

Identifying and eliminating unauthorized discharges from

Livestock Auctions



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Photo courtesy of OSU Ag Comm.

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United States
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Introduction

This brochure showcases suggested best management practices (BMPs) that can promote the cleanliness and safety of livestock auction facilities by minimizing or eliminating unlawful discharges of process wastewater¹ to waters of the United States.² It also highlights common Clean Water Act (CWA) noncompliance problems that U.S. Environmental Protection Agency (EPA) Region 6 has observed at these facilities. Livestock auction facilities may be defined as animal feeding operations (AFOs) or concentrated animal feeding operations (CAFOs) if they meet the regulatory definitions at 40 CFR 122.23(b). These facilities may also generate large quantities of manure and process wastewater. EPA's goal is to provide guidance and compliance assistance to livestock auction AFOs and CAFOs on the proper storage and management of manure, lot scrapings, feed and contaminated runoff (i.e., process wastewater) from production areas.³

When is a livestock auction defined as an AFO?

As indicated in 40 CFR 122.23(b)(1), an AFO is a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

- (i) Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days⁴ or more in any 12-month period, and
- (ii) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

EPA interprets "maintained" to mean that the animals are confined in an area where waste is generated and/or concentrated and where crops/vegetation are not grown or sustained, or simply put, where manure is generated in lots and pens unable to support vegetative cover. Therefore, EPA interprets most livestock auction facilities in the U.S. to be AFOs.

When is a livestock auction defined as a CAFO?

An AFO is a Large CAFO if it meets the animal threshold numbers indicated in 40 CFR 122.23(b)(4). In addition to the animal threshold numbers, an AFO must also meet the discharge criteria described at 40 CFR 122.23(b)(6) to meet the definition of a Medium CAFO.⁵ A Small AFO that does not meet the minimum animal threshold numbers may also be designated by the permitting authority as a Small CAFO if it is a significant contributor of pollutants to waters of the U.S. (40 CFR 120.2).

¹ Process wastewater is a pollutant and includes water directly or indirectly used in the operation of the animal feeding operation for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other AFO facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts including manure, litter, feed, milk, eggs or bedding. 40 CFR 122.23 (b)(7).

² Waters of the United States as is currently defined at 40 CFR 120.2.

³ The production area is the part of the AFO/CAFO that includes: (1) the animal confinement areas (including confinement houses, barns, open lots, and animal walkways), (2) the manure storage areas (including lagoons, runoff ponds, storage sheds, and stockpiles), (3) the raw materials storage area (including bedding materials), (4) the waste containment area (including the areas within berms and diversions which separate uncontaminated storm water), and (5) the area used in managing mortalities. 40 CFR 122.23 (b)(8).

⁴ If an animal is confined for any portion of a day, EPA interprets it to be on the facility for a full day. For example, dairy cows that are brought in from pasture for less than an hour to be milked are counted as being confined (i.e., on the lot or facility) for the day. Therefore, animal operations such as stockyards, fairgrounds, and auction houses where animals may not be fed, but are confined temporarily, may be AFOs according to EPA Permit Writer's Manual for CAFOs (EPA 833-F-12-001, February 2012)

⁵ According to 40 CFR 122.23(b) a Medium CAFO must meet both the animal number thresholds and also meet either one of the following criteria: (A) Pollutants are discharged into waters of the United States through a man-made ditch, flushing system, or other similar man-made device; or (B) Pollutants are discharged directly into waters of the United States which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

How are animals counted?

The threshold animal numbers in Table 1 apply to operations that confine any kind of cattle (excluding dairy operations which have their own thresholds) including heifers, steers, bulls, and cow/calf pairs. For example, these thresholds apply to beef cattle operations such as feedlots, veal calf operations, and livestock auctions. Except for cow/calf pairs, each animal is counted as one animal, regardless of its age or weight. In the case of cow/calf pairs, the pair is counted as one animal until the calf is weaned. After the calf is weaned, the cow and calf count as individual animals (40 CFR 122.23(b)(4)).

An AFO that has	is a	by
at least 1,000 cattle, dairy heifers, cow/calf pairs, or veal calves	Large CAFO	regulatory definition
from 300 to 999 cattle, dairy heifers, cow/calf pairs, or veal calves and meets one of the medium category discharge criteria	Medium CAFO	
from 300 to 999 cattle, dairy heifers, cow/calf pairs, or veal calves and has been designated by the permitting authority	Medium CAFO	designation
fewer than 300 cattle, dairy heifers, cow/calf pairs, or veal calves and has been designated by the permitting authority	Small CAFO	

Table 1: Definitions of Large, Medium and Small CAFOs [Cattle]

What constitutes an unauthorized discharge to a water of the U.S.?

