



Nebraska Department of Environment and Energy

ANNUAL REPORT 2021

More information about the Nebraska Department of Environment and Energy

NDEE's vision is everyone living, working and enjoying a healthy Nebraska environment. Our mission is to protect and improve human health, the environment and energy resources. We enforce regulations and provide assistance, but to fully accomplish this vital mission we need your help. We encourage you to work with us to ensure future generations can use and enjoy the precious natural resources we enjoy today.

The agency's mailing address:
Nebraska Department of Environment and Energy
P.O. Box 98922
Lincoln, NE 68509-8922

Main phone number: (402) 471-2186
Toll-free number: 1-877-253-2603
Toll-free air construction permit hotline 1-877-834-0474
Records requests: (402) 471-3557
Public Information Office: (402) 471-4223

Visit our website 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

TABLE OF CONTENTS

Chapter 1: Agency Overview	1
Significant Topics in 2021.....	3
Agency Annual Statistics	7
2021 Legislative Summary	10
Chapter 2: Administration/Legal/Management Services	11
Administrators	11
Legal Division.....	11
Management Services.....	12
Chapter 3: Environmental Quality Council	19
Chapter 4: Air Quality Programs	22
Air Permitting	23
Air Compliance	28
Volkswagen State Trust Activities	42
Chapter 5: Land Management Programs	49
Waste Grants Programs	49
Waste Reduction and Recycling Incentive Grants Program.....	51
Litter Reduction and Recycling Incentive Grants Program	65
Nebraska Voluntary Cleanup Program.....	78
Resource Conservation and Recovery Act (RCRA) Program	84
Superfund Program.....	88
Solid Waste Program.....	96
Chapter 6: Water Programs	101
Petroleum Remediation Program	101
Water Quality Monitoring and Assessment Programs	108
Water Quality Planning	119
CWA 404 Program.....	123
Agriculture Section.....	124
Water Permitting and Certification Programs	130
State Revolving Loan Fund and Associated Grant Programs	145
Nebraska’s Public Water Systems.....	150
Drinking Water Division Activities.....	152
Monitoring and Compliance Section.....	157
Chapter 7: Energy Programs	165
Energy	166
Chapter 8: Expenditure and Budget Summary	170
Chapter 9: Distribution of Aid	175
Waste Management Aid Programs.....	175
Water Quality Aid Programs	176
Energy Aid Programs.....	177
Chapter 10: Staffing	178
Chapter 11: Financial Assurance Requirements	180

CHAPTER 1:

Agency Overview

The Nebraska Department of Environment and Energy (NDEE) marked its 50th year as a state agency in 2021. The agency was originally created with the passage of the Environmental Protection Act in 1971. At that time, the agency was named the Nebraska Department of Environmental Control; it later became the Nebraska Department of Environmental Quality in 1992. With the 2019 merger of the Nebraska Energy Office, the agency became the Nebraska Department of Environment and Energy to better reflect its new focus.

On July 1, 2021 Governor Pete Ricketts commemorated the anniversary with Department staff at a celebration at its new location in Lincoln's Fallbrook area. The Governor said the Department has much to show for its efforts over the past half-century. "The Nebraska Department of Environment & Energy has successfully supported the responsible stewardship of Nebraska's environment for the past 50 years," said Gov. Ricketts. "The Department's dedicated work has helped Nebraska rank among national leaders for the quality of our natural environment. The agency will continue to deliver a high level of service to Nebraskans as we work together to grow our state for future generations."

This report focuses on activities occurring in state fiscal year 2021 (July 1, 2020 to June 30, 2021). During FY2021, NDEE was authorized for a staffing level of 221 full-time employees.

Through a memorandum of agreement with the Nebraska Department of Health and Human Services (DHHS), 43 DHHS employees were placed with the agency to improve coordination between the Safe Drinking Water Act and Clean Water Act programs.

The NDEE has an FY2021 annual budget of approximately \$82 million. This includes money from federal grants, state taxes, and fees.

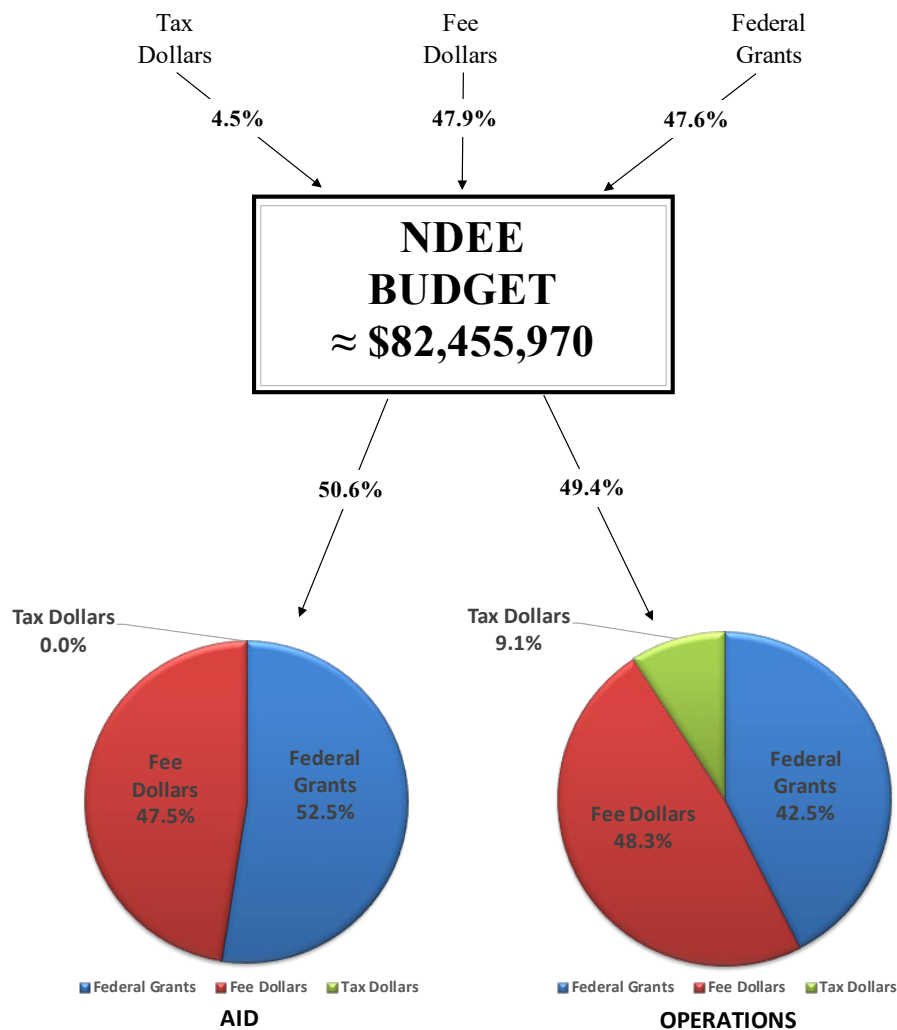
The table on page 2 shows a breakdown of NDEE funds. The columns listed as aid represent the agency's budget redistributed to other agencies, organizations, and individuals as grants and loans. The columns listed as operations represent amounts used for agency operation and contracts for such things as investigations and cleanups. The following graphic depicts NDEE's FY2021 budget by funding source and percent expended by fund type and activity (aid or operations).



On July 1, 2021, NDEE celebrated its 50th anniversary at its new Fallbrook building.

Funding Type	Operations: \$ Amount	Percent of Operations Budget	Aid: \$ Amount	Percent of Aid Budget
Federal Funds (Grants)	\$17.3 million	42.5%	\$21.9 million	52.5%
State General Funds (Tax \$)	\$3.7 million	9.1%	\$0 million	0.00%
Cash Funds (Fees)	\$19.7 million	48.4%	\$19.80 million	47.5%
Total	\$40.7 million		\$41.7 million	

FY21 Budget



Significant Topics in 2021

The following are some of the significant topics, challenges and accomplishments that NDEE addressed in 2021:

Building move

Nearly 28 years after starting to work in the Atrium (the first week of December in 1992), NDEE moved to a new building in the north Lincoln area of Fallbrook.

The agency started operating in the new building on December 2, 2020. Before this move, NDEE employees had been working from four locations in Lincoln: The Atrium Building on ‘N’ Street, 1111 Lincoln Mall, the Executive Building near the Capitol and the Van Dorn Complex on south 8th Street. The agency’s 2019 merge with the Nebraska Energy Office, and agreements to provide a workspace for over 40 DHHS teammates made a new space even more necessary.

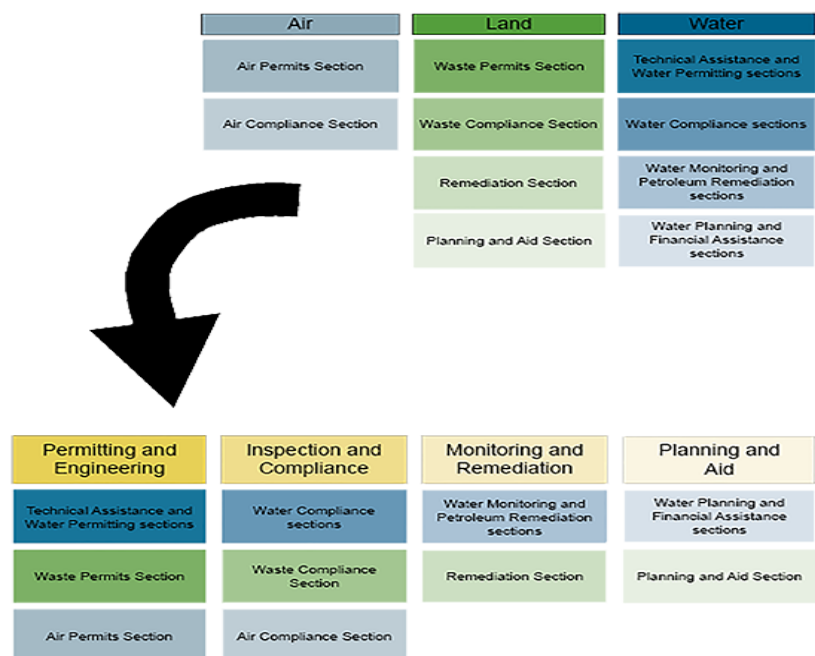
The new building offers, for the first time, a single space for all agency employees working in Lincoln offices, about 250. It provides a headquarters for NDEE activities including storage space for equipment reused in petroleum remediation cleanups, a surface water testing lab and a hearing room for groups such as the Environmental Quality Council.

Staff reorganization

At the same time the agency moved to a new location, it also underwent an organizational staffing change. It was a move under consideration for several years which became reality when the Department was able to relocate and accommodate the reorganization of its teams. Now, the agency can better serve Nebraskans and the regulated community by more closely reflecting their needs.

The reorganization is designed to allow NDEE to be more focused on functional segments than its current vertical segments of air, water, land, remediation and energy. Under the reorganization, the new divisions are Administration, Inspection & Compliance, Planning & Aid, Permitting & Engineering, Drinking Water & Groundwater and Monitoring & Remediation.

For example, when a new business starts up in Nebraska or expands, its changes and regulatory requirements don’t necessarily fit neatly into one or two of these traditional structural categories like air or water. Often, they need a “whole product” experience.



This diagram shows how the teams were reorganized.

To create a smooth transition, division leaders met with teams before the reorganization happened to identify subject matter experts and key elements of the programs. They continue to communicate and work through the logistics of issues, such as organizing the administrative support pool to address program functions while operating in a group aligned with records and administration.

Drinking Water, Environmental Safety, and Water Well Standards Programs Transfer to NDEE

To better serve Nebraskans and the regulated community, the 2021 Nebraska Legislature passed a bill transferring several EPA state-delegated environmental health programs from the Department of Health and Human Services (DHHS) to the Nebraska Department of Environment and Energy (NDEE). This action improves state program collaboration and maximizes federal and state resources.

Legislative Bill 148 created an Environmental Safety Program, transferred Safe Drinking Water Programs, and moved the Water Well Standards Program to NDEE. On July 1, 2021, over 40 DHHS teammates, who had been working at NDEE under a written agreement, officially became part of NDEE's team.

It was a move years in the making. The idea of transferring these former DHHS programs has existed since the '90s, and formal discussions began in 2015. Through a Memorandum of Agreement (MOA), NDEE began supervising and providing a workspace for the DHHS employees in 2017. NDEE began administering the Safe Drinking Water Act (SDWA) and providing cross-training to DHHS and NDEE staff on Drinking Water and Clean Water programs.

An MOA modification in 2018 moved responsibility of administering the Water Well Standards and Contractors' Practice Act and relevant statutes, from DHHS to NDEE. A modification in 2019 brought in five other areas: swimming pools, well and septic loan evaluation, mobile home parks, recreation camps and food inspections.

In 2017, the agencies established objectives to measure the transfer's effectiveness.

- Cross-training inspection staff to be able to conduct both water and wastewater inspections, including training to get appropriate certifications in wastewater and wells.
- Cross-training water and wastewater engineering staff.
- Building resilience to retirements and turnover.
- Strengthening the communication and marketing of the State Revolving Fund (SRF) programs.
- Evaluating field office needs and opportunities to be more efficient.
- Resizing the Drinking Water Monitoring and Compliance team.

Program collaboration and communication have realized process improvements in work efforts. For example, the average number of days to issue a wastewater construction permit in 2017 was 24 days; in 2020 the average was 14.6 days. For drinking water construction permits in 2017, the average was 20.3 days; in 2020 the average was also 14.6 days.

Notably, the collaboration has provided a more holistic approach to community needs. This was valuable, for example, during statewide floods in 2019, when teammates more effectively

served impacted areas since they were cross trained in drinking water and wastewater programs.

Moving forward, NDEE will continue to determine solutions for optimal customer service. The programs plan to establish more efficient systems for licensure and renewals for the water well operators, water well contractors, and swimming pool operators to make them run more efficiently.

Strategic planning

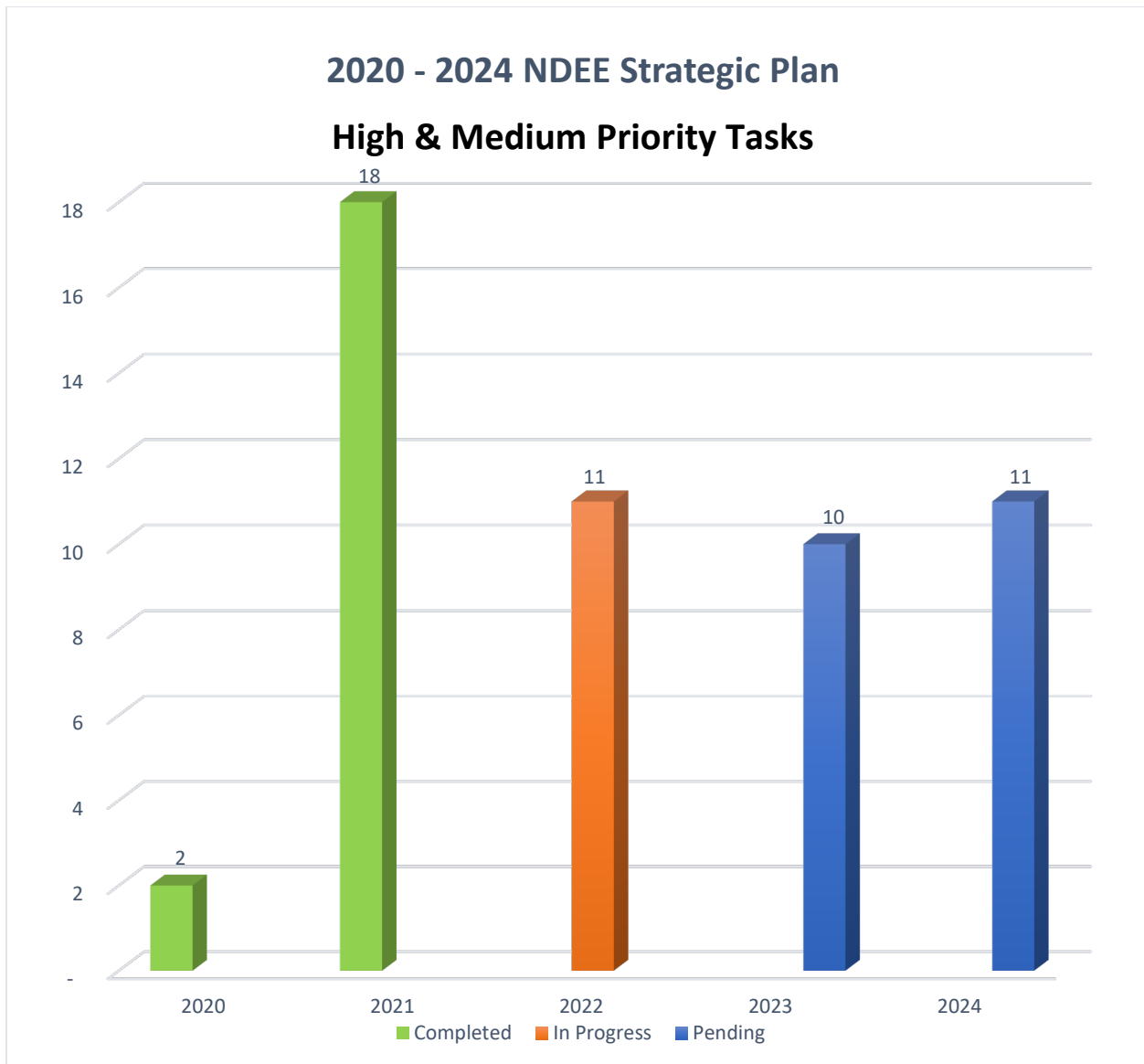
Agency leadership started strategic planning efforts in August 2019 to update NDEE's vision and mission statements and provide the agency a compass for the next one to five years. The idea germinated in 2015 after Director Jim Macy joined the agency as a more intentional way for NDEE to operate.

Strategic planning affects both internal and external components of NDEE functions. Internally, it addresses areas in need of improvement and helps teammates work more efficiently. It also allows teammates and team leaders to focus on the future and process improvement in addition to day-to-day tasks. On an external level, it enables NDEE to take a more proactive approach to serving Nebraskans' needs by planning and allocating resources as needed.

Highlights of 2020 and 2021 Strategic Plan accomplishments include:

- Staff Retention – employee of the month, fun committee, and working from home were all recently implemented. The Executive Team continues to work on the structure of job shadowing and mentoring.
- Credentialing Project – online renewal of licenses/certificates with acceptance of online credit card payments. Communication within the agency has been on point with multiple teams working on this project.
- Social Media – use of social media in a way that helps market the agency's brand and creates communication with the public. The agency has used Twitter to communicate on summits, energy conservation, environmental awareness, grants/aid, and vacant positions.
- Financial Reviews with Division Administrators – creates awareness of financial issues and allows time for planning to solve those issues.

Following the strategic year 2020, the NDEE Executive team opted for a 5-year strategic plan instead of creating single year plans. The 5-year plan began on October 1, 2019 and will expire September 30, 2024. Progress is reviewed quarterly by the Executive team. A chart showing the progress of the plan is on the next page.



Vision: Everyone living, working, and enjoying a healthy Nebraska environment.

Mission: To protect and improve human health, the environment, and energy resources. We will accomplish this through assessing, assisting, inspecting, educating, enforcing, funding, monitoring, permitting, and restoring.

Core Values

- **Integrity:** Honest, accountable, consistent
- **Excellence:** Customer focused; commitment to quality
- **Teamwork:** Working together towards a common goal
- **Innovation:** Open to new ideas and continuous improvement
- **Communication:** Sharing information; respectful; active listening

Strategic Focuses**Focus 1: Personnel**

Assess, develop, and implement personnel programs that support professional development, succession planning, training, and talent management.

Focus 2: Equipment

Identify new requirements and maintain current equipment to increase effectiveness, efficiencies, and utilization.

Focus 3: Funding

Identify and pursue the best funding options to ensure stability.

Focus 4: Innovation

Find creative and thoughtful approaches to fulfill our mission and support measurable improvements.

Focus 5: New Requirements

Develop and implement a consistent process to identify, assess, and prioritize new programs and requirements which supports our vision of a healthy environment.

Focus 6: Change

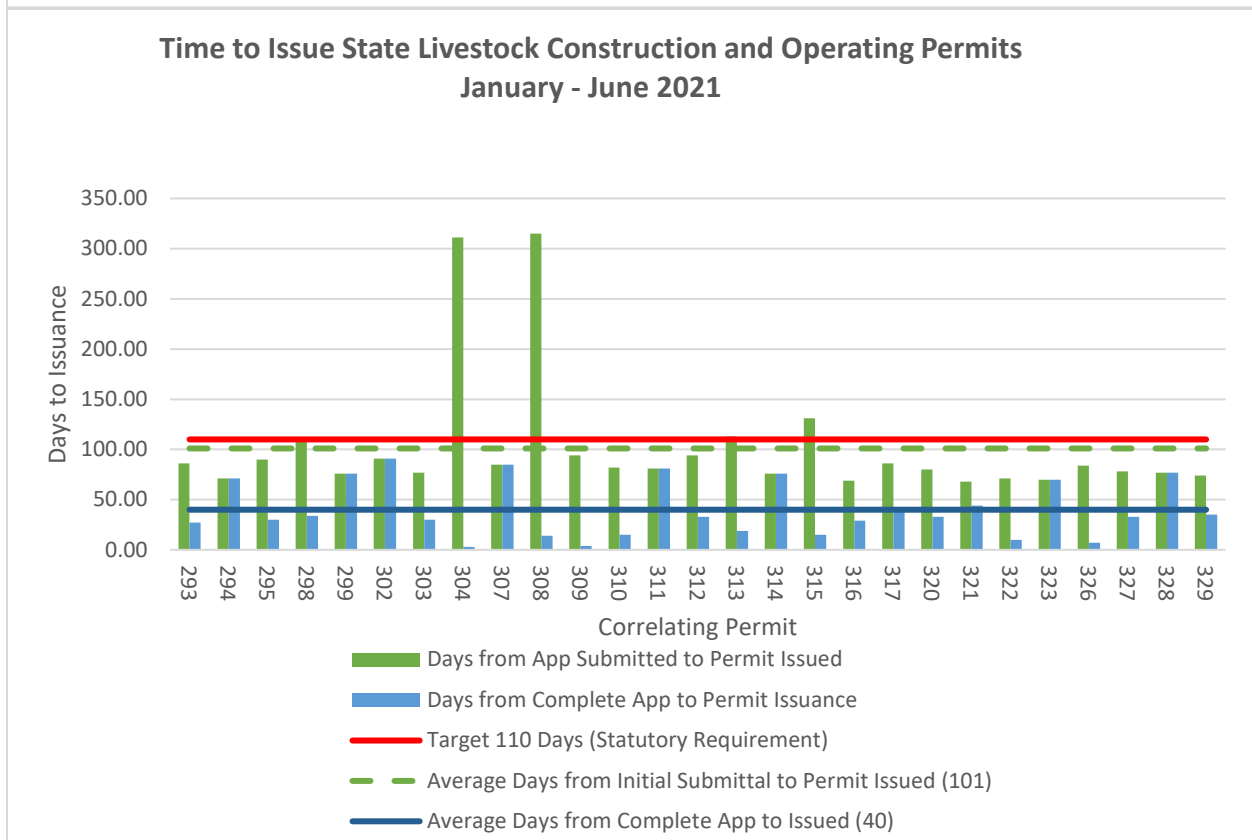
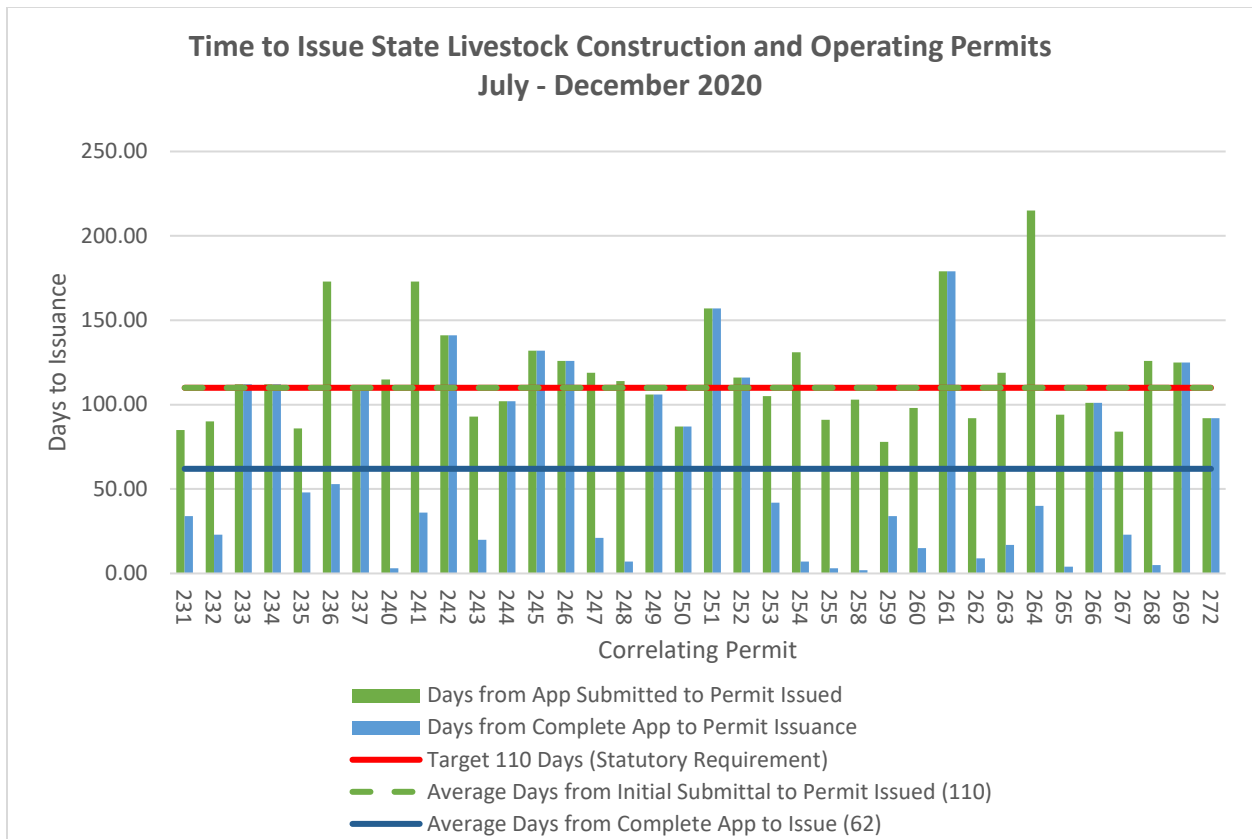
Improve individual and organizational resilience to change by developing enhanced methods of awareness, adaptiveness, and proactiveness.

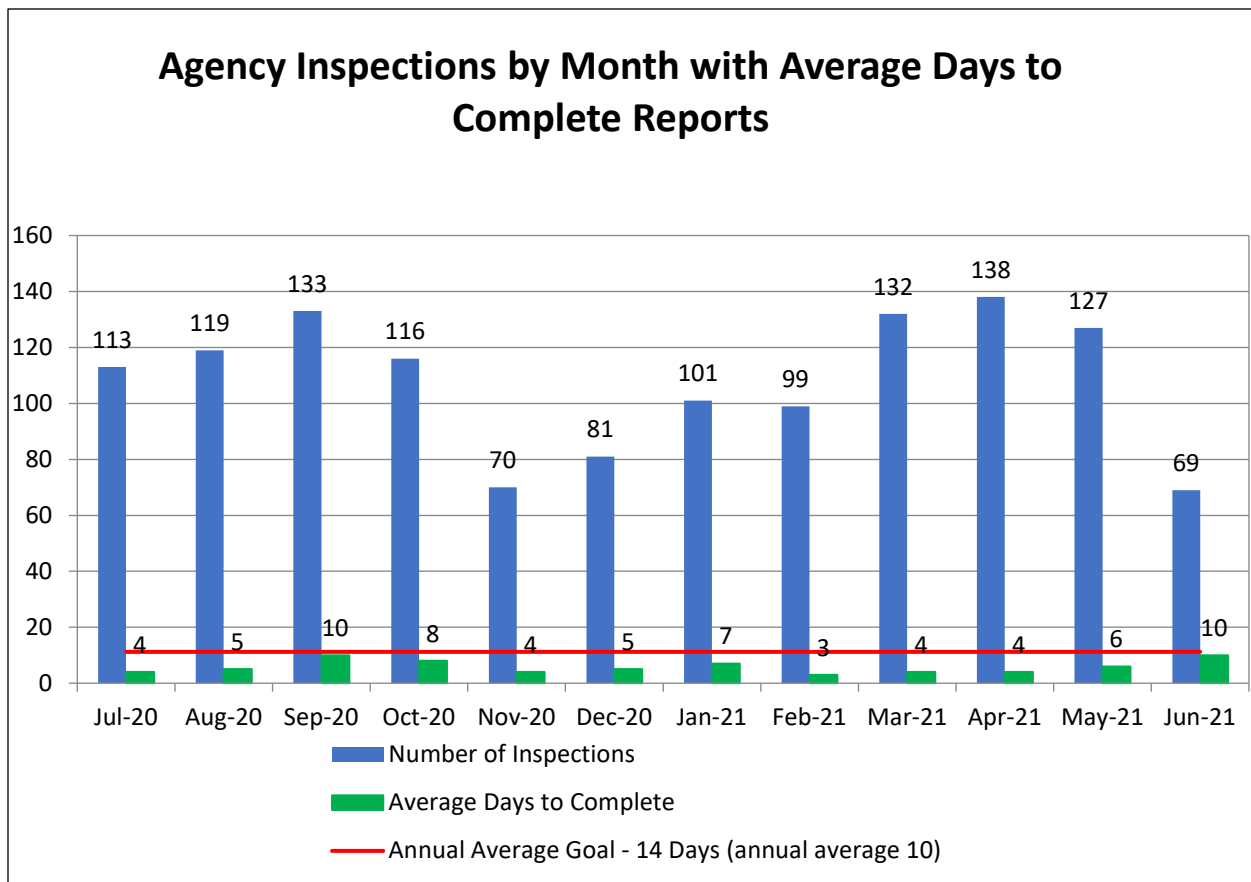
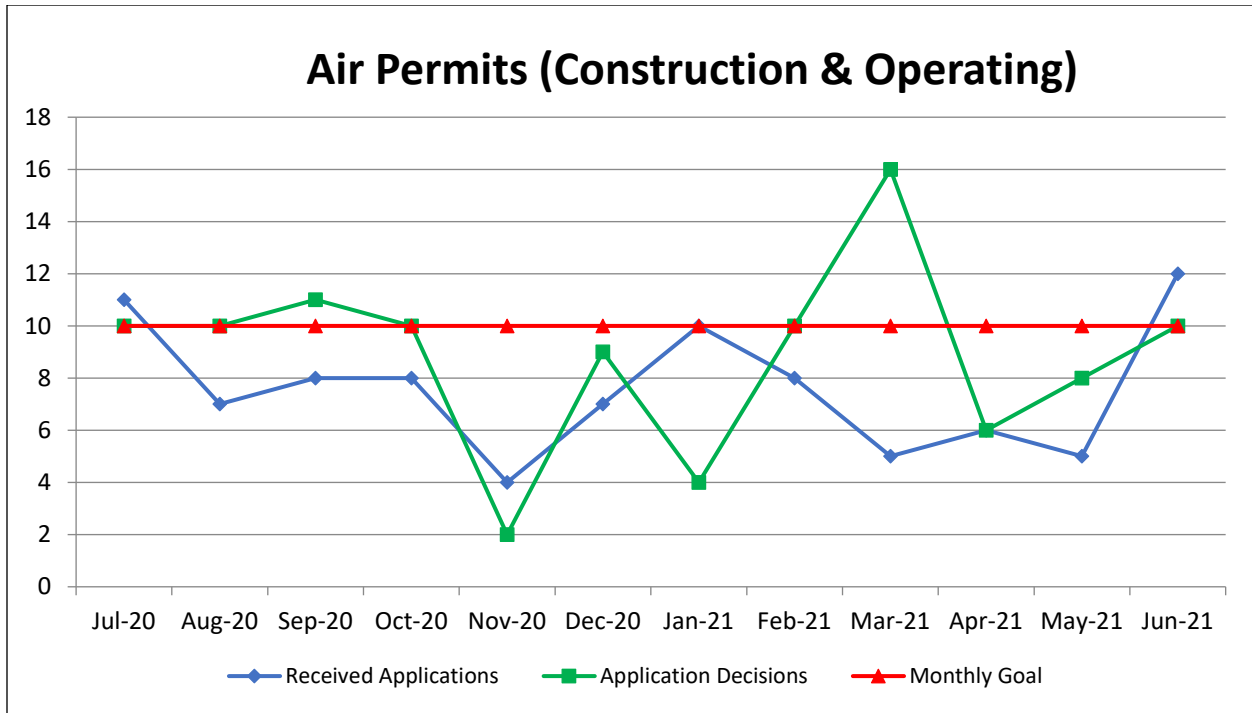
Focus 7: Communication

Establish a comprehensive internal and external communication plan which is intentional and proactive.

Agency Annual Statistics

The following charts show statistics from state fiscal year 2021 (July 1, 2020 to June 30, 2021) related to State Livestock Construction and Operating Permits, Air Construction and Operating 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.





2021 Legislative Summary

The Nebraska Legislature enacted three legislative bills in 2021 that had direct impact on NDEE:

LB 148 – This legislation amended current law to transfer agency responsibilities being performed by the NDEE under a Memorandum of Agreement with the Department of Health and Human Services. Administration of the Nebraska Safe Drinking Water Act and Water Well Standards and Contractors’ Practice Act is moved to NDEE. The bill created the new Environmental Safety Act for the administration of swimming pools, mobile home parks, recreation camps and home loan inspection programs. The powers, duties, obligations, employees, and assets of these programs were transferred to NDEE. LB 148 created two new cash funds. Fees related to the inspections and license payments collected through the Environmental Safety Act is to be credited to the Environmental Safety Cash Fund, and any fees collected related to engineering reviews of plans and specifications is to be credited to the Engineering Plan Review Cash Fund.

LB 306 – This bill amends statute to expand eligibility of the Low-Income Home Energy Assistance Program (LIHEAP) program from 130% of the federal poverty level to 150%, making more Nebraska households eligible for assistance. LIHEAP funds received by DHHS provide federal financial assistance to those in need to offset the costs of heating and cooling. LB 306 also directs DHHS to allocate at least 10% of LIHEAP funds be allocated to weatherization assistance. NDEE administers the state’s Low-Income Weatherization Assistance Program.

LB 380 – The original contents of LB 449 were amended into the state appropriations bill, LB 380. As enacted, LB 380 includes the provisions of LB 449 which appropriates \$100,000 in General Funds for FYs ‘22 and ‘23 to NDEE’s Low-Income Weatherization Assistance Program to aid in carrying out energy efficiency audits and weatherization improvements. No expenditures are allowed to be used for permanent and temporary salaries or per diems for state employees.

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.

Administrators

The Administrators of NDEE provide oversight and policy direction in all areas of NDEE'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 NDEE activities.

NDEE 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 NDEE 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 coordinate the various agency programmatic activities.

Legal Division

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

- Supporting enforcement case development and return to compliance;
- Preparing administrative orders and other enforcement actions for the Agency;
- Coordinating Agency response to variance requests;
- Representing the Agency in administrative proceedings;
- Preparing judicial referrals to the Attorney General;
- Assisting the Attorney General as requested;
- Serving as hearing officers for public and administrative contested case hearings;
- Assisting review and development of proposed legislation, rules and regulations;
- Advising the Director and Agency staff on duties and program responsibilities;

- Advising the Environmental Quality Council as requested;
- Drafting and reviewing contracts, leases, environmental covenants, and other legal documents;
- Reviewing other Agency documents as requested; and
- Representing the Director and Agency as requested by the Director.

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

Management Services

The Management Services Division provides administrative and technical support to NDEE 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.

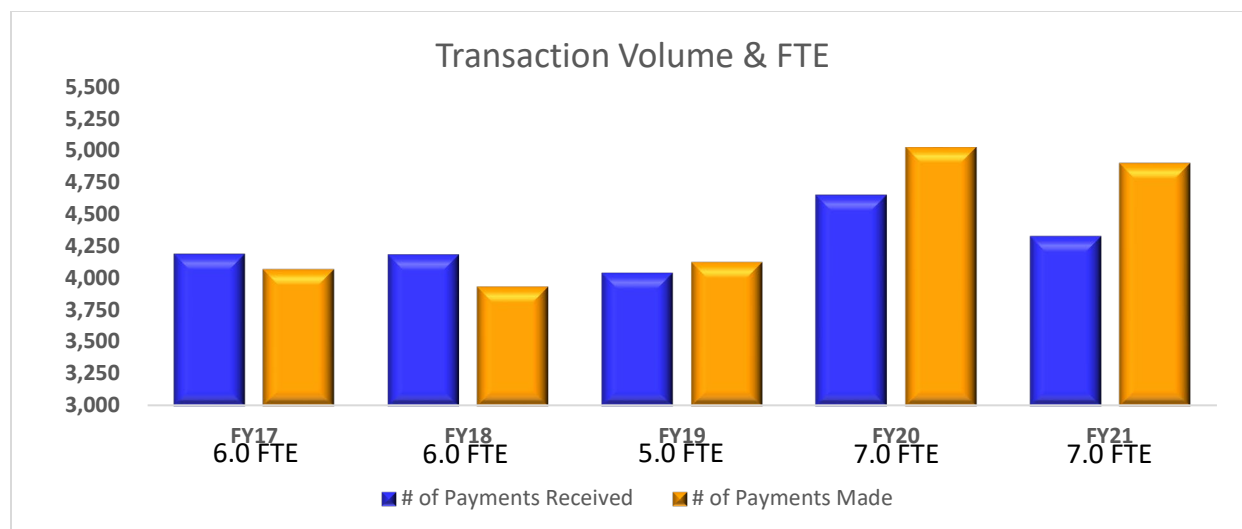
Fiscal Services

The Fiscal Services Section is responsible for agency finance and accounting functions, which includes managing NDEE purchasing, spending, receipting, budgeting, forecasting, and auditing responsibilities. The section has seven 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 regard to financial planning, in addition to the collection, tracking and reporting applicable fees. Because of the vast role the team plays within the agency, emphasis was placed on professional development and streamlining processes in the last year.

Major accomplishments during fiscal year 2021:

- Development and testing of 32 standard operating procedures (SOPs). During this time, the team worked on creating efficiencies within its core processes and identifying/training backups so processes can be executed in times of need.
- Consolidated financial reporting for the agency to include the Energy Programs. With this accomplishment, executive leaders can review the financial performance of the agency within a single set of reports.

Created a system for reporting cost savings and obligated funds to executive leaders for use with reinvestments back into the agency for strategic planning.



Human Resources

The Human Resources Section consists of three staff members, who together plan, direct, coordinate, and administer the day-to day operations of Human Resource Section. The Human Resource team supports the agency efforts to provide a working environment that strengthens individual and organizational performance.

Human Resources has a Training Coordinator which is responsible for analyzing training needs, developing curriculum and consults with the managers and supervisors of the agency to assess training needs and develop programs to match these needs. The coordinator continually evaluates procedures to monitor and analyze course effectiveness and updates the curriculum as needed.

Staff retention continues to be an important goal for NDEE. Staff turnover impacts continuity in NDEE’s programs and activities, and results in additional costs for recruitment and training of replacement staff members. NDEE strives to foster and maintain an employee-friendly workplace by offering transfer and promotional opportunities for qualified internal applicants. The Agency’s Strategic Plan addressed retention by implementing a Staff Retention Group this year, led by Human Resources. The group was comprised of employees from across agency divisions. The group met for a year and was able to identify and develop recommendations to help with retention, several of those recommendations have already been implemented.

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

The following charts comparatively show staffing activity for FYs 2020 and 2021. With historically low unemployment, the agency has been very fortunate to have the opportunity to hire 25 of the best and brightest new employees during this fiscal year timeframe. The agency continues to anticipate a large number of retirements over the next few of years, as the baby boomer generation has reached retirement age. We have been actively developing redundancy in positions (succession planning) to avoid a significant loss of agency knowledge and expertise.

July 1, 2019 through June 30, 2020	
New Hires	23
Retirements	4
Terminations	5
Transfers	4
Promotions	10

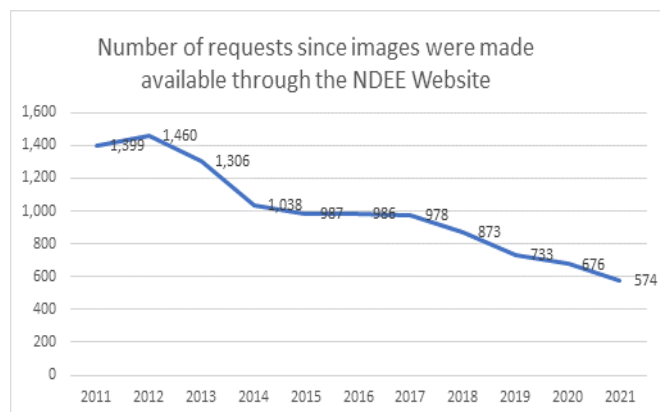
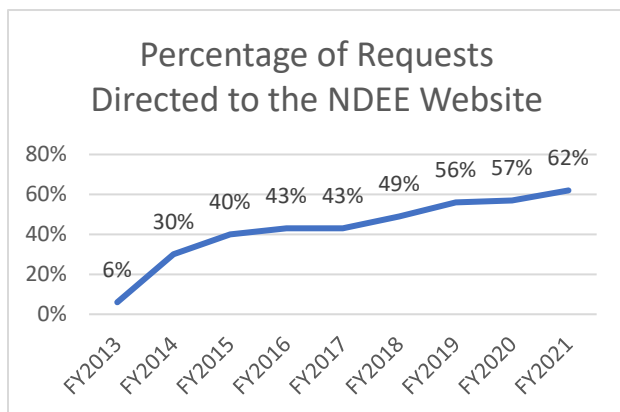
July 1, 2020 through June 30, 2021	
New Hires	25
Retirements	17
Terminations	11
Transfers	4
Promotions	24

Records Management

The Records Management Section is responsible for managing the agency’s paper and electronic records, centralized mail handling process, and requests for public information. Section employees also furnish support functions to agency programs.

In FY2021:

- Over 118,200 records were stored in the Enterprise Content Management System (ECM) utilizing OnBase software applications from Hyland Software.
- More than 30,200 incoming mail items were imaged and routed electronically to agency staff through a workflow process in the ECM.
- Staff in the Records Section responded to 574 requests for information. The number of information requests go down annually, as more information is made available online.
- Less time spent responding to public requests allowed the team to back-scan documents from more than 5000 files in preparation for moving the file room. In the future, the Records Management Team will focus on imaging Leaking Underground Storage Tank and Release Assessment documents and files, which are the most requested items for the agency.
- This year 62% of the 574 requests made were fulfilled by directing the requestor to the agency website to view documents.
- In response to public requests, the Records Team imaged over 488 legacy paper files into the ECM.





The agency fileroom was moved to the new Fallbrook location in November 2020. The Records Management Team coordinated transfer of more than 50,000 physical files to the new file room. In preparation for the move, staff transferred over 30,000 files to the State Record Storage Center and imaged paper documents for more than 5000 files, reducing the file room footprint by two-thirds.

The Records Management Section also coordinates building and implementation of solutions in the ECM.

- In the 2021 fiscal year, an inspection workflow tool was finalized and implemented for agency inspectors.

Information Technology

The Information Technology (IT) Section responsibilities are to assist NDEE users with any problems or concerns that are not PC hardware or software related, maintain the midrange IBM Power I (AS/400) computer hardware, web page support, and AS/400 application development.

The application development staff, in cooperation with the new Drinking Water programs, has developed four new computer programs for Engineering Plan Review, Safe Drinking Water, Environmental Safety, Water Well Standards and Contractors' Licensing to assist not only the new program staff with their daily jobs but also to provide new ways for the public to interact with the agency. Application development like this, can at times, take multiple years, in this case they were completed and put into production in ten months.

The IT section added a staff member from the Drinking Water merger to NDEE and will be filling a programmer position to help with continued application development.

NDEE web developers have been maintaining and making updates to the agency web page. The agency is working towards having a new web interface in 2022.

The IT Section added new project management software for the entire agency, to help manage all types of projects in a visual manner on their local computers. The software is not

only able to share information with other staff in their program, but all agency staff, when and where necessary.

The Office of the Chief Information Officer (OCIO) has assigned one OCIO support staff to the Fallbrook Blvd building for PC hardware and software support. This will help the IT staff focus and be more efficient in accomplishing other work that is not PC support.

Public Information Office

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

A primary responsibility of this office is to handle questions from the public and media (newspaper, television, radio and web) regarding NDEE'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 NDEE'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 NDEE.problem@nebraska.gov. The site 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.

NDEE also maintains social media accounts on Facebook, Twitter, LinkedIn, and YouTube to share agency updates, offer a resource for its audiences, and provide another way to reach the agency.

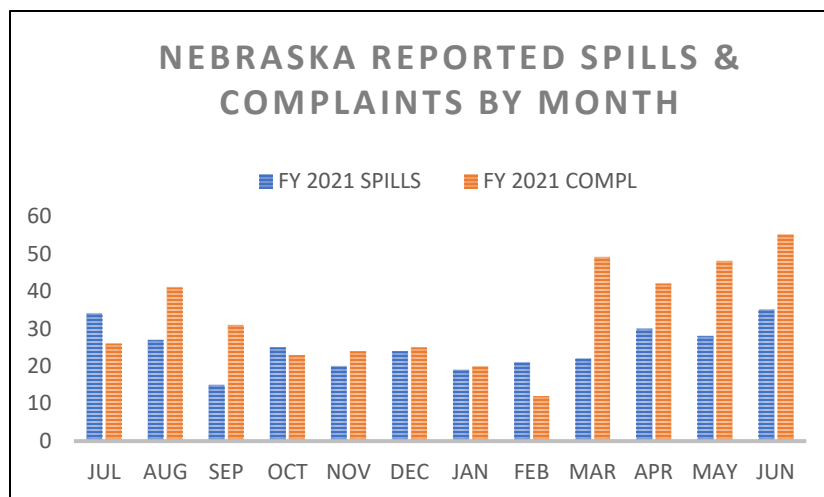
As part of the FY2021 reorganization, the PIO team now provides support for the agency's legislative activities, in addition to the small business and environment assistance program. You can review the Department's legislative summary in Chapter 1 and find discussion of the Department's assistance activities in Chapter 4.

