an Environmental Protection Agency (EPA) delegation agreement with the Department and NDEE *Title 119 - Rules and Regulations Pertaining to the Issuance of Permits under the National Pollutant Discharge Elimination System.* The Nebraska NPDES program encompasses a number of different types of discharges including: municipal, commercial and industrial wastewater discharges; livestock waste control; industrial discharges to public wastewater treatment systems (also known as the Nebraska Pretreatment Program); municipal combined sanitary and storm sewer overflows (CSO); and construction, industrial, and municipal storm water discharges. Graphs on the next page show distribution of permits issued to various types of NPDES dischargers. Livestock NPDES permits may be found in a separate section.

Most NPDES permits limit the discharge of pollutants by establishing effluent limitations for specific pollutants such as carbonaceous biochemical oxygen demand, total suspended solids, and ammonia among others. The permittee is then responsible for testing their wastewater discharge to ensure that the limits are not exceeded. Permits may also limit toxicity in effluents and permittees may be required to demonstrate that their wastewater is not toxic to aquatic organisms (e.g., daphnia or fathead minnows). Permits may also require development of Best Management Practice Plans to minimize or control pollutant discharges.

The permit development process involves identifying the pollutants of concern, and then developing permit limits based upon the more stringent of either technology-based standards or water quality based standards. Technology-based standards reflect effluent quality that can be achieved using treatment technology that is available to the permittee. NDEQ Title 119 sets forth technology-based standards for municipal facilities and many types of industrial facilities. Technology-based standards can also be developed on a case-by-case basis when necessary.

Water quality based limits are the limits necessary to meet the in-stream water quality standards established in NDEQ *Title 117 - Nebraska Surface Water Quality Standards*. In some instances, where a surface water/groundwater interconnection may be of concern, NPDES permit limits may be based upon NDEQ *Title 118 - Groundwater Quality Standards and Use Classification*.

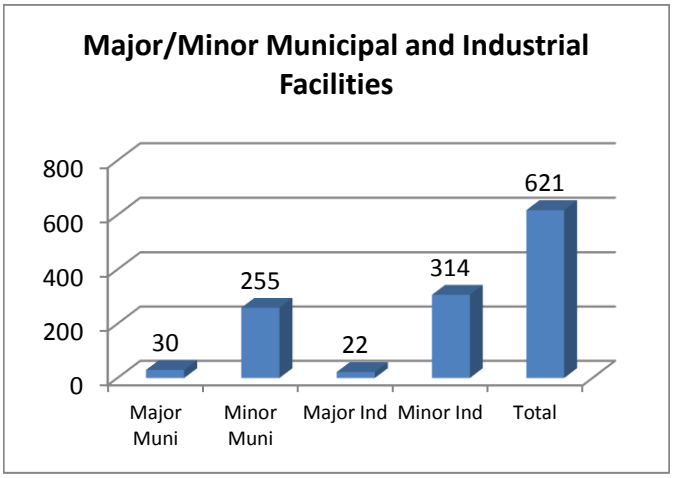
Permits may be developed and issued on an individual site-specific basis, or they may be developed and issued to apply to facilities with similar activities or effluent characteristics. These two types of permits are respectively referred to as individual permits and general permits. To date, the department has developed and issued general permits for the following activity categories: hydrostatic testing, dewatering, land application of concrete grooving/grinding slurry, pesticides applications to, over, and near Waters of the State, gasoline contaminated groundwater remediation projects, petroleum product contaminated groundwater remediation projects, construction site storm water, and industrial site storm water. Municipal Separate Storm Sewer System (MS4) permits have been issued to entities, including metropolitan areas and counties that meet the criteria of the NPDES Storm Water Program.

There are 617 facilities with discharge authorizations under individual permits (municipal, industrial and pretreatment), and 27 municipal storm water permits (MS4). There are nearly 2,600

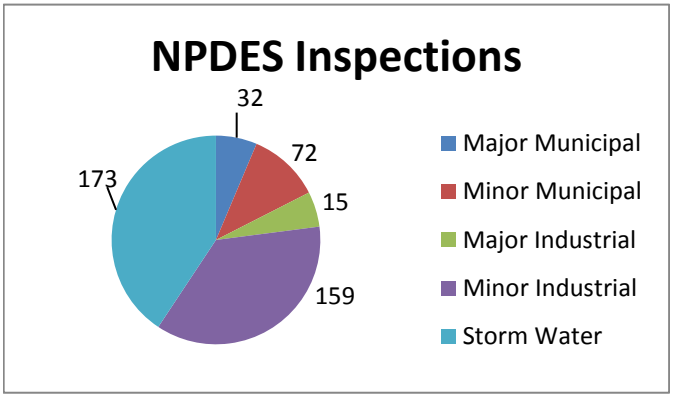
active facilities authorized to discharge under other general permits. The general permits include 1,542 active authorizations under the construction general storm water permit, 126 dewatering including Omaha, 46 hydrostatic testing, 850 industrial storm water, 17 pesticide, and 15 Treated Ground Water Remediation Discharge sites.

Municipal and Industrial Facilities

Industrial and municipal facilities are both grouped as major or minor facilities based upon their size and/or their potential to impact the receiving stream. The chart titled "Major/Minor Municipal and Industrial Facilities" provides a numeric break down of these types of facilities.



Municipal and industrial facilities are required to verify compliance with numeric permit limits by monitoring their effluents (i.e., self-monitoring). Monitoring frequency can vary from daily to annually depending upon the pollution and impact potential of the facility. The facility must report monitoring results to NDEE; typically this is done on a quarterly basis. However, monitoring results that indicate non-compliance with permit requirements must be reported verbally within 24 hours. Records of all monitoring activities must be kept for a period of three years.



The Section verifies compliance through a variety of activities including reviewing discharge monitoring reports, following up on complaints and incident reports, conducting on-site inspections, and performing effluent monitoring inspections. Inspections are planned and conducted to align with the federal fiscal year.

During on-site inspections, section personnel walk through the facility and review operational procedures and records. Major industrial, major municipal, and pretreatment facilities receive annual on-site inspections. The priority of minor facilities inspections is based on discharge compliance histories, incident reports and complaints. Minors are inspected once every five years at a minimum. Inspectors performed 451 NPDES inspections in Fiscal Year 2019. A breakdown of those inspections is provided in the chart above. The minor industrial inspections include 118 pretreatment inspections. During selected effluent monitoring inspections, effluent samples are collected and analyzed by the Department to compare with self-monitoring results. Facilities selected for effluent monitoring inspections are chosen based upon pollution potential, past compliance or incident report histories, complaints, and/or Basin Management Approach priorities.

Data generated by facility monitoring and NDEE on-site and effluent monitoring inspections are reviewed and entered into the federal Integrated Compliance Information System (ICIS) computer database. This database is used to generate facility reports and review facility compliance history.

In addition to inspections, NDEE provides permit assistance visits to help permittees better understand the requirements in their permits and help identify problems before they become significant noncompliance. These visits can be requested by the permittee or offered by NDEE. NDEE conducted 13 assistance visits in the 2019 Fiscal Year.

Combined Sewer Overflow Program

The City of Omaha has combined sewers that are subject to storm-induced bypasses of untreated wastewater. Many of Omaha's systems were built prior to the existence of secondary sanitary wastewater disposal standards. When storm or snow melt runoff is occurring, these systems may become hydraulically overloaded and excess water flows bypass the treatment system. Untreated wastewater is discharged into the receiving stream when bypasses occur.

The City and the Department work within the framework of the Clean Water Act, a consent Order initiated in 2007, and the City's Long Term Control Plan (LTCP). The projects included in the LTCP span through 2037 and are estimated to cost over $2 billion. The goal of the projects is to reduce or eliminate combined sewer overflows and comply with State and Federal regulations. The City has completed 36 of the projects identified in the LTCP. The order was amended in January 2018 to allow for evaluation of existing and future CSO improvements. The evaluation will help determine what efforts have been the most or least effective meeting permit requirements, provide socio-economic value to neighborhoods, improve the bid process, and improve value engineering for projects.

The City of Omaha and NDEQ continue to work cooperatively on evaluating and implementing long term solutions to protect water quality, comply with the CSO requirements of the Clean Water Act, and minimize the financial impacts to the most vulnerable citizens in the community. The 2019 flooding continues to impact this progress. The NDEE and the City are working to determine the latest impacts and the path forward.

The City provides updates and encourages public involvement with its CSO program. This can be viewed on the City's website at http://omahacso.com/.

Wastewater Treatment Sludge and Bio-solids Disposal

Disposal requirements for municipal and industrial wastewater treatment sludges or biosolids can be incorporated into NPDES permits. These sludge disposal requirements assure that sludges or biosolids are treated and disposed in a manner that is environmentally sound and protective of human health. Beneficial use through the land application of biosolids, is an effective management tool.

On Feb. 19, 1993, the EPA published the federal sludge regulations under 40 CFR 503. Under these regulations, an estimated 330 municipal facilities in the state have sludge monitoring requirements. These requirements include metal and nutrient content analyses; improved records for tracking the amount of sludge and metals applied to each disposal site, and cumulative disposal limits. The Department has not sought delegation of this program from the EPA. The program is managed out of the EPA Region 7 office in Lenexa, KS. NDEQ provides guidance for municipalities, approves land application sites, and provides permit language to assist with biosolids program compliance.

Storm Water Program

In compliance with federal regulations, the NPDES Storm Water Programs regulate the discharge of pollutants in storm water from certain construction sites, industrial facilities and municipal storm sewers. Federal Storm Water regulations determine the threshold for coverage of construction sites at one acre or more; or sites that are less than one acre if they are part of a common plan of development or sale. Industrial facilities include a number of different types of facilities in addition to typical process industries (e.g., landfills, wastewater treatment sites, recycling centers, scrap yards, mining operations, transportation facilities, and hazardous waste facilities). These regulations also determine the number of municipalities and urban areas that are subject to the NPDES program for storm water discharges.

Two general permits have been issued to provide coverage for industrial facilities and construction sites. Both of these general permits require the permittee to develop Storm Water Pollution Prevention Plans to control and reduce the discharge of pollutants. Since FY2017, an online application processes is utilized for the Construction Storm Water General Permit that streamlines the issuance of coverage to applicants. This online process coordinates with the Nebraska Game and Parks Commission and facilitates endangered and threatened species reviews, reducing the time and paperwork needed. The City of Lincoln now shares a construction storm water permitting and records system with the NDEE. This increases communication and efficiency with the State, City, and permitted community.

Urbanized areas are subject to the Municipal Separate Storm Sewer System (MS4) Program. Currently, permitted urbanized areas in Nebraska include the cities of Lincoln and Omaha, Douglas, Sarpy, and Dakota Counties, the communities of Beatrice, Columbus, Fremont, Grand Island, Hastings, Kearney, Lexington, Norfolk, North Platte and Scottsbluff. The program also requires coverage for the University of Nebraska, Lincoln and Omaha; the Nebraska Department of Transportation, and Offutt Air Force Base. The NDEE works with individual permittees and organizations, like Nebraska H2O and the Nebraska Floodplain & Stormwater Managers Association, to conduct outreach. The NDEE also evaluates the individual storm water management plans provided by permittees and communicates if these plans meet requirements. This can also include site visits throughout the year to evaluate implementation of the plans.

Nebraska Pretreatment Program Permits

The Nebraska Pretreatment Program functions to protect municipal wastewater collection and treatment systems from damage or overloading by industrial dischargers. The pretreatment regulations are found in Title 119. The rules and regulations set forth prohibited discharge standards that apply to all industrial users of publicly owned wastewater treatment facilities and require permits for significant industrial users. The significant industrial users are determined by one of several means: 1) the existence of an industrial category for which pretreatment discharge standards are established in NDEQ Title 119; 2) the volume or strength of the wastewater discharged from the facility; or 3) the potential of the industrial user to adversely affect the wastewater collection or treatment facilities.

The authority for establishing the Pretreatment Program is derived from the NPDES program requirements set forth in Section 402 of the Federal Clean Water Act. The issuance procedures and general format of Pretreatment Program and NPDES permits are very similar. Permittees are required to carry out self-monitoring activities, maintain records and submit periodic reports. Compliance activities include report reviews, on-site inspections and compliance monitoring inspections. Compliance data are entered into the national database, ICIS, to facilitate compliance review activities.

Although the Pretreatment Program is really a subprogram of the NPDES program, administration of this program requires more coordination and cooperation with local municipal officials. To accomplish this, the Department has entered into Memorandums of Agreement (MOAs) with 11 communities describing respective city and state responsibilities. The agreements vary in nature depending on the size and capabilities of the community. Omaha and Lincoln are the most active municipal partners, accepting responsibility for a large variety of activities including facility sampling, inspections, complaint investigations, permit reviews, and industrial user technical assistance. Other communities rely more heavily upon the State for compliance inspections and technical reviews. However, all cities with agreements conduct initial complaint or incident investigations, report significant incidents to the NDEE and assist in permit development by reviewing draft permits. The NDEE is working with communities throughout the state to get them more involved in the pretreatment program and to improve cooperative efforts in this program.

State Revolving Loan Fund Programs

The Water Permits Division's Financial Assistance Section administers distribution of state and federal assistance for the Clean Water State Revolving Loan Fund and the Drinking Water State Revolving Loan Fund.

Clean Water State Revolving Loan Fund

The Nebraska Clean Water State Revolving Loan Fund (CWSRF) program provides low-interest loans and small community matching grants to municipalities for construction of wastewater treatment facilities and sanitary sewer collection systems to alleviate public health and environmental problems. The loan principal repayments go into new loans, and interest earnings on the Fund are used to pay off the state match bond that are issued annually and to make new loans. A small administrative fee are charged to each loan made through the CWSRF. These funds pay for program operating costs including day-to-day program management activities. Also included are other costs associated with debt issuance, financial management, consulting, and support services necessary to provide a complete program.

The CWSRF program receives an annual federal EPA capitalization grant. A 20% state match, required to obtain the federal grant, is provided through Nebraska Investment Finance Authority (NIFA) bond issues. The EPA awarded the 2018 capitalization grant, in the amount of $8,070,261, in August of 2018. The required match of $1,638,400 was provided through bonds and cash. In State Fiscal Year (SFY) 2019, the CWSRF funded projects totaling $8,749,528 in loans and $771,302 in loan forgiveness and grant funds.

