

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY - REGION VII (EPA)
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT**

STATEMENT OF BASIS (DRAFT)

August 7, 2020

Permittee: K-4 Cattle, LLC, f/k/a LBBJ, Inc.
1213 J Avenue
Pender, NE 68047

NPDES Permit No.: NE0134961

Facility Location: K-4 Cattle, LLC
S½ SW¼ Section 12, Township 25 N, Range 5 E
Latitude: 42.148439° N
Longitude: -96.800764° W
Thurston County, Nebraska

Facility Contact: Brad Krusemark, Owner
K-4 Cattle, LLC
876 12th Road
Pender, NE 68047
Phone (402) 922-0073

A. Status of Permit

This Statement of Basis supports EPA's draft NPDES Permit No. NE0134961 for the livestock feeding facility owned by Brad Krusemark, which is located within the Omaha Tribe of Nebraska Indian Reservation, about 7 miles northwest of Pender in Thurston County, Nebraska. The facility's Standard Industrial Code is 0211 - Beef Cattle Feedlots.

This is a reissuance of an NPDES permit for this facility by the EPA. A permit application for this facility was received on March 23, 2020.

B. Background

The K-4 Cattle, LLC facility is located within the exterior boundaries of the Omaha Tribe of Nebraska Indian Reservation. EPA has sole authority to issue NPDES permits under Section 402 of the Clean Water Act, 33 U.S.C. §1342, to Concentrated Animal Feeding Operations (CAFOs) located within the exterior boundaries of the Omaha Tribe of Nebraska Indian Reservation.

The EPA has prepared this Statement of Basis and the permit for K-4 Cattle, LLC using information in the permit application dated March 6, 2020, and information from other sources, all as identified within this Statement of Basis and included in the Administrative Record.

C. Description of Facility

K-4 Cattle, LLC is a Concentrated Animal Feeding Operation with approximately **39.4** acres of open lot pens that are used for the feeding of up to **4,500** head of beef cattle. Runoff from the open lot pens and approximately **4.4** acres of other contributing drainage area is directed to a

runoff holding pond. The runoff holding pond has a capacity of approximately **35.8 acre ft or 11,650,779 gallons**. Solid manure scrapped from the pens, solids removed from the debris basins, and the contents of the holding pond are to be applied to the land application areas in accordance with the CAFO's approved Nutrient Management Plan ("NMP"). K-4 Cattle, LLC has **2,563 acres** available for manure application, but may also transfer manure to other recipients in any given year.

D. Discharge Prohibition

Discharge is prohibited except when precipitation in excess of a 25-year, 24-hour rainfall event causes an overflow from a properly designed, constructed, operated, and maintained runoff control system. Proper design, construction, operation, and maintenance are specified in the permit and the required nutrient management plan. These requirements are based on the NPDES permit program regulations found at 40 CFR Part 122 and the Effluent Limitations Guidelines and Standards for Concentrated Animal Feeding Operations found at 40 CFR Part 412.

E. Receiving Waters

If an overflow were to occur, the receiving water from the runoff control system is an unnamed tributary of Rattlesnake Creek then to Logan Creek, which is within the Omaha Tribe of Nebraska Indian Reservation. The unnamed tributary flows southeasterly about 1 mile from the CAFO before reaching Rattlesnake Creek that flows easterly about 2 miles before reaching Logan Creek. The Nebraska Department of Environment and Energy has included Logan Creek on their *2018 Water Quality Integrated Report* 303(d) list as impaired for *E. coli*, Segment EL2-20000 of Logan Creek, which is considered state waters for those portions upstream and downstream of the Indian Reservation(s) that it traverses, but within the boundary of the Reservation, the stream is considered Indian Country waters.