Emergency Response Program

Through the Emergency Response Program, NDEE 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 and coordinate closely with the local, state, and federal agencies involved in emergency response incidents.



The agency relocation to a new facility offered and opportunity for the program to evaluate its resources. The replacement of aging response equipment has begun. Recruitment and training of new volunteers to the team was initiated. All resources, personnel, and equipment are now co-located for the first time in the agency's history, which should produce a much greater efficiency.

The NDEE recorded 300 reports of spills in FY 2021 (Jul 2020 – Jun 2021). Of the spills, 218 involved petroleum. An additional 386 citizen complaints were recorded by NDEE in FY2021.

Quality Assurance

The EPA has requirements for conducting quality management activities for all environmental data collected by the NDEE, to ensure that the Department's decisions are supported by data of known and documented quality. In turn, the Department is responsible for reviewing the procedures a project will use to ensure that the samples participants collect and analyze, the data they store and manage, and the reports they write are of high quality. Quality Assurance Project Plans (QAPPs) are written documents that outline these procedures. Management 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 NDEE programs meet reporting deadlines, consolidating reports and verifying 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 NDEE 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 NDEE. In addition, the Governor appoints the NDEE 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. NDEE 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 NDEE's administrative functions or day-to-day responsibilities. The NDEE Director is responsible for administration of NDEE 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 for FY20-21.

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	Vacant	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
July 1, 2020, to June 30, 2021

Council Meeting Date	Regulation	Action
December 15, 2020	Public Hearing on 2021 Litter Percent Allocations	Approved
	Public Hearing on Amendments to the 2021 Intended Use Plan and Project Priority List for Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF)	Approved
January 27, 2021	Public Hearing on Amendments to the 2021 Intended Use Plan and Project Priority List for Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF)	Approved
June 15, 2021	Public Hearing on 2022 Intended Use Plan and Project Priority List for Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF)	Approved

CHAPTER 4:

Air Quality Programs

The objective of the Air Quality Programs 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 Programs work to maintain Nebraska's air quality by implementing state and federal air quality regulations, through permitting and compliance activities for stationary sources, and by monitoring outdoor ambient air for regulated pollutants. Nebraska's air quality rules are set forth in Nebraska Administrative Code (NAC) *Title 129 – Nebraska Air Quality Regulations* (Title 129).



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

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

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

Through an agreement with the Department and direct delegation from the EPA, three local agencies — Lincoln-Lancaster County Health Department, Omaha Air Quality Control, and Douglas County Health Department — have accepted responsibility for various facets of the air

quality program within the jurisdictions of those agencies. These responsibilities include air quality monitoring, permitting, and enforcement.

Air Permitting

An air quality permit sets enforceable limits on the amounts of pollutants that a facility may emit, ensuring that facilities are constructed and operated in a manner that protects the quality of the surrounding ambient air. The Department issues two main types of air quality permits: construction permits and operating permits. A construction permit may be required for a facility before the construction or modification of an emission unit. An operating permit may be required for an existing facility source of certain air pollutants. Currently, there are approximately 1,207 facilities that have received a construction permit and/or an operating permit.

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. Some sources will require a construction permit, but may not require an operating permit.

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

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

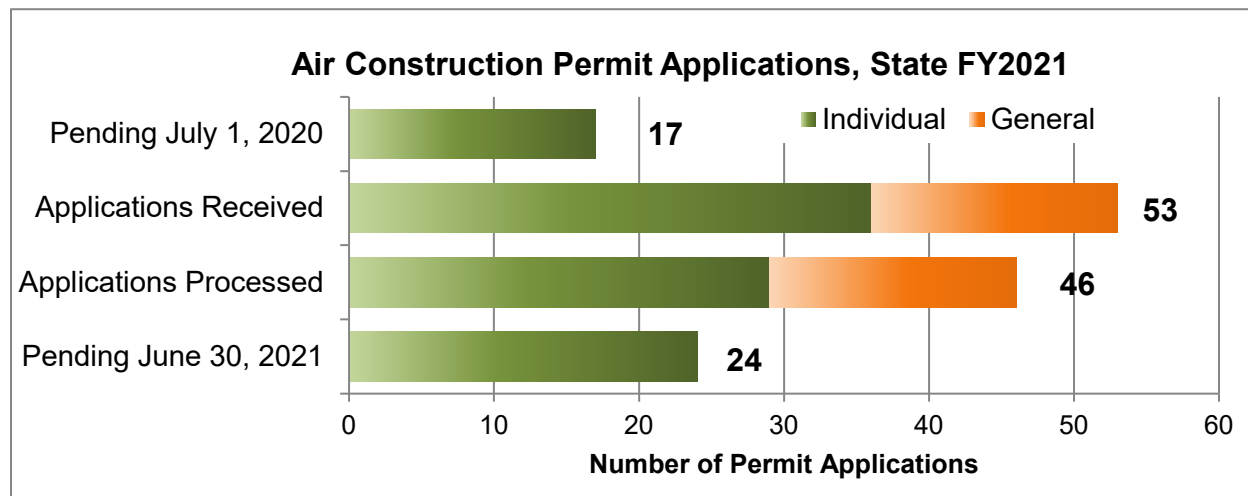
General construction permit coverage is currently available for eligible sources in nine categories (including time-sensitive construction activities), and general operating permit coverage is available for one category (small incinerators). Approval of general and permit-by-rule coverage takes much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

Construction Permit Program

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

sources with potential emissions at or above these thresholds are required to obtain a construction permit. A construction permit is valid for the life of the covered emission units.

The following graph summarizes construction permit applications received, processed, and pending during the 2021 state fiscal year. (Note: the *Processed* category includes permits issued, withdrawn, denied, and determinations of no permit required.)

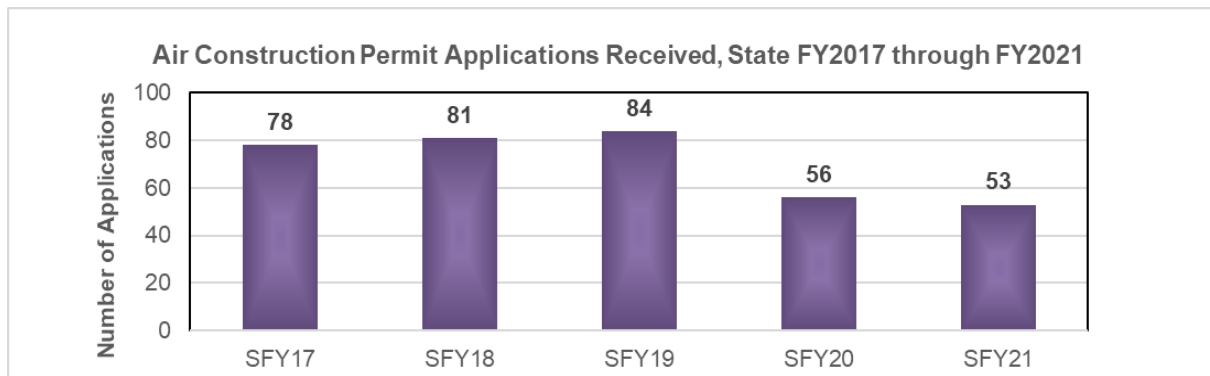


Nebraska's program also implements the federal construction permit program, called Prevention of Significant Deterioration (PSD). The PSD program applies to construction of new major sources or major modifications to existing sources that emit significant levels of certain types of pollutants. The purpose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

For facility sources regulated under the construction permit program that emit levels of certain types of air pollutants sufficient to trigger PSD requirements, Air Program 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.

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

The economy and business activity in the state impact the number of air quality construction permit applications received each year. The following graph shows the number of construction permits received annually from state FY2017 through FY2021.



Air Dispersion Modeling

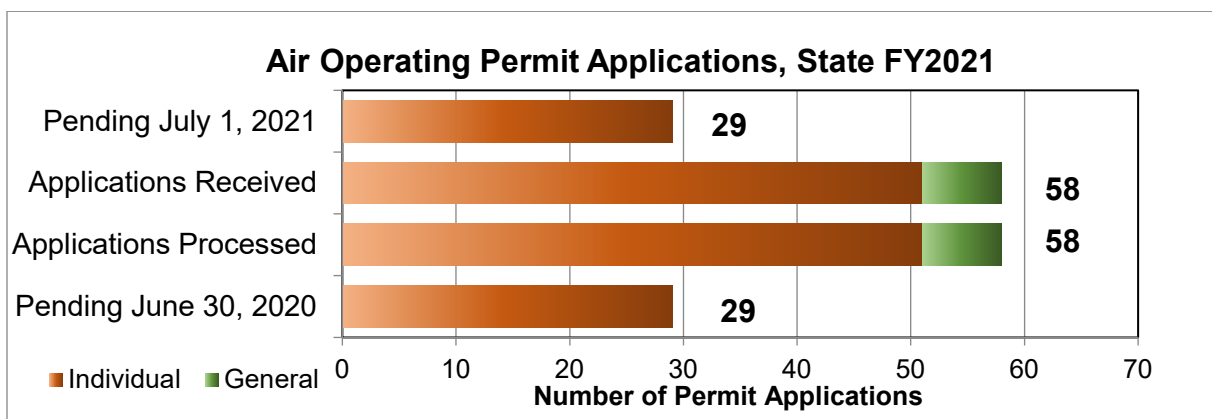
Air dispersion computer models predict how air pollutants emitted by a facility spread and disperse. These regulatory models use expected emissions, meteorological and geographical data, and other factors to estimate ground level concentrations of air pollutants at a large array of locations outside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

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

Operating Permit Program

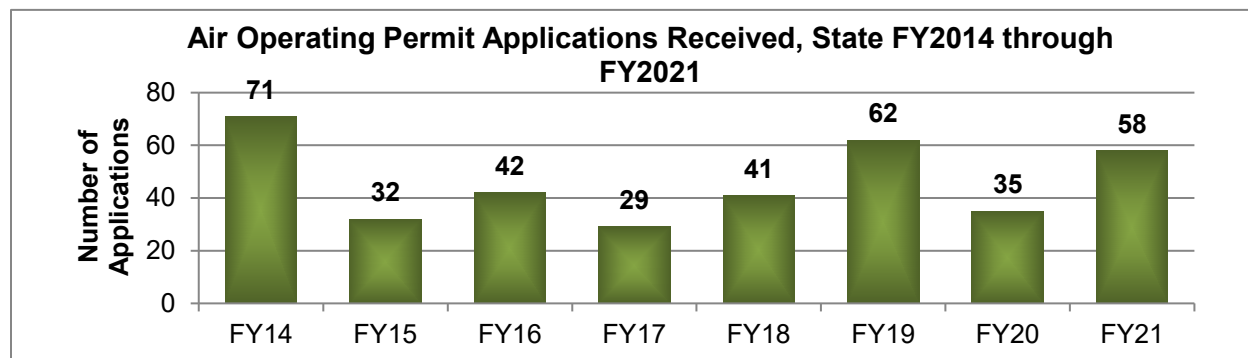
As required by Title V of the Federal Clean Air Act Amendments of 1990, Nebraska issues operating permits for Class I (major) sources of certain air pollutants. The Department also regulates minor sources using Class II operating permits as required under Nebraska law. Application for an operating permit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

The following chart provides statistics on the number of operating permit applications received, processed, and pending during the 2021 state fiscal year. These statistics include general permit coverage approvals. The current general operating permit for small incinerators was issued in FY2018, replacing the previous five-year general operating permit that expired that year. Most of the general operating permit coverages issued in FY2021 were for new applicants requesting coverage for their small animal incinerator. (The current general operating permit for small incinerators is available through an efficient online process, whereas the previous general permit required a paper application).



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

The five-year renewal cycle, past delays in issuing renewals, and other factors have resulted in wide variations over time in the numbers of operating permits up for renewal each year. The chart below summarizes air quality operating permit applications received from State FY2014 through FY2021 (applications for all application types, including permit revisions, general operating permits, permit-by-rule, etc.).



Permit Program Process Improvements

Individual construction and operating permits are complex, highly technical documents that must address all emission points for various pollutants at a facility in a manner that is enforceable as a practical matter. Processing a permit application includes complex analysis with multiple steps and personnel. In FY2020, the Operating Permits Team undertook a process improvement project on operating permit renewals and applications. The project resulted in a significant reduction in the time needed to prepare and process an operating permit renewal application. One applicant estimated an 80% reduction in their application preparation time. The Air Programs have 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. Air Program staff made significant fact sheet process improvements in FY2018 and will revisit permit fact sheets each year to pinpoint opportunities for streamlining. Additional improvements were made in FY2020 and 2021 that continue to make these fact sheets more uniform and easier to understand, making compliance easier for facility staff, which also assists the efforts of agency compliance inspectors.

With the process improvement event that started in 2016, fact sheet project initiated in 2018, and other ongoing efforts, the average time required to reach a decision on a construction permit application improved significantly from 188 days to approximately 85 days (including online-only general construction permit coverage) at the end of FY2021. The operating permit application backlog was also significantly improved down from approximately 120 applications a few years ago to 29 applications pending at the end of FY2021, even with a steady influx of applications. Although some impacts of improvements may not be realized in the immediate future, sources with permits being issued now should see processing times significantly improved when they apply for permit renewal.

The Air Quality Permitting Programs have consistently had a significant amount of staff turnover, leading to recurring discussions about permit decisions, regulations and other challenges. The Air Program staff 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 Program Staff. In addition, the Air Program revamped new employee onboarding procedures. These are two examples of the significant efforts to help improve staff training and permitting consistency. This tool allows Air Program staff to research past permitting actions and associated publications and documents to help facilitate more rapid permit and uniform permit decisions.

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

During the last half of FY2021 the Air Program began working on and completed draft versions of six White Papers to help sources to understand different aspects of the air program and how it applies to them. Once the white papers are completed, they will be placed in the Air Program's Compendium Public Section for reference. The Titles of the White Papers are:

Blanket Emissions Limits – *When are they allowed?*
Continuous Emissions Monitoring Systems (CEMS) vs Performance Testing
Major, Minor, and Synthetic Minor Sources – *Foundation Station*
Wet Scrubber Operational Parameter Monitoring and Variability at Ethanol Plants
Air Quality Permit Limits and Enforceability – *Then and Now*
Potential to Emit (PTE) – *What it means for me?*

Air Compliance

Ambient Air Quality Monitoring Program

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

- Particulate Matter (PM)
 - With a diameter of 10 micrometers or less (PM₁₀)
 - With a diameter of 2.5 micrometers or less (PM_{2.5})
- Sulfur Dioxide (SO₂)
- Nitrogen Dioxide (NO₂)
- Carbon Monoxide (CO)
- Ozone (O₃)
- Lead (Pb)

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

Nebraska Ambient Air Monitoring Network

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

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

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

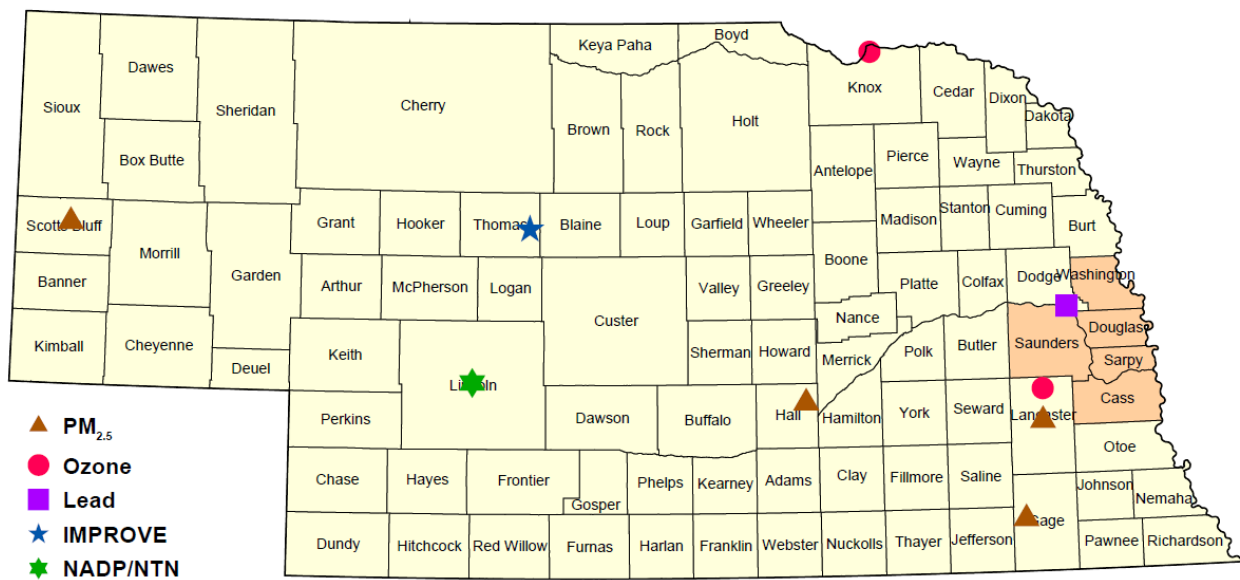
Most of the sites in the monitoring network evaluate pollutants for which standards are established (*i.e.*, PM_{2.5}, PM₁₀, CO, SO₂, Lead, or Ozone). Some sites monitor for more than one pollutant. The NCore site in Omaha is part of a National Core Network that monitors for nine pollutant parameters. There are two additional types of sites in the network: Interagency Monitoring of Protected Visual Environments (IMPROVE) and National

Atmospheric Deposition Program/National Trends Network (NADP/NTN) sites. See the following maps for locations.

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

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

Nebraska Monitoring Sites Outside of the Omaha Metropolitan Statistical Area



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

Ozone
 Davey (Lancaster County)
 Santee (Knox County)

Lead
 Fremont (Dodge County)

IMPROVE
 Nebraska National Forest (Thomas County)

NADP/NTN
 Maxwell (Lincoln County)

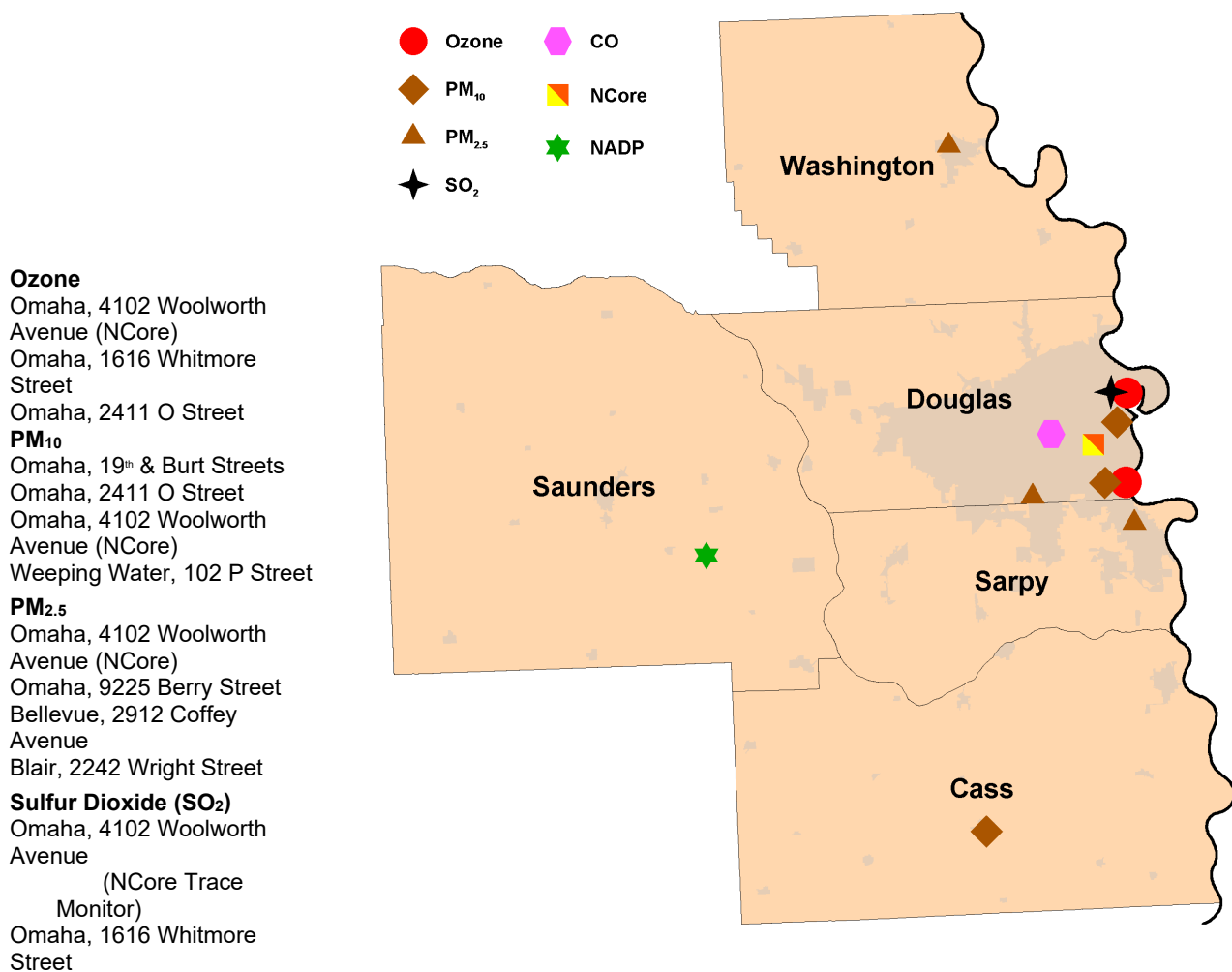
The Nebraska counties in the Omaha-Council Bluffs Metropolitan Statistical Area are indicated by orange shading.

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

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

The following map shows the location of the monitoring sites in the Nebraska portion of the Omaha-Council Bluffs Metropolitan Statistical Area (two sites monitor two pollutants and are represented by overlapping pairs of symbols). Nine of these sites, located in Douglas, Sarpy, and Washington Counties, are operated by the Douglas County Health Department with oversight by the Department. A PM₁₀ site in Weeping Water in Cass County is operated by NDEE. The National Atmospheric Deposition Program site at Mead is operated by the University of Nebraska.

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



In May 2021, NDEE established a new PM_{2.5} monitoring site at Homestead National Historical Park a few miles west of Beatrice. This site will provide continuous measurement of fine particulates from various sources, including smoke from wildfires and prescribed burns.

At the end of 2020, SO₂ monitoring sites in north Omaha and southwest Lancaster County were permanently closed. These sites were established at the beginning of 2017 to measure air quality adjacent to coal-fired electrical generating plants. Closure was approved by EPA because three years of monitor data demonstrated that SO₂ levels at these sites were well below the NAAQS and did not warrant further monitoring.

Two monitoring sites are temporarily closed at the request of the property owners at each site: a combined ozone and PM₁₀ monitoring site in south Omaha and the lead monitoring site in Fremont. NDEE and the Douglas County Health Department are working to find new locations for these sites.

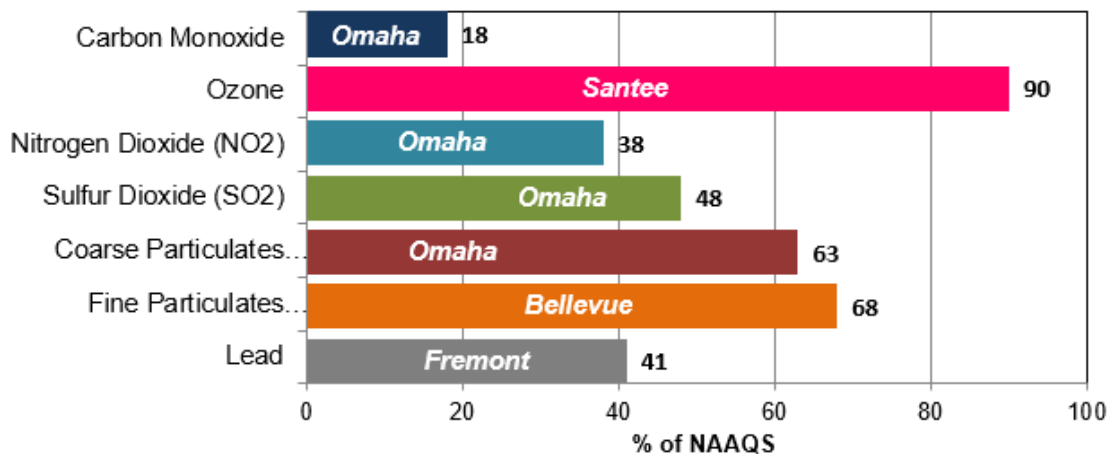
Monitoring Information Online

Data from continuous ozone and PM_{2.5} monitors in Lincoln, Omaha, Grand Island, and Scottsbluff 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. The new Beatrice PM_{2.5} monitor will also report hourly data to AirNow after installation of required telecommunications equipment.

Compliance with National Ambient Air Standards (NAAQS)

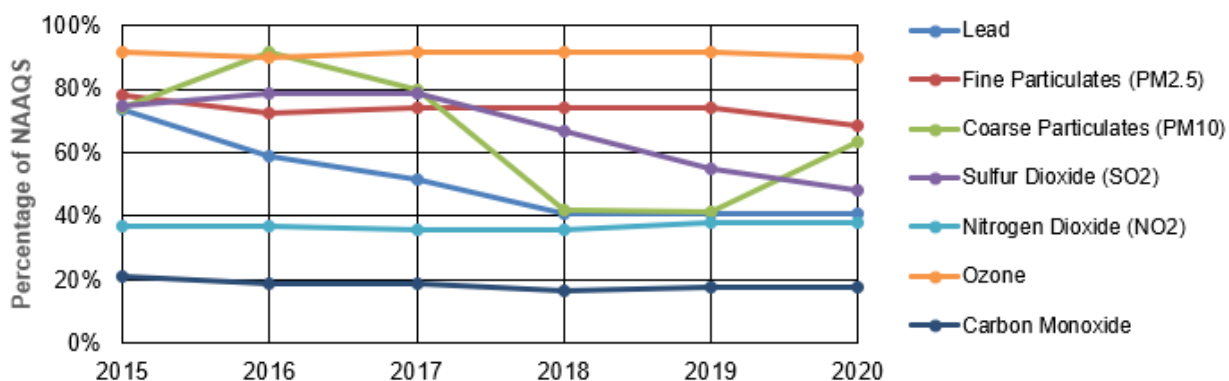
Current air quality monitoring data shows that all areas of Nebraska are in attainment (in compliance) with the NAAQS. The chart on the next page shows where the highest air pollutant levels are being detected in Nebraska for each criteria pollutant and how their levels compare to the NAAQS. A reading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

**Maximum Ambient Criteria Pollutant Levels in Nebraska
as a Percentage of the National Ambient Air Quality Standards (NAAQS):
Based on Monitoring Data Collected from 2018 through 2020**



EPA issued final designations of “Attainment/Unclassifiable” with respect to the NAAQS for sulfur dioxide for two Nebraska counties in 2021: Douglas County in April and Lancaster County in July. These counties include coal-fired power plants in North Omaha and near Hallam, respectively. Designations for these areas are based on data from two source-specific sulfur dioxide monitoring sites operational from 2017-2020, which demonstrate that sulfur dioxide levels at these locations are in attainment/compliance with the NAAQS. EPA had previously designated all other Nebraska counties as “Attainment/Unclassifiable” with respect to the SO₂ NAAQS.

Trends in Maximum Ambient Criteria Pollutant Levels in Nebraska



The chart above shows trends in the maximum measured levels of criteria pollutants in Nebraska from 2015 through 2020. The value for each pollutant and year is the maximum measured at any monitoring site in the state (as a percentage of the NAAQS for that pollutant). 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. Levels for ozone, NO₂, CO, and PM_{2.5} have remained fairly constant or have declined slightly since 2015, while the maximum SO₂ level has decreased significantly since 2017. The level and location of the maximum PM₁₀ readings have fluctuated widely during this period.

The Department 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 Department website: http://dee.ne.gov/Publica.nsf/Pubs_Air_Amb.xsp.

Inspections and Facility Compliance

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

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

State FY2021 Compliance Activity Summary

Compliance Activity	NDEE
On-site Inspections	290
Facility Stack Tests Conducted	75
On-site Observations Conducted	33
Continuous Emission Monitoring Audits Conducted	32
On-site Observations Conducted	15
Complaints Received	77
Burn Permits Issued	91
Burn Permits Denied	1
Burn Permits Withdrawn	1

Emission Inventory and Emission Fees

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

The Department also uses the emission inventories to determine the assessment of annual emission fees. Facilities that emit major sources of air pollution are required to pay

emission fees for each ton of pollutant emitted during the previous calendar year. The maximum emission for which a fee is assessed is 4,000 tons per pollutant. For electrical generating facilities with a capacity between 75 and 115 megawatts, the maximum emission for which a fee is assessed is 400 tons per pollutant. The Department attempts to set the fee rate at the minimum level needed to pay reasonable direct and indirect costs of developing and administering the air quality permit program. An analysis detailing how the Department arrived at the fee rate is made available to fee payers. The rate for emissions generated in 2020 was \$50 per ton, a reduction from \$65 per ton for the 2019 calendar year.

The Department transitioned to a new online reporting system called State and Local Emissions Inventory System (SLEIS) for the 2019 calendar year. During the 2020 reporting period there were still many lower emitting sources reporting to the new system for the first time. Training sessions for those new to the system were conducted throughout 2020 and have continued into the current year.

Planning for Air Quality Issues in Nebraska

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

At the present time, Nebraska is in attainment with all of the NAAQS. Planning activities are currently in progress to address regulatory issues concerning state Air Quality regulations (Title 129), Regional Haze and the Municipal Solid Waste Landfill Rule.

Sulfur dioxide (SO₂)

The 2010 sulfur dioxide (SO₂) standard requires states to demonstrate attainment in the areas surrounding large sources of the pollutant. EPA finalized the Data Requirements Rule (DRR) in 2015 to assist in implementation of the 2010 standard, requiring state air agencies to characterize the air quality near sources that emit 2,000 tons per year or more of SO₂. Nebraska chose to comply with this requirement using both air quality monitoring and pollutant dispersion modeling. Sources in Nebraska subject to this rule include coal-fired power plants, specifically Whelan Energy Center (Adams County), Sheldon Station (Lancaster County), North Omaha Station (Douglas County), Gerald Gentleman Station (Lincoln County), and Nebraska City Station (Otoe County).

Areas surrounding Gerald Gentleman Station and Nebraska City Station were characterized by modeling, and EPA designated them as “Unclassifiable/Attainment” in 2016. The area surrounding Whelan Energy Center was also characterized by modeling and was designated as “Attainment/Unclassifiable” by EPA in 2018. (Starting in 2018, EPA changed the designation “Unclassifiable/Attainment” to “Attainment/Unclassifiable” to emphasize that these areas are in compliance with current air quality standards.) The remaining areas around Sheldon Station (Lancaster County) and North Omaha Station (Douglas County) were characterized using data from ambient air monitors operated from 2017-2019. Monitoring data demonstrated compliance

with the NAAQS in both areas, and EPA designated Douglas County and Lancaster County as “Attainment/Unclassifiable” in April 2021 and August 2021, respectively.

The DRR requires annual reporting (termed “ongoing requirements”) for areas characterized by modeling, and this year’s report was submitted as part of the Nebraska 2021 Ambient Air Monitoring Network Plan in July 2021. Two facilities are subject to these ongoing requirements: Whelan Energy Center and Gerald Gentleman Station, though another facility (Nebraska City Station) was addressed in this year’s report due to a slight increase in emissions. Facility emissions data indicate that all areas continue to demonstrate attainment with the federal standard.

A SIP revision addressing interstate transport of SO₂ was submitted to EPA in October 2020, and demonstrates that emissions from Nebraska sources do not interfere with adjacent states’ ability to maintain or comply with the NAAQS. EPA issued its full approval of the plan in August 2021.

In April 2019, EPA retained the current primary (health-based) SO₂ NAAQS.

Ozone

EPA issued revised ozone standards in 2015, lowering the standard from 0.075 parts per million (ppm) to 0.070 ppm. In November 2017 EPA designated the entire state of Nebraska as “Unclassifiable/Attainment”. EPA approved Nebraska’s SIP revision for ozone in April 2020. In December 2020, following a review of the standard, EPA retained the current NAAQS.

Particulate Matter

In April 2020, EPA proposed to retain the current NAAQS for particulate matter (PM), including both fine particles (PM_{2.5}) and coarse particles (PM₁₀), issuing its final rule in December 2020 to retain the current standards. In June 2021, EPA announced that it will reconsider the 2020 final rule based on evidence that current standards may not be adequate; it expects to issue proposed rulemaking in the summer of 2022.

Regional Haze

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

Nebraska submitted its Regional Haze SIP for the first implementation period (2008-2018) in July 2011; in 2012, EPA issued a partial approval/partial disapproval of the SIP. The disapproved portions include the BART determination for sulfur dioxide for Gerald Gentleman Station and the state’s long-term strategy for regional haze insofar as it relied on the BART determination. EPA issued a Federal Implementation Plan (FIP) that relies on the Cross-State Air Pollution Rule (CSAPR) to satisfy BART for sulfur dioxide at Gerald Gentleman Station. The remaining disapproved portion (long-term strategy) will be

addressed in the forthcoming SIP revision. This source participates in the CSAPR trading program, which allots each source an emissions budget for SO₂ and permits trading of allotments. To date, no additional control measures have been required.

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

Affordable Clean Energy Rule

In July 2019, EPA finalized the Affordable Clean Energy (ACE) Rule as a replacement for the Clean Power Plan. This rule includes three separate rule-makings: 1) repeal of the Clean Power Plan; 2) establishment of emission guidelines for states to use when developing plans to limit greenhouse gas emissions at power plants and 3) determination that heat rate improvement is the best system for reducing greenhouse gas emissions from coal-fired power plants. The Affordable Clean Energy Rule was vacated in January 2021. NDEE has put this plan on hold.

Municipal Solid Waste Landfill Plan

On May 21, 2021, EPA finalized the federal implementation plan for municipal solid waste landfills (MSWL). The plan supports the following federal rule located at 40 CFR Part 60 Subpart Cf: Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills. The emission guidelines apply to landfills that were constructed prior to July 17, 2014 and accepted waste after November 8, 1987. This new emission guideline lowers the threshold for which facilities must install gas collection and control equipment from 50 Mg/yr to 34 Mg/yr of nonmethane organic compounds (NMOCs). NDEE is working with EPA on implementation of the federal plan while the agency develops a state implementation plan.

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

Smoke Awareness Program

Prescribed fires and wildfires impact Nebraska's air quality and have received increased attention over the past 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 grasses. 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 and Nebraska can experience air quality impacts (elevated fine particulates, known as PM_{2.5}, and ozone) for 24-48 hours following these events. Rangeland prescribed burning and wildfires also occur in Nebraska, though fewer acres are burned.

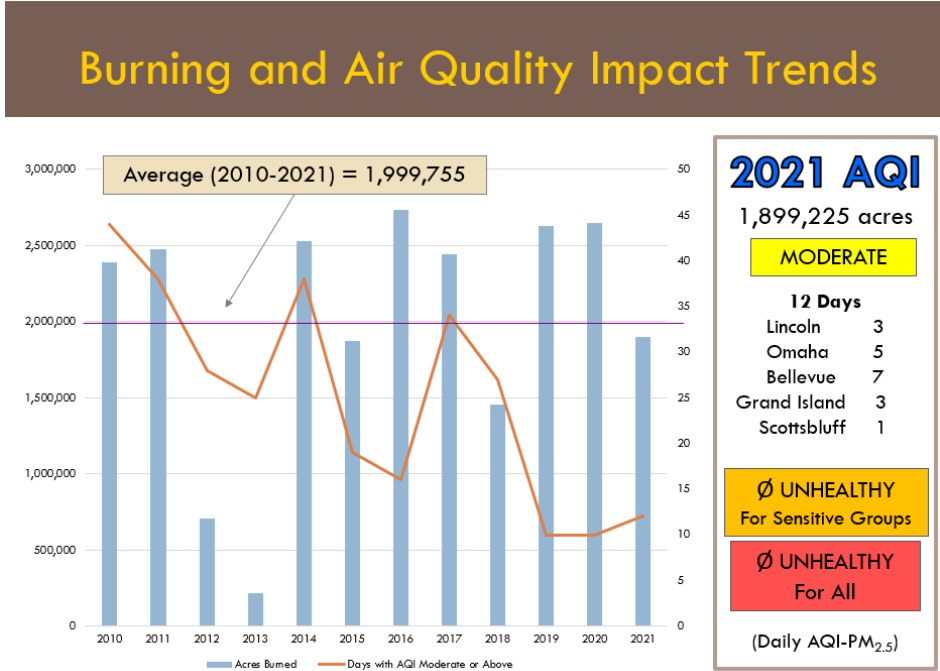
Impacts on air quality in Nebraska from wildfires are garnering more interest due to severe wildfire seasons and drought conditions in western states and Canada over the past 2-3 years. It is becoming more common to experience impacts that persist over several days due to heavy smoke from these fires that often impact air quality in much of the United States.

Collaborative efforts with key stakeholder agencies continued in 2021 and included pre- and post-season virtual meetings in February and June 2021, respectively. Participants included a number of local health Departments, the Nebraska Game and Parks Commission, University of Nebraska Agronomy-Horticulture program researchers, and land managers who rely on prescribed fire as a management practice. Other activities included communicating about potential smoke and air quality impacts, consulting on the scope and extent of smoke advisories, and planning for future burn seasons.

Tasks performed by NDEE staff during the 2021 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 NDEE 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 to generate advisories for the public
- Providing email updates to stakeholders on air quality conditions and wildfire conditions
- Interpreting and deploying National Weather Service software technologies.

Agency staff coordinate and consult with other stakeholder agencies on days when heavy burning and smoke impacts are predicted. If a health advisory is warranted, staff coordinated with the Nebraska Department of Health and Human Services (DHHS) to issue a Smoke Advisory to the public. Smoke Advisories were issued in 2021 for March 28-29, April 1-2, July 29-Aug 1, August 3-4, and August 10-12.



During the 2021 burn season, Nebraska experienced a total of 12 days with an Air Quality Index (AQI) for fine particulates (PM_{2.5}) in the *Moderate* range (18% of days) as noted in the chart above, and six days with an AQI for ozone in the *Moderate* range. The *Moderate* range is characterized by pollutant levels at or above the National Ambient Air Quality Standards for a 24-hour period, which may induce health effects in those who are unusually sensitive to fine particulates or ozone. The *Unhealthy for Sensitive Groups* range is characterized by pollutant concentrations which may induce health effects in those who are sensitive as opposed to unusually sensitive to air pollution. 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 2021 burn season in which the daily AQI values in Nebraska were in the *Unhealthy for Sensitive Groups* or *Unhealthy for All* category, as was the case in 2018 and 2019. Burn seasons in previous years (2010-2020) averaged about one day per year in the *Unhealthy for Sensitive Groups* category.

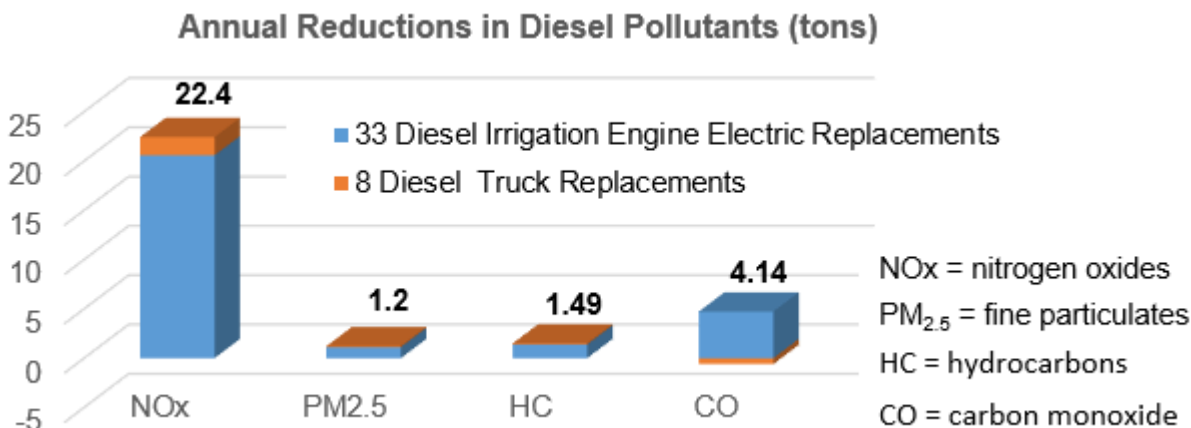
The activities conducted with other agencies in 2021 resulted in timely health advisories and notification to the public of potential air quality impacts from prescribed burning. Predictions of potential impacts, while cautious, were fairly accurate. The flow of information continues to improve, and a standardized process for dissemination of advisories is in place.

It should be noted that while both prescribed burning and wildfires affect localized air quality, Nebraska remains one of the few states to comply with all federally established National Ambient Air Quality standards.

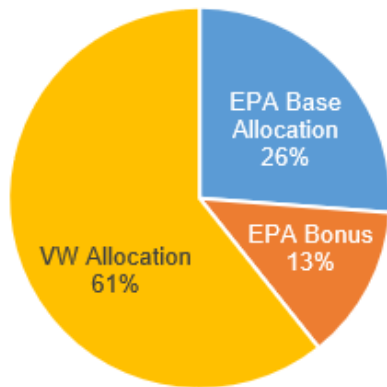
Nebraska Clean Diesel Rebate Program

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, NDEE 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.

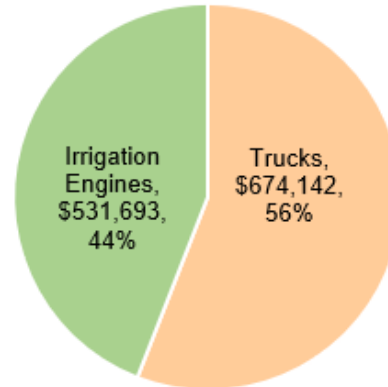
For the Clean Diesel Rebate Program annual funding cycle that opened in October 2020, NDEE has awarded or expects to award \$1,205,835 in rebates to 38 projects. The two types of projects funded are diesel truck replacements (eight trucks) and all-electric replacements of 33 diesel irrigation engines. The truck replacement rebates reimburse 25% of the cost (maximum \$70,000) of a new diesel vehicle or 35% (up to \$120,000) 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.



**Funding for
2020 Clean Diesel Rebate Program
\$1,264,983**



**2020 Clean Diesel Replacement Rebates
\$1,205,835**



2020-2021 Refuse Truck Replacement Rebates: \$674,142

Name	Location	Replacement	Rebate Amount
City of Lincoln Fleet Services	Lincoln	2 Diesel Plow Trucks	\$133,049
Gretna Sanitation	Gretna	1 CNG Refuse Truck	\$120,000
Soil Dynamics Composting Farm	Springfield	1 Diesel Truck Cab	\$69,120
Uribe Refuse Services	Lincoln	2 CNG Refuse Trucks	\$207,578
Metropolitan Utilities District	Omaha	2 CNG Utility Trucks	\$144,395

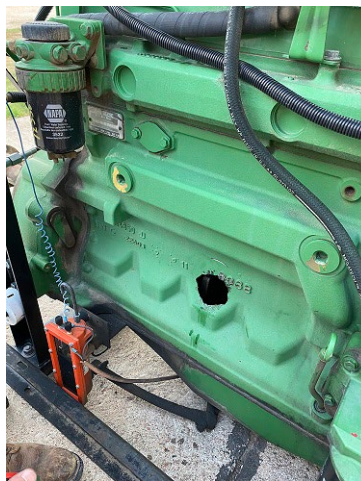
2020-2021 Irrigation Engine Replacement Rebates: \$531,693

Name	County	Replacement	Rebate Amount
Brozek & Sons, Inc.	Antelope	Electric motor	\$20,000
Carpenter, Jerry	Antelope	Electric motor	\$14,926
Filkins, JoAnn	Antelope	Electric motor	\$20,000
Filkins, Mark	Antelope	Electric motor	\$15,764
Godeken, Steve	Keith	Electric motor	\$19,960
Holm, Eugene	Lincoln	Electric motor	\$13,604
Jorgenson, Neil	Custer	Electric motor	\$11,965
Klabenes Land and Cattle	Antelope	Electric motor	\$14,679
Klabenes Trucking	Antelope	Electric motor	\$10,663
Klabenes, Marvin	Antelope	Electric motor	\$10,697
Klabenes, Matt	Antelope	Electric motor	\$14,163
Klabenes, Stacy	Antelope	Electric motor	\$11,760
Larson, John	Boone	Electric motor	\$12,638

McDonald, Dennis	Antelope	Electric motor	\$14,055
MTC Properties LLC	Lincoln	Electric motor	\$20,000
Mulliken Farms	Dodge	Electric motor	\$13,902
Nelson, Leon	Howard	Electric motor	\$20,000
Nelson, Ross	Madison	Electric motor	\$12,132
Nikkel, Cole	Perkins	Electric motor	\$20,000
Ox Hoof LLC	Holt	Electric motor	\$20,000
Panowicz, John	Hall	Electric motor	\$17,444
Panowicz, Mike	Hall	Electric motor	\$20,000
Pellatz, Tim	Antelope	Electric motor	\$15,270
Peterson, David M.	Holt	Electric motor	\$19,020
Peterson, Miles	Greely	Electric motor	\$20,000
Rohde, Keith	Madison	Electric motor	\$11,698
Ro-Jon, Inc.	Keith	Electric motor	\$20,000
Siffring Living Trust	Keith	Electric motor	\$14,722
Stanley, John R.	Deuel	Electric motor	\$20,000
Sunderman, Randy	Madison	Electric motor	\$14,416
TJK Farms	Antelope	Electric motor	\$20,000
Trambly, Nelson	Franklin	Electric motor	\$16,823
Werkmeister, Joe	Frontier	Electric motor	\$17,837



Old diesel engine to be scrapped.



