Iowa
Fields of Opportunities

STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

Work Plan Agreement 9/11/13

Between

The Iowa Department of Natural Resources and the Environmental Protection Agency Region 7

Attached to this correspondence is – *Annual Report* - This satisfies Objective 7, item 1 and 2 due within one year of execution of the Work Plan.

Objective 7 – To keep the EPA and the public up-to-date on DNR's progress towards implementation of this Work Plan.

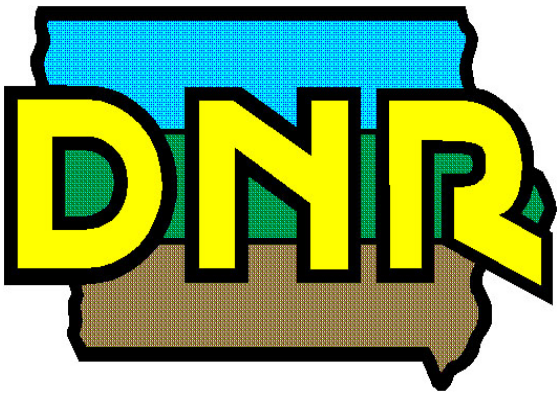
1. DNR agrees to provide progress reports on its progress with implementing Objectives 1-6 of this Work Plan within 90 days, 210 days and one year from the date of execution of this Work Plan. Progress reports will be posted on DNR's website.
2. Beginning in 2014 and ending in FFY 2019, DNR agrees to submit an annual report by August 1 (amended by EPA in July 2014 to September 11) of each year that summarizes all the relevant results associated with DNR's implementation of this Work Plan. In the annual report, if DNR has not met the 20% annual evaluation requirement discussed above, DNR agrees to reassess available resources and progress towards meeting the Work Plan's requirements. The annual report will be posted on DNR's website.

Respectfully submitted to Region 7 on September 10, 2014.

William A. Ehm, Division Administrator

Iowa Department of Natural Resources

Environmental Services Division



2014 Annual Report

For

WORK PLAN AGREEMENT

Between

The Iowa Department of Natural Resources and the

Environmental Protection Agency Region 7

September 11, 2014

Introduction

The Work Plan Agreement between the Iowa Department of Natural Resources (IDNR) and the Environmental Protection Agency Region 7 was created as a means to strengthen IDNR's implementation of the federally authorized National Pollutant Discharge Elimination System (NPDES) program. A petition for withdrawal of the NPDES program authorization was submitted to the EPA on September 20, 2007 by Iowa Citizens for Community Improvement, the Sierra Club, and the Environmental Integrity Project. As a result of the petition, EPA conducted a formal investigation of the petitioners' allegations. The investigation found deficiencies in Iowa's NPDES program for concentrated animal feeding operations (CAFOs). The Work Plan was negotiated to address those deficiencies over a five-year period and covers 7 specific objectives as described in this report, the first of five scheduled annual reports.

Significant progress has been made toward implementation of all stated objectives and commitments in the Work Plan. IDNR believes these objectives have been implemented through a variety of means including development of Standard Operating Procedures (SOPs), standardized forms, checklists, tracking using existing databases, inspections including on-site and desktop evaluations, and an effective enforcement program. Several additional Animal Feeding Operation (AFO) staff, funded and authorized by the State of Iowa, were hired and received extensive training to perform inspections. Existing AFO staff and supervisors also received training regarding implementation of the Work Plan. As a result, producers across the state of Iowa can expect consistent inspections to determine their regulatory status.

Adoption of the federal regulations necessary to fully implement the NPDES permitting program for confinement CAFOs that discharge to waters of the U.S. provides an additional layer of accountability for confinement operations that choose to apply, or are required to apply, for an NPDES permit. The combination of state requirements and the full complement of federal regulations puts Iowa in a strong regulatory position in regard to AFOs.

The progress with implementation of Objectives 1-6 of the Work Plan will be discussed in detail in the remainder of this report.

Objective 1: Recommend promulgation of NPDES permitting regulations for confinement CAFOs that discharge to water of the U.S.

1. *DNR intends to recommend to the Environmental Protection Commission (Commission) that the Commission incorporate by reference the federal regulations necessary to fully implement the NPDES permitting program for confinement CAFOs that discharge to waters of the U.S. Within 180 days of execution of this Work Plan or within 180 days of notification from Region 7 that the previously submitted list of regulations to be incorporated is correct, whichever occurs last, DNR will recommend action to promulgate the proposed rules in the Iowa Administrative Bulleting pursuant to Iowa Code Chapter 17A.*

2. *DNR will recommend that the Commission adopt by reference the revised rules within one year of execution of this Work Plan.*

The language and rule reference was submitted to Region 7 on November 21, 2013 for approval.

At the Commission's meeting on March 18, 2014, the IDNR recommended that the Commission approve publication of a Notice of Intended Action (NOIA) to adopt by reference the federal regulations necessary to fully implement the NPDES permitting program for confinement CAFOs that discharge to waters of the U.S. By unanimous vote the Commission approved the NOIA. The NOIA was published in the Iowa Administrative Bulletin on April 16, 2014.

At the Commission's meeting on August 19, 2014, the IDNR recommended that the Commission adopt by reference the federal regulations necessary to fully implement the NPDES permitting program for confinement CAFOs that discharge to waters of the U.S. By unanimous vote the Commission adopted the amendments as proposed by the IDNR. The adopted amendments will be published in the Iowa Administrative Bulletin on September 17, 2014, and, unless delayed by the Iowa Administrative Rules Review Committee, will become effective on October 22, 2014.

Objective 2: Recommend promulgation of Iowa regulations related to setback and separation distances so that they are equivalent to federal requirements.

1. *DNR intends to recommend to the Commission that the Commission adopt by reference federal regulations that fully implement the NPDES permitting program with respect to land application setback and separation distances for open feedlot CAFOs. Within one year of execution of this Work Plan, DNR agrees to recommend adoption by reference of applicable regulations related to setback and separation distances for open feedlot CAFOs. DNR will recommend rulemaking as set forth in Paragraph 1 of Objective 1 above.*

At the Commission's meeting on March 18, 2014, the IDNR recommended that the Commission approve publication of a NOIA to adopt by reference the federal regulations necessary to fully implement the NPDES permitting program with respect to land application setback and separation distances for open feedlot CAFOs. By unanimous vote the Commission approved the NOIA. The NOIA was published in the Iowa Administrative Bulletin on April 16, 2014.

At the Commission's meeting on August 19, 2014, the IDNR recommended that the Commission adopt by reference the federal regulations necessary to fully implement the NPDES permitting program with respect to land application setback and separation distances for open feedlot CAFOs. By unanimous vote the Commission adopted the amendments as proposed by the IDNR. The adopted amendments will be published in the Iowa Administrative Bulletin on September 17, 2014, and, unless delayed by the Iowa Administrative Rules Review Committee, will become effective on October 22, 2014.

Objective 3: To revise DNR application forms and templates to meet the minimum federal requirements.