Additional Subsidy Awards

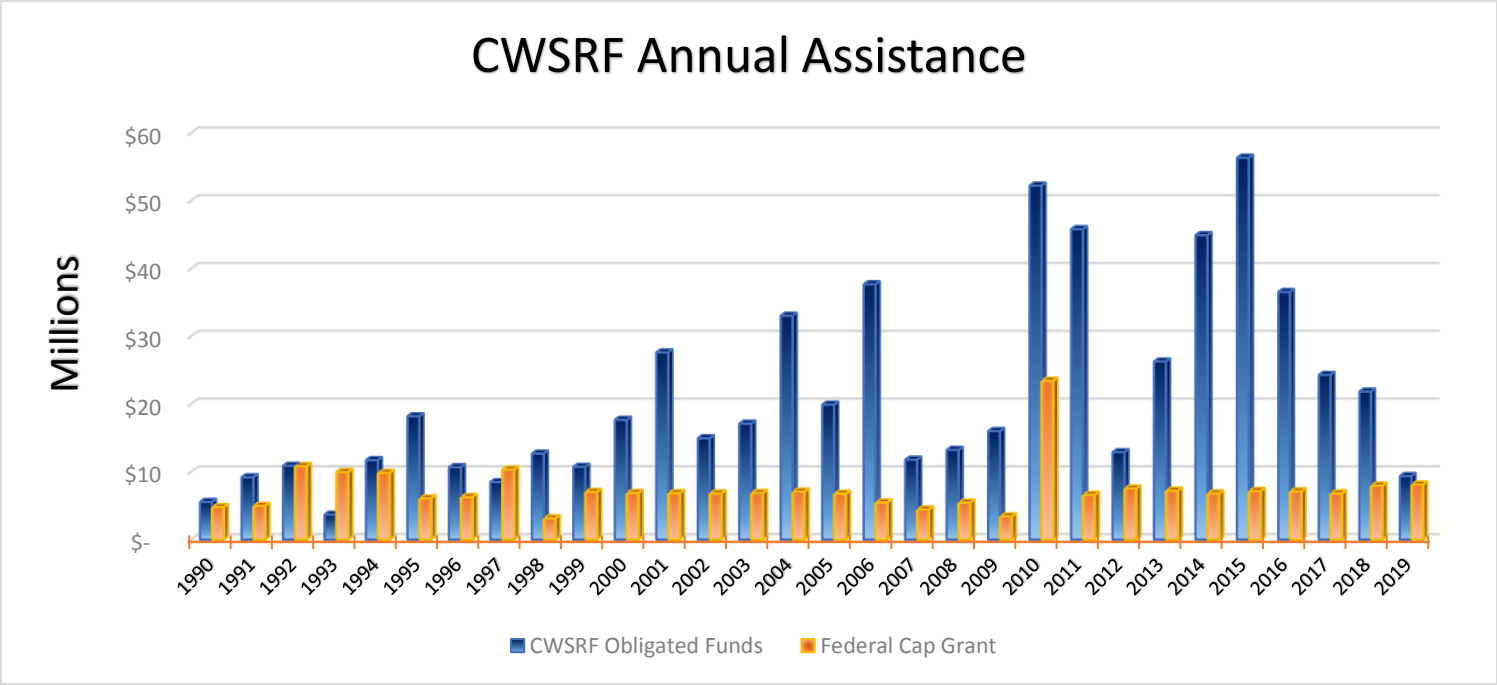
Many small municipalities find that the development and construction of needed projects are too costly without the additional grant subsidy provided concurrent with the CWSRF loan. To assists those communities with project costs, the CWSRF provides additional subsidy awards to financially distressed municipalities with a population of 10,000 or less. One available grant is the Project Planning Activities and Report Grant (PPAR). This grant is funded through the Administrative Cash Fund and awarded to small communities to identified wastewater treatment facility project needs. After the project is identified there is another grant available to communities in concurrent with a construction loan called the Small Town Grant (STG). This grant is also funded through the Administration Cash Fund and can provide subsidy of the project cost of up to $250,000 per project. This grant has provided $9.65 million in grant funding for 81 projects concurrent with a CWSRF loan since the start of the program.

Loan forgiveness is another form of subsidy that is funded through the CWSRF program by reserving up to 10% of the capitalization grant with a maximum award of $150,000 per project. Similar to the PPAR and STG, borrowers must show financial hardship to be eligible for this grant.

Total CWSRF Assistance Provided

After 30 years of activity, the Fund's Net Assets have reached $323.6 million. Since its inception, the CWSRF has provided loans for 309 projects with a cumulative loan award amount of $575.4 million.

The graph below provides the total assistance provided by the Clean Water program per year since inception.



Drinking Water State Revolving Loan Fund

The Nebraska Drinking Water State Revolving Loan Fund (DWSRF) program provides low-interest loans and grants to owners of public water systems. Similar to the CWSRF loan program, loan principal repayments go into new loans, and interest earnings on the Fund are used for revenue bonds purchased for state match, a requirement of the capitalization grant, and to make new loans. There is also a small administration fee charged to each loan of the DWSRF that goes to program management activities.

Where the DWSRF is different from the CWSRF is that there is an agreement between the NDEE and the Nebraska Department of Health and Human Services, Division of Public Health (NDHHS-DPH), to operate the program and administer the DWSRF funds. In addition, the DWSRF is also unique in that loans may be awarded to privately owned public water supplies. Other program differences include set-asides for program administration, technical assistance, wellhead protection, capacity development, and operator certification. After 22 years of activity, the Fund's Net Assets have reached $204.9 million.

DWSRF Set-Aside Funds

The Small System Technical Assistance set-aside (up to 2% of the capitalization grant) provides technical assistance to Public Water Systems (PWS) serving a population of 10,000 or less. This is accomplished through contracts with organizations with expertise in dealing with small systems and is coordinated by the NDHHS-DPH.

In SFY2019, under the Local Assistance and Other State Programs set-aside (15%), four agreements for preliminary engineering reports totaling $60,000 were awarded to high priority ranked communities to address public health issues associated with public water supplies. In

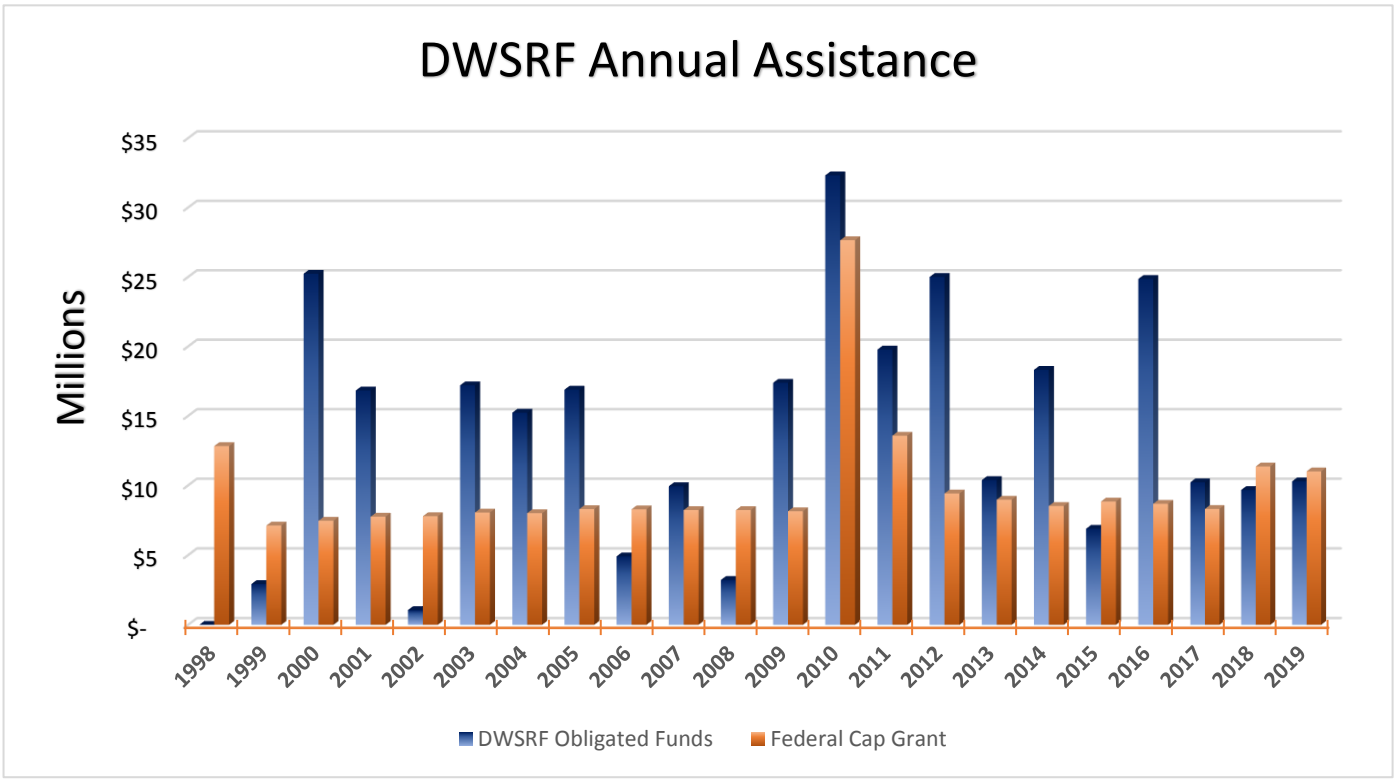
addition, the communities of Creighton, Dodge, Plainview, and West Knox Rural Water District were selected to receive Source Water Grants totaling approximately $150,000 from the 2018 Capitalization Grant.

The State may use up to a total of 10 percent of the Capitalization Grant for the PWS Program Administration set-aside. NDHHS-DPH used $1,234,500 from the FFY 2018 Capitalization Grant to administer Nebraska's Public Water Supply Program during SFY 2019. That amount included $130,900 of authority that had been previously reserved from past capitalization grants.

The 2018 DWSRF capitalization grant allocation totaled $11,036,000. In SFY 2019, the DWSRF entered into eleven binding commitments to communities, including three amendments to already existing loans, to provide financial assistance to PWS projects totaling $10,286,699, of which disadvantaged communities received $1,798,941 in forgiveness funding. The Federal Fiscal Year (FFY) 2018 capitalization grant required that a minimum of 20% of the grant be reserved for additional subsidization (e.g., principal forgiveness).

In addition, from the FFY 2018 capitalization grant $2,130,220 was allocated to the 2% ($220,720), 10% ($1,234,500), and 15% ($675,000) set-asides. More details on the programs associated with these set-asides can be found in the Drinking Water State Revolving Fund Annual Report for SFY 2019 on our website at http://deq.ne.gov/.

The graph reflects the cumulative loan assistance of DWSRF.



SRF Assistance by District

	CWSRF Assistance			DWSRF Assistance			Total SRF Assistance		
District	Below Market Interest Loan	CWSRF Grant Assistance	CWSRF Total Assistance	Below Market Interest Loan	DWSRF Grant Assistance	DWSRF Total Assistance	Total Below Market Loan	Total Grant Assistance	Total Assistance
1	$8,583,858	$926,436	**$9,510,294**	$13,042,084	$2,898,203	**$15,940,287**	$21,625,942	$3,824,639	**$25,450,581**
2	$13,173,808	$650,919	**$13,824,727**	$9,574,715	$540,935	**$10,115,650**	$22,748,523	$1,191,854	**$23,940,377**
3	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
4	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
5	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
6	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
7	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
8	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
9*	$140,619,110	$1,908,000	**$142,527,110**	$6,552,655	$1,272,182	**$7,824,837**	$147,171,765	$3,180,182	**$150,351,947**
10	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
11	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
12	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
13	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
14	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
15	$3,874,588	$120,577	**$3,995,165**	$2,984,156	$772,916	**$3,757,072**	$6,858,744	$893,493	**$7,752,237**
16	$15,528,483	$2,008,079	**$17,536,562**	$17,422,618	$1,340,896	**$18,763,514**	$32,951,101	$3,348,975	**$36,300,076**
17	$22,367,736	$1,523,766	**$23,891,502**	$6,962,528	$557,664	**$7,520,192**	$29,330,264	$2,081,430	**$31,411,694**
18	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
19	$11,663,750	$189,394	**$11,853,144**	$2,273,161	$125,000	**$2,398,161**	$13,936,911	$314,394	**$14,251,305**
20	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
21	$750,000	$250,000	**$1,000,000**	$0	$0	**$0**	$750,000	$250,000	**$1,000,000**
22	$4,327,139	$1,086,404	**$5,413,543**	$5,537,187	$1,614,846	**$7,152,033**	$9,864,326	$2,701,250	**$12,565,576**
23	$25,826,664	$833,963	**$26,660,627**	$4,049,050	$814,955	**$4,864,005**	$29,875,714	$1,648,918	**$31,524,632**
24	$27,798,199	$524,400	**$28,322,599**	$15,759,160	$4,025,420	**$19,784,580**	$43,557,359	$4,549,820	**$48,107,179**
25	$0	$0	**$0**	$2,056,127	$0	**$2,056,127**	$2,056,127	$0	**$2,056,127**
26	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
27	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
28	$0	$0	**$0**	$14,977,829	$0	**$14,977,829**	$14,977,829	$0	**$14,977,829**
29	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
30	$5,274,475	$334,478	**$5,608,953**	$9,916,128	$1,905,104	**$11,821,232**	$15,190,603	$2,239,582	**$17,430,185**
31	$0	$0	**$0**	$0	$0	**$0**	$0	$0	**$0**
32	$7,322,713	$1,502,949	**$8,825,662**	$6,226,189	$1,468,291	**$7,694,480**	$13,548,902	$2,971,240	**$16,520,142**
33	$9,693,048	$75,989	**$9,769,037**	$1,663,361	$289,293	**$1,952,654**	$11,356,409	$365,282	**$11,721,691**
34	$13,352,041	$757,551	**$14,109,592**	$6,109,170	$1,360,906	**$7,470,076**	$19,461,211	$2,118,457	**$21,579,668**
35	$37,338,756	$0	**$37,338,756**	$0	$0	**$0**	$37,338,756	$0	**$37,338,756**
36	$13,355,804	$2,611,798	**$15,967,602**	$6,559,816	$660,564	**$7,220,380**	$19,915,620	$3,272,362	**$23,187,982**
37	$29,389,328	$0	**$29,389,328**	$15,318,375	$223,869	**$15,542,244**	$44,707,703	$223,869	**$44,931,572**
38	$9,818,320	$1,697,932	**$11,516,252**	$2,046,701	$318,126	**$2,364,827**	$11,865,021	$2,016,058	**$13,881,079**
39	$7,450,784	$100,000	**$7,550,784**	$859,653	$186,578	**$1,046,231**	$8,310,437	$286,578	**$8,597,015**
40	$8,038,867	$2,291,297	**$10,330,164**	$8,953,930	$2,387,352	**$11,341,282**	$16,992,797	$4,678,649	**$21,671,446**
41	$7,697,064	$1,213,004	**$8,910,068**	$6,933,602	$2,191,300	**$9,124,902**	$14,630,666	$3,404,304	**$18,034,970**
42	$18,064,666	$40,484	**$18,105,150**	$10,750,175	$737,046	**$11,487,221**	$28,814,841	$777,530	**$29,592,371**
43	$23,522,145	$2,314,344	**$25,836,489**	$7,791,151	$1,397,958	**$9,189,109**	$31,313,296	$3,712,302	**$35,025,598**
44	$28,069,565	$1,886,650	**$29,956,215**	$19,739,097	$1,694,631	**$21,433,728**	$47,808,662	$3,581,281	**$51,389,943**
45	$6,985,901	$0	**$6,985,901**	$0	$0	**$0**	$6,985,901	$0	**$6,985,901**
46*	$34,847,644	$1,250,000	**$36,097,644**	$0	$0	**$0**	$34,847,644	$1,250,000	**$36,097,644**
47	$14,392,211	$2,392,483	**$16,784,694**	$24,399,184	$3,843,862	**$28,243,046**	$38,791,395	$6,236,345	**$45,027,740**
48	$14,142,244	$991,959	**$15,134,203**	$7,688,598	$2,550,340	**$10,238,938**	$21,830,842	$3,542,299	**$25,373,141**
49	$12,160,210	$0	**$12,160,210**	$1,476,413	$0	**$1,476,413**	$13,636,623	$0	**$13,636,623**

**The data collected is from loan obligations and grants awarded to communities for SRF related projects. Grants include Loan Forgiveness, Small Town Grant (CW only), and Planning Grants.*

***For the cities of Omaha and Lincoln which have multiple districts in the area, District 9 was selected for Omaha projects and District 46 was used for Lincoln area projects.*

Nebraska's Public Water Systems

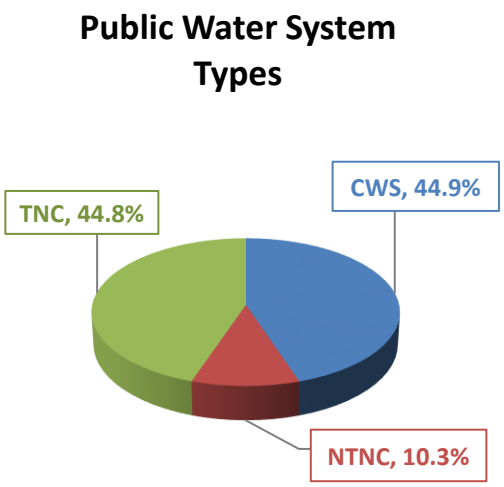
Population and Type of System

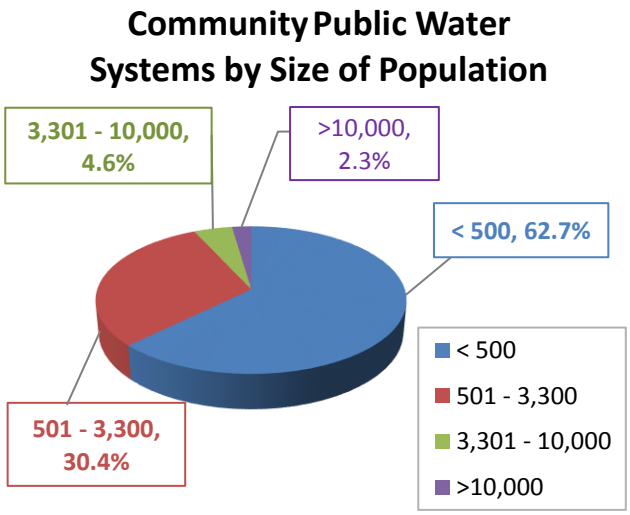
Nebraska public water systems can be broken down into categories based on the size of the population served and/or the type of population served.

