CHAPTER 6:
Water Quality Division

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

Petroleum Remediation Program

NDEQ's activities regarding the Petroleum Remediation Program involve two interrelated program areas:

1. Overseeing the **investigation and cleanup** of petroleum contamination resulting from leaking above-ground and underground storage tanks and other sources; 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 potential contamination exists. After some initial indication that there may be petroleum contamination at a site, NDEQ decides whether more investigation and cleanup is required. The agency also determines whether parties who caused the contamination are available and financially capable of assuming responsibility.

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

The program has developed risk-based corrective action (RBCA) regulations and accompanying guidance. The RBCA process allows 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 initiating many new investigations to collect information needed for Tier 1, the first step in the RBCA process. The plan is to continue investigating additional sites until eventually the information necessary for a RBCA Tier 1 evaluation has been collected at all sites. Sites that fail Tier 1 are activated for Tier 2, which is a more detailed investigation and the next step in the RBCA process. If sites fail Tier 2, they are normally scheduled for cleanup.

Financial Assistance – Petroleum Release Remedial Action Reimbursement Fund

When contamination has been found at a site, and the NDEQ has determined that more investigation and/or cleanup are required, the agency will also determine the "responsible person(s)." This term refers primarily to those who owned or operated the site when the leak

occurred. Those who are determined to be the responsible persons may be eligible for reimbursement through the Petroleum Release Remedial Action Reimbursement Fund.

This fund helps pay for investigation and cleanup costs for owners/operators of facilities that have leaking petroleum 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 initiating reimbursements for eligible costs. To assist applicants, the program developed guidelines entitled "Reasonable Rates Schedule and Reimbursement Guidance Manual."

"Orphan" Sites

In situations involving "orphan" sites (sites where the person or business that caused the contamination either cannot be identified or located or does not have the resources to pay for their share of cleanup costs), investigation and remediation costs are paid with federal and/or state funds. In FY14, 14 orphan sites were activated for investigation and/or cleanup. As of August 31, 2014, there were 519 orphan sites on the inactive list.

Pay for Performance

Some orphan sites are selected by the state to be cleaned up through a different process known as "Pay for Performance." Under the Pay for Performance program, pre-qualified contractors are invited to submit bids to clean up specific petroleum-contaminated sites. NDEQ has signed 36 Pay for Performance contracts since the program's inception. Of these projects, 10 have been successfully completed, 19 were terminated prior to completion, and 7 are still in the cleanup phase. This program saves the state time and money in getting these sites cleaned up.

Program Statistics

Since June 1999, through July 31, 2014, 2,641 Tier 1 site investigations have been initiated. Of the 2,368 Tier 1 field investigations completed, 1,461 (62%) were closed, and 907 (38%) were determined to need a more detailed Tier 2 investigation. Since April 2002, 784 Tier 2 investigations have been completed; 557 (71%) of these sites have been closed. Of all the sites that have completed a Tier 1 or Tier 2 investigation, 316 (13%) have reported finding the contaminant methyl tert-butyl ether (MTBE) in groundwater.

The revenue going into the cleanup fund in FY14 was about $11.5 million. As of June 30, 2014, a total of $191,180,415 has been disbursed since the program began. During FY14, NDEQ reimbursed $5,176,395 to responsible persons (or their designees) for work done at 233 different sites.

The 34 sites listed on the next page are all currently active sites that have received a total reimbursement of more than $600,000 each. Once the statutory limit is reached, the responsibility of funding the remainder of cleanup necessary reverts to the responsible person. Some closed sites also reached the statutory limit but are not shown.

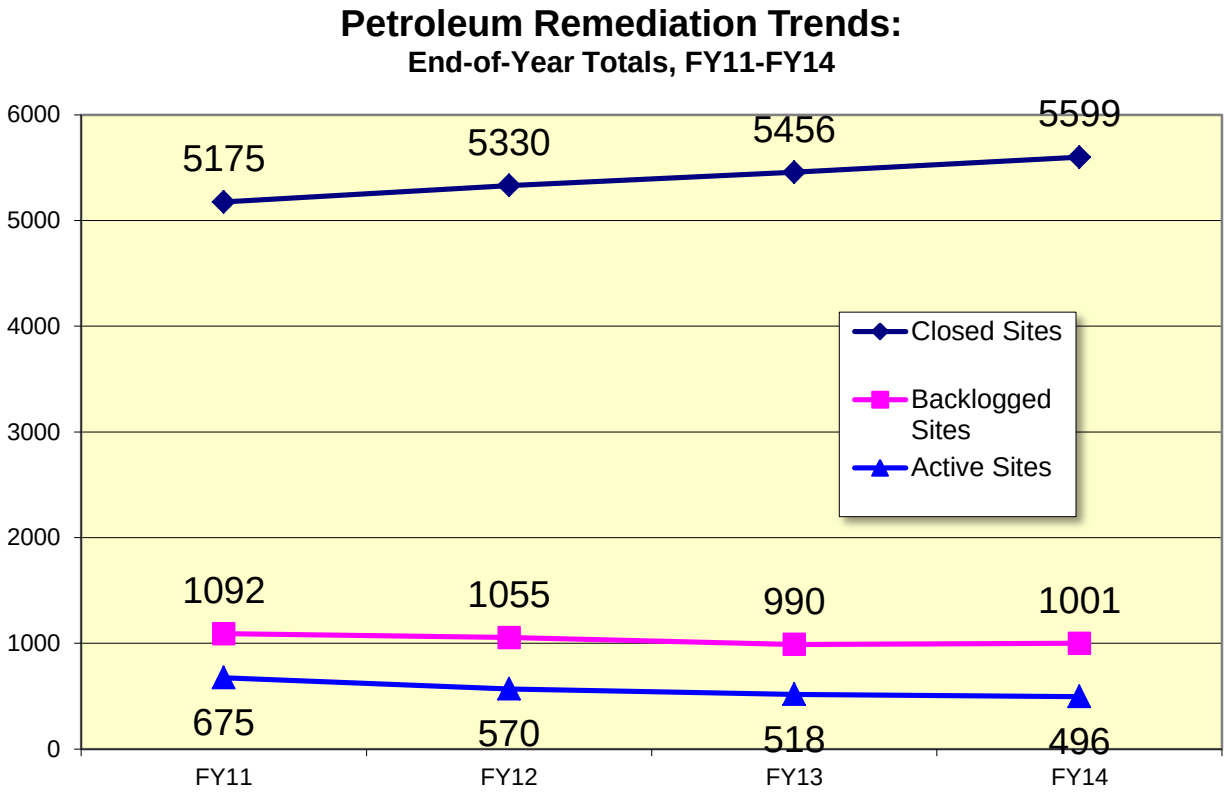
Responsible Person	City	Reimbursed amount as of June 30, 2014	Has Statutory Limit Been Reached?*
Burlington Northern & SFR	Alliance	$975,000.00	yes
Burlington Northern & SFR	Mc Cook	$975,000.00	yes
Konecky Oil	Mead	$975,000.00	yes
Burlington Northern & SFR	Lincoln	$974,300.47	yes
Conoco Phillips	Sidney	$973,919.00	yes
Burlington Northern & SFR	Alliance	$973,682.45	yes
Ag Valley Coop	Bartley	$973,381.20	no
Burlington Northern & SFR	Alliance	$973,302.50	yes
Burlington Northern & SFR	Alliance	$972,578.98	yes
Elkhorn Valley Coop	Snyder	$970,688.80	no
Western Cooperative Co.	Alliance	$969,002.35	yes
Unocal Corporation	Ogallala	$950,471.14	no
Magers Service	North Platte	$947,669.57	no
Wortman Motor Co.	Doniphan	$906,909.98	no
Neitzel Oil Co.	Springfield	$851,686.82	no
IBP ATV(at The Verticals)	Dakota City	$842,715.15	no
Coastal Refining & Market	Chester	$827,364.08	no
Flying J Inc	Gretna	$820,806.09	no
Foote Oil Company	Hastings	$806,088.05	no
Western Cooperative Co.	Alliance	$802,667.68	no
Leigh Oil Co	Leigh	$776,204.69	no
City Of Lincoln	Lincoln	$762,231.03	no
Ag Valley Coop	Curtis	$744,026.73	no
Roesener Oil Co	Cook	$743,946.93	no
Sandhill Oil	Thedford	$732,983.95	no
Lohr Petroleum Co	Columbus	$717,742.00	no
Indianola Oil Company	Indianola	$709,640.19	no
Sinclair Oil Corp.	Grand Island	$700,145.26	no
Lexington Coop Oil	Eddyville	$645,923.78	no
I-90 Truck Haven	Norfolk	$638,840.78	no
Shoemaker Truck Station	Lincoln	$630,308.64	no
Farmers Union Coop	Dannebrog	$609,703.28	no
Former Farmers Coop	Cedar Bluffs	$607,091.97	no
Burlington Northern & SFR	Columbus	$602,944.84	no

** Those with a yes indicate that the statutory limit was reached prior to June 30, 2014. The total reimbursed amount may have been reduced due to noncompliance.*

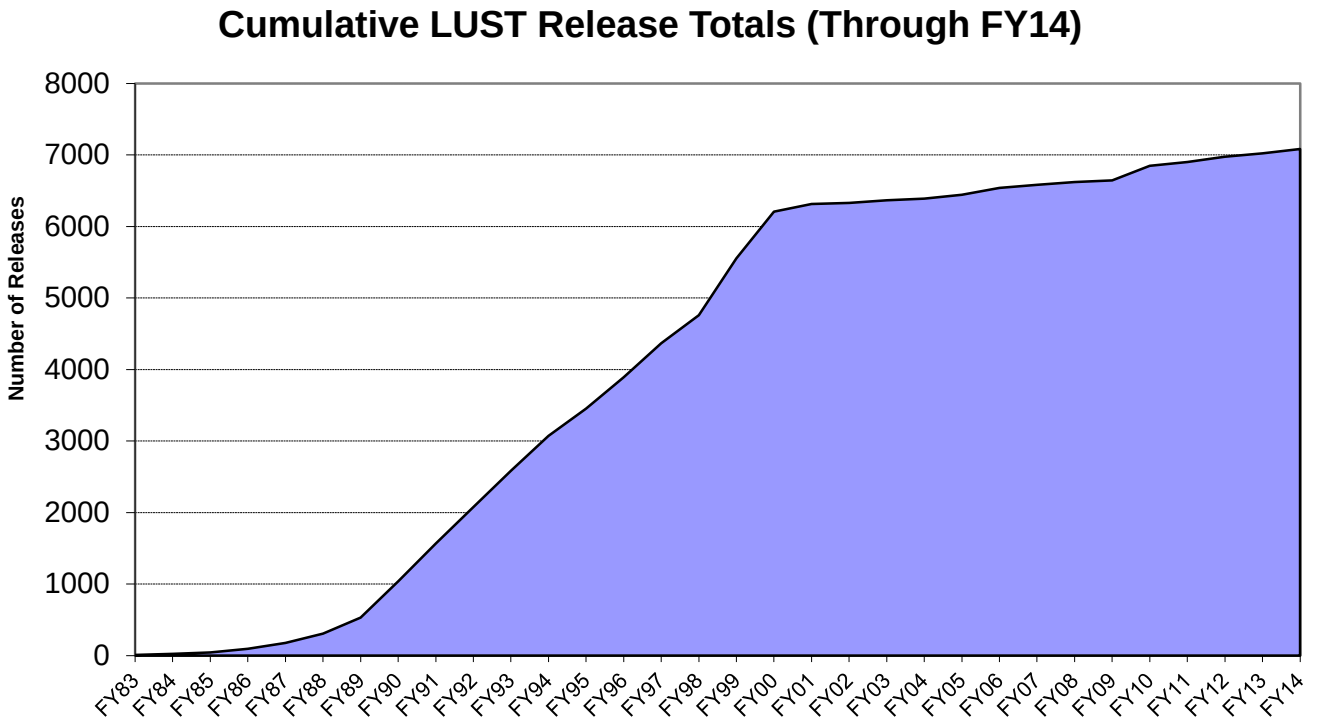
Responsible persons are able to perform voluntary remedial action prior to NDEQ's approval of their plans and still be eligible for reimbursement consideration in the future. This allows sites to move forward on their own initiative. To date, 223 suspended or backlogged leaking underground storage tank sites have been closed based on voluntary submittals.