1. *Within 60 days of execution of this Work Plan, DNR agrees to revise its construction permit application to include the predictive modeling requirement associated with alternative technologies and to require the additional information needed to determine whether the CAFO discharges. The revised application will include a provision stating that alternative technologies require extensive monitoring and reporting conditions in any permit; in addition, an application for a permit does not guarantee that a permit will be granted or that any permit granted will be renewed.*

The construction permit application was revised to include the predictive modeling requirement on October 23, 2013 (see appendix #3). A provision was added to the construction permit application form, stating that alternative technologies systems require extensive monitoring and reporting in the NPDES permit. In addition, the form includes a statement that an application for a permit does not guarantee that a construction or NPDES permit will be granted or that any NPDES permit will be renewed.

2. *Within 60 days of execution of this Work Plan, DNR agrees to revise its nutrient management plan template to include manure application setback requirements.*

The nutrient management plan template was revised to include manure application setback requirements on October 21, 2013 (see appendix #4). Page 1 of the Nutrient Management Plan Form (under supporting information) states "For an animal feeding operation that is required to have an NPDES permit, these restrictions include setback requirements for land application of manure, litter and process wastewater as set forth in endnote 'cc' on page 9 of this form." Those requirements are detailed on page 9 of the Nutrient Management Plan form (see appendix #4).

Objective 4: Compliance Evaluation and Inspections

A. To implement a comprehensive survey to identify AFOs that are CAFOs that discharge to waters of the U.S. and have failed to apply for NPDES permits.

1. *Within 30 days of execution of this Work Plan, DNR will establish a baseline inventory of all known large CAFOs and medium-sized AFOs in Iowa based upon up-to-date information contained in DNR's AFO database and provide this number to Region 7. Within 90 days of execution of this Work Plan, DNR will provide Region 7 a written plan to systematically locate and/or identify any unknown large CAFOs and medium-sized AFOs to supplement the baseline inventory. Private or personally identifiable information will not be included as part of these submittals.*

A baseline inventory from the IDNR's AFO database was established on September 19, 2013. This inventory was submitted to EPA Region 7 on October 10, 2013 (see attachment #1).

A written plan to systematically locate and/or identify unknown large CAFOs and medium-sized AFOs was developed by IDNR and submitted to EPA Region 7 on December 10, 2013 (see attachment #2).

2. *Within 5 years of the execution of this Work Plan, DNR shall perform a Comprehensive Survey of all large CAFOs and medium-sized AFOs that currently do not have NPDES permits to identify, independent of information supplied by regulated persons, CAFOs that discharge to a water of the U.S. and have failed to comply with NPDES permit application or other permit requirements. The Comprehensive Survey shall be performed pursuant to and consistent with the CWA CAFO portions of the IDNR Comprehensive Survey Standard Operating Procedure (SOP) which is attached to this Work Plan.*

The Comprehensive Survey Standard Operating Procedure (SOP), dated July 3, 2013, is attached to this report (Attachment #3). Comprehensive Surveys are being conducted at large CAFOs and medium-sized AFOs in all regions of the state of Iowa. Further discussion of the inspections and evaluations of AFOs and CAFOs occurs in A.3. and A.4., below.

3. *DNR shall document for each facility the basis for its decision regarding the type of evaluation (on-site inspection or desk-top evaluation) to be conducted.*

The IDNR AFO Desktop Assessment Form was developed as a means of documentation regarding the type of evaluation to be conducted at all large CAFOs and medium-sized AFOs (Attachment #6). The types of evaluations include on-site inspections, desk-top assessments and equivalent on-site inspections previously conducted since November 1, 2011.

Documentation is provided on the Desktop Assessment Form for all large CAFOS and medium-sized AFOs regardless of the type of evaluation that is conducted. On-site inspections are required for all large CAFOs and some medium-sized AFOs depending on housing type (open lot or confinement), manure storage (covered or uncovered), and distance to watercourses. Additional factors include compliance history factors which consider spills to Waters of the U.S., releases of manure and legitimate, documented complaints against the facility.

4. *DNR agrees to perform approximately 20% of these evaluations annually.*

AFO WORKPLAN REPORT 7-1-13 to 8-31-14	**Total**
Total confinements inventory	**6617**
Total open lots inventory	**1457**
NPDES permit inventory	**168**
Combined facilities (open lot and confinement)	**508**
Desk top assessments performed	**1131**
On-site inspections performed	**724**
Return on-site visits performed	**11**

Unknown lots identified	**56**
NPDES permits issued	**9**
Equivalent inspection (since 11/1/2011)	**74**

Total Confinements Inventory = actual recorded in database above medium-sized AFO status

Total Open Lots Inventory = actual recorded in database above medium-sized AFO status

Combined Facilities Inventory = actual recorded in database above medium-sized AFO status with a combination of open lots and confinement facilities

NPDES Permit Inventory = actual AFOs with NPDES permits in database, including newly issued permits

Desktop Assessments Performed = in office determination by publically available mapping services

On-site Inspections Performed = at the facility inspection

Return On-site Visits Performed = follow up inspection to verify status or updates

Unknown lots Identified = verified that they are a medium-sized or larger open lot and were not in the AFO database

NPDES Permits Issued = number of NPDES operation permits issued since July 1, 2013, which include those initiated prior to and during the time frame applicable to producers expanding or building a new facility

Equivalent Inspection = a substantially equivalent on-site inspection conducted since 11/1/11

All facilities, whether or not on-site inspections are conducted, receive desktop evaluations. As of August 29, 2014 a total of 1,131 desktop assessments were completed. In addition, 75 facilities were determined to have had an equivalent on-site inspection since November 1, 2011. Therefore, of the total of 8,582 facilities in the Baseline Inventory, evaluations were conducted (desktop and/or on-site) at 1,205 sites or 14.0%.

IDNR agreed to conduct approximately 20% of these evaluations annually. For the first year, IDNR did not meet that goal. However, several reasons can be cited for not attaining the goal in the first year.

- Program enhancements, including Standard Operating Procedures for inspections of non-NPDES open lots (attachment #7) and confinements (attachment #8) were developed. In addition, desk-top assessment SOP (attachment #9) and biosecurity

protocol SOP (attachment #10) were developed to ensure uniform evaluations were conducted at all field offices.

- Standard inspection forms were developed for confinement facilities (appendix #6) and open lot facilities (appendix #7).
- Hiring for additional AFO staff authorized by the Iowa Legislature for State Fiscal Year 2014 (SFY14) did not commence until July 1, 2013 (when funds were made available). The hiring process generally takes several weeks to complete.
- Once hired, AFO staff were required to meet strict training guidelines to conduct independent inspections as described in the training plan.
- Seasoned AFO staff and new AFO staff received training in how to conduct Comprehensive Surveys and newly created SOPs.
- As a result of hiring, training of new and seasoned staff, and general acclimatization to a new inspection program, several months passed before new staff were able to conduct independent inspections.
- According to the Comprehensive Survey, low priority is given to medium-sized confinement facilities. Of the Baseline Inventory total facility number of 8,582, 42.3% of all facilities are medium-sized confinements. It is anticipated that an increasing number of these will be evaluated as the field offices proceed with the priority list.

Now that staff are trained and have one year's familiarity with the program, the pace of inspections will likely increase. It also should be noted that funding for the new AFO staff was reauthorized for SFY15.