Population	CWS	NTNC	TNC	Total Systems	Percentage*
< 101	104	75	513	692	51.3%
101-500	276	46	87	409	30.3%
501-1000	97	8	4	109	8.1%
1001-3300	87	8	0	95	7.0%
3301-10000	28	2	0	30	2.2%
10001-50000	11	0	0	11	0.8%
>50000	3	0	0	3	0.2%
TOTAL	606	139	604	1349	100%

**Based on approximate population*

CWS = Community ..... 606 systems
NTNC – Non-transient, non-community ..... 139 systems
TNC = Transient, non-community ..... 604 systems





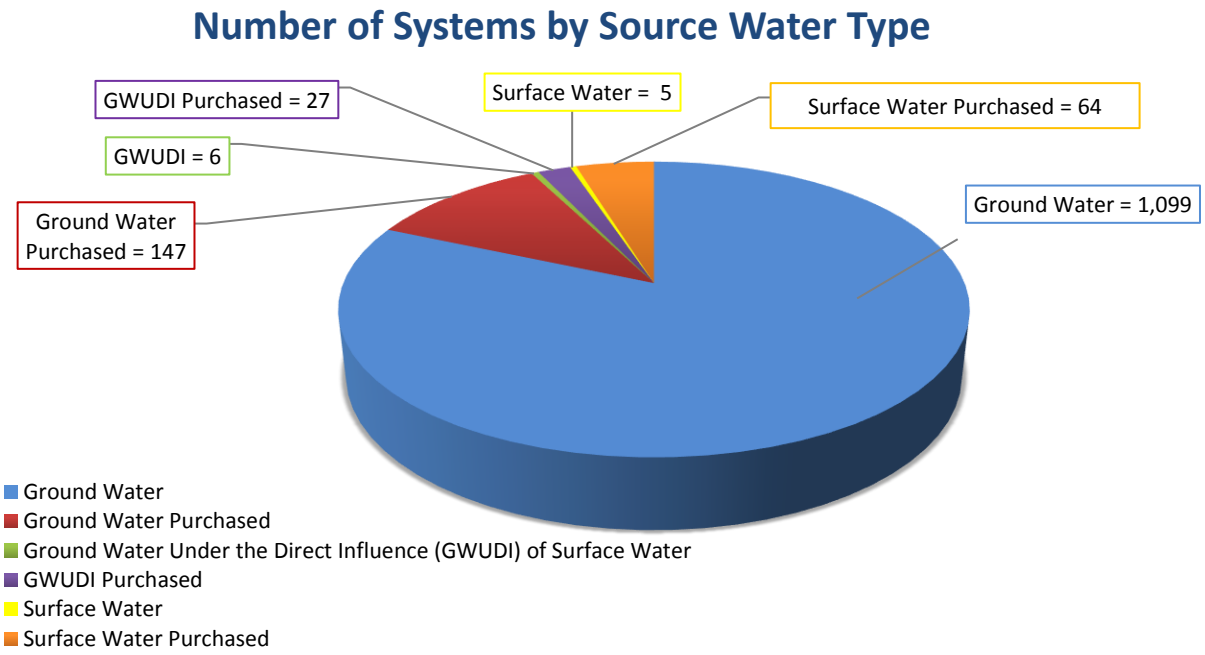
Approximately 80% of all Nebraskans get their water from a community public water system. Private domestic wells provide water for the remaining 20% of the overall State population.

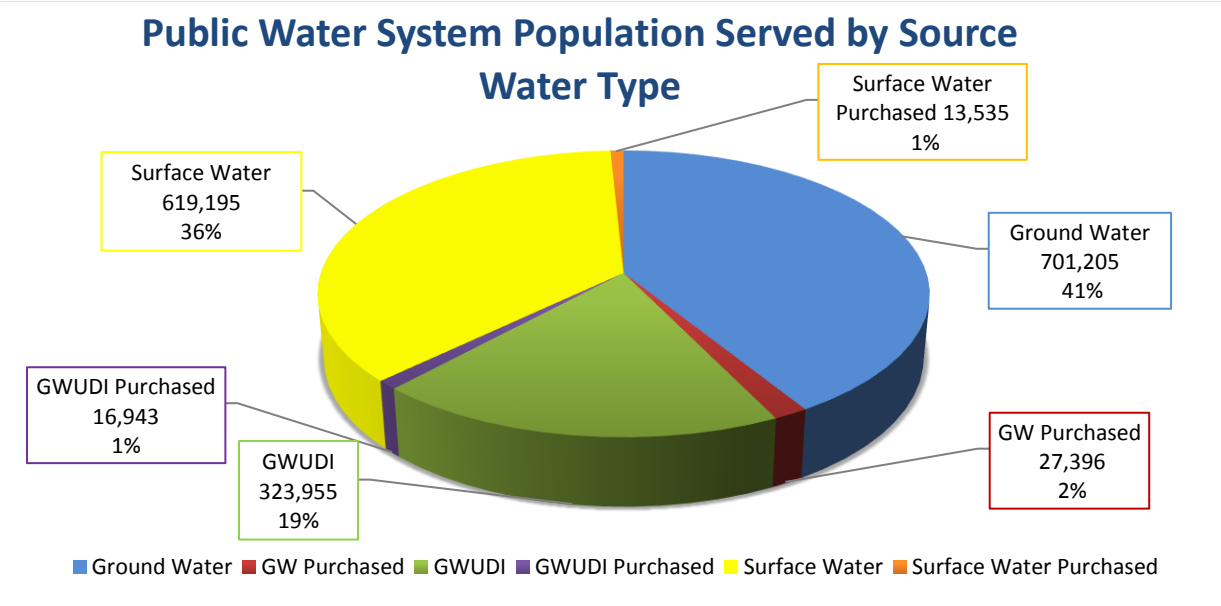
As you can see, over 60% of Nebraska's community water systems are below 500 people in size. Water systems with populations below 3,300 are considered to be "small systems" by the EPA. This makes Nebraska a predominantly small system state with 93.1% of all of the State's community public water systems serving 3,300 or fewer persons.

Public Water in Nebraska

The Drinking Water Program at the Department of Health and Human Services administers the State's regulations governing public water systems (Title 179 NAC 2 through 26), promulgated under the State's SDWA pursuant to and in accordance with the federal SDWA. EPA promulgates rules and sets standards in accordance with the federal SDWA, which was originally passed in 1974 and later amended in 1986 and 1996.

Public water systems provide water to approximately 80% of the people of Nebraska. Private domestic wells provide water for other 20% of Nebraskans. Most of the water Nebraskans drink is ground water and only five public water systems in the state obtain their drinking water from surface water. Another 64 systems purchase water from those five systems. In addition, 6 systems utilize ground water under the influence of surface water (GWUDI), and 27 additional systems purchase water from those six systems. The remaining 1,125 systems use ground water, and an additional 147 systems purchase their water from another ground water system.





**Percentages rounded to nearest 1%*

What Nebraska's Public Water System Program Does

The Drinking Water Program has 31 full time equivalent positions (FTEs). The Monitoring and Compliance Section has 9, the Engineering Section has 8, the Field Services and Training Section has 12, and two FTEs contribute to the administration of the program.

Field Services and Training Section

The Public Water System Field Services and Training (FS&T) Section encompasses four separate but related areas of responsibility:

1) Field services (inspections, operator assistance, etc.)
2) Training
3) Capacity development, and
4) Water system security

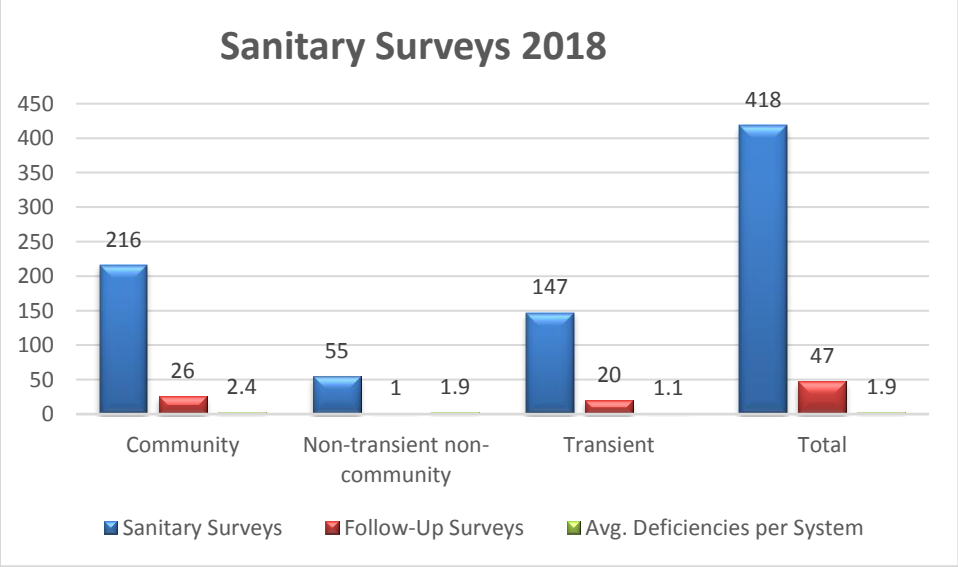
FS&T staff include a supervisor, eight field representatives, a training coordinator, a capacity development coordinator, and a staff assistant. FS&T staff conduct sanitary surveys, train public water system operators, attend and present information at continuing education programs for water operators, assist public water systems (PWSs) with Level 1 and Level 2 assessments, during emergency situations, and help public water systems to achieve or maintain adequate technical, financial, and managerial capacity. There are eight field areas with locations in North Platte, Grand Island, Norfolk, Blair, Nelson, Chadron and Lincoln to provide close contact and timely assistance to Nebraska's public water systems. The Norfolk office serves two field areas.

Field Services -- Sanitary Surveys

Routine sanitary surveys are conducted once every three years for community water systems (CWS) and non-transient non-community (NTNC) public water systems and once every five years for transient non-community (TNC) PWSs. A few of the items for which field personnel check are the presence of a properly licensed water operator in responsible charge, an emergency plan, and a cross-connection control program. When deficiencies are found, the system is notified of the needed improvements.

In 2018, field personnel conducted 418 sanitary surveys (216 community, 55 non-transient non-community, and 147 transient public water systems) and 47 follow-up surveys (26 community, 1 non-transient non-community, and 20 transient public water systems). A total of 791 deficiencies were found in 2018. This reflects an overall deficiency rate of 1.9 deficiencies per sanitary survey in 2018. There was an average of 2.4 deficiencies found in community systems, an average of 1.9 deficiencies found in non-transient non-community water systems, and an average of 1.1 deficiencies in transient water systems. No deficiencies were found in 173 (41%) sanitary surveys done in 2018. The number of deficiencies found in Nebraska's public water systems declined by 14% from 2017 to 2018.

Outside of sanitary surveys, field staff conduct site inspections for the location of new wells, in addition to assisting engineering services personnel in conducting construction inspections of public water system projects (such as the drilling of wells, the construction of treatment plants, and the erection of water towers) during construction and upon completion. When needed, field services staff provide public health advice concerning emergency situations associated with natural disasters or contamination of a public water system. As needed or upon request, they go out to communities to help public water system personnel identify potential causes of problems in their systems.



Level 1 & Level 2 Assessments

When public water systems have a confirmed presence of coliform bacteria, the Revised Total Coliform Rule (RTCR) requires that either a Level 1 or Level 2 assessment of the system be conducted. An assessment is an evaluation to identify the possible presence of sanitary defects, defects in coliform monitoring practices, and (when possible) the likely reason for the presence of coliform bacteria in the system. Any identified defects are required to be corrected.

A Level 1 assessment is triggered by the confirmed presence of only total coliform in the public water system. The public water system is responsible for completing a Level 1 assessment and submitting its findings to the DHHS for review. Then field staff are responsible for completing the review of a Level 1 assessment.

Level 2 assessments are triggered by either multiple Level 1 assessments within a running twelve-month period, or by the confirmed presence of *E. coli* in the system. The Level 2 assessment is conducted by field staff and provides a much more detailed evaluation of the public water system.

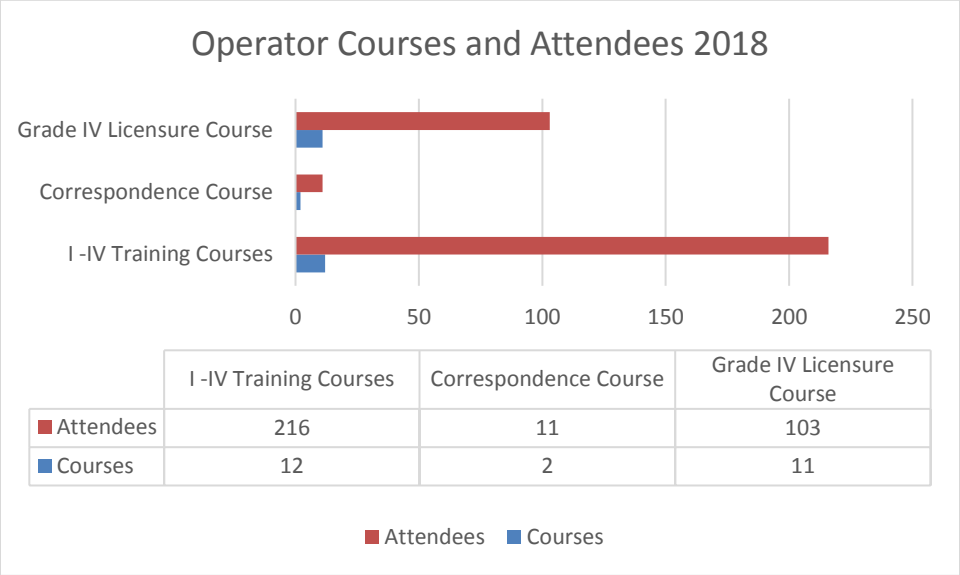
The Drinking Water Program maintains a number of hypochlorinators for temporary loan to public water systems when bacterial contamination is a source of concern. This assistance to communities in need of temporary chlorination of their water supplies has been very helpful in ensuring the safety of drinking water. When a power outage or source failure is involved, program staff also help systems locate equipment and supplies which may be needed. In general, the program's response to emergencies is limited to consultation and advice regarding actions to be carried out by the owners of public water systems.

In addition to the tasks mentioned above, the FS&T program has been actively enforcing water operator licensing standards through the issuance of fines against operators who are in responsible charge of their respective public water systems who allow their licenses to expire. Without a valid license, they are not allowed by regulation to be in responsible charge of or operate a public water system, and the DHHS has the ability to issue administrative penalties (fines) against such persons when they continue to be in responsible charge or operate without a valid water operator license. During 2018 no fines were issued to individuals for "Practice (Operating) Without a License."

Training

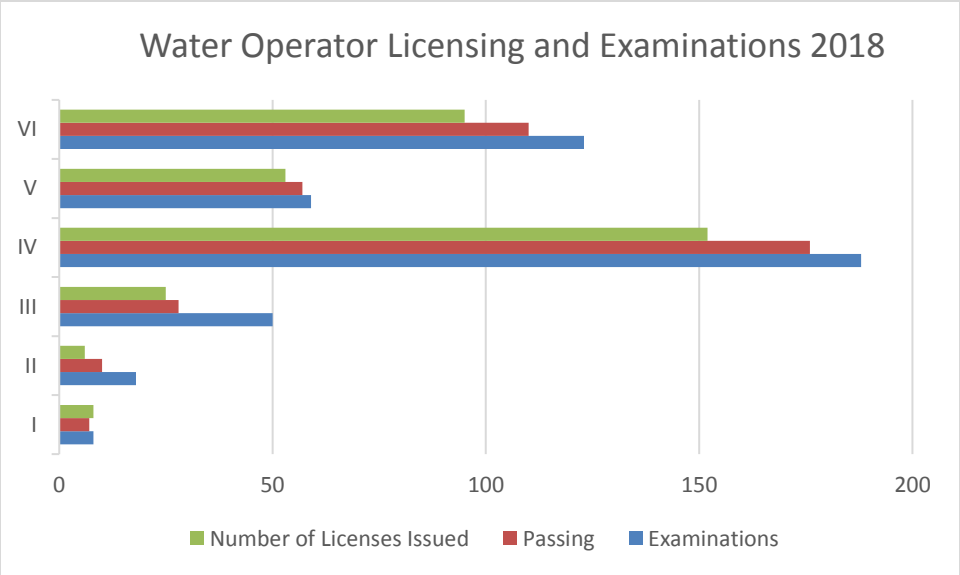
DHHS conducts emergency response training sessions around the state. This training focuses on the necessity of keeping a good working emergency response plan up-to-date and training all individuals who have a role in the plan.