Scrapped engine with hole.



New electric motor at wellsite.

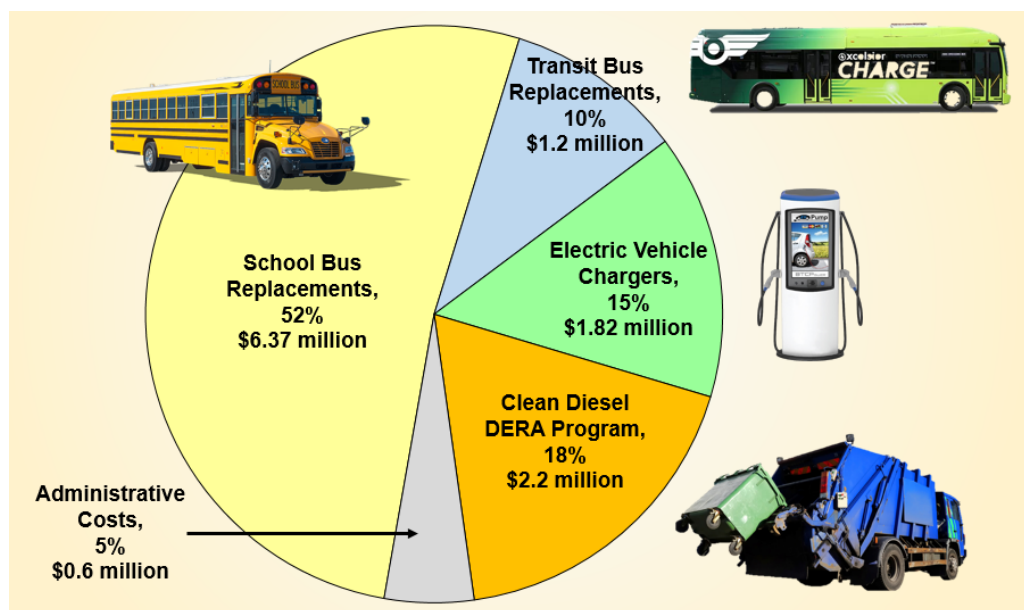
Photos courtesy of Robert D. Nelson, Ro-Jon Inc., Ogallala.

Volkswagen State Trust Activities

NDEE 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

In April 2020, NDEE submitted a revised 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 selected for funding in Nebraska and the percentage of funds expected to be allocated to each type.



Planned Allocations of VW State Trust Funds by Mitigation Action

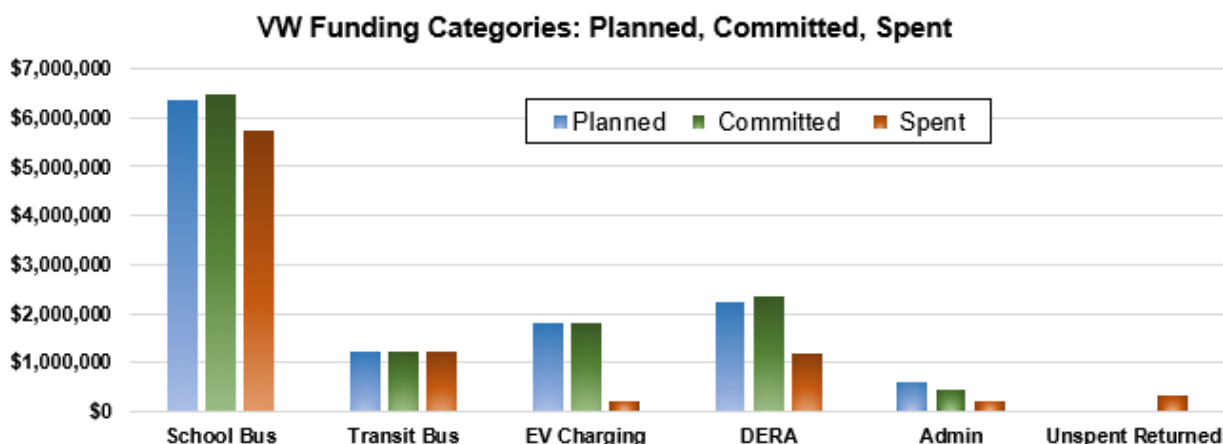
Action	Percent	Dollars
Transit Bus Alternative Fuel Replacements	10%	\$1,224,835
School Bus Diesel & Propane Replacements	52%	\$6,369,141
Zero Emission Vehicle (Electric Vehicle) Charging Infrastructure	15%	\$1,818,224
DERA: Irrigation engine & refuse Truck Replacements	18%	\$2,223,729
Administrative Costs*	5%	\$612,417
TOTAL	100%	\$12,248,347.48

* The 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. 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 by the end of 2023.

Nebraska Diesel Emission Mitigation Program

NDEE established the Nebraska Diesel Emission Mitigation Program to use VW State Trust funds for projects to mitigate NOx emissions in Nebraska, and has carried out projects in all of the categories laid out in the Beneficiary Mitigation Plan. As of the end of State Fiscal Year 2020, NDEE has requested Trust funds for nine programs and expended \$8,554,633 of those funds. The distribution of spending in the different project categories is shown in the chart below.



NDEE’s Beneficiary Mitigation Plan set a goal to limit administrative costs to no more than 5% of Trust funds spent. To date only 2.3% of Trust funds spent have been for administrative costs. During this fiscal year NDEE returned \$319,709 in unspent funds from four programs to Nebraska’s account with the State Trust, as required by the trust agreement. These returned funds are available for future projects.

During the fiscal year the Department completed two programs: the Transit Bus Alternative Fuel Replacement program initiated in 2018 and the 2019 School Bus Rebate Program. The City of Lincoln was reimbursed for replacing two older diesel transit buses with two battery-electric buses, part of an order of ten buses to begin the conversion of the Lincoln StarTran fleet to electric vehicles.



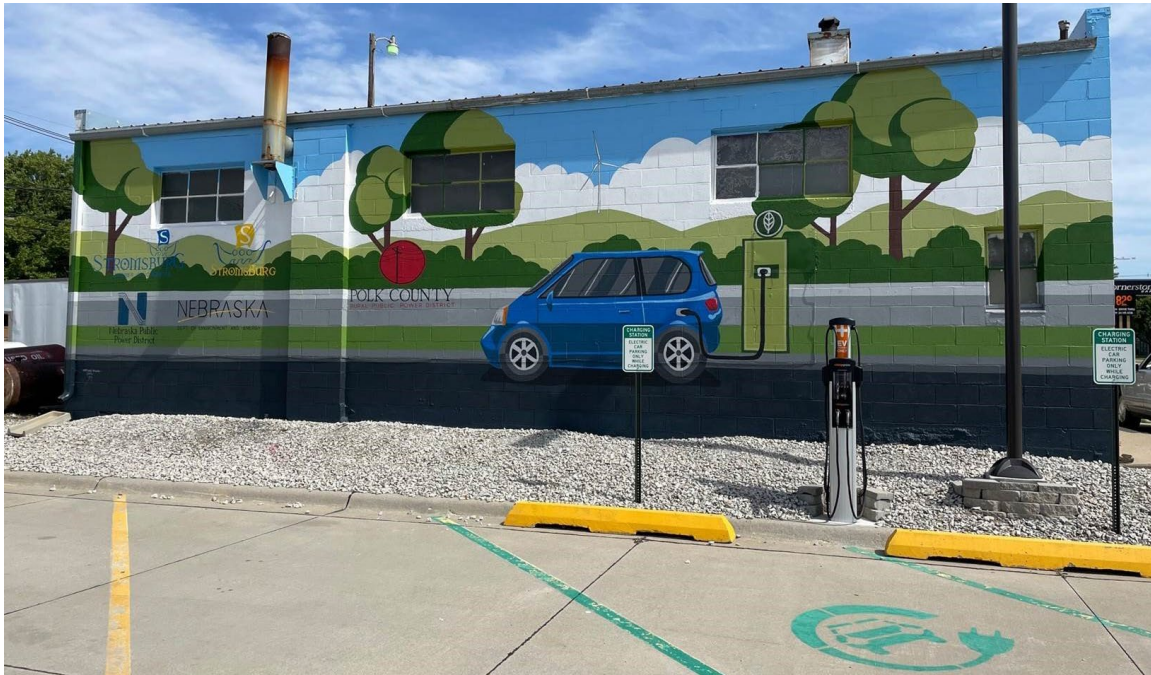
One of two Lincoln StarTran electric transit buses partially funded through the NDEE Transit Bus Alternative Fuel Replacement Program.

The completed 2019 School Bus Rebate program reimbursed 65 school districts a total of \$2,633,926 for the purchase of new buses to replace older diesel school buses, which were scrapped to eliminate their diesel emissions. Eleven of the new buses were equipped with low-NOx propane fueled engines, which have NOx emissions 90% lower than new diesel buses.

Electric Vehicle Charging Rebates

The Nebraska 2019 Electric Vehicle Charging Rebate Program provided financial incentives to municipalities and businesses to encourage installation of electric vehicle charging stations to serve light-duty electric vehicles in Nebraska. The program awarded rebates for 28 projects for the installation and maintenance of Level 2 and Direct Current (DC) Fast Charging equipment at public and workplace locations.

During the past year charging equipment has been installed at over 15 new locations in Nebraska, including all six high schools in Lincoln. The first station completed under this program has a Level 2 charger installed in Stromsburg by Polk County Rural Public Power District. An attractive mural on the building wall behind the charger draws attention to this new charging site, as shown in the illustration below.



Level 2 electric vehicle charging station in Stromsburg partially funded through the Electric Vehicle Charging Rebate Program.

A new site recently completed by the Nebraska Public Power District at a travel center adjacent to Interstate 80 south of York has two DC fast chargers (shown in the illustration below) and a Level 2 charger. The DC fast chargers are linked so that one electric vehicle can draw power from both chargers if both are not in use, cutting the charging time significantly.



Two DC fast electric vehicle chargers at the York, Nebraska station installed by the Nebraska Public Power District.

2020 School Bus Replacement Rebates

In SFY2021, the Nebraska Diesel Emission Mitigation Program opened the third and final year of its School Bus Rebate Program and awarded a total of \$1,993,604 for the replacement and scrapping of 46 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. Projects were given a completion deadline of December 15, 2021 in anticipation of pandemic-related manufacturing delays.

2020 School Bus Replacement Rebates			
Amherst Public School	\$57,000	Mullen Public Schools	\$42,000
Banner County School	\$42,000	Oakland-Craig Public Schools	\$42,000
Bayard Public Schools	\$42,000	Ogallala Public Schools	\$42,000
Bertrand Community School	\$42,000	Osmond Community Schools	\$55,753
Bloomfield Community Schools	\$41,270	Overton Public Schools	\$16,375
Centura Public School	\$42,000	Pawnee City Public School District	\$42,000
Chambers Public School	\$42,000	Perkins County Schools	\$42,000
Eustis-Farnam Public Schools	\$42,000	Randolph Public Schools	\$56,292
Fillmore Central Schools	\$42,000	Raymond Central Public Schools	\$42,000
Freeman Public Schools	\$42,000	Schuyler Community Schools	\$42,000
Fremont Public Schools	\$42,000	Seward School District	\$42,000
Giltner Public Schools	\$42,000	Shickley Public Schools	\$42,000
Gretna Public Schools	\$42,000	Silver Lake Public Schools	\$42,000
Harvard Public Schools	\$42,000	South Central Nebraska USD #5	\$42,000
Hemingford Public Schools	\$42,000	Southern Public Schools	\$42,000
Hershey Public Schools	\$42,000	Stanton Community Schools	\$42,000
High Plains Community Schools	\$42,000	Stapleton Public Schools	\$42,000
Humboldt Table Rock Steinauer Schools	\$42,000	Tekamah-Herman Schools	\$42,000
Kearney Public Schools	\$57,000	Wakefield Community Schools	\$42,000
Lyons-Decatur Northeast Public School	\$42,000	Waneta-Palisade Schools	\$42,000
Mid States School Bus	\$16,947	Waverly School District	\$42,000
Minatare Public Schools	\$42,000	Wilcox-Hildreth Public School	\$42,000
Minden Public Schools	\$56,341	York Public Schools	\$42,000



Kearney Public Schools' replacement low-NOx propane-fueled school bus partially funded through the 2020 School Bus Rebate Program.

Small Business and Public Assistance Program

The Small Business and Public Assistance program and associated Small Business Compliance Advisory Panel (SBCAP) were created to comply with 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, and this support has expanded to include energy programs.

Key activities of the program include developing guidance and outreach materials; responding to outside requests for information; hosting training and informational workshops, webinars, and one-stop meetings to help 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

NDEE's internal Grow Nebraska Team (GNT), launched in 2018, provides outreach to new businesses proposing operations in Nebraska within 10-days of a request for information, in addition to the services outlined below.

The following summarizes the primary compliance assistance activities offered by the agency.

- **Compliance Assistance Visit (CAV):** An on-site service offered by NDEE in response to a request by a business or regulated party to receive support for one or multiple environmental program areas to which they are currently subject or considering under proposed operations. Compliance assistance activities (see individual Site Assistance/Training below) may be provided during an inspection; however, a CAV cannot be requested after an inspection that may result in enforcement until that issue is resolved. A CAV focuses on supporting the efforts of an entity to achieve voluntary compliance; however, it does not absolve it from receiving an enforcement action if egregious violations are found during the visit.

- **Permit Assistance Visit (PAV):** An on-site service (or meeting) offered by NDEE in response to a request by a business or regulated party to receive support under a new, modified or existing permit to address permit related questions.

- **One-Stop Meeting:** A One-Stop Meeting allows for a newly proposed or expanding business and their selected representatives to engage with applicable NDEE permitting programs and other regulatory agencies. The goal of each meeting is to provide the permittee an opportunity to ask questions and receive direction toward attainment of the necessary permits to achieve environmental regulatory compliance.

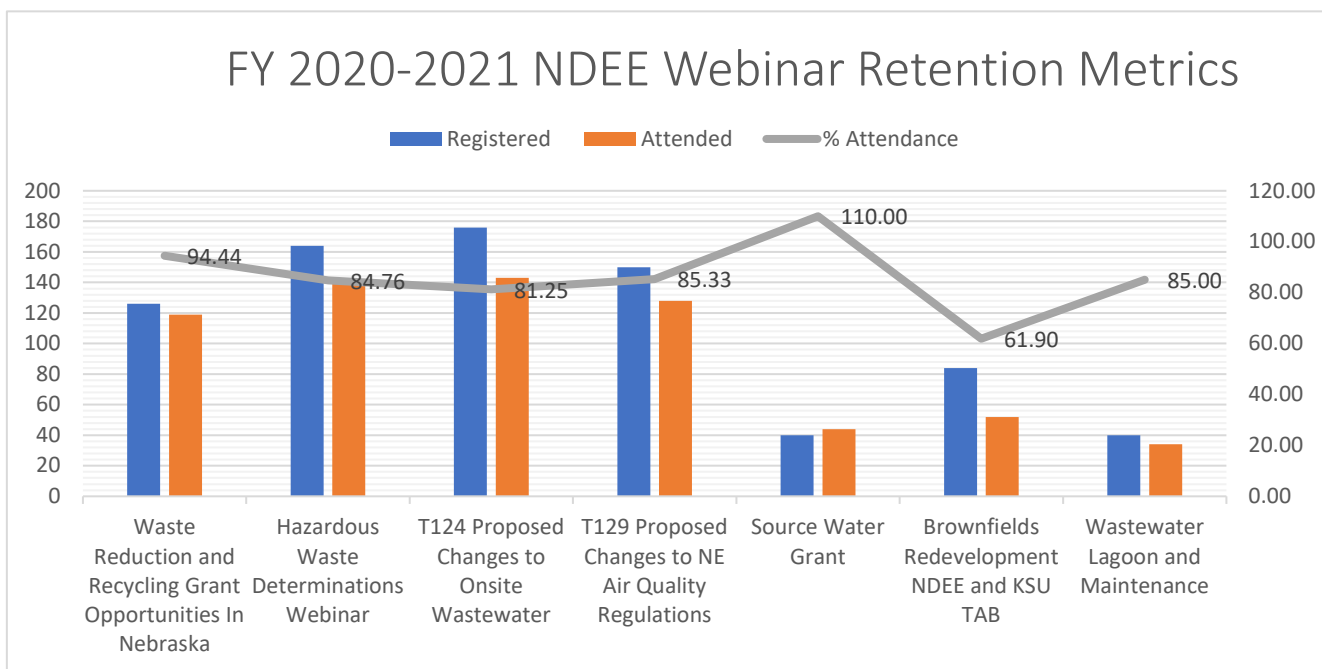
- **Scoping Meeting:** A meeting within or outside of NDEE to introduce a new or proposed business to involved staff, programs and agencies. The meeting may include a review of processes or technologies, tools, resources, and strategic partnerships to assist the business in making the appropriate contacts for applicable regulatory requirements or business needs.

- Individual Site Assistance/Training: An on-site service offered by NDEE in response to a request or during or after a Compliance Inspection.

Key accomplishments for the team during the 2021 FY included:

- Hosted seven webinars on waste reduction and recycling grant opportunities, hazardous waste determinations, upcoming regulation changes, technical assistance to brownfields, source water protection grants, and wastewater lagoons
 - Conducted mini follow-up surveys after webinars that provided immediate customer feedback about the webinar events.
- Added updated permit information and resources to the Permit Matrix. The Matrix assists small businesses with compliance-related topics by sharing links to guidance documents, program overviews, regulations, supporting NDEE web pages, and additional resources.
- Conducted seven multi program-based Compliance Assistance Visits
- Maintained regular engagement with the Nebraska Industrial Council on the Environment (NICE)
- Maintained agency’s video events page on the NDEE website with webinar recordings, presentation slide decks, and compilations of answers to webinar participant questions
- Supported NDEE staff to be remote presenters at two separate and distinct conferences pertaining to emergency management and energy.
- Continued social media outreach via Twitter, Facebook, and LinkedIn with monitoring of metrics in conjunction with the Public Information Office

The Department continues to work on improvements to its outreach and assistance processes in the wake of the pandemic; develop standard operating procedures to support remote and in-person outreach events and maintaining the goal to provide necessary support for stakeholders in an effort to make compliance easy.



CHAPTER 5:

Land Management Programs

The Land Management Programs' objectives are to ensure solid and hazardous wastes are properly managed, assess and remediate contaminated sites, facilitate the redevelopment and reuse of contaminated properties and administer grant programs that advance waste reduction and recycling practices throughout the state. This chapter will begin discussion with the waste grant programs, the voluntary cleanup program, and is followed by activities performed by the hazardous waste (RCRA), Superfund and solid waste management programs.

Waste Grants Programs

The Grants Section manages the Waste Reduction and Recycling Incentive Grants Program and the Litter Reduction and Recycling Grant Program; Illegal Dumpsite Cleanup Program; and Landfill Disposal Fee Rebate Program.

The Section's responsibilities include:

- Awards financial aid to public and private partners – reviews grant submissions; performs compliance inspections; monitors the activities, budgets, and equipment purchases of grantees; and conducts quarterly performance report reviews.
- Outreach – Promotes the availability of grant funding, coordinates the ranking process, coordinates grant awards, and provides integrated waste management information to the public.

Nebraska Department of Environment and Energy/Nebraska Environmental Trust Partnership

In July 2018, the Nebraska Department of Environmental Quality (now NDEE) and the Nebraska Environmental Trust entered 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 who will ensure coordination occurs between the 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 and when critical program or project needs arise for the purpose of discussing issues of mutual concern and opportunities to enhance the partnership.

Litter Percentage Allocation

At the Environmental Quality Council meeting on December 15, 2020, a hearing was held to decide the 2021 Litter Percentage Allocation. Each year, the Council establishes the percentage of how the funds will be allocated for recycling, public education, and cleanup programs or projects. The Department's recommended percentage allocations for 2021 were based on the actual applications received:

Category	2021 Eligible Requests	
Recycling	28.9%	\$607,816
Public Education	68.0%	\$1,431,568
Cleanup	3.1%	\$65,986
Totals	100%	\$2,105,370

The Department asked for the ability to adjust the percentages by up to 20% for the 2021 grant year, if warranted. The Environmental Quality Council granted this request.

New Grant Application Guidance Updates

To address common issues with grant recipients, the Section created grant application guidance in 2018 to provide direction and set limits on grant-funded expenses. The purpose is to provide fair and equitable reimbursements, especially when requests exceed the amount of grant funding available. A subcommittee of the Nebraska Environmental Quality Council reviewed the guidance in the Fall of 2018 and accepted it at the November 15, 2018, Environmental Quality Council meeting. The guidance affects grant applications received after January 1, 2019. Further updates were made in 2020 and 2021 to clarify eligible reimbursements for personnel and other expenses.

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. Since this time all grant terms are on a calendar year basis starting January 1 through December 31.

Online Grant Application

In 2020, an updated online application was created for the Waste Reduction and Recycling Incentive Grants Program and the Litter Reduction and Recycling Grant Program. The updated application provides more instruction on each screen where data is entered to improve the application process.

Expected Service Life

The Grants Section programs utilize an expected service life procedure for grant-funded equipment. The expected service life determines how long the grantee is responsible for reporting the status of grant-funded equipment to NDEE and how long NDEE maintains a financial 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 grant-funded 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.

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 (HHW) programs
- 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, 2020 - June 30, 2021	
Fund Balance June 30, 2020	\$1,811,620
Revenues:	
New Tire Fees	\$2,540,002
Business Fees	\$526,318
Waste Reduction & Recycling Fee	\$516,389
Solid Waste Disposal Fee	\$990,750
Interest, Grant Returns	\$31,197
Miscellaneous	\$24,969
Operating Transfers Out	\$-180,000
Net Collections for Year	\$4,449,626
Expenditures:	
Administration	\$518,674
Grant Funds Expended*	\$3,739,177
Total Expenditures FY 2021	\$4,257,851
Fund Balance June 30, 2021	\$2,003,395

**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 calendar year 2021, \$4,602,170 was awarded for Waste Reduction and Recycling Incentive Grants to 91 projects. There were 20 grants awarded from the Business Fee category (\$1,405,815), 11 were awarded from the Disposal Fee category (\$1,661,286), and 60 were awarded from the funds prioritized for scrap tire projects (\$1,535,069).

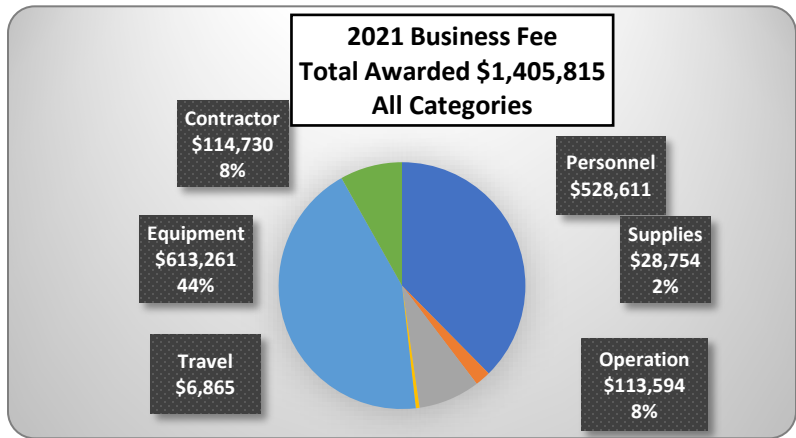
The following lists indicate the locations across Nebraska that received funds in the Business Fee, Disposal Fee and Tire Fee categories.

Business Fee

Personnel:
All or part of 33 staff

Contractual:
Pharma, Hazardous & E-Waste collection services, compost concrete Pad repairs and recycling services.

Equipment:
Computer and office equipment, forklifts, and Recycling Trailers



Photos provided by All Business Commercial Recycling LLC (ABC), which was awarded funding for a truck, a skid loader, and a flatbed trailer to provide recycling pickup services and transportation for mid-western Nebraska for up to 1 million lbs. of hard-to-recycle plastics.

Business Fee: \$1,405,815 for 20 grants			
Alliance	Keep Alliance Beautiful	\$99,781	Funds for the recycling center for Box Butte County and surrounding area, and waste and recycling education programs. Through June 2020, shipped 425,717 lbs. of recyclables; 71,000 lbs. higher than the same time in 2019.
Chadron	Keep Chadron Beautiful	\$63,038	Funds to continue the paper and cardboard recycling program in Chadron. Last year 167,180 lbs. were collected and recycled.
Columbus	Keep Columbus Beautiful	\$26,088	Funds to host a household hazardous waste (HHW) collection for residents of Platte County. Anticipate collecting 16,000 lbs. of HHW.
Fremont	Keep Fremont Beautiful, Inc	\$30,414	Household hazardous waste collection event for over 36,500 residents of Dodge County.
Fremont	Horizon Biofuels Inc.	\$23,618	50% of the cost to purchase 10 roll-off containers to expand collect sites and store 2,000 - 3,000 tons of wood waste to be recycled into heating fuel pellets and animal bedding products.
Grand Island	Grand Island Area Clean Community System	\$84,716	Funds to operate the Household Hazardous Waste (HHW) facility for Hall, Hamilton, Howard, Merrick, and Adams counties. Since 2012, 850,000 lbs. of HHW accepted, with 203,301 lbs. reused.
Kimball	Keep Kimball Beautiful	\$17,594	Funds to increase recycling by providing collection services for rural residents and residential alley recycling. Program serves Kimball and Banner counties.
Lexington	Lexington Area Solid Waste Agency	\$28,509	Funds to hold two household hazardous waste collection events to serve 45,000 people in central Nebraska.
Lincoln	Keep Nebraska Beautiful	\$93,592	Funds for the Materials Exchange Program (reused/recycled) 13 million lbs. of materials last year; saving landfill fees of \$190,000 and purchasing costs of \$245,000), Food Waste Program (yearlong social media campaign to reduce food waste) and Used Oil Program (collect oil and anti-freeze at 62 sites in 58 counties). Also purchase a computer and printer.
Lincoln	Lincoln Public Schools	\$48,012	Funds for the recycling and composting program in 58 school buildings to divert 1.8 million lbs. of organic material. Over 1.25 million lbs. of materials from 60 buildings are recycled each year. Work to expand the quantity and types of materials collected and to purchase additional recycling containers.
Lincoln	Habitat Lincoln ReStore	\$27,833	Funds toward two forklifts; one to replace a worn-out forklift at an existing store, and a second for the new store to open in 2022. Current store has diverted > 1,000 tons of material from the landfill; the new store estimates to divert 1,300 tons in the first year.
Lincoln	Joslyn Institute for Sustainable Communities	\$80,828	Funds to plan the opening of the Lincoln/Lancaster County LNK Conservation Center in 2022. Will partner with the City of Lincoln, NE Dept. of Corrections, LPS, UNL, and SECC. From 2005 to 2018, a former business diverted 3,000 tons of building materials from the landfill.
Louisville	Keep Cass County Beautiful	\$2,034	Hold four electronic waste (e-waste) collection events for Cass County residents. 33,000 lbs. of e-waste were last collected in 2019.
North Platte	All Business & Commercial Recycling, LLC	\$65,589	Funds for a truck and skid loader, and funds toward a flatbed trailer to provide recycling pickup services and transportation for mid-western Nebraska for up to 1 million lbs. of hard-to-recycle plastics (irrigation pipe, feed tubs, fertilizer tanks, corn/grain

			liners). Plan to collect up to 150,000 lbs./month from curbside recycling pickups.
Ogallala	Western Resources Group	\$120,123	Funds to collect and process recyclables collected from central and western Nebraska. Between 2015-2019, 251,050 tons of materials were diverted from landfills.
Ogallala	Western Resources Group	\$32,842	Funds to support the organization's expansion into small animal bedding made from recycled cardboard. Materials are received from 12 western Nebraska counties.
Ogallala	Keep Keith County Beautiful	\$50,995	Continue litter reduction and recycling at Lake McConaughy and continue school and education program. Purchase three recycling trailers.
Omaha	Firstar Fiber, Inc.	\$374,705	Funds for a shredder and granulator, and partial funding for a pellet mill to establish a plastic pre-processing facility. The facility will process 20,000 tons of hard-to-recycle plastic waste and agricultural films into higher-valued feedstock for a variety of end-market uses.
Scottsbluff	Keep Scottsbluff Gering Beautiful	\$51,016	Hold a pharmaceutical take back and household hazardous waste collection for Scottsbluff, Gering, and surrounding area.
Springfield	Soil Dynamics Composting Farm, Inc.	\$84,488	Funds to help upgrade the composting system from windrow to a turned aerated pile system. Funds toward a concrete pad to house the below-grade aeration piping system.

Disposal Fee

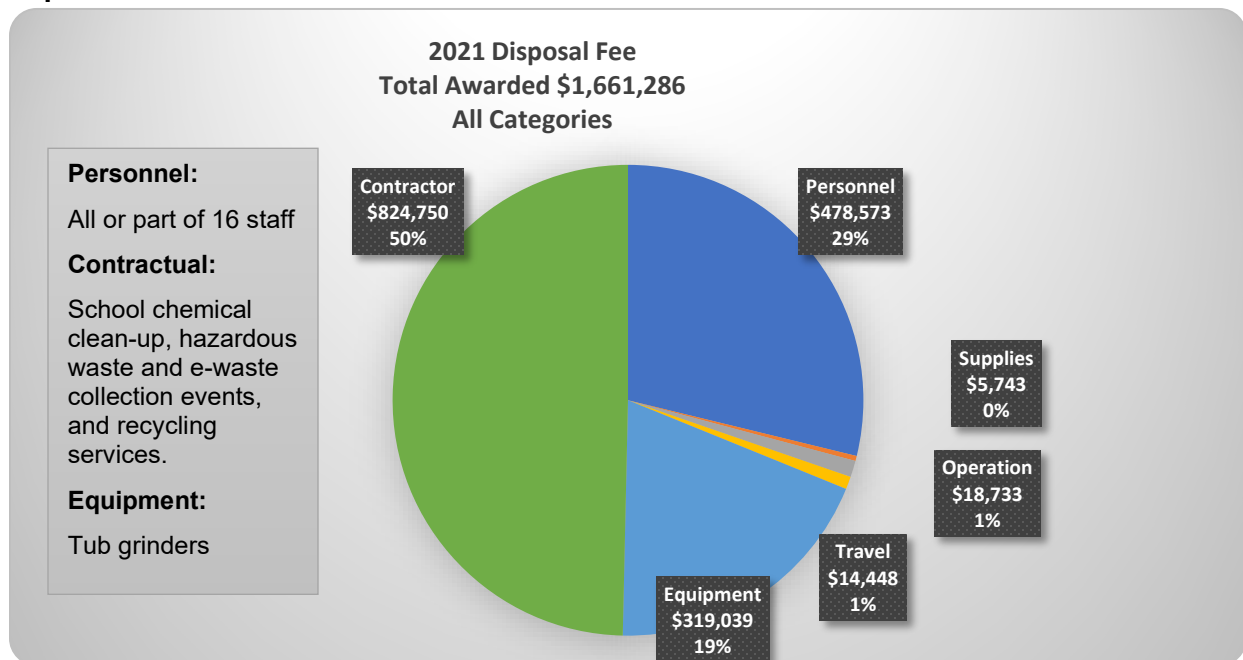




Photo provided by City of Lincoln-Solid Waste Management, which was awarded funding for asphalt pavement repairs for their existing composting pad.

Disposal Fee: \$1,661,286 for 11 grants			
Bennington	City of Bennington	\$161,488	Funds toward a horizontal grinder to process tree debris into mulch and eliminate hauling to landfills. Will process trees with emerald ash borer (city has 300 ash trees on city property), plus ongoing tree maintenance and storm debris management.
Crofton	City of Crofton	\$1,999	Funds to help defray the cost of transporting recyclables collected in Crofton.
Gering	City of Gering	\$147,864	Funds toward a tub grinder to process tree and wood debris into mulch for Scotts Bluff County. Mulch will be available to city, homeowners, and farmers in the county. City has 3,500 cy stockpiled wood waste from two winter storms.
Lincoln	Lincoln and Lancaster County Health Department	\$195,425	Maintain and operate the Lincoln Lancaster County Health Department's HazToGo household hazardous waste (HHW) disposal facility. The facility serves over 319,000 residents of Lancaster County. Plans include evaluating the building of a re-use center for household hazardous waste that may be open for public access.
Lincoln	University of Nebraska-Lincoln Board of Regents	\$64,629	Program for UNL engineering students to provide technical onsite waste/volume reduction and recycling assistance for Nebraska manufacturing businesses during the summer.
Lincoln	City of Lincoln-Solid Waste Management	\$355,386	Electrical work and compost pad repairs to allow the use of a statis aeration system to reach organic waste diversion goals in five to six years at the Bluff Road composting facility. About 20,000 cubic yards of finished compost will be produced annually.
McCook	Red Willow County	\$351,514	Funds to provide residents of central and southwest Nebraska with safe, reliable means to recycle or dispose of household hazardous waste (HHW). Expect to collect 200,000 lbs. of HHW in 2021.
Norfolk	Norfolk Catholic High School	\$1,209	50% of the cost to properly dispose of potentially hazardous and unwanted chemicals in the high school science laboratory.

Omaha	City of Omaha -- UnderTheSink HHW Facility	\$365,415	Funds for Omaha's UnderTheSink household hazardous waste (HHW) facility serving Douglas and Sarpy counties. In 2019 over 1.3 million lbs. of HHW were collected and processed.
Wayne	City of Wayne	\$5,461	Expenses for a household battery recycling program for Wayne and nearby residents at the Wayne Public Library. Anticipate collecting 990 lbs. of batteries in 2021.
Wayne	City of Wayne	\$10,896	Hold an electronic waste (e-waste) event for residents of Wayne and surrounding towns. Anticipate collecting 30,000 lbs. of e-waste.

Tire Fee

The scrap tire grants are funded by the \$1 per tire fee on retail sales of new tires. In 2021, \$1,535,069 was awarded to 60 projects.

- Scrap tire cleanup events: 13 grants, \$535,010 awarded
- Completed projects for the partial reimbursement of the purchase of tire-derived products and/or crumb rubber: 34 grants, \$542,180 awarded
- Proposed projects for the partial reimbursement for the purchase of tire-derived products and/or crumb rubber: 13 grants, \$457,879

Scrap Tire Cleanup Events

Funding is provided to political subdivisions for tire collection site cleanups. Thirteen scrap tire cleanup grants were awarded in 2021 to political subdivisions. The grants totaled \$535,010 and proposed to clean up 3,925 tons of scrap tires.



Photos provided by Middle Niobrara NRD, which was awarded for a proposed 300-ton scrap tire cleanup for Cherry County.



Scrap Tire Cleanup Events: 13 grants, \$535,010 awarded			
Alliance	City of Alliance	\$72,460	Proposed 500-ton scrap tire cleanup for Box Butte, Sheridan, Morrill, Grant, Dawes, and Sioux counties.
Ashland	City of Ashland	\$9,740	Proposed 75-ton scrap tire cleanup in Ashland for the town and one-mile surrounding area.
Fairbury	Jefferson County Highway Department	\$17,454	Proposed 150-ton scrap tire cleanup for Jefferson County.
Falls City	Richardson County	\$37,699	Proposed 350-ton scrap tire cleanup in two locations for Richardson County.
Hastings	City of Hastings - Solid Waste Department	\$43,178	Proposed 350-ton scrap tire cleanup for Adams County.
Mullen	Village of Mullen	\$9,700	Proposed 50-ton scrap tire cleanup for Hooker County and southern Cherry County.
Norfolk	City of Norfolk	\$63,610	Proposed 500-ton scrap tire cleanup for Madison County, along with Stanton and Pierce County residents with a Norfolk zip code.
Scottsbluff	City of Scottsbluff	\$70,352	Proposed 500-ton scrap tire event for Scotts Bluff County.
Sidney	City of Sidney	\$69,479	Proposed 500-ton scrap tire cleanup for Cheyenne, Morrill, and Deuel counties.
Trenton	Village of Trenton	\$14,904	Proposed 100-ton scrap tire cleanup for Hitchcock County.
Valentine	Middle Niobrara NRD	\$53,964	Proposed 300-ton scrap tire cleanup for Cherry County.
Wallace	Village of Wallace	\$21,706	Proposed 150-ton scrap tire cleanup in Wallace for Lincoln County.
Wayne	Wayne County Roads Department	\$50,764	Proposed 400-ton scrap tire cleanup in Wayne for Wayne County.

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

In 2021, \$1,000,059 was awarded to 47 projects to partially reimburse the purchase of tire-derived products and/or crumb rubber.



Photo provided by the Elkhorn Legion Baseball Post 211, which was awarded for partial reimbursement of artificial turf made with 68,000 lbs. of crumb rubber for their Jerry Frerichs Legion Field. Due to the impact of COVID-19, the Frerichs Legion Field turf project got postponed to the Summer of 2021.



50% reimbursement of 13,650 lbs. of rubber playground mulch.

Partial Reimbursement for the Purchase of Tire-Derived Products and/or Crumb Rubber- Completed Projects: 34 projects, \$542,180 awarded			
Adams	Gold Crest Retirement Center	\$4,162	50% reimbursement of 29,250 lbs. of rubber playground mulch.
Atkinson	West Holt Public Schools	\$15,837	25% reimbursement of a rubber bond playground surface made from 60,900 lbs. of crumb rubber.
Bertrand	Bertrand Community School	\$13,367	25% reimbursement of rubber playground mats made from 41,600 lbs. of crumb rubber.
Blair	City of Blair	\$18,700	25% reimbursement of two poured-in-place playground surfaces using 41,500 lbs. of crumb rubber.
Blair	Blair Community Schools	\$33,137	50% reimbursement of 290,000 lbs. of rubber playground mulch.
Blue Hill	Blue Hill Community Schools	\$8,265	50% reimbursement of 11,700 lbs. of rubber playground mulch and 25% reimbursement of a poured-in-place playground surface made from 13,450 lbs. of crumb rubber.
Broken Bow	Custer County Foundation	\$2,775	50% reimbursement of 19,500 lbs. of rubber playground mulch.
Central City	Central City Public Schools	\$7,500	50% reimbursement of 50,000 lbs. of crumb rubber used to top dress the athletic playing field.
Columbus	Jared Lesuer	\$878	50% reimbursement of 5,850 lbs. of rubber playground mulch.
Fremont	Midland University/Dodge County Head Start	\$10,417	25% reimbursement of two poured-in-place playground surfaces and one bonded rubber surface using 14,100 lbs. of crumb rubber.
Fullerton	Fullerton Public Schools	\$832	50% reimbursement of 5,580 lbs. of rubber playground mulch.

Gibbon	Gibbon Public Schools	\$2,240	50% reimbursement of 15,600 lbs. of rubber playground mulch.
Harrisburg	Banner County School	\$20,608	50% reimbursement of 156,000 lbs. of rubber playground mulch.
Homer	Homer Community School	\$29,375	25% reimbursement of an athletic track surface using 50,000 lbs. of crumb rubber.
Kearney	Fort Kearny Preservation, Restoration, & Development	\$998	25% reimbursement of nine 6-ft. park benches and eight 3-ft. trail benches.
Lincoln	4Views Academy	\$3,733	25% reimbursement of a bonded rubber playground surface made from 6,350 lbs. of crumb rubber.
Loomis	Loomis Public Schools	\$1,700	50% reimbursement of 15,600 lbs. of rubber playground mulch.
Loup City	Central Nebraska Community Action Partnership	\$1,126	50% reimbursement of 7,800 lbs. of rubber playground mulch and one swing mat.
Merna	Anselmo-Merna Public Schools	\$20,220	25% reimbursement of an athletic running track surface made from 58,000 lbs. of crumb rubber.
Ogallala	Ogallala Housing Authority	\$637	50% reimbursement of 5,850 lbs. of rubber playground mulch.
Omaha	Millard North High School	\$68,174	25% reimbursement of an artificial turf playing field using 334,000 lbs. of crumb rubber.
Omaha	Skutt Catholic High School	\$27,214	25% reimbursement of athletic track made from 84,000 lbs. of crumb rubber.
O'Neill	O'Neill Public Schools	\$25,365	25% reimbursement of an athletic running track surface made from 82,000 lbs. of crumb rubber.
Osmond	City of Osmond	\$10,757	25% reimbursement of two poured-in-place playground surfaces made from 47,800 lbs. of crumb rubber.
Palmyra	Otoe County School District 66-0501	\$95,575	25% reimbursement of an artificial turf soccer/football field made from 376,000 lbs. of crumb rubber.
Palmyra	Otoe County School District 66-0501	\$26,136	25% reimbursement of an athletic running track surface made from 88,000 lbs. of crumb rubber.
Papillion	Papillion LaVista Community Schools	\$30,391	25% reimbursement of athletic track made from 94,000 lbs. of crumb rubber.
Potter	Village of Potter	\$1,650	50% reimbursement of 13,650 lbs. of rubber playground mulch.
Red Cloud	Red Cloud Community Schools	\$1,387	50% reimbursement of 9,750 lbs. of rubber playground mulch.
Stanton	Stanton Community Schools	\$29,456	25% reimbursement of an athletic running track surface made from 93,000 lbs. of crumb rubber.
Steinauer	Steinauer, Village of	\$8,000	50% reimbursement of 66,000 lbs. of rubber playground mulch.
Waverly	City of Waverly	\$7,375	50% reimbursement of 60,000 lbs. of rubber playground mulch.
Wilber	Gingerbread House	\$321	50% reimbursement of 1,950 lbs. of rubber playground mulch.
York	St. Joseph Catholic School	\$13,872	50% reimbursement of 95,500 lbs. of rubber playground mulch.

Partial Reimbursement for the Purchase of Tire-Derived Products and/or Crumb Rubber-Proposed Projects: 13 projects, \$457,879 awarded			
Ashland	City of Ashland	\$3,505	Proposed 50% reimbursement of 31,200 lbs. of rubber playground mulch.
Benedict	Village of Benedict	\$7,525	Proposed 50% reimbursement of 56,550 lbs. of rubber playground mulch.
Kenesaw	Kenesaw Public Schools	\$8,840	Proposed purchase of 52,000 lbs. of rubber playground mulch.
Lincoln	Nebraska Game & Parks Commission	\$12,465	Proposed 25% reimbursement of 77 picnic tables made from 520 passenger tire equivalents for nine state park and recreation areas.
Madison	Madison Public Schools	\$2,925	Proposed 50% reimbursement of 19,500 lbs. of rubber playground mulch.
Minden	Minden High School	\$25,026	Proposed 25% reimbursement of an athletic track surface using 94,000 lbs. of crumb rubber.
Morrill	Village of Morrill	\$5,827	Proposed 50% reimbursement of 44,000 lbs. of rubber mulch.
Niobrara	Santee Community Schools	\$107,192	Proposed 25% reimbursement of an artificial turf and athletic track.
Omaha	Northstar Foundation	\$89,600	Proposed 25% reimbursement of an 86,000 square foot artificial turf soccer/lacrosse field.
Omaha	Nebraska Philanthropic Trust	\$121,312	Proposed 25% reimbursement of an artificial turf baseball field at the University of Nebraska-Omaha, using 310,000 lbs. of crumb rubber.
Omaha	Nebraska Philanthropic Trust	\$59,777	Proposed 25% reimbursement of an artificial turf softball field at the University of Nebraska Omaha, using 112,000 lbs. of crumb rubber.
Tecumseh	Nemaha NRD	\$11,960	Proposed 50% reimbursement of 94,000 lbs. of rubber mulch for two lake playgrounds.
Wilcox	Wilcox-Hildreth Public Schools	\$1,925	Proposed 50% reimbursement of 13,650 lbs. of rubber mulch for the preschool playground.

Deconstruction of Abandoned Buildings

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 second class cities, 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.



Photo provided by the City of Oshkosh. A Grant was awarded in 2020 to the City of Oshkosh for the deconstruction of the abandoned Midwec Building at 602 Main St.

Illegal Dumpsite Cleanup Program

The Illegal Dumpsite Cleanup Program, established in 1997, is a Waste Reduction and Recycling 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 5% of the total revenue from the disposal fee collected from landfills in the preceding fiscal year. NDEE encourages municipalities, counties, and other political subdivisions to submit applications for the reimbursement of cleanup efforts. In FY2021, the program provided 23 grants, totaling \$48,579. Funds were provided to:

Illegal Dumpsite Cleanup Awards		
City of Lincoln - 7	City of Omaha – 4	Seward County - 6
Lincoln/Lancaster County - 4	Adams County - 2	

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 NDEE, 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 FY2021, the program provided \$101,365 to five counties and six cities participating in the program. All 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	\$ 1,741	Butler County	\$ 5,909	City of David City	\$ 238
City of North Platte	\$ 3,819	City of Lincoln	\$ 34,183	Saline County	\$ 3,049
City of Omaha	\$ 49,268	South Sioux City	\$ 955	Jefferson County	\$ 660
Seward County	\$ 1,428	City of Grant	\$ 115		

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
- Kitchen supplies

Fund Summary Litter Reduction and Recycling Fund July 1, 2020 - June 30, 2021	
Fund Balance June 30, 2020	\$1,804,263
Revenues:	
Litter Taxes Collected	\$2,538,860
Interest, Grant Returns	\$37,806
Miscellaneous Adjustment	\$0
Operating Transfer Out	\$-90,000
Net Collections for FY2021	\$2,486,666
Expenditures:	
NDEE Administration	\$364,108
Grant Funds Expended*	\$1,423,269
Total Expenditures FY2021	\$1,787,377
Fund Balance June 30, 2021	\$2,480,671

*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

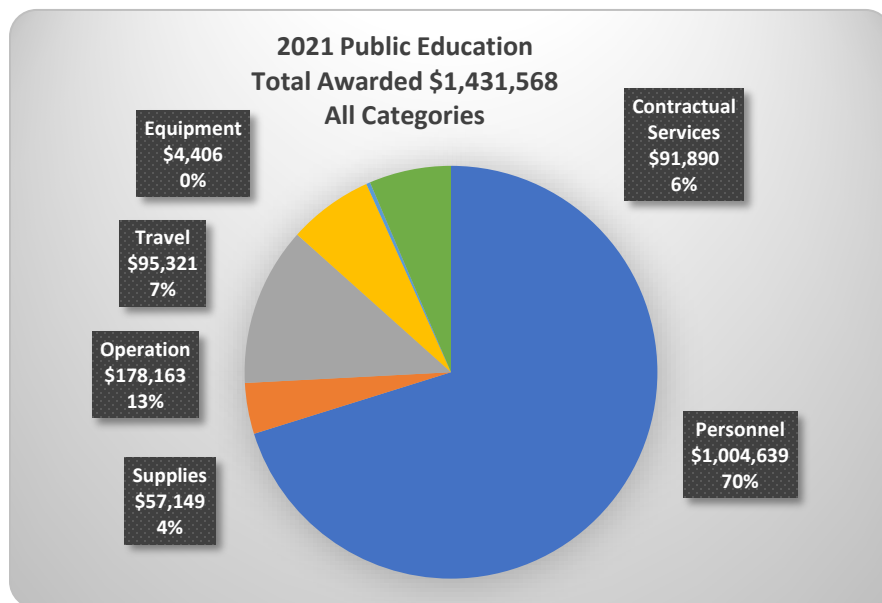
In 2021, \$2,084,200 was awarded to 53 Litter Reduction and Recycling Grant recipients. Grant funding is awarded to several types of programs, including non-profit groups, public and private entities, and over 20 Keep America Beautiful affiliates. Many of these programs utilize the Litter Reduction and 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	(69%)	25 grants	\$ 1,431,568
Cleanup	(3%)	10 grants	\$ 65,986
Recycling	(28%)	18 grants	\$ 586,646
Totals	100%	53 grants	\$ 2,084,200

Public Education

In 2021, 25 grants totaling \$1,431,568 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.