B. To perform appropriate CWA NPDES compliance evaluation inspections at NPDES permitted CAFOs.

1. *DNR agrees to perform CWA/NPDES inspections at all NPDES permitted CAFOs in Iowa within 5 years of execution of this Work Plan, and to complete approximately 20% of these inspections annually, in accordance with the prioritization established in Paragraph 2 below. The CWA/NPDES inspections shall be conducted pursuant to and consistent with the CWA CAFO portions of the IDNR Concentrated Animal Feeding Operation NPDES On-Site Inspection SOP attached to this Work Plan.*

The IDNR Concentrated Animal Feeding Operation NPDES On-Site Inspection SOP (attachment #4) was developed in conjunction with development of other inspection procedures as a result of the Work Plan. Components of the inspection procedure were in place prior to the development of the Work Plan. The NPDES inspection procedure established uniform statewide procedures for inspections of permitted CAFOs. In addition, a statewide inspection form template was also developed and implemented on a statewide basis (attachment #5). As of August 31, 2014, IDNR had 168 active NPDES permits. A total of 29 NPDES inspections were completed from September 1, 2013 to August 31, 2014 for a total of 17.3% of all permitted CAFOs. IDNR, therefore, completed approximately 20% of these inspections.

Current IDNR protocol is to inspect NPDES permitted open feedlots just prior to their permit expiration date. If any compliance issues are noted during the inspection, those items need to

be resolved prior to reissuance of the permit. Also, inspections will be prioritized according to item #2, below, as those events occur.

2. *DNR and Region 7 agree that it is appropriate to prioritize inspections of NPDES permitted facilities with spills or legally sufficient complaints as set forth in Iowa Code 459.601 or 567 IAC 65.113 (459A) that involve a water of the U.S.*

As spill reports or legally sufficient complaints are received by IDNR, those facilities will be scheduled for inspection. All NPDES permitted CAFOs will be inspected within 5 years from September 11, 2013 in accordance with this objective. IDNR is on pace to achieve that objective.

C. Resources and Training

1. *Pursuant to Senate File 435 (2013), DNR received an increase of $700,000 for its animal feeding operation program. This will result in approximately 7 additional full-time staff from the previous fiscal year in order to conduct the evaluation and inspections required by this Work Plan. In the annual reports required pursuant to Section 7.2 of this Work Plan, DNR will provide an assessment as to whether it has sufficient resources to meet the requirements of this Work Plan, and if not, what additional resources are needed.*

The appropriation from the Iowa legislature was available after July 1, 2013. Hiring of AFO staff commenced immediately. Approximately 7 full-time AFO staff were hired with the $700,000 legislative appropriation and they started at the IDNR by the end of 2013.

The adequacy of staffing resources will be discussed in further detail (Objective 7.2) later in the report.

2. *Within 180 days of execution of this Work Plan, DNR will develop a CAFO/NPDES training curriculum for all staff conducting NPDES evaluations and inspections at AFO/CAFOs. The curriculum will be completed by all existing AFO/CAFO inspectors and their field office supervisors within 270 days of execution of this Work Plan. New AFO/CAFO staff/inspectors will complete the curriculum within 3 months of their start date. The curriculum will cover state and federal CWA-related matters, including CAFO inspector training requirements for DNR inspectors. DNR shall develop and provide the training curriculum to Region 7 for review and comment within 180 days of execution of this Work Plan.*

The training curriculum was developed by a team of IDNR staff and management with guidance from EPA Region 7. The training team began meeting in October, 2013, and met approximately every other week. The final training plan was developed and submitted to EPA Region 7 on December 17, 2013 (see attached training plan).

The CAFO NPDES Training Curriculum has been implemented for all AFO field staff and field office supervisors. In addition to the core training, new AFO staff must complete on-the-job (OJT) training before conducting independent inspections. Several of the courses were video-taped for utilization by other IDNR staff, now and in the future.

To date, 31 existing IDNR field office AFO/CAFO inspectors have completed the training. Six field office supervisors have completed the training. As of August 29, 2014, all but two of the new field office AFO/CAFO inspectors have received OJT training, and it is anticipated that those two staff will be fully trained by the fall of 2014.

It is important to understand that almost all field staff have other program area responsibilities. Very few staff are assigned only to AFO program area responsibilities. Furthermore, some AFO staff hours are used by the field office supervisor, AFO enforcement coordinator, field office administrative assistant and field office secretary.

Objective 5: Timely issue NPDES permits that meet federal requirements to all CAFOs that DNR determines discharge to waters of the U.S. and take timely and appropriate enforcement action if necessary.

1. *In accordance with Objective 4, DNR agrees that upon completion of an evaluation of a CAFO operating without an NPDES permit, where DNR determines the CAFO is required to obtain an NPDES permit because it discharges to a water of the U.S., DNR will notify the CAFO within 60 days after completion of its evaluation and require the CAFO to either: submit an application for an NPDES permit to DNR within 90 days from the date of DNR's notification or longer if additional time is necessary; or immediately put in place interim remedial measures that eliminate the discharge to waters of the U.S. followed by permanent measures that eliminate the cause of the discharge to waters of the U.S. DNR may provide these notifications through commencement of an informal or formal action, depending on DNR's best judgment about what will bring the CAFO into compliance with the CWA. DNR agrees to track the CAFO's response and ensure that a permit application is submitted or discharge cause is clearly eliminated, relying on enforcement (or further enforcement) if necessary.*

In 2013, IDNR issued 29 Final NPDES permits and in 2014, so far, IDNR has issued 18 Final NPDES permits. The total number of NPDES permits issued to feedlots in Iowa is 168. However, no permits were issued as a result of requirements from a Work Plan inspection. Several facilities chose to initiate remedial measures to eliminate discharges, followed by permanent measures to remediate the cause of the discharge. These cases are being tracked by IDNR environmental specialists in the field offices.

2. *Within 180 days after receipt of each application for an NPDES permit submitted according to this Objective, DNR will complete a draft permit that contains facility-appropriate provisions designed to control all discharges from the CAFO in a manner consistent with federal effluent limitations for CAFOs. At the termination of the public comment period for each draft permit, and after consideration of all public comments received, DNR agrees to expeditiously issue a final permit for each such CAFO.*

To date, no permits have been issued to facilities required to do so as a result of a Work Plan inspection. It should be noted that several facilities may have chosen to voluntarily apply for, and receive, an NPDES permit in anticipation of the need to do so, either because of an

impending inspection or recognition by the facility of the need to comply with NPDES discharge requirements.

Objective 6: To implement enforcement program that ensures penalties are sought in accordance with DNR's EMS and creates a stronger deterrent to noncompliance.

1. *DNR agrees to carry out enforcement against CAFOs with illegal discharges to waters of the U.S. or NPDES permit violations in accord with its Enforcement Management Systems (EMS) manual. DNR will document the basis for enforcement response decisions. When seeking administrative penalties, DNR agrees to assess the actual or reasonably estimated economic benefit in accordance with 567 IAC 10.3(2) and the EMS manual, including both delayed and avoided cost of compliance. In specific cases where DNR does not seek or recover full economic benefit, DNR will document the case-specific rationale and/or mitigating factors supporting DNR's decision to not seek full economic benefit. DNR will also document mitigating factors used for the non-economic benefit component of assessed penalties.*

Since the Work Plan was signed on September 11, 2013, IDNR has finalized seven administrative consent orders against producers with unauthorized releases, one Attorney General action against a producer with an unauthorized discharge and three administrative consent orders against producers with NPDES permit violations. In an effort to assist the field office personnel in determining the appropriate enforcement action, an Enforcement Checklist was created. This checklist has been implemented in each AFO inspection or complaint. The checklist provides a list of possible DNR compliance options including but not limited to Notice of Violation letters and Administrative Orders, and it documents IDNR's decision in each case. The checklist helps ensure that enforcement is consistent with IDNR's EMS manual.