In 2018, FS&T program personnel conducted 12 water operator training courses, Grades I through IV, with a total of 216 attendees. An additional 11 persons completed the correspondence course that is also offered to prepare for the Grade IV licensure examination. For Grade VI licensure (backflow preventer testing and repair), 11 courses were offered with a total of 103 attendees. For Grade V operators (transient systems only), there are no classroom courses. Training is obtained through a self-study process. Water operators are licensed only after successfully passing an exam. Examinations are offered following each training course and can also be scheduled individually.



The following table breaks down the number of licenses issued following examination at each grade level during 2018:

Grade	Examinations	Passing	Number of Licenses Issued
I	8	7	8
II	18	10	6
III	50	28	25
IV	188	176	152
V	59	57	53
VI	123	110	95



The Drinking Water Program and other training providers offered continuing education opportunities for water operators in 2018. Coordinated by the program, a group informally known as the Water Operator Training Coalition convened periodically in 2018 to identify training needs and to avoid conflicts in the scheduling of training opportunities. Members include the Nebraska Rural Water Association, the League of Nebraska Municipalities, the Midwest Assistance Program, Central Community College, and the Nebraska Section of the American Water Works Association. In 2018, as in past years, the Coalition produced a calendar identifying dates and locations of continuing education opportunities for distribution to licensed water operators.

A total of 126 workshops/seminars/conferences were offered in Nebraska in 2018 for the purpose of water operator continuing education. Of these, 42 focused primarily on backflow prevention continuing education for Grade VI operators.

Capacity Development

The Capacity Development Coordinator has been overseeing DHHS's 2% contracts with the various technical assistance providers – the 2% Team -- which consist of the same members as the Water Operator Training Coalition. The name comes from the 2% set-aside from the Drinking Water State Revolving Fund.

To provide a measurement for financial and managerial capacity for a project that has been funded by the State Revolving Fund Program, assessments need to be made on water systems prior to beginning any new construction. These initial assessments provide a basis whereby a determination can be made as to the financial and managerial capacity of the system, before work begins on the new project. Once the project has been completed and the system has been in operation for approximately one to two years, a follow-up assessment is done to show the improvement that has been accomplished with the funding that was provided. There was one initial assessment, and two follow-up assessments done in 2018.

A concerted effort has been made to educate water system operators regarding their role in developing and maintaining adequate capacity for their water systems. The Capacity Development Coordinator typically coordinates with DHHS's Water Operator Training Coalition partners to provide training to water operators. Due to unforeseen staffing issues, DHHS was not able to provide this training in 2018.

Ten board/council information sessions were held to advise members about the legal and fiduciary responsibilities that they have to assure adequate, safe water to their customers. A total of 62 board/council members attended, representing 10 community water systems.

The 2% Team provides continuing education for water operators, and also assists DHHS by providing technical, managerial and financial assistance to public water systems. The 2% Team made 277 contacts in 2018. These included assistance with the applications for funding from various sources, training manuals, and mentors from large systems to assist small systems, as well as several other activities. DHHS has found capacity development to be a proactive approach to helping systems.

Drinking Water Engineering Section

The Drinking Water Engineering Section provides engineering plan review; issuance of construction permits; inspection of newly constructed projects for issuance of approvals for placement into service; technical assistance and advisory contacts with owners/operators of public water systems, consulting engineers, state, federal and local officials, organizations, and the general public in matters relating to siting, design, construction, maintenance, and operation of public water systems.

The Nebraska Safe Drinking Water Act and regulations adopted thereunder require that plans and specifications for all major construction related to public water systems be prepared by a registered professional engineer and be approved by DHHS before construction begins. The law defines major construction as structural changes that affect the source of supply, treatment processes, or transmission of water to service areas, but it does not include the extension of service mains within an established service area.

Water system plan review was incorporated into state law to increase assurance that water source development, treatment, storage, and distribution facilities would be constructed or expanded in a manner contributing to the ability of the system to deliver safe drinking water. Emphasis is placed on encouraging long-term benefits from capital investment as opposed to temporary actions designed to eliminate an emergency situation. Engineering services are a significant factor in preventing the occurrence of contamination in the delivery of safe drinking water.

In 2018, DHHS received 178 sets of plans and specifications for the construction of water projects for review and approval. In addition, engineering staff conducted 170 inspections of constructed water projects.

On April 4, 2010, state regulations – Title 179 NAC 7, *Siting, Design and Construction of Public Water Systems* -- became effective. As a result, public water systems can enter into a 3-year agreement to construct water distribution main projects without having to submit plans and specifications to DHHS for review and approval. These systems are subject to an annual audit by the Drinking Water Engineering Section as a condition of the agreement. In 2018, 22 annual audits were completed and as of December 31, 2018, a total of 23 public water systems had entered into a 3-year agreement with the DHHS.

Drinking Water State Revolving Fund

The engineering staff also participates in the common pre-application review process for federal and state agencies' loan; grant programs for water and wastewater projects; and the Drinking Water State Revolving Fund (DWSRF) program activities. The DWSRF program is administered jointly by DHHS and the Nebraska Department of Environmental Quality (NDEQ).

At the beginning of the 2018 calendar year, the Drinking Water Engineering Section reviewed the responses from the annual DWSRF needs survey sent out to all public water systems the preceding fall. The returned surveys indicated 326 eligible projects with just over $970.5 million in infrastructure needs. The ranking system developed by DHHS was used to prioritize and establish the funding order for DWSRF projects. Historically public health was the primary ranking factor for forgiveness, but the number of communities needing to address those concerns continued to fall during the last fiscal year cycle. As a result, the program switched to primarily funding infrastructure replacement. Subsequent, the DWSRF closed 10 loans in 2018 for $16,276,316, with $2,919,864 of that provided in forgiveness assistance. In the fall of 2018, the Engineering Services staff started drafting the next Intended Use Plan (IUP), with a public water system needs

survey form mailed to all public water supply systems in concert with the clean water needs survey conducted by NDEQ's Clean Water SRF.

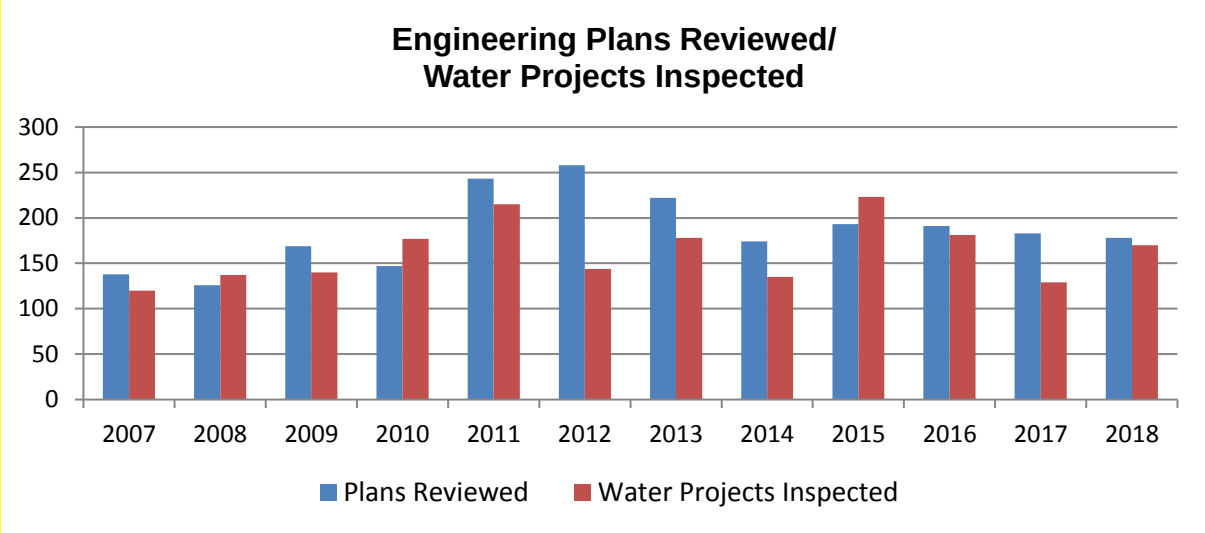
The Drinking Water Engineering Section staff also review and evaluate justifications provided by professional engineers for any new well site that does not meet the setback distances in Title 179 NAC 7. In 2018, a total of nine new well site justifications were reviewed and approved. In addition, the engineering staff also works with NDEQ and City officials in evaluating encroachment issues that may be of concern to existing public drinking water wells. One encroachment issue was evaluated and resolved.

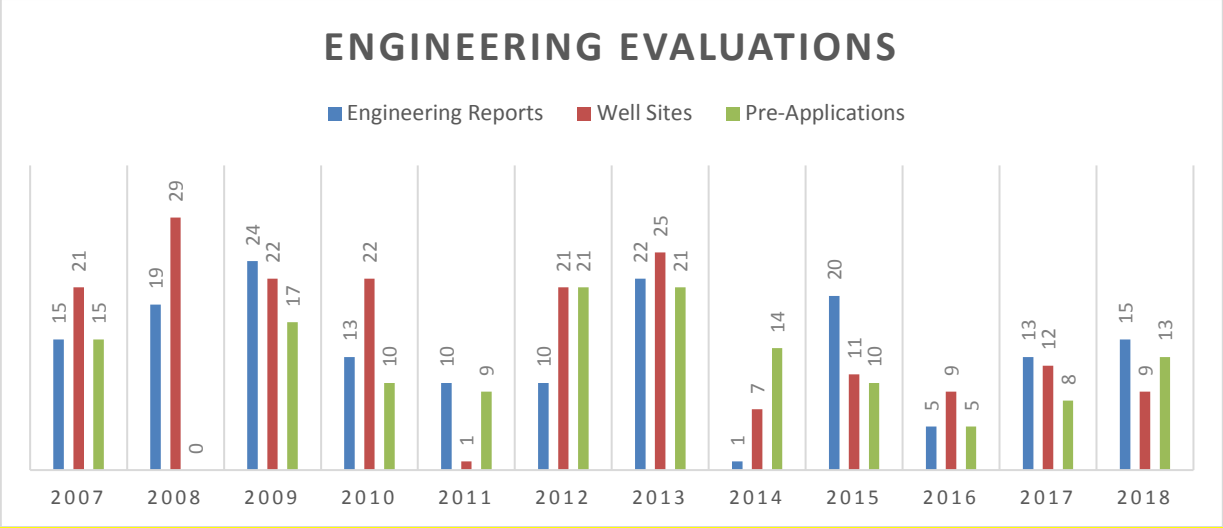
DHHS and NDEQ enter into a Memorandum of Agreement on July 2017.The DHHS Drinking Water Engineering Section now works closely with the NDEQ Water Division Technical Assistance Unit to facilitate administration and review of construction projects. This has allowed for cross-training, improved efficiency, a more complete understanding, and more effective support for the construction permitting process. The crossing training will be an on-going process.

In summary, the Drinking Water Engineering Section activities play a significant role in ensuring that public water systems in Nebraska provide safe drinking water to the public.

SUMMARY OF THE DRINKING WATER ENGINEERING SECTION ACTIVITIES
January 1, 2018 to December 31, 2018

ACTIVITIES	NUMBER
Water Projects Received for Review and Approval	178
Water Projects Inspected	170
Engineering Reports for Water System Improvements Evaluated	15
New Water Well Sites Evaluated	9
Common Pre-Applications for Water/Wastewater Projects for Federal and State Financial Assistance Reviewed	13
Operation and Maintenance Manuals for Drinking Water State Revolving Loan Funded Projects Reviewed	3
Three-Year Agreements for Distribution Main Projects—Annual Audits Completed	22
Encroachment Issues	1





Monitoring and Compliance Section

The Monitoring and Compliance (M&C) Section of the Drinking Water Program establishes monitoring schedules and reviews analytical results for contaminants in drinking water. In this review of analytical results, M&C personnel determine compliance with MCLs and issue appropriate enforcement actions, when necessary, to help a PWS return to compliance.

Monitoring and MCL Violations, and Assessments

There were no any waterborne diseases or deaths reported in Nebraska due to public water systems in 2018.

A public water system is required to monitor for the presence of volatile organic, synthetic organic, inorganic, radionuclide, and microbial contaminants. If a contaminant is present in the water, the system must monitor and verify that it does not exceed the maximum contaminant level (MCL). An MCL is the amount of a substance that is allowed to be in the water before the system must take corrective action to lower the level. Levels of substances below the MCL are not considered to be harmful to health. In 2018, only 6 of 87 contaminants for which community public water systems monitor were found in quantities above the MCL. That means 81 contaminants for which monitoring was conducted were not found above the MCL in *any* community water system in Nebraska.

A major monitoring violation occurs when no valid samples are obtained. Significant monitoring violations are defined as any major monitoring violation that has occurred during a specified reporting period, which differs for each contaminant.

The following tables summarize the types of violations issued in calendar year 2018 and the number of public water systems that received violations. There were a total of 258 violations from 145 public water systems for MCLs and monitoring. There were 13 treatment technique violations and there were no public notice violations in Nebraska in 2018.

Revised Total Coliform Rule (RTCR)

The objective of the RTCR is to increase public health protection through the reduction of potential pathways of entry for fecal contamination into distribution systems. The rule is based on a “find and fix” approach and has established a MCL for E. coli. As with the prior Total Coliform Rule, all public water systems are required to monitor for the presence of coliform bacteria and routine monitoring is based on the system type and size. RTCR assessments and corrective actions are required based on these monitoring results. A system is required to do Public Notice (PN) for failure to complete an assessment or corrective action, and for an Acute E. coli violation.

With this “find and fix” approach, Level 1 and Level 2 Assessments of the public water system are conducted in accordance with the RTCR. The assessments are meant to evaluate a system and try to find the reasons for the Total Coliform or E. coli detects.

A Level 1 Assessment is triggered when total coliform is found in the system. The public water system is responsible for conducting the Level 1 Assessment and for returning the completed Level 1 paperwork to their Field Area Representative who reviews and accepts it or returns it for further information. Identified defects noted in the Assessment are required to be corrected in a timely manner.

A Level 2 Assessment is triggered when a system incurs multiple Level 1 Assessments in a running 12-month period, or if a system has a confirmed E. coli presence within their system. The Level 2 Assessment is a more detailed analysis of the public water system, with many similarities to a sanitary survey. A DHHS Field Area Representative conducts Level 2 Assessments with a representative of the public water system. Level 2 paperwork is completed and identified defects are noted. The system is sent a letter and copy of the paperwork, and is responsible for responding to the letter in a timely manner with a timeline of when the defects found will be corrected.

RTCR Assessments

(All public water systems must monitor for total coliform bacteria.)