Photos provided by Keep North Platte & Lincoln Co Beautiful (KNPLCB), which was awarded a public education grant to encourage waste reduction and a litter-free environment. KNPLCB works with schools, businesses, and organizations to educate on the benefit of buying recycled content products. KNPLCB offers after-school and summer programs with various activities to encourage and inspires students to reuse, reduce, and recycle.

Public Education Awards: \$1,431,568 for 25 grants			
Alliance	Keep Alliance Beautiful	\$64,329	Public education for waste reduction and litter prevention to Box Butte County students and residents. Teach practical habits to reduce, reuse, and recycle.
Beatrice	Keep Beatrice Beautiful	\$39,288	Public education to promote litter reduction and recycling. Partner with the City of Beatrice and Gage County. Supply litter and recycling containers for Litter-Free events.
Burwell	Loup Basin RC&D Council/Keep Loup Basin Beautiful	\$47,767	Public education for litter prevention, waste reduction, and recycling in 13 counties in central and north central Nebraska.
Chadron	Keep Chadron Beautiful	\$71,438	Public education to establish new attitudes and behaviors toward litter reduction and recycling. Conduct community presentations, help with litter-free events, and offer educational after-school programs.
Columbus	Keep Columbus Beautiful	\$33,482	Public education for schools, businesses, and organizations to increase recycling and raise awareness for litter prevention in Platte County.
Fremont	Keep Fremont Beautiful, Inc.	\$70,785	Public education to create awareness regarding environmental issues and increase community participation in litter reduction, recycling, and the proper disposal of waste in Dodge County.

Grand Island	Grand Island Area Clean Community System	\$40,374	Public education on litter, recycling, and reuse, and proper disposal of household chemicals through presentations to adults and youth in Hall County. Work with Grand Island schools on a new food waste composting program.
Kimball	Keep Kimball Beautiful	\$24,532	Public education for Kimball and the surrounding area concerning litter prevention and proper waste management. Work with Kimball Public Schools and Banner County School.
Lexington	Keep Lexington Beautiful	\$37,133	Public education at Lexington Public Schools through after-school and summer programs on recycling and waste reduction. Also provide educational waste reduction programs for the elderly population and entire community.
Lincoln	Lincoln and Lancaster County Health Department	\$91,289	Public education for litter prevention, reduce landfill waste, and proper waste management practices for Lancaster County. Stormwater awareness program, cigarette litter and illegal dumping prevention.
Lincoln	Keep Nebraska Beautiful	\$105,948	Operating expenses for the Litter Hotline for Douglas, Lancaster, Gage, Dodge, Cass, and Colfax counties to increase community awareness of Litter. Educate K-12 students about the litter free school zone program. Help develop after-school curriculum focusing on food waste and resource management.
Lincoln	Nebraska Recycling Council	\$74,638	Public education to support Nebraska community and regional recycling systems and service providers, develop Nebraska's composting industry, provide business technical assistance, and help Agriculture producers recycle ag bags.
Lincoln	Nebraska Recycling Council	\$51,152	Public education on recycling and materials management, instructional publications, waste assessments and audits, municipal and regional recycling system design assistance. Develop the Hub and Spoke recycling project for 34 counties in Western Nebraska.
Lincoln	City of Lincoln-Solid Waste Management Division	\$91,890	Public education for a comprehensive K-12 problem/solving curriculum focused on the solid waste industry, "Bin Banter" live-stream webinar on recycling, and create a new logo and marketing related to composting.
Lincoln	University of Nebraska-Lincoln Board of Regents	\$7,800	Due to pandemics and disease epidemic increases, UNL will research the rate and volumes of personal protection equipment waste generation, treatment, and disposal to plan for safe and sustainable environmental management practices.
Lincoln	University of Nebraska-Lincoln	\$4,985	Public education to engage the UNL community. Develop a waste management and recycling guide to be promoted via the web and social media, as well as in print form for campus. Plan at least 10 on-campus events with themes of sustainability and responsible waste management through recycling.
Louisville	Keep Cass County Beautiful	\$65,013	Public education to provide resources for the development of pro-environmental behaviors that result in litter prevention and waste reduction in Cass County. Provide bins and cigarette receptacles for local events.
Nebraska City	Keep Nebraska City Beautiful	\$36,832	Public education to increase recycling, promote litter reduction, and food waste reduction through after-school programs and community presentations in Otoe County.

Norfolk	Keep Norfolk Beautiful	\$29,276	Public education to teach youth about the importance of litter prevention, proper recycling practices, and instill proper waste handling habits in Madison and parts of surrounding counties.
North Platte	Keep North Platte and Lincoln County Beautiful	\$87,102	Public education to encourage waste reduction and a litter-free environment. Work with schools, businesses, and organizations to educate on the benefit of buying recycled content products. Provide recycling containers for events.
Ogallala	Keep Keith County Beautiful, Inc.	\$134,720	Public education on litter reduction through source reduction, recycling right, food waste elimination, and sustainable waste management.
Omaha	Keep Omaha Beautiful	\$151,715	Public education workshops and presentations at community events and virtually on waste reduction, recycling, and litter prevention. Participate in schools as allowed. Create online recycling guide.
Scottsbluff	Keep Scottsbluff Gering Beautiful	\$38,983	Public education on litter prevention, waste reduction, and recycling in classrooms and at public events. Educate residents on proper disposal of household hazardous waste.
Sidney	Keep Sidney Beautiful	\$24,857	Public education on recycling and waste reduction to local schools, youth groups, and the community. Boost online and virtual education opportunities, and work with organizations to bring better recycling options to Cheyenne County.
Wayne	City of Wayne	\$6,240	Public education campaign on Zero Waste Living in the community. Promote waste reduction through flyers, newspapers, radio, online, and social media.

Cleanup

In 2021, 10 grants totaling \$65,986 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 awarded Cleanup grants propose to clean up litter from 996 road-side miles and 435 acres of public areas.





Photos provided by Keep Sidney Beautiful, which was awarded funding to clean up a proposed 18 miles in Cheyenne County. As of September 1, 2021, Keep Sidney Beautiful volunteers have cleaned up over 3,000 lbs. of litter.

Cleanup Awards: \$65,986 for 10 grants			
Beatrice	Keep Beatrice Beautiful	\$5,975	Clean up 100 roadside miles and 60 public acres in Gage County.
Chadron	Keep Chadron Beautiful	\$5,135	Clean up 100 miles in Dawes County.
Grand Island	Grand Island Area Clean Community System	\$5,800	Clean up 100 roadside miles and 50 public acres in Hall, Merrick, Hamilton, Howard, and Adams counties.
Lincoln	Lincoln and Lancaster County Health Department	\$15,000	Clean up 240 roadside miles and 300 public acres in Lancaster County.
North Platte	Keep North Platte and Lincoln County Beautiful	\$16,314	Clean up 320 roadside miles in Lincoln County.
Ogallala	Keep Keith County Beautiful, Inc.	\$3,250	Clean up 60 roadside miles and 25 public acres in Keith County.
Omaha	Keep Omaha Beautiful	\$7,840	Supplies to conduct over 500 cleanups in Omaha, including Adopt-a-Park/Spot programs, public spaces, and trail cleanups.
Scottsbluff	Keep Scottsbluff Gering Beautiful	\$2,995	Clean up 48 roadside miles in Scotts Bluff County.
Sidney	Keep Sidney Beautiful	\$3,135	Clean up 18 miles in Cheyenne County.
Steinauer	Steinauer Community Club	\$542	Clean up 10 roadside miles leading into Steinauer.

Recycling

In 2021, 18 grants totaling \$586,646, 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.

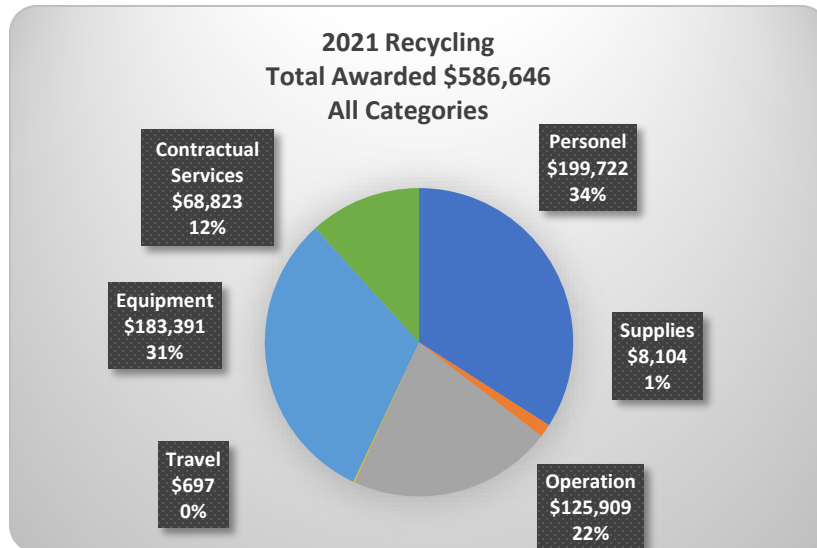


Photo provided by City of Madison, which was awarded for 50% of the cost of a brush chipper and skid loader to process tree waste and vegetation. As of September 1, 2021, the City has produced 22 tons of mulch to be shared with the community.

Recycling Awards: \$586,646 for 18 grants			
Alliance	Keep Alliance Beautiful	\$46,131	Funds to operate the recycling center in Alliance serving Box Butte County, and partially fund a vertical baler.
Columbus	Platte County Highway Department	\$49,413	50% of the cost of a brush chipper and skid loader to process vegetation and tree waste along Platte County roads. Resulting mulch will be available for free at five locations in Platte County.
Columbus	Keep Columbus Beautiful	\$20,420	Provide services to move recyclable materials collected in Columbus to the recycling center in Schuyler.
Crofton	Lewis and Clark State Recreation Area/Nebraska Game and Parks Commission	\$1,643	Funds for recycling containers to distribute around the Lewis and Clark State Recreation Area to be used by park staff and visitors.
Kimball	Keep Kimball Beautiful	\$73,216	Funds to operate the Kimball Recycling Center serving Kimball County. Over the past two years 655,000 lbs. of recyclable materials have been diverted from the landfill.
Lexington	Keep Lexington Beautiful	\$12,148	Conduct a paper shredding day in Lexington, service five recycling trailers, and support cleanups in the area.
Lyons	City of Lyons	\$17,172	Funds to operate the recycling center in Lyons, serving Burt and parts of Washington, Thurston, and Cuming counties.
Madison	City of Madison	\$20,000	50% of the cost of a brush chipper to process tree and wood waste from the City of Madison into mulch. Mulch will be used in city parks and offered to the public at a low cost.
Morrill	Village of Morrill	\$23,438	50% of the cost to crush 6,000 tons of concrete and 1,100 tons of asphalt to produce aggregate to use on village roads.
Newcastle	Village of Newcastle	\$10,828	Funds toward a recycling trailer to haul recyclables collected from Newcastle and the surrounding area to market.
North Platte	Keep North Platte and Lincoln County Beautiful	\$33,657	Promote and help to increase recycling, including electronic waste and non-contaminated yard waste in Lincoln County through drop-off, school, and business recycling programs.
Omaha	Papio Missouri River Natural Resources District	\$24,300	Funds to conduct four electronic waste (e-waste) events in Washington, Burt, Thurston, and Dakota counties. Anticipate collecting 60,000 lbs. of e-waste from these events.
Omaha	City of Omaha (Environmental Quality Control)	\$56,000	Purchase trailer with a solar-powered surveillance camera to monitor and prevent illegal dumping at Omaha's recycling drop-off sites.
Omaha	Duet-Care	\$121,157	Funds toward a horizontal baler and operating expenses for the recycling center, providing employment for 37 individuals with development and intellectual disabilities. Over 200 businesses, churches, and organizations are served in Douglas and Sarpy counties.
Schuyler	Keep Schuyler Beautiful	\$43,719	Operating expenses for the Colfax County Recycling Facility, accepting materials from Colfax, plus parts of Butler, Platte, and Dodge counties.
South Sioux City	City of South Sioux City	\$16,007	50% of the cost to purchase 800 64-gallon curbside recycling bins for South Sioux City homes.

Thedford	Upper Loup Natural Resources District	\$14,000	Operating expenses for the Upper Loup NRD recycling program. Materials accepted from Grant, Hooker, Thomas, Logan, Blaine, and portions of McPherson, Cherry, and Brown counties.
Verdigre	Village of Verdigre	\$3,397	Funding to aid the Village's recycling shed, serving the western half of Knox County.

Grant Reporting

Each grantee is required to submit a report quarterly, even if there is no activity. The reports are approved within 1 business day if there are no issues with the report resulting in its rejection. Here are the top issues for rejection for the reporting from January to June 2021:

- Payroll, benefits, and/or taxes wrong
- Missing invoices or other documents
- Volunteer calculation missing or wrong
- Travel missing documentation
- Requesting ineligible expenses

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)
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
2020	\$325,938	\$1,325,085	\$89,153	\$1,740,176	\$1,827,643
2021	\$586,646	\$1,431,568	\$65,986	\$2,084,200	\$2,105,370
Total Amounts				\$18,082,259	\$24,868,089*

*Estimate

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

Grant Year	Awarded Deconstruction Grants	Awarded Landfill Disposal Rebate	Awarded Illegal Dumpsite
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
2020	\$186,662	\$23,016	\$102,061
2021		\$101,365	\$48,579
Total	\$478,162	\$583,043	\$947,380

*Estimate

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

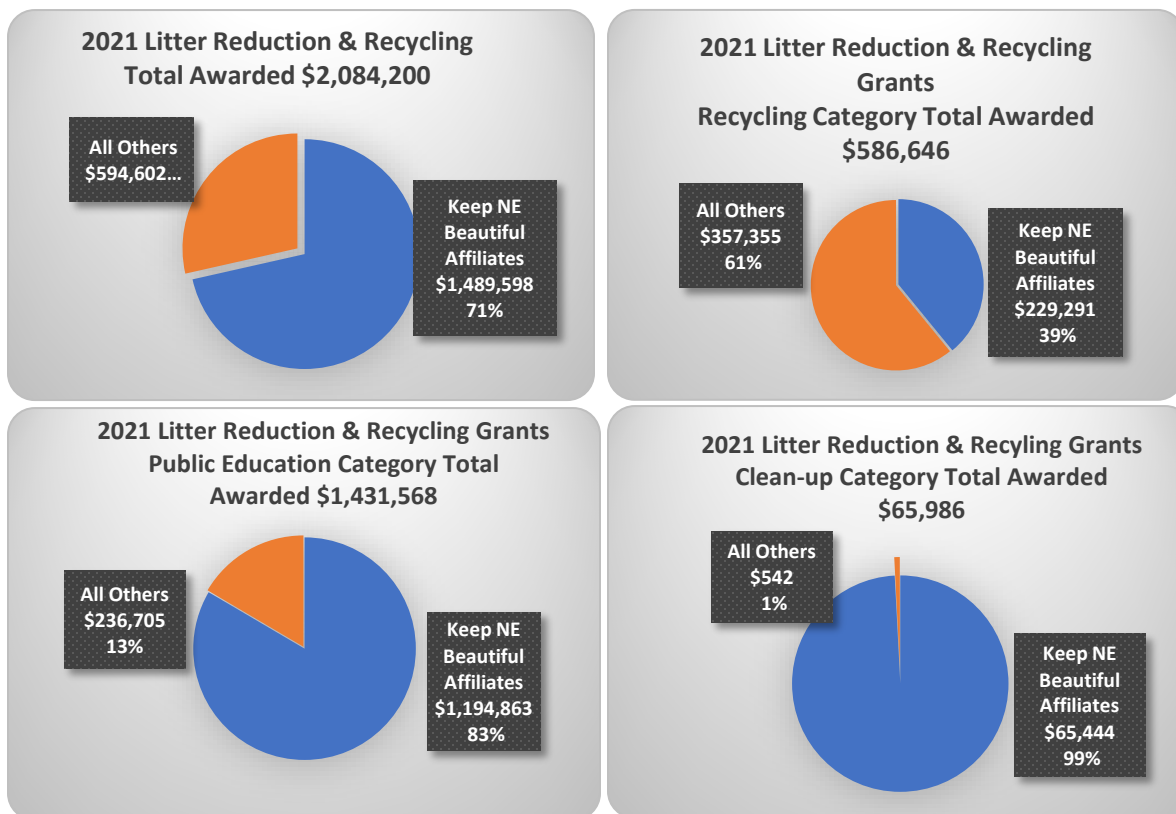
Amounts Awarded for Deconstruction, Illegal Dumpsite, and Landfill Disposal Rebates

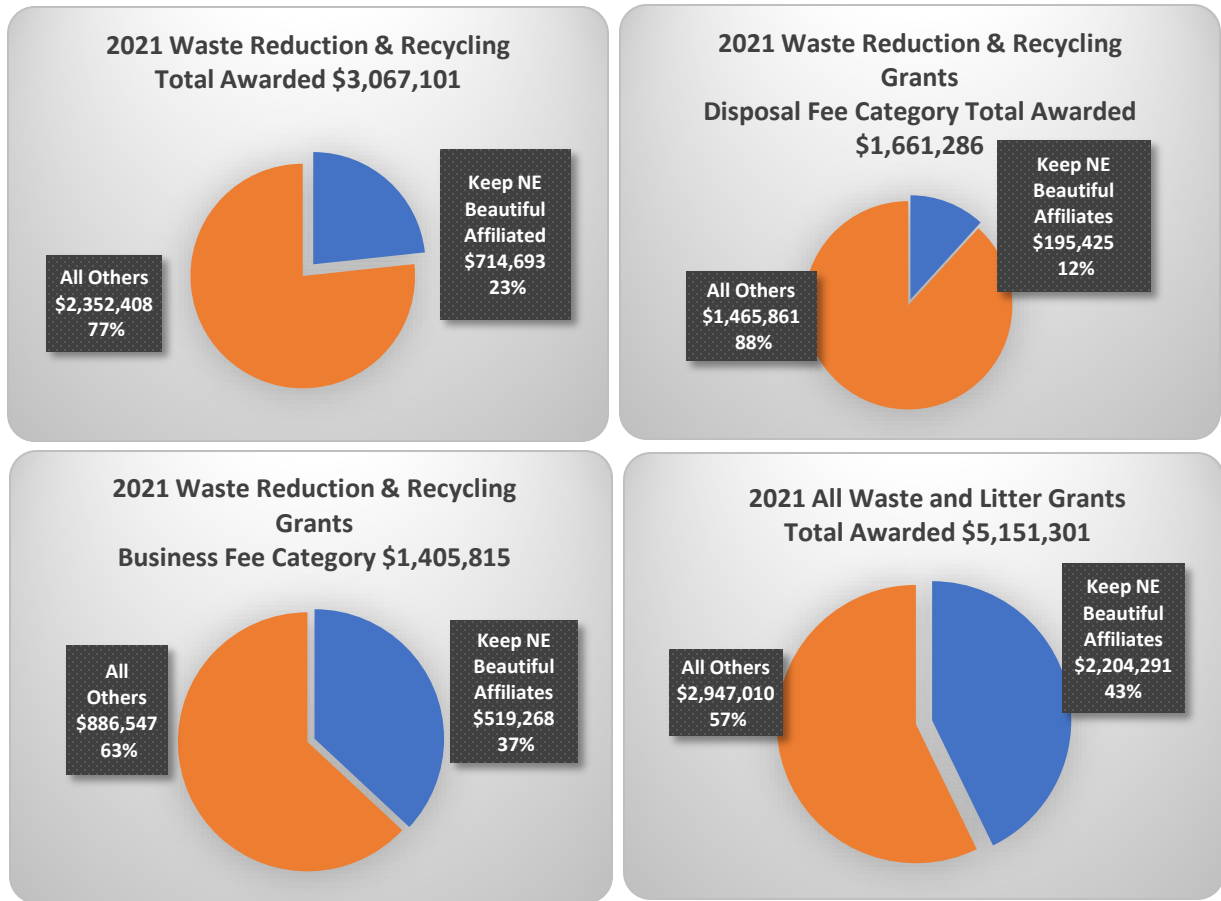
Grant Year	Awarded Disposal Fee	Awarded Business Fee	Total Awarded (Both WRR Categories)	Total Eligible Grant Funds Requested (Both WRR Categories)
2012	\$916,461	\$774,715	\$1,691,176	\$2,387,797*
2013	\$816,990	\$549,524	\$1,366,514	\$2,388,515*
2014	\$1,012,371	\$1,107,888	\$2,120,259	\$3,083,431*
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
2020	\$1,400,186	\$828,181	\$2,228,367	\$2,481,692
2021	\$1,661,286	\$1,405,815	\$3,067,101	\$3,469,624
	Total Amounts		\$21,470,795	\$31,321,650*

Keep America Beautiful Nebraska Affiliate Funding for 2021

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.

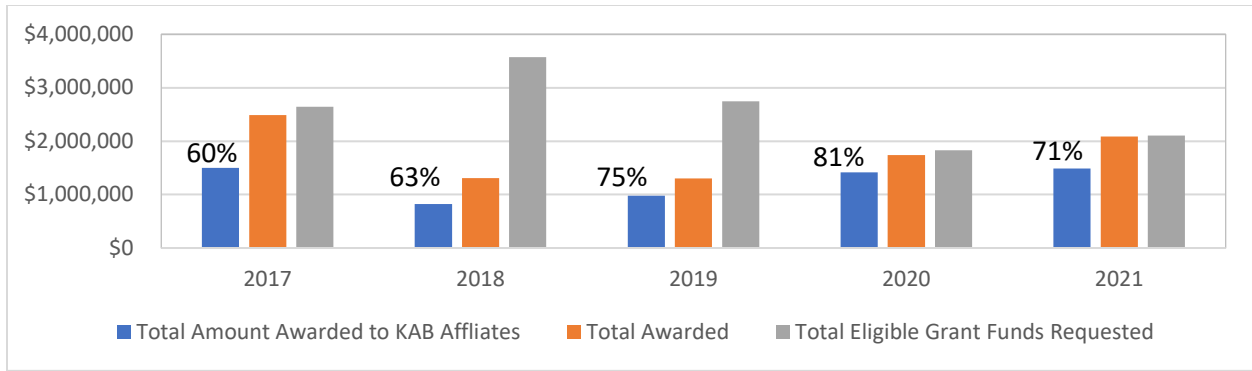
The Litter grant program also includes the cleanup category, which covers expenses to pick up litter along roadways and in public areas. Recycling is the third category under the Litter grant program and is like the Business Fee category, of the Waste Reduction and Recycling Incentive Grant Program. 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.





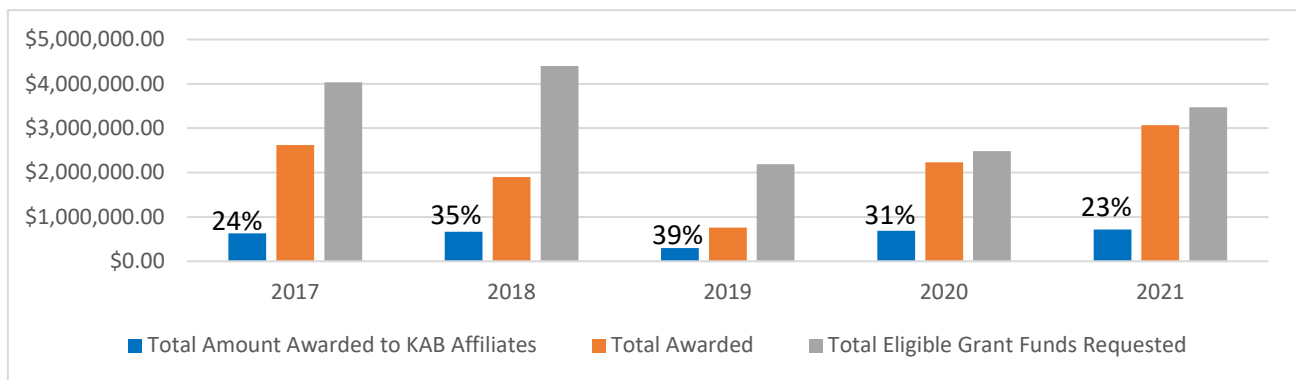
2017-2021 Awarded Litter Reduction and Recycling Grants to Keep America Beautiful (KAB) Nebraska Affiliates

Grant Year	Total Amount Awarded to KAB Affiliates	Percent Awarded to KAB Affiliates	Total Awarded	Total Eligible Grant Funds Requested
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
2020	\$1,415,978	81%	\$1,740,176	\$1,827,643
2021	\$1,489,598	71%	\$2,084,200	\$2,105,370



2017-2021 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
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
2020	\$689,675	31%	\$2,228,367	\$2,481,692
2021	\$714,693	23%	\$3,067,101	\$3,469,624



Nebraska Voluntary Cleanup Program

The Remedial Action Plan Monitoring Act (RAPMA), initially created in 1995, established the Nebraska Voluntary Cleanup Program (VCP). The VCP provides property owners and parties responsible for contamination with a mechanism for developing voluntary environmental cleanup plans that are reviewed and approved by NDEE. It also gives businesses a way to proceed with property cleanup 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.

NDEE has a Memorandum of Agreement with EPA Region 7, which provides federal approval of VCPs. Under this agreement, any site that joins the Nebraska Voluntary Cleanup Program and successfully completes the cleanup action is assured that EPA will not pursue federal enforcement under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

To date, 68 sites have entered the Voluntary Cleanup Program. Currently, 25 sites are active in the VCP. Two sites have been referred to the EPA Superfund program. Seven 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-eight sites have successfully completed cleanup requirements and have received "No Further Action" letters from NDEE, and one site received an Acknowledgement Letter for cleanup work completed to date, but not an official No Further Action Letter.

NDEE continues to have significant interest from applicants enrolling properties or sites into the VCP. New properties enrolled include the former Goodyear Lease Location #7522 in Lincoln, the AltEn, LLC facility in Mead, and three properties in Omaha that include the former AAA Welding facility, the former Max I Walker Cleaners at Baker Square, and the Tiny Houses project. Investigation activities are ongoing at the J.A. Woollam, Co. in Lincoln, 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 former Farmland Industries UAN Terminal in Doniphan, the Archer Daniels Midland facility in Lincoln, the Dettmer Lease property in Auburn, Hoover Manufacturing in Beatrice, the former Nebraska Solvents Company site in Grand Island, the Vishay Dale Electronics site in Norfolk, the Appleton Electric site in Columbus, West Haymarket Block 4 in Lincoln, the Elster American Meter Company in Nebraska City, the Omaha Steel Castings Parish School, and the former Murdock and Utica USDA grain bin sites.



This former manufacturing facility located at 1528 N 16th Street in Omaha will be the future location of a Tiny Houses project by Arch Icon Development and the Sienna Francis House. The City of Omaha enrolled the site in the VCP to address heavy metals contamination in the soil. When complete, approximately 50 tiny houses – each about the size of a hotel room – will be constructed onsite to provide a housing service for the homeless.

Post-remediation monitoring is ongoing at Case New Holland in Grand Island and the Lewis and Clark Landing/Heartland of America Park Redevelopment Project. A No Further Action letter was issued to the Omaha Steel Castings – Saddle Creek Redevelopment project and an Acknowledgement Letter for remedial work completed to date was issued for the Lynch Park Former Manufactured Gas Plant (FMGP) site in Omaha. 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			
Site	Location	Date started	Progress
KN Energy	Holdrege	4/3/95	Completed 5/1/97
Garvey Elevator	Hastings-West	4/13/95	Deferred to EPA Superfund
ASARCO	Omaha-Riverfront	2/5/96	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	2/9/96	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	9/17/98	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 1/3/05
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
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	10/10/07	Active

Voluntary Cleanup Program Sites and Status			
Site	Location	Date started	Progress
Archer Daniels Midland	Lincoln	12/11/08	Active
Plaza North Station LLC	Omaha	7/17/09	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 4/13/12
Magnolia Metal Corporation	Auburn	3/9/11	Completed 10/31/13
Dettmer Lease Property	Auburn	5/19/11	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	10/1/12	Completed 3/26/18
Lynch Park FMGP	Omaha	11/20/12	Acknowledgement Letter issued 10/1/20
Appleton Electric	Columbus	3/1/13	Active
Magnus Farley	Fremont	6/16/14	Completed 8/23/18
Beatrice FMGP	Beatrice	11/13/15	Completed 8/22/19
Omaha Steel Castings – Saddle	Omaha	4/26/16	Completed 8/24/20

Voluntary Cleanup Program Sites and Status			
Site	Location	Date started	Progress
Creek Redevelopment			
Omaha Steel Castings – Parish School	Omaha	3/24/17	Active
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	Withdrawn 7/16/20
Former Farmland Industries Doniphan UAN Terminal	Doniphan	10/9/2018	Active
Lewis and Clark Landing/Heartland of America Park Redevelopment Project	Omaha	8/13/2019	Active
Elster American Meter	Nebraska City	9/19/2019	Active
Former AmFirst Bank Branch	McCook	11/07/2019	Completed 6/22/20
West Haymarket Block Four	Lincoln	2/4/2020	Active
Former Goodyear Lease Location #7522	Lincoln	7/21/20	Active
Former Max I. Walker Cleaners – Baker Square	Omaha	1/11/21	Active
Former AAA Welding	Omaha	1/11/21	Active
Tiny Houses	Omaha	2/1/21	Active
AltEn, LLC	Mead	6/30/21	Active

Brownfields Assessments and Cleanups

A brownfield site is a vacant or under-used industrial or commercial property where expansion or redevelopment is complicated by unresolved contamination concerns. Common brownfield properties include historic dry cleaners, former gas stations, auto repair shops, and closed manufacturing facilities. These properties can be contaminated with various chemicals

such as tetrachloroethylene (PCE) used in dry cleaning, benzene from petroleum fuel, and heavy metals such as lead from manufacturing activities. The Section 128(a) Brownfields Program performs Phase I and Phase II Environmental Site Assessments (ESAs) and cleanups at brownfield sites in Nebraska. A Phase I ESA consists of a review of historical documents and regulatory databases to determine if there are any environmental concerns associated with a property's past (e.g., the property was a gas station in the 1950s). If environmental concerns are identified, a Phase II ESA can be completed that consists of collecting soil, soil gas, and/or groundwater samples to identify if there has been a release to the environment. These ESAs are performed by NDEE with limited federal funds at no cost to interested parties in Nebraska communities. The ESA can also include surveys of existing structures on the property for the presence of lead-based paint, mold 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, NDEE has performed nine Phase I assessments, four Phase II assessments, 12 asbestos surveys, two lead-based paint surveys, and three mold surveys. NDEE received two applications this year for partial cleanup assistance for removal of asbestos prior to building renovation or demolition. NDEE also completed Brownfields Inventories for three Nebraska communities over the past year. A Brownfield Inventory helps identify all potentially contaminated properties in a neighborhood, corridor, or other area slated for redevelopment. It is similar to a Phase I ESA except it covers a larger area instead of a single property.



Photos courtesy of Sara Arnett – Wood River Vision 20/20

When the Good Samaritan Building in Wood River was left abandoned after the bomb cyclone of 2019, the community saw an opportunity to turn the unutilized space into a much-needed day care facility. To ensure the property was safe for children, the non-profit Wood River Vision 20/20 asked the NDEE to complete a Phase I Assessment, an asbestos survey, and a lead-based paint survey for the facility. Additional brownfields funding was used to help remove the asbestos that was identified during the survey. The Stick Creek Kids Child Development Center officially celebrated its grand opening on May 1, 2021.

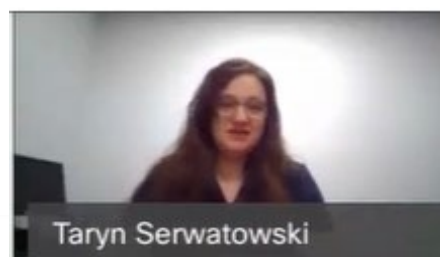


Brownfields Program Enhancement and Public Outreach

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.

Many in-person workshops were cancelled over the past year due to the COVID-19 pandemic; however, outreach activities proceeded using virtual platforms. NDEE partnered with the Kansas State University Technical Assistance to Brownfields Program (KSU TAB) to hold a live webinar promoting brownfields resources and how the two programs work together to assist in redeveloping blighted properties in Nebraska. A recording of the webinar was subsequently posted to the NDEE website to allow for future reference. The NDEE Brownfields Coordinator was invited to speak at the Papio-Missouri River Natural Resources District (NRD) virtual workshop to discuss available funding and resources related to updating the NRD's hazard mitigation plan. And several virtual meetings were held with KSU TAB, the Environmental Protection Agency Region 7 (EPA), the Benkelman Community Redevelopment Authority, and the McCook Economic Development Corporation to begin planning for the for the first in-person workshop next fiscal year following the pandemic.

NDEE's Brownfields Coordinator, Taryn Serwatowski, discusses the Brownfields Program and available resources on a live webinar that aired May 13, 2021. A recording of the webinar is archived on the NDEE website for future reference for Nebraska communities.



**COMMUNITY REVITALIZATION THROUGH
BROWNFIELDS REDEVELOPMENT:
ASSISTANCE, TOOLS, & RESOURCES FOR
NEBRASKA COMMUNITIES**

May 13, 2021



Meeting one on one with community members is another outreach approach that the NDEE's Brownfields Program uses to assist communities in need. The NDEE Brownfields Coordinator, along with KSU TAB and EPA, held several Partnership Resource Review virtual meetings the past year. The purpose of a Partnership Resource Review meeting is to discuss strategies to help a community develop a competitive EPA 104(k) Brownfields Assessment, Cleanup, or Revolving Loan Fund Grant Proposal, and/or to make a community aware of the funding and technical assistance these programs have to offer. Communities that participated in a Partnership Resource Review meeting included the City of Beatrice for the Dempster Industries facility; the City of Norfolk for their Riverfront Redevelopment Plan, as well as the abandoned Tyson plant and Stockyards; the City of Minden and Harold Warp Foundation for renovations to the Harold Warp Pioneer Village; the Metropolitan Area Planning Agency for an abandoned Liberal Arts College in Blair; the City of Gering for their 10th Street corridor; Cozad Development Corporation for the former Tenneco facility; the Village of Elm Creek for an abandoned hotel and gas station complex; and Custer County Economic Development for an abandoned nursing home facility. The Brownfields Coordinator also had separate calls with Keith County Economic Development, the City of Ord, and a compost business owner in Omaha to discuss how the Brownfields Program

can assist in bringing their projects and vision to fruition. Outreach efforts by the Brownfields Coordinator also helped three Nebraska communities secure technical assistance grants from the EPA. The City of Fremont was awarded a Building Blocks for Sustainable Communities: Green and Complete Streets grant. Through this grant an environmental consultant worked with Fremont's Planning Commission to develop design elements and implementation strategies for greener, safer, and more aesthetically appealing thoroughfares and sidewalks. The City of Beatrice was selected for a technical assistance grant valued at \$30,000 for a contractor to develop a market analysis, reuse vision, and compile available resources to assist with redeveloping the former Dempster Industries facility. And the City of Bayard was selected for an EPA pilot study to provide redevelopment strategies to rural, low-population communities to revitalize their downtowns.

Resource Conservation and Recovery Act (RCRA) Program

The NDEE received authorization from the EPA in 1985 to administer portions of the Resource Conservation and Recovery Act (RCRA) program. Nebraska Administrative Code (NAC) *Title 128 - Nebraska Hazardous Waste Regulations* incorporates the applicable RCRA regulations, which the NDEE updates as Federal 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 the clean-up of hazardous waste that has been released to the environment through the RCRA Corrective Action program, and
- Maintaining data systems to support decision-making and making information available to the public.

The Compliance Assistance Program helps Nebraska businesses, government entities, and private citizens comply with hazardous and solid waste regulations in a non-enforcement setting. This program works with the regulated community in a partnership and promotes 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.

Since March 2019, the NDEE has had ongoing responses to two major activities: statewide flooding in 2019 and COVID-19 pandemic in 2020 which continues into 2021. The NDEE continues to provide compliance assistance to generators and the public for the disposal of flood-related wastes as part of the Governor's Long Term Recovery Task Force, and regularly

examines potential hazardous waste issues related to pandemic response activities. The NDEE is generating and updating guidance documents pertaining to responses to flood and pandemic issues as new questions on waste handling arise.

Compliance and enforcement activities include investigating complaints and inspecting 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 prevent the release of hazardous substances into the environment. Closure actions are required for treatment, storage, or disposal facilities that discontinue operations or that have operated without a permit. Permits are required for all operating treatment, storage, and disposal facilities. Post-closure permits are required for treatment, storage, and disposal facilities that have gone through closure and have contamination remaining on-site.

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

Corrective action 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. NDEE has administered the RCRA Corrective Action Program since January of 2017.

Significant Accomplishments

Significant corrective action accomplishments during FY2021 include:

- Proprietary institutional control established for Snyder Industries.

EPA continues to move generators to use the e-manifest module that is part of the national RCRAInfo database. Nebraska recommends generators use the e-manifest system, which provides a more 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. 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. This provides the public a clearer understanding of wastes generated and disposed, and the process it followed to disposal.

Nebraska's RCRA program helps generators notify and manage their generator status by having them use the myRCRAID module, also within the national RCRAInfo database. In addition, Nebraska recommends that the facility hazardous waste managers prepare their 8700-12 Hazardous Waste notification form electronically. The Department currently has 520 facilities that have requested and received permission to file electronically. NDEE approves the requests electronically, which saves NDEE and the hazardous waste facilities time, equating to money saved. Each generator then has electronic notification (email documentation) of the last time their status was updated and by whom.

As a result of process improvement, the RCRA Section emails confirmations to generators who submit 8700-12 Hazardous Waste notification through the US EPA RCRAInfo system and for contingency plan update submittals mailed in to NDEE. In the past, a formal letter was prepared and mailed certified for each of these update requests, which was the past practice, saving time and reducing costs.

Program Funding

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

The RCRA program collects an annual 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:

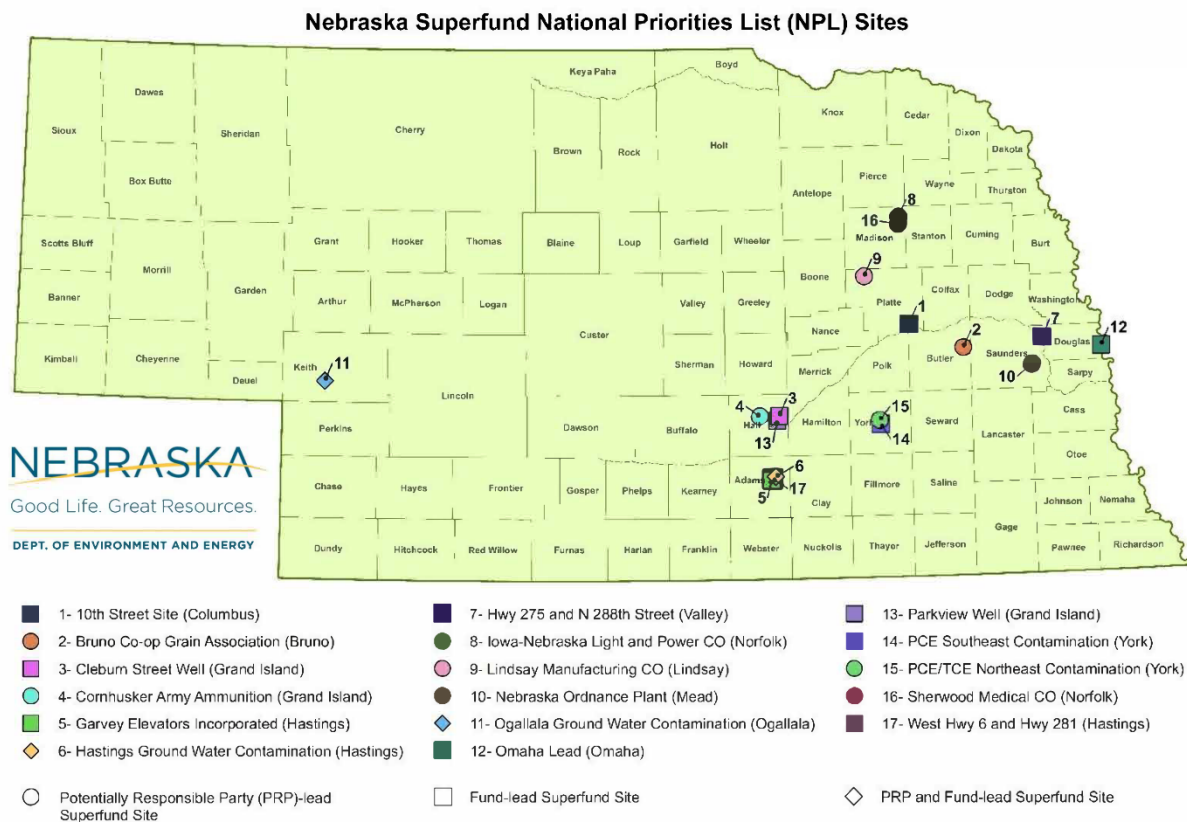
- 109 Large Quantity Generators (greater than 2,200 pounds of hazardous waste generated per month)
- 414 Small Quantity Generators (between 220 and 2,200 pounds generated per month)
- 1,440 Conditionally Exempt Small Quantity Generators (less than 220 pounds generated per month)
- 1 Hazardous Waste Incinerator 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		Madison 2	Stanton 1
Butler 1	Hall 6	Otoe 1	Thayer 1
Cuming 1	Hooker 1	Phelps 1	Washington 2
Cheyenne 1	Holt 2	Platte 5	Wayne 1
Dakota 2	Kimball 1	Red Willow 1	York 1
Dawson 2	Knox 1	Sarpy 6	
Dodge 3	Lancaster 25	Scotts Bluff 3	
Douglas 30	Lincoln 2	Seward 3	

Summary of FY2021 Activities		
Compliance Assistance	State	EPA
On-site Visits	1	*
Direct Assistance Contacts	589	*
Public Outreach Presentations (total 325 in attendance)	3 / 339	*
Complaints Received	17	*
Complaints Investigated	17	*
Complaints Closes	17	*
<i>*Data not available</i>		
RCRA Inspections		
Land Treatment Facilities	0	0
Treatment, Disposal, and Storage Facilities	2	1
Comprehensive Groundwater Monitoring Evaluations	0	0
Operation and Maintenance Inspections	0	0
Facility Self-Disclosure	0	0
Large Quantity Generator	12	1
Small Quantity Generator	8	2
Conditionally Exempt Small Quantity Generators	3	4
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	24	0
Corrective Action	1	0

Superfund Program

Thousands of contaminated sites exist nationally due to hazardous waste being improperly managed. These sites include manufacturing facilities, processing plants, landfills, and mining sites. Superfund is a federal cleanup program designed to investigate and cleanup sites contaminated with hazardous substances. Sites on the National Priorities List (NPL) are considered the most highly contaminated and undergo longer-term remedial investigation and cleanups. These sites pose the highest risk to human health and the environment in the nation. The United States EPA, with concurrence from the State of Nebraska, determines whether a site should be listed on the NPL. Superfund forces the parties responsible for the contamination to either perform cleanups or reimburse the EPA-led work. Unfortunately, the responsible parties are often long gone and out of business, so Superfund gives EPA funds and authority to clean up contaminated sites. State cost obligations occur when the responsible party lacks the financial resources so federal funds are used to pay for the cleanup.



The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) became federal law in 1980. Nebraska has 17 active NPL sites. One site, the Waverly Groundwater Contamination Site, was removed from the National Priorities List on November 20, 2006, upon achieving the cleanup goals for the site. 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.

The investigation and remediation of contaminated sites under CERCLA are the primary responsibility of the EPA and other federal agencies. NDEE 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. This investigation and remedial work at Nebraska Superfund sites makes a visible and lasting difference in communities across the state, giving people healthy places to live and work. 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 around contaminated municipal and private drinking water supply wells or where there is a significant potential for groundwater contamination.