If violations are referred for administrative penalty, IDNR includes the delayed and avoided cost of compliance in the referral document as well as in the administrative action. If DNR does not seek or collect the full amount of the economic benefit the IDNR documents the determination in the Penalty Calculation and Settlement Forms which are placed in the file.

2. *DNR agrees to develop checklists necessary to ensure consistent and appropriate enforcement responses by enforcement staff within 60 days of execution of this Work Plan.*

As stated above, the IDNR developed an Enforcement Checklist for field inspectors to use when conducting inspections or visits. This checklist is used by all field offices in the state and assists in ensuring consistent and appropriate enforcement. The Enforcement Checklist was submitted to the EPA on November 8, 2013 (see appendix #5).

3. *DNR agrees to complete any required staff training on its revised EMS and penalty calculations within 120 days of execution of this Work Plan.*

On January 6, 2014, the IDNR Legal Services Bureau conducted a six-hour training course for all field office inspectors and supervisors. The class explored federal and state regulations, court decisions and the enforcement process, including but not limited to the EMS and penalty calculations. The class was recorded and disks of the training are in each of the field offices for staff who were unable to attend the training or for new staff. Documentation of the training, including the training agenda was submitted to the EPA on January 7, 2014.

This training also satisfies a portion of Objective 4, Item C.2. Compliance Evaluation and Inspections – Resources and Training.

Objective 7: To keep the EPA and the public up-to-date on DNR's progress towards implementation of the Work Plan.

1. *DNR agrees to provide progress reports on its progress with implementing Objectives 1-6 of the Work Plan within 90 days, 210 days and one year from the date of execution of this Work Plan. Progress reports will be posted on the DNR's website.*

90-day and 210-day progress reports were submitted to the EPA and posted on the IDNR's website within the required time frames (see appendices 1 & 2). This (2014 annual report) is being submitted by September 11, 2014, one year from the signed agreement, per discussion with EPA Region 7. Subsequent reports will be submitted by August 1 of each year. The 2014 annual report will be posted on the IDNR's website.

2. *Beginning in 2014 and ending in FFY 2019, DNR agrees to submit an annual report by August 1 of each year that summarizes all relevant results associated with DNR's implementation of this Work Plan. In the annual report, if DNR has not met the 20% annual evaluation requirement discussed above, DNR agrees to reassess available resources and progress towards meeting the Work Plan's requirements. The annual report will be posted on DNR's website*.

This submittal satisfies the 2014 annual report requirement. The 20% annual evaluation requirement is discussed at length in Objective 4, Item A.4., above. It appears, at this time, current staffing levels will be sufficient to carry out the responsibilities of the Work Plan. Of course, this depends on funding by the PPG, facility fees and reauthorization of funding by the Iowa Legislature.

Summary

The Work Plan Agreement between IDNR and EPA Region 7 was signed on September 11, 2013. Since then, significant progress has been made to strengthen Iowa's implementation of the federally authorized NPDES program. Work Plan objectives 1 through 7 were implemented in a timely manner and summarized below:

- Work Plan objectives #1 and #2, regarding permitting and setback regulations were completed as the Commission adopted the amendments as proposed by the IDNR at its August 19, 2014 meeting. The adopted amendments will be published in the Iowa Administrative Bulletin on September 17, 2014, and, unless delayed by the

Iowa Administrative Rules Review Committee, will become effective on October 22, 2014.

- Work Plan objective #3 required the construction permit application form and nutrient management plan form be modified to include a predictive modeling requirement and federal setback requirements for manure application. These were completed on October 23, 2013 and October 21, 2013, respectively.
- Objective #4 requires comprehensive surveys and evaluations at all large CAFOs and medium-sized AFOs in Iowa along with staff training and development. This objective will be on-going for the extent of the Work Plan Agreement.
- Objective #5 requires the IDNR to timely issue NPDES permits to all CAFOs that IDNR determines to discharge. This objective will be on-going.
- Objective #6 requires IDNR to implement an enforcement program consistent with IDNR's EMS. Staff training with the revised EMS has been completed and an enforcement checklist developed. Enforcement is an on-going process.
- Objective #7 requires IDNR to keep the EPA and the public up-to-date on IDNR's progress toward implementation of the Work Plan. Progress reports have been posted on IDNR's website as required. This annual report will be posted on the IDNR website.

Conclusion

All major objectives and requirements of the Work Plan have been completed. Additional AFO inspection staff have been hired and have undergone extensive training as required in the Work Plan. The 20% annual evaluation requirement was not achieved in the first year. However, the IDNR fully anticipates that current staffing levels are sufficient to meet the goals in subsequent years. This will be re-evaluated in next years' report, due August 1, 2015.

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STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

Work Plan Agreement 9/11/13

Between

The Iowa Department of Natural Resources and the Environmental Protection Agency Region 7

Attached to this correspondence is the DNR/EPA Work Plan Progress Report (90 days). This satisfies workplan Objective 7, #1 submission of a progress report within 90 days.

Respectfully submitted to Region 7 on December 6, 2013.

Barbara A Lynch

for William A. Ehm, Division Administrator

Iowa Department of Natural Resources

Environmental Services Division

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DNR/EPA Work Plan Progress Report (90 days)

Objective 1: Recommend promulgation of NPDES permitting regulations for confinement CAFOs that discharge to waters of the U.S.

1) Completed – Language and rule reference submitted to EPA on 11/21/13 for approval.
2) To be completed depending on outcome of #1 above.

Objective 2: Recommend promulgation of Iowa regulations related to setback and separation distances so that they are equivalent to federal requirements.

1) Completed – Language and rule reference submitted to EPA on 11/21/13 for approval.

Objective 3: To revise DNR application forms and templates to meet the minimum federal requirements.

1) Completed – Construction permit application now includes the predictive modeling requirement. Form revised on 10/22/13.
2) Completed – Nutrient Management Plan template is revised to include manure application setback requirements. Form revised on 10/21/13.

Objective 4: Compliance Evaluation and Inspections.

A.1) Baseline inventory submitted to EPA on 10/8/13. Written plan to systematically locate and/or identify any unknown large CAFPs and medium sized AFOs submitted to EPA on 12/10/13.

A.2) In progress – A minimum of 117 CWA CAFO inspections have been completed to date (12/2/13).

A.3) Ongoing

A.4) Ongoing – Inspection program well underway toward meeting the 20% goal.

B.1) CWA/NPDES inspections are being conducted at NPDES permitted facilities according to the NPDES On-Site Inspection SOP meeting the 20% goal.

B.2) CWA/NPDES inspections are being prioritized regarding spills and legally sufficient complaints.

C.1) 7 new AFO FTEs have been hired to complete evaluations and inspections.

C.2) Training curriculum is being developed and implemented. The DNR is meeting it's goal of having the curriculum developed within 180 days of execution of the work plan.

Objective 5: Timely issue NPDES permits that meet federal requirements to all CAFOs that DNR determines discharge to waters of the U.S. and take timely and appropriate enforcement action if necessary.