Type of RTCR Assessment	Number of Assessments Triggered	Number of Systems	% of Systems with Assessments
Level 1, Multiple TC +	114	114	8.4%
Level 2, 2nd Level 1 triggered	97	66	4.9%
Level 2, *E. coli* MCL triggered	10	10	0.7%

RTCR Violations

Type of RTCR Violation	Number of Violations Issued	Number of Systems	% of Systems with Violations
Treatment Technique, Level 1 requirements not met	0	0	0%
Treatment Technique, Level 2 requirements not met	0	0	0%
MCL – *E. coli* +	10	10	0.7%
Monitoring, Additional Routine, Major Routine	116	102	7.6%

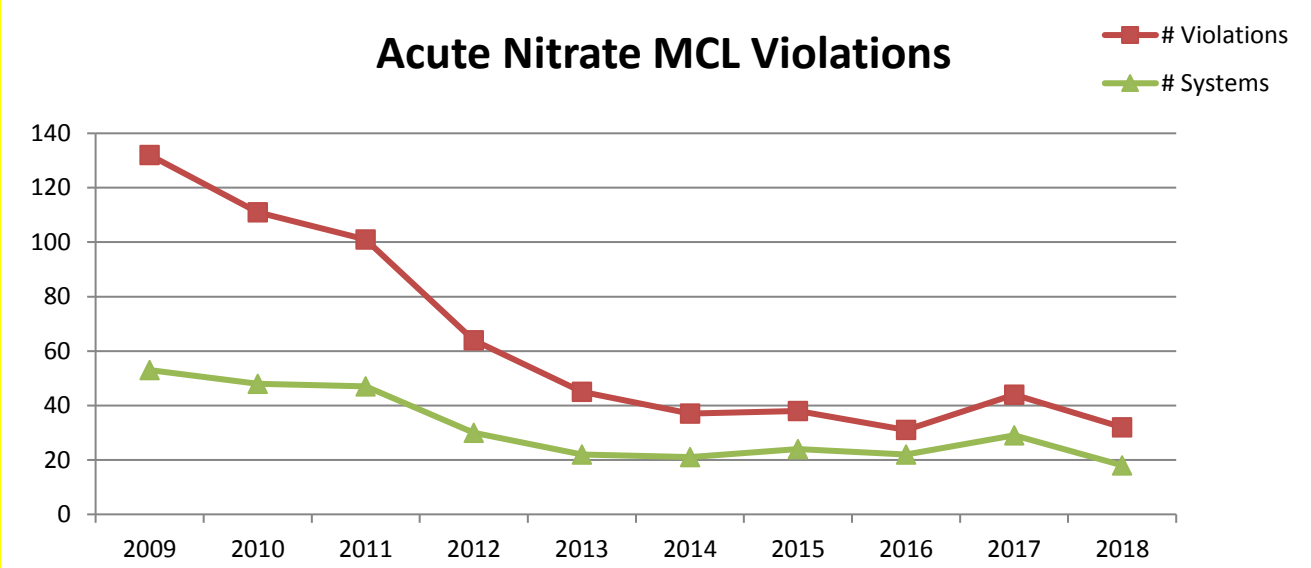
Nitrate-Nitrite Violations

This listing is separate from other Inorganic Contaminants because only Community and Non-transient, non-community systems monitor for other inorganic contaminants, while all public water systems monitor for Nitrate-Nitrite.

Data indicates the number of nitrate-nitrite MCL violations decreased from 2017 and the number of monitoring violations also decreased from the previous year.

Violation	Number of Violations	Number of Systems	% of Systems with Violations
MCL – 10 mg/l	32	18	1.3%
Monitoring	11	10	0.9%

Nitrate-nitrite violations are considered acute violations because immediate adverse health effects can be experienced when nitrate is consumed by the vulnerable population of pregnant women, infants under six months of age, and nursing mothers. The system is significantly out of compliance when it receives one violation and will be issued an Administrative Order if two acute nitrate-nitrite violations are issued within a consecutive three quarter period.



Looking at the past 10 years, the number of nitrate MCL violations decreased significantly from 2009 to 2013 and has maintained consistent numbers since.

CHAPTER 7:
Energy and Assistance Division

NDEQ cosponsored a Nebraska Electric Vehicle (EV) Charging Conference in York in March 2019 in advance of an EV Charging funding program.

With the enactment of LB302, on July 1, 2019 the Nebraska Department of Environmental Quality and the Nebraska Energy Office (NEO) merged into the Nebraska Department of Environment and Energy (NDEE). The functions and programs of NEO are now primarily the responsibility of NDEE's Energy and Assistance Division (EAD). The EAD provides information and assistance to the public and the regulated community and partners with other agency programs to manage specific projects. EAD assistance-based programs are focused on making compliance easy for the regulated community. Related programs include Small Business and Public Assistance – including serving the Small Business Compliance Advisory Panel, coordination of the Grow Nebraska Team, the One-Stop Permit Assistance Program, and the Public Advocate. The primary energy-related activities include conduct of the overall State Energy Program, administration of the Dollar and Energy Saving Loan Program, and administration of the federally-funded state Weatherization program. A comprehensive annual report on energy activities is required by statute and will be included in a separate report submitted to the Governor and the Clerk of the Legislature by February 15, 2020. The NEO annual report for 2018 may be found at http://neo.ne.gov/info/pubs/ar/pdf/NEOAnnualReport.pdf.

Small Business and Public Assistance Program

The Small Business and Public Assistance program and associated Small Business Compliance Advisory Panel (SBCAP) were created as required by the Clean Air Act Amendments of 1990 to assist businesses in complying with air quality regulations. However, the Department has provided the same compliance assistance services and support to Water Quality and Land Management Division stakeholders as well.

Key activities of the program include developing guidance and outreach materials; responding to outside requests for information; hosting information workshops and one-stop meetings to assist new businesses determine their permit applicability; expanding partnerships; helping the regulated community understand their obligations under state and federal law; and promoting compliance and permit assistance visits to small businesses and municipalities.

Grow Nebraska Team

The NDEQ Grow Nebraska Team (GNT) was launched in July 2018 to work within and outside of the Department to support and assist the regulated community in a clear, timely, and efficient manner. The Grow Nebraska Team includes and expands upon the One-Stop Permit Assistance Program to offer information and permit application assistance to the regulated community. The team seeks to make compliance easy for the regulated community and to provide the public with clear and understandable explanations of environmental regulations, policies, and processes. The core members of the team include the Division's Environmental Assistance Coordinator, staff of the Air Division permitting section, the Water Permit Division's NPDES section, the Land Management Division's compliance unit, and the NDEQ Public Information Office, as well as representatives from the Department of Economic Development. One additional member representing Energy Programs joined the team after the merger in 2019. In 2018 and 2019, the team hosted 13 total meetings for new concepts and businesses.

NDEQ's Grow Nebraska Team meets quarterly and also conducts special project meetings. Accomplishments during the past year include:

- Developed the Permit Matrix (see 2018 Annual Report)
- Formalized the team mission and charter
- Hosted seven internal training events (NDEQ University) for all agency staff
- Conducted a public outreach survey in spring of 2019
- Developed the first formal Outreach Plan for NDEQ

The Outreach Plan was developed and implemented with key monthly goals and action items. Outreach will include training webinars, promoting compliance and permit assistance visits, measuring baseline compliance understanding of the regulated community, and listing of community partnership organizations or events that staff work with. One final area that has helped our public presence and outreach has been the recent launch of the Department's social media accounts and associated metrics. Agency social media pages include Twitter, Facebook, and LinkedIn**. T**he team has agreed to capture metrics and demographics from our social media followers, which is already allowing NDEQ to have a better understanding of our stakeholders.

Smoke Awareness Program

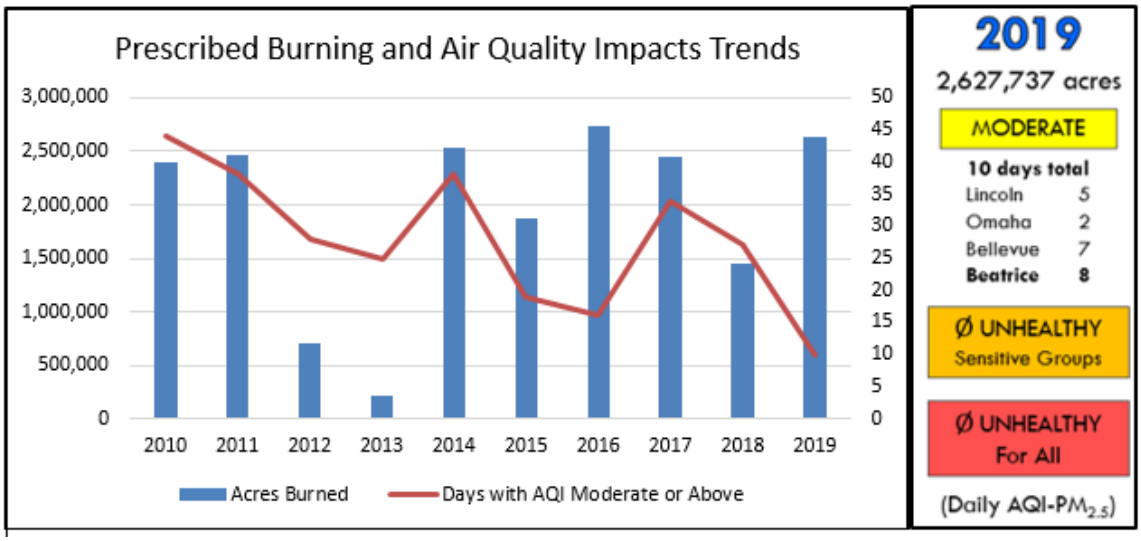
Prescribed fires and wildfires have impacted Nebraska's air quality and have received increased attention over the last several years. In early to mid-spring, ranchers and land managers burn an average of 2.3 million acres of tallgrass prairie in the Flint Hills of Kansas to control invasive plant species and to encourage growth of pasture grass. Unpredictable spring weather conditions may provide only a few days of optimal weather for burning, which can result in widespread burning and large amounts of smoke on those days. Wind from the south is typical during the spring season and Nebraska can experience air quality impacts (elevated fine particulates – PM2.5 – and ozone) for 24-48 hours following these events. Rangeland prescribed burning and wildfires also occur in Nebraska, though fewer acres are burned.

Collaborative efforts with key stakeholder agencies continued in 2019 and included a meeting in March 2019 with a number of local health departments, the Nebraska Game and Parks Department, University of Nebraska researchers, and landowners and land managers that rely on prescribed fire as a management practice. Other activities included communication regarding potential smoke and air quality impacts, generation of smoke advisories, and planning for future burn seasons.

Daily tasks performed by Assistance Division staff during the 2019 burn season included:

- Monitoring air quality ($PM_{2.5}$ and ozone levels)
- Generating maps showing fire locations and smoke plumes
- Reviewing weather and smoke forecasts, prescribed fire and smoke updates from Kansas, and smoke prediction models
- Updating the NDEQ Smoke Awareness webpage with current information on smoke impacts and pollutant monitoring
- Conducting conference calls with stakeholders to determine the likelihood for smoke impacts and generating advisories for the public.

Division staff coordinated and consulted with other stakeholder agencies on days when heavy burning was predicted. If a health advisory was warranted, staff coordinated with the Nebraska Department of Health and Human Services (DHHS) to generate a Smoke Advisory for release to the public. Smoke Advisories were issued in 2019 on April 2, 5, 9, and 15, with an update advisory issued on April 16.



During the 2019 burn season, Nebraska experienced a total of 10 days with an Air Quality Index (AQI) for fine particulates ($PM_{2.5}$) in the *Moderate* range (19% of days) and two days with an AQI for ozone in the Moderate range (see chart above). The Moderate range is characterized by pollutant levels at or above the National Ambient Air Quality Standards 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.

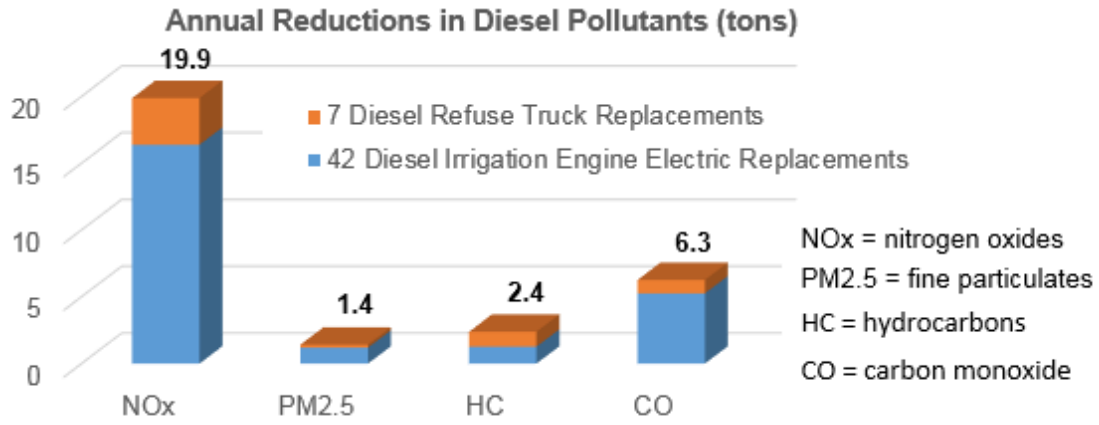
There were no days during the 2019 burn season in which the AQI values in Nebraska were in the *Unhealthy for Sensitive Groups* or *Unhealthy for All* categories, as was the case in 2018. Burn seasons in previous years (2010-2017) averaged about one day per year in the *Unhealthy for Sensitive Groups* category.

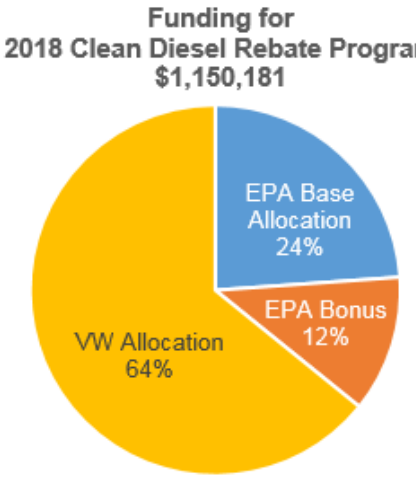
The activities conducted with other agencies in 2019 resulted in timely health advisories and notification to the public of potential air quality impacts from prescribed burning. Predictions of potential impacts, while guarded, were fairly accurate. The flow of information continues to improve, and a standardized process for dissemination of advisories is in place.

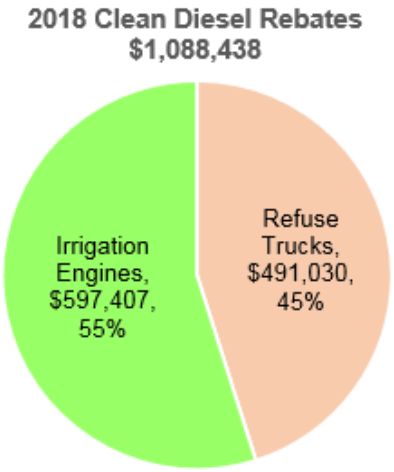
Nebraska Clean Diesel Rebate Program

The Department established the Nebraska Clean Diesel Program in 2008 to distribute federal funding received from the EPA to reduce diesel emissions, as authorized by Congress in the Diesel Emissions Reduction Act (DERA). The DERA program provides annual funding 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. Starting in 2017, NDEQ has elected to supplement the federal grant with funds from Nebraska's portion of the *Volkswagen Diesel Emissions Environmental Mitigation Trust* (*VW Trust*; see next section), which earns bonus EPA funding.

For the Clean Diesel Rebate Program annual funding cycle that opened in October 2018, NDEQ has awarded or expects to award $1,088,438 in rebates to 48 projects. The two types of projects funded are diesel refuse truck replacements (seven trucks) and all-electric replacements of 42 diesel irrigation engines. The refuse truck replacement rebates reimburse 25% of the cost (maximum $70,000) of a new diesel vehicle or 35% (up to $110,000) for a new compressed natural gas (CNG) vehicle meeting emission standards for nitrogen oxides that are stricter than the current EPA standard. The irrigation engine rebates are for replacement of a 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. Estimated annual reductions in diesel pollutants as a result of these replacement projects are shown below.