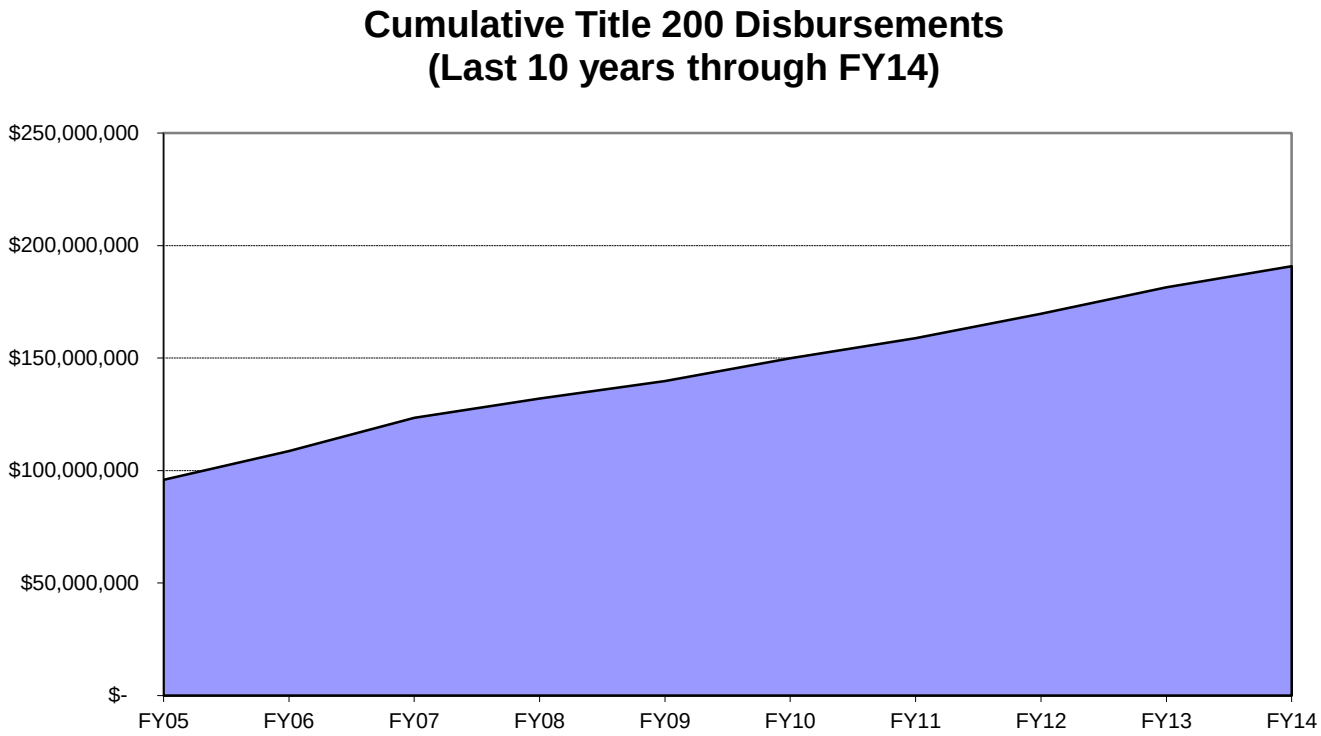
The following is a chart of end-of-year totals for the past four years relating to Petroleum Remediation sites in Nebraska. The chart provides information relating to:

- **Closed Sites:** Sites that have been closed either because they have been cleaned up or it has been determined that no cleanup is necessary.
- **Backlogged Sites:** Sites identified as potentially needing cleanup, but are on a waiting list for further investigation.
- **Active Sites:** Sites that are currently being actively investigated or remediated.



The chart below shows the cumulative number of sites that have had releases identified. The second chart shows the cumulative amount that the program has spent on investigation and cleanup in the past several years.





Agriculture Section

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

Livestock Waste Control Program

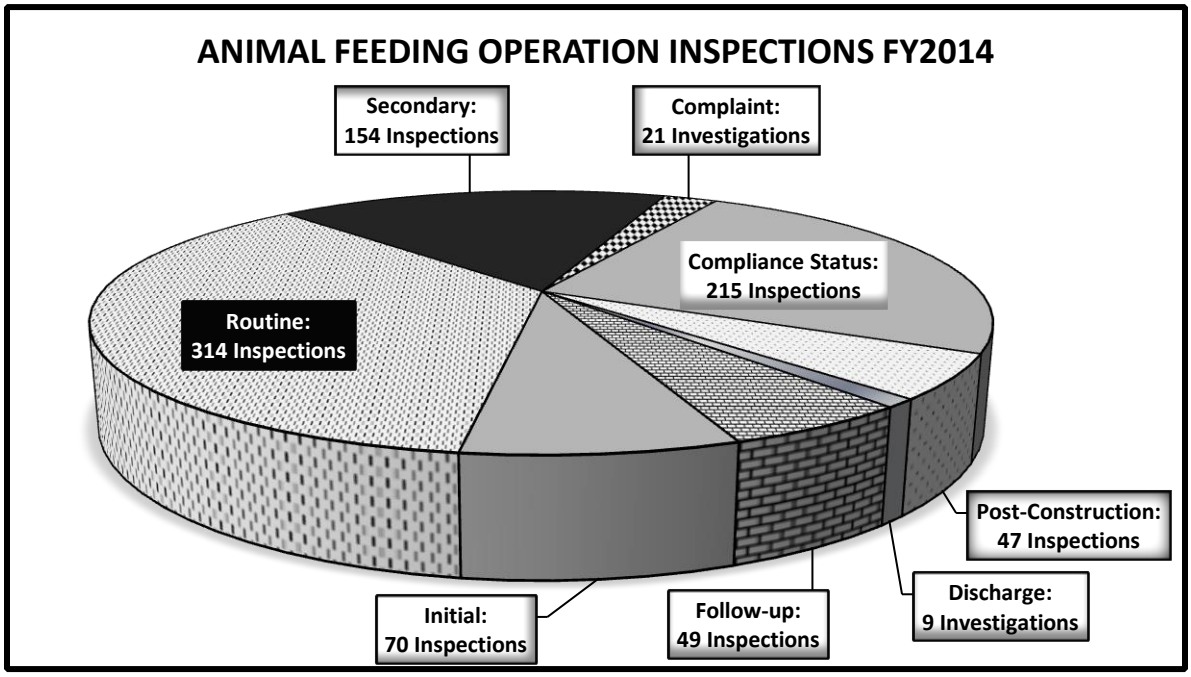
Overview

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

To accomplish this responsibility, the program administers *Title 130 - Livestock Waste Control Regulations*. The LWC program primarily focuses on the 769 active large Concentrated Animal Feeding Operations (CAFOs) required to have permits, but also works with approximately 2,000 Medium AFOs. The program uses inspections, permitting, and periodic monitoring to fulfill this responsibility. The permitting includes administering the National Pollutant Discharge Elimination System (NPDES) program for CAFOs.

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

Inspections



The LWC Program staff conducted a total of 879 livestock waste control inspections and investigations in FY2014 (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.

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 program staff. The reason for this inspection is to determine if livestock waste control facilities 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 livestock waste control facility, program staff conduct a post-construction inspection to verify the waste control facility was constructed as approved by the Department.

Routine Inspections. Once a CAFO or an AFO has received a permit, and the Department has approved operation of the livestock waste control facility, 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 inspections of an AFO, involving a detailed, extensive inspection of the livestock waste control facility, recordkeeping, and waste management at the operation.

Follow-up Inspections. These are conducted in response to some specific activity, situation, or request by the operation. Follow-up inspections could be prompted by an operation's request for a "second opinion" on a requirement; or to monitor the AFO's progress on completing a construction or repair project; or to follow up after a complaint inspection or enforcement action, for example.

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.

Discharge Investigations. Discharge investigations are conducted when discharges of livestock waste from livestock waste control facilities 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, program staff will investigate the complaint and may conduct an on-site complaint investigation.

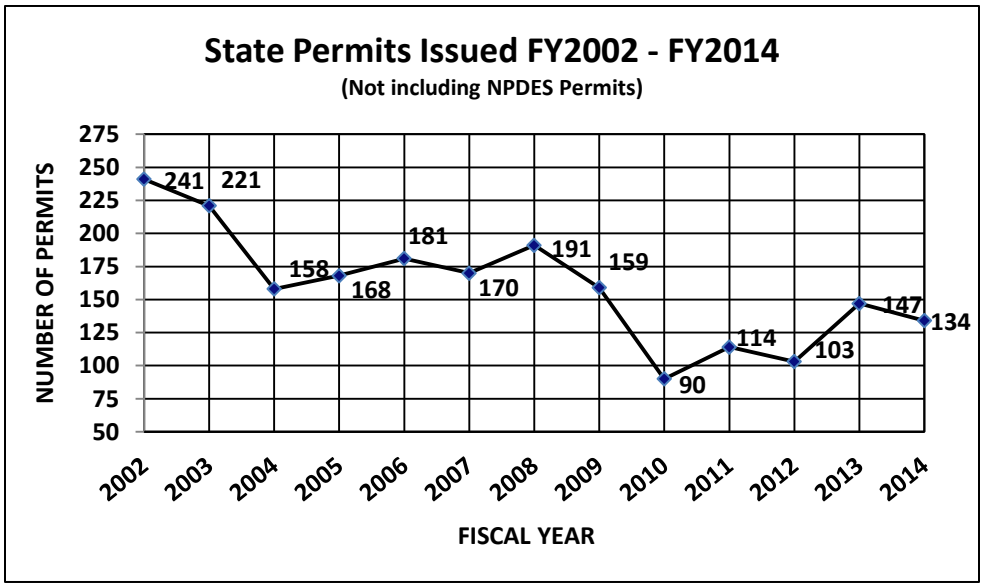
Secondary Inspections. Secondary Inspections are primarily conducted for training purposes and to assist the primary inspector in evaluating unusual or atypical AFOs.

State Permitting

After conducting an initial inspection, the Department may require the Animal Feeding Operation 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.

Construction and Operating Permits – FY2014		
Type of Application or Permit	Applications Received	Permits Issued
New permits	49	71
Modified permits	33	44
Transfer permits	17	19
TOTAL	**99**	**134**

The Department received a total of 99 permit applications and issued 134 permits during FY2014, as shown in the table to the right. The totals do not include applications received or permits issued for any NPDES permits. The chart below shows the total number of state permits issued annually for livestock waste control facilities since FY2002. There were more Construction and Operating Permits issued than applications received because the Department updated some existing Construction Permits, Construction Approvals and Operating Permits to Construction and Operating Permits if the Animal Feeding Operations updated their nutrient management plans to current Title 130 standards. The 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 FY2014, the Department gave approval to 144 AFOs for operation of their new or expanded Livestock Waste Control facilities.