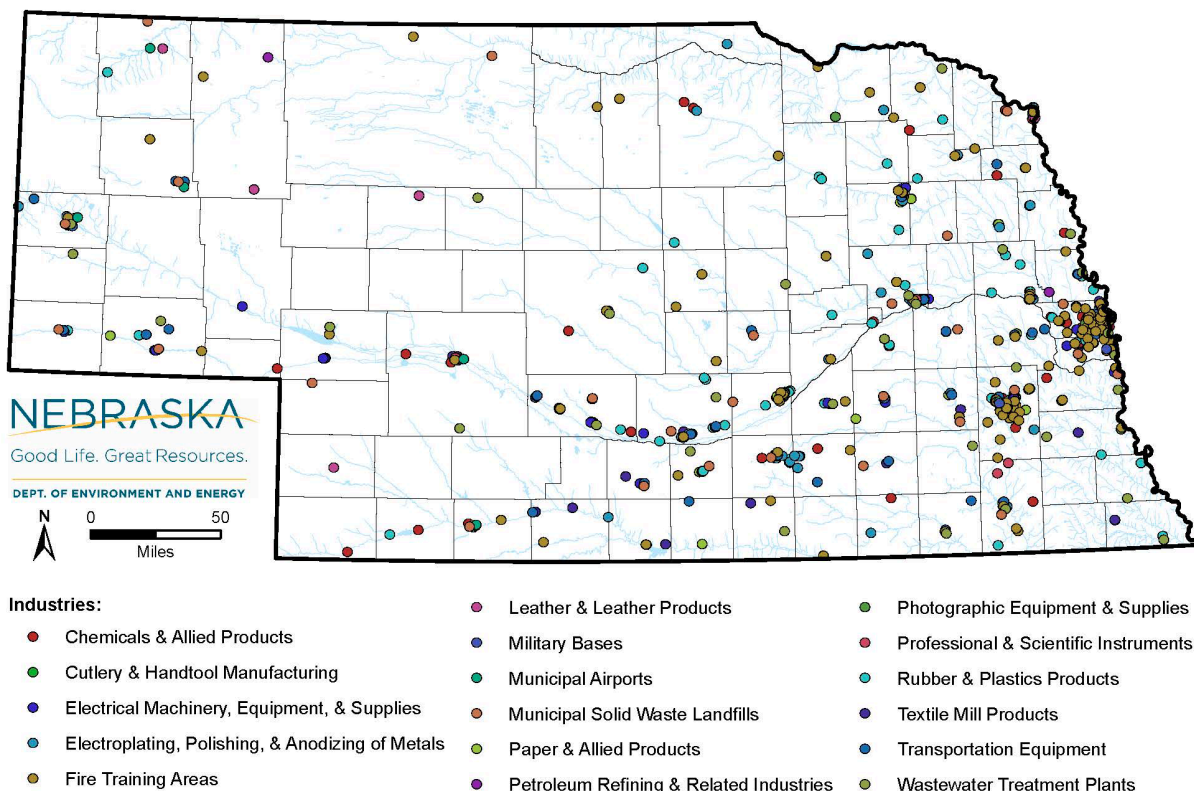
Site assessment steps:

1. Pre-CERCLA screening assessment. This step is a review of existing information on a potential site to determine whether a release has occurred requiring further evaluation through the Superfund process.
2. Abbreviated preliminary assessment. This step involves collecting background information such as property ownership, operational history, and geology/hydrogeology and performing a site reconnaissance.
3. Site inspection. This step involves sampling environmental media, such as soil, soil gas, and groundwater, and evaluating vapor intrusion into indoor air of building structures. In some situations, a combined preliminary assessment and site inspection is conducted.
4. Expanded site inspection. This step is performed at large and/or complex sites to collect additional soil and groundwater samples to further define the extent of contamination.
5. Site re-assessment. This step is performed at some sites if new information is obtained that indicates that a threat to public health and/or the environment may exist.

During the past year, NDEE has performed work on two CERCLA pre-screening assessments, nine abbreviated preliminary assessments, one site inspection, two expanded site inspections, and one site reassessment.

In 2017, NDEE compiled a Statewide Inventory of Per- and Polyfluoroalkyl Substances (PFAS). PFAS are a large group of man-made chemicals used in consumer products, industrial processes, and firefighting foams. In use since the 1940's, PFAS are resistant to heat, oils, stains, grease, and water—properties which contribute to their persistence in the environment. EPA has identified PFAS as contaminants of emerging concern that can have adverse health effects if found in drinking water supplies. The figure below illustrates the locations of industries present across the state that potentially used or manufactured PFAS based on the 2017 state inventory report.

Nebraska Statewide Inventory Per- and Polyfluoroalkyl Substances



One of the main uses of PFAS is in aqueous film-forming foam (AFFF), which is a commercial surfactant solution used to extinguish hydrocarbon fires. The Federal Aviation Administration requires the storage, use, and testing of AFFF firefighting foams at all airports that have a Federal Aviation Regulation Part 139 Airport Operating Certificate. Releases of AFFF to the environment may have occurred during routine training and testing exercises, or as a result of a discharge from actual aircraft rescue situations, fixed fire protection (aircraft hangar deluge) systems, or the removal and replacement of AFFF concentrate from vehicles during maintenance. Additionally, residual AFFF/ AFFF wastewater may have drained to existing infrastructure on the airport property to be directed to a wastewater treatment facility. In Nebraska, nine municipal airports have a Part 139 Airport Operating Certificate. The NDEE is currently completing abbreviated preliminary assessments at all nine of these sites to evaluate any potential impacts to the environment.

Other high priority processes and facilities identified in the inventory include metal and chrome plating facilities and fire training areas. The two pre-CERLA screening assessments were completed to evaluate whether PFAS and volatile organic compounds (VOCs) are present in groundwater downgradient of industrial areas with electroplating facilities. Fire training areas are areas of interest that will be investigated as pre-CERCLA screening assessments in the future.

NDEE also continued to work with the EPA Region 7 Superfund Site Assessment and Removal programs to investigate the potential for vapor intrusion near former dry cleaners in Bellevue and Norfolk. At both of these sites, tetrachloroethene (PCE) and trichloroethene (TCE), which were commonly used in the dry cleaning industry, were found in soil and groundwater. In Bellevue, vapor mitigation systems have been 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.

What is Vapor Intrusion?



Photo courtesy of the Minnesota Pollution Control Agency

Volatile organic compounds (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).



NPL Site Management Assistance

The Superfund Management Assistance program provides management and technical support to the EPA at Superfund NPL 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, NPL 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. NDEE 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, 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, NDEE funded these costs with Legislative appropriations of general funds. During 2004-2007, NDEE received Nebraska Environmental Trust grant funding to pay these costs. Beginning in FY18, NDEE 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 FY2021, the NDEE's cost share was \$768,631. Future projections of these costs are \$1,002,028 in FY2022, \$1,441,679 in FY2023, and \$2,769,679 in FY2024.

During the last year, groundwater monitoring has been conducted at the Cleburn Street site in Grand Island to monitor the performance of the completed in-situ thermal remedy. 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. NDEE believes this remedy will save the State a significant amount of future operation and maintenance costs to achieve the cleanup goals for the site. In-situ thermal treatment will also be used at the Hastings Second Street subsite and the York PCE Southeast site in the near future. NDEE will be responsible for 10% of the costs for the capital construction and operation and maintenance costs for these actions.

What is In-Situ Thermal Treatment?

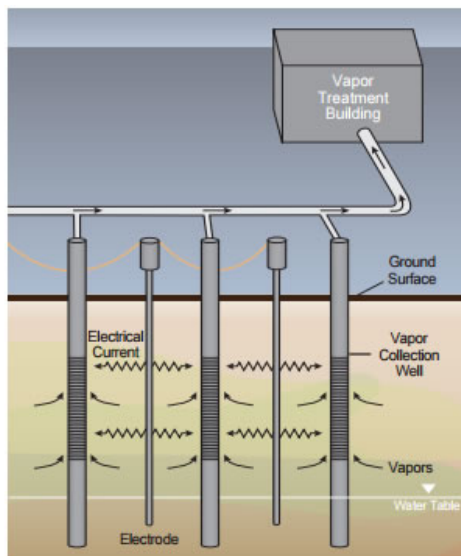


Photo courtesy of the EPA

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 Omaha Lead Superfund site is associated with two former lead-processing facilities, American Smelting and Refining Company, Inc. (ASARCO) and the Aaron Ferer & Sons Company (later the Gould Electronics, Inc.) lead battery recycling plant. Both the ASARCO and Aaron Ferer/Gould facilities released lead-containing particulates to the atmosphere from their smokestacks, which were deposited on surrounding residential properties. In February 2020, NDEE concurred with a partial delisting of 117 properties at the site, which were formally delisted on the Federal Register on July 21, 2020. NDEE also concurred with the partial delisting of 96 properties this year; EPA issued a notice of intent to partially delete these properties in mid-May 2021. The partial deletion rule allows EPA to delist portions of NPL sites provided that deletion criteria are met. This allows portions of a site to be available for productive use before cleanup of the entire site has been completed.

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. At the Columbus 10th Street site, NDEE completed the first Adaptive Management Study pilot in EPA Region 7. This was a collaborative effort with EPA and the City of Columbus to determine when it may be possible to shut down the groundwater extraction and treatment system and utilize an in-situ treatment remedy to clean up the remaining groundwater contamination. The Parkview Well Site in Grand Island was transferred to the State in September 2021, and includes operation and maintenance of a groundwater extraction and treatment system.

What is Groundwater Extraction and Treatment?

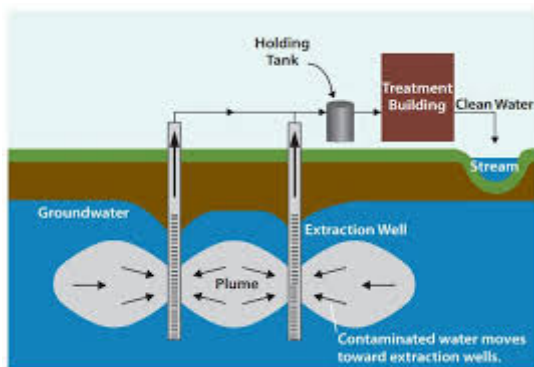


Photo courtesy of the EPA

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 groundwater extraction and treatment system at the Columbus 10th Street site.



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>

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 two active sites and 12 formerly used defense sites. Military munitions response activities are being performed at three 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.

Sampling for Per- and Polyfluoroalkyl Substances (PFAS) conducted at both the Lincoln Air National Guard Base and Offutt Air Force Base detected significant levels of PFAS compounds in soil, groundwater, surface water and sediment. Private drinking water well sampling near the Lincoln Air National Guard Base did not detect PFAS in any of the private wells above the EPA Health Advisory Limit of 70 parts per trillion for PFAS. Future site investigation to characterize the extent of PFAS contamination will be conducted by the Air Force; however, this site will be a low priority nationally as there are no threats or impacts to any public or private drinking water supplies.

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. The Air Force has committed to performing further site investigation and private well sampling in the upcoming year.

Solid Waste Program

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

Duties assigned to this program include:

- Permit issuance, renewal, and modification;
- Response to inquiries related to facility operations;
- Compliance inspections and enforcement actions;
- Investigation of citizen complaints;
- Alternate waste management method approvals;
- Groundwater investigations and groundwater/soil remediation projects at permitted and non-permitted facilities;
- Gas emissions monitoring related to landfills and other permitted sites;
- Closure inspections and monitoring of closure and post-closure activities;
- Conducting public information sessions and hearings related to permits;

- Financial assurance review and monitoring compliance; and
- 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 the disposal (one time and repeated) or treatment of special wastes. In addition, solid waste processing facilities, such as compost sites, material recovery facilities, transfer stations, and medical waste processing facilities are regulated by this program.

Permit modification requests are routinely submitted by permitted facilities. Responses to the modification requests are particularly time-critical since the facility may need to expand or construct new waste disposal cells in order to meet their disposal capacity needs.

A Solid Waste Management Programs Study conducted in 2016 provides a complete description of Nebraska's solid waste programs and reported that the average remaining capacity for waste disposal is approximately 39 years.

The Waste Permit programs coordinate with other NDEE 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, amongst other regulatory requirements.

Currently, the Waste Permit and Waste Compliance Programs oversee the following facilities:

Total Permitted Facilities in FY2021	
Municipal Solid Waste Disposal Areas (Landfills)	23
Solid Waste Compost Sites	8
Transfer Stations	36
Materials Recovery Facilities	5
Construction & Demolition Waste Disposal Areas	32
Delisted Waste Disposal Area	1
Processing Facility	2
Fossil Fuel Combustion Ash Disposal Areas	8
Total	115

The following table indicates the number of inspections, complaints and permitting-related activities that the program was involved with in FY2021:

Summary of FY21 Activities	
Compliance Assistance	
Facility Inspections (General)	120
Facility Closure Inspection	2
Facility Construction Inspections	0
Facility Comprehensive Renewal Inspections	17
Complaints Received	142
Complaints Investigated	142
Complaints Closed or Referred	130
Permitting	
New Permits Issued	1
Permit Renewals	13
Major Permit Modifications	4
Public Hearings	2
Permits Transferred	0
Financial Assurance Reviews	134
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 of contaminants from the facility. During FY2021, 14 operating and 4 closed facilities conducted detection monitoring. If one or more of the parameters being monitored exceed background levels, the facility must begin assessment monitoring, which includes a more extensive list of contaminants. During FY2021, 16 operating and 3 closed facilities conducted assessment monitoring.

If during the assessment monitoring phase, contaminant concentrations are detected above a groundwater protection standard, the facility is required to characterize the nature and extent of the release and, if necessary, assess and conduct remedial measures. In FY2021 investigations or remedial measures were continued at 4 active and 2 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 NAC *Title 118 – Groundwater Quality Standards and Use Classification*. In FY2021, groundwater investigations continued at one site, and remedial actions continued at 9 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 Permit 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 50% 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

The NDEE also administers the waste tire management program. Approved beneficial uses of waste tires are outlined in NDEE regulations. Waste tire haulers are required to obtain individual permits annually and 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 while maintaining mosquito control and fire prevention measures. Accumulation of more than 500 waste tires at any location is prohibited by rule.

Compliance assistance is an important aspect of this program. Program activities include responding to inquiries from local and state sources, developing guidance documents, conducting site visits, and providing technical advice. The NDEE develops and maintains guidance documents explaining on a wide variety of topics, including 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.

Waste Tire Permit Totals, FY2020 Permitting	
Renewed Hauler Permits	23
New Permits Issued	0
Permits Expired	1
Financial Assurance Reviews	7

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.

CHAPTER 6:

Water Programs

The goal of the Water Programs is to protect the surface water and groundwater resources for all purposes in Nebraska. This chapter describes the programs administered by the Water programs, 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.

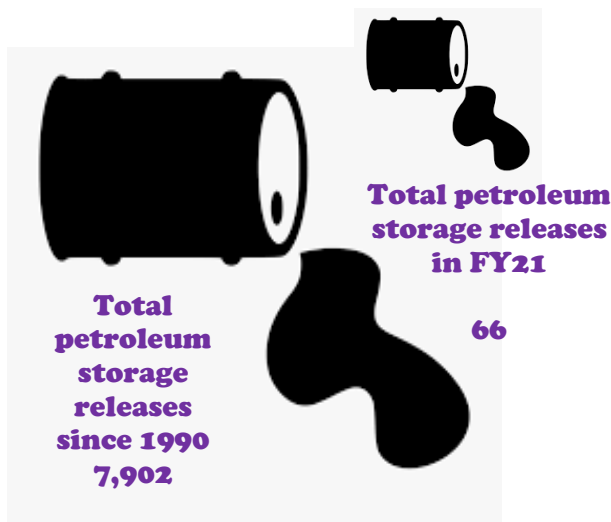
Petroleum Remediation Program

Activities regarding the Petroleum Remediation Program involve two interrelated areas:

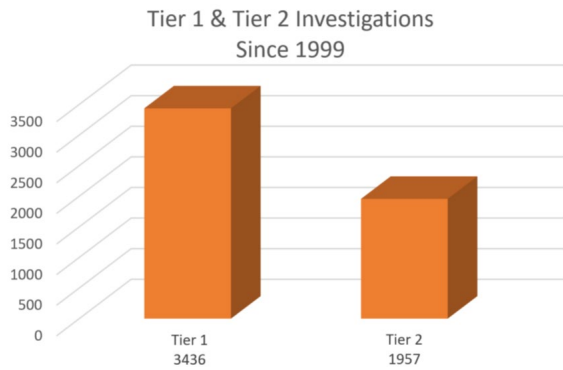
1. Overseeing the **investigation and cleanup** of petroleum contamination resulting from leaking above ground and underground storage tanks as well as other sources such as pipeline leaks and transportation spills; and
2. Administering a **financial assistance program** for persons responsible for investigation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

Investigation and Cleanup

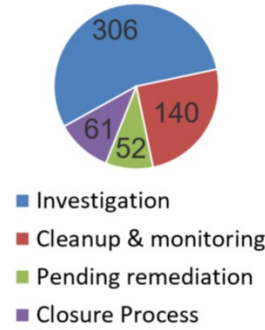
The first step in the Petroleum Remediation Program is the review of tank removal assessment reports or other documentation to determine whether contamination exists. If contamination is present, NDEE decides whether more investigation and cleanup are required. NDEE also determines whether parties who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



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 FY 2021, 102 Tier 1 investigations and 15 Tier 2 investigations were initiated. If sites fail Tier 2, they are normally scheduled for cleanup.



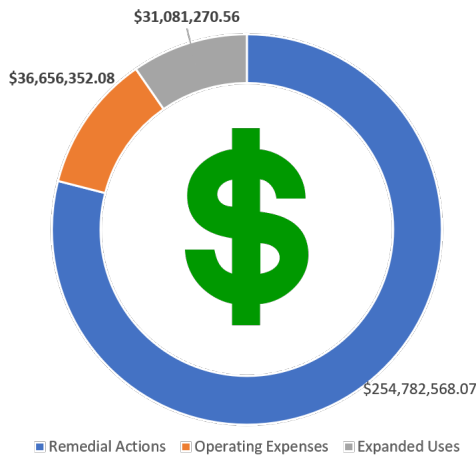
Active Site Status



Financial Assistance – Petroleum Release Remedial Action Reimbursement Fund

When contamination has been found at a site and 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 entities determined to be a Responsible Person may be eligible for reimbursement through the Petroleum Release Remedial Action Reimbursement Fund.

How \$326M of Revenue Has Been Spent since 1989



Moving a surplus remediation system

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.



NDEE trailer containing a remediation system

Revenue was just over \$11.3 million in FY21. During the year, NDEE reimbursed about \$3.2 million to Responsible Persons for work done at 139 different sites, and \$5.8 million was spent to clean up orphan sites. An additional \$563,445.29 of revenue was transferred to NDEE's Superfund program, as directed by legislation passed in 2017. As of June 30, 2021, over \$254 million total has been spent on site cleanups.

Responsible Person Sites

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.



Direct push technology collecting soil or groundwater samples



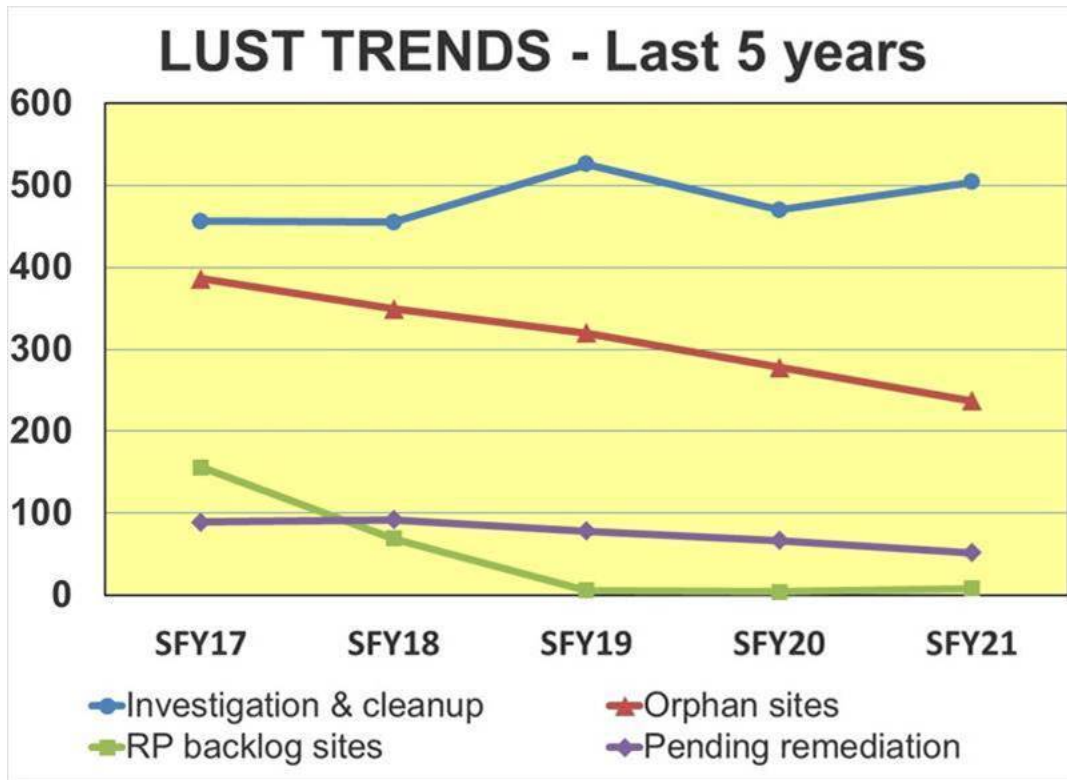
Tank excavation

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 FY 2021, 60 orphan sites were activated for investigation and/or cleanup using State contractors. At the end of FY 2021, there were 243 orphan sites backloged and not yet investigated.

Leaking Underground Storage Tanks

Another name for the entire program is the acronym **LUST**. Many states use this term for their state petroleum cleanup programs.



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 \$6.5 million in new equipment costs and allowed that money to be used for cleanup of additional sites.



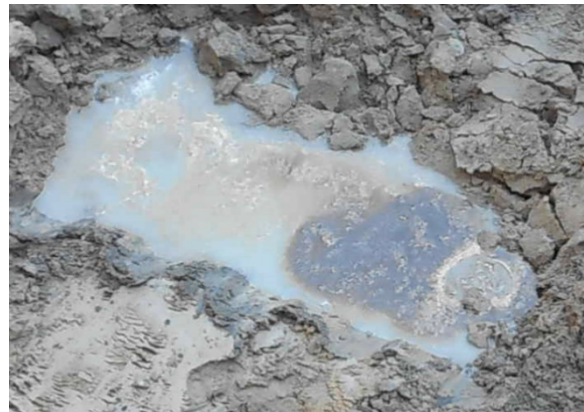
Some of the inventory of remediation trailers waiting to be reused



Amount saved from reused equipment

Voluntary Remedial Action

Tank owners can 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, 235 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

New Technologies

NDEE has always evaluated and implemented new methods of identifying and remediating petroleum releases. Working with both the University of Nebraska-Lincoln and private industry, we have tried many new technologies over the last 25 years. Currently, chemical injection and remote sensing are being tried throughout the State.



Remote sensing equipment

Surface Spills

We have long been aware that many trucking companies, petroleum distributors, emergency response managers, and law enforcement agencies are unaware of Nebraska regulations regarding response to a petroleum spill onto road surfaces and shoulders, especially when groundwater is threatened.

Therefore, the Petroleum Remediation Section developed a brochure for distribution throughout the State explaining NDEE regulations and recommendations for cleaning up after a spill. We have distributed the brochure to all Nebraska county emergency managers, many law enforcement entities, as well as many trucking companies and private citizens.

The brochure and further information is also available on our website at <http://dee.ne.gov/NDEQProg.nsf/OnWeb/PSS>.

**What to do
when you've had
a fuel spill**
(Over the Road Vehicle Incidents)
Nebraska Department of
Environment and Energy (NDEE)
March 2019



When and how do I report a fuel spill?

- Call NDEE M-F, 8-5 at **402-471-2186**
- Non-office hours, call the Nebraska State Patrol (NSP) Dispatch at **402-479-4921**. NSP will contact NDEE, who will call you back
- NDEE will ask you:
 - when the spill occurred,
 - location of the spill,
 - amount spilled,
 - what has been done to contain or recover the spill, and
 - who is responsible for the spill.

Frequently Asked Questions about the Sale and Purchase of a Retail Petroleum Convenience Store
January, 2020

The Nebraska Department of Environment and Energy (NDEE) Petroleum Remediation Section often fields questions from real estate agents, lenders, and the public regarding the sale or purchase of a convenience store/gas station. Many of the questions relate to concerns about environmental problems due to leaks of petroleum from the fuel storage tank system or concerns about costs the buyer may incur if the system needs to be upgraded to meet current requirements. Here are some commonly asked questions and suggested methods the public can use to gather information needed to make an informed buying or selling decision.



Contact for more information

NDEE-Petroleum Remediation Section	(402) 471-2186
http://deq.ne.gov/NDEQProg.nsf/OnWeb/LUST	
NDEE Records Management Section	(402) 471-3557
http://dee.ne.gov/NDEQProg.nsf/OnWeb/PRR	
NE State Fire Marshal-Fuels Division	(402) 471-9465
https://sfm.nebraska.gov/fuels-safety	

Sale & Purchase of Retail Petroleum Convenience Store

The Petroleum Remediation Section often fields questions from real estate agents, lenders, and the public regarding the sale or purchase of a convenience store/gas station. Many of the questions relate to concerns about environmental problems due to leaks of petroleum from the fuel storage tank system or concerns about costs the buyer may incur if the system needs to be upgraded to meet current requirements.

As a response, PRS developed a brochure for distribution to the public containing some commonly asked questions and suggested methods the public can use to gather information needed to make an informed buying or selling decision.

More information is available on the Petroleum Remediation Section website at <http://dee.ne.gov/NDEQProg.nsf/OnWeb/LUST>.



Excavation of a petroleum release

Water Quality Monitoring and Assessment Programs

Surface Water Assessment Programs

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, but most monitoring is focused in one to three major river basins each year in conjunction with a six-year rotating basin monitoring strategy. Monitoring data are used to document existing water quality conditions, assess the support of beneficial uses (such as aquatic life,



Canoeing at Holmes Lake, Lincoln

recreation, public drinking water supply, and National Discharge Elimination System (NPDES) permit limits), 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), United States Geological Survey (USGS) and United States Environmental Protection Agency (USEPA).

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.

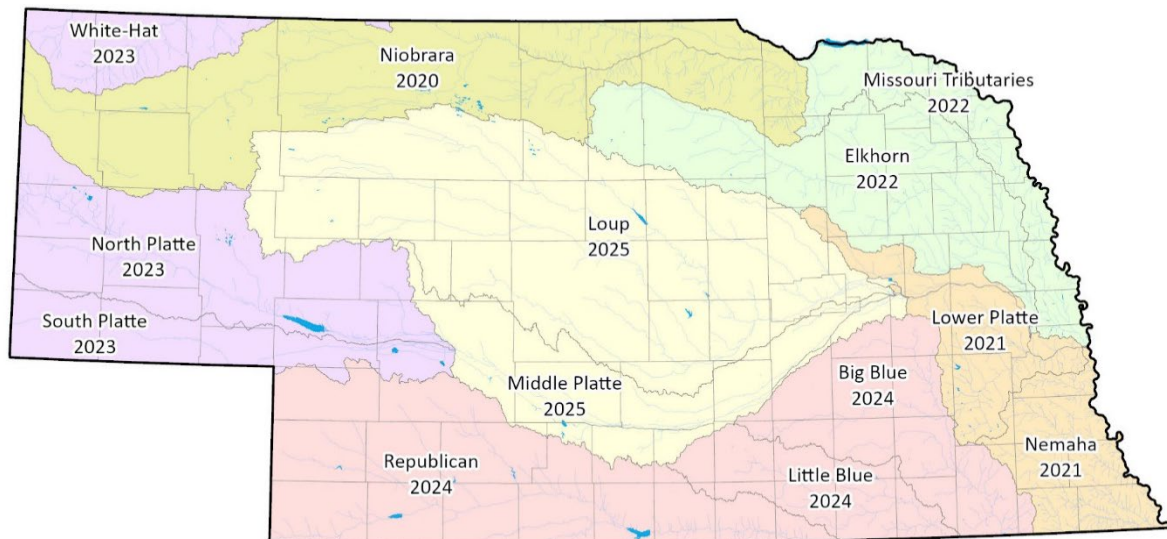
NDEE's surface water monitoring programs have different purposes. Brief descriptions of the basin monitoring strategy, as well as other water quality monitoring programs, are provided below. Additionally, a more detailed overview of the programs is provided in the Department's annual publication *Water Quality Monitoring Programs Report* available online. <http://dee.ne.gov/Publications/pages/WAT344>



Basin Rotation Monitoring Program

- Geographically focuses water quality sampling in one to three major river basins per year.
- Weekly monitoring of flowing Waters (rivers and streams) May- September.
- 14 parameters analyzed at each sampling location.
- In 2021, NDEE sampled 42 sites within the Lower Platte and Nemaha River basins.

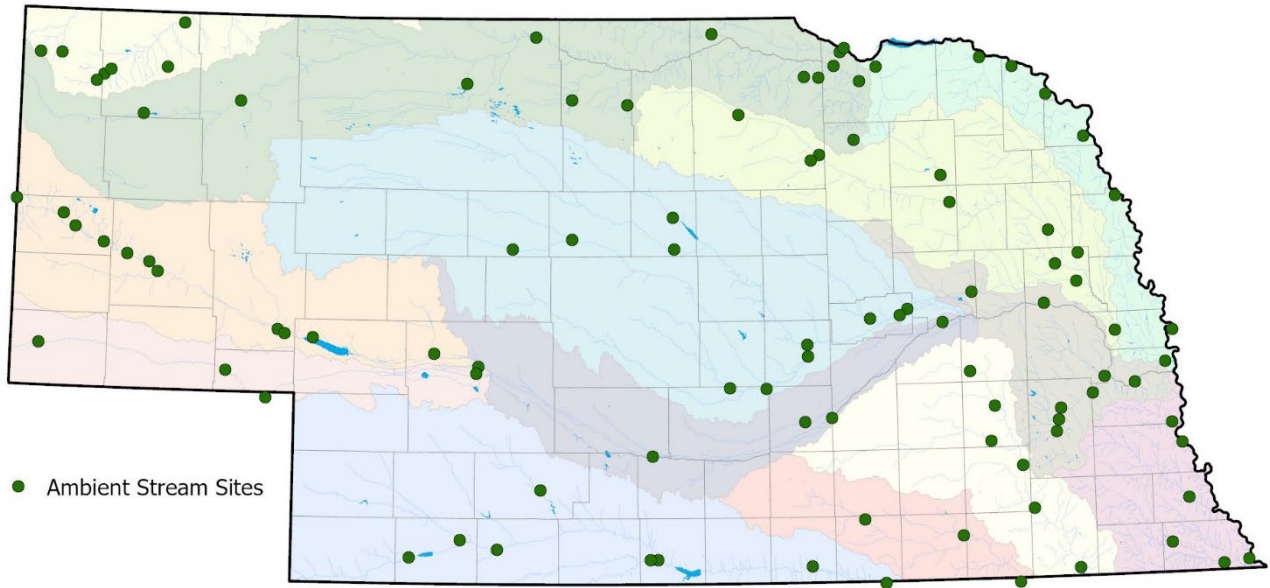
Six-year basin rotation monitoring schedule



Ambient Stream Monitoring Program

- Network of 101 fixed stations.
- Main stem and tributary streams.
- Thirty-four parameters analyzed at each sampling location.
- Samples are collected monthly, year-round.

Locations of NDEE Ambient Stream Monitoring Program sites



Public Beach Monitoring Program

- Nebraska is on the forefront of national sampling and public notification for events related to Harmful Algal Bloom (HAB), also known as blue-green algae.
- Up to 54 public beaches are sampled weekly during the summer months of May-September.
- 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 the BeachWatch Listserv and NDEE’s web site. Signs are posted at affected beaches. The weekly and past results are available online at <https://deq-iis.ne.gov/zs/bw/>. Directions to sign up for the Listserv are at the bottom of the BeachWatch web page.



Stream Biological Monitoring Program

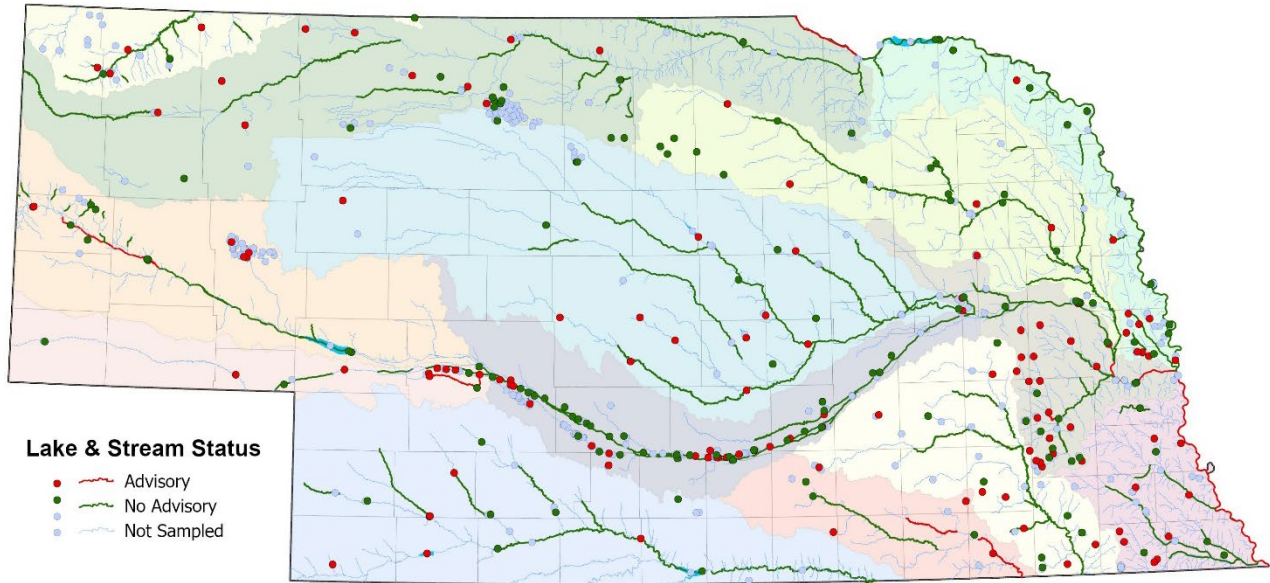
- Diversity and numbers of resident aquatic macroinvertebrate and fish communities are evaluated to assess the overall health of streams.
- Sites are chosen with a probabilistic sampling design within the framework of the basin rotation schedule.
- 45 sites (10 completed in partnership with NGPC) were sampled in 2021 within the Lower Platte and Nemaha River basins.

***Fish Tissue Monitoring Program***

- Assess fish tissue for toxins, such as mercury and polychlorinated biphenyl compounds (PCBs).
- Current fish tissue consumption advisories at 136 locations (127 lakes and 9 river/stream segments).
- In 2021, 52 lakes and 12 river and stream locations were sampled within the Lower Platte and Nemaha River basins.
- The most recent report is online at <http://dee.ne.gov/publica.nsf/pages/WAT341>



Lake and Stream Fish Consumption Advisory Locations in Nebraska Through 2020



Ambient Lake Monitoring Program

- Data from 24 trend lakes (sampled every year) and 13 basin lakes (sampled according to basin rotation schedule) were collected monthly during May-September in 2021.



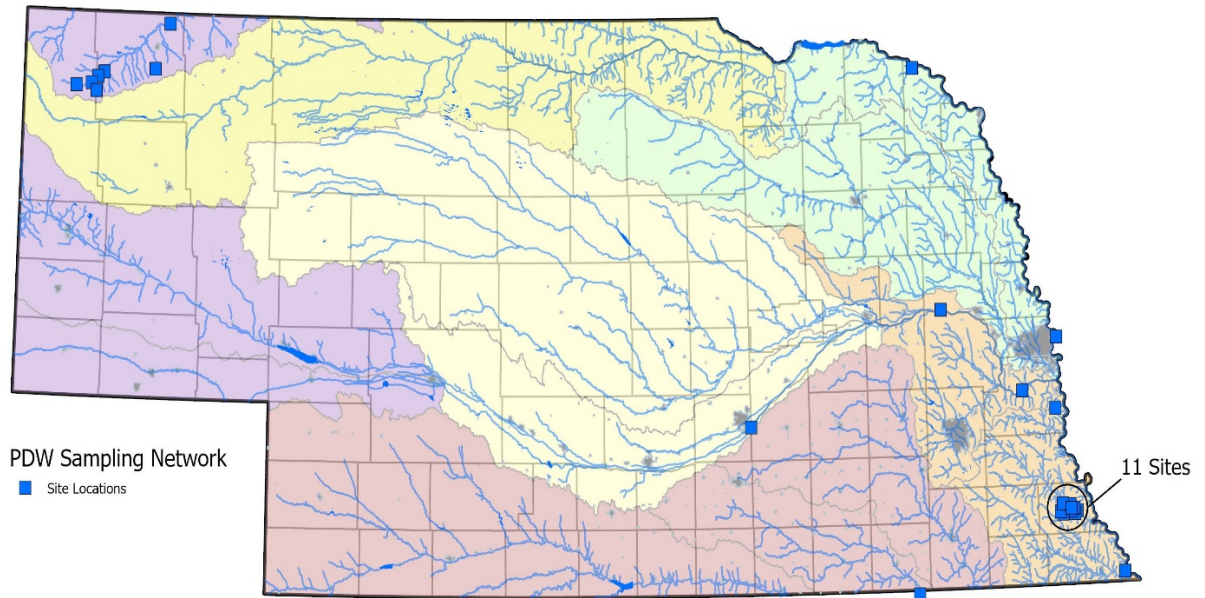
- 19 additional trend lakes are sampled for this program by staff from the USACE and the Lower Loup and Nemaha NRD's.
- 14 parameters analyzed at each lake.
- Depth profile data are taken at deep water and mid-lake locations.
- Data are used to evaluate water quality suitability for fish and aquatic organisms to survive and reproduce.
- Long-term changes to water quality 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 sites of many of the complaints.
- 11 fish kills investigated from July 1, 2020 to June 30, 2021: 6 were from low dissolved oxygen levels, 3 from disease/parasite issues, 1 from a pollutant spill and one resulted from an unknown cause.
- 90 complaints of surface water pollution were taken by the Monitoring Section in the last year, many were forwarded to other NDEE programs.

***Public Drinking Water Special Study***

- Title 117 – Nebraska Surface Water Quality Standards (NSWQS) defines the Public Drinking Water (PDW) designation as “These are surface waters which serve as a public drinking water supply. These waters must be treated (e.g., coagulation, sedimentation, filtration, chlorination) before the water is suitable for human consumption. After treatment, these waters are suitable for drinking water, food processing, and similar uses.”
- The goal of the study is to develop a dataset that will allow NDEE to assess all stream segments that have the PDW designation. This will ensure sufficient data is collected to determine if a stream segment is impaired by pollution, as well as potentially identify whether the pollution source is from groundwater or surface water.
- Atrazine, nitrate/nitrite, arsenic, manganese, uranium and selenium are monitored monthly with the collection of surface water samples at 26 stream location sites statewide.



NRD Watershed Special Studies

- NDEE has partnered with several NRDs on Watershed Special Studies with strategic plans to monitor the sources and quantities of pollutants entering these systems from specific sub-watersheds.
- Information gathered allows a complete assessment of stream segments where data is insufficient to determine if all designated uses are met.
- Allows finer calibration of predictive models to allocate pollutant loads to specific sub-watersheds and to quantify load reductions from sub-watershed conservation projects.
- Sampling partners of Watershed Special Studies in 2021 include: Lewis and Clark NRD – Bow Creek Special Study, Lower Platte North NRD – Wahoo Creek Special Study, Lower Big Blue NRD – Turkey Creek and Indian Creek Special Studies and Lower Platte South NRD – Twin Lakes Special Study.

Regional Monitoring Network

- Collaboration between the USEPA and numerous states, tribes, and other organizations to collect continuous stream discharges and temperatures and other chemical and biological data.



- Data are used as baselines for long term comparisons of stream condition.
- Having many sensors deployed nationwide that collect continuous data allows USEPA and other partners to detect significant yet subtle trends in stream condition.
- NDEE has been monitoring eight streams since May 2017.
- Each location has a sensor that collects water level and temperature every thirty minutes, typically bolted to a post driven into the stream bottom.
- Each of the study locations is also sampled as part of the NDEE Ambient Stream Monitoring Program.

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 2020 Water Quality Integrated Report, which was approved by the USEPA in June 2021, is available on NDEE's web site at <http://dee.ne.gov/Publica.nsf/Pages/WAT352> Work on the 2022 Integrated Report is underway and expected to be completed by the end of calendar year 2022.

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. The 2020 Groundwater Quality Monitoring Report can be accessed on the NDEE website at <http://dee.ne.gov/publica.nsf/PubsForm.xsp?documentId=C3C47F71DBDA83338625863100728C51&action=openDocument>. Statistics and maps showing nitrate-nitrogen groundwater monitoring

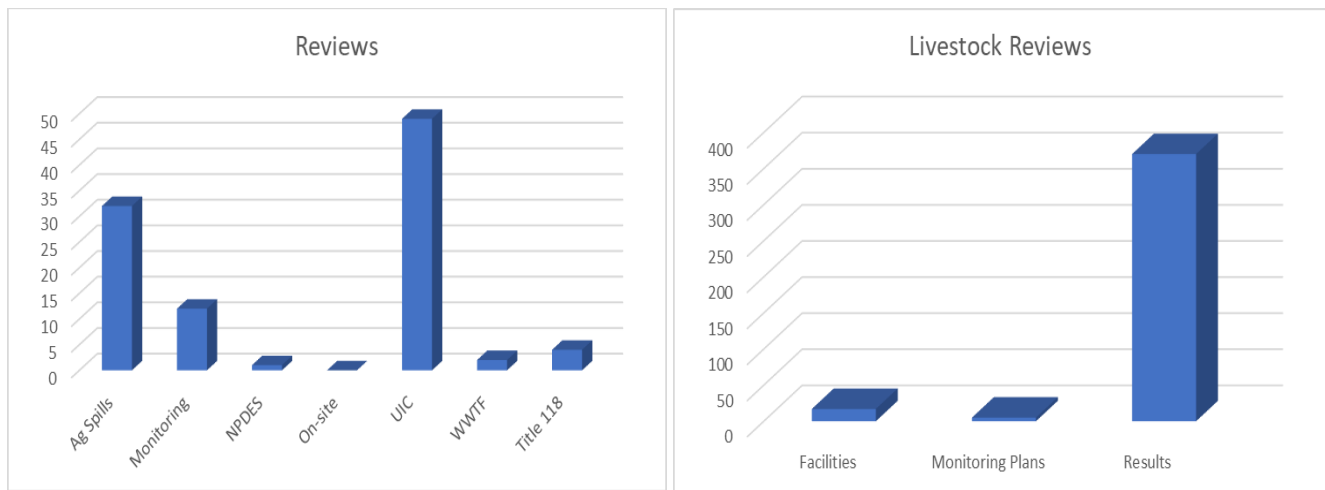


results as well as statistics for three of the 241 agricultural chemicals detected in the state are presented. The report uses data from the Quality-Assessed Agrichemical Contaminant Database for Nebraska Groundwater, developed cooperatively by the Nebraska Department of Agriculture, University of Nebraska-Lincoln, and NDEE. Over the past two years, the data has been migrated to a more user-friendly and interactive platform. These data are now accessible to the public as the Nebraska Groundwater Quality Clearinghouse at <http://clearinghouse.nebraska.gov>.

Hydrogeologic Studies and Reviews

The Groundwater Section is responsible for hydrogeologic review of various NDEE projects to determine possible effects on groundwater quality and to recommend possible courses of action. These reviews are completed for programs at NDEE that address leaking underground storage tanks, surface spills, underground injection control, wastewater treatment facilities, septic systems, NPDES permits, livestock waste control facilities, and for outside entities, such as review of Natural Resources Districts' Groundwater Management Plans

In addition, the Groundwater Section performs reviews and oversees remediation if a situation does not fall under another agency program and is of environmental significance. Section personnel continue to take responsibility under Nebraska Administrative Code (NAC) *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, which are illegal, and have never been allowed in Nebraska.
- Class V injection wells are any wells not included in the other specific classes. Common examples of Class V wells include open loop heat pump systems, large capacity septic systems, and subsurface 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., a uranium facility near Crawford. The other two are issued to the City

of McCook and Kugler Oil Company in Culbertson. The only Class III wells in the state are at the Crow Butte Resources, Inc. 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 NAC *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 (WHP) program is a voluntary program, which assists communities and other public water suppliers in preventing contamination of their water supplies. State WHP 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, developing monitoring plans and contingency plans to provide alternate water supplies and site new wells. One hundred eighteen (118) community water supplies have approved Wellhead Protection plans as of August 31, 2021.

In 2019, NDEE began using the Groundwater Evaluation Tool (GET) to model WHP areas for Nebraska's Public Water Systems (PWS). 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 PWSs. 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 (SWP) funds have been distributed to complete 100 separate Source Water Protection projects throughout the state since 2004. In SFY2021, Source Water Protection funds were distributed to the following public water systems: Wahoo and David City. The total amount available to award was \$150,000.

The Source Water Protection program coordinates closely with the 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 (from Drinking Water State Revolving Fund) are used to develop the plans, encourage community involvement through stakeholder groups, and put on public meetings to promote the projects.



9-Element Watershed Management Plans are developed and implemented to address nonpoint source pollution issues that affect water quality. They are non-regulatory, community-based plans with the main goal to remove impaired waterbodies from the 303(d) list. Approved 9-element watershed management plans allow project sponsors to apply for nonpoint source pollution program (319) grants from NDEE. These plans provides more funding and longer-term grants (five years) than the Source Water Protection Grants are able to .

These plans bring together NRDs, the Natural Resource Conservation Service (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 stages of development.