2018-2019 Refuse Truck Replacement Rebates: $491,030

Name	Location	Replacement	Rebate Amount
Gretna Sanitation	Gretna	1 CNG Refuse Truck	$110,000
Soil Dynamics Composting Farm	Springfield	1 Diesel Truck Cab	$40,406
Waste Connections dba J & J Sanitation	O'Neill	1 Diesel Refuse Truck	$51,250
S2 Rolloffs	Fremont	2 Diesel Refuse Trucks	$110,000
Gretna Sanitation 2	Gretna	1 CNG Refuse Truck	$140,000
Niederhaus Brothers Refuse Inc.	Lincoln	1 Diesel Refuse Truck	$56,288

Left: Old refuse truck being scrapped. Right: new replacement refuse truck. Photos courtesy of Waste Connections of Nebraska dba J & J Sanitation, O'Neill

2018-2019 Irrigation Engine Replacement Rebates: $597,407

Name	County	Replacement	Rebate Amount
4A Farms LLC	Hamilton	Electric motor	$20,000
4P Farms	Polk	Electric motor	$12,699
Allen, Loren	Holt	Electric motor	$9,750
Anson Farms Inc	Antelope	Electric motor	$20,000
Beelaert, Robert	Holt	Electric motor	$7,452
Carpenter Farms Inc.	Antelope	Electric motor	$12,257
Carpenter, Garrett	Antelope	Electric motor	$20,000
Central Agency Farms % Austin Co	Chase	Electric motor	$8,749
Cheney Farm	Antelope	Electric motor	$7,020
Collins, Rick	Hamilton	Electric motor	$7,550
Creutzberg, Mark	Polk	Electric motor	$18,407
Danielski Harvesting & Farming LLC	Holt	Electric motor	$8,157
Dickerson, John	Holt	Electric motor	$10,778
Dougherty-Ruther Farm	Holt	Electric motor	$10,485
Drayton, Terry	Antelope	Electric motor	$10,840
Dunn, William	Blaine	Electric motor	$20,000
H Corporation	Holt	Electric motor	$19,806
JSK LLC	Boone	Electric motor	$9,818
Kelly, Barry	Holt	Electric motor	$10,723
Koenig, Kevin J.	Holt	Electric motor	$20,000
Lee, Deloris A.	Perkins	Electric motor	$8,058
LT Farms, Inc.	Holt	Electric motor	$14,722
Mueller Family Trust	Jefferson	Electric motor	$11,014
O & W Dairy Farm Inc	Antelope	Electric motor	$18,248
Oberhauser, Karen	Platte	Electric motor	$20,000
OBrien, Dale	Hayes	Electric motor	$20,000
Oertwich, Douglas	Stanton	Electric motor	$14,346
Pearson, Erik	Jefferson	Electric motor	$18,806
Peterson, Mick	Custer	Electric motor	$15,630
Pfeifer, Dean John	Madison	Electric motor	$16,573
Phillips, Mike	Morrill	Electric motor	$17,262
Probst, Lyle	Gage	Electric motor	$17,149
Riley, James	Buffalo	Electric motor	$15,888
Schmidt Brothers Farms	Madison	Electric motor	$17,431

Schmidt Family Trust	Madison	Electric motor	$12,000
Simonson, Gordon	Blaine	Electric motor	$11,335
SRI2 LLC	Holt	Electric motor	$10,372
Stagemeyer, Brent M.	Holt	Electric motor	$14,812
Stauffer Ag Enterprises	Holt	Electric motor	$17,492
Taake, Brian	Madison	Electric motor	$11,092
Thiele, Fred J.	Holt	Electric motor	$20,000
Thies Farms Central LLC	Merrick	Submersible Power	$20,000

Diesel irrigation engine removal.

Torch cutting hole in engine block.

New electric motor in place.

Photos courtesy of Mike Phillips, Lisco

Volkswagen State Trust Activities

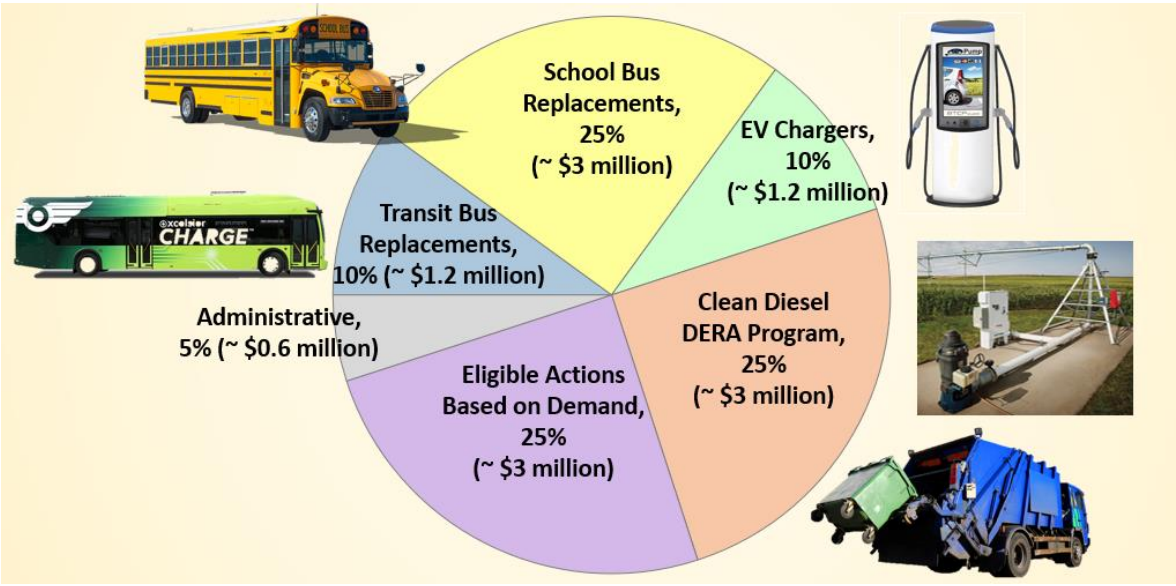
NDEQ is the lead agency administering funds allocated to Nebraska from the *Volkswagen Environmental Mitigation Trust for State Beneficiaries, Puerto Rico, and the District of Columbia* ("VW State Trust"). The VW State Trust was established in 2017 as part of court settlements with Volkswagen AG and 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.

Beneficiary Mitigation Plan

As mandated by the Trust Agreement, in 2018 NDEQ submitted a Beneficiary Mitigation Plan that summarizes how Nebraska intends to use the funds allocated to it under the Trust. The table

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

Initial Planned 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 engine & refuse Truck Replacements	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. 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. The Department has set a goal of expending Nebraska's share of the funds in five to six years.

Nebraska Diesel Emission Mitigation Program

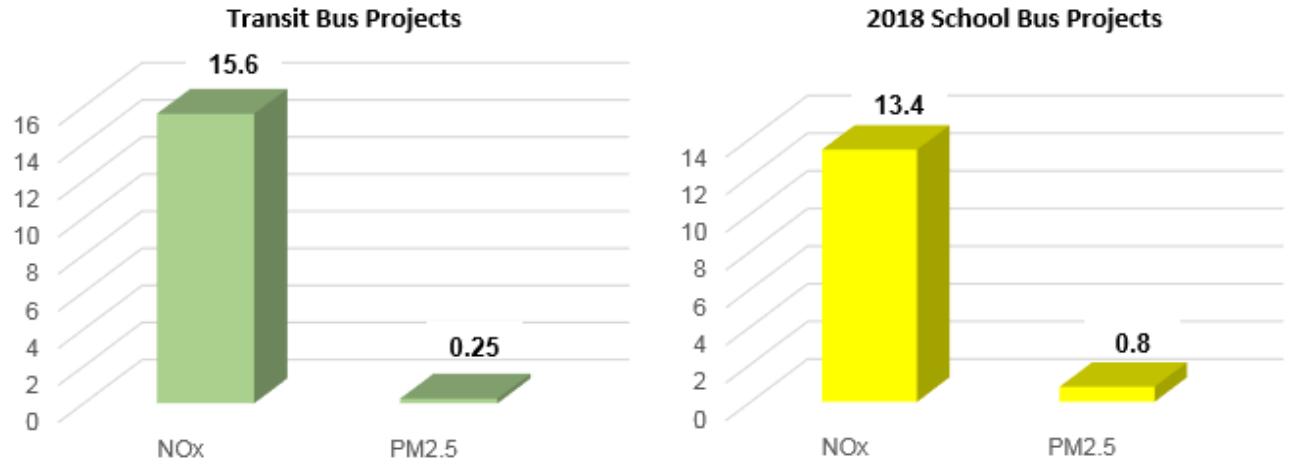
NDEQ has established the Nebraska Diesel Emission Mitigation Program to use funds from the VW State Trust to undertake projects to mitigate NOx emissions in addition to the Clean Diesel Program described above. Projects in two categories were in progress during the fiscal year: Transit Bus Alternative Fuel Replacements and School Bus Replacements.

Transit Bus Alternative Fuel Replacements

In 2018, NDEQ awarded VW funds to Lincoln StarTran and the Transit Authority of Omaha (Metro) as supplements to other grant funds. Each agency will replace and scrap two older diesel transit buses. These projects are expected to be complete in the fall of 2019. Expected lifetime reductions in diesel emissions as a result of these projects are shown in the chart below.

Transit Bus Alternative Fuel Replacements		
Lincoln StarTran	Replace 2 diesel buses w/ battery electric buses	$489,934
Omaha Metro	Replace 2 diesel buses w/ CNG-fueled rapid transit buses	$734,901
TOTAL		$1,224,835

Estimated Lifetime Diesel Emission Reductions for Current VW-Funded Projects (tons)



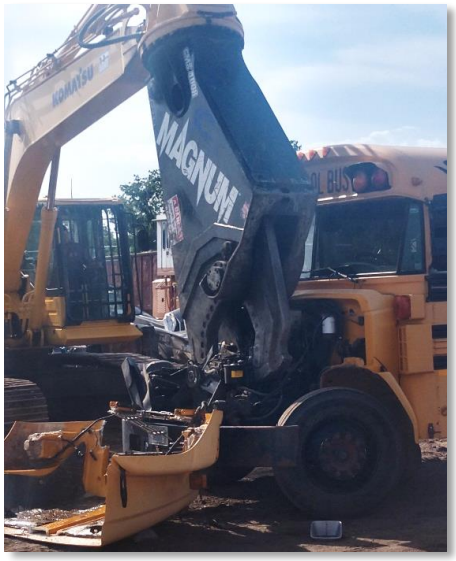
NOx = Nitrogen Oxides, PM2.5 = fine particulates

School Bus Replacement Rebates

In SFY2019, the Nebraska Diesel Emission Mitigation Program awarded a total of $1,703,651 for the replacement and scrapping of 40 older diesel school buses. School districts were eligible for a 50% reimbursement (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. All projects were completed by the end of summer 2019. Expected lifetime reductions in diesel emissions as a result of these projects are shown in the chart above.

2018 School Bus Replacement Rebates			
Alma Public Schools	$42,000	Heartland Schools	$40,350
Anselmo-Merna Public Sch.	$42,000	HTRS Public Schools	$42,000
Bayard Public Schools	$42,000	Kearney Public Schools	$57,000
Beatrice Public Schools	$42,000	Lewiston Consolidated Schools	$42,000
Bellevue Public Schools	$42,000	Lexington Public Schools	$42,000
Bertrand Public Schools	$42,000	Loomis Public Schools	$55,890
Blair Community Schools	$42,000	Louisville Public School District	$41,743
Brady Public Schools	$42,000	Neligh-Oakdale Public Schools	$44,742
Bridgeport Public Schools	$39,225	North Bend Central Public Schools	$42,000
Centennial Public School	$42,000	Ogallala Public Schools	$41,125

Cozad Community Schools	$42,000	Osmond Community Schools	$41,794
Elkhorn Valley Schools	$41,650	Overton Public Schools	$42,000
Elm Creek Public Schools	$42,000	Paxton Consolidated Schools	$42,000
Fillmore Central Schools	$42,000	Ravenna Public Schools	$42,000
Fort Calhoun Community Schools	$42,000	Seward School District	$41,510
Fremont Public Schools	$42,000	Stanton Community Schools	$41,175
Giltner Public Schools	$42,000	Stapleton Public Schools	$46,259
Gordon-Rushville Public Schools	$42,000	Tri County Public Schools	$42,000
Hampton Public School	$42,000	Wallace School District	$42,000
Hartington-Newcastle Public Schools	$40,188	York Public Schools	$42,000



Above, chassis and engine of old school bus being scrapped.

Left, new replacement school bus. Photos courtesy of Centennial Public Schools.

In May 2019, NDEQ opened the application period for a second round of school bus rebate projects. During the coming year, the Department anticipates providing an additional $2,698,981 in rebates for 62 projects. These projects will utilize the remainder of the Volkswagen State Trusts initially allocated to school bus replacement projects with an additional $1,297,348 drawn from the funds initially set aside for Eligible Actions Based on Demand.

Planning for Additional Mitigation Actions

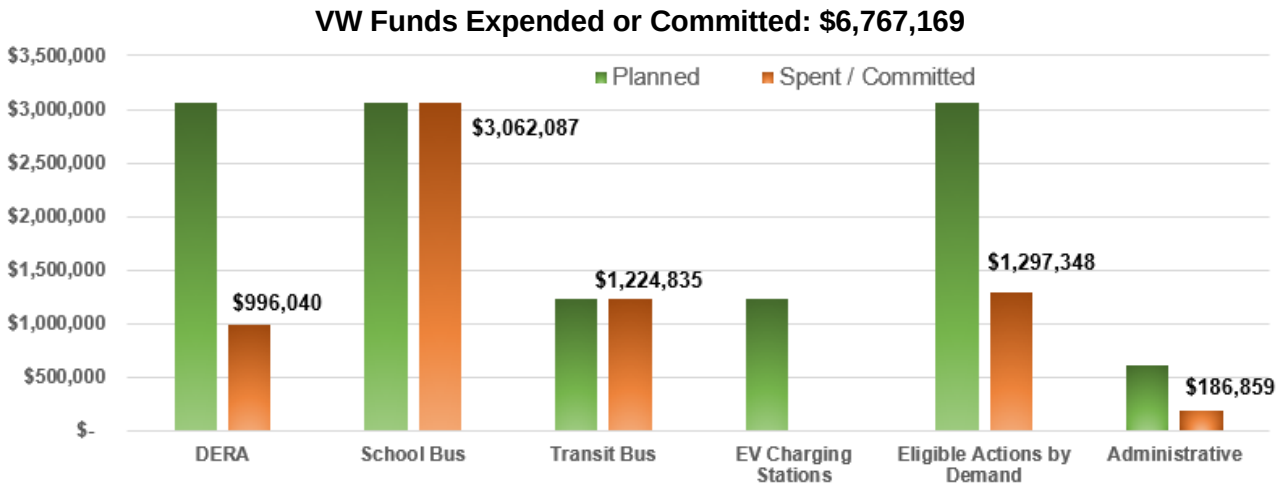
Nebraska has allocated 10% of its VW State Trust funds, or approximately $1.2 million, to partially fund Electric Vehicle (EV) Charging Infrastructure that will be available to the public. During the past year, NDEQ staff have conducted ongoing discussions with representatives of electric utilities (Nebraska Public Power District, Lincoln Electric System, and Omaha Public Power District),

the Nebraska Department of Transportation, 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. In March 2019, NDEQ and the Nebraska Power Association co-sponsored a stakeholder conference held in York to provide information to the public about EV charging and potential grant opportunities from Nebraska's VW State Trust. The conference also provided an opportunity for the Department to receive public input on the type of charging infrastructure that should be supported using the limited available funds.

In August 2019, the Department opened the application period for the Nebraska Electric Vehicle Charging Infrastructure program. The Department will fund both Direct Current Fast Chargers and slower Level 2 (240-volt AC) chargers along highway corridors, community and destination locations, and workplaces. The application period closes November 15, and awards are expected to be announced in early January 2020.

Current Status of Nebraska's Volkswagen State Trust Funds

As of the summer of 2019, NDEQ has expended or committed $6,767,169 in funds from the Volkswagen State Trust in five funding categories, as shown in the figure below.



CHAPTER 8:
Expenditure and Budget Summary

The following information summarizes department expenditures for fiscal year 2019 and outlines budget projections for fiscal year 2020. The figures in the expenditure summaries were derived from the state accounting system. The budget projections were prepared by the Department.

Chart A shows actual FY19 expenditures for each federal grant, including the state match.

Chart B lists actual FY19 expenditures of programs funded by state general funds and/or cash funds. This chart lists expenditures by activity. Activity in this case is not considered a program activity, but is a category of expenditure. Activities listed in this chart are personal services, operating expenses, travel, capital outlay, contracting and distribution of aid.

Chart C outlines the proposed FY20 budget for each federal grant. Chart C also lists proposed match for each program for which a non-federal match is required. Additionally, match for the 319H grant is provided by in-kind services in the Groundwater Management Area program.

