



## DEPT. OF ENVIRONMENT AND ENERGY

### SFY2023 ANNUAL REPORT TO THE LEGISLATURE LIVESTOCK WASTE CONTROL PROGRAM Nebraska Department of Environment and Energy

**December 2023**

#### **Introduction**

Each year, the Nebraska Department of Environment and Energy submits a report to the Legislature, pursuant to Neb. Rev. Stat. §54-2428(5), in sufficient detail to document all direct and indirect costs incurred in the previous fiscal year in carrying out the Livestock Waste Management Act (Neb. Rev. Stat. §54-2416 to 54-2438). The Department implements the Livestock Waste Management Act through our Livestock Waste Control Program (LWC). The Department is pleased to provide the Appropriations Committee a report on the activities of the agency's Livestock Waste Control Program during state fiscal year 2023.

#### **Overview**

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

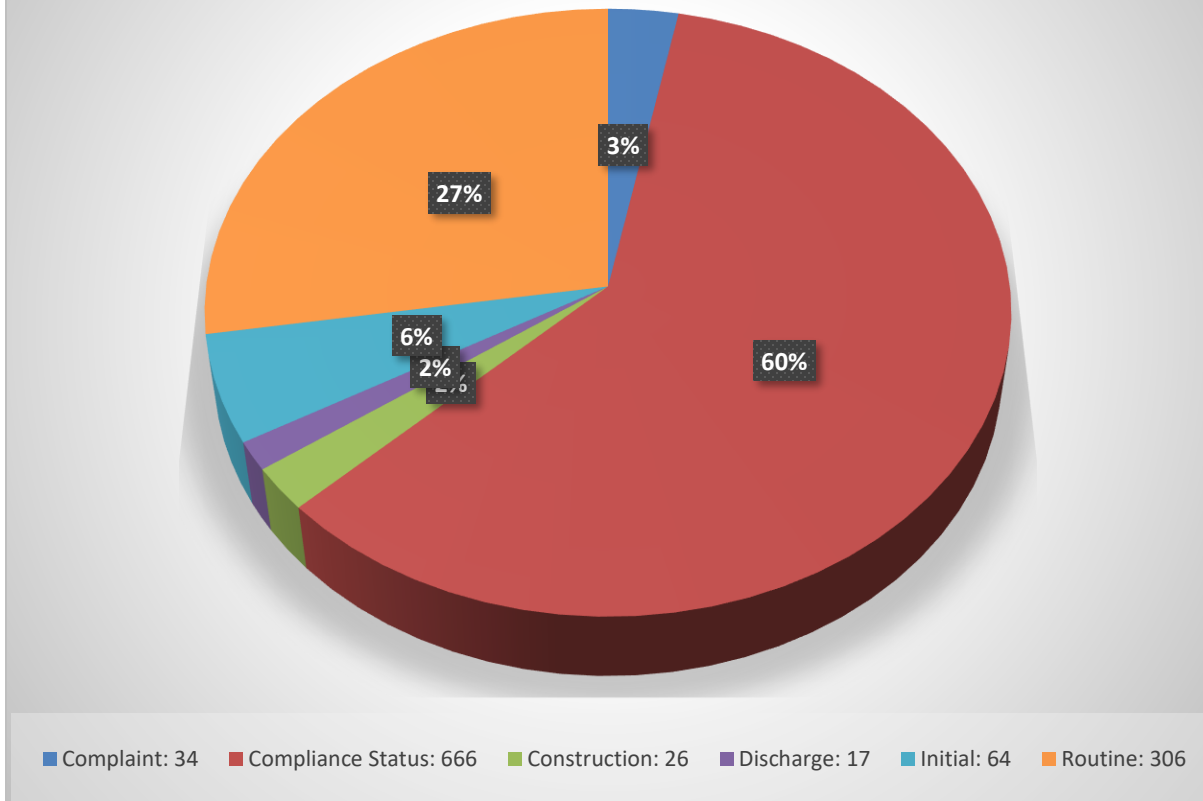
To accomplish this responsibility, the program administers *Title 130 - Livestock Waste Control Regulations*. The LWC program primarily focuses on the 1,217 active large Concentrated Animal Feeding Operations (CAFOs) required to have permits, but also works with 2,176 Medium AFOs. The LWC Program uses inspections, permitting, and periodic monitoring to fulfill this responsibility. The permitting program includes administering the federal National Pollutant Discharge Elimination System (NPDES) program for CAFOs.