1) In progress and ongoing.
2) No applications for NDPES permits have been submitted.
3) In progress and ongoing.

Objective 6: To implement enforcement program that ensures penalties are sought in accordance with DNR's EMS and creates a stronger deterrent to compliance.

1) In progress and ongoing.
2) Checklist developed and completed. Submitted to EPA on 11/4/13.
3) Staff training scheduled for 1/6/14 by DNR legal staff.

Objective 7: To keep the EPA and the public up-to-date on DNR's progress towards implementation of this work plan.

1) 90 day progress report will be posted on DNR's website.
2) To be completed August 1, 2014.

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DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

Work Plan Agreement 9/11/13

Between

The Iowa Department of Natural Resources and the Environmental Protection Agency Region 7

Attached to this correspondence is – *Progress report with implementing Objectives 1-6 of the Work Plan within 210 days* - This satisfies Objective 7, item 1 due within 210 days of execution of the Work Plan.

Objective 7 – To keep the EPA and the public up-to-date on DNR's progress towards implementation of this Work Plan

1. DNR agrees to provide progress reports on its progress with implementing Objectives 1-5 of this Work Plan within 90 days, 210 days and one year from the date of execution of this Work Plan. Progress reports will be posted on the DNR's website.

Respectfully submitted to Region 7 on April 14, 2014.

Bill Ehm, Division Administrator

Iowa Department of Natural Resources

Environmental Services Division

DNR/EPA Work Plan Progress Report (210 days)

Objectives 1 and 2: Recommend promulgation of NPDES permitting regulations for confinement CAFOs that discharge to waters of the U.S.

Regarding Objectives 1 and 2:

On March 18, 2014, the Environmental Protection Commission agreed with the Department's recommendation and approved the Notice of Intended Action for proposed rulemaking regarding NPDES permitting regulations and manure application setback requirements. This satisfies Objective 1, item 1 and Objective 2, item 1.

Objective 3: To revise DNR application forms and templates to meet the minimum federal requirements.

1) Completed – Construction permit application now includes the predictive modeling requirement. Form revised on 10/22/13.
2) Completed – Nutrient Management Plan template is revised to include manure application setback requirements. Form revised on 10/21/13. Final adoption will occur when rulemaking is completed.

Objective 4: Compliance Evaluation and Inspections.

A.1) Baseline inventory submitted to EPA on 10/8/13. Written plan to systematically locate and/or identify any unknown large CAFPs and medium sized AFOs submitted to EPA on 12/10/13.

A.2) In progress – A minimum of 294 CWA CAFO inspections have been completed to date (4/7/14). In addition, 600 desk-top inspections have been completed.

A.3) Ongoing

A.4) Ongoing – Inspection program well underway with progress toward meeting the 20% goal.

B.1) CWA/NPDES inspections are being conducted at NPDES permitted facilities according to the NPDES On-Site Inspection SOP, meeting the 20% goal.

B.2) CWA/NPDES inspections are being prioritized regarding spills and legally sufficient complaints.

C.1) 7 new AFO FTEs have been hired to complete evaluations and inspections.

C.2) The training curriculum has been developed and submitted to EPA for approval. Supervisors and existing AFO/CAFO staff have completed training. New AFO/CAFO inspectors are in progress completing the training curriculum.

Objective 5: Timely issue NPDES permits that meet federal requirements to all CAFOs that DNR determines discharge to waters of the U.S. and take timely and appropriate enforcement action if necessary.

1) In progress and ongoing.
2) No applications for NDPES permits have been submitted.
3) In progress and ongoing.

Objective 6: To implement enforcement program that ensures penalties are sought in accordance with DNR's EMS and creates a stronger deterrent to compliance.

1) In progress and ongoing.
2) On November 8, 2013, DNR submitted to EPA an enforcement checklist to ensure consistent and appropriate enforcement responses. This submittal satisfied the requirement in Objective 6, Item 2.
3) On January 7, 2014, DNR submitted to EPA the training curriculum for the "Federal and State Rules and Enforcement Procedures" training that occurred on January 6, 2014. The training was provided DNR Legal Services Bureau to all animal feeding field office staff and supervisors. The training satisfied the requirement in Objective 6, Item 3.

Objective 7: To keep the EPA and the public up-to-date on DNR's progress towards implementation of this work plan.

1) 210 day progress report will be posted on DNR's website.
2) To be completed August 1, 2014.

Appendix 3

OPEN FEEDLOT[1] OR COMBINED[2] OPERATION
Construction Permit Application Form

INSTRUCTIONS:

Prior to construction, complete Section 1 to determine if a construction permit is required. If a construction permit is required, complete the rest of the form. Then, sign it and mail it as instructed in the submittal checklist No. 1 (pages 3 to 7). See page 7 for information regarding additional permits that may be required to your open feedlot.

SECTION 1 - Is a construction permit required?

If any of the following criteria are met, a construction permit is required prior to constructing, expanding or modifying the manure control system at an open feedlot or a combined operation or prior to repopulating an open feedlot operation. Check all boxes that apply:

Criteria

☐ A) An open feedlot or a combined operation required to be issued a National Pollutant Discharge Elimination System (NPDES)[3] permit. This includes (check one box):

- ☐ A large CAFO[4], as defined in 567 Iowa Administrative Code (IAC) 65.100(455b, 459A). You must combine same type of animals in confinement[5] operation buildings and open feedlot pens that are under common ownership or management. See page 8 for CAFO definitions.
- ☐ A medium CAFO, as defined in 567 IAC 65.100(455B,459,459A). You must combine same type of animals in confinement operation buildings and open feedlot pens that are under common ownership or management. See page 8 for CAFO definitions.
- ☐ A designated CAFO, as defined in 567 IAC 65.100(455B,459, 459A). See page 8 for CAFO definitions.

And any of following is planned (check one box):

- ☐ Construction or expansion of a settled open feedlot effluent basin.
- ☐ Construction or expansion of an Alternative Technology (AT) system[6].
- ☐ Installation of a settled open feedlot effluent transfer piping system.

☐ B) The animal unit capacity (AUC)[7] of the open feedlot operation will be increased to more than the AUC approved by the department in a previous construction permit. To calculate the AUC, use Table 1 (page 2.)

☐ C) The volume of settled open feedlot effluent, settleable solids or open feedlot effluent stored at the open feedlot operation will be increased to more than the volume approved by the department in a previous construction permit.

☐ D) Repopulation of an open feedlot operation if it was discontinued for 24 months or more and the AUC would be 1,000 AU or more. To calculate the AUC, use Table 1 (page 2.)

SECTION 2 - General Information

A) Name of operation: _____

Location: _____
(1/4 1/4) (1/4) (Section) (Tier & Range) (Name of Township) (County)

B) Owner information:

Name: _____ Title: _____

Address: _____

Telephone: _____ Fax: _____ Email: _____

C) Person to contact with questions about this application (if different than owner):

Name: _____ Title: _____

Address: _____

Telephone _____ Fax: _____ e-mail: _____

1 Open Feedlot: Unroofed or partially roofed area where livestock or poultry are confined for more that 45 days out of any 12-month period.

2 Combined: combined operation includes both of the other two definitions in items 1 & 5.

3 NPDES permit as defined in rule 567 IAC 65.100(455B,459,459A). See page 7 for instructions on how to download the open feedlot operation rules.