Chart D outlines proposed FY20 budgets for programs funded by state funds. This chart lists proposed expenditures by activity. As in Chart B, activity is not a program activity, but a category of expenditure. Activities listed are personnel services, operations, travel, capital outlay, contracting and distribution of aid.

Agency program activities are described in Chapter 2 and Chapters 4 through 7 of this report.

Chart A -- Actual Expenditure for Each Federal Grant for FY19

Grant / Program Title	Grant	Match	Total
Performance Partnership	3,636,748	1,730,314	5,367,063
Clean Water State Revolving Fund	7,809,065	1,774,891	9,583,956
Exchange Network	45,864		45,864
604 B Water Quality Management	93,745		93,745
319 H Non-Point Source	1,896,758		1,896,758
Drinking Water State Revolving Fund	6,415,799		6,415,799
Leaking Underground Storage Tanks	835,706	99,078	934,784
Clean Diesel	284,470		284,470
Section 106 Monitoring	254,008		254,008
Department of Defense	138,948		138,948
PM 2.5 Ambient Air Monitoring	197,211		197,211
Superfund UNL Mead	16,223		16,223
Superfund Core	125,117	942	126,058
Superfund Management Assistance	152,659		152,659
Superfund Site Assessment	308,690		308,690
Section 128 (a) State Response	516,892		516,892
Totals	**$ 22,727,903**	**$ 3,605,225**	**$ 26,333,128**

Performance Partnership is made up of Water 106/NPDES, Air 105, Groundwater, RCRA 3011, a part of nonpoint source prograrm, Underground Injection Control, and Mineral Exploration

A portion of the match for the State Revolving Fund Programs is provided by Revenue Bonds issued by NIFA

An indirect rate of 55.22% was negotiated with EPA for FY19 and charged against direct payroll cost to cover agency administrative expenses

Chart B - Actual Expenditure of State Funds for State Programs for FY19 Including Aid

Program	Subprogram	Fund Type	Personal Services	Operating Expenses	Travel	Capital Outlay	Consulting /Contracting	Subtotal	Distribution of Aid	Total
Integrated Solid Waste Management	004	C	1,346,181	485,012	23,016	-	21,086	1,875,296	-	1,875,296
Ag - Livestock	016	G/C	1,409,502	97,582	47,586	316	11,167	1,566,152	-	1,566,152
Air Construction Permits	020	C	43,120	34,399	119	-	-	77,637	-	77,637
Superfund State Cost Share	023	G/C	33,893	12,080	56	-	556,682	602,712	395,515	998,226
Litter Reduction	024	C	151,516	70,648	1,040	-	144,355	367,558	1,070,280	1,437,838
Private Onsite Wastewater Cert & Registration	030	C	265,515	156,257	4,874	-	3,503	430,150	-	430,150
Emission Inventory - Title V	033	C	1,829,261	963,025	27,050	-	15,455	2,834,790	-	2,834,790
Chemigation	034	C	12,599	6,699	-	-	23,860	43,158	-	43,158
Remedial Action Plan Monitoring Act	036	C	67,399	24,798	599	-	-	92,796	-	92,796
Private Onsite Wastewater Permit & Approval	037	C	58,822	(4,603)	500	-	10,233	64,952	-	64,952
Operator Certification	040	C	48,864	20,246	2,104	-	8,944	80,158	-	80,158
Community Right to Know	041	G	13,025	704	-	-	-	13,729	-	13,729
Petroleum Release Remedial Action Act	051	C	1,031,445	583,374	6,090	128,503	3,973,071	5,722,484	3,440,765	9,163,248
Emergency Response	057	G/C	62,571	42,271	4,472	-	-	109,314	-	109,314
Engineering Reviews	061	G	224,210	4,817	976	-	33,001	263,004	-	263,004
Volkswagen	065	C	66,726	27,166	181	-	-	94,073	1,152,893	1,246,966
Waste Reduction & Recycling	091	C	187,452	103,109	2,611	-	-	293,173	2,859,163	3,152,336
Agency Organizational Dues	099	G	-	13,000	-	-	-	13,000	-	13,000
Totals			**$ 6,852,102**	**$ 2,640,584**	**$ 121,274**	**$ 128,818**	**$ 4,801,358**	**$ 14,544,136**	**$ 8,918,616**	**$ 23,462,752**

FUND TYPE LEGEND
G - Program Expends General Funds
C - Program Expends Cash Funds
G/C - Program Expends Both General and Cash Funds

An indirect rate of 55.22% was negotiated with EPA for FY19 and charged against direct payroll cost to cover agency administrative expenses.

Chart C - Proposed Budget for Each Federal Grant Program for State FY20

Grant / Program Title	Grant	Match	Total
Performance Partnership	4,842,934	1,657,075	6,500,009
Clean Water State Revolving Fund	6,940,000	600,000	7,540,000
604 B Water Quality Management	59,502	-	59,502
319 H Non-Point Source	4,067,361	-	4,067,361
Drinking Water State Revolving Fund	8,500,000	1,700,000	10,200,000
Leaking Underground Storage Tanks	983,679	109,298	1,092,977
Clean Diesel	196,918	-	196,918
Section 106 Monitoring	270,314	-	270,314
Department of Defense	134,154	-	134,154
PM 2.5 Ambient Air Monitoring	114,726	-	114,726
Superfund UNL Mead	16,323	-	16,323
Superfund Core	108,540	12,060	120,600
Superfund Management Assistance	190,679	-	190,679
Superfund Site Assessment	561,388	-	561,388
Section 128 (a) State Response	471,040	-	471,040
Totals	**$ 27,457,559**	**$ 4,078,433**	**$ 31,535,993**

Performance Partnership is made up of Water 106/NPDES, Air 105, Groundwater, RCRA 3011, a part of nonpoint source program, Underground Injection Control, and Mineral Exploration

A portion of the match for the State Revolving Fund Programs is provided by Revenue Bonds issued by NIFA

An indirect rate of 55.22% was negotiated with EPA for FY19 and charged against direct payroll cost to cover agency administrative expenses

Chart D - Proposed Budget of State Funds for State Programs for FY20 Including Aid

Program	Subprogram	Fund Type	Personal Services	Operating Expenses	Travel	Capital Outlay	Consulting /Contracting	Subtotal	Distribution of Aid	Total
Integrated Solid Waste Management	004	C	1,379,329	637,990	24,754	-	65	2,042,139	-	2,042,139
Ag - Livestock	016	G/C	1,541,753	31,568	52,766	485	-	1,626,572	-	1,626,572
Air Construction Permits	020	C	32,763	43,260	-	-	-	76,023	-	76,023
Superfund State Cost Share	023	G/C	44,284	19,043	55	-	1,161,229	1,224,611	172,835	1,397,446
Litter Reduction	024	C	106,984	53,579	855	-	137,417	298,835	1,500,000	1,798,835
Private Onsite Wastewater Cert & Registration	030	C	325,047	147,457	4,109	1,420	6,247	484,279	-	484,279
Emission Inventory - Title V	033	C	2,289,773	804,193	28,369	-	29,373	3,151,709	-	3,151,709
Chemigation	034	C	26,283	11,586	-	-	32,671	70,540	-	70,540
Remedial Action Plan Monitoring Act	036	C	84,325	35,020	483	-	-	119,829	-	119,829
Private Onsite Wastewater Permit & Approval	037	C	52,483	24,721	1,194	-	9,107	87,505	-	87,505
Operator Certification	040	C	65,801	31,027	2,165	-	10,407	109,400	-	109,400
Community Right to Know	041	G	11,904	-	-	-	-	11,904		11,904
Petroleum Release Remedial Action Act	051	C	1,930,820	1,077,809	9,656	-	4,753,121	7,771,406	8,254,505	16,025,911
Emergency Response	057	G/C	64,323	36,180	2,154	-	-	102,658	-	102,658
Engineering Reviews	061	G	200,906	5,036	97	-	72,791	278,830	-	278,830
Volkswagen	065	C	70,000	25,000	5,000			100,000	2,400,000	2,500,000
Waste Reduction & Recycling	091	C	280,290	142,708	5,805	-	63,655	492,458	3,626,637	4,119,095
Totals			**$ 8,507,069**	**$ 3,126,177**	**$ 137,462**	**$ 1,905**	**$ 6,276,082**	**$ 18,048,695**	**$ 15,953,977**	**$ 34,002,672**

FUND TYPE LEGEND
G - Program Expends General Funds
C - Program Expends Cash Funds
G/C - Program Expends Both General and Cash Funds

An indirect rate of 55.22% was negotiated with EPA for FY19 and charged against direct payroll cost to cover agency administrative expenses.

CHAPTER 9:
Distribution of Aid

The Department has a number of programs that distribute aid for specific activities. These range from funding for roadside cleanup to providing loans through the State Revolving Fund Loan Programs for construction of wastewater treatment facilities and drinking water systems.

WASTE MANAGEMENT AID PROGRAMS

Following is a summary of funds provided in FY2019 through the Waste Grants programs managed in the Waste Planning and Aid Unit.

A. Litter Reduction and Recycling

The Litter Reduction and Recycling Grant Program provides funds to reduce litter, provide education and promote recycling in Nebraska. Funding for the program is an annual fee on manufacturers, wholesalers and retailers who have significant sales in categories of products that would generally be considered to produce litter.

In FY2019, 49 Litter Reduction and Recycling grants were awarded, totaling $1,300,000. The grants were awarded in three categories: Public Education, $826,761; Cleanup, $49,716; and Recycling, $423,523. These grants were awarded to both public and private entities.

B. Waste Reduction and Recycling

The Waste Reduction and Recycling Incentive Grants Program provides grants for various solid waste management activities. Revenues to the fund are provided by proceeds from various fees, including a one-dollar fee on each new tire sold in the state, and a retail business fee on tangible personal property sold in the state. In addition, 50% of a fee collected on the disposal of solid waste going to landfills goes to this fund.

In FY2019, 83 projects totaling $1,729,302 were funded from the Waste Reduction and Recycling Incentive Grants Program.

C. Illegal Dumpsite Cleanup Program

The Illegal Dumpsite Cleanup Program, established in 1997, provides funding for political subdivisions to clean up solid waste disposed of along public roadways or ditches. Potential funding is limited to five percent of the total revenue from the disposal fee collected in the preceding fiscal year. In FY2019, the program provided $14,936 to 21 recipients.

D. Landfill Disposal Fee Rebate Program

The Landfill Disposal Fee Rebate Program was created as an incentive to political subdivisions to support and encourage the purchasing of products, materials, or supplies that are manufactured or produced from recycled material. Funding for the program is from the Waste Reduction and Recycling Incentive Fund. In FY2019, the program provided $91,630 to 11 recipients.

Any municipality or county may apply for a rebate if they have a written purchasing policy in effect requiring a preference for purchasing products, materials or supplies which are manufactured or produced from recycled material. If the policy is approved by NDEQ, the applicant may receive a ten cent rebate from the $1.25 per ton disposal fee. Rebates are provided no more than quarterly and no less than annually.

Additional information about these programs can be found in the Planning and Aid portion of Chapter 5.

WATER QUALITY AID PROGRAMS

A. Petroleum Remediation

The Petroleum Remediation program provides aid through the Petroleum Release Remedial Action Fund to assist in paying the cost of cleanup of sites where petroleum has leaked from tanks, generally service stations. Funding to this program is primarily provided by a fee on petroleum sold in Nebraska. Over $236 million has been disbursed since the program began. The program provided $3.2 million to 186 sites for investigation and cleanup in FY2019.

Additional information about this program can be found in the Petroleum Remediation portion of Chapter 6.

B. State Revolving Loan Fund Program

I. The **Clean Water State Revolving Loan Fund** provides low interest loans and loan forgiveness to municipalities for construction of wastewater treatment facilities and sanitary sewer collection systems. The sources of funding for this program include federal grants and funds from the Nebraska Investment Financial Authority (NIFA) through bond issuance. In FY2019, the CWSRF funded projects totaling $8,749,528 in loans and $771,302 in principal forgiveness and grant funds.

Additional information about these programs can be found in the State Revolving Loan Fund Programs portion of Chapter 6.

II. The **Drinking Water State Revolving Fund** provides low-interest loans and loan forgiveness to owners of public water systems. In FY2019, the program provided financial assistance to public water system projects totaling $10,286,699, of which disadvantaged communities received $1,798,941 in forgiveness funding.

Additional information about these programs can be found in the State Revolving Loan Programs portion of Chapter 6.

CHAPTER 10:
Staffing

NDEQ deals with a wide array of complex environmental issues and it is essential to our operations to recruit and hire technically competent people. Technically competent, trained, experienced, and dedicated staff within NDEQ provide the foundation to support the mission of the agency to protect and improve human health, the environment, and energy resources.

Staff retention continues to be an important goal for NDEQ. Staff turnover impacts continuity in NDEQ's programs and activities, and results in additional costs for recruitment and training of replacement staff members. NDEQ strives to foster and maintain an employee-friendly workplace by offering transfer and promotional opportunities for qualified internal applicants. In addition, training and tuition assistance are provided to interested staff.

NDEQ monitors diversity to encourage the receipt of applications from qualified members of protected groups by seeking to recruit members of protected groups.

The chart on the following page shows hiring activity on specific job categories for the last ten years:

Employees Assuming Agency Positions

These figures include new hires, promotions, transfers and classification upgrades. 2010-2018 statistics are from October 1 through Sept. 30; figures for 2019 are from October 1, 2018 through June 30, 2019.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Director, Deputy Director, Assistant Director, Division Administrator	0	0	0	0	0	1	5	0	0	0
Section Supervisor, Records Manager Budget Officer, IT Manager	0	0	0	1	5	0	4	0	1	2
Unit Supervisor	2	0	2	1	1	2	0	0	0	3
Human Resources, Training Coordinator	1	0	0	0	0	1	0	1	0	1
Process Improvement Coordinator								1	0	0
Federal Aid Administrator, Financial Assurance Coordinator, Accountant	2	1	1	0	0	0	1	1	1	0
Clerical/Accounting Clerk	3	5	0	2	4	4	4	1	3	2
Information Technology, Public Information, Research Analyst	0	1	0	0	0	0	0	2	0	2
Attorney I, II & III	1	0	0	0	2	0	2	1	0	0
Environmental Engineer	0	3	2	2	7	2	4	5	4	6
Compliance Specialist	0	0	0	1	0	0	1	1	0	0
Programs Specialist I & II	8	9	11	10	7	11	19	8	11	9
Geologist, Groundwater I & II	2	0	2	4	2	3	1	0	0	0
Environmental Assistance Coordinator	0	1	1	1	0	0	0	0	1	1
TOTALS	20	20	19	22	28	24	41	21	21	26

CHAPTER 11:
Financial Assurance Requirements

Section 81-1505(21) provides the statutory authority for the Department to develop, and the Council to adopt as regulations, requirements for all applicants to establish proof of financial responsibility. The requirements pertain to all new or renewal permit applicants regulated under the Nebraska Environmental Protection Act, the Integrated Solid Waste Management Act, and the Livestock Waste Management Act, unless a class of permittees is exempted by the Council. The purpose of financial responsibility is for an applicant to provide funds to be used in the event of abandonment, default or other inability of the permittee to comply with terms or conditions of its permit or license. State statutes also identify types of funding mechanisms that applicants can use to meet the requirements.

Following is a table which provides a comprehensive list of existing financial assurance requirements for each permittee. Financial assurance amounts are listed in two categories: the first is the obligated amount, which lists the total amount of financial assurance which must be provided by the time of closure of the facility. Second is the current amount demonstrated, which lists the amount of financial assurance which is currently accrued towards the obligated amount. The table lists the facility location, permit type, initial date financial assurance provided, method or type of financial assurance provided and the guarantor for each permittee.