#### **Inspections**

The LWC Program staff conducted a total of 1,113 livestock waste control inspections and investigations in FY2023 (including complaint and discharge investigations). Chart 1 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 compliance with Title 130 and the EPA CAFO Rule.

With the continued lifting of the restrictions put in place at the beginning of the COVID-19 pandemic, there was an increase in person site inspections and a sharp reduction of virtual or remote investigations. There were 345 more inspections than were conducted in FY 2022.

**Chart 1: Animal Feeding Operation Inspections  
FY 2023**



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

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

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

**Routine Inspections.** Once a CAFO or an AFO has received a permit, and the Department has approved operation of the LWCF, program staff will conduct periodic, routine inspections to monitor operation of the livestock waste control facilities, management of the operation’s livestock waste, and the records these CAFOs and AFOs are required to maintain. Routine inspections are regularly scheduled inspections of an AFO, involving a detailed, extensive inspection of the LWCF, recordkeeping, and waste management at the operation.

**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, LWC Program staff will investigate the complaint and may conduct an on-site complaint investigation.

**State Permitting**

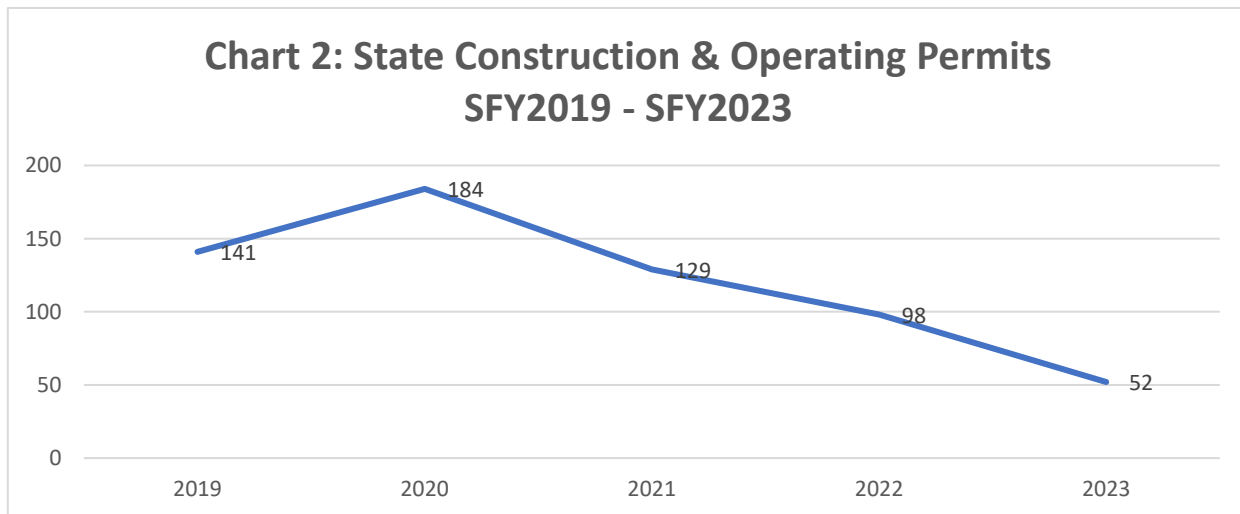
After conducting an initial inspection, the Department may require the AFO to submit an application for a Construction and Operating Permit if there is a potential to discharge to waters of the State. The Construction and Operating Permit is the state permitting process for livestock waste control facilities. A state permit is required prior to construction of livestock waste control facilities at AFOs.

The Department received a total of 74 permit applications and issued 52 permits during FY2023, as shown in the table below.

<b>Table 1: State Construction and Operating Permits – FY2023</b>		
<b>Type of Application or Permit</b>	<b>Applications Received</b>	<b>Permits Issued</b>
New permits	27	19
Modified permits	31	28
Transfer permits	16	8
<b>TOTAL</b>	<b>74</b>	<b>52</b>

The values in Table 1 detail the breakdown of state Construction and Operating Permits.

Chart 2 below shows the total number of state permits issued annually for livestock waste control facilities since FY2019.



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 may begin operation. In FY2023, the Department gave approval to operate 29 AFOs for new or expanded LWC facilities.