The 2018 Farm Bill 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 worked with the NRCS to develop the priority areas in Nebraska where funds are 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 NRD groundwater management areas (Phases I - IV) that include WHP areas. A Phase I area covers an entire NRD district. In specific areas within an NRD where nitrate reaches a determined threshold, they may move into Phase II, III or IV areas. Some NRDs only define areas as I - III, while others go from I - IV. Each NRD determines the 'trigger' (or contaminant level) that would move a Phase area into the next level. Each Phase level has requirements for landowners/producers to follow. Moving from a Phase I to a Phase II level often means that producers need to complete an educational requirement such as nutrient management or fertilizer application training. Phase II-IV may also require that certain Best Management Practices (BMPs) may be required such as split application of fertilizer, cover crops, or not applying fertilizer in the fall for example. 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 farm bill helps many Nebraska communities enact Drinking Water Protection Management Plans, and the 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.

Water Well Standards and Contractors' Licensing Program

This program is tasked with inspecting all domestic wells and 25% of all other wells drilled in the previous calendar year. Program personnel include three inspectors and one administrative assistant. This year the inspectors are using iPads equipped with GPS and mapping software to assist in completing inspections and have already inspected over 33% of the wells for the year.

Starting July 1, 2021 all licensing tasks were moved to the NDEE Water Well Standards Program. The Program is responsible for licensing and regulating over 800 licensed water well professionals which includes administering examinations on a quarterly basis.

Advising the Program is the Water Well Standards and Contractors Licensing Board. The board is comprised of five government representatives (including NDEE, DHHS, Nebraska Resources Districts and Nebraska Department of Natural Resources) and five non-government entities (including pump installation contractors, irrigation water well contractors and equipment suppliers/manufacturers). Board members meet quarterly to make decisions related to issues such as application fees, rules and regulations, continuing education units and disciplinary action.



Water Quality Planning

The stated public policy of Nebraska related to water quality includes conserving water and to protect and improve the quality of water for human consumption, wildlife, fish and other aquatic life, industry, recreation, and other productive, beneficial uses (Neb. Rev. Stat. 81-1501(1)). NDEE carries out this important mandate, in part, through water quality planning along with water quality standards.

Surface Water Quality Standards

NDEE develops surface water quality standards which are found in NAC *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 last revised in 2019. The updated standards are available on NDEE’s website. A public hearing was held on April 29th, 2021 to solicit comments from the public on the current regulation. This signifies the beginning of the triennial review process. In addition to developing the standards, staff develop and implement procedures for applying the standards to surface water quality programs, such as NPDES permits.

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 NAC *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 (IR). The 2020 Integrated Report was approved by EPA in June 2021 and is available on NDEE’s web site.

The following table summarizes NDEE’s work in this area.

IR Category	TMDL/5-alt Name	# of Waterbodies	Pollutant	Status
4a				
	Republican River Basin	26	<i>E. coli</i>	NDEE Developing Draft
5-alt ¹				

IR Category	TMDL/5-alt Name	# of Waterbodies	Pollutant	Status
	Willow Creek Reservoir	1	TN/TP	Lower Elkhorn WQMP approved by EPA March 2019, 5-alt revisions in progress
	Chadron Creek	1	<i>E. coli</i>	5-alt acceptance pending EPA review/approval of White River-Hat Creek WQMP

¹In 2015, NDEQ (now NDEE) and EPA created the “5-alt” alternative to developing TMDLs for impaired waterbodies in order to address missing TMDLs in areas where project sponsors have targeted restoration work. This alternative restoration approach allows the state flexibility to align efforts with public interests to restore impaired waters more effectively and efficiently.

Nonpoint Source Pollution Management Program

The goal of the Nebraska Nonpoint Source Pollution 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 Nebraska Nonpoint Source Management Plan: "Strategic Plan and Guidance for Implementing the Nebraska Nonpoint Source Management Program – 2021 through 2036," available at <http://dee.ne.gov/publications/pages/WAT119>. The program emphasizes watershed and groundwater management area planning, targeting of 303(d)-listed impaired waters, and community

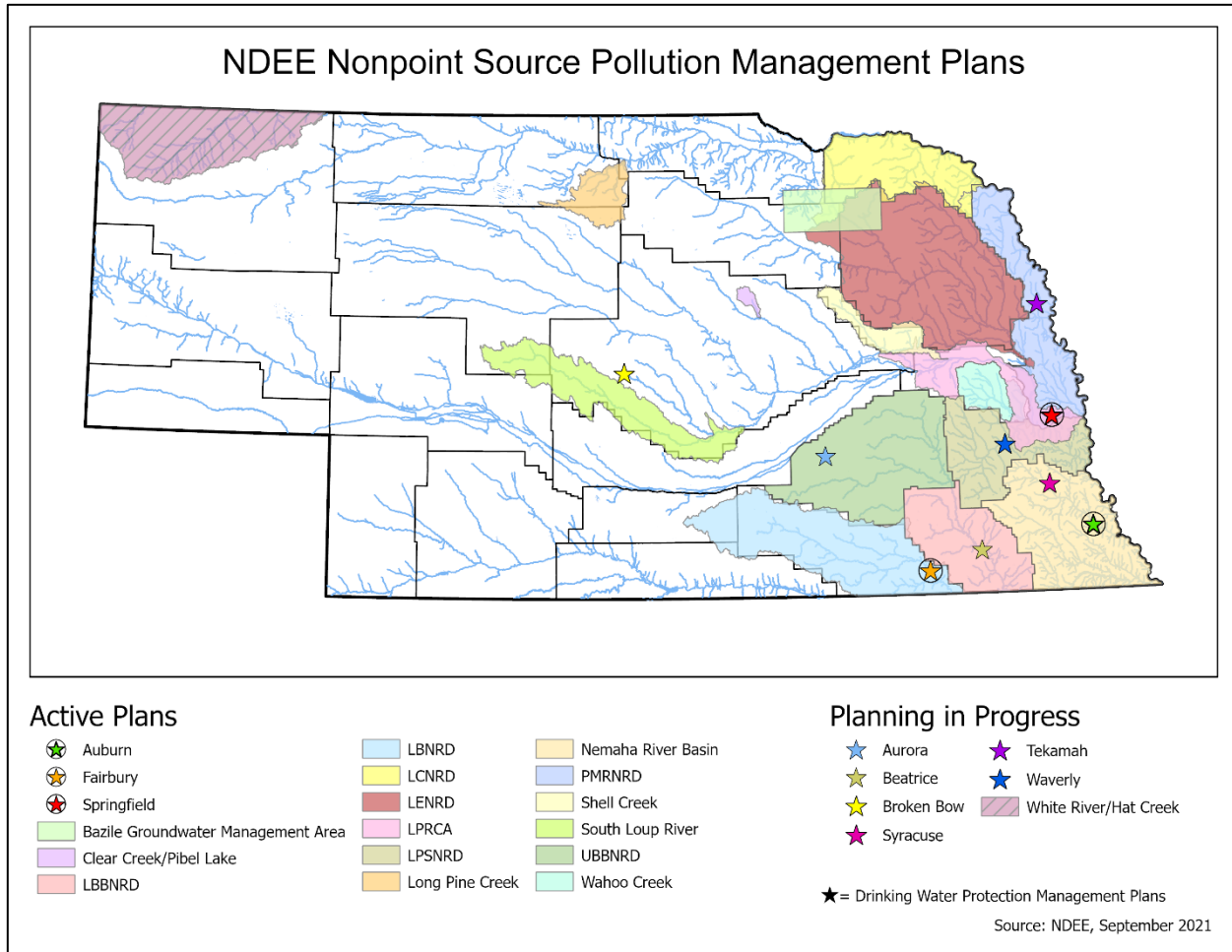


Stormwater infrastructure tour, Omaha

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.

Included in the major program highlights this year is the approval by EPA of Project Implementation Plans for the Auburn wellhead protection area, South Loup watershed and a cover crop inter-seeder demonstration project with UNL. The program also produced a virtual tour

video of the Antelope Creek project that was shown for a regional meeting and posted on the City of Lincoln cable channel. In addition, the NPS program has continued to emphasize groundwater quality planning through development of Drinking Water Protection Management Plans (DWPMPs) as Alternative to 9-Element plans with the communities of Aurora, Beatrice, Broken Bow, Syracuse, Tekamah, and Waverly. In the past year, Springfield, Auburn and Fairbury DWPMPs were accepted by EPA. Once DWPMPs are accepted by EPA, these communities are eligible to apply 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 website for this information is <https://www.epa.gov/waterdata>. During FY2021, NDEE 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.

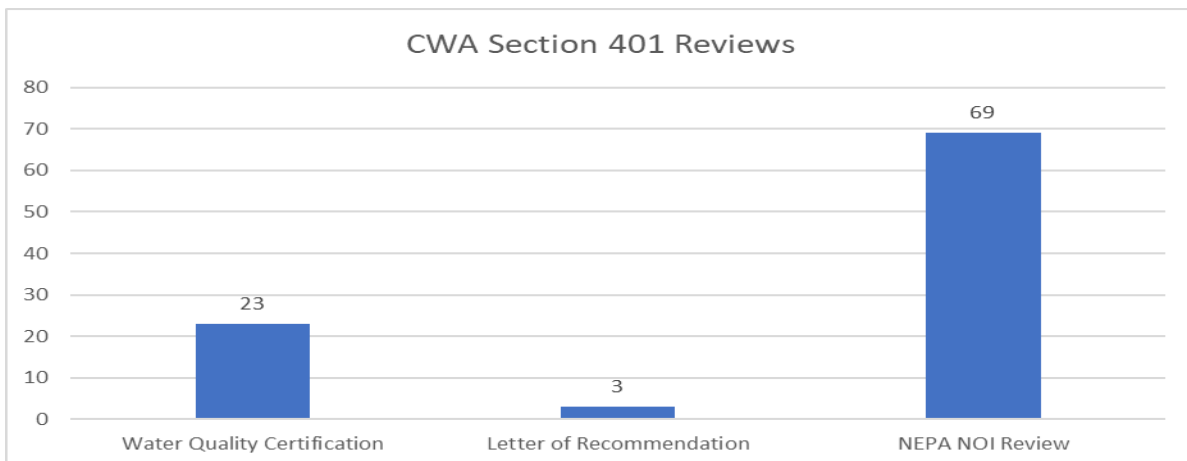
CWA 404 Program

Dredge and Fill Permits

The CWA 404 Section was created in 2019 in response to LB302, which allowed the Department to investigate the process and cost to assume Clean Water Act (CWA) 404 permitting authority from the U.S. Army Corps of Engineers (Corps) for activities in and around waters of the U.S. The 404 section is investigating the assumable workload for all waters of the U.S. outside of CWA Section 10 waters and waters within Tribal lands which will be retained by the Corps. The Department has conducted a desktop analysis to determine the impact several new rules will have on the assumable workload. This information is being utilized to estimate staffing needs, program implementation costs, and develop sustainable funding scenarios.

CWA Section 401 Water Quality Certification

The CWA 404 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 Title 117, 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 23 projects for individual WQCs annually. The following figure details the number of reviews conducted by the section during FY2021:



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

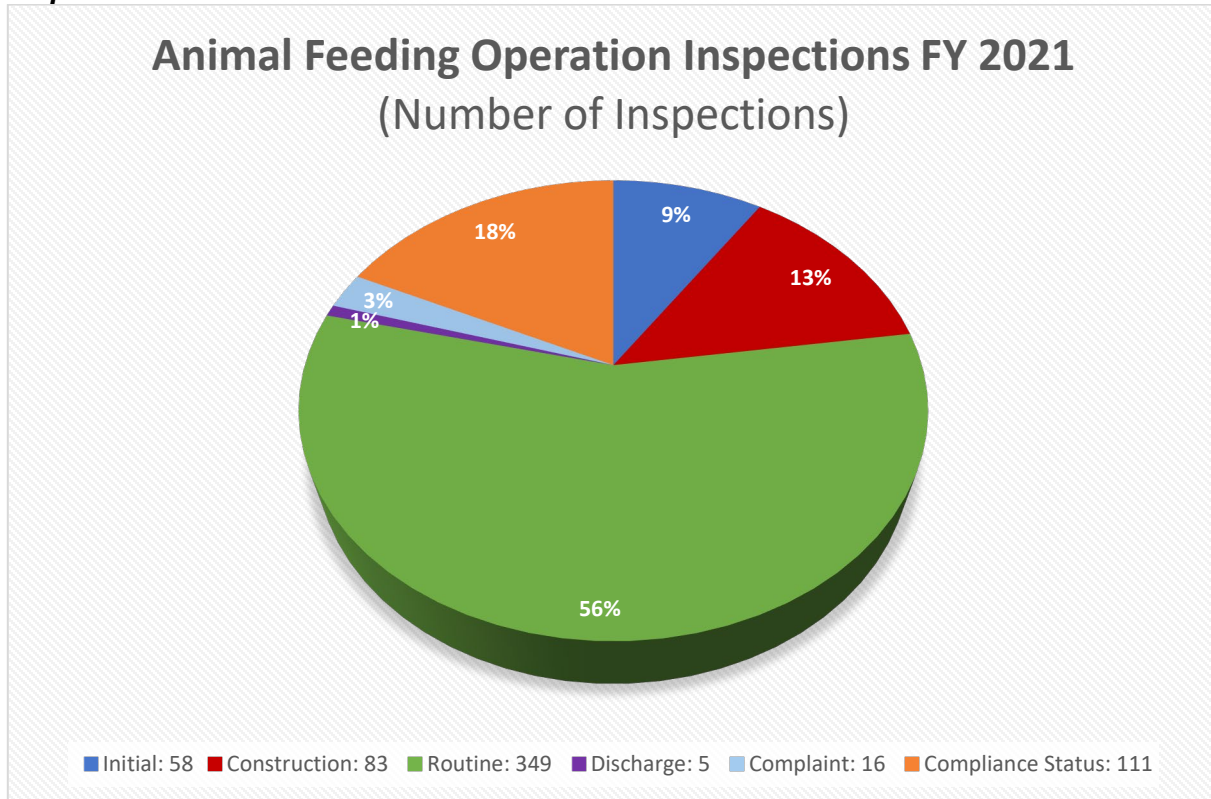
The Livestock Waste Control Program (LWC) is charged with the overall responsibility to protect Nebraska's surface water and groundwater from discharge of livestock waste from any of the thousands of Animal Feeding Operations (AFOs) in Nebraska.

To accomplish this responsibility, the program administers NAC *Title 130 - Livestock Waste Control Regulations*. The LWC Program primarily focuses on the 1,330 active large Concentrated Animal Feeding Operations (CAFOs) required to have permits, but also works with approximately 2,239 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 in 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 622 livestock waste control inspections and investigations in FY2021 (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.

With the lifting of many of the restrictions put in place at the beginning of the COVID-19 pandemic, there was an increase in person site inspections and a sharp reduction of virtual or remote investigations. There were 48 more inspections than were conducted in FY 2020.

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 LWCF 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 at 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.

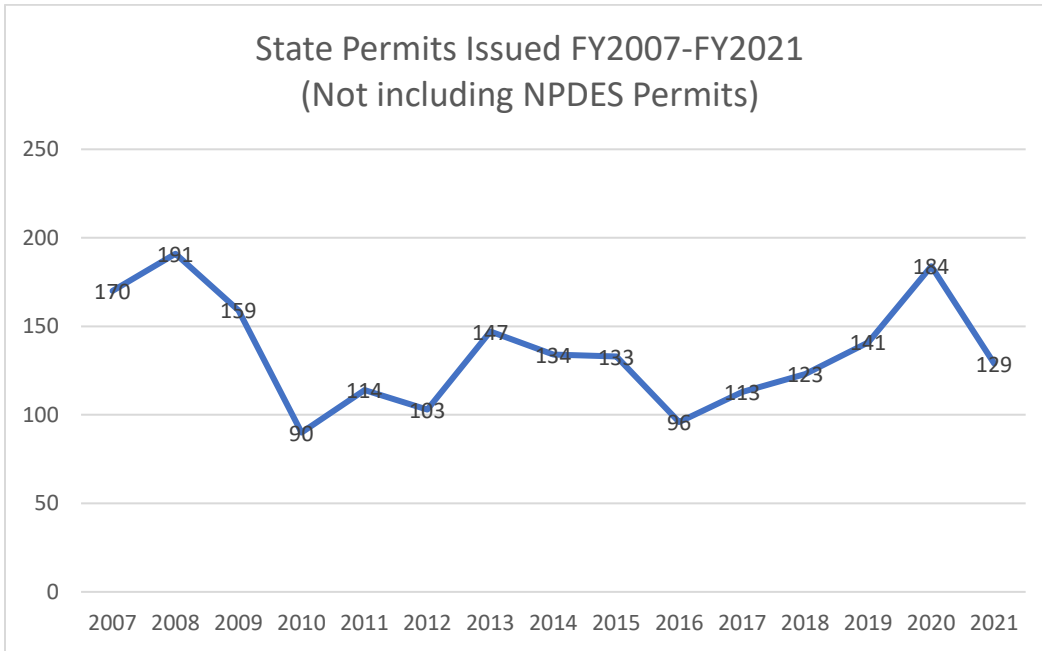
State Permitting

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 116 permit applications and issued 129 permits during FY2021, as shown in the table to the right.

Construction and Operating Permits – FY2021		
Type of Application or Permit	Applications Received	Permits Issued
New permits	32	46
Modified permits	55	62
Transfer permits	29	21
TOTAL	116	129

The following chart 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 FY2021, the Department gave approval to 77 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 FY2021.

NPDES PERMITS – FY2021		
Type of NPDES Application/Permit	Applications Received	Permits Issued
GENERAL PERMIT FOR CAFOs CONFINING CATTLE		
New Coverage	20	12
Modified or Transferred	19	20
Reissued	94	99
SUBTOTAL GENERAL PERMIT:	133	131
INDIVIDUAL PERMITS		
New Coverage	0	0
Modified or Transferred	1	0
Reissued	2	1
SUBTOTAL INDIVIDUAL PERMIT:	3	1
NPDES TOTALS:	136	132

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 \$284,566 in annual permit fees. In addition, the Department received \$31,350 in initial inspection fees, \$39,550 in permit application fees, \$500 in late payment fees, and \$5,893 in investment income for a total of \$361,860 in fees and revenue.

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 be found on the Department's website at <http://dee.ne.gov>.

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 NAC 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 28,757 chemigation permits issued in 2021 constituted a 6% increase in permits issued compared to 2020 (26,951 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-Lincoln Nebraska Extension. Applicator certifications also are reported on a calendar-year basis.

In calendar year 2021, 1,167 applicators have been trained, tested, and certified, bringing the current number of certified chemigation applicators to 5,437. Information about chemigation applicator training dates and certified applicators is available after January 1 of each year at <http://dee.ne.gov/NDEQProg.nsf/%24%24OpenDominoDocument.xsp?documentId=D884FD6EE633A0AA86257CAE0077CC9D&action=openDocument>. Title 195 was updated on April 19, 2020.

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 NAC *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. Title 198 was updated on April 25, 2020

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.
- **Environmental Safety** – The Environmental Safety Program inspects the following types of facilities: public swimming pools, recreational camps, and mobile home parks. The Environmental Safety 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; and 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, Environmental Safety and Operator Certification Program Accomplishments and Challenges

In 2019, the Onsite Section launched the online system registration process, and to date, 380 systems have been registered using this option. The online system has seen an increase in use from last year of 173%. Each year the Section processes roughly 1,500 paper registrations and related applicable fees. The new system allows certified professionals to register systems online and pay via credit card, or print a receipt and pay with a traditional check, which greatly speeds up the registration process and frees up resources for other priorities.

A majority of the Department, including the Onsite Wastewater Section and Environmental Safety, began working from home due to the COVID-19 pandemic. While traditional inspections were not performed during this time, the Section was able to utilize technology to perform some inspections virtually, and to perform all administrative tasks, such as compliance assistance, administering onsite wastewater certified professional exams, renewing professional certifications, and issuing permits.

On July 1, 2021 the Environmental Safety section was officially merged with the Department. The merger required a large amount of work from many sections to complete. This included field office leases, vehicle transfers, job classifications, letterhead and form changes, IT challenges, MOU negotiations, and regulation changes.

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.

The Private Onsite Wastewater Treatment System Contractors Certification and System Registration Act (the 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, 692 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, 2021 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 25,000 systems have been registered, with 1,783 systems registered in FY2021.

The Section receives a large number of complaints. There were 88 new onsite-related complaints in FY2021 and program staff resolved a total of 72 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 4,000 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.

NAC Title 124 - Rules And Regulations For The Design, Operation And Maintenance of Onsite Wastewater Treatment Systems 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 FY2021, the program received 56 applications for construction/operating permits and 7 applications for subdivision review and approval.

Environmental Safety Program

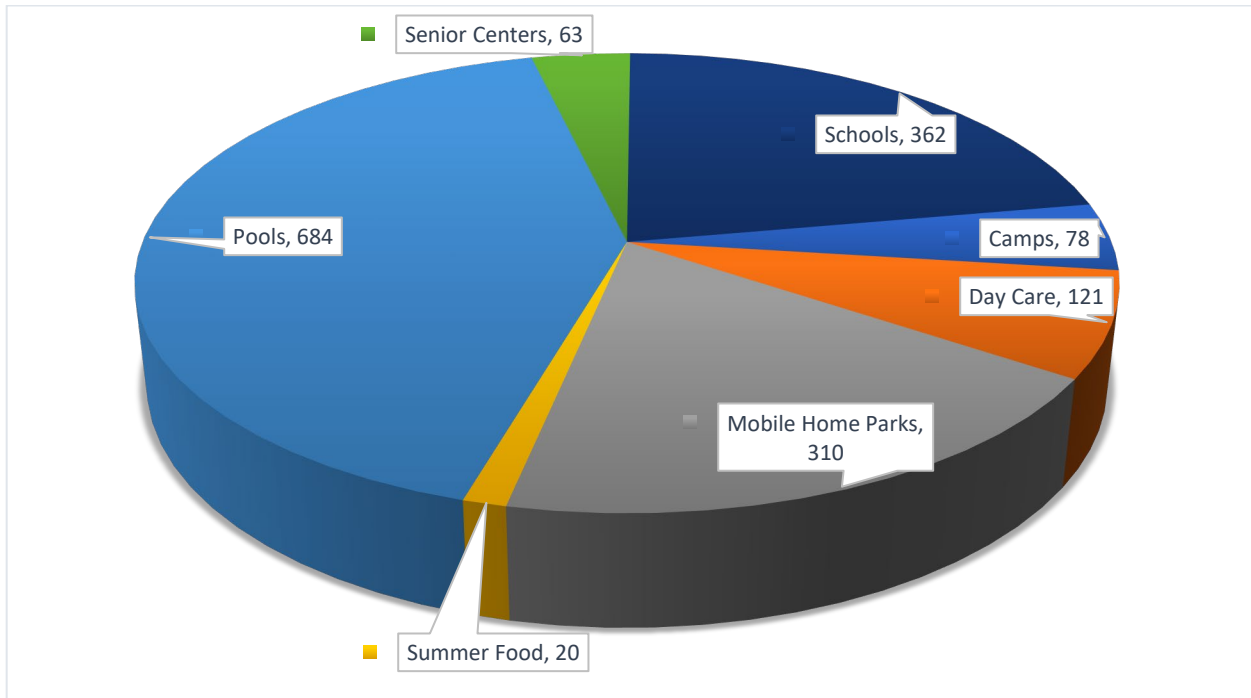
The Environmental Safety staff inspect all public swimming pools/spas located at hotels, apartments, municipalities, and recreational facilities. During inspections staff check water chemistry, safety equipment, personnel training, and mechanical areas. Recreation camps and mobile home parks are inspected to assure conditions are safe, sanitary, and comply with NAC Title 178 - Environmental Health. 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.



At left: shown is a sign temporarily closing an apartment pool. Above: 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 FY2021, the seven sanitarian program staff completed 1,638 inspections pools, camps, parks, child care and senior centers, and schools. There were an additional 176 well and septic evaluations completed for property transfers. Inspections were down from FY2020 due to the COVID-19 pandemic resulting in many facilities being closed during the season. The chart below shows a breakdown of FY2021 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 and 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 NAC 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.



This photo shows a Wastewater Treatment Facility for Lincoln.

The Wastewater Operator Certification Program currently has 796 operators with municipal/compatible certificates. In addition, there are currently 91 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 2021. NDEE has contacted approximately 300 facilities potentially eligible for the exemption and, of these, issued four-year operator exemptions to 215 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 I through IV. Since the Department began using this exam series, the pass rate for exams has declined sharply. The Department evaluated the issue with ABC and decided the best course of action was to reinstate the previously used state specific exams. The table below shows the increase in passing rate due to this change.

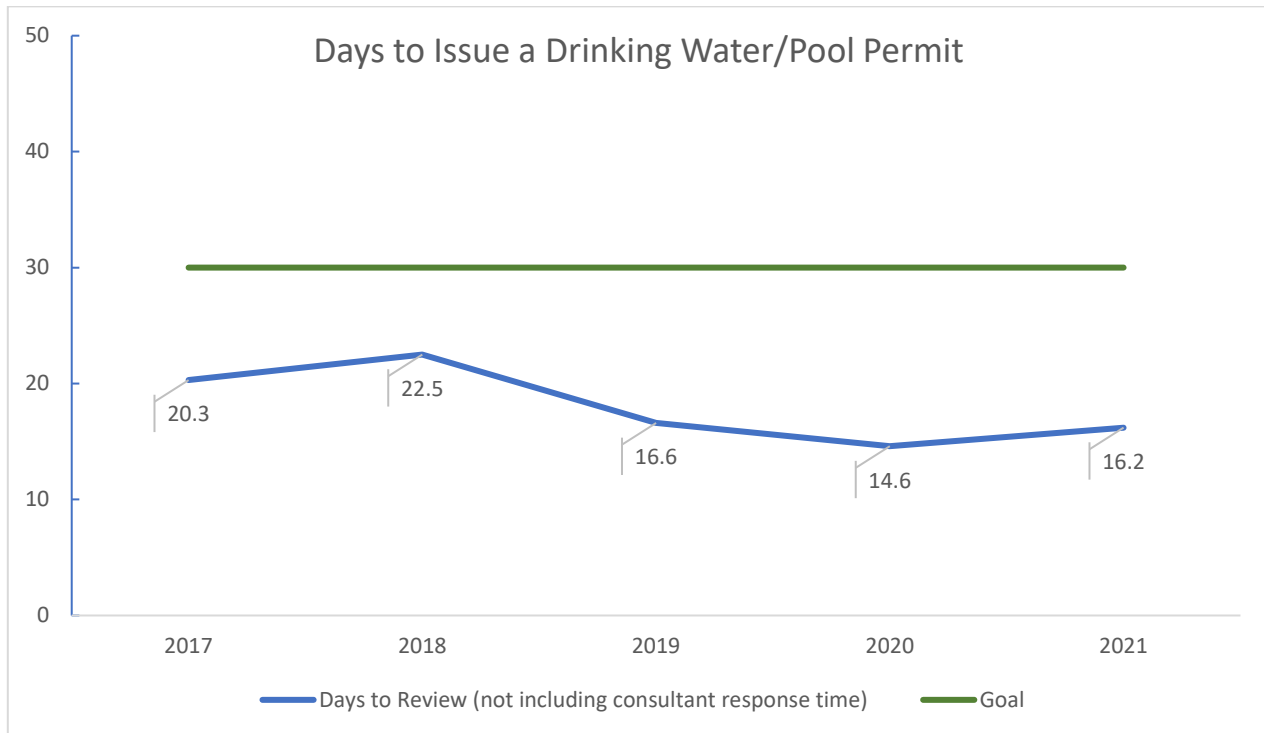
Operator Certification Program Annual Reporting					
Term		Operator Certification Testing			4-yr. operator exemption (applications received)
		Exam Format	no. administered	pass rate	
Fiscal Year July 1, 2020 – June 30, 2021		standardized/national	22	21%	189 exemptions granted
		state-specific	133	46%	
		combined	155	42%	
Calendar Year Jan. 1-dec. 31	2020	Standardized/national	61	30%	
	2021	State-specific	133	46%	
1988-2018		State specific	4,500+	48%	

Engineering Programs

The drinking water, wastewater, swimming pool, onsite, mobile home park, and recreation camp engineering program reviews are conducted by one engineering team. Team members have been cross-trained, which has resulted in a positive impact on NDEE efficiency of project reviews as well as providing the communities and businesses we serve a holistic view of engineering activities at their site. In FY2021, all engineering and permitting activities were moved into one division, allowing for even further cross-training between the engineering/permitting programs in air, livestock and solid waste.

Wastewater Engineering

The engineers in the program 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, are able to meet treatment standards as well as meet discharge limits and protect the public and the environment from adverse effects. During FY2021, the Engineering Section received 238 applications for wastewater projects and approved 224 projects. The average day for the Engineering Section to review and issue a construction permit is shown in the following chart:



Nebraska’s design standards for wastewater facilities are found in NAC *Title 123 -- Rules and Regulations for the Design, Operation and Maintenance of Wastewater Works*. These standards are updated periodically to keep Nebraska in alignment 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. The last update became effective on September 4, 2019. This update addresses duplicative language and provides clarity to the reader. Also, an exemption for not requiring a construction permit for pretreatment facilities if the facility discharged to a public owned treatment works in another state was removed.

Drinking Water Engineering



Swimming Pool Under Construction

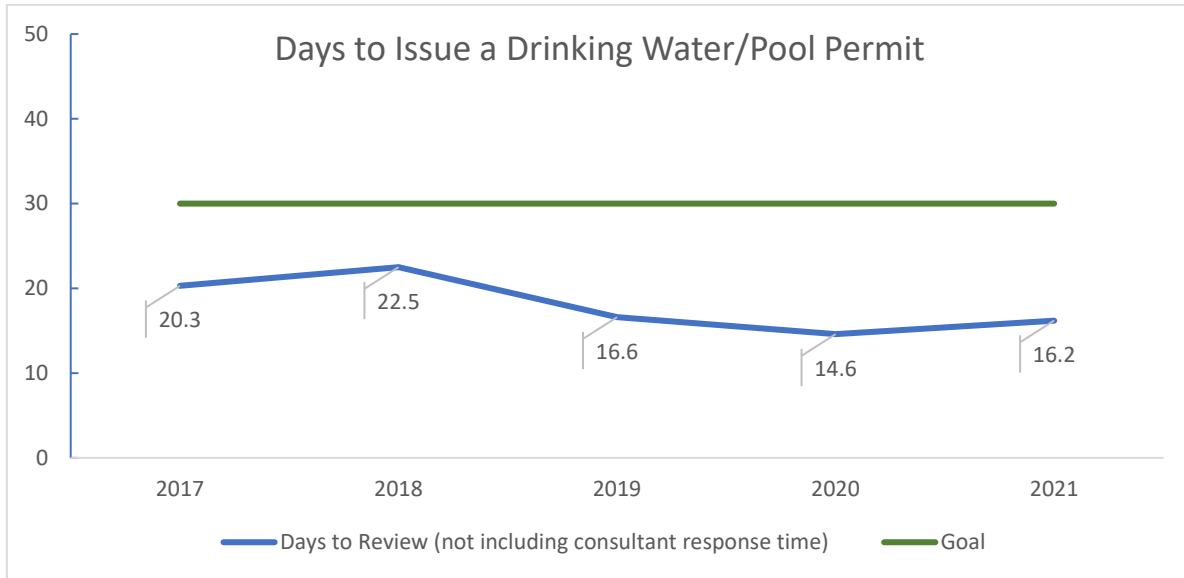
Drinking Water Engineering provides engineering plan review; issuance of construction permits; inspection of newly constructed projects for issuance of approvals for placement into service; and technical assistance and advisory contacts with owners/operators of public water systems, consulting engineers, 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.

On April 4, 2010, *NAC Title 179, Chapter 7: Siting, Design, and Construction of Public Water Systems* became effective. As a result, public water systems can enter into a three-year agreement to construct water distribution main projects without having to submit plans and specifications for review and approval. These systems are subject to an annual audit as a condition of the agreement. The City of York entered into an agreement with the Agency on January 14, 2021. As a result, we now have a total of 24 public water systems that have agreements with the Agency.

The following table details the drinking water review and inspection engineering activities for FY2021:

Drinking Water Engineering Activities	Number
Water Projects Received for Review	196
Water Projects Approved	190
Water Projects Inspected	112
New/Modified Swimming Pool/Spa Projects Received for Review	68
New/Modified Swimming Pool/Spa Projects Approved	67
Pool/Spa Construction Projects Inspected	43
Three-Year Agreements for Distribution Main Projects—Annual Audits Completed	16

As with the wastewater engineering program, the drinking water engineering program has also experienced improved timeliness as a result of the cross-training within the Agency. This is shown in the following chart:



Other Engineering Activities

In addition to the normal plan review and approval activity, the Engineering Section spends a considerable amount of time each year working with communities that need to upgrade their facilities, meeting with municipal officials, funding agencies, and consulting engineers to develop affordable projects for Nebraska's communities. The Agency continues to have quarterly meetings with the City of Omaha to discuss their combined sewer separation projects, regulatory, engineering and funding issues. The Engineering Section also perform various activities. The following is a list of activities conducted by the Engineering Section:

- Reviewed and approved 62 onsite projects. Engineering review and approval is needed; when an onsite project cannot meet Title 124 design standards or setback distances, for non-domestic type waste or for a system with flow exceeding 1000 gallon per day.
- Inspection of wastewater treatment facilities when the need arises or to assist the Compliance Section.
- Review and evaluate justifications provided by professional engineers for any new well siting that does not meet the setback distances identified in NAC *Title 179, Chapter 7*.
- Evaluate encroachment issues that may be of concern to existing public drinking water system infrastructure.
- Review preliminary engineering reports and applications to the Water Wastewater Advisory Council
- Draft Categorical Exclusion and Finding of no Significant Impact documents for projects funded by the State Revolving Loan Fund.
- Review and approve operation and maintenance manuals funded the State Revolving Loan Fund.
- Assist in drafting loan documents and providing financial capability analyses for the projects to be funded.
- Assist the NPDES program in wastewater treatment plant capacity evaluation and local limits related activity.

National Pollutant Discharge Elimination System (NPDES) and Related Programs

The Water Permits program 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**, which 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.

NDEE 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 NAC *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. The following graphs show distribution of permits issued to various types of NPDES dischargers. Livestock NPDES permits may be found in the Agriculture 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. NDEE 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 NAC *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 NAC *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.

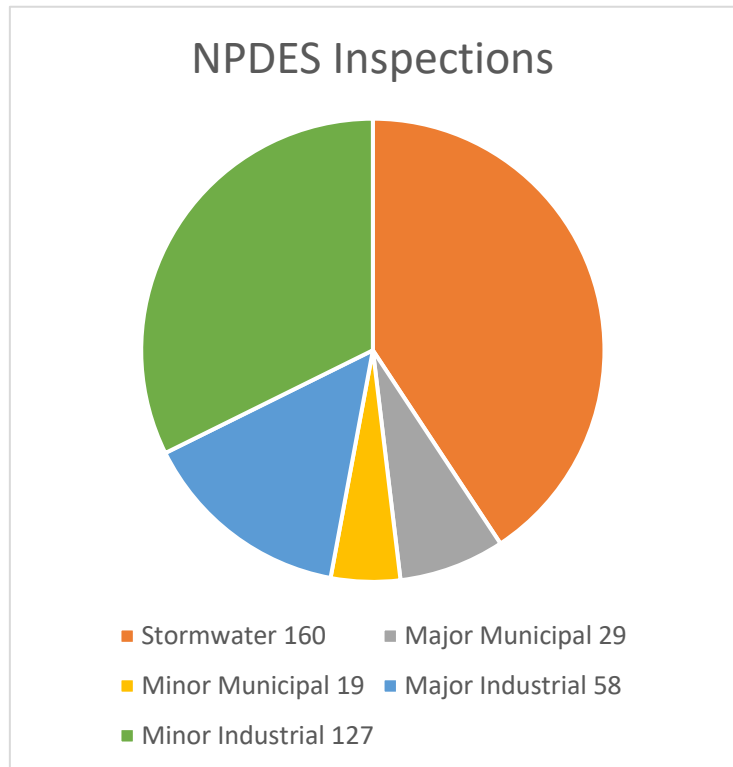
There are 604 facilities with discharge authorizations under individual permits (municipal, industrial, and pretreatment), and 28 municipal storm water permits (MS4). There are nearly 3,107 active authorized discharges under other general permits. The general permits include 1,630 active authorizations under the construction general storm water permit, 392 dewatering including Omaha, 68 hydrostatic testing, 987 industrial storm water, five pesticide, and 25 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.

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 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. Minor facilities are inspected once every five years at a minimum. Inspectors performed 393 NPDES inspections in Fiscal Year 2021. A breakdown of those inspections is provided in the chart above. The minor industrial inspections include 96 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 44 assistance visits in the 2021 Fiscal Year.

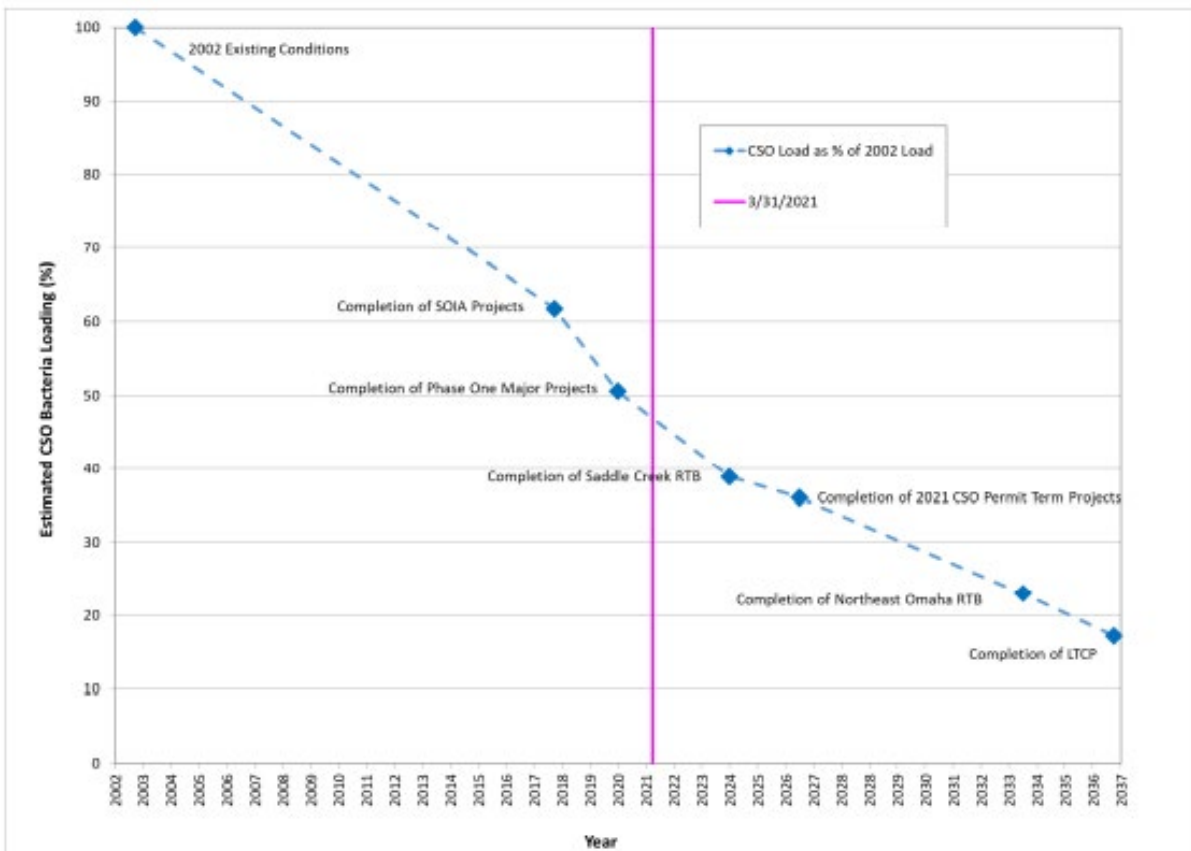
Combined Sewer Overflow Program

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 identified 29 projects in the LTCP for delivery in the next 16 years. Thirteen of these projects are scheduled for completion by 2026. 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.

In the Missouri River Watershed (MRW), Omaha modeled the efforts to date to show the following:

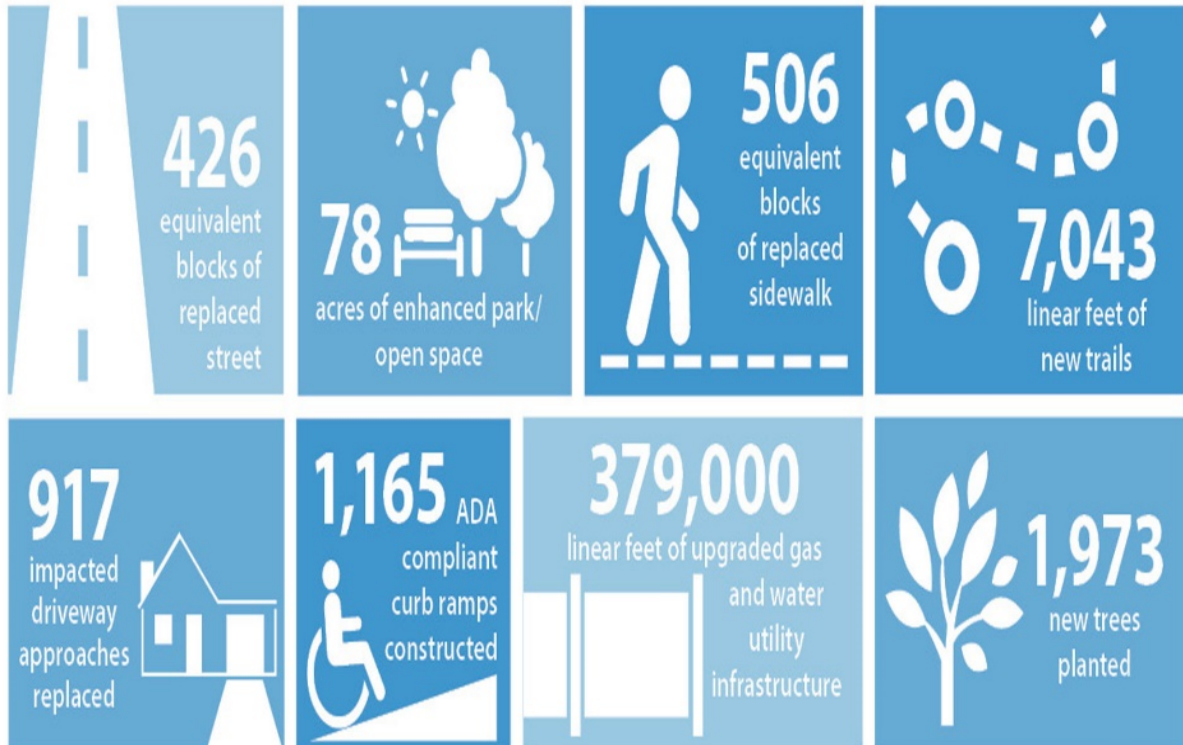
- A 56 percent capture of representative year wet weather volume as compared to 30 percent under 2002 Existing Conditions.
- A significant increase in flow receiving secondary treatment during wet weather due to increased treatment capacity at the Missouri River Water Resource Recovery Facility and increased pumping capacity at the new Leavenworth Lift Station; the volume receiving secondary treatment was 40 percent greater than in 2002 Existing Conditions.
- As CSO volumes are reduced, CSO pollutant loadings also will be reduced. In the MRW, it was estimated that the E. coli load to the Missouri River will be reduced by 85 percent under representative year precipitation conditions after full implementation of 2021 LTCP Update CSO controls. In the PCW, it was estimated that the E. coli load to the watershed will be reduced by 71 percent for the representative year. Overall, as of 2021, Omaha estimates that



Clean Solutions for Omaha, City of Omaha. OmahaCSO.com

E. Coli loading has been reduced by over 50 percent. The chart on page 141 details the progress of E. Coli reductions over time.

In addition to the environmental benefits from the CSO program, Omaha has realized many community benefits which have allowed for the enhancement of neighborhoods. The next figure details some of the benefits realized beyond the environmental:



Includes 30 completed or underway projects as of fourth quarter, 2020, since the inception of the Program.

Clean Solutions for Omaha, City of Omaha website. OmahaCSO.com

The City of Omaha and NDEE 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 key elements of this process are evaluating the success of completed efforts, maximize the effectiveness and value of future efforts, and balance these achievements with other infrastructure needs. 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 Biosolids 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, Kansas. NDEE provides guidance for municipalities, approves land application sites, and provides permit language to assist with biosolids program compliance.

Storm Water Programs

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 process 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; and the communities of Beatrice, Columbus, Fremont, Grand Island, Hastings, Kearney, Lexington, Norfolk, North Platte, South Sioux City, Gretna, Gering, Terrytown, and Scottsbluff. The program also requires coverage for the University of Nebraska's campuses in 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

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 NAC 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 NAC 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. There are 127 significant industrial users with a pretreatment permit.

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 and Associated Grant Programs

The Planning and Aid Division's State Revolving Fund Section administers distribution of state and federal assistance for the Clean and the Drinking Water State Revolving Loan Funds. This section also oversees the Small, Underserved, and Disadvantaged Communities and Sewer Overflow and Stormwater Reuse Municipal Grant programs.

Clean Water State Revolving Loan Fund

The Nebraska Clean Water State Revolving Loan Fund (CWSRF) program provides below-market financing 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 revolve back into new loans, and interest earnings on the fund are primarily used to pay off the state match bonds. An administrative fee is assessed to each loan made through the CWSRF. These fees pay for program operating costs including day-to-day program management activities and for other costs associated with debt issuance, financial management, consulting, and support services necessary to provide for a complete program.

The CWSRF program receives an annual federal EPA capitalization grant. There is a 20% state match requirement to obtain that grant, which is typically a debt issuance provided through a Nebraska Investment Finance Authority (NIFA) bond. In July of 2020, the EPA awarded Nebraska's 2020 CWSRF capitalization grant in the amount of \$8,110,000. The required match of \$1,622,000 was provided both through bonds, and this year, a cash transfer from the Administrative Cash Fund. In State Fiscal Year (SFY) 2021, the CWSRF funded projects totaling \$9,497,305 in loans, with \$1,822,704 in loan forgiveness and grant assistance.