National Pollutant Discharge Elimination System (NPDES) Permit

The Livestock Waste Control 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 Open-Lot Cattle Operations. 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 FY2014.

NPDES PERMITS – FY2014		
Type of NPDES Application/Permit	Applications Received	Permits Issued
GENERAL PERMIT FOR OPEN LOTS		
New Coverage	39	214
Modified or Transferred	18	16
SUBTOTAL GENERAL PERMIT:	**57**	**230**
INDIVIDUAL PERMITS		
New Coverage	3	7
Modified or Transferred	3	1
Reissued	1	4
SUBTOTAL INDIVIDUAL PERMIT:	**7**	**12**
NPDES TOTALS:	**64**	**242**

Fees

An 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 $231,669 in annual permit fees from 692 permitted operations. In addition, the Department received $23,981 in initial inspection fees (70 inspections), $23,600 in permit application fees (118 applications), and $249 in late payment fees (one operation), for a total of $279,499 in fees.

General information about the Livestock Waste Control Program, including application forms, fact sheets, guidance documents, copies of the NPDES General Permit and the four general permits, Title 130 regulations, and public notices of permit issuance or denial, can all be found on the Department's website at: http://deq.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 *Title 195 – Chemigation Regulations.*

The NRDs inspect irrigation systems and issue site permits for specific safety equipment that is required to be installed on systems that chemigate. Chemigation permits for chemigation sites are issued annually, and are reported to the Department on a calendar year basis. Since permitting began in 1987, the total number of annual permits issued has followed an upward trend, with NRDs issuing 23,695 chemigation permits in 2013, a six percent increase over 2012 permits issued.

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

In calendar year 2014, 981 applicators have been trained, tested and certified, bringing the current number of certified chemigation applicators to 5,163 applicators. Information about chemigation applicator training dates and certified applicators is available after January 1 of each year on the Department's web site, http://deq.ne.gov.

On February 14, 2014, the Governor approved Legislative Bill 272, which changed provisions related to the Nebraska Chemigation Act. Specifically, LB 272 requires that the Natural Resources Districts establish permit fees in the amount to pay the reasonable costs of administering the permit program. Title 195 -- Chemigation Regulations will be amended to become consistent with the Nebraska Chemigation Act, which was amended by LB 272. The Department anticipates bringing the proposed changes to Title 195 to the Environmental Quality Council at the February 2015 meeting.

Agricultural Chemical Containment Program

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

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

The Department and the Nebraska Department of Agriculture have a cooperative agreement that outlines the procedure for coordinating inspection activities between the two agencies. The agreement enhances the communication between the agencies and provides specific protocols to be followed when investigating Agricultural Chemical Containment complaints. In FY2014, Agriculture Section staff conducted a total of eight complaint investigations of suspected releases related to agricultural chemical containment systems. Activities related to Agricultural Chemical Containment are funded from the Performance Partnership Grant.

Water Quality Monitoring and Assessment Programs

Surface Water Assessment Programs

In 2001, NDEQ completed a comprehensive study on water quality monitoring in response to LB 1234, and began implementing comprehensive, integrated surface water monitoring programs throughout the state by working with additional monitoring partners, in addition to program staff, to collect water samples. These programs use contractual and voluntary monitoring relationships to collect samples, which has significantly improved the efficiency and effectiveness of NDEQ's statewide monitoring networks. Current monitoring partners include the Natural Resources Districts, Nebraska Public Power District, U.S. Army Corps of Engineers, Nebraska Game and Parks Commission, University of Nebraska-Lincoln, Central District Health Department, National Park Service and United States Geological Survey.

The Surface Water Monitoring and Assessment programs collect physical, chemical and biological water quality samples from streams and lakes, implements surface water improvement projects, and prepares surface water quality reports. Some monitoring programs collect stream and lake samples throughout the state; however, most monitoring is focused in one to three major river basins each year in conjunction with a rotating basin monitoring strategy.

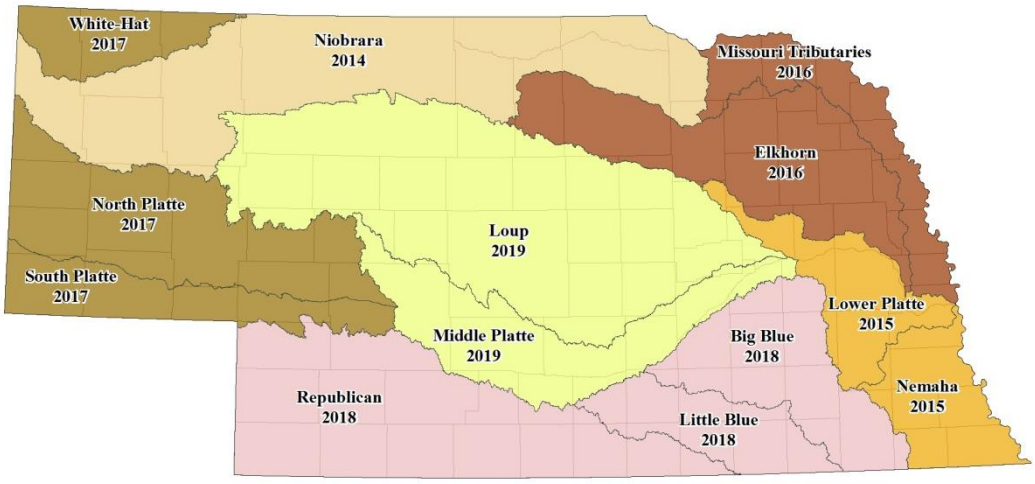
Brief descriptions of the basin monitoring strategy, as well as other water quality monitoring programs are provided below. Additionally, a more detailed overview of the programs are provided in the agency's annual publication Water Quality Monitoring Report: http://deq.ne.gov/Publica.nsf/Pages/WAT212

Basin Rotation Monitoring Program — The Basin Rotation Monitoring Program targets one to three river basins each year for intensive monitoring. Targeting resources in this manner improves NDEQ's ability to identify and remediate water quality problems and allows resources to be focused where they can produce the greatest environmental results. During a six-year cycle, all 13 major river basins in the state are intensively monitored (see map on next page for details). Monitoring data are used to document existing water quality conditions, assess the support of beneficial uses (such as aquatic life, recreation, and public drinking water supply) and prioritize water quality problems. The current six-year basin rotation monitoring cycle is:

2014 -- Niobrara River basin;
2015 -- Lower Platte and Nemaha River basins;
2016 -- Elkhorn and Missouri Tributaries River basins;
2017 -- White River-Hat Creek, North Platte and South Platte River basins;
2018 -- Big Blue, Little Blue and Republican River basins; and
2019 -- Middle Platte and Loup River basins.

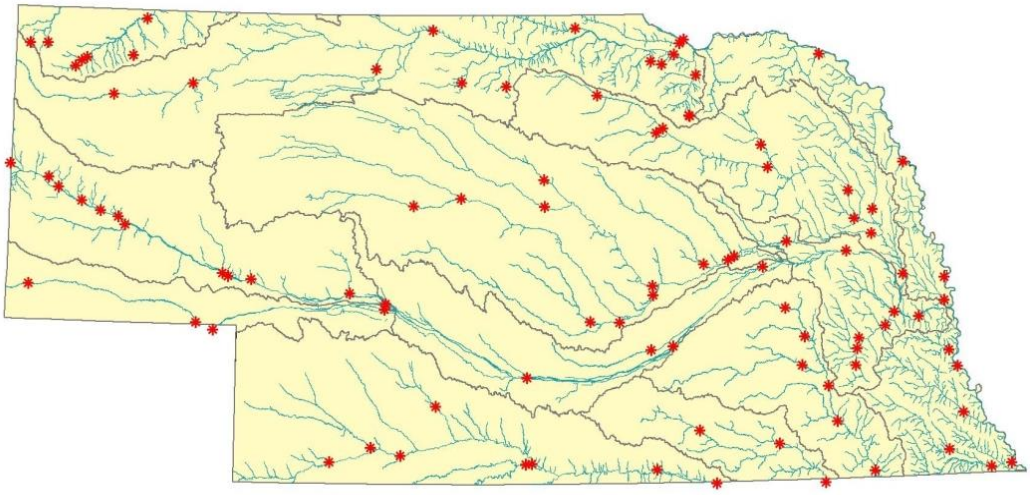
In 2014, a total of 41 stream sites in the Niobrara River Basin were sampled weekly from May through September, which resulted in 902 samples. The sites were sampled for *E. coli* bacteria, field measurements including temperature, pH, oxygen, conductivity and turbidity, and physical/chemical parameters such as nutrients, total suspended solids, chlorides and select pesticides. The data is used to document existing water quality conditions, identify water quality problems, identify pollutant(s) of concern and their sources and estimate pollutant loadings. Monitoring partners that assisted NDEQ in collecting water samples for the 2014 Basin Rotation Monitoring Program included Natural Resources Districts and the National Park Service.

Six-year basin rotation monitoring schedule



Ambient Stream Monitoring Program — This program has a network of 97 fixed stations located on main stem and tributary streams across the state (see map below for details). The primary objectives are to provide information on the status and trends of water quality in streams within each of the state's 13 major river basins and link assessments of status and trends with natural and human factors that affect water quality. Fifty-eight of the 97 sites are located on main stem streams. Ecoregion and land use considerations were used in selecting many of the stream locations. Samples are collected monthly and analyzed for traditional chemical and physical parameters and include select pesticides and heavy metals. During 2014, approximately 1,160 water samples were collected for this program.

Locations of NDEQ Ambient Stream Monitoring Program sites



Public Beach Monitoring Program—Since 2004, NDEQ has collected and tested water samples at public beaches statewide, for *E. coli* bacteria and the microcystin toxin. The microcystin toxin is a hepatotoxin that can be produced by blue-green algae also known as a harmful algal bloom. The risks to humans come from external exposure (prolonged contact with skin) and from swallowing the water. Symptoms from external exposure are skin rashes, lesions and blisters. 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. Incidents in 2004 with dogs dying caused by drinking water from lakes that were undergoing a harmful algal bloom led NDEQ to begin monitoring public waters for the presence and concentration of microcystin.

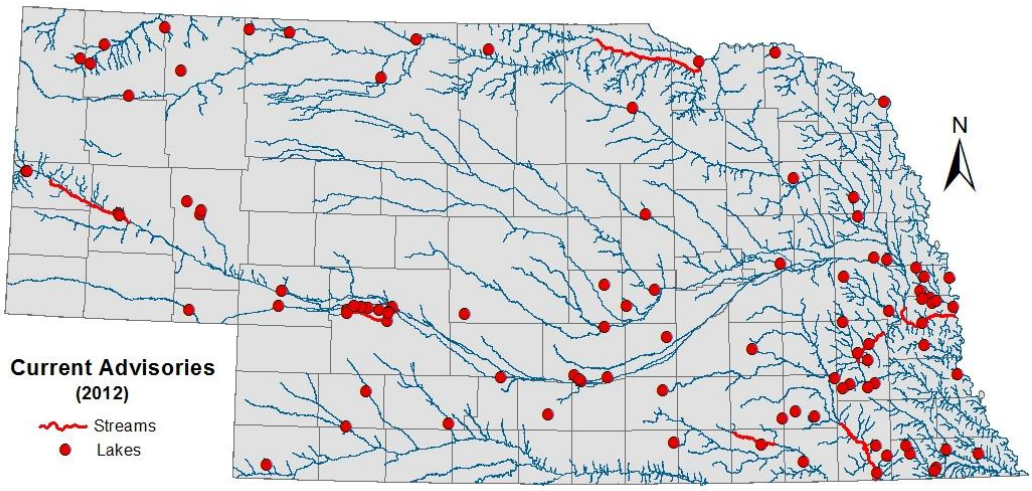
In 2014, monitoring occurred weekly at 53 beaches on 50 different lakes from May through September. Several monitoring partners assisted NDEQ in collecting these samples, including Natural Resources Districts, Nebraska Public Power District, Central District Health Department, and the U.S. Army Corps of Engineers. Over 1,200 samples were assessed for each parameter. Our collection protocols allow for samples to be collected, analyzed and reported to the public weekly before the weekend when lakes typically experience the most usage. Results are posted to the NDEQ website by Thursday afternoon with press releases on affected lakes being sent to area newspapers Friday morning.