**National Pollutant Discharge Elimination System (NPDES) Permit**

The NPDES permit program addresses water pollution by regulating point sources that have the potential to discharge pollutants to waters of the State. An Animal Feeding Operations (AFO) are considered point source of water pollution if it meets the definition of a CAFO. CAFOs are required to obtain NPDES coverage. The program oversees the NPDES permitting process for livestock, issuing coverage under individual NPDES permits to CAFOs, as well as coverage under a NPDES General Permit. These permits expire every five years, and permittees are required to submit a reissuance application to continue NPDES permit coverage.

Table 2 below summarizes the number of NPDES applications received and permits issued for livestock waste control facilities in FY2023.

<b>Table 2: NPDES PERMITS – FY2023</b>		
Type of NPDES Application/Permit	Applications Received	Permits Issued
<b>GENERAL PERMIT FOR CAFOs CONFINING CATTLE</b>		
New Coverage	16	8
Modified or Transferred	19	4
Reissued	102	11
<b>SUBTOTAL GENERAL PERMIT:</b>	<b>137</b>	<b>23</b>
<b>NPDES PERMITS – FY2023</b>		
<b>INDIVIDUAL PERMITS</b>		
New Coverage	0	0
Modified or Transferred	0	0
Reissued	0	0
<b>SUBTOTAL INDIVIDUAL PERMIT:</b>	<b>0</b>	<b>0</b>
<b>NPDES TOTALS:</b>	<b>137</b>	<b>23</b>

### Fees

The annual fee is assessed on all permitted Large CAFOs and all CAFOs covered under an NPDES permit. The fee is determined based upon the number of head of livestock for which the operation has a permit. The fees provide 20% of the Department’s costs to administer the livestock waste control program, as required by statute. The Department received \$296,142 in annual permit fees. In addition, the Department received \$24,100 in initial inspection fees, \$35,200 in permit application fees, \$752 in late payment fees, and \$8,008 in investment income for a total of \$364,202 in fees.

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

Table 3 below lists the size categories for AFOs, as well as the rate, by species, of the annual permit fee for FY2022. The fee amount is based on the operation’s permitted capacity. The program seldom works with operations in the Small AFO category (those with less than the

minimum number of head listed for a Medium AFO) because these operations usually are exempt from the inspection and permitting requirements by statute.

<b>Table 3: Animal Feeding Operations (AFO) Categories and Annual Permit Fee Rates</b>			
<b>SPECIES</b>	<b>LARGE</b>	<b>MEDIUM</b>	<b>ANNUAL FEE RATE</b>
Cattle/Calves/ Heifers	≥ 1,000	300 - 999	\$0.05 per head
<b>Dairy Cows</b>	<b>≥ 700</b>	<b>200 - 699</b>	<b>\$0.075 per head</b>
Swine – 55 lbs. or more	≥ 2,500	750 - 2,499	\$2.00 per 100 *
<b>Swine – Weaned or Nursery Pigs</b>	<b>≥ 10,000</b>	<b>3,000 - 9,999</b>	<b>\$0.50 per 100 *</b>
Chickens – Laying Hens, Broilers: Liquid Manure System	≥ 30,000	9,000 - 29,999	\$1.50 per 1,000 *
<b>Chickens – Laying Hens: Dry System</b>	<b>≥ 82,000</b>	<b>25,000 - 81,999</b>	<b>\$0.50 per 1,000 *</b>
Chickens – except Laying Hens: Dry System	≥ 125,000	37,500 - 124,999	\$0.50 per 1,000 *
<b>Turkeys</b>	<b>≥ 55,000</b>	<b>16,500 - 54,999</b>	<b>\$1.00 per 1,000 *</b>
Horses	≥ 500	150 - 499	\$0.10 per head
<b>Sheep/Lambs</b>	<b>≥ 10,000</b>	<b>3,000 - 9,999</b>	<b>\$0.50 per 100 *</b>
<b>*NOTE:</b> Or any fraction of the Unit of calculation			

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

### Online Applications

The Department has implemented a new online application process in FY2021. This online application portal has allowed for a more streamlined process for permit applications to be submitted to the Department for Nebraska producers.

### Water Quality Monitoring – Surface Water

The Monitoring Section receives reports of fish kills, complaints and questions concerning the quality and possible pollution of Nebraska’s rivers, streams, lakes, and ponds. Occasionally the reported fish kills and complaints received are related to animal feeding operations and livestock waste control facilities.