4 CAFO: Concentrated Animal Feeding Operation as defined in rule 567 IAC 65.100(455B,459,459A). You must combine same type of animals, in confinement buildings and open feedlot pens that are under common ownership or management. To calculate the animal capacity of the operation or combined operation, use Table 1 (on page 2.) If the combined animal capacity meets the large CAFO or medium CAFO definitions, your operation is a CAFO. A CAFO also includes a designated CAFO. See page 7 for instructions on how to download the open feedlot operation rules and page 8 for a CAFO description.

5 Confinement: Totally roofed area where livestock or poultry are confined for more than 45 days out of any 12-month period.

6 AT systems require extensive monitoring and reporting which will be required conditions in any NPDES permit. An application for a permit does not guarantee that a construction permit and NPDES permit will be granted or that any NPDES permit will be renewed.

7 AUC: Animal Unit Capacity as defined in rule 567 IAC 65.100(455B, 459,459A). You must combine animals in confinement buildings and open feedlot pens that are under common management or ownership. See page 7 for instructions on how to download the rules.) To calculate the AUC of the operation use Table 1 (on page 2.).

D) Adjacency criteria: do you own another open feedfeedlot operation, or do you manage another open feedlot operation that is located within 1,250 feet of the open feedlot operation that is applying for a construction permit?

☐ Yes. Include the animals from the adjacent feedlot(s) in Table 1 (below). ☐ No.

E) This construction permit application is for:

☐ A new open feedlot operation
☐ Expansion of an existing open feedlot operation
☐ Modification of the manure control system at an existing open feedlot operation
☐ Reopening an open feedlot operation that was discontinued for 24 months or more
☐ An Alternative Technology (AT) manure control system at an open feedlot operation
☐ An animal feeding operation that after combining the same type of animals in confinement buildings and open feedlot pens, under common ownership or management, meets the definition of large CAFO, medium CAFO or designated CAFO, that is proposing to install manure and runoff controls

F) Animal capacity and AUC of the animal feeding operation:

- If the operation has animals housed in confinement buildings and open feedlot pens that are under common ownership or management, for each animal type enter the current and proposed number of head in columns [1] and [2]. Add the number of head entered in columns [1] and [2], for each animal type. For each row, look at the Total No. of Head (combined operations) and determine if it meets of exceeds the large CAFO or medium CAFO definitions.
- If this is only an open feedlot operation, for each row enter the current and proposed number of head in column [2] and determine if it meets or exceeds the large CAFO or medium CAFO definitions. If the open feedlot maintains more than one animal type, add all animal units in open feedlots and determine if the Total AUC is 1,000 AU or more. Also, if you answered "Yes" in SECTION 1, D) (adjacency), include the animals of the adjacent open feedlot operation(s).
- If the Total number of head for each animal type at an open feedlot or at a combined CAFO, meets or exceeds the large CAFO or medium CAFO[4] definitions, or if the Total AUC at the open feedlot operation meets or exceeds 1,000 AU, your operation is a CAFO. See page 8 for CAFO definitions.

Table 1: Animal Capacity and Animal Unit Capacity (AUC)

Animal Type	Confinements		Open Feedlots				Combined
	Current No. Head	Proposed No. Head [1]	Current No. Head	Proposed No. Head [2]	x Factor	= AUC	Total No. Head [1] + [2]
Cattle (other than veal calves or mature dairy cows) which includes beef cattle, steers, cow-calf pairs, dairy heifers or immature dairy					1.0		
Veal calves					1.0		
Mature dairy cows (milked or dry)					1.4		
Swine, 55 lbs. or more					0.4		
Swine nursery, 15 to 55 lbs.					0.1		
Sheep and goats, including lambs					0.1		
Chicken broilers, 3 lbs. or more					0.01		
Chicken broilers, less than 3 lbs.					0.0025		
Chicken layers, 3 lbs. or more					0.01		
Chicken layers, less than 3 lbs.					0.0025		
Turkeys, 7lbs or more					0.018		
Turkeys, less than 7 lbs.					0.0085		
Horses					2.0		
					Total AUC[7]:		

My animal feeding operation is:

☐ An open feedlot that is a large CAFO
☐ An open feedlot that is a medium CAFO[4]
☐ A combined CAFO that is also a large or medium CAFO
☐ A designated CAFO

I hereby certify that the information contained in this application is complete and accurate.

Signature of owner(s) _____ Date: _____

CAVEAT: This form is only a summary of Iowa Code chapter 459A and the DNR's amended administrative rules. It is a guidance document and should not be used as replacement for the statutory provisions and administrative rules (collectively, the law). While every effort has been made to assure the accuracy of this information, the law will prevail in the event of a conflict between this document and the law.

Applicant's Submittal Checklist No. 1
Open Feedlots[1] with Conventional Systems (567 IAC Chapter 65, Appendix A) or AT Systems[6]

Submit the information requested in this checklist and include this checklist with your application. Incomplete applications will be immediately returned to applicant. If included with the construction permit application, the NPDES permit application form and NPDES fee should be the first page of the application package.

Mail one package containing (4) copies, unless indicated otherwise, of Items 1 through 6, and if applicable Item 7, as instructed on page 7 and in the following order:

☐ **Item 1 - NPDES permit application form and NPDES fees.**

Applicant/ Consultant	Item
☐	NPDES permit application and fees (Forms 542-4001 and 542-1250) are included. Include a check payable to Iowa DNR.
☐	One (1) copy of the Nutrient management plan (NMP) if an NPDES permit is to be submitted.
☐	One (1) copy of the copy of public notice for the nutrient management plan and anti deg analysis.

☐ **Item 2 - Construction permit application form** DNR Form 542-1427, completed and signed by the owner (previous pages.)

☐ **Item 3 - Engineering report** Must be stamped and signed (on original) by a licensed professional engineer (PE) in the state of Iowa or by an engineer of the Natural Resources Conservation Service (NRCS). The report shall describe in detail the proposed manure control system and the feedlot runoff control system (567 IAC Chapter 65, Appendix A, Systems 1 to 5) or AT System being proposed, including calculations that show the detailed system requirements:

Applicant/ Consultant	Item
☐	Animal unit capacity (Table on previous page)
☐	Number of acres and estimated volume of runoff from the unpaved feedlot area.
☐	Number of acres and estimated volume of runoff from the paved feedlot area.
☐	Number of acres and estimated volume of runoff from cropland, pasture and woodland draining into the runoff control system; and the estimated runoff expected from the 25-yr, 24-hr storm event.
☐	Number of square feet or acres (whatever best describes the facility) and estimated volume of runoff from total roofs, farmstead and driveways draining into the runoff control system. If none, please enter "0."
☐	The volume of processed wastewater which drains into the runoff control system during a 12-month period. If none, please enter "0."
☐	The volume of open feedlot effluent from other sources which discharge into the control system during a 12-month period. Drainage areas must include areas for feed storage and bulk material storage. Drainage from these areas **cannot** be diverted. If none, please enter "0."
☐	The volume required in the settled open feedlot effluent basin to store the feedlot runoff.
☐	The volume provided in the settled open feedlot effluent basin.
☐	Volume required in the AT System or solids settling facility to contain expected open feedlot effluent as required in 567 IAC 65.110(1).
☐	Volume provided in the AT System or solids settling facility.