Levels of microcystin above 20 parts per billion result in public health alerts being issued and signs are then posted recommending full body contact activities in the water be avoided. In 2014, health alerts were issued on eight different lakes and the amount of time the lakes were on alert ranged from two to eight weeks. Results and health alerts are listed weekly during the recreational season on the NDEQ's web site http://deq.ne.gov.

Fish Tissue Monitoring Program — The NDEQ has been sampling and assessing toxins in fish tissue annually since 1978. In 2014, a total of 63 fish tissue samples were collected from nine streams and 26 lakes across Nebraska for analysis of pollutants. This information is used to assess pollutant trends, identify potential problem areas and to inform the public about health risk concerns identified through fish consumption advisories. Nebraska began issuing fish consumption advisories in 1990. The data is received from the EPA lab approximately one year after collections and therefore, the final report on the 2013 data is expected to be completed by the end of 2014 and the 2014 data report is anticipated in the spring of 2015.

The report “Regional Ambient Fish Tissue Program - 2012 Data Assessment Report” and current list of advisory sites can be found at NDEQ’s web site, http://deq.ne.gov. The report is located at Publications/Water Publications/Water Publications by Type/Reports. The direct URL is: http://deq.ne.gov/Publica.nsf/Pages/WAT173. A summary of fish advisory information is easily located at DEQ’s web site by entering “fish” in the box titled NDEQ Search, located on the right side of the Home page, or by selecting News and Announcements, Topics of Interest. The direct URL is: http://deq.ne.gov/SurfaceW.nsf/Pages/FCA.

Currently, Nebraska has 98 state-issued fish tissue advisories. The primary contaminants of concern in fish tissue in Nebraska and most other states are mercury and polychlorinated biphenyl compounds (PCBs). See map on the following page for current advisory locations.



The NDEQ's Policy for Issuing Fish Consumption Advisories uses an 8-oz weekly meal portion combined with a consumer body weight of 70 kg (154 lbs.), an absorption factor of 1.0 and an exposure period of 30 years for calculating health risks. Carcinogenic effects are still averaged over a lifetime of 70 years because it is assumed cancer can develop at any time during one's lifetime, even after the exposure to the carcinogen has ended. Health advisories are not intended to discourage people from eating fish in moderation. Actually, fish are a high quality protein, low in saturated fat, and high in omega-3 fatty acid. It is a primary goal of the program to ensure that the public have as much information as possible regarding the water bodies that they use for fishing. An immediate health risk is unlikely from an occasional meal of fish from waters where fish consumption advisories have been issued; however, in order to reduce health risks that may result from long-term consumption, it is recommended that eating fish from advisory waters not exceed an average of eight ounces of fish per week.

Stream Biological Monitoring Program — This program is used to evaluate the health of streams by evaluating the composition and numbers of resident aquatic macroinvertebrate and fish communities. These biological communities display varying habitat requirements and water quality tolerances making them excellent indicators of stream health. In 1997, the Department added a probabilistic monitoring design that involved the sampling of randomly selected sites in order to address statewide and regional questions about water quality. Assessments are made by comparing the biological communities of "reference condition" streams where there are no significant disturbances, to the communities collected from randomly selected stream sites. During 2014, a total of 34 stream sites were sampled in the Niobrara River basin.

Sampling is conducted in conjunction with the basin rotation monitoring strategy. Data from 2012 and 2013 are being assessed and will be used to verify the biological criteria used in evaluating the health of aquatic life populations in Nebraska streams. The current approach allows evaluations of aquatic life health to be made with greater confidence even though fewer samples are collected.

Lake Monitoring Program — Lake monitoring is currently conducted on approximately 29 lakes across the state. Monitoring involves the collection of monthly water samples from May through September. These data are used to document existing water quality conditions, evaluate long-term trends, design watershed and lake restoration/protection projects and evaluate project effectiveness. Monitoring focuses on nutrients, sediment, pesticides, heavy metals, dissolved oxygen, pH, temperature, conductivity and water clarity. In 2014, approximately 145 samples

were collected at deep water locations with additional profiles collected from mid-lake locations. In addition, some inlet streams are sampled during periods of significant precipitation to provide information on nutrient, sediment and pesticide loadings to lakes during runoff events.

Fish Kill and Citizen Complaint Investigations — The Surface Water Unit responds to reports of fish kills and other environmental concerns of citizens related to surface water. On-site investigations are conducted, as needed, to document existing water quality conditions, surface water quality standards violations and identify pollution sources and responsible parties. A total of seven fish kills were reported between July 1, 2013 and June 30, 2014. This compares to 19 during the same time period the year before. Four of the reported fish kills were attributed to low dissolved oxygen levels within the waterbody, whereas three were the result of disease.

Between July 1, 2013 and June 30, 2014 the Surface Water Unit received 43 notifications of complaints concerning surface water issues. This compares to 30 notifications during the same time period the year before. While many of these cases were referred to other agency programs that more closely relate to the problem, sometimes the Surface Water Unit would assist by providing observations or samples to help document conditions.

Integrated Report — Beginning in 2004, and every two years thereafter, states are required to prepare a biennial water quality report called the Integrated Report, which is a combination of the Section 305(b) and Section 303(d) reporting requirements of the Clean Water Act. 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 2014 Water Quality Integrated Report, which was approved by the EPA in April 2014, is available on NDEQ's web site http://deq.ne.gov. The report's direct URL is: http://deq.ne.gov/Publica.nsf/Pages/WAT214.

Nebraska Water Monitoring Programs Report — A report summarizing the monitoring programs performed by NDEQ called the "Nebraska Water Monitoring Programs Report" was prepared again in 2013. This report describes the numerous monitoring programs NDEQ is involved with, its partners, and several highlights of recent monitoring efforts. Future enhancements to this report will include more in-depth examinations of what our monitoring programs are telling us, how we are using them to manage and improve water quality and to inform the public of the trends observed. The 2013 Nebraska Water Monitoring Programs Report is available on the NDEQ's web site http://deq.ne.gov, by selecting Your Environment (located in the center box of Home page) and then selecting Water Quality Monitoring Report. The report's direct URL is: http://deq.ne.gov/Publica.nsf/Pages/WAT212

Groundwater Assessment Programs

Groundwater Quality Monitoring Report — Legislation passed in 2001 directed NDEQ to issue an annual report to the Legislature concerning the quality of the groundwater in Nebraska. The first of these reports was issued December 1, 2001. These reports summarize the water quality monitoring efforts of the Natural Resources Districts, NDEQ, and other state, local and federal agencies, and can be found on the agency's web site, http://deq.ne.gov. (Select Publications, then select Water Quality, then select 2013 Groundwater Quality Monitoring Report. Or, the Water Quality Division reports' index URL is: http://deq.ne.gov/Publica.nsf/pages/WAT183.) Statistics and maps showing nitrate-nitrogen groundwater monitoring results as well as four of the 241 agricultural chemicals 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 Nebraska Department of Environmental Quality using federal funding. These data are accessible to the public on the Nebraska Department of Natural Resources web site, http://dnr.ne.gov.

In 2002, a Statewide Groundwater Monitoring Network was developed to better evaluate the groundwater quality in the state. Data was first analyzed for trends in 2005 for this report. Approximately 1,400 water wells are in the Network, with the majority of them being irrigation wells. Utilizing irrigation wells to collect water quality information may not be as representative of the aquifer as dedicated monitoring wells due to screen lengths and other construction issues in irrigation wells. This year, the NDEQ had the opportunity to expand the Network utilizing Federal/State funds. General locations for new wells were determined utilizing a computer model to calculate the weighted averages of the locations of current Network wells, NRD dedicated monitoring wells, Wellhead Protection areas and Conservation and Survey Division (CSD) test holes. The map generated by this model was distributed to the NRDs and CSD to refine drilling/well locations. The NDEQ then contracted with CSD to drill and log a test hole at each proposed monitoring location. The information collected from each test hole was used to design the well(s) at that location. The NDEQ contracted a water well driller to construct dedicated monitoring wells at the test hole locations.

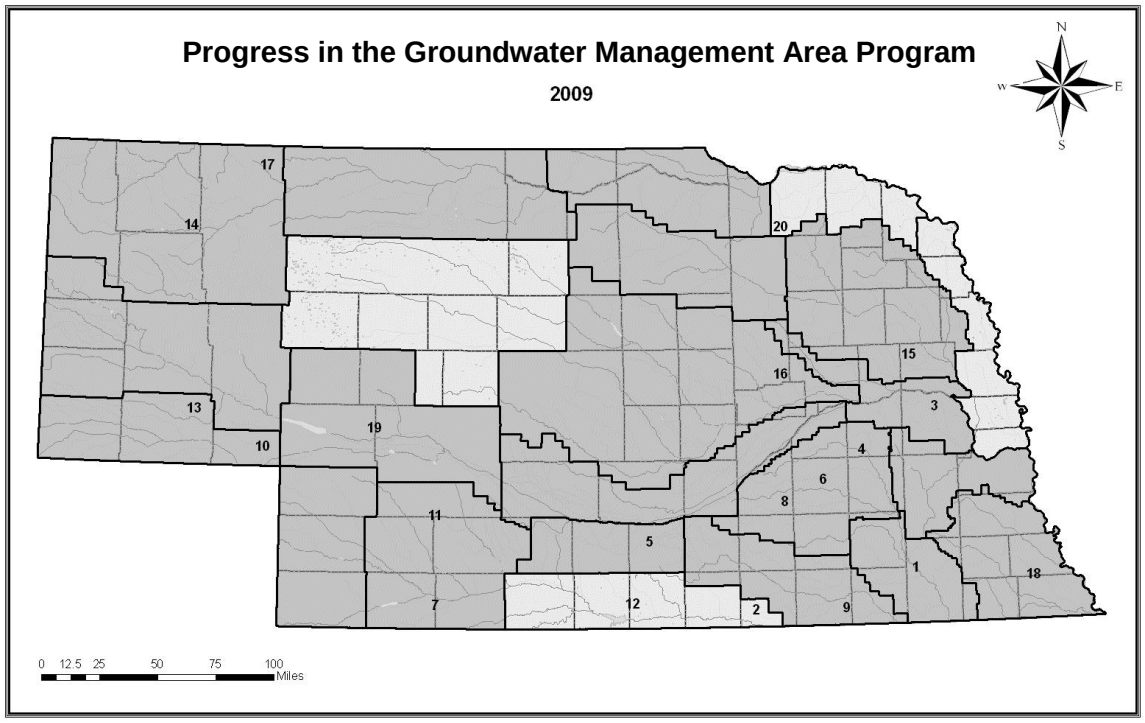
The most important aspect of the Network is the ability to sample the wells on regular basis. Utilizing irrigation wells requires the well to be running at the time the sampler arrives. If the well is not running the sampler must return another time, which in turn uses more resources. Monitoring wells with dedicated sampling equipment can be sampled any time, which reduces personnel costs. For that reason, NDEQ provided funds to the NRDs to purchase sampling equipment to be placed in active Network monitoring wells and the new wells added this year. The NDEQ worked with 13 NRDs for drilling 37 test holes and 29 dedicated monitoring wells. In addition, 15 NRDs were granted funds to purchase 143 pumps sampling devices. The addition of the dedicated monitoring wells and the equipment to sample them will greatly increase the data collection, reliability, and quality of data collected.