During FY2023, the Monitoring Section received reports on 7 fish kills, down from the previous year’s 11 fish kills reported. Of these 7 reported fish kills, none were attributed to livestock waste. There were also no livestock waste-related fish kills in FY2022.

The Monitoring Section received a total of 91 complaints about Nebraska’s surface waters during FY2023, down considerably from last year’s 127 complaints received. Five of the 91 complaints received this year involved livestock waste, which matched the 5 livestock related complaints received during FY2022. While many of these cases were referred to other Department programs

that more closely relate to the problem, sometimes the Monitoring Section provides assistance through investigations and/or collecting samples to help document conditions.

Upon receiving a complaint or a report of a fish kill, Monitoring Section staff, Livestock Waste Control Program staff or other Department inspectors investigate the report or complaint. The investigators verify the complaint or report, attempt to identify the source of the problem, and gather samples for analysis, if appropriate.

If the source of the problem is determined to be livestock-waste related, Livestock Waste Control Program staff work to identify a responsible party and correct any problems caused by improper livestock waste management, including cooperation with other Department programs if appropriate. If a responsible party is identified, the Department may seek additional compliance or enforcement actions, as necessary.

Water samples taken by the Monitoring Section – whether at the site of a problem or as part of the extensive routine sampling done by the Section’s staff – are analyzed to detect the presence of pollutant sources, including livestock waste. The analysis looks for ammonia, chlorides, bacteria, nutrients, and organic matter present in the sample. Even though livestock waste is not the only source of these pollutants, elevated concentrations of these parameters can indicate its presence. These pollutants are of special concern because they can significantly lower water quality if they reach rivers, streams, and lakes. These pollutants may impair the biological communities in the water, kill fish, result in water unfit for swimming because of bacterial pollution, increase algae blooms in the water body, and raise the potential for the growth of toxic algae.

For additional information on surface water quality data or monitoring programs, please refer to the 2023 Nebraska Water Monitoring Programs Report and the 2022 Nebraska Water Quality Integrated Report, which are available on the Department’s web site, <http://dee.ne.gov>.

### **Water Quality Monitoring - Groundwater**

The Groundwater Section of the Drinking Water and Groundwater Division has been reviewing plans for livestock waste control facilities since October 1997 to determine the need for groundwater monitoring. Groundwater Section staff prepare a review for each animal feeding operation using site-specific information to determine the potential for groundwater pollution by the livestock waste control facility. The review considers numerous factors, including:

1. Distance between groundwater and the bottom of the livestock waste control facility;
2. Direction of groundwater flow;
3. Type of soils and sediments in the unsaturated zone; and
4. Whether the groundwater is used as drinking water near the livestock waste control facility.

If the Department determines that groundwater monitoring is needed, the operation is required to prepare a groundwater monitoring plan, with details on monitoring well placement, construction, and groundwater sampling techniques. The plan must be approved by the Department before being implemented. Groundwater is tested for nitrate as nitrogen, ammonia as nitrogen, and chloride, as well as measurement of the depth to groundwater. Samples are required to be collected twice a year – spring and fall -- with results submitted to the Department within 45 days of sampling.

# LIVESTOCK PROGRAM STATISTICS FOR FY2023

## Inspections – FY2023

Initial Inspections	64
Post construction	26
Routine (scheduled) Inspections	306
Compliance Status Inspections	666
Discharge Investigations	17
Complaint Investigations	34
Total Inspections & Investigations	1,113

## Construction & Operating Permits – FY2023

New Construction & Operating Permit Applications	27
Modification & Transferred Applications	47
Total Applications Received	74
New Construction & Operating Permits Issued	19
Modification & Transferred Permit Issued	36
Total Permits Issued	52

## NPDES Permits – FY2023

New General Permit Coverage Applications	16
Modification & Transferred General Permit Applications	19
Reissuance of General Permit Coverage Applications	102
Total General Permit Coverage Permits Issued	23
New Individual NPDES Permit Applications	0
Modification & Transferred Individual Permit Applications	0
Reissuance of Individual Permit Applications	0
Total Individual Permits Issued	0
Total NPDES Permits Issued	23

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## Livestock Program Budget & Revenue– FY2023

Total Program Budget	\$1,768,034
Initial Inspection Fees Received	\$24,100
Late Fees Received	\$752
Permit Application Fees Received	\$35,200
Annual Fees Received	\$296,142
Investment Income	\$8,008
Total Revenue	\$364,202