The CWA and federal regulations prohibit the discharge of pollutants, such as process wastewater, from a CAFO to a water of the U.S. without a National Pollutant Discharge Elimination System (NPDES) permit (or similar state permit system), except under very limited circumstances. Generally, Medium CAFOs with NPDES permits can only discharge to waters of the U.S. when the permit allows; the permit writer will use their best professional judgement to determine applicable conditions and limitations in permits for Medium CAFOs. Generally, Large CAFOs with NPDES permits can only discharge from the production area to waters of the U.S. whenever precipitation causes an overflow of manure, litter, or process wastewater to be discharged, provided that: (1) the production area is designed, constructed, operated and maintained to contain all manure, litter, and process wastewater including the runoff and direct precipitation from a 25-year, 24-hour rainfall event; and (2) the production area is operated in accordance with additional measures and records required by 40 CFR 412.37(a) and (b)⁶ and 40 CFR 412, Subpart C. A 25-year, 24-hour storm event is the maximum 24-hour rainfall event with a probable recurrence interval of once in 25 years. For example, in New Orleans, LA, this event is currently 10.6 inches of rain in 24 hours, and in Albuquerque, NM it is currently about 3.5 inches.⁷

To comply with the CWA, operators of unpermitted CAFOs must ensure that no water that comes in contact with manure, bedding, feed, or other raw materials in areas where animals are confined, fed, or maintained is discharged to a water of the U.S. (40 CFR 120.2). These areas are part of the production area (Figure 1), and runoff from all these areas is process wastewater (40 CFR 122.23(b)(7)). All discharges, including discharges of process wastewater, from an unpermitted CAFO to a water of the U.S., violate section 301(a) of the CWA and the NPDES permitting regulations at 40 CFR 122.21(a).⁸

⁶ This list includes, but is not limited to, routine visual inspections, requirements for storage pond depth markers, mortality management and recordkeeping requirements.

⁷ NOAA's National Weather Service Hydrometeorological Design Studies Center Precipitation Frequency Data Server (PFDS) <https://hdsc.nws.noaa.gov/hdsc/pfds/>

⁸ Unpermitted CAFOs may discharge pursuant to the agricultural stormwater exemption, outlined in 40 CFR 122.23(e), but that exemption applies to discharges from land application that would generally not apply to livestock auction facilities.