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

In addition, the Groundwater Unit performs reviews and oversees remediation if a situation does not fall under another agency program and is of environmental significance. Unit personnel

continue to take responsibility under *Title 118 — Groundwater Quality Standards and Use Classification* for many site investigations, and have sampled and supervised site cleanups.

Groundwater Management Areas — The Groundwater Management Area (GWMA) program focuses on assessing areas where groundwater problems from nonpoint source contaminants (such as agricultural chemicals) exist or are likely to exist. The Agency carries out detailed field studies to collect groundwater data, assesses the data, and determines whether a correlation exists between land-use practices and any nonpoint contamination trends. The Department's conclusions and recommendations are presented at public hearings during which public comments on the study are also obtained. The Director makes a determination on whether or not to designate the study area as a Groundwater Management Area. The staff works closely with the Natural Resources District (NRD) within whose boundary the area is located throughout the investigation, designation and implementation stages. The NRDs are responsible for implementation of many aspects of this program. In fact, NRDs can designate Groundwater Management Areas acting on their own authority. In addition to the three NDEQ-designated areas, 20 NRDs have designated GWMAs within their jurisdiction. However, if an NRD does not implement a Groundwater Management Area, the Department has the responsibility of implementation. The Department reviews and comments on all proposed GWMA rules and regulations prior to public notice. The following map shows NDEQ study areas (numbers).



NDEQ GWMA Studies

1. Beatrice/DeWitt, 1988
2. Superior, 1988
3. Fremont, 1988
4. E. Upper Big Blue, 1989
5. Wilcox/Hildreth, 1989
6. York/Polk Co., 1990
7. Red Willow/Hitchcock Co., 1990
8. W. Upper Big Blue, 1991
9. E. Little Blue, 1992 - 1994
10. Deuel Co., 1992
11. N. Middle Republican, 1995
12. Lower Republican, 1996 - 97
13. E. Cheyenne Co., 1996
14. Box Butte Co./Mirage Flats, 1998
15. S. Lower Elkhorn, 1999
16. E. Lower Loup, 2000
17. E. Sheridan Co., 2001
18. Humboldt, 2001
19. Keith-Lincoln Co., 2002 - 2003
20. Bazile Triangle, 2004

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. The program must ensure that injection activities are in compliance with state and federal regulations, and that groundwater is protected from potential contamination sources. Injection wells are classified by activity. Most wells are Class I, II, III, and V wells. Class II wells are associated with oil and gas production, and are regulated by the Nebraska Oil and Gas Conservation Commission. NDEQ has authority over and manages Class I, III and V wells. Class IV wells are illegal and have never been allowed in Nebraska.

Three Class I injection wells are currently permitted within the state. The permits are issued for injection of wastewater below the lowermost underground source of drinking water. Two Class I well permits are issued to the Crow Butte Resources uranium mine near Crawford and the other to the City of McCook.

Class III wells are used to inject fluids for the purpose of extracting minerals. The only Class III wells in the state are at the Crow Butte Resources uranium facility near Crawford. Crow Butte Resources operates over 4800 Class III wells as of October 1, 2014.

Injection wells not included in the other specific classes are considered to be Class V wells. Common examples of Class V wells include: open-loop heat pump systems, large capacity septic systems, and sub-surface drip irrigation systems.

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

Wells that are drilled for the production of mineral resources are regulated as Class III injection wells, and are governed by Title 122 – Rules & Regulations for Underground Injection and Mineral Production Wells.

Wellhead Protection — The State Wellhead Protection program is a voluntary program, which assists communities and other public water suppliers in preventing contamination of their water supplies. State Wellhead Protection Program activities include delineating the zones of influence which may impact public supply wells, training communities on how to inventory all potential sources of pollution within these vulnerable zones, working with the local officials to identify options to manage these potential pollution sources, working on monitoring plans, and helping develop contingency plans to provide alternate water supplies and site new wells. All community public water supplies have a Wellhead Protection Area map as of October 1, 2009. The Nebraska Legislature passed LB 1161 in 1998 (Neb. Rev. Stat. §46-1501 - 46-1509), authorizing the Wellhead Protection Area Act. This Act sets up a process for public water supply systems to use if they choose to implement a local Wellhead Protection plan. One hundred three community water supplies have approved Wellhead Protection Plans as of October 1, 2014.

Water Quality Planning

Surface Water Quality Standards

NDEQ develops water quality standards that designate the beneficial uses to be made of surface waters and the water quality criteria to protect these assigned uses. Title 117 - Nebraska Surface Water Quality Standards forms the basis of water quality protection for all surface water quality programs conducted by the Department. The federal Clean Water Act specifies that states review their water quality standards and revise where appropriate once every three years. NDEQ presented proposed revisions to Title 117 as part of a triennial review package to the Environmental Quality Council on October 16, 2014. Proposed revisions included more stringent ammonia criteria, new criteria for carbaryl, addition of new lakes and reservoirs, and a number of housekeeping changes.

The most significant of these new proposals deal with water quality criteria for ammonia. The U.S. Environmental Protection Agency has adopted new Clean Water Act Section 304(a) criteria recommendations for ammonia based on new information about the toxicity of ammonia to aquatic life, specifically freshwater unionid mussels. EPA's new ammonia recommendations are lower than their previous criteria recommendation. The proposed revisions to ammonia criteria in Title 117 are consistent with EPA's recommendations and are lower than what is currently adopted in Title 117. Considerable outreach was conducted with permittees, wastewater treatment plant operators, consultants, and other affected parties regarding the proposed ammonia criteria revisions.

The proposed new criteria for carbaryl (a pesticide commonly known as Sevin®) are identical to EPA's newly recommended Section 304(a) criteria to protect aquatic life from both acute and chronic toxicity. Prior to 2012, EPA had no recommended criteria, thus Nebraska had not adopted criteria.

Three newly constructed reservoirs were proposed to be added to the list of lakes and reservoirs. Nine additional lakes or reservoirs that are under public management were also proposed to be added to the list of lakes and reservoirs.

The proposed revisions were adopted by the Environmental Quality Council at the October 16, 2014 meeting. The proposed revisions have been submitted to the Attorney General for review and, if approved, will be submitted to the Governor for approval.

The standards are available on the department's web page at http://deq.ne.gov/. In addition to developing the standards, the Water Division develops and implements procedures for applying the standards to surface water quality programs, such as NPDES permits.

Section 401 Water Quality Certification

The Water Division Planning Unit administers the Water Quality Certification Program in accordance with Section 401 of the Clean Water Act. This program evaluates applications for federal permits and licenses that involve a discharge to waters of the state and determines whether the proposed activity complies with Nebraska Surface Water Quality Standards. If the activity is likely to violate the standards, conditions for complying with the standards will be issued with the certification, or certification will be denied. The U.S. Army Corps of Engineers Section 404 Dredge and Fill Permits and Federal Energy Regulatory Commission licenses are examples of federal

regulatory programs that require State Water Quality Certification before federal permits or licenses can be issued. The Department reviewed 433 Section 404 permit applications during FY2014.

On January 9, 2001 the U.S. Supreme Court issued a decision in the matter of Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers, No. 99-1178. The court decision eliminated the Corp's regulatory jurisdiction over isolated, non-navigable intrastate waters where the only link to interstate commerce was the use of the waters by migratory birds. Therefore no permit or other authorization by the Corps of Engineers is required for projects that might impact waters meeting those criteria. Following the SWANCC decision in 2001, the Supreme Court handed down a decision in Rapanos, et al. v. United States on June 19, 2006 that further limits the Corps of Engineers' jurisdiction over waters of the U.S. This had the effect of further reducing the number of projects that needed a Corps 404 permit. However, these waters of the state are still under the authority of the Department of Environmental Quality, because isolated wetlands are regulated by Nebraska Surface Water Quality Standards.

Although the department has no permitting mechanism to authorize projects in advance of their implementation, procedures have been developed to assist project sponsors who wish to avoid violating state water quality standards and potential enforcement actions. Project sponsors are encouraged to contact NDEQ before implementing their project so that the plans can be discussed in light of requirements of *Title 117 - Nebraska Surface Water Quality Standards*.

Impaired Waters and Total Maximum Daily Loads (TMDLs)

The Federal Clean Water Act, Section 303(d) requires states to prepare a list of impaired surface waters. These are waters that do not support the assigned beneficial uses as listed in 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 that these waters may meet their assigned beneficial uses. As in previous years, the Department has opted to combine the required CWA Section 303(d) list with the Section 305(b) report on the general status of water quality in the state. This combination is referred to as the Integrated Report. The 2014 Integrated Report is available on NDEQ's web site http://deq.ne.gov, by selecting Water, then selecting Water Quality Planning. Or, the report's direct URL is: http://deq.ne.gov/Publica.nsf/Pages/WAT214. The 2014 Integrated Report was submitted to EPA Region 7 in March 31, 2014 and was approved by EPA April 25, 2014.

Several TMDLs were prepared, submitted, and approved throughout the fiscal year. The table on the following page summarizes NDEQ's work in this area.

TMDL Name	# of Segments	Pollutant	Status
Big Blue River Basin			
Big Blue River Basin	10	*E. Coli*	Approved by EPA 12/17/2013
Big Blue River Basin	13	*Atrazine*	Approved by EPA 12/17/2013
Lower Platte River Basin			
Conestoga Reservoir	1	*Phosphorous*	Draft Under Review
Conestoga Reservoir	1	*Sedimentation*	Draft Under Review
Missouri Tributaries River Basin			
Bazile Creek	2	*E. Coli*	NDEQ & Santee Sioux Nation Developing Draft
Nemaha River Basin			
Buck and Duck Creeks	3	*E. Coli*	Draft Under Review
White-Hat River Basin			
White River Basin	3	*E. Coli*	NDEQ Developing Draft

Nonpoint Source Management Program

The Nebraska Nonpoint Source Management Program is an integrated statewide effort to protect and improve water quality impacted by nonpoint source pollution. The program is of particular significance because nonpoint source pollution is the most prevalent, widespread cause of water quality degradation in Nebraska. Nonpoint source pollutants of particular concern in Nebraska include those associated with runoff and percolation from agricultural and urban areas. Initiated in 1990, the program is largely funded by the Environmental Protection Agency (EPA) through Section 319 of the federal Clean Water Act (CWA) and involves a multitude of federal, state and local agencies and organizations.

Through the Nonpoint Source Management Program, the Department has initiated major shifts in program activities, including increased emphasis on watershed and groundwater management area planning, targeting of 303(d)-listed impaired waters, community participation in project development and implementation, and installation of management practices in smaller areas of manageable size. Because of these program changes, it was necessary to reduce financial support for outreach and demonstration projects. Prioritization of eligible projects and activities were refined in the 2014 Section 319 request for proposals, which emphasized watershed planning, knowing that in future years, 319 funds would primarily be granted to projects which have an EPA-approved watershed or groundwater plan in place.