F. Proposed Effluent Limits

The permit contains technology-based permit limitations that prohibit discharges except overflows caused by precipitation in excess of 25-year, 24-hour rainfall events; and then, only if the other requirements of the permit have been followed. There have been no reported discharges from the CAFO during the previous 5 years. Compliance with the limitations for the production and land application areas, which includes: 1) best management practices, and 2) the development and implementation of a nutrient management plan, will assure that the CAFO achieves the basic "no discharge" requirement. The technology-based limitations of "no discharge" are protective of water quality in the receiving stream if the holding pond is designed and operated as required by the permit and will seldom, if ever, discharge. Even though Logan Creek has been included on the NDEE 303(d) list as impaired for *E. coli*, the permit does not contain any specific conditions or monitoring requirements for *E. coli* because the Effluent Limitations Guidelines and Standards for CAFOs, 40 CFR Part 412, as required in the permit, prohibits almost all discharges of pollutants from the CAFO.

Technology-based Effluent Limitations

The CAFO is subject to the provisions of 40 CFR Part 412 - Concentrated Animal Feeding Operations (CAFO) Point Source Category, Subpart C - Dairy Cows and Cattle Other than Veal Calves, Effluent Limitations Guidelines (ELG). This subpart of the ELG applies to CAFOs with at least 1,000 cattle.

Production Area

The ELG does not allow discharges of manure, litter, or process wastewater pollutants from the production area to waters of the United States, except when precipitation causes an overflow from a facility where 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 [40 CFR § 412.31(a)(1)(i)], and
- Operated in accordance with the additional measures (visual inspections, depth marker, corrective actions, mortality handling, and record keeping requirements) for the production area required by 40 CFR § 412.37(a) and (b) and 40 CFR § 412.31 (a)(1)(ii).

Land Application Area

In accordance the NPDES regulations and ELGs, the permit incorporates the approved site-specific nutrient management plan.

- The nutrient management plan (NMP) contains the maximum amount of nitrogen and/or phosphorus, based on the field-specific phosphorus risk assessment, soil test results, nutrient credits, manure and wastewater analysis, and crop need and sequence. [40 CFR § 412.4 (c)]
- The NMP addresses best management practices (BMPs) such as land application setback requirements, development of a field-specific assessment that determines the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters. [40 CFR § 412.4 (c)(2)]
- The NMP meets the 9 minimum measures that are specified in 40 CFR § 122.42 (e)(1).
- The NMP is also in compliance with the Natural Resources Conservation Service (CRCS), Conservation Practice Standard, Nutrient Management, Code 590 for nutrient management. [40 CFR § 412.4 (c)(2)]

Best Management Practices

The NPDES permit regulations authorize best management practices (BMPs) to be included in permits when BMPs are reasonably necessary to meet technology-based effluent limitations in 40 CFR § 122.44 (k). Part I. B. of the permit contains BMPs that are necessary in order to achieve the basic "no discharge" requirement for the production area. These BMPs address: 1) adequate storage capacity for the holding pond, 2) adequate pumping system capacity for the irrigation system, and 3) dewatering of the holding pond. Dewatering of the holding pond, with an adequately sized pump, is necessary in order to operate and maintain the system to contain the runoff and direct precipitation from the 25-year, 24-hour storm event as required by the ELGs at 40 CFR § 412.31.

G. Antidegradation Statement

The CAFO is an existing operation. Due to the "no discharge" technology-based requirements in the permit, the limitations and conditions in the permit are protective of the Clean Water Act §101(a)(2) goals. The existing uses and quality of water in the receiving stream as well as the

downstream state water bodies should not be lowered because compliance with the permit limits and best management practices are designed to prevent discharges other than when precipitation in excess of a 25-year, 24-hour rainfall event causes an overflow from a properly designed, constructed, operated, and maintained runoff control system. The permit also requires the diversion of clean water, as appropriate, from the production area.

A specific study of the existing uses and quality of the receiving stream was not necessary and was not conducted based on other information available to EPA that included a November 5, 2003 Point Source Stream Evaluation conducted by the EPA Region 7's Environmental Services Division. The results of the evaluation indicate that Logan Creek, the receiving stream for the discharge addressed by the permit, likely has habitat for aquatic life since the average stream depth recorded was 0.32 meters. At the time of the evaluation, recreational activities were not observed; however, since the stream is in close proximity to the Village of Pender, recreational use is highly likely. A site visit of the Pender Wastewater Treatment Facility that discharges to Logan Creek was conducted on March 8, 2017 by EPA Region 7's Wastewater Infrastructure Management Branch that confirms the findings in the Point Source Stream Evaluation conducted on November 5, 2003.