	Initials
I have reviewed and submitted the information for engineering report (Engineer initial):	
I have reviewed the engineering report that has been submitted to the DNR and it meets DNR requirements (DNR representative initial):	

☐ **Item 4 - Engineering plans**. Must be stamped and signed (on original) by a licensed professional engineer (PE) in the state of Iowa or by an engineer of the Natural Resources Conservation Service (NRCS). The plans must include the following:

Applicant/ Consultant	Item
☐	A certification that the design of the settled open feedlot effluent basin and/or AT System complies with the construction design standards of Division II of chapter 65, as required in 567 IAC 65.105(3)"b."
☐	Information (e.g. maps, drawings, aerial photos, etc.) that shows the location of your feedlot, including the name of the feedlot and legal description (¼ ¼, ¼, Section, Tier and Range, Township name, County), as required in 567 IAC 65.107(2)"h."
☐	The location of any other open feedlot operation that you own or manage that is located within 1,250 feet of the open feedlot operation that is applying for a construction permit; or that is adjacent, as defined in 567 IAC 65.107(2)"h"(2.)
☐	A plan view that shows the location of the feedlot(s), proposed solids settling basin, settled open feedlot effluent basin (effluent control structures) and AT System components:
	☐ Include dimensions and available storage volume.
	☐ Clean water diversions.
☐	Identify separation distances to existing private and public wells to show that the separation distance requirements of 567 IAC 65.108(1) and (2) are being met.
☐	Cross sectional view(s) of the proposed settled open feedlot effluent basin:
	☐ Indicate settled open feedlot effluent basin dimensions at inside top of berm and include maximum liquid level.
	☐ Indicate elevations at settled open feedlot effluent basin tops and bottoms, also the natural and final grade elevations.
	☐ Indicate drainage directions and effluent system flowpath.
	☐ Basin inlet and outlet details (manure transfer pipe.)
	☐ Indicate the proposed liner thickness and the berm widths.
	☐ Indicate the side slope of the basin.
	☐ If a groundwater lowering system is required 567 IAC 65.109(3) "c", include details and calculations.
	☐ All elevations referenced to an identified benchmark – County benches as established by NGVD29Datum (USGS topographic map, MSL)
☐	**Recommended** Details for Drawings:
	☐ Erosion control (riprap or equal) provided at basin inlets, outlets, spillways, and corners.
	☐ Overflow emergency spillway.
	☐ Maximum 3:1 berm slope (inner and outer.)

	Initials
I have reviewed and submitted the information for engineering drawings (Engineer initial):	
I have reviewed the engineering drawings that has been submitted to the DNR and it satisfies DNR needs (DNR representative initial):	

☐ **Item 5 - Soils and Hydrogeologic Report**. The soils and hydrogeologic report shall address all of the following requirements:

Applicant/ Consultant	Item
☐	The soils and hydrogeologic conditions, subsurface soil classification and the result of soils investigation at the proposed construction site must be conducted as required in 567 IAC 65.109(2), "a" to "c"(1)-(7) and/or 567 IAC 65.110(4):
	☐ The report must be prepared by a qualified person ordinarily engaged in the practice of performing soil investigations.

☐ A detailed description of three continuous core samples – minimum of three per Cell (Settled Open Feedlot Effluent Basin), must be included. All boring logs should provide soil profile characterization to identify both depth to seasonal high ground water table and Loess/Till interface – to a minimum of 10 feet below the proposed basin bottom.

☐ Carbonated bedrock depth determination: If proposed basin is in karst according to DNR siting atlas the soils investigation shall include a description of one 25 ft deep coring below bottom of proposed structure OR a well log from within 100 feet of the proposed structure (well logs may be found at the GEOSAM website). If more than 25 feet or more of unconsolidated(suitable) material exists then the site is not considered to be karst.

☐ If site is in karst or drains to a known sinkhole then settled open feedlot effluent basins and all manure storage structures must be formed, pursuant to 567 IAC 65.109(4).

☐ Where bedrock is encountered, but site is not in karst, determine if the bedrock separation requirement in 567 IAC 65.109(5) is met.

☐ Groundwater Hydrology, 567 IAC 65.109(3), 567 IAC 65.110(5):

☐ Determine if the minimum groundwater separation required in 567 IAC 65.109(3)"b" is met.

☐ Determine if an artificial groundwater lowering system as required in 567 IAC 65.109(3)"c" is needed.

☐ Determination of groundwater table must be done as required in 567 IAC 65.109(3)"a" or 567 IAC 65.110(5). The measured groundwater elevations rarely represent the seasonal groundwater table. Therefore, soils characteristics and NRCS soils data must be considered.

☐ Water table map should be constructed from the water table levels observed in the soil corings and monitoring wells. This may also be included in the cross sectional view of the engineering plans.

☐ Indicate in a cross sectional view, the estimated surface groundwater table. This may also be included in the cross sectional view of the engineering plans.

☐ Verify that all deep soil corings and temporary monitoring wells will be plugged following sampling.

☐ If known, identify location of proposed long-term monitoring (as needed by the DNR determination) and based upon the Geotechnical report submitted. This may also be included in the plan view or cross sectional view of the engineering plans.

☐ Verify soil suitability for construction of the compacted liner.

	Initials
I have reviewed and submitted the information for soil & hydrogeological report (Engineer initial):	
I have reviewed the soil & hydrogeological report that has been submitted to the DNR and it satisfies DNR requirements (DNR representative initial):	

☐ **Item 6 - Technical Specifications**. Must be prepared by a licensed professional engineer (PE) in the state of Iowa or by an engineer of the Natural Resources Conservation Service (NRCS), that address the following:

Applicant/ Consultant	**Item**
☐	The technical specifications for the basin and/or AT System must describe in detail, all design, construction and specifications for the basin to meet the design requirements of 567 IAC Chapter 65, Division II "Open Feedlot Operations":
☐	Technical specifications for the basin and/or AT System to meet drainage tile removal standards of 567 IAC 65.109(1) and 567 IAC 65.110(3).
☐	The technical specifications shall also describe the liner construction standards for the basin to meet the requirements of 567 IAC 65.109(7), "a"(1)-(2) or "b":
☐	☐ Provide minimum of one-foot thick compacted clay liner on interior berms and bottom of settled open feedlot effluent basin(s).
	☐ Conduct tests to show that percolation of berm and bottom do not exceed 1/16 inch per day (1.8×10^{-6} cm/s) at the design depth.
☐	Summary of predictive computer modeling results for any proposed AT System as required by 567 IAC 65.110(6)"a" and 65.110(7)"a".

	Initials
I have reviewed and submitted the technical specifications (Engineer initial):	
I have reviewed the technical specifications that has been submitted to the DNR and it satisfies DNR requirements (DNR representative initial):	

☐ **Item 7 - Well variance, if needed**. In accordance to 567 IAC 65.108(3), the applicant may request a well variance if the proposed open feedlot effluent structures do not comply with the well separation distance requirements of 567 IAC 65.108(1) and 65.108(2). The well variance request shall be made in writing to the Director, at the time the construction permit application is submitted. Call (712) 262- 4177 for well variance procedure.

☐ A. For each well that does not meet the required separation distance, the following items must be submitted:

- ☐ 1. Well location:
  - Legal description of each well in 1/4 1/4, 1/4, Section, Tier, Range, and County.
  - Image of proposed site (in the form of a site plan or drawn on an aerial photo) with well locations and distances marked to proposed new structures and other landmarks.
- ☐ 2. Recent water analysis for nitrate-N from a certified laboratory.