Major components of the nonpoint source management program include program administration, nonpoint source monitoring and assessment, and implementation of nonpoint source pollution management projects through Section 319 grant funding. Nonpoint source monitoring and assessment is an integral and crucial element for the successful implementation of the program. Water quality information is needed to identify and prioritize nonpoint source problem areas, develop watershed management plans and TMDLs, and evaluate the effectiveness of measures implemented to abate nonpoint source pollution. Currently identified nonpoint source problems and priorities are defined in the primary guidance document of the Nonpoint Source Management Program: "Strategic Plan and Guidance for Implementing the Nebraska Nonpoint Source Management Program 2000-2015." This guidance document is currently being updated and is slated for EPA approval by the end of the calendar year. While the updated guidance is written for the years 2015-2030, it is scheduled to be updated every five years per EPA requirements.

Nonpoint source monitoring activities conducted during the past year included investigative water quality evaluations, detailed watershed assessments, and effectiveness evaluations of implemented nonpoint source management measures.

In the past year, the Nonpoint Source Management Program provided Section 319 grants to local sponsors of eligible projects in the two categories: 1) Large Competitive Projects (generally under $300,000) and 2) Small Project Assistance (under $15,000). Including the new 2014 funds, a total of 46 Section 319 projects were managed. All but one of these were large multi-year projects, with total funds of all projects equaling $5,620,679. One small project was managed with total funds equaling $15,000. To date, a total of 220 large projects, spending $63,801,646, have been funded through Section 319 funds since the beginning of the program in 1990 and have addressed both surface water and ground water quality concerns.

Source Water Assessment and Protection

When Congress amended the Safe Drinking Water Act in 1996, one of the amendments created the Source Water Assessment Program (SWAP) for public drinking water protection. Every state has developed a Source Water Assessment Program with the following basic components:

1) Delineate the source of each public drinking water system;
2) Identify potential contaminants in the source area;
3) Determine the drinking water source's susceptibility or vulnerability to contamination; and
4) Make the assessments available to the public.

NDEQ is implementing their EPA-approved program in cooperation with the Nebraska Health and Human Services System, Nebraska Rural Water Association, the Natural Resources Districts, and numerous other stakeholders. All assessments were completed and distributed by August 2003; however, delineations continue to be updated as needed upon receipt of new information about public water supply systems.

Beginning in SFY2004, funds were set aside from the Drinking Water State Revolving Fund (DWSRF) to finance source water protection projects statewide. Funds are provided to political subdivisions that operate a public water system serving a population of 10,000 or less. Eligible activities address drinking water quality, quantity, and/or education within the source water protection area. To date, Source Water Protection funds have been distributed to complete 79 separate Source Water Protection projects throughout the state. In SFY2014, Source Water Protection funds were distributed to the following public water systems: Cedar-Knox, Crete, Meadow Grove, Osmond, Prosser, and Wymore. The total amount available in SFY2014 was $100,000.

Water Quality Data Handling and Storage

The department has implemented the STORET electronic storage system for water quality data. This will make Nebraska surface water quality information available to anyone who has an internet connection. The web site for this information is www.epa.gov/storet**.** During FY2014, the department continued to add monitoring results to the STORET database, monitoring results conducted on surface waters of the state. The end result will be the centralization of NDEQ's previous and current surface water quality monitoring information.

Wastewater 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.

- **Wastewater Construction Permit Program –** This permit program is for communities that are constructing new wastewater facilities or are renovating or expanding existing facilities.

- **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. Other NPDES-related programs include:
  - **Combined Sewer Overflows** -- to address municipalities that have combined storm water and wastewater sewer systems.
  - **Wastewater Treatment Sludge and Biosolids Disposal** -- requirements for treatment and disposal of municipal and industrial wastewater sludges and biosolids, and
  - **Storm Water Permit Program** -- involves: 1) Construction sites of a specific size; and 2) the Municipal Separate Storm Sewer System permits for medium and large municipalities.

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

The Department initiated the **Assessing Wastewater Infrastructure Needs (AWIN)** project to assist Nebraska communities with environmental compliance with existing or upcoming regulations. The project is based in NDEQ's Wastewater Division, but it can involve other NDEQ programs, as well as other state and local agencies.

Many communities in the Upper Great Plains States and other regions of the country have population declines, aging populations, declining median household income, and limited or no job availability, all of which lead to limited resources to operate their utilities. AWIN uses data from the latest census and other available data sources to generate a rating for communities using modeling tools. NDEQ uses this information, the communities' input, their consultants' input, and NDEQ observations to make adjustments in NDEQ's standard procedures and design conditions. A few examples of changes include better interest rates on loans, longer compliance schedules, and designs which take into account future declining population. A recent example of AWIN use is a village that will install a lagoon that is half the size of the normal design. The revised smaller design should better fit the community's predicted population 15 years from now. The facility will have a long-term compliance schedule and use temporary irrigation and limited discharges to

achieve compliance until the community achieves no discharge from the lagoon. This project is slated to save this community's 177 residents $160,000 to $200,000.

Onsite Wastewater Treatment Facilities

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* (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.

Certification of onsite professionals covers design, installation, inspection, maintenance, and pumping of onsite systems. Subdivision review and approval requirements apply when onsite systems will be used on any proposed development lots that will have less than three acres suitable for building. Program staff work to make sure that the design, installation, modification, repair, and maintenance of onsite wastewater systems is performed by certified professionals who understand Title 124 and the proper practices of their trade.

The Act was amended in 2007 by LB333, which provided for application fees for permits and subdivision approvals and established a fee waiver provision for government inspectors. Nebraska Administrative Code *Title 124 – Rules and Regulations for the Design, Operation and Maintenance of Onsite Wastewater Treatment Systems* was last amended, effective August 11, 2012. Onsite or septic system regulations administered by the Department were first enacted in 1977.

The Onsite Program is focused on the protection of surface and groundwater in the area of proposed onsite systems through the use of standardized design requirements, the certification of onsite professionals, review and approval of plans for subdivision development, and review of plans and issuance of permits for large onsite systems, systems where other concerns have been identified (such as setback, soil limitations, shallow groundwater, design), or systems with non-domestic wastes (such as wineries, butchers shops, camping trailer parks, veterinarian clinics, equipment shops, hair salons, and drinking water treatment facilities).

A certification by examination is required for professionals to obtain initial certification. Currently, 525 people hold onsite certificates. Some professionals obtain certification in multiple categories. Current certificates expire December 31, 2015, unless renewed.

The registration requirement provides a statewide inventory of new or modified onsite systems. Since registrations began in 2004, nearly 17,800 systems have been registered, with 1,547 systems registered in FY14.

NDEQ has cooperative agreements with other governmental agencies (state and local) to help implement and coordinate the program. There are currently 16 certified Inspectors from local governments. NDEQ also works cooperatively with Nebraska Department of Health and Human Services personnel to resolve health-related onsite wastewater handling issues.

There were 280 new onsite-related complaints in FY14 and program staff resolved a total of 248 complaints, which includes both old and new complaints. Fifty-four Notices of Violation were issued and there were two enforcement resolutions in FY14.

The Private Onsite Wastewater Treatment System Advisory Committee advises the Department on administration of the Act and proposed rules and regulations.

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.

Department engineers review construction/operating permit applications for systems that do not meet requirements for Authorization by Rule. Title 124 also provides for Department approval prior to construction of any subdivision with any lot less than three acres where onsite wastewater treatment is proposed. In the past year, the program received 46 applications for construction/operating permits and 10 applications (totaling 112 subject lots) for subdivision review and approval.

Program staff have worked and continue to work with many organizations, including local health offices, county and city planning and zoning, the Nebraska Onsite Wastewater Association, the Nebraska Onsite Wastewater Task Force, UNL Cooperative Extension, Nebraska Realtors, Nebraska Association of County Officials, and the Groundwater Foundation to educate the public about the importance of proper installation and maintenance of onsite wastewater treatment systems and to improve the knowledge and skills of the various practitioners who install and maintain onsite systems.

In FY14, Department staff continued the implementation of a new inspection program which began in FY13 and was encouraged by onsite professionals. The inspection program is focused on the evaluation of reporting and construction activities of certified installers to ensure that Title 124 requirements are met.

Wastewater Treatment Facility Operator Certification Program

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

This program administers nationally accredited certification exams to new wastewater operators, or to operators wishing to advance their credentials, and issues certification renewals for operators who have obtained the necessary Department-approved continuing education as provided for in *Title 197 – Rules and Regulations for the Certification of Wastewater Treatment Operators in Nebraska*. Staff will continue to monitor those facilities that are required to have certified operators and work with them to help them comply with the regulations. The wastewater operator certification program has 868 certified operators with municipal certificates and 74 operators with industrial certificates.

The Department 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 2016. The Department contacted a total of 252 facilities potentially eligible for the exemption and, of these, issued four-year operator exemptions to 214 facilities.

In FY14, the Department provided 11 Discharge Monitoring Report training sessions, and seven operator certification examination sessions. Testing of municipal and industrial wastewater treatment facility operators will continue in FY15.

Wastewater Construction Permit Program

The Technical Assistance Unit of the Wastewater Section administers Nebraska's construction permit program for wastewater works. Industries and municipalities are required to submit the engineering designs for their wastewater projects to the Department for review and approval. These plans are reviewed by the Section's engineering staff to assure that the designs meet the Department's standards for protecting the public health and the environment from the effects of improperly handled or treated wastewater.

Nebraska's design standards for wastewater facilities are found in NDEQ Title 123, *Rules and Regulations for the Design, Operation and Maintenance of Wastewater Works*. These standards are updated periodically to keep Nebraska consistent with national standards. The State's design standards are written to encourage the use of proven technologies, but have also allowed Nebraska communities to utilize innovative designs where they are appropriate.

Title 123 also contains basic rules for the operation and maintenance of collection systems and wastewater treatment facilities. It requires that Operation and Maintenance Manuals be prepared for pumping stations and wastewater treatment facilities. Title 123 also contains rules for the proper abandonment of wastewater facilities that have been removed from service. The abandonment rules protect the public from the threat of unsafe conditions or public health hazards.

For FY2014, a total of 200 wastewater projects were submitted to the Department for review and approval.

Considerable time was spent last year working with communities that need to upgrade their wastewater treatment facilities. Section engineers regularly met with municipal officials, funding agencies, and consulting engineers to develop affordable projects for Nebraska's communities. The section also met with food processing industries, power generating plants, ethanol plants, and other industries to assist them in planning their projects. Staff also worked with the owners of many privately owned wastewater facilities that were not properly built and do not function properly.

Engineers from the Section continued to meet with the City of Omaha to discuss their combined sewer separation project. These meetings have been valuable to both sides. Omaha's project is expected to have about 90 separate construction projects over an 18-year period. Each of these individual projects must be submitted to NDEQ for review and approval.

National Pollution Elimination System (NPDES) and Related Programs

The Wastewater Section 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 so as to maintain and protect the water quality of Nebraska's streams, lakes, rivers, and groundwater. Other NPDES-related programs include:
  - **Combined Sewer Overflows**, which addresses those municipalities that have combined storm water and wastewater sewer systems.
  - **Wastewater Treatment Sludge and Biosolids Disposal**, which are requirements for treatment and disposal of municipal and industrial wastewater sludges and biosolids,
  - **Storm Water Permit Program** – This permit programs involves: 1) Construction sites of a specific size; 2) the Municipal Separate Storm Sewer System permits for medium and large municipalities; 3) Industrial facilities.
  - **The Nebraska Pretreatment Program**, which functions to protect municipal wastewater collection and treatment systems from damage or overloading by industries.

Activities include issuing permits to monitor and limit pollutants in wastewater discharges and evaluate compliance with the permits and other applicable regulatory requirements of the programs.