Additional Subsidy Awards

Many small municipalities find that the development and construction of needed projects are too costly without the additional grant subsidy provided concurrently with the CWSRF loan. To assist 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 project needs. After the project is identified, there is another funding opportunity called the Small Town Grant (STG). Again, funded from the Administration Cash Fund, this grant provides subsidy of up to \$250,000 per project. This grant program has provided \$10.6 million in funding for 86 projects with CWSRF loans since the start of the program.

Loan forgiveness is last form of additional subsidy, through reserving up to 10% of the CWSRF capitalization grant. Similar to the PPAR and STG, borrowers must show financial hardship to be eligible for this grant.

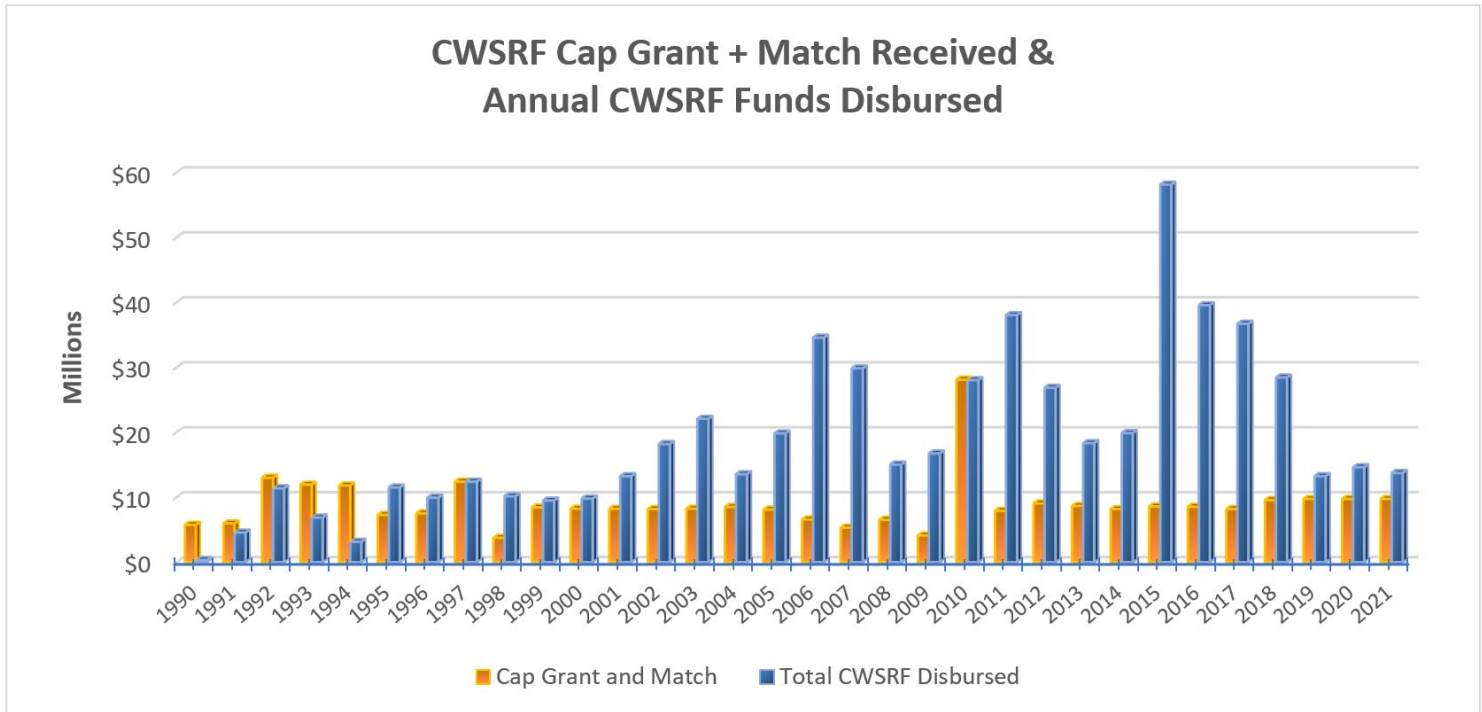
- Loan Forgiveness eligibility will continue to follow the implemented tiered system for the
 - Population Focused
 - Population of 10,000 or less – Capped at 15%
 - Population of 3,300 or less – Capped at 20%
 - Population of 500 or less – Capped at 25%

- Borrowers were evaluated based on standard loan forgiveness terms from past years as well as the new population focused terms and are awarded loan forgiveness amount based on whichever is greater, dependent on availability of funds.

Total CWSRF Assistance Provided

After over 40 years of activity, the Fund’s Net Assets have reached \$344.3 million. Since its inception, the CWSRF has provided loans for 329 projects with a cumulative loan award amount of \$662.7 million.

The following graphs provide the total assistance provided by the Clean Water program per year and the second graph shows the cumulative amounts of capitalization grants and match received and total amounts disbursed.



Drinking Water State Revolving Loan Fund

The Nebraska Drinking Water State Revolving Loan Fund (DWSRF) program is setup similarly, but it provides below-market loans and grants to owners of public water systems (PWSs). Loan principal repayments revolve back into new loans, and interest earnings on the Fund are used to pay off NIFA bonds issued for the required EPA capitalization grant match. There is also a small administration fee assessed to each DWSRF loan for program management activities.

The DWSRF is unique in that loans may be awarded to privately-owned PWSs. Another notable difference from the CWSRF include set-asides for funding the Nebraska’s Drinking Water Division, technical assistance, source water protection, capacity development and operator certification. After nearly 25 years of activity, the Fund’s Net Assets have reached \$225.3 million.

DWSRF Set-Aside Funds

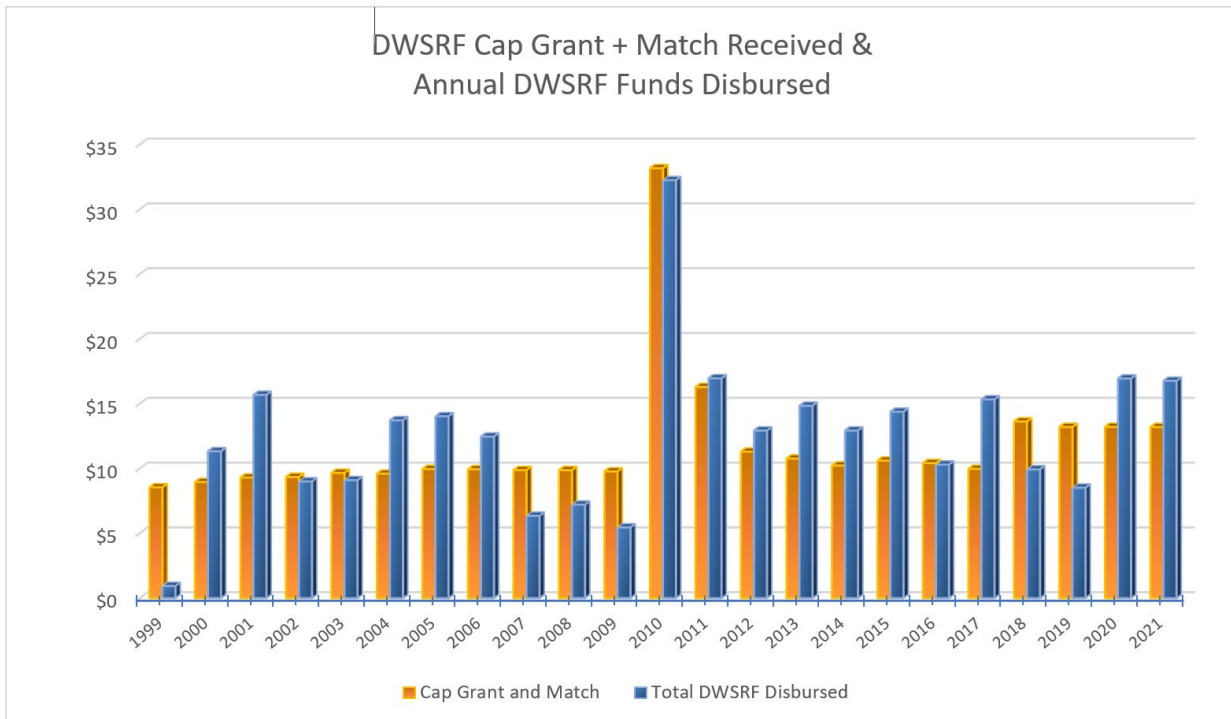
The Small System Technical Assistance set-aside (up to 2% of the capitalization grant) provides technical, financial and managerial assistance to PWSs serving a population of 10,000 or less. This is accomplished through contracts with organizations that have expertise in dealing with small systems. The state may use up to a total of 10% of the capitalization grant from the State Program Management set-aside, which the DWSRF typically allocates to help fund the NDEE’s Drinking Water Division.

In SFY 2021, under the Local Assistance and Other State Programs set-aside (15%), the communities of David City and Wahoo were selected to receive Source Water Grants totaling approximately \$87,950 from the 2020 Capitalization Grant. Further, six agreements for preliminary engineering reports were awarded to high priority PWSs to address public health issues in Fairmont, Gibbon, Giltner, Norris School District, Plainview and Union.

The 2020 DWSRF capitalization grant allocation totaled \$11,011,000. In SFY 2021, the DWSRF entered into 8 binding commitments to communities, including four amendments to already existing loans. These are commitments provided financial assistance totaling \$21,030,548. Of that amount, disadvantaged communities received \$3,628,187 in forgiveness assistance. The EPA grant award required that a minimum of 20% of the grant be in the form of additional subsidization (e.g., loan forgiveness). Beyond that noted for the CWSRF, increased loan forgiveness is provided when a project addresses a public health concern (e.g., Nitrates in a drinking water supply)

For the set-asides, from the FFY 2020 capitalization grant, \$2,021,320 was allocated to the 2% (\$220,220), 10% (\$1,101,100), and 15% (\$700,000) set-asides.

The following graphs provide the total assistance provided by the Drinking Water program per year since inception and the second graph shows the cumulative amounts of capitalization grants and match received and total amounts disbursed.



State Revolving Loan Assistance by Legislative District as of June 30, 2021

District	CWSRF Assistance			DWSRF Assistance			TOTAL SRF Assistance		
	Below-Market Interest Loan	CWSRF Grant Assistance	CWSRF Total Assistance	Below-Market Interest Loan	DWSRF Grant Assistance	CWSRF Total Assistance	Below-Market Interest Loan	DWSRF Grant Assistance	CWSRF Total Assistance
1	\$8,925,558	\$899,006	\$9,824,564	\$27,295,809	\$5,799,001	\$33,094,810	\$36,221,367	\$6,698,007	\$42,919,374
2	\$22,448,808	\$514,559	\$22,963,367	\$13,094,126	\$560,935	\$13,655,061	\$35,542,934	\$1,075,494	\$36,618,428
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**	\$139,869,110	\$1,908,000	\$141,777,110	\$6,552,655	\$1,272,182	\$7,824,837	\$146,421,765	\$3,180,182	\$149,601,947
8	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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	\$4,274,588	\$520,577	\$4,795,165	\$2,984,156	\$772,916	\$3,757,072	\$7,258,744	\$1,293,493	\$8,552,237
16	\$15,528,483	\$1,310,215	\$16,838,698	\$23,217,474	\$3,048,399	\$26,265,873	\$38,745,957	\$4,358,614	\$43,104,571
17	\$60,633,244	\$1,523,766	\$62,157,010	\$12,269,207	\$908,042	\$13,177,249	\$72,902,451	\$2,431,808	\$75,334,259
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	\$5,642,187	\$1,719,846	\$7,362,033	\$9,969,326	\$2,806,250	\$12,775,576
23	\$26,025,014	\$1,233,963	\$27,258,977	\$4,856,237	\$970,768	\$5,827,005	\$30,881,251	\$2,204,731	\$33,085,982
24	\$26,841,361	\$462,947	\$27,304,308	\$16,395,535	\$4,237,545	\$20,633,080	\$43,236,896	\$4,700,492	\$47,937,388
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**	\$34,576,358	\$1,250,000	\$35,826,358	\$14,977,829	\$0	\$14,977,829	\$49,554,187	\$1,250,000	\$50,804,187
28	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30	\$5,545,761	\$322,478	\$5,868,239	\$9,916,128	\$1,925,104	\$11,841,232	\$15,461,889	\$2,247,582	\$17,709,471
31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
32	\$7,322,713	\$1,502,949	\$8,825,662	\$9,242,789	\$2,458,691	\$11,701,480	\$16,565,502	\$3,961,640	\$20,527,142
33	\$5,409,430	\$75,989	\$5,485,419	\$1,663,361	\$289,293	\$1,952,654	\$7,072,791	\$365,282	\$7,438,073
34	\$13,691,969	\$780,290	\$14,472,259	\$7,498,468	\$1,864,481	\$9,362,949	\$21,190,437	\$2,644,771	\$23,835,208
35	\$33,831,257	\$0	\$33,831,257	\$0	\$0	\$0	\$33,831,257	\$0	\$33,831,257
36	\$13,355,804	\$2,611,797	\$15,967,601	\$6,559,816	\$660,564	\$7,220,380	\$19,915,620	\$3,272,361	\$23,187,981
37	\$50,163,336	\$0	\$50,163,336	\$15,332,392	\$383,869	\$15,716,261	\$65,495,728	\$383,869	\$65,879,597
38	\$9,872,893	\$1,535,280	\$11,408,173	\$3,376,701	\$648,126	\$4,024,827	\$13,249,594	\$2,183,406	\$15,433,000
39	\$7,775,884	\$100,000	\$7,875,884	\$859,653	\$186,578	\$1,046,231	\$8,635,537	\$286,578	\$8,922,115
40	\$9,830,441	\$2,849,610	\$12,680,051	\$12,207,669	\$2,625,889	\$14,833,558	\$22,038,110	\$5,475,499	\$27,513,609
41	\$8,121,457	\$1,657,394	\$9,778,851	\$7,619,076	\$2,447,297	\$10,066,373	\$15,740,533	\$4,104,691	\$19,845,224
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	\$23,642,145	\$2,027,373	\$25,669,518	\$7,791,151	\$1,397,958	\$9,189,109	\$31,433,296	\$3,425,331	\$34,858,627
44	\$27,975,871	\$2,027,350	\$30,003,221	\$19,739,097	\$1,694,631	\$21,433,728	\$47,714,968	\$3,721,981	\$51,436,949
45	\$6,985,901	\$0	\$6,985,901	\$0	\$0	\$0	\$6,985,901	\$0	\$6,985,901
46	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
47	\$18,074,409	\$3,216,134	\$21,290,543	\$24,734,122	\$3,955,503	\$28,689,625	\$42,808,531	\$7,171,637	\$49,980,168
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	\$12,613,210	\$0	\$12,613,210	\$1,476,413	\$0	\$1,476,413	\$14,089,623	\$0	\$14,089,623

*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 7 was selected for Omaha projects and District 27 was used for Lincoln area projects

SRF Summary

Each year the CWSRF and DWSRF publish an IUP, which explains how the SRF programs will use capitalization grants received annually from the federal government, annual state matching funds, and current program funds to meet Nebraska's communities' needs and funding requirements for the upcoming fiscal year. The IUP requires comment period that is then formally presented to the Environmental Quality Council (EQC) for review and approval. Lastly, a more detailed annual report is prepared to meet EPA program requirements, including the Auditor of Public Account's report done on both programs. These can be found at the State Revolving Fund Section at www.deq.ne.us.

Other Clean Water and Safe Drinking Water Act Grants**Small, Underserved, and Disadvantaged Communities Grant Program**

New this year, authorized under the Water Infrastructure Improvements for the Nation Act, the Small, Underserved, and Disadvantaged Communities Grant Program was established to assist such PWSs. Awards will be as non-competitive grants to Nebraska. The grant program is designed to help systems meet and comply with Safe Drinking Water Act requirements. The grant program will aid underserved communities that have no household drinking water or wastewater services or are served by a PWS that violates or exceeds any Maximum Containment Level, treatment technique, or action level.

The initial recipient of this grant was the Village of Martinsburg to help the community return into compliance with the Uranium drinking water standard and to replace a deteriorated water storage tank. This past fiscal year \$420,000 was awarded to the community, and another \$263,000 is planned for the Village to construct a blending water supply well and stainless-steel water tank. The project was developed with assistance from the University of Nebraska and the local Lewis-Clark Natural Resources District.

Sewer Overflow and Stormwater Reuse Municipal Grants Program

America's Water Infrastructure Act of 2018 amended section 221 of the Clean Water Act, which reauthorized the Sewer Overflow and Stormwater Reuse Municipal Grants Program. These amendments expanded project eligibilities to include stormwater management projects and authorized appropriations for the program. Grants will be awarded to states, which will then provide sub-awards to eligible entities for projects that address infrastructure needs for combined sewer overflows (CSO), sanitary sewer overflows (SSO), and stormwater management. In March of 2021, EPA provided instruction to Nebraska and planning to award this grant to communities was started.

Nebraska’s Public Water Systems

Information presented for the rest of this chapter reflects 2020 calendar year activities as published in the Nebraska *Public Water System 2020 Annual Report*, issued in June, 2021.

Population and Type of System

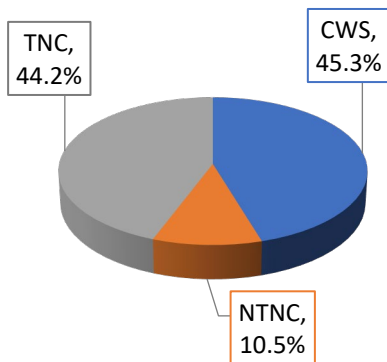
Nebraska public water systems can be broken down into categories based on the size of the population served and/or the type of population served.

Population	CWS	NTNC	TNC	Total Systems	Percentage*
<101	102	76	492	670	50.8%
101-500	268	45	86	399	30.2%
501-1,000	98	7	6	111	8.4%
1,001-3,300	89	8	0	97	7.3%
3,301-10,000	26	2	0	28	2.1%
10,001-50,000	12	0	0	12	0.9%
>50,000	3	0	0	3	0.2%
TOTAL	598	138	584	1,320	100.0%

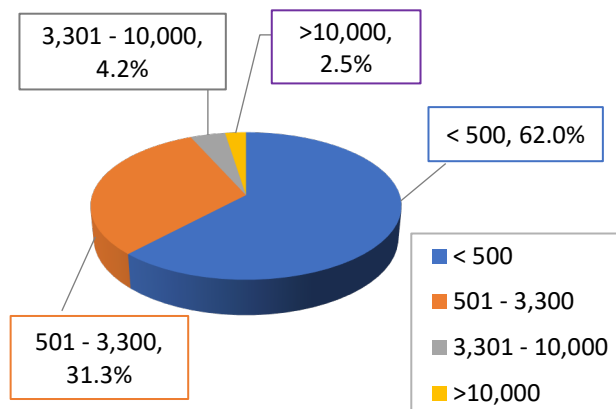
*Based on approximate population

CWS = Community 598 systems
 NTNC – Non-transient, non-community 138 systems
 TNC = Transient, non-community 584 systems

Public Water System Types



Community Public Water Systems by Size of Population



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.

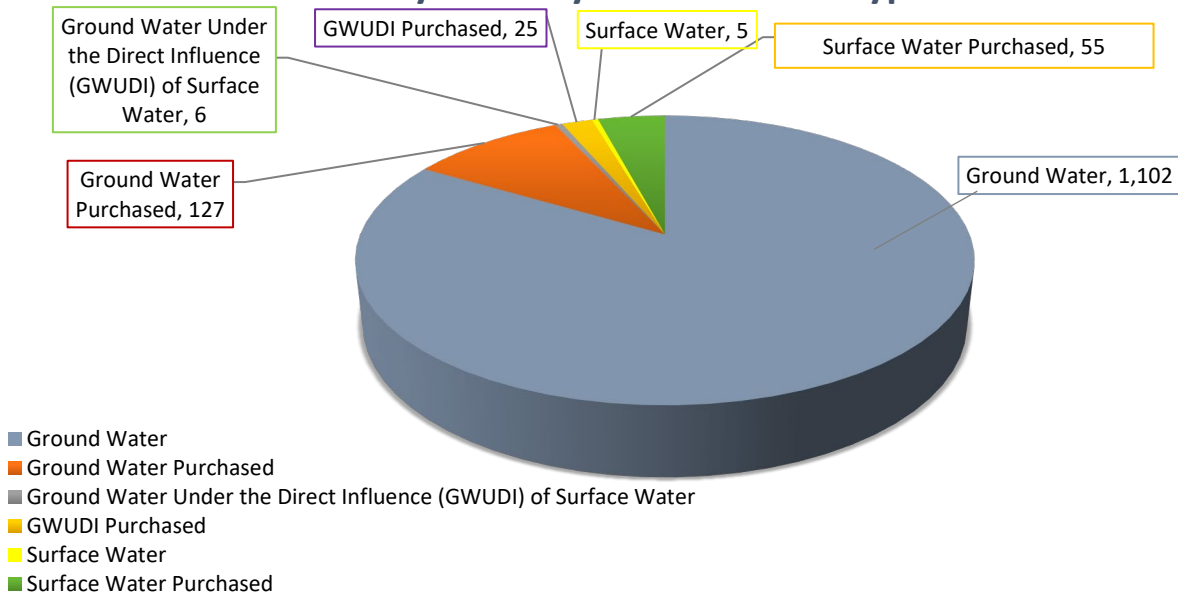
Over 60% of Nebraska’s CWSs serve populations less than 500 people. Water systems with populations below 3,300 are considered to be “small systems” by the EPA. This makes Nebraska a predominantly small system state with 93.2% of all of the State’s CWSs serving 3,300 or fewer people.

Public Water in Nebraska

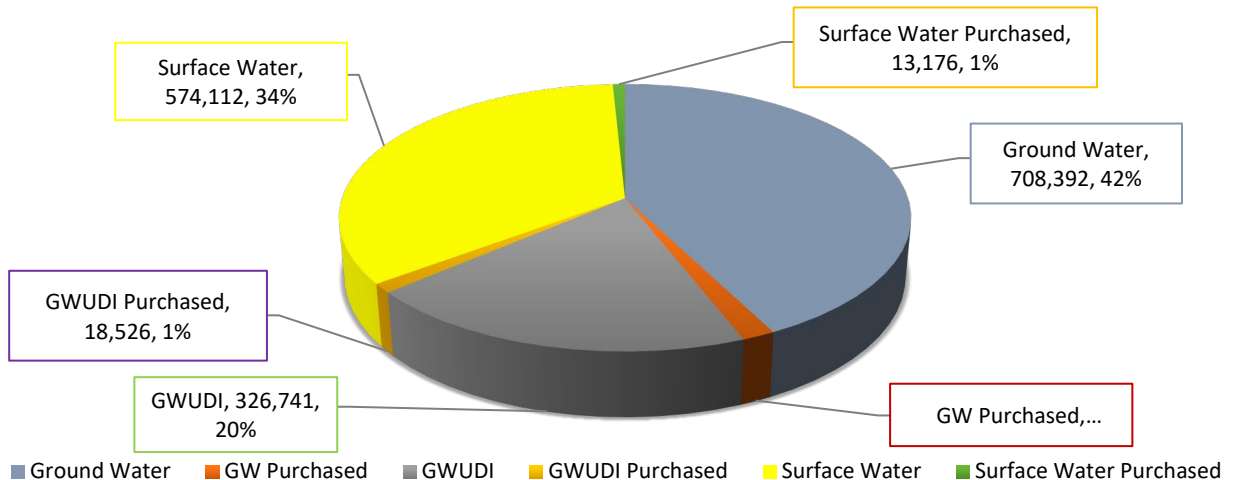
The Drinking Water Division the State’s regulations governing PWSs, Title 179 NAC 2 through 26, promulgated under the State’s SDWA pursuant to and in accordance with the federal SDWA. State regulations must be at least as stringent as the federal regulations.

Public water systems provide water to approximately 80% of the people of Nebraska. Private domestic wells, which are not regulated under the SDWA, 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 55 systems purchase water from those five systems. In addition, 6 systems utilize ground water under the influence of surface water (GWUDI), and 25 additional systems purchase water from those six systems. The remaining 1,102 systems use ground water, and an additional 127 systems purchase their water from another ground water system. Percentages rounded to nearest 1%.

Number of Systems by Source Water Type



Public Water System Population Served by Source Water Type



Drinking Water Division's Activities

The Drinking Water Division has 31 full time equivalent positions (FTEs). The Monitoring and Compliance Section has 9, the Field Services and Training Section has 12, and 2 FTEs contribute to the administration of the program.

Drinking Water Field Services and Training Section

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

1. Field Services (inspections, operator assistance, etc.)
2. Water Operator Training
3. Capacity Development, and
4. Water System Security

FS&T staff include a supervisor, eight field representatives, a training coordinator, and a capacity development coordinator. 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 located throughout the State to provide close contact and timely assistance to Nebraska's public water systems.

2020 FS&T Covid-19 Response

The Covid-19 Pandemic impacted the activities of the FS&T Section. All field and training activities were suspended in mid-March, and did not resume until mid-June. At that time, sanitary surveys, as well as other inspections, were allowed to resume under specific protocols to minimize the risk of spreading Covid-19. All DHHS staff were required to wear masks and gloves when at a PWS, and social distancing was observed whenever possible.

Operator training courses and examinations also resumed with modified procedures. Class sizes were reduced to ensure adequate social distancing, masks were worn by students and instructors at all times, and materials were prepared in advance for each student/examinee to limit the possibility of transmission. Additional courses were added to make up for the suspended courses and smaller class sizes.

Following the initial suspension of activities, the FS&T Section was able to complete all required inspections for the year and clear the backlog of those needing training for water operator licensure. As cases of Covid-19 began to rise a second time in Nebraska, activities were again suspended in November, in all counties that were designated as "red" on their local risk dial, representing a severe risk for spread. The conditions in the individual counties was monitored closely and as the risk dials began moving back out of the "red," we were able to resume activities in most counties by the end of the year.

Field Services

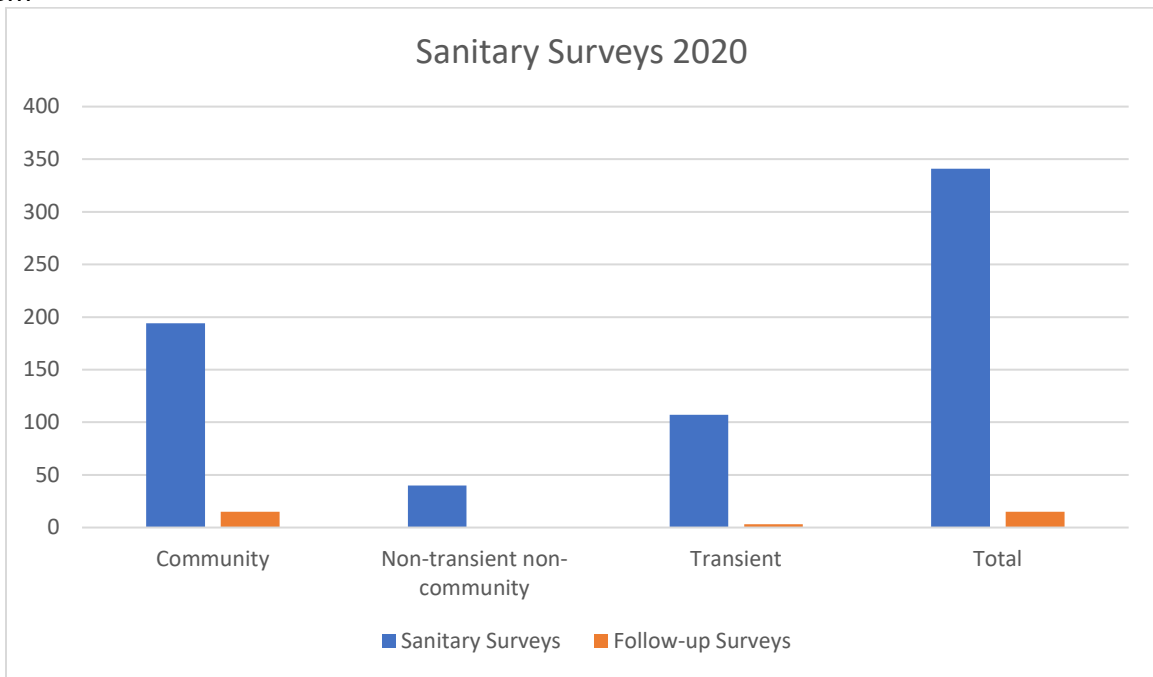
Sanitary Surveys

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 sanitary survey helps to ensure that a water system is operating properly by working with their licensed water operator(s) to evaluate records, review their emergency plan and cross-connection control program, and inspect components of the water system.

Field personnel conducted 341 sanitary surveys (194 community, 40 non-transient non-community, and 107 transient public water systems) and 18 follow-up surveys (15 community and 3 transient public water systems). A total of 637 deficiencies were found in 2020. This reflects an overall deficiency rate of 1.9 deficiencies per sanitary survey in 2020. No deficiencies were found in 162 (48%) of the sanitary surveys completed in 2020. The average number of deficiencies found in Nebraska’s public water systems remained stable from 2019 to 2020, highlighting the great work of water operators in our State.

Outside of sanitary surveys, field staff conduct site inspections for the location of new public wells, assist 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). Field services staff are essential workers that respond to emergencies associated with natural disasters, water service interruption, and/or contamination of a public water system



Level 1 & Level 2 Assessments

When public water systems have a confirmed presence of coliform bacteria, the Revised Total Coliform Rule (RTCR) requires that an assessment of the system be conducted. An assessment helps to identify 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 total coliform bacteria in a public water system. The public water system is responsible for completing a Level 1 assessment. Then field staff are responsible for completing a review of this assessment.

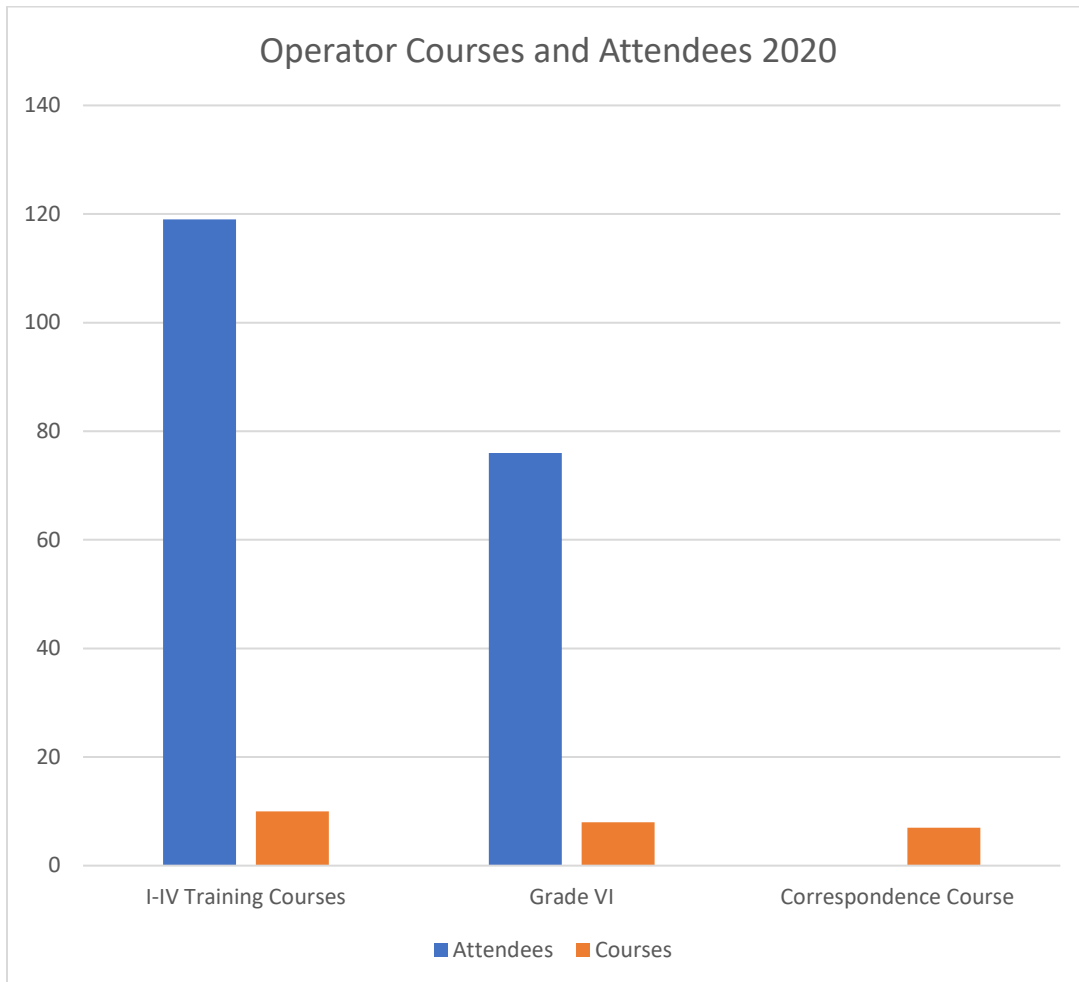
A Level 2 assessment is triggered by either multiple Level 1 assessments within a running twelve-month period, or by the confirmed presence of *E. coli* bacteria in the system. A Level 2 assessment is conducted by field staff and provides a much more detailed evaluation of the public water system.

Hypochlorinators

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 equipment helps communities with temporary chlorination of their water supplies to ensure the safety of their drinking water. When a power outage or source failure is involved, program staff also help systems locate equipment and supplies which may be needed.

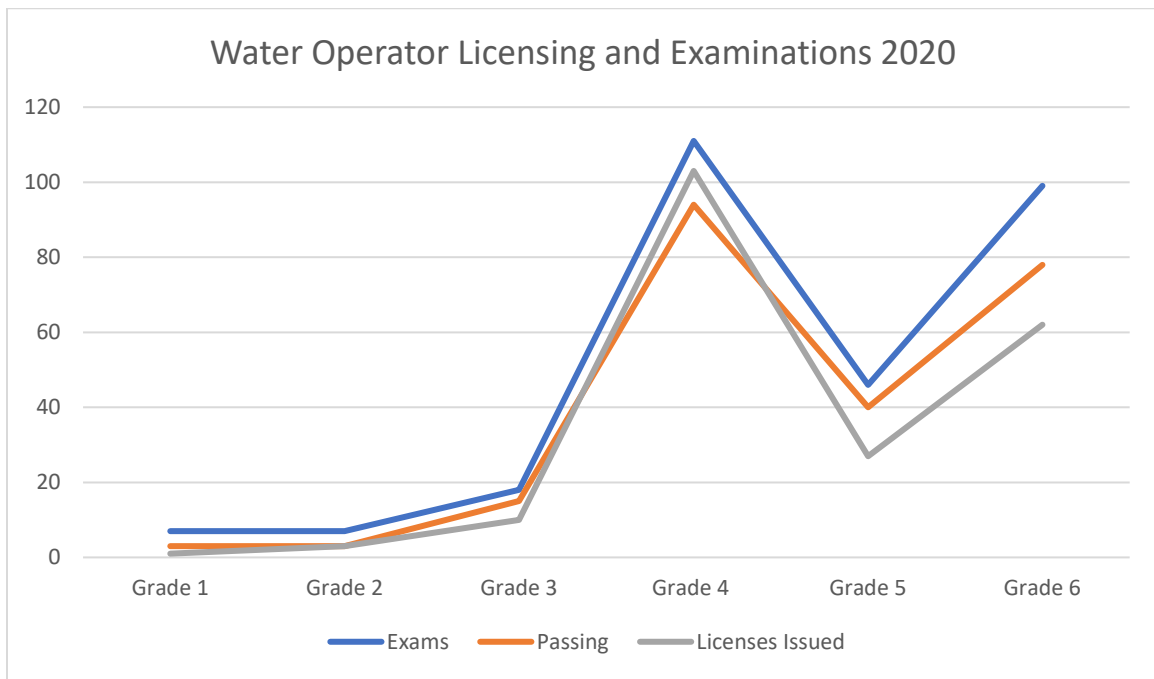
Training

FS&T program personnel conducted 10 water operator training courses, Grades I through IV, with a total of 119 attendees. An additional 7 individuals 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), 8 courses were offered with a total of 76 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 initial licenses issued and examinations conducted at each grade level:

Grade	Examinations	Passing	Number of Licenses Issued
I	7	3	1
II	7	3	3
III	18	15	10
IV	111	94	103
V	46	40	27
VI	99	78	62



Although COVID-19 did slow continuing education activities in 2020, the Drinking Water Division and other training providers adapted to existing conditions both in person and virtual training formats for water operators in 2020. Coordinated by the program, a group informally known as the Water Operator Training Coalition, met to identify training needs and to assist with 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 2020, 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 93 workshops/seminars/conferences were initially offered in Nebraska for the purpose of water operator continuing education. Of these, 33 focused primarily on backflow prevention continuing education for Grade VI operators.

Capacity Development

Capacity development is a proactive approach, through which water systems acquire and maintain adequate technical, managerial, and financial capabilities, enabling them to provide safe drinking water to Nebraskans. The Drinking Water program activities to bolster water systems' capacity are overseen by the program's Capacity Development Coordinator.

Additional support is provided by 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 (DWSRF).

DWSRF 2% Set-Aside Funds

Funds from the 2% Set-Aside of the DWSRF are used to provide assistance to public water systems to develop, and maintain, technical, managerial, and financial capacity. The Department contracts with technical assistance providers to provide on-site technical assistance, capacity assessment, and board/council trainings.

On-Site Assistance: The Department, along with the 2% Team, prioritize water systems in need of assistance. Providers then work with water systems, providing assistance with applications for funding, capacity development training, manuals, and mentorship to assist water systems. Technical assistance providers made 302 in person or phone contact visits with systems.

Capacity Assessment: Assessments of a system's managerial and financial capacity are conducted at water systems that receive loans through the DWSRF. An assessment is completed before the funded project begins, and again after it is completed, to determine the impact of the project on improving the system's capacity. Initial assessments were completed for 15 systems, and 6 systems received final assessments.

Board/Council Training: Information sessions are held to advise board/council members about the legal and fiduciary responsibilities they have as owners of a public water system, and their role in maintaining an adequate, safe supply of water for their customers. A total of 11 board/council members, representing 2 community water systems, attended sessions. This number was down considerably from 2019 due to COVID-19 restrictions.

Education and Outreach

In addition to utilizing the 2% Contractors, the Capacity Development Coordinator works with the Water Operator Training Coalition partners to provide capacity development training for water operators, owners, city clerks, and others, with a focus on each of their roles in developing and maintaining adequate capacity for their water systems. Included in this focus was emphasis on the importance of implementing an asset management plan with demonstrations of using available tools for inventory and budget, and the necessity of maintaining an up-to-date emergency response plan, and how systems should work with local emergency managers to ensure robust and resilient emergency response. Although the Capacity Development Coordinator was limited in the number of trainings provided due to the COVID-19 pandemic, trainings were given at 7 conferences and workshops.

Monitoring and Compliance Section

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

Safe Drinking Water Information System

The Safe Drinking Water Information System (SDWIS) is a database developed by EPA for States to report water quality data test results, violations, compliance assistance, enforcement, compliance schedules, water operator licensure, and PWS operating permits. It receives electronic data from the State of Nebraska Environmental Health Laboratory and 4 contract laboratories (Midwest Lab, Hall County, American Ag, and Enviro Services) that perform water analyses for DHHS.

DHHS is preparing for transition to cloud-based software. This transition includes staff training, implementing routine quality assurance and quality control measures, and implementing standard data entry and reporting methods.

Monitoring and MCL Violations, and Assessments

A public water system is required to monitor for the presence of 83 different contaminants. If a contaminant is present in the water, the system must verify that the contaminant does not exceed its maximum contaminant level (MCL).

In 2020, only 6 of 83 contaminants for which community public water systems monitor were found to be present above a MCL. That means 77 contaminants, for which monitoring was conducted, were not found above their respective MCL in **any** community water system in Nebraska.

Monitoring & Compliance enforces 9 different federal monitoring rules. Each rule contains a group of similar contaminants. Below is a list of the federal monitoring rules:

1. Revised Total Coliform Rule
2. Disinfections Byproducts
3. Groundwater
4. Lead & Copper
5. Inorganic Chemicals
6. Radionuclides
7. Synthetic Organic Chemicals
8. Surface Water Treatment
9. Volatile Organic Chemicals

A major monitoring violation occurs when a system fails to collect any samples during a required compliance period. Significant monitoring violations are defined as any major monitoring violation that has occurred during a specified reporting period, which differs for each contaminant.

There were a total of 97 violations from 58 public water systems in 2020 for exceeding an MCL or failing to properly monitor. More detailed information on each of the monitoring rules follow the summary table below.

Revised Total Coliform Rule (RTCR)

The objective of the Revised Total Coliform Rule (RTCR) is to reduce potential exposure to bacterial contamination in drinking water. Testing for coliform bacteria is a way to indicate whether potentially harmful bacteria may be present. All public water systems are required to routinely monitor for the presence of coliform bacteria and *E. coli*, a type of coliform bacteria. The RTCR establishes a MCL for *E. coli*. Assessments of the PWS and corrective actions are required if *E. coli* bacteria are found. A system is required to issue a Public Notice (PN) if they fail to monitor for coliform bacteria, if *E. coli* bacteria are found, or for failure to complete an assessment or corrective action.

A Level 1 Assessment is triggered when total coliform is found in the system. The public water system conducts the Level 1 Assessment and the Drinking Water program then reviews it. Identified deficiencies noted in the Assessment are required to be corrected in a timely manner.

A Level 2 Assessment is triggered when a system incurs more than one Level 1 Assessment in a running 12-month period, or if a system has a confirmed *E. coli* bacteria presence within their system. The Level 2 Assessment is conducted by the Drinking Water program with a representative of the public water system. Level 2 paperwork is completed and identified deficiencies are noted and the system is responsible for correcting deficiencies in a timely manner.

Significant deficiencies must be corrected within 120 days and minor deficiencies must be corrected within 12 months.

RTCR Assessments 2020

Type of RTCR Assessment	Number of Assessments Triggered	Number of Systems	% of Systems with Assessments
Level 1	79	79	6.0%
Level 2	70	46	3.5%
Level 2, <i>E. coli</i> MCL triggered	5	5	1.5%

RTCR Violations 2020

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%
Treatment Technique, Startup Procedures	1	1	0.08%
MCL – <i>E. coli</i> +	8	8	0.6%
Monitoring, Additional Routine, Major Routine	18	18	1.4%

Nitrate-Nitrite Rule

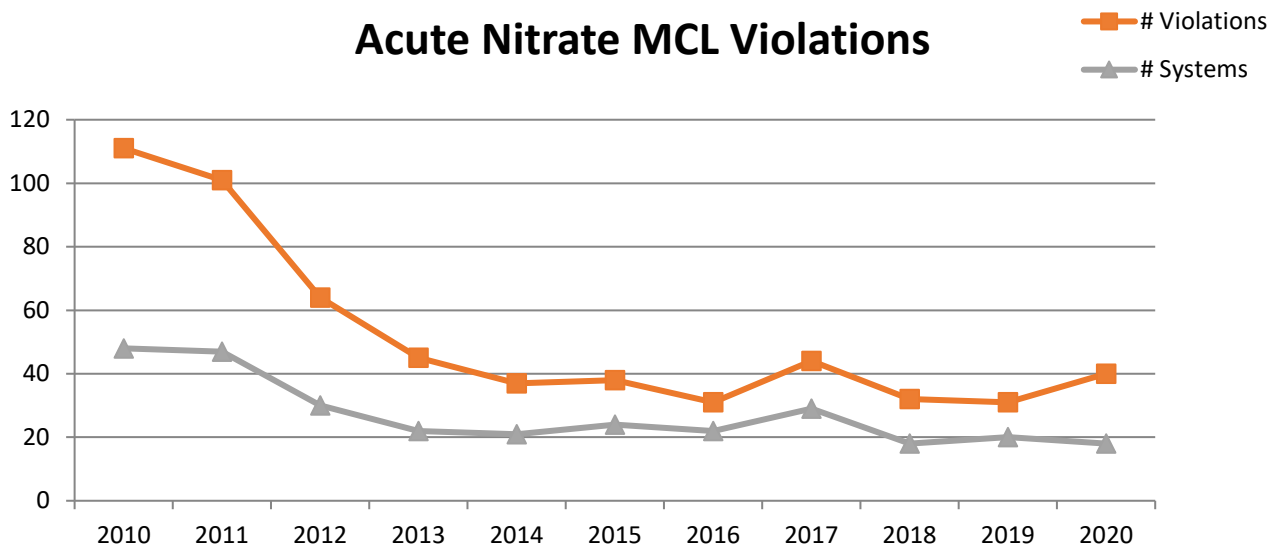
All public water systems monitor for nitrate-nitrite. Adverse health effects may be experienced when pregnant women, infants under six months of age, and nursing mothers, consume high levels of nitrate or nitrite in drinking water. A system is out of compliance when it receives one monitoring or MCL violation. A system is issued an Administrative Order to correct a nitrate contamination problem if two nitrate-nitrite violations are issued within a consecutive three-quarter period.

A summary of the 2020 nitrate-nitrite violations is presented below along with historic data. Nitrate MCL violations have decreased significantly in Nebraska since 2010.

Nitrate-Nitrite Violations 2020

Violation	Number of Violations	Number of Systems	% of Systems with Violations
MCL – 10 mg/l	40	18	1.4%
Monitoring	6	4	0.3%

Acute Nitrate MCL Violations



Public Notification Rule 2020

Public Notification is required if a PWS receives a MCL, Monitoring, or acute violation. There were no systems in violation of the PN Rule.

Rule	Number of Violations	Number of Systems
Public Notification Rule	1	1

Consumer Confidence Rule 2020

The CCR Rule requires all community water systems to prepare and distribute a brief annual water quality report summarizing information regarding source water, detected contaminants, compliance, and educational information. There were no systems in violation of the CCR Rule.