NDEQ FINANCIAL ASSURANCE

Facility Name	Location	Permit Type	Initial Date	Obligated Amount	Current Amount Demonstrated	FA Mechanism	Guarantor
Municipal Solid Waste Disposal Areas (MSWDA), Sanitary Landfills (LF)							
Alliance Landfill	Alliance	MSWDA	03/17/94	$ 4,746,891	$ 1,966,721	Enterprise Fund	City of Alliance
Beatrice Area SW Agency	Beatrice	MSWDA	07/12/00	$ 6,910,988	$ 6,908,709	Financial Test	City of Beatrice
Butler County Landfill	David City	MSWDA	10/03/08	$ 14,953,440	$ 5,981,898	Trust Fund	US Bank
Douglas County Landfill	Bennington	MSWDA	03/28/00	$ 13,319,331	$ 13,319,331	Surety Bond	Evergreen Ntl. Indemnity Co.
G & P Dev Landfill	Milford	MSWDA	10/03/08	$ 12,336,388	$ 3,198,850	Trust Fund	US Bank
Gering Landfill	Gering	MSWDA	02/13/96	$ 2,299,570	$ 1,651,190	Enterprise Fund	City of Gering
L.P. Gill Landfill	Jackson	MSWDA	04/09/96	$ 7,664,733	$ 4,240,316	Trust Fund	Premier Trust
Grand Island Landfill	Grand Island	MSWDA	03/31/96	$ 10,540,348	$ 10,540,348	Financial Test	City of Grand Island
Hastings Area Landfill	Hastings	MSWDA	03/18/13	$ 6,017,684	$ 3,757,100	Enterprise Fund	City of Hastings
Hastings Landfill	Hastings	Sanitary LF	10/01/97	$ 145,106	$ 32,110	Faith & Credit	City of Hastings
Holdrege Landfill	Holdrege	MSWDA	07/29/96	$ 3,057,733	$ 2,038,133	Enterprise Fund	City of Holdrege
J-Bar-J Landfill	Ogallala	MSWDA	03/28/00	$ 6,338,451	$ 6,338,451	Performance Bond	Evergreen Ntl. Indemnity Co.
Kearney Landfill	Kearney	MSWDA	03/31/94	$ 8,267,153	$ 3,481,875	Trust Fund	Union Bank & Trust
Kimball Landfill	Kimball	MSWDA	05/10/96	$ 1,930,202	$ 1,124,496	Enterprise Fund	City of Kimball
Lexington Landfill	Lexington	Sanitary LF	07/25/96	$ 284,586	$ 283,051	Faith & Credit	City of Lexington
Lexington Area Agency	Lexington	MSWDA	01/19/97	$ 2,899,359	$ 2,366,299	Enterprise Fund	Lexington Area SW Agency
Lincoln Bluff Road Landfill	Lincoln	MSWDA	04/01/96	$ 25,948,987	$ 25,948,987	Financial Test	City of Lincoln
Loup Central Landfill	Elba	MSWDA	04/09/96	$ 2,485,685	$ 1,075,075	Trust Fund	Citizens Bank & Tr St. Paul
McCook Landfill	McCook	Sanitary LF	03/04/96	$ 409,860	$ 81,972	Faith & Credit	City of McCook
NE Ecology Landfill	Geneva	MSWDA	10/03/08	$ 3,213,562	$ 1,027,416	Trust Fund	US Bank
NNSWC Landfill	Clarkson	MSWDA	04/09/96	$ 20,788,659	$ 8,193,200	Enterprise Fund	NNSWC
Pheasant Point Landfill	Bennington	MSWDA	08/01/03	$ 29,796,193	$ 29,786,193	Surety Bond	Evergreen Ntl. Indemnity Co.
Sarpy County Landfill	Papillion	MSWDA	03/31/96	$ 3,200,964	$ 3,937,989	Enterprise Fund	Sarpy County
Sidney Landfill	Sidney	MSWDA	02/11/97	$ 2,468,833	$ 1,032,270	Enterprise Fund	City of Sidney
SWANN Landfill	Chadron	MSWDA	09/25/97	$ 1,554,718	$ 808,208	Enterprise Fund	SWANN
Valentine Landfill	Valentine	MSWDA	04/09/96	$ 1,845,096	$ 792,850	Enterprise Fund	City of Valentine
York Landfill	York	Sanitary LF	05/14/96	$ 46,490	$ 11,750	Faith & Credit	City of York
York Area SW Landfill	York	MSWDA	05/14/96	$ 4,730,229	$ 2,171,572	Enterprise Fund	City of York
*MSWDAs are landfills that are operating under current solid waste management regulations.							
**Sanitary LFs are closed facilities that have post-closure monitoring and maintenance.							
Construction/Demolition Landfills							
Abe's Trash Service C & D	Blair	Const./Demol.	03/30/98	$ 278,675	$ 278,889	Escrow Account	Bank of Bennington
Alliance C & D Landfill	Alliance	Const./Demol.	12/02/99	$ 159,203	$ 91,877	Enterprise Fund	City of Alliance
Anderson Excavating C & D	Omaha	Const./Demol.	11/15/12	$ 990,900	$ 990,900	Letter of Credit	Availa Bank
Arnold C & D Landfill	Arnold	Const./Demol.	07/24/00	$ 49,529	$ 50,200	Enterprise Fund	Village of Arnold
Beatrice Area SW Agency	Beatrice	Const./Demol.	10/15/12	$ 1,057,762	$ 1,093,011	Financial Test	City of Beatrice
Benkelman C & D Landfill	Benkelman	Const/Demol.	10/15/06	$ 67,551	$ 22,733	Enterprise Fund	City of Benkelman
Broken Bow C & D Landfill	Broken Bow	Const/Demol.	11/23/07	$ 129,543	$ 41,719	Enterprise Fund	City of Broken Bow

NDEQ FINANCIAL ASSURANCE

Facility Name	Location	Permit Type	Initial Date	Obligated Amount	Current Amount Demonstrated	FA Mechanism	Guarantor
Bud's Sanitary Service C & D	Newman Grove	Const./Demol.	06/01/97	$ 38,529	$ 38,529	Letter of Credit	First Natl. Bank Newman Gr
Eco-Storage C & D Landfill	Omaha	Const./Demol.	06/03/10	$ 286,600	$ 286,600	Surety Bond	Evergreen Ntl Indemnity Co.
Franklin C&D Landfill	Franklin	Const./Demol.	11/08/10	$ 28,273	$ 14,441	Enterprise Fund	City of Franklin
Gage County C & D Landfill	Beatrice	Const./Demol.	02/23/98	$ 165,076	$ 200,000	Letter of Credit	Security First Bank
Hawkins Construction C & D	Omaha	Const./Demol.	01/03/02	$ 392,604	$ 392,604	Surety Bond	Hartford Fire Ins. Co.
Holdrege C & D Landfill	Holdrege	Const/Demol.	05/01/09	$ 316,612	$ 63,756	Enterprise Fund	City of Holdrege
KGP Services C & D	Norfolk	Const/Demol.	11/06/03	$ 99,062	$ 99,062	Escrow Account	Elkhorn Valley Bank & Trust
Kimball C & D Landfill	Kimball	Const./Demol.	04/01/01	$ 81,812	$ 61,067	Enterprise Fund	City of Kimball
Lead Waste Mgmt C&D Landfill	Waterbury	Const./Demol.	05/28/14	$ 73,765	$ 73,765	Letter of Credit	Adrian State Bank
L.P. Gill Landfill C & D	Jackson	Const/Demol.	04/09/96	$ 165,353	$ 138,891	Trust Fund	Premier Trust
Lexington C & D Landfill	Lexington	Const./Demol.	09/30/98	$ 339,490	$ 167,119	Enterprise Fund	Lexington Area SW Agency
Lincoln North 48th St. C & D	Lincoln	Const./Demol.	04/01/96	$ 3,569,917	$ 3,569,917	Financial Test	City of Lincoln
Loup Central C & D Landfill#2	Elba	Const./Demol.	01/28/01	$ 100,281	$ 52,287	Trust Fund	Citizens Bank & Tr. St. Paul
NPPD Gerald Gentleman	Sutherland	Const./Demol.	04/01/95	$ 264,354	$ 264,354	Financial Test	NPPD
O'Neill C & D Landfill	O'Neill	Const./Demol.	06/01/01	$ 235,896	$ 49,257	Enterprise Fund	City of O'Neill
O'Neill Wood Resources C & D	Grand Island	Const./Demol.	10/10/18	$ 462,928	$ 11,388	Trust Fund	Minden State Bank & Trust
PAD LLC C & D Landfill	Hastings	Const./Demol.	06/05/02	$ 205,413	$ 207,889	Escrow Account	Five Points Bank
Plainview C & D Landfill	Plainview	Const./Demol.	09/26/00	$ 83,661	$ 74,385	Enterprise Fund	City of Plainview
Rainwood Hill LLC C & D	Omaha	Const/Demol.	05/29/15	$ 211,320	$ 211,320	Surety Bond	Hudson Insurance Co.
Red Cloud C&D Landfill	Red Cloud	Const/Demol.	04/04/17	$ 98,896	$ 9,115	Enterprise Fund	City of Red Cloud
Schmader C & D Landfill	West Point	Const/Demol.	07/27/12	$ 190,472	$ 190,472	Letter of Credit	Charter West Ntl Bank
Sidney C & D Landfill	Sidney	Const./Demol.	11/23/99	$ 133,419	$ 49,806	Enterprise Fund	City of Sidney
SW NE Solid Waste Agency	Imperial	Const./Demol.	06/01/01	$ 151,202	$ 72,600	Enterprise Fund	City of Imperial
Three Valleys C & D Landfill	Indianola	Const./Demol.	02/24/10	$ 81,539	$ 81,539	Letter of Credit	McCook Ntl Bank
York C & D Landfill	York	Const/Demol.	12/01/07	$ 822,221	$ 136,307	Enterprise Fund	City of York
Fossil Fuel Combustion Ash (FFCA), Industrial Waste Landfills, Monofills							
Ash Grove Cement Co.	Louisville	Indus. Waste	03/01/03	$ 4,566,288	$ 4,795,726	Insurance Policy	Great American E&S Ins. Co.
Clean Harbors Technology	Kimball	Monofill	08/01/95	$ 2,867,743	$ 3,615,339	Insurance Policy	Indian Harbors Insurance Co.
Fremont Utilities	Fremont	FFCA	05/28/96	$ 3,512,995	$ 793,767	Enterprise Fund	City of Fremont
Hastings Utilities	Hastings	FFCA	02/01//01	$ 12,829,000	$ 2,087,822	Enterprise Fund	City of Hastings & PPGA
NPPD Gerald Gentleman 4	Sutherland	FFCA	04/01/95	$ 6,646,123	$ 6,646,123	Financial Test	NPPD
NPPD Sheldon Station 4	Sheldon	FFCA	07/01/01	$ 2,332,648	$ 2,332,648	Financial Test	NPPD
OPPD NE City 1	NE City	FFCA	04/04/95	$ 6,719,167	$ 6,719,167	Financial Test	OPPD
OPPD NE City 2	NE City	FFCA	06/30/09	$ 6,125,423	$ 6,115,423	Financial Test	OPPD
OPPD North Omaha	Omaha	FFCA	04/04/95	$ 3,460,926	$ 3,424,926	Financial Test	OPPD
OPPD Fort Calhoun (IW)	Ft. Calhoun	Indus. Waste	04/04/95	$ 128,365	$ 128,365	Financial Test	OPPD
Platte Generation	Grand Island	FFCA	03/18/14	$ 1,772,778	$ 1,772,778	Financial Test	City of Grand Island
Waste Management of NE	Bennington	Indus. Waste	02/19/04	$ 1,458,137	$ 1,458,137	Surety Bond	Lexon Insurance Co.

NDEQ FINANCIAL ASSURANCE

Facility Name	Location	Permit Type	Initial Date	Obligated Amount	Current Amount Demonstrated	FA Mechanism	Guarantor
Transfer Stations, Material Recovery Facilities, Compost Sites							
AltEn LLC	Mead	Compost	04/01/07	$ 188,466	$ 188,508	Escrow Account	American Ntl Bank
Bud's Sanitary Service	Newman Gr.	Transfer Station	05/19/17	$ 2,970	$ 2,970	Letter of Credit	First Natl. Bank, NG
Custer Transfer Station	Broken Bow	Transfer Station	11/08/16	$ 10,339	$ 10,339	Letter of Credit	Nebraska State Bank
Doernemann Const. Co.	Clarkson	Compost	12/15/99	$ 101,013	$ 101,013	Letter of Credit	Clarkson Bank
Edgetown Properties LLC	Madison	Transfer Station	06/27/12	$ 7,500	$ 7,500	Escrow Account	Frontier Bank
Fremont CRD, Inc.	Fremont	Transfer Station	07/02/03	$ 13,125	$ 13,125	Surety Bond	Capitol Indemnity Corp
King Transfer Station	Walthill	Transfer Station	04/02/96	$ 1,182	$ 1,187	Escrow Account	First Natl. Bank, Walthill
Medi-Waste Disposal	Lincoln	Processing Fac	01/24/18	$ 36,036	$ 36,036	Surety Bond	Cincinnati Ins. Co.
Prairieland Dairy LLC	Firth	Compost	08/01/15	$ 313,830	$ 313,830	Letter of Credit	First State Bank Nebraska
Recycling Enterprises of NE, Inc.	Lincoln	Mat. Recovery	08/30/12	$ 7,734	$ 7,734	Letter of Credit	CityBank & Trust Co.
River City Recycling	Omaha	Mat. Recovery	01/01/01	$ 55,920	$ 55,920	Escrow Account	US Bank Ntl Assoc
Sarpy County	Papillion	Transfer Station	04/17/12	$ 98,643	$ 98,643	Surety Bond	Travelers Surety Co. of Amer.
Seneca Sanitation	Dubois	Transfer Station	09/27/17	$ 4,012	$ 4,012	Letter of Credit	First Heritage Bank
Stericycle	Lincoln	Processing Fac	07/01/12	$ 56,873	$ 56,873	Surety Bond	Westchester Fire Ins. Co.
Waste Connections of NE	Gering	Transfer Station	08/15/03	$ 25,831	$ 25,831	Surety Bond	Evergreen Ntl. Indemnity Co.
Waste Connections of NE	Ord	Transfer Station	07/02/03	$ 8,387	$ 8,387	Surety Bond	Capitol Indemnity Corp
Waste Connections of NE	Central City	Transfer Station	05/30/13	$ 9,223	$ 9,223	Surety Bond	Platte River Ins Co.
RCRA Closure and RCRA Post-Closure (PC)							
Loveland Products	Fairbury	RCRA PC	12/10/15	$ 630,697	$ 630,697	Letter of Credit	Bank of Nova Scotia
Bosch Security Systems	Lincoln	RCRA PC	06/02/09	$ 10,344	$ 10,344	Letter of Credit	Bank of Montreal
Clean Harbors Technology	Kimball	RCRA Closure	09/16/13	$ 30,462,670	$ 30,462,670	Insurance Policy	Indian Harbors Insurance Co.
Douglas County Landfill	Omaha	RCRA PC	03/08/85	$ 274,952	$ 274,952	Trust Fund	First Natl Bank of Omaha
Eaton Corporation	Omaha	RCRA PC	06/08/09	$ 4,463,158	$ 4,463,158	Letter of Credit	JP Morgan/Chase Bank
Safety Kleen	Grand Island	RCRA Closure	10/15/01	$ 148,686	$ 148,686	Insurance Policy	Indian Harbors Insurance Co.
Safety Kleen	Omaha	RCRA Closure	10/15/01	$ 393,938	$ 393,938	Insurance Policy	Indian Harbors Insurance Co.
Tenneco Automotive Inc.	Cozad	RCRA PC	09/17/97	$ 52,366	$ 52,366	Letter of Credit	Canadian Imperial Bank
Van Diest Supply Liquid Plant	McCook	RCRA PC	02/16/06	$ 1,662,826	$ 2,627,776	Letter of Credit	1st State Bank Webster Cty IA
Douglas County Landfill	Omaha	RCRA Cor Act	08/20/18	$ 1,780,435	$ 1,780,435	Financial Test	Douglas County
Preferred Pump & Equipment	Dodge	RCRA Closure	09/15/17	$ 57,084	$ 57,084	Financial Test	Preferred Pump & Equipment
Underground Injection Control (UIC)							
Crow Butte Resources, Inc.	Crawford	UIC		$ 47,740,447	$ 47,740,447	Letter of Credit	Royal Bank of Canada, NY Div.
Waste Tire Haulers							
ABC Tire LLC	Kansas C, KS	Waste Tire	06/24/13	$ 10,000	$ 10,000	Surety Bond	Nationwide Mutual Ins.
Abe's Trash Service Inc.	Omaha	Waste Tire	02/08/19	$ 5,000	$ 5,000	Letter of Credit	Bank of Bennington