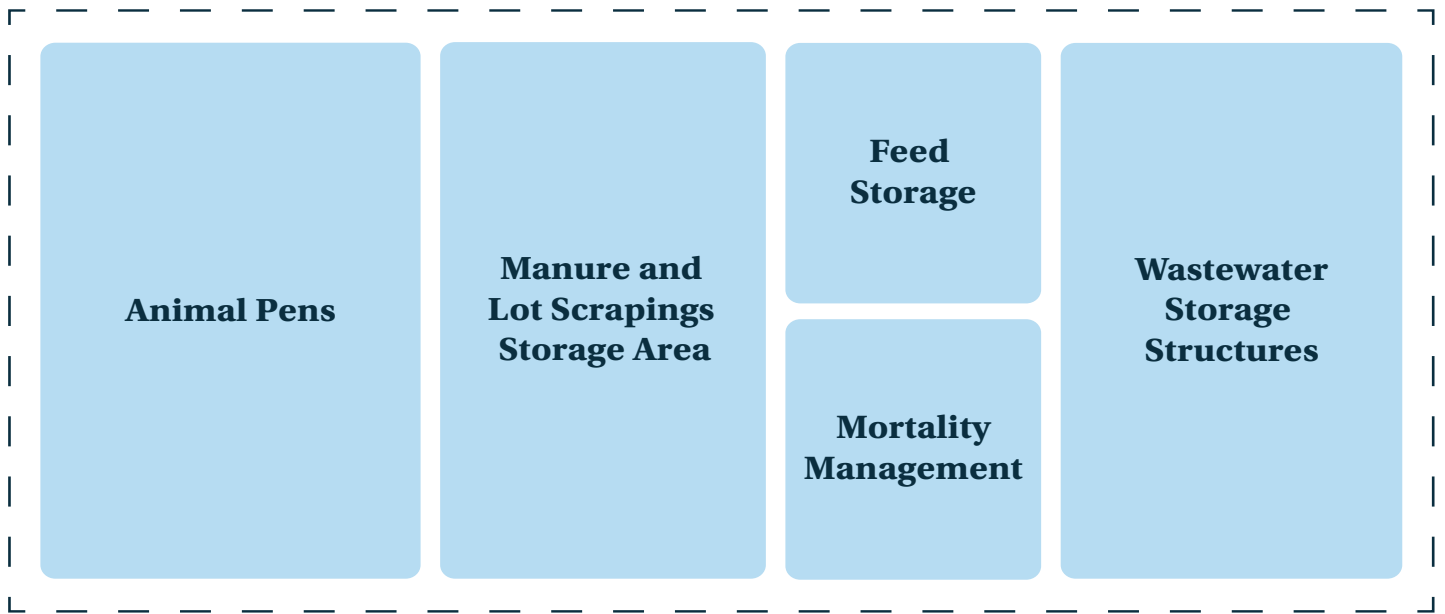


Figure 1: Example diagram of a livestock auction CAFO production area

Unauthorized Discharges from Lot Scrapings and Manure Piles

Historically, manure piles have been the primary source of unauthorized discharges at livestock auction CAFOs in Region 6. For example, in 2006, EPA inspectors observed a discharge from manure piles (Photos 1 and 2) that had been formed over a period of about ten years. These manure piles were located next to a creek and contaminated runoff (process wastewater) discharged directly into the creek, which is a water of the U.S. EPA surveyed these manure piles (Photo 1) and produced contour maps showing the exact locations and sizes of the piles. Based on the survey, the total volume of the manure piles was estimated to be 409 cubic yards. A detailed modeling study was undertaken to determine how much manure from these piles was discharged into the adjacent creek. The modeling results indicated that 4.29 tons of manure were discharged into the creek over a period of five years, in violation of Section 301(a) of the CWA and the federal permitting regulations at 40 CFR 122.21(a). EPA initiated enforcement actions that resulted in the removal of these manure piles.



Photo 1: A manure pile that discharged runoff and leachate into a nearby waterbody.



Photo 2: A close-up view of the manure pile investigated in 2006.



Photo 3: Process wastewater flowing off a manure and lot scraping storage pile.



Photo 4: Process wastewater flowing out of the open lots of a livestock auction facility.



Photo 5: Process wastewater flowing off a manure and lot scraping storage pile due to incidental damage to the berm.

Recent inspections have revealed that manure piles continue to be the most prevalent source of unauthorized discharges from livestock auction AFOs and CAFOs (Photo 3). During an inspection of a livestock auction in 2018, inspectors observed a stream adjacent to the facility which was covered in a thick layer of duckweed from bank to bank. Oftentimes, vegetation like this can be a sign of excess nutrients in the stream. The inspectors were eventually able to determine that process wastewater coming off uncovered manure piles and open lots flowed towards and eventually discharged into this stream (Photo 4). At another facility investigated by EPA in 2019, routine maintenance to irrigation lines damaged a berm intended to convey wastewater to the facility's lagoon (Photo 5). This incident resulted in multiple discharges of process wastewater from a manure storage area approximately a third of an acre in size.

Recommended BMPs to Prevent Unauthorized Discharges

If your facility meets the definition of a CAFO that discharges pollutants to a water of the U.S., you are required to seek NPDES CAFO permit authorization. The conditions of the permit will provide the specific measures needed for your facility to comply with the CWA. For all other non-permitted facilities, EPA recommends utilizing the following BMPs to prevent unauthorized discharges of process wastewater to waters of the U.S.:

1. Store manure and lot scraping piles under a roofed structure (Photo 6).
2. Store manure piles in areas that are graded in such a way that all process wastewater that emanates from them will be contained within a properly designed, constructed, and maintained retention control structure (e.g., lagoon).
3. Construct berms around manure piles to contain any process wastewater that might emanate from them.

Livestock Auction Facilities Currently Implementing Recommended BMPs

EPA's investigations have revealed several livestock auction facilities that are properly managing manure and process wastewater. Below are pictures of livestock auction facilities that are currently implementing EPA-recommended BMPs to prevent the unauthorized discharge of wastewater to waters of the United States.



Photo 6: At this facility, all manure and lot scrapings are stored under the roof of a large storage barn.



Photo 7: A drainage system of culverts and catchment basins directs all process wastewater to the facility's retention control structures.

Photo 8: This facility's lagoons are designed, constructed, operated and maintained to contain all process-generated waste and process wastewater plus runoff from a 25-year, 24-hour rain event.



Contacts and Additional Information:

For more information on CWA AFO and CAFO regulations, please visit <https://www.epa.gov/npdes/animal-feeding-operations-afos>. For specific questions about the applicability of these regulations to your facility, please contact your EPA/State CAFO permitting authority. To determine which agency is responsible for administering your NPDES permit, please visit <https://www.epa.gov/npdes/animal-feeding-operations-mpdes-cafo-permitting>. To reach EPA Region 6 by mail or by phone, please use the following:

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