The Nebraska Department of Environment and Energy (NDEE) includes Rattlesnake Creek (Segment EL2-20400) and Logan Creek (Segment EL2-20000) in their *2018 Water Quality Integrated Report* that describes the status and trends of existing water quality, the extent to which designated uses are supported, pollution problems and sources, and the effectiveness of the water pollution control programs.

H. Inspection and Record Keeping Requirements

The permit requires that the Permittee perform visual inspections of the production area on a regular basis and keep records that document those inspections. The as-built design and drawings of the holding pond and any overflows from the pond must also be kept. [40 CFR § 412.37 (a) and (b)]

Records that document land application practices are required to be kept. They include such items as test methods and test results for manure, process wastewater, and soil; the amount of nitrogen and phosphorus applied to each field and the date of application; and the results of a phosphorus risk assessment for each field. [40 CFR § 412.37 (c)]

I. Endangered Species Act Review

Section 7(a)(2) of the Endangered Species Act requires all federal agencies to ensure, in consultation with the U.S. Fish and Wildlife Service (Service), that any action they authorized, funded, or carried out is not likely to jeopardize the continued existence of federally listed endangered or threatened species, or result in the adverse modification or destruction of critical habitat of such species that is designated by the Service. If a federal action may affect federally listed species or federally designated critical habitat, section 7 consultation is required.

The EPA defines the action area as the K-4 Cattle, LLC, CAFO in Thurston, County and the 22 land application sites for manure in Thurston, Wayne and Cuming counties, in Nebraska. In order to identify federally listed endangered and threatened species likely to occur in the action area, the EPA contacted the Service's Nebraska field office for technical assistance regarding

federally-listed threatened and endangered species likely to occur within the action area in Thurston and Cuming counties. The two listed species are shown in Table 1:

Table 1

Listed Species	Status	County	Effect Determination on Listed Threatened and Endangered Species
Northern Long-eared Bat	Threatened	Wayne/Thurston/Cuming	May Effect, not Likely to Adversely Affect
Pallid Sturgeon	Endangered	Wayne/Thurston/Cuming	May Affect, not Likely to Adversely Affect

The basis for EPA’s effects determination for the listed threatened and endangered species is as follows:

Northern Long-eared Bat

The action area contains suitable roost trees for the Northern Long-eared Bat; however, no destruction or removal of trees is being authorized under this permit. Additionally, the Northern Long-eared Bat could potentially come into contact with wastewater in the lagoons at the CAFO. However, the wastewater is mostly manure slurry, containing mostly nitrogen, phosphorus and potassium, and none of these pollutants may be toxic to the species.

Pallid Sturgeon

Pallid Sturgeon mostly inhabits the Missouri River which is several miles downstream from the facility and the closest stream, and unnamed tributary of Rattlesnake Creek. Rattlesnake Creek is a tributary to Logan Creek, which is a tributary to the Missouri River.

The engineering design, regulatory, and operational controls specified in this permit and by regulations in 40 CFR Part 412 preclude any discharge of wastewater from the CAFO process areas and lagoons to the receiving streams under normal operating conditions. The permit allows stormwater-induced releases of wastewater to the receiving streams as a result of a 25 year, 24 hour rainfall event (i.e., significant 24-hour rainfall event expected to occur only once every 25 years). Such releases would only occur in flood conditions and consequently any wastewater released would be highly diluted by stormwater already in the streams, as well as those flowing from the surrounding land areas. In addition, any potential changes in water quality due to wastewater released during flooding conditions would be short-term in duration, and small compared to other water quality changes that occur during flooding. For these reasons, the EPA does not expect that authorized discharges from the CAFO will adversely affect the water quality of receiving streams or the Missouri River.