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.

The Department 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 EPA delegation agreement with the Department and NDEQ *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; and industrial and municipal storm water discharges. The graph on the next page titled "NPDES Discharge Authorizations" shows the distribution of permits issued to various types of NPDES dischargers,

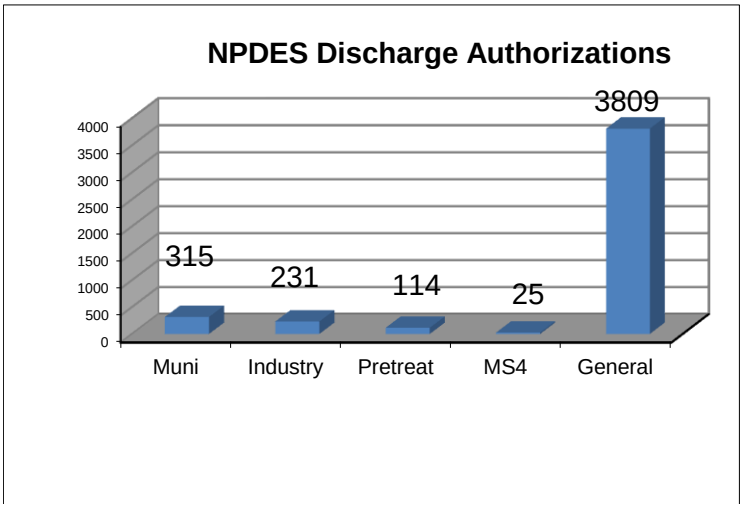
except Livestock. Information regarding Livestock NPDES permits is found on page 54 of this report.

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). The permit may also require development of Best Management Practices Plans to reduce or control pollutant discharges.

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

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

Permits may be developed and issued on an individual site-specific basis, or they may be developed and issued to apply to facilities with similar activities or effluent characteristics. These two types of permits are respectively referred to as individual permits and general permits. To date, the department has developed and issued general permits for the following activity categories: hydrostatic testing, dewatering, land application of concrete grooving/grinding slurry, pesticides applications to, over, and near Waters of the State, gasoline contaminated groundwater remediation projects, petroleum product contaminated groundwater remediation projects, construction site storm water, and industrial site storm water. Municipal Separate Storm Sewer System (MS4) permits have been issued to entities, including metropolitan areas and counties that meet the criteria of the NPDES Storm Water Program. There currently are 24 metropolitan areas and counties in Nebraska that have received MS4 permits, and one MS4 permit for the University of Nebraska-Lincoln. The Construction Storm Water General Permit was reissued January 1, 2008. It is currently under extension, and is expected to be reissued in Fiscal Year 2015. The Industrial Storm Water General Permit was issued on July 1, 2011.



There are 660 facilities with discharge authorizations under individual permits (municipal, industry and pretreatment), and 25 municipal storm water permits (MS4). There are 3809 active

facilities authorized to discharge under other general permits. The graph titled "NPDES Discharge Authorizations" provides a summary of this information. The general permits include 2831 active authorizations under the construction general storm water permit, 107 dewatering including Omaha, 30 hydrostatic testing, 772 industrial storm water, 39 pesticide, and 30 petroleum remediation sites.

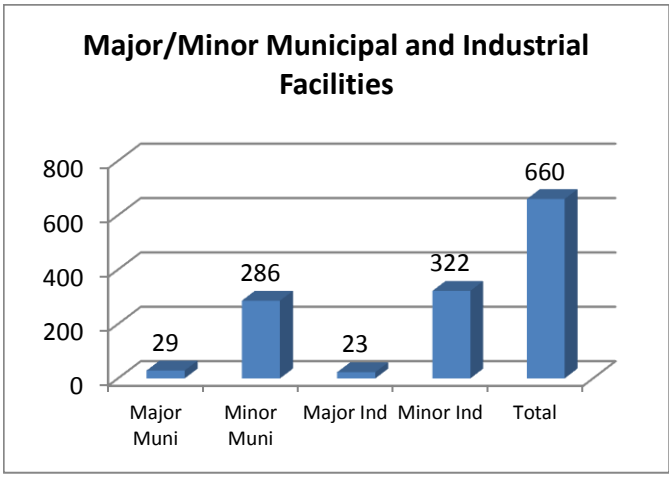
Municipal and Industrial Facilities

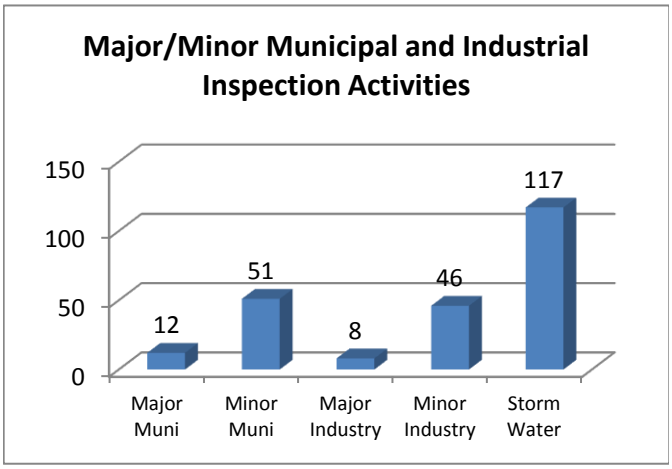
Industrial and municipal facilities are both grouped as major or minor facilities based upon their size and/or their potential to impact the receiving stream. The chart titled "Major/Minor Municipal and Industrial Facilities" provides a numeric break down of these types of facilities.

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

The Section verifies compliance through a variety of activities including reviewing discharge monitoring reports, following up on complaints and incident reports, conducting on-site inspections, and performing effluent monitoring inspections.

During on-site inspections, section personnel walk through the facility and review operational procedures and records. Major industrial and municipal facilities receive annual on-site inspections. The priority of minor facilities inspections is based on discharge compliance histories, incident reports and complaints. Inspectors performed 234 NPDES inspections in Fiscal Year 2014. A breakdown of those inspections is provided in the chart at right. In addition, the inspectors completed 102 pretreatment inspections and 41 inspections of non-discharging wastewater lagoons. During effluent monitoring inspections, effluent samples are collected and analyzed by the Department to compare with self-monitoring results. Facilities targeted for effluent monitoring inspections are chosen based upon pollution potential, past compliance or incident report histories, complaints, and/or Basin Management Approach priorities. One facility had an effluent monitoring inspection in FY14.





Data generated by facility monitoring and Department 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.

Combined Sewer Overflows

The Combined Sewer Overflow (CSO) program addresses Omaha's combined storm water and wastewater sewer systems. 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. When bypasses occur, untreated wastewater is discharged into the receiving stream.

The City of Omaha has combined sewers that are subject to storm-induced bypasses of untreated waste. The City submitted a substantively complete long-term control plan on October 1, 2007 in compliance with an Administrative Consent Order between the City and NDEQ. On September 25, 2009, the City submitted their Final Long Term Control Plan, also in compliance with the Administrative Consent Order. This order initially required Omaha to complete the long-term control plan projects by 2024. In 2012 the order was modified to add an additional three years due to the 2011 Missouri River flood. The projects included in the plan span 18 years and are estimated to cost $1.5 billion. The goal of the projects is to reduce or eliminate combined sewer overflows and comply with State and Federal regulations.

The City of Omaha's CSO NPDES permit has been re-issued effective October 1, 2010 and includes a schedule for project implementation. This schedule utilizes the first five years of project implementation as defined by the Long Term Control Plan.

The City of Plattsmouth recently separated their storm and sanitary sewer lines. Separation projects began on July 1, 2010 and the City's re-issued permit, effective October 1, 2010, included a schedule for completion of this work in the next five years. As with Omaha, this schedule was modified due to the 2011 Missouri River flood. Separation work was completed on November 30, 2012. On or before September 1, 2016, the City of Plattsmouth is required to complete the Post Construction Compliance Monitoring Plan that will ascertain the effectiveness and completeness of the sewer separation project and send a final report to the NDEQ.

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, such as land application of biosolids, is strongly encouraged.

On Feb. 19, 1993, the EPA published the federal sludge regulations. Under these regulations, an estimated 330 municipal facilities in the state have additional sludge monitoring requirements. These additional requirements include increased metal and nutrient content analyses; improved records for tracking the amount of sludge and metals applied to each disposal site, and cumulative disposal limits. The Department has not sought delegation of this program from the EPA. The program is managed out of the EPA Region 7 office in Lenexa, KS.

Storm Water Program

In compliance with federal regulations, the NPDES Storm Water Phase I and Phase II Programs regulate the discharge of pollutants in storm water from certain construction sites, industrial facilities and municipal storm sewer outfalls. Phase II was promulgated by EPA in March of 2003. Storm Water Phase II federal regulations lowered the threshold for coverage of construction sites from five acres or more to one acre or more. And, sites that are less than one acre can also be regulated in Phase II, if they are part of a common plan of development or sale. The industrial facilities are defined to 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 increase the number of municipalities and urban areas that are subject to the NPDES program for storm water discharges.

The cities of Omaha and Lincoln were subject to the Municipal Separate Storm Sewer System (also known as the MS4) Program with the implementation of Phase I. Lincoln was issued an MS4 Permit on September 1, 2002. This permit was reissued on July 1, 2008 and January 1, 2013. The Omaha MS4 Permit was issued on October 1, 2003 and was reissued in October 1, 2008. Phase II has expanded the areas requiring coverage under an NPDES MS4 Permit to include the urbanized areas in Douglas, Sarpy, Lancaster, Washington and Dakota Counties. An NPDES permit for Douglas, Sarpy and Washington Counties was issued effective August 1, 2004 and reissued October 1, 2009. The Dakota County MS4 permit was issued effective December 1, 2004.

The Department determined that the communities of Beatrice, Columbus, Fremont, Grand Island, Hastings, Kearney, Lexington, Norfolk, North Platte and Scottsbluff were exempt as of December 20, 2002. However, new approved Total Maximum Daily Loads and a review of the criteria for each municipality, made all subject to Phase II regulations for MS4s. A statewide general permit was issued January 1, 2006. The Storm Water Management Plans for all of these cities have been received, public noticed and each of these communities was authorized under this general permit. These permittees have entered into a cooperative agreement to form the Phase II Storm Water Cooperative. Their Storm Water Management Plans are being coordinated so that development work and implementation plans can be shared between them. The NDEQ is working closely with this group. The re-issuance of the statewide general permit for small MS4s is scheduled in Fiscal Year 2015. Dakota County, South Sioux City, and Dakota City will also be covered under this state-wide permit when it becomes effective.

Nearly $1.825 million in grant funds was awarded in FY2014 to MS4 permittees. This program, established by Legislative Bill 1226 in 2006, is awarded annually for implementation of the MS4 communities' Storm Water Management Plans. The grant is distributed by population and requires a matching 20% from each of the grantees. Funds are distributed near the end of each calendar year.

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. The NPDES General Permit for Storm Water Discharges from Construction Sites, NER110000 was issued with change on January 1, 2008. The NPDES General Permit for Storm Water Discharges from Industrial Activity, NER900000, was issued July 1, 2011. The new permit requires benchmark monitoring for certain industrial activities. This monitoring was to be in place by July 1, 2012.

Nebraska Pretreatment Program Permits

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

The authority for establishing the Pretreatment Program is derived from the NPDES program requirements set forth in Section 402 of the Federal Clean Water Act. The issuance procedures and general format of Pretreatment Program and NPDES permits are very similar. Permittees are required to carry out self-monitoring activities, maintain records and submit periodic reports. Compliance activities include report reviews, on-site inspections and compliance monitoring inspections. Compliance data are entered into 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 Department and assist in permit development by reviewing draft permits. The Department is working with communities throughout the state to get them more involved in the pretreatment program and to improve cooperative efforts in this program.