Rule	Number of Violations	Number of Systems
Consumer Confidence Rule	0	0

MCL Violations for Chronic Contaminant Exposure

Ingestion of bacteria and nitrate-nitrite in drinking water are typically associated with acute (i.e., sudden) adverse health effects. Exposure to other drinking water contaminants are considered to be associated with chronic health effects (i.e., the adverse health effect is evident only after repeated exposure or ingestion over a long period of time. Depending on the contaminant, routine monitoring occurs every year, every three years, or every six years (per EPA). If a contaminant is detected, monitoring is increased to quarterly.

If the level decreases below the MCL, the monitoring frequency may be reduced. A public water system is issued an AO after 3 quarterly MCL violations are issued in a rolling 12-month period. An AO is issued immediately if the contaminant is found at a level that may pose a health risk.

Below are a list of tables that outline the type of contaminants and the number of violations issued for each.

Volatile Organic Chemical (VOC) Violations 2020

(Per the SDWA, only community and non-transient, non-community systems monitor for VOCs.)

VOC Contaminant	Number of MCL Violations	Number of Monitoring Violations	Number of Systems	% of Systems with Violations
Aldrin	0	0	0	0.0%
Benzene	0	0	0	0.0%
Carbon tetrachloride	0	0	0	0.0%
cis-1,2-Dichloroethylene	0	0	0	0.0%
Dicamba	0	0	0	0.0%
1,1-Dichloroethylene	0	0	0	0.0%
Dichloromethane	0	0	0	0.0%
1,2-Dichloropropane	0	0	0	0.0%
Metribuzin	0	0	0	0.0%
Monochlorobenzene	0	0	0	0.0%
o-Dichlorobenzene	0	0	0	0.0%
para-Dichlorobenzene	0	0	0	0.0%
Styrene	0	0	0	0.0%
Tetrachloro-ethylene	0	0	0	0.0%
Toluene	0	0	0	0.0%

trans-1,2-Dichloroethylene	0	0	0	0.0%
1,2,4-Trichlorobenzene	0	0	0	0.0%
Trichloroethylene	0	0	0	0.0%
1,1,1-Trichloroethane	0	0	0	0.0%
1,1,2-Trichloroethane	0	0	0	0.0%
Vinyl chloride	0	0	0	0.0%
Xylenes (total)	0	0	0	0.0%

Inorganic Chemical Contaminant (IOC) Violations 2020

(Per the SDWA, only Community and Non-transient, non-community systems monitor for IOCs.)

Contaminant	Number of MCL Violations	Number of Monitoring Violations	Number of Systems	% Systems with MCL Violations
Antimony	0	0	0	0%
Asbestos	0	0	0	0%
Arsenic	3	3	4	0.15%
Barium	0	0	0	0%
Beryllium	0	0	0	0%
Cadmium	0	0	0	0%
Chromium total	0	0	0	0%
Cyanide (as free cyanide)	0	0	0	0%
Fluoride	0	0	0	0%
Mercury	0	0	0	0%
Nickel	0	0	0	0%
Selenium	3	0	3	0.2%
Sodium	0	0	0	0%
Thallium	0	0	0	0%

Non-Volatile Synthetic Organic Chemical (SOC) Contaminants 2020

(Per the SDWA, only community and non-transient, non-community systems monitor for SOCs.)

Contaminant	Number of MCL Violations	Number of Monitoring Violations	Number of Systems	Systems with Violations
Alachlor (Lasso)	0	0	0	0%
Atrazine	0	0	0	0%
Benzo[a]pyrene	0	0	0	0%
Butachlor	0	0	0	0%
Carbaryl	0	0	0	0%
Carbofuran	0	0	0	0%
2,4-D	0	0	0	0%
2,3,7,8-TCDD (Dioxin)	0	0	0	0%
2,4,5-TP	0	0	0	0%
Chlordane	0	0	0	0%
Dalapon	0	0	0	0%
Di(2-ethylhexyl)adipate	0	0	0	0%
Di(2-ethylhexyl)phthalate	0	0	0	0%
Dibromochloropropane	0	0	0	0%
Dieldrin	0	0	0	0%
Dinoseb	0	0	0	0%
Diquat	0	0	0	0%
Endothall	0	0	0	0%
Endrin	0	0	0	0%
Ethylene dibromide	0	0	0	0%
Glyphosate	0	0	0	0%
Heptachlor	0	0	0	0%
Heptachlor epoxide	0	0	0	0%
Hexachlorobenzene	0	0	0	0%
Hexachlorocyclopentadiene	0	0	0	0%
Lindane	0	0	0	0%
Methomyl	0	0	0	0%
Methoxychlor	0	0	0	0%
Oxamyl (Vydate)	0	0	0	0%
Pentachlorophenol	0	0	0	0%
Contaminant	Number of MCL Violations	Number of Monitoring Violations	Number of Systems	Systems with Violations

Picloram	0	0	0	0%
Polychlorinated biphenyls	0	0	0	0%
Propachlor	0	0	0	0%
Simazine	0	0	0	0%
Toxaphene	0	0	0	0%

Radionuclide Violations 2020

(Per the SDWA, only Community water systems monitor for Radionuclides.)

Contaminant	Number of MCL Violations	Number of Monitoring Violations	Number of Systems	Systems with Violations
Combined Radium (Radium - 226 and Radium -228)	0	0	0	0%
Gross Alpha Including Radon and Uranium	0	0	0	0%
Uranium Mass Combined Uranium	7	0	2	0.15%

Disinfection Byproduct Violations 2020

(Only water systems that disinfect their water, monitor for Disinfection Byproducts and Disinfectant Residuals.)

Contaminant	Number of MCL Violations	Number of Monitoring Violations	Number of Systems
Total Haloacetic Acids	0	0	0
Total Trihalomethanes	5	0	2

Disinfection Byproducts Stage 1 Monitoring

Violation	# Violations	# Systems
Qualified Operator Failure	0	0

Disinfection Byproducts Monitoring

	# Violations	# Systems
Monitoring	0	0

Disinfectant Residual Contamination Violations

MRDL	Treatment Technique # Violations	Treatment Technique # Systems	Monitoring # Violations	Monitoring # Systems
0	0	0	0	0

Lead and Copper Rule Violations

(Per the SWDA, only Community and Non-transient, non-community water systems monitor for Lead and Copper.)

Contaminant	Number of Monitoring Violations	Number of Systems	Systems with Violations
Lead and Copper	0	0	0%

Surface Water Treatment Rule Violations 2020

Type of Violation	Number of Violations	Number of Systems
Monitoring	0	0
Record Keeping	0	0
Treatment Technique	0	0

Ground Water Rule 2020

Type of Violation	Number of Violations	Number of Systems
Monitoring/Reporting/Recordkeeping	0	0
Sanitary Survey – Failure to Address Deficiency	0	0
Sanitary Survey – Failure to Consult	0	0
Treatment Technique	0	0

Administrative Orders 2020

The Drinking Water program issues an Administrative Order (AO) when a public water system is significantly out of compliance. (Each contaminant has different parameters that indicate what constitutes “significantly out of compliance.”) Once an AO is issued, MCL violations continue to be issued until the System returns to compliance. Failure to comply with the terms of an AO can result in administrative action or revoking the system’s permit to operate.

	Total Coliform Monitoring	Nitrate	Arsenic	DBP
Number of Orders	0	1	0	0
Population Affected	0	397	0	0

Variations and Exemptions

No variations or exemptions were issued in 2020.

MCL Violations other than Total Coliform/RTCR and Nitrate**Population Affected by Various Contaminants**

Contaminant	Number of MCL Violations	Number of Systems	Population Affected
Arsenic	3	2	727
Selenium	3	3	7612
Uranium Mass	7	2	603

CHAPTER 7:

Energy Programs

The primary energy-related responsibilities focus on administering the Dollar and Energy Saving Loan Program (DESL), administering the federally funded state Weatherization Assistance Program (WAP), and conducting the overall State Energy Program (SEP). The SEP consists of the general pursuit of all energy-related activities and is funded by the Department of Energy (DOE). Specific efforts include the administration and implementation of the Nebraska State Energy Code, pursuit of an energy benchmarking effort

focused on improving energy use in state buildings, and the implementation of the Renewable Fuel Infrastructure Program to improve air quality in Nebraska through the installation of ethanol blender pumps capable of dispensing clean burning high-blend ethanol. The DESL and WAP provide financial resources for Nebraska citizens to install upgrades to their homes or businesses to make them more energy efficient and decrease energy costs.



This photo shows a residential solar installation erected summer of 2020 in South Lincoln, funded by a Dollar and Energy Savings Loan from NDEE. Photo by Bryce Puck, May 2021.

A comprehensive annual report on energy activities is required by statute and the 2021 report will be included in a separate report submitted to the Governor and the Clerk of the Legislature by February 15, 2022. The State Energy Annual Report for 2020 may be found at <http://dee.ne.gov/NDEQProg.nsf/PubsForm.xsp?databaseName=CN=DEQSER6/O=NDEQ!!Publica.nsf&documentId=34437FBD421B63EE8625867E00584DCF&action=editDocument>.

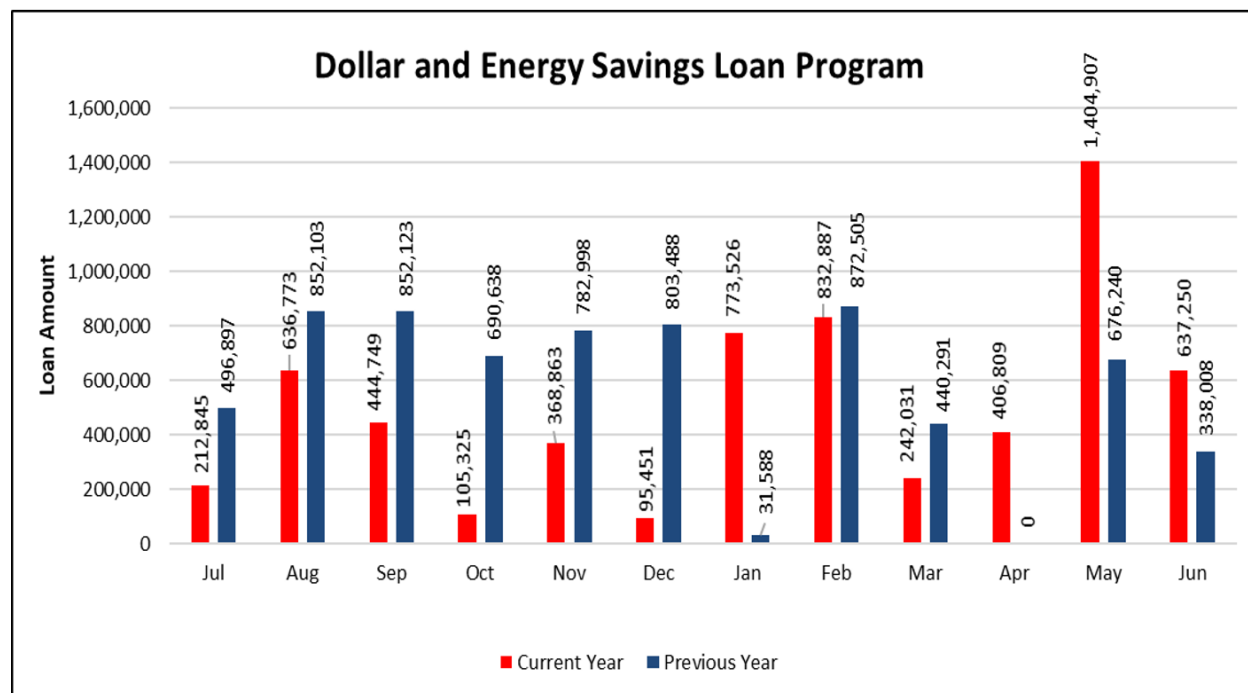
Energy

Dollar and Energy Savings Loan Program

The Dollar and Energy Saving Loans (DESL) program helps hundreds of Nebraska residents, local businesses, school districts, and municipalities make their homes and buildings more energy efficient and helps them reduce energy bills by providing low-cost financing for energy-efficient equipment and projects. NDEE provides funds to Nebraska-based lending institutions to participate in a portion (50-90%) of each energy conservation loan. The DESL revolving loan system will continue to provide for energy conservation loans far into the future. These energy loans can be used for a multitude of energy-related projects including replacing inefficient lighting; installing highly rated, energy-efficient heating and cooling systems; providing better thermal resistance with added insulation, and replacing old windows and doors; installing large and small-scale solar projects; and constructing new, energy-efficient housing..

In fiscal year 2021, the DESL program helped finance \$9.43 million in 327 projects that improved energy efficiency. Over that time period the DESL program is estimated to have saved 57,458 kilowatt-hours of electricity, 47,996 therms of natural gas and reduced carbon emissions by almost 6,710 tons. Since the inception of the program in 1990, the DESL program has helped finance over 30,000 energy saving projects with the total cost of all improvements financed totaling over \$377.8 million.

The following chart shows the loans disbursed for FY2019/2020 and FY2020/2021.



Highlights from FY21 include: \$1.2M HVAC project for Weeping Water Public School District; \$400K lighting retrofit for Cass County School District; \$58K lighting retrofit for non-profit, City Impact; and 26 new solar projects totaling 424.74 kW.

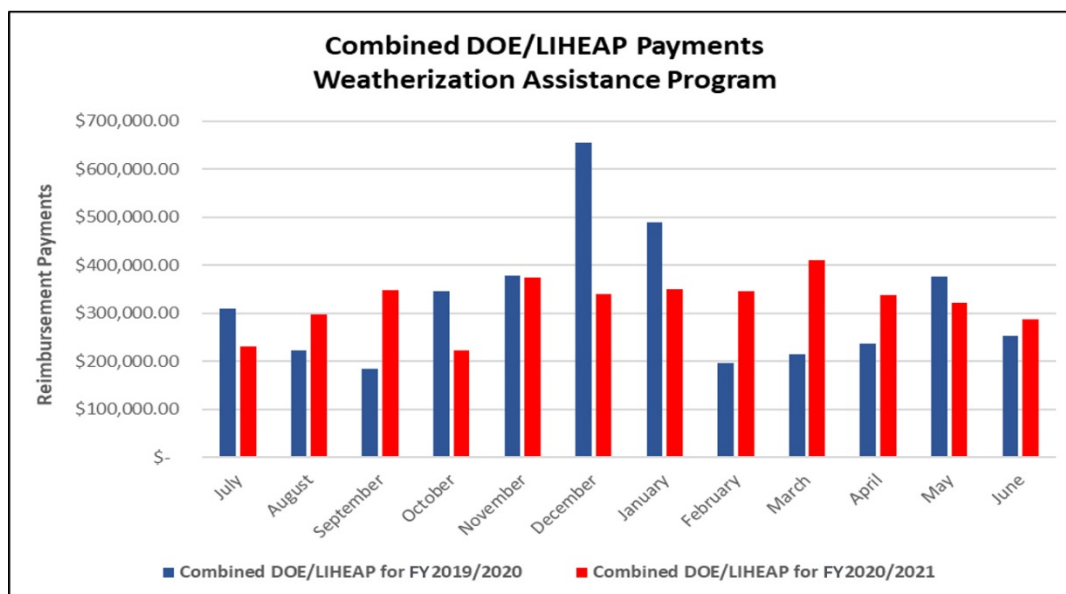
Weatherization Assistance Program

This federally funded program enables low-income families in Nebraska to reduce their energy bills by making their homes more energy efficient. Program staff evaluate the homes of clients that meet income requirements and are approved for weatherization assistance services to identify the most effective energy- and dollar-saving improvements. Seven community action agencies and one non-profit agency are responsible for implementing the home weatherization improvements in Nebraska.

The types of improvements vary based on an energy audit analysis of the home; improvement investment averages between \$5,000 and \$7,500 per home, excluding the cost of health and safety improvements such as furnace repairs. The most common improvements are adding insulation, air sealing the home, repairing and replacing furnaces, installing energy-efficient lighting, and installing weather-stripping. Beyond the energy savings achieved, clients generally notice an increase in comfort due to reduced drafts and a more even temperature throughout their home. Between July 1, 2020 and June 30, 2021, 351 homes were weatherized across the state, helping to reduce the energy burden for low-income Nebraskans. Weatherization Program staff inspect a minimum of 10-15% of all completed homes to ensure the quality of work performed.

The program receives funding from two sources: DOE’s Weatherization Assistance Program and the Low-Income Home Energy Assistance Program (LIHEAP) financed through the Nebraska Department of Health and Human Services. Since the WAP began in 1977, \$220.7 million has been provided to make energy efficiency improvements in 70,326 homes. The Department also received an additional \$500,000 from LIHEAP to use for Heating and Cooling Repair and Replacement. This program, started in January of 2019, is able to offer furnace and AC repair or replacement assistance to extremely low-income clients. This program was especially beneficial in providing heating system replacements needed as a result of Nebraska’s historic flooding during the spring of 2019.

The following chart shows the Weatherization Assistance Programs reimbursements for FY2019/2020 and FY2020/2021.



The Covid-19 pandemic has presented numerous challenges for the program. Changes to standard operating procedures were needed to conduct normal weatherization activities and to keep program clients and sub-grantee staff safe. NDEE Weatherization Assistance Program staff collaborated with sub-grantee representatives to develop guidance and identify needed training to enable weatherization services to take place in residential homes with potentially high-risk individuals at home. NDEE staff and sub-grantees will continue to work on updating these processes to ensure the safety of our clients while continuing to provide needed weatherization services across Nebraska.

State Energy Program and Special Projects

The Department of Energy (DOE) provides funds to states for the general operations of State Energy Offices. These funds support the day-to-day energy responsibilities of NDEE. The funds provide support for both the DESL and WAP programs and serve as a primary funding source for a number of other efforts that are the responsibility of the Energy Programs. A description of those efforts follows.

Energy Codes

As a result of LB 405, signed into law by Governor Ricketts on May 8, 2019, the Nebraska Energy Code was updated from the 2009 standards established by the International Energy Conservation Code to the 2018 standard. Nebraska was among the first states to adopt the 2018 standard. With the adoption of the updated code, homeowners of the typical three-bedroom house are projected to save between \$165 and \$206 annually on energy costs.

NDEE staff have been actively involved in providing training on the new code and prior to the pandemic had partnered with other organizations to provide on-site trainings. NDEE is continuing virtual training efforts through a training partnership with the Midwest Energy Efficiency Alliance.

Building Energy Benchmarking

NDEE staff are administering a grant from DOE involving benchmarking energy use in state buildings. To date, energy benchmarking has occurred in approximately 62% of all state-owned buildings. Building managers now can document the value of subsequent energy conservation measures. DOE estimates that benchmarking programs can save anywhere from 7-20% energy savings on an annual basis. Additionally, this grant enabled the development of a tool to calculate economic, energy, and environmental impacts in public and commercial buildings. Finally, grant funds provided Building Operation Certification and Certified Energy Manager training to 31 state employed facility managers and helped establish a curriculum for middle and high school students to learn how to benchmark energy use in any public or private building.

Renewable Fuel Infrastructure Program

From 2016 to 2019, the Nebraska Energy Office staff administered the Access Ethanol Nebraska program that provided \$2.285 million in funds to support the installation of 88 high-blend ethanol pumps at 22 retail locations across the state. LB 585, enacted by the legislature in 2019, provided NDEE with the opportunity to place additional blender pump installations

should funding become available. Increased use of advanced biofuels will have a positive impact on air quality across the state.

State Heating Oil and Propane Programs

NDEE staff support the state's heating oil and propane users by participating in the DOE State Heating Oil and Propane Program. Price and supply information is obtained from Nebraska retailers and entered on the NDEE website. Consumers can then effectively plan for purchases of these commodities during the heating season.

Information may be found at:

- Propane Prices: <https://neo.ne.gov/programs/stats/inf/86.html>
- Heating Oil Prices: <https://neo.ne.gov/programs/stats/inf/87.html>

Nebraska Energy Assurance Initiative

NDEE staff gave a virtual presentation to the National Association of Emergency Management in April 2021. The presentation was an overview of Energy Assurance and the US DOE State Energy Program project: Nebraska Energy Assurance Initiative. The Nebraska Energy Assurance Initiative is aiding local officials and emergency managers to increase their jurisdictions' energy resiliency by developing their own local energy assurance plans.

CHAPTER 8:

Expenditure and Budget Summary

The following information summarizes Department expenditures for fiscal year 2021 and outlines budget projections for fiscal year 2022. 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 FY21 expenditures for each federal grant, including the state match.

Chart B lists actual FY21 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 FY22 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 FY22 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 FY21

Grant / Program Title	Grant \$	Match \$	Total \$
Drinking Water State Revolving Fund	9,501,017	655,486	10,156,503
Clean Water State Revolving Fund	4,500,807	1,872,487	6,373,294
Performance Partnership	4,368,676	1,981,157	6,349,833
Weatherization	3,597,284		3,597,284
319 H Non-Point Source	2,667,598		2,667,598
Dollar & Energy Savings Loan (DESL)	2,393,466	48,145	2,441,610
Leaking Underground Storage Tanks	780,636	83,985	864,621
State Energy Program (SEP)	532,738	119,769	652,507
Section 128 (a) State Response	467,243		467,243
Superfund Pre-remedial	441,786		441,786
PM 2.5 Ambient Air Monitoring	308,309		308,309
Superfund Core	172,238	81,309	253,547
Clean Diesel	249,300		249,300
Section 106 Monitoring	242,297		242,297
604 B Water Quality Management	159,695		159,695
Department of Defense	133,339		133,339
Superfund Management Assistance	127,456		127,456
WIIN-Martinsburg	50,049		50,049
Lead in Schools/Daycares	33,158		33,158
Superfund UNL Mead	9,027		9,027
Totals	\$ 30,736,118	\$ 4,842,337	\$ 35,578,455
Non-grant federal expenditures*	\$ 4,406,761		
*Indirect Cost Pool, EQC, and USDA/RAPMA			
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 46.62% was negotiated with EPA for FY21 and charged against direct payroll cost to cover agency administrative expenses			

Chart B - Actual Expenditure of State Funds for State Programs for FY21 Including Aid

Program	Subprogram	Fund Type	Personal Services	Operating Expenses	Travel	Capital Outlay	Consulting /Contracting	Distribution of Aid	Total
Petroleum Release Remedial Action Act	051	C	879,902	509,184	2,628	40,760	5,690,535	3,304,252	10,427,261
Waste Reduction & Recycling	091	C	243,156	266,757	1,275	-	7,486	3,739,177	4,257,851
Volkswagen	065	C	36,387	23,675	-	-	-	3,134,024	3,194,086
Emission Inventory - Title V	033	C	1,565,053	571,269	6,773	-	22,118	-	2,165,213
Ag - Livestock	016	G/C	1,395,258	523,648	20,599	-	23,750	-	1,963,255
Integrated Solid Waste Management	004	C	1,334,480	525,693	13,835	440	59,164	-	1,933,613
Litter Reduction	024	C	156,950	203,492	-	-	3,666	1,423,269	1,787,377
Superfund State Cost Share	023	C	48,860	15,346	-	-	422,937	73,629	560,771
Engineering Reviews	061	G	337,193	0	30	-	62,921	-	400,144
Private Onsite Wastewater Cert & Registration	030	C	274,770	97,018	647	-	4,314	-	376,748
Energy Admin/Special Projects	816	C	105,884	24,238	181	-	3,666	-	133,969
Emergency Response	057	C	68,033	35,917	-	-	-	-	103,950
Air Construction Permits	020	C	53,973	18,392	-	-	-	-	72,366
Operator Certification	040	C	43,844	14,716	422	-	11,997	-	70,979
Private Onsite Wastewater Permit & Approval	037	C	36,657	28,639	23	-	1,779	-	67,097
Chemigation	034	C	28,231	10,783	-	-	24,837	-	63,850
Remedial Action Plan Monitoring Act	036	C	23,723	7,978	-	-	1,767	-	33,468
Training Fund	031	C	-	260	-	-	-	-	260
Community Right to Know	041	G	77	105	-	-	-	-	182
Totals			\$ 6,632,430	\$ 2,877,110	\$ 46,412	\$ 41,200	\$ 6,340,936	\$ 11,674,351	\$ 27,612,439
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 46.62% was negotiated with EPA for FY21 and charged against direct payroll cost to cover agency administrative expenses.									

Chart C - Proposed Budget for Each Federal Grant Program for State FY22			
Grant / Program Title	Grant \$	Match \$	Total \$
Drinking Water State Revolving Fund	11,458,315	661,295	12,119,610
Clean Water State Revolving Fund	7,172,052	1,901,455	9,073,507
Performance Partnership	4,862,050	2,049,416	6,911,466
Weatherization	3,638,249	100,000	3,738,249
319 H Non-Point Source	3,103,140		3,103,140
Dollar & Energy Savings Loan (DESL)	2,450,000	50,000	2,500,000
State Energy Program (SEP)	1,592,248	398,062	1,990,310
Public Water	1,081,572	463,531	1,545,103
Leaking Underground Storage Tanks	685,669	77,778	763,447
PM 2.5 Ambient Air Monitoring	445,421		445,421
Section 128 (a) State Response	392,845		392,845
Clean Diesel	265,000		265,000
Superfund Core	229,615	25,513	255,128
Section 106 Monitoring	244,800		244,800
604 B Water Quality Management	159,158		159,158
Department of Defense	154,018		154,018
Superfund Management Assistance	151,818		151,818
Superfund Pre-remedial	150,318		150,318
State Heating Oil & Propane Program (SHOPP)	23,733	44,075	67,808
WIIN-Martinsburg	34,176		34,176
Lead in Schools/Daycares	34,176		34,176
Superfund UNL Mead	16,702		16,702
Totals	\$ 38,345,075	\$ 5,771,125	\$ 44,116,200
Non-grant federal expenditures*	4,267,080		
*Indirect Cost Pool, EQC, and USDA/RAPMA			
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 36.87% was negotiated with EPA for FY22 and charged against direct payroll cost to cover agency administrative expenses			

Chart D - Proposed Budget of State Funds for State Programs for FY22 Including Aid

Program	Subprogram	Fund Type	Personal Services	Operating Expenses	Travel	Capital Outlay	Consulting /Contracting	Distribution of Aid	Total
Petroleum Release Remedial Action Act	051	C	976,125	2,014,409	6,000	-	5,700,000	6,950,601	15,647,135
Waste Reduction & Recycling	091	C	292,838	312,457	-	-	10,000	4,800,000	5,415,295
Volkswagen	065	C	72,917	27,192	934	-	4,669	3,735,000	3,840,712
Emission Inventory - Title V	033	C	2,512,478	33,291	7,000	-	-	-	2,552,769
Litter Reduction	024	C	182,210	198,618	-	-	5,000	2,100,000	2,485,828
Ag - Livestock	016	G/C	1,431,650	857,940	23,000	-	25,000	-	2,337,590
Integrated Solid Waste Management	004	C	1,409,707	520,853	13,500	-	60,000	-	2,004,060
Superfund State Cost Share	023	G/C	65,075	18,435	-	-	861,501	300,000	1,245,011
Plan Review	285	C	585,675	39,650	-	-	-	-	625,325
Environmental Safety	209	G/C	468,540	134,860	7,000	-	-	-	610,400
Energy Admin/Special Projects	816	C	224,255	39,891	-	-	-	282,950	547,096
Engineering Reviews	061	G	357,913	2,000	-	-	65,000	-	424,913
Private Onsite Wastewater Cert & Registration	030	C	279,823	111,970	5,000	-	5,000	-	401,793
Well Drillers	287	C	292,838	34,850	9,000	-	-	-	336,688
Private Water Environmental Safety	210	G/C	117,135	110,700	5,500	-	-	-	233,335
Air Construction Permits	020	C	97,613	31,152	2,000	-	-	-	130,765
Emergency Response	057	G/C	78,090	39,822	1,500	-	-	-	119,412
Operator Certification	040	C	45,553	23,904	1,500	-	1,200	-	72,157
Chemigation	034	C	32,538	10,217	-	-	25,000	-	67,755
Totals			\$ 9,522,973	\$ 4,562,211	\$ 81,934	\$ -	\$ 6,762,370	\$ 18,168,551	\$ 39,098,039
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 36.87% was negotiated with EPA for FY22 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 and energy programs.

Waste Management Aid Programs

Following is a summary of funds provided in FY2021 through Waste Grants programs, managed by the Waste Planning and Aid Section.

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 Calendar Year 2021, 53 Litter Reduction and Recycling grants were awarded, totaling \$2,084,200. The grants were awarded in three categories: Public Education, \$1,431,568; Cleanup, \$65,986; and Recycling, \$586,646. 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 CY2021, 191 projects totaling \$4,602,170 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 FY2021, the program provided \$48,579 to 23 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 FY2021, the program provided \$101,365 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 NDEE, 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 Waste Grants Programs 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 \$254 million has been disbursed since the program began. The program provided \$3.2 million to 139 sites for investigation and cleanup in FY2021.

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 (CWSRF) 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 FY2021, the CWSRF funded projects totaling \$9,497,305 in loans and \$1,822,704 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 FY2021, the program provided financial assistance to public water system projects totaling \$21,030,548, of which disadvantaged communities received \$3,628,187 in forgiveness funding.

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

Energy Aid Programs

A. Dollar and Energy Savings Loan Program

The Dollar and Energy Saving Loans (DESL) program assists Nebraska residents, local businesses, school districts, and municipalities make their homes and buildings more energy efficient, and helps reduce energy bills by providing low-cost financing for energy-efficient equipment and projects. NDEE provides funds to Nebraska-based lending institutions to participate in a portion (50-90%) of each energy conservation loan.

In Fiscal year 2021, the DESL program helped finance \$9.43 million in 327 projects. Since the inception of the program in 1990, the DESL program has helped finance over 30,000 energy saving projects with the total cost of all improvements financed totaling over \$377.8 million.

B. Weatherization Assistance Program

The Weatherization Assistance Program (WAP) enables low-income families in Nebraska to reduce their energy bills by making their homes more energy efficient.

The program receives funding from two sources: DOE's Weatherization Assistance Program and the Low-Income Home Energy Assistance Program (LIHEAP) financed through the Nebraska Department of Health and Human Services. Between July 1, 2020 and June 30, 2021, 351 homes were weatherized across the state, helping to reduce the energy burden for low-income Nebraskans. Since the WAP began in 1977, \$220.7 million has been provided to make energy efficiency improvements in 70,326 homes.

Seven community action agencies and one non-profit agency are responsible for implementing the home weatherization improvements in Nebraska.

Additional information about these programs can be found in the Energy Programs portion of Chapter 7.

CHAPTER 10:

Staffing

NDEE deals with a wide array of complex environmental issues and it is essential to our operations to recruit and hire technically competent people. Trained, experienced, and dedicated staff within NDEE 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 NDEE. Staff turnover impacts continuity in NDEE's programs and activities, and results in additional costs for recruitment and training of replacement staff members. NDEE 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.

NDEE 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 10 years.

Employees Assuming Agency Positions										
<i>These figures include new hires, promotions, transfers and classification upgrades. Figures for 2021 are from July 1, 2020, through June 30, 2021.</i>										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Director, Deputy Director & Division Administrator	0	0	0	1	5	0	0	0	1	4
E Q Section Supervisor, Accounting & Finance Manager, IT Manager, Division Chief, Human Resource Manager	0	1	5	0	4	0	1	2	5	8
Unit Supervisor	2	1	1	2	0	0	0	3	1	***
Administrative Program Officer I										2
Human Resource Officer, Training Coordinator	0	0	0	1	0	1	0	1	0	0
Process Improvement Coordinator/Legislative Coordinator						1	0	0	0	1
Federal Aid Administrator, Financial Assurance Coordinator, Accountant	1	0	0	0	1	1	1	0	0	1
Office Specialist, Administrative Specialist & Accounting Clerk	0	2	4	4	4	1	3	2	3	8
Information Technology, Marketing & Communication Specialist, Research Analyst	0	0	0	0	0	2	0	2	2	0
Attorney I, II & III	0	0	2	0	2	1	0	0	1	1
Engineer & Professional Engineers	2	2	7	2	4	5	4	6	1	8
Environmental Quality Compliance Specialist	0	1	0	0	1	1	0	0	3	***
Environmental Quality Programs Specialist I or II	11	10	7	11	19	8	11	9	15	12
Geologist, Groundwater I & II	2	4	2	3	1	0	0	0	2	2
Environmental Assistance Coordinator	1	1	0	0	0	0	1	1	1	***
Energy Conservation Program Specialist/Energy Conservation Loan Program Coordinator									1	2
TOTALS	19	22	28	24	41	21	21	26	36	50

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.

NDEE 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	\$ 4,939,119	\$ 2,121,379	Enterprise Fund	City of Alliance
Beatrice Area SW Agency	Beatrice	MSWDA	07/12/00	\$ 7,117,018	\$ 7,117,018	Financial Test	City of Beatrice
Butler County Landfill	David City	MSWDA	10/03/08	\$ 15,399,228	\$ 7,225,859	Trust Fund	US Bank
Douglas County Landfill	Bennington	MSWDA	03/28/00	\$ 13,716,404	\$ 13,716,404	Surety Bond	Evergreen Ntl. Indemnity Co.
G & P Dev Landfill	Milford	MSWDA	10/03/08	\$ 12,704,158	\$ 3,387,276	Trust Fund	US Bank
Gering Landfill	Gering	MSWDA	02/13/96	\$ 2,392,692	\$ 2,025,121	Enterprise Fund	City of Gering
L.P. Gill Landfill	Jackson	MSWDA	04/09/96	\$ 13,740,211	\$ 13,740,211	Surety Bond	Travelers Casualty & Surety
Grand Island Landfill	Grand Island	MSWDA	03/31/96	\$ 10,724,846	\$ 10,724,846	Financial Test	City of Grand Island
Hastings Area Landfill	Hastings	MSWDA	03/18/13	\$ 6,261,374	\$ 3,912,622	Enterprise Fund	City of Hastings
Hastings Landfill	Hastings	Sanitary LF	10/01/97	\$ 147,645	\$ 33,073	Faith & Credit	City of Hastings
Holdrege Landfill	Holdrege	MSWDA	07/29/96	\$ 3,276,700	\$ 2,240,159	Enterprise Fund	City of Holdrege
J-Bar-J Landfill	Ogallala	MSWDA	03/28/00	\$ 6,527,412	\$ 6,527,412	Performance Bond	Evergreen Ntl. Indemnity Co.
Kearney Landfill	Kearney	MSWDA	03/31/94	\$ 8,513,611	\$ 4,317,535	Trust Fund	Union Bank & Trust
Kimball Landfill	Kimball	MSWDA	05/10/96	\$ 1,845,115	\$ 1,233,283	Enterprise Fund	City of Kimball
Lexington Landfill	Lexington	Sanitary LF	07/25/96	\$ 289,903	\$ 255,209	Faith & Credit	City of Lexington
Lexington Area Agency	Lexington	MSWDA	01/19/97	\$ 2,985,793	\$ 2,479,047	Enterprise Fund	Lexington Area SW Agency
Lincoln Bluff Road Landfill	Lincoln	MSWDA	04/01/96	\$ 26,722,571	\$ 26,722,571	Financial Test	City of Lincoln
Loup Central Landfill	Elba	MSWDA	04/09/96	\$ 2,752,871	\$ 1,201,003	Trust Fund	Citizens Bank & Tr St. Paul
McCook Landfill	McCook	Sanitary LF	03/04/96	\$ 341,160	\$ 85,290	Faith & Credit	City of McCook
NE Ecology Landfill	Geneva	MSWDA	10/03/08	\$ 3,309,365	\$ 1,152,157	Trust Fund	US Bank
NNSWC Landfill	Clarkson	MSWDA	04/09/96	\$ 20,282,003	\$ 9,562,341	Enterprise Fund	NNSWC
Pheasant Point Landfill	Bennington	MSWDA	08/01/03	\$ 30,674,171	\$ 30,674,171	Surety Bond	Evergreen Ntl. Indemnity Co.
Sarpy County Landfill	Papillion	MSWDA	03/31/96	\$ 3,597,174	\$ 3,937,989	Enterprise Fund	Sarpy County
Sidney Landfill	Sidney	MSWDA	02/11/97	\$ 2,568,807	\$ 1,144,881	Enterprise Fund	City of Sidney
SWANN Landfill	Chadron	MSWDA	09/25/97	\$ 2,393,983	\$ 857,275	Enterprise Fund	SWANN
Valentine Landfill	Valentine	MSWDA	04/09/96	\$ 2,193,468	\$ 924,859	Enterprise Fund	City of Valentine
York Landfill	York	Sanitary LF	05/14/96	\$ 130,207	\$ 12,037	Faith & Credit	City of York
York Area SW Landfill	York	MSWDA	05/14/96	\$ 5,541,146	\$ 2,452,241	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	\$ 284,565	\$ 284,565	Escrow Account	Bank of Bennington
Alliance C & D Landfill	Alliance	Const./Demol.	12/02/99	\$ 421,267	\$ 120,015	Enterprise Fund	City of Alliance
Anderson Excavating C & D	Omaha	Const./Demol.	11/15/12	\$ 1,008,241	\$ 1,008,241	Letter of Credit	Availa Bank
Arnold C & D Landfill	Arnold	Const./Demol.	07/24/00	\$ 50,454	\$ 51,530	Enterprise Fund	Village of Arnold
Beatrice Area SW Agency	Beatrice	Const./Demol.	10/15/12	\$ 1,089,296	\$ 1,089,296	Financial Test	City of Beatrice
Benkelman C & D Landfill	Benkelman	Const/Demol.	10/15/06	\$ 70,286	\$ 26,178	Enterprise Fund	City of Benkelman
Broken Bow C & D Landfill	Broken Bow	Const/Demol.	11/23/07	\$ 133,404	\$ 47,178	Enterprise Fund	City of Broken Bow
Bud's Sanitary Service C & D	Newman Grove	Const./Demol.	06/01/97	\$ 39,204	\$ 39,204	Letter of Credit	First Natl. Bank Newman Gr
Eco-Storage C & D Landfill	Omaha	Const./Demol.	06/03/10	\$ 42,344	\$ 42,344	Surety Bond	Evergreen Ntl Indemnity Co.
Franklin C&D Landfill	Franklin	Const./Demol.	11/08/10	\$ 67,838	\$ 26,561	Enterprise Fund	City of Franklin
Gage County C & D Landfill	Beatrice	Const./Demol.	02/23/98	\$ 174,852	\$ 200,000	Letter of Credit	Security First Bank
Hawkins Construction C & D	Omaha	Const./Demol.	02/11/21	\$ 413,499	\$ 413,499	Surety Bond	Western Surety Co.
Holdrege C & D Landfill	Holdrege	Const/Demol.	05/01/09	\$ 327,615	\$ 84,541	Enterprise Fund	City of Holdrege
Imperial C&D Landfill	Imperial	Const./Demol.	06/01/01	\$ 157,325	\$ 83,651	Enterprise Fund	City of Imperial
KGP Services C & D	Norfolk	Const/Demol.	11/06/03	\$ 102,014	\$ 102,014	Escrow Account	Elkhorn Valley Bank & Trust
Kimball C & D Landfill	Kimball	Const./Demol.	04/01/01	\$ 189,026	\$ 68,325	Enterprise Fund	City of Kimball
Lead Waste Mgmt C&D Landfill	Waterbury	Const./Demol.	05/28/14	\$ 75,965	\$ 75,965	Letter of Credit	Adrian State Bank
L.P. Gill Landfill C & D	Jackson	Const/Demol.	04/09/96	\$ 777,920	\$ 777,920	Surety Bond	Travelers Casualty & Surety
Lexington C & D Landfill	Lexington	Const./Demol.	09/30/98	\$ 349,611	\$ 177,637	Enterprise Fund	Lexington Area SW Agency
Lincoln North 48th St. C & D	Lincoln	Const./Demol.	04/01/96	\$ 3,676,342	\$ 3,676,342	Financial Test	City of Lincoln
Loup Central C & D Landfill#2	Elba	Const./Demol.	01/28/01	\$ 182,496	\$ 64,349	Trust Fund	Citizens Bank & Tr. St. Paul
NPPD Gerald Gentleman	Sutherland	Const./Demol.	04/01/95	\$ 272,234	\$ 272,234	Financial Test	NPPD
O'Neill C & D Landfill	O'Neill	Const./Demol.	06/01/01	\$ 236,917	\$ 57,486	Enterprise Fund	City of O'Neill
O'Neill Wood Resources C & D	Grand Island	Const./Demol.	10/10/18	\$ 481,674	\$ 35,419	Trust Fund	Minden State Bank & Trust
PAD LLC C & D Landfill	Hastings	Const./Demol.	06/05/02	\$ 211,536	\$ 212,472	Escrow Account	Five Points Bank
Plainview C & D Landfill	Plainview	Const./Demol.	09/26/00	\$ 89,245	\$ 78,050	Enterprise Fund	City of Plainview
12221 Rainwood Road C & D	Omaha	Const/Demol.	08/10/21	\$ 217,620	\$ 217,620	Surety Bond	North American Specialty Ins.
Red Cloud C&D Landfill	Red Cloud	Const/Demol.	04/04/17	\$ 101,843	\$ 15,194	Enterprise Fund	City of Red Cloud
Schmader C & D Landfill	West Point	Const/Demol.	07/27/12	\$ 207,646	\$ 196,150	Letter of Credit	Charter West Ntl Bank
Sidney C & D Landfill	Sidney	Const./Demol.	11/23/99	\$ 280,190	\$ 60,368	Enterprise Fund	City of Sidney
Three Valleys C & D Landfill	Indianola	Const./Demol.	02/24/10	\$ 174,715	\$ 174,715	Letter of Credit	McCook Ntl Bank
York C & D Landfill	York	Const/Demol.	12/01/07	\$ 846,734	\$ 172,874	Enterprise Fund	City of York
Fossil Fuel Combustion Ash (FFCA), Industrial Waste Landfills, Monofills							
Ash Grove Cement Co.	Louisville	Indus. Waste	03/01/03	\$ 4,793,726	\$ 4,793,726	Insurance Policy	Great American E&S Ins. Co.
Clean Harbors Technology	Kimball	Monofill	07/31/20	\$ 2,953,236	\$ 2,953,236	Insurance Policy	Great American Ins. Co.

Safety Kleen	Omaha	RCRA Closure	07/31/20	\$ 414,851	\$ 414,851	Insurance Policy	Great American 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	\$ 1,712,398	\$ 1,712,398	Letter of Credit	1st State Bank Webster Cty IA
Douglas County Landfill	Omaha	RCRA Cor Act	08/20/18	\$ 1,852,903	\$ 1,852,903	Financial Test	Douglas County
		Underground Injection Control (UIC)					
Crow Butte Resources, Inc.	Crawford	UIC		\$ 51,383,364	\$ 51,383,364	Letter of Credit	Royal Bank of Canada
		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
B-Rose Transportation	Alvo	Waste Tire	04/16/15	\$ 100,000	\$ 100,000	Surety Bond	Merchants Bonding Co.
Butler County Landfill	David City	Waste Tire	05/16/97	\$ 50,000	\$ 50,000	Surety Bond	Travelers Casualty & Surety
Champlin Tire Recycling Inc	Concordia KS	Waste Tire	10/04/96	\$ 10,000	\$ 10,000	Letter of Credit	United Bank & Trust
Don's Used Tires	Lincoln	Waste Tire	03/13/03	\$ 5,000	\$ 5,000	Surety Bond	Old Republic Surety Co.
Gill Hauling Inc.	Jackson	Waste Tire	02/04/09	\$ 10,000	\$ 10,000	Letter of Credit	Dakota County State Bank
Hoke Transport LLC	Gering	Waste Tire	04/04/12	\$ 5,000	\$ 5,000	Surety Bond	Old Republic Surety Co.
Intrawest LLC	Fountain CO	Waste Tire	09/15/15	\$ 5,000	\$ 5,000	Surety Bond	U.S. Specialty Ins. Co.
J & M Steel	Hastings	Waste Tire	01/15/15	\$ 5,000	\$ 5,000	Letter of Credit	Five Points Bank
Kenny Frazier	Edmond OK	Waste Tire	05/26/04	\$ 5,000	\$ 5,000	Escrow Account	Bank of America, Inc.
LAL Enterprise, LLC	Alvo	Waste Tire	04/16/15	\$ 100,000	\$ 100,000	Surety Bond	Merchants Bonding Co.
Leo Porter	Oshkosh	Waste Tire	02/21/08	\$ 15,000	\$ 15,000	Escrow Account	Nebraska State Bank
Liberty Tire Services of Ohio	Savage, MN	Waste Tire	03/09/09	\$ 10,000	\$ 10,000	Surety Bond	Evergreen Ntl. Indemnity Co.
Million Tire Disposal	Sarcoxi,MO	Waste Tire	09/16/16	\$ 5,000	\$ 5,000	Surety Bond	Great American Ins.Co.
New Horizons Enterprises LLC	Lincoln	Waste Tire	05/11/12	\$ 5,000	\$ 5,000	Surety Bond	Granite Re, Inc.
Omaha Casing Co. Inc	Omaha	Waste Tire	12/05/14	\$ 5,000	\$ 5,000	Letter of Credit	Security Natl. Bank
Resource Management Co	Brownell, KS	Waste Tire	01/17/06	\$ 10,000	\$ 10,000	Letter of Credit	First State Bank, Ness Cy,KS
River City Recycling	Omaha	Waste Tire	04/22/16	\$ 43,750	\$ 43,750	Letter of Credit	Access Bank
Shockley Trucking	Octavia	Waste Tire	02/24/16	\$ 10,000	\$ 10,000	Surety Bond	Universal Surety Co.
Southwick Liquid Waste Inc.	Hickman	Waste Tire	12/16/20	\$ 20,000	\$ 20,000	Surety Bond	Atlantic Specialty Ins. Co.
Tire Cutters	Centralia KS	Waste Tire	05/13/06	\$ 5,000	\$ 5,000	Letter of Credit	First Heritage Bank
Tire Town, Inc.	Leavenworth,K	Waste Tire	06/11/15	\$ 10,000	\$ 10,000	Letter of Credit	Bank of the Prairie
Uribe Scrap Tires, LLC	Lincoln	Waste Tire	01/06/14	\$ 5,000	\$ 5,000	Surety Bond	Ohio Casualty Ins. Co.