With regard to the land application areas, the permit authorizes land application of effluent wastewater and manure at twenty-two sites located in Thurston, Wayne and Cuming counties, which are identified in the facility’s Nutrient Management Plan. These sites are mostly dry land with slopes ranging from 6 to 11 %, used mainly for growing corn and soybeans. Due to the low slopes of the land surface area, as well as the restrictions specified in the Nutrient Management Plan and in the regulations (CAFO regulations in 40 CFR 412 and land application regulations in 40 CFR Part 503) requiring strict adherence to land application rules and standards (including prescribed buffer distances of land application areas from wetlands and streams), the land applied manure will be unlikely to adversely affect the receiving streams. In general, land

application controls for manure specified in this permit are designed to prevent degradation of water quality in the receiving streams, pursuant to 40 CFR Parts 412 and 40 CFR Part 503 Regulations. For these reasons, the EPA does not expect that land application from the CAFO will adversely affect the water quality of to receiving streams or the Missouri River.

The EPA initiated consultation with the Service on July 7, 2020, and consultation with the Service is still ongoing. When concurrence is received from the Service's Nebraska Ecological Services Field Supervisor on our effect determination(s) made for federally listed species, that concurrence letter will be included in the administrative record for this permit.

J. Nebraska Nongame and Endangered Species Conservation Act

All federally listed species under the Endangered Species Act are also state-listed under the Nebraska Nongame and Endangered Species Conservation Act. The Nebraska Game and Parks Commission (NGPC) published a document entitled "Estimated Current Ranges of Threatened and Endangered Species: List of Species by County, Nebraska Natural Heritage Program, Nebraska Game and Parks Commission, Version: December 2017". For Thurston County, the state listed endangered species in the above referenced NGPC document are the pallid sturgeon and sturgeon chub; and the threatened species are the American ginseng, lake sturgeon, northern long-eared bat, and river otter. The sicklefin chub is proposed as a state listed endangered species.

NDEE Title 117 - *Nebraska Surface Water Quality Standards*, Chapter 5, designates Logan Creek, Segment EL2-20000, with the following key species: bluntnose minnow, flathead chub, yellow sandshell, and channel catfish as sensitive species.

The EPA submitted the draft Permit for this CAFO to the Nebraska Game and Parks Commission on July 7, 2020 for review and determination of any effects on the species listed under the Nebraska Nongame and Endangered Species Conservation Act. In a response letter dated July 23, 2020, the Commission stated that the project as described will have no adverse effect within the areas of concern, including state-listed threatened and endangered species, fish and wildlife resources and their habitats.

K. Certification of CWA Section 401 Compliance

The Director of the EPA Region 7 Water Division will have the opportunity to address any comments received during the public comment period prior to signing the Water Quality Certification statement for the facility.

L. Permit Duration

The permit will be issued for a period of five years with the permit expiration date being determined at the time of permit issuance.

M. Procedures for Final Decision Making on the Proposed Permit

The comment period for the Public Notice (PN) of the permit starts with the date noted on the PN and ends 30 calendar days later. The PN requests comments from interested individuals, agencies, or organizations. A written request for a public hearing on the permit may also be

submitted. Any request for a hearing must state the nature of the issues that the requestor proposes to raise at the hearing. In accordance with 40 CFR § 124.17, EPA will respond to all significant comments that are submitted before the end of the 30-day public comment period. If there is a significant amount of interest expressed during the 30-day public comment period, a public hearing will be held on the contents of the permit. The final permit will be issued in accordance with the provisions of 40 CFR § 124.15. (Regulations pertaining to the public notice and issuance of NPDES permits are included in the Administrative Record.)

N. EPA Contact for Additional Information

For additional information regarding the permit and the administrative process for making a final determination regarding issuance of the permit, please contact:

U.S. Environmental Protection Agency, Region 7

Attention: Mark Matthews

WD/ PALB

11201 Renner Boulevard

Lenexa, Kansas 66219

Phone: (913) 551-7635 or 1-800-223-0425

Fax: (913) 551-7884

E-mail: matthews.mark@epa.gov