State Revolving Loan Fund Programs

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

Clean Water State Revolving Loan Fund

The Nebraska Clean Water State Revolving Loan Fund (CWSRF) program provides low-interest loans and small community matching grants to municipalities for construction of wastewater treatment facilities and sanitary sewer collection systems to alleviate public health and environmental problems. The loan principal repayments go into new loans, and interest earnings on the Fund are used to pay off the state match bond issues and to make new loans.

The CWSRF program receives an annual federal EPA capitalization grant. A 20% state match, required to obtain the federal grant, is provided through Nebraska Investment Finance Authority (NIFA) bond issues. After 26 years of activity, the Fund's Net Assets have reached $251 million. Since its inception, the program has made loans totaling $432 million to 176 municipalities for 253 projects.

In SFY2014, the CWSRF funded projects totaling $45,512,151 in loans and $898,000 in principal forgiveness and grant funds.

The EPA awarded the 2013 capitalization grant, in the amount of $6,798,000, in August of 2013. A $1,360,000 bond was used to match this federal grant.

Initiatives in 2014 for the State Revolving Fund Program include:

- The Program is implementing Northbridge loan and grant tracking software purchased with the 4% set-aside funds from both CWSRF and DWSRF. Installation is being completed in phases. In July 2014 the first phase was completed and we started utilizing the financial tracking part of the software. It may take until the end of SFY15 to complete all the phases.
- In 2014, the Legislature passed LB514, which authorizes the creation of a Clean Water Linked Deposit Program. The bill authorizes a process of working with private lending institutions to provide low-interest loans for private uses associated with nonpoint source pollution control, such as: septic tank repair and replacement; certain livestock waste control facilities; and agricultural best management practices, among others.
- Also included in LB 514 is a provision for refinancing previous debt used for the construction of wastewater treatment facilities.
- NDEQ is currently revising Title 131 to include the LB 514 changes and plans on presenting these to the EQC in SFY15.
- The Preliminary Engineering Report Guide in the Intended Use Plan was updated with recommendations from USDA and EPA. It also includes steps to help communities assess options for sustainability, especially with those communities experiencing population decline.

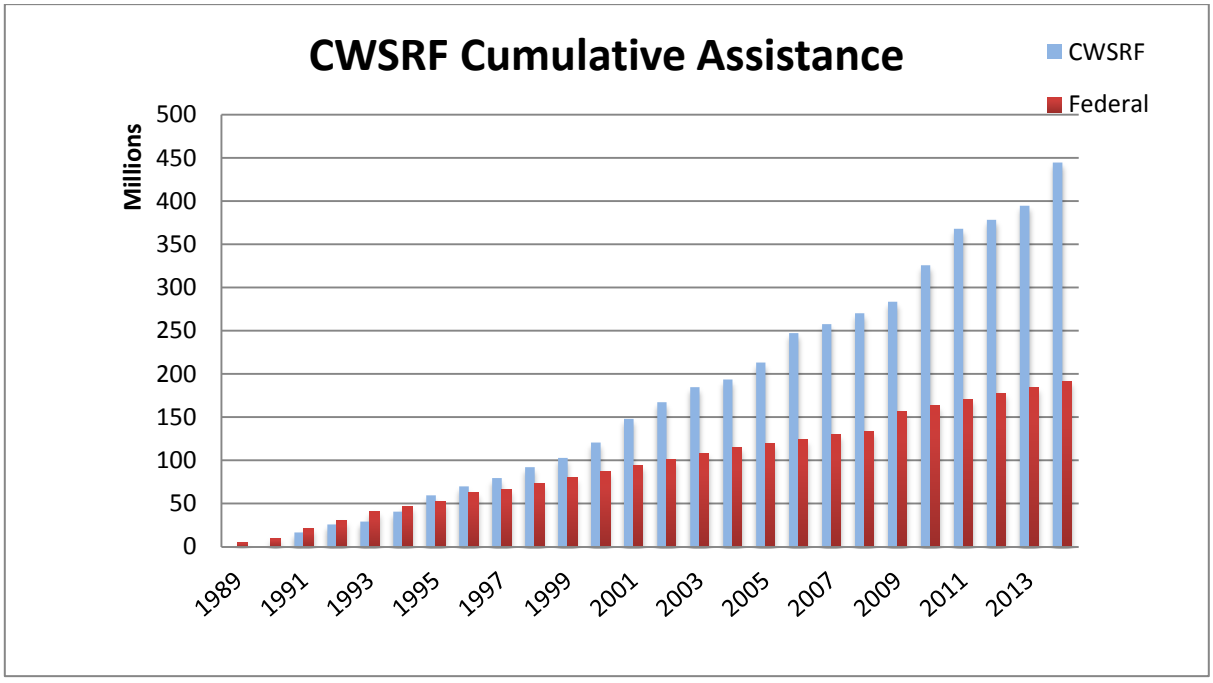
Municipalities Receiving CWSRF Loans in SFY2014

Municipality	Loan Date	Loan Amount	Principal Forgiveness Amount	Small Town Grant Amount	Total
Sprague (small town grant & principal forgiveness only)	6/26/2014		100,000	30,000	130,000
Winside (small town grant only)	6/20/2014			240,000	240,000
Bassett Amd #1	4/29/2014	135,000			135,000
Spencer	4/11/2014	78,000	78,000		156,000
Kearney	3/25/2014	1,200,000			1,200,000
Gothenburg	12/16/2013	2,133,400	100,000		2,233,400
Bruning Amd #1	12/11/2013	90,915			90,915
Mead	11/22/2013	976,836	100,000	250,000	1,326,836
Omaha Mo River Sch B	11/18/2013	40,000,000			40,000,000
TOTAL		**$44,614,151**	**$378,000**	**$520,000**	**$45,512,151**

Thirty-three projects were under construction during SFY 2014**:** Albion, Amherst, Ansley, Aurora, Bassett, Bertrand, Blair, Brainard, Bruning, Clarkson, Crawford, Denton, Dodge, Gothenburg, Gresham, Hickman, Jansen, Kearney, Lancaster County SID #5, Lexington, Lincoln, Maxwell, Mead, Nebraska City, Omaha, Osmond, Oxford, Plattsmouth, Polk County SID #1, South Sioux City, Spencer, Wakefield, and Wisner.

Ten SRF wastewater projects initiated operation in SFY 2014: Amherst, Oxford, Bruning, Crawford, Gresham, Clarkson, Dodge, Bertrand, Lexington, and Nebraska City.

The graph reflects the cumulative loan assistance of CWSRF.



Construction Administration Fund Small Community Matching Grants

In addition to and concurrent with loans, the CWSRF provides small community matching grants to financially distressed municipalities with population of 10,000 or less. This program has provided $7.9 million in grant funding for 70 projects concurrent with a CWSRF loan during the 26 years of the program. Many small municipalities find that needed projects are too costly without the additional grant subsidy provided concurrent with the CWSRF loan. During FY2008, legislation was passed providing the department with authority to allocate up to 65% of prior-year revenue from fees collected on CWSRF loans to the various grants. This legislation also increased the population level for eligible communities to 10,000 or less. The department intends to provide increased funding to as many qualifying projects as possible; therefore, for FY2014, up to $593,167 was available for small community grants, and any one community could receive a maximum of $250,000. The program provided a total of $520,000 in small community grants to the communities of Mead, Winside, and Sprague.

In FY 2014, five planning grants for a total of $100,000 from the Administrative Cash Fund were awarded to small communities. These communities identified wastewater treatment facility project needs. They were listed on the Project Priority List, have not received a planning grant in the previous five years and have 10,000 or fewer inhabitants.

Drinking Water State Revolving Loan Fund

The Nebraska Drinking Water State Revolving Loan Fund (DWSRF) program provides low-interest loans and loan forgiveness to owners of public water systems. The loan principal repayments go into new loans, and interest earnings on the Fund are used to pay off the state match bond issues and to make new loans. An agreement between the NDEQ and the Nebraska Department of Health and Human Services, Division of Public Health (NDHHS-DPH), effective on October 30, 1997, defined the authority of the two agencies in administering the DWSRF program.

The DWSRF is similar to the Clean Water State Revolving Fund in that both obtain the required 20% state match through Cash Funds or revenue bonds, give low interest loans, and will be self-sustaining. The DWSRF is unique in that loans may be awarded to privately owned public water supplies. Other program differences include set-asides for program administration, technical assistance, wellhead protection, capacity development and operator certification. After 17 years of activity, the Fund's Net Assets have reached $153 million.

DWSRF Set Aside Funds and Administration Cash Fund

Administrative costs are being paid out of the administrative Cash Fund and may include program operating costs for both NDEQ and NDHHS-DPH, including day-to-day DWSRF program management activities for both agencies. Also included are other costs associated with debt issuance, financial management, consulting, and support services necessary to provide a complete program.

The Small System Technical Assistance set-aside (2%) provides technical assistance to Public Water Supply Systems serving 10,000 or fewer persons. This is accomplished through contracts with organizations with expertise in dealing with small systems and is coordinated by the NDHHS-DPH.

In FY2014, under the Source Water Protection Implementation set-aside (15%), ten agreements for preliminary engineering reports totaling $160,000 were awarded to high priority

ranked communities to address public health issues associated with public water supplies, and $100,000 for source water protection project agreements. The NDEQ administers these programs.

The DHHS-DPH has determined eligibility for Public Water Supply program management, development and implementation of a capacity development strategy, and a water operator certification program set-aside of $750,000. The state may use up to a total of 10 percent for this set-aside but must provide a one-to-one state match. DHHS-DPH has determined the set-aside eligibility by using program overmatch dollars for federal fiscal years 1993 to 1997. No additional state dollars are required for the set-aside.

Municipalities Receiving DWSRF Loans in SFY2014

Municipality	Loan Date	Loan Amount	Principal Forgiveness
Ogallala	4/30/2014	2,719,119.00	543,824.00
Waverly	4/23/2014	4,610,000.00	-
McCook	4/9/2014	2,086,810.00	417,362.00
Kearney	4/1/2014	2,000,000.00	-
Wakefield **(30 year loan)**	12/23/2013	1,200,000.00	240,000.00
Utica	10/24/2013	1,370,000.00	274,000.00
Scribner **(30 year loan)**	9/30/2013	3,500,000.00	700,000.00
Haigler	9/23/2013	210,000.00	42,000.00
Lindsay	8/1/2013	618,850.00	188,502.00
TOTAL		**$18,314,779.00**	**$2,405,688.00**

The FY2013 DWSRF capitalization grant allocation totaled $8,421,000 million. In FY2014, the DWSRF entered into nine binding commitments to communities in order to provide financial assistance to PWS projects totaling $18,314,779, of which disadvantaged communities received $2,405,688 in forgiveness funding. Further, the Federal Fiscal Year (FFY) 2013 capitalization grant required that a minimum of 20% of the grant be reserved for additional subsidization (e.g., principal forgiveness).

In addition, from the FFY 2013 capitalization grant $2,385,520 was allocated to the 2% ($168,420), 10% ($1,492,100) and 15% ($725,000) Set-Asides. More details on the programs associated with these Set-Asides can be found in the Drinking Water State Revolving Fund Annual Report for SFY 2014 on our website at http://deq.ne.gov/.

The graph reflects the cumulative loan assistance of DWSRF.