☐ B. If gross contamination is indicated, submit as many of the following items as possible:

- ☐ 1. Driller's log submitted by a certified well driller. These logs may be from local drillers, the GEOSAM website, the Private Well Tracking System, county sanitarians, or other county agencies.
- ☐ 2. Total well depth.
- ☐ 3. Screen materials, length, and depth.
- ☐ 4. Casing diameter and depth.
- ☐ 5. Static water level (SWL) and pumping water level (PWL) as plumbed/measured by a certified driller, pump installer, professional engineer, or county sanitarian.
- ☐ 6. Description of wellhead protection such as a concrete pad around the well, runoff control, berms, and buffers.
- ☐ 7. Details of water use such as the livestock or human consumption and daily pumpage rates.

  Note: *Water withdrawal permits are required if the daily pumpage rate will exceed 25,000 gallons per day.*
- ☐ 8. Additional water quality characteristics from recent analyses.

	Initials
I have reviewed and submitted the well variance information, if needed (Engineer initial):	
I have reviewed the well variance information that has been submitted to the DNR and it satisfies DNR requirements (DNR representative initial):	

DO NOT MAIL THIS PAGE

Instructions on finding the open feedlot[1] operation rules – 567 IAC Chapter 65:

1. Go to http://www.iowadnr.gov/ and click on "Environment", then select "Land Stewardship", then select "Animal Feeding Operations", then select "AFO Rules and Regulations".
2. Scroll until you find "Current Rules" and click on Chapter 65.
3. Scroll until you find the open feedlot operation rules which are in "DIVISION II" (Note that "DIVISION I" applies to confinement[5] feeding operations.)

Information about other permits that may be required:

This section is for informational purposes only. The applicant is responsible for verifying any additional permit requirements, with the corresponding DNR office, and for obtaining any other local, state or federal permits that may be required to the open feedlot operation.

☐ Open feedlot operation structures exceeding storage capacity or dam height thresholds or located on a flood plain or within a floodway of a river or stream may be required to obtain DNR flood plain development permits and provide protection from inundation by flood waters, as specified in the Iowa Administrative Code, 567-Chapters 71 and 72. For more information contact Kelly Stone of the Flood Plain Management Program at (515) 281-4312 or visit: http://www.iowadnr.gov/insidednr/regulatoryland/floodplainmanagement/floodplaindevpermit.

☐ A Storm water permit General permit No. 2, associated with construction activities is required, prior to disturbing any soil if the total construction site area to be disturbed equals or exceeds one (1) acre of land. This includes the clearing, grading and excavation of the animal feeding operation structures, even with phased construction. The permit must be obtained before commencement of soil disturbing activities for the project. For more information contact the Storm Water Program at (515) 281-6782 or visit: http://www.iowadnr.gov/insidednr/regulatorywater/stormwater**.**

☐ A water use permit is required for the withdrawal or diversion of more than 25,000 gallons per day of water. Water purchased from municipal or rural water systems is excluded. For additional information, contact the Water Supply Section at (515) 725-0336 or visit: http://www.iowadnr.gov/insidednr/regulatorywater/watersupplyengineering/waterallocationuse.

Questions:

- Questions about open feedlot construction permit requirements or regarding this form should be directed to an engineer of the animal feeding operations (AFO) Program at (712) 262-4177 or go to http://www.iowadnr.gov (select link to "Environment", "Land Stewardship", "Animal Feeding Operations" and "Open Feedlots".)
- To contact the appropriate DNR Field Office, go to http://www.iowadnr.gov/insidednr/dnrstaffandoffices/environmentalfieldoffices.
- For questions regarding combining animals in confinements and open feedlots, contact Gene Tinker at (563) 927-2640.

Mailing Instructions:

If you opt to have the pre-design meeting with DNR to ensure the "Fast track" permitting process (see Open Feedlot Construction Permit Manual), mail the construction permit application and requested documents in Checklist No. 1, as instructed in the pre-design meeting with DNR.

If you choose not to have the pre-design meeting, at least 90 days before the date that construction, installation or modification is scheduled to start, mail 4 copies of the construction permit application documents, Items 1 through 6, and if applicable Item 7 to the following address:

Iowa Department of Natural Resources
Environmental Services Division
Field Office 3, Gateway North
1900 N Grand Ave, Suite E17
Spencer, Iowa 51301

DO NOT MAIL THIS PAGE

CAFO DEFINITIONS

"Large concentrated animal feeding operation"* or *"large CAFO." An AFO is defined as a large CAFO if it stables or confines as many as or more than the numbers of animals specified in any of the categories shown below. An AFO is also defined as a large CAFO, if after combining animals in confinement structures and open feedlot pens, it meets or exceeds any of the following:

1. ☐ 700 mature dairy cows, whether milked or dry;
2. ☐ 1,000 cattle, including but not limited to heifers, steers, bulls, veal calves and cow/calf pairs;
3. ☐ 2,500 swine each weighing 55 pounds or more;
4. ☐ 10,000 swine each weighing less than 55 pounds;
5. ☐ 500 horses;
6. ☐ 10,000 sheep or lambs;
7. ☐ 55,000 turkeys;
8. ☐ 30,000 laying hens or broilers, if the AFO uses a liquid manure handling system;
9. ☐ 125,000 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system;
10. ☐ 82,000 laying hens, if the AFO uses other than a liquid manure handling system;
11. ☐ 1,000 animal units, where more than one category of animals is maintained using the same type of operation.

"Medium concentrated animal feeding operation"* or *"medium CAFO." The term medium CAFO includes any AFO with the type and number of animals that fall within any of the ranges listed in paragraph *"a"* of this definition and which has been defined or designated as a CAFO. An AFO is defined as a medium CAFO if:

a. The type and number of animals that it stables or confines fall within any of the ranges shown below. You must combine animals in confinement structures and open feedlot pens:

(1) ☐ 200 to 699 mature dairy cows, whether milked or dry;
(2) ☐ 300 to 999 cattle, including but not limited to heifers, steers, bulls, veal calves and cow/calf pairs;
(3) ☐ 750 to 2,499 swine each weighing 55 pounds or more;
(4) ☐ 3,000 to 9,999 swine each weighing less than 55 pounds;
(5) ☐ 150 to 499 horses;
(6) ☐ 3,000 to 9,999 sheep or lambs;
(7) ☐ 16,500 to 54,999 turkeys;
(8) ☐ 9,000 to 29,999 laying hens or broilers, if the AFO uses a liquid manure handling system;
(9) ☐ 37,500 to 124,999 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system;
(10) ☐ 25,000 to 81,999 laying hens, if the AFO uses other than a liquid manure handling system;
(11) ☐ 300 to 999 animal units, where more than one category of animals is maintained using the same type of operation; and

b. Either one of the following conditions is met:

(1) ☐ Manure or process wastewater is discharged into waters of the United States through a manmade ditch, flushing system, or other similar man-made device; or
(2) ☐ Manure or process wastewater is 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 animals confined in the operation.

"Designated CAFO" means an AFO that has been designated as a CAFO pursuant to rule 65.103(455B,459A).

65.103(1) The department may evaluate any animal feeding operation that is not defined as a large or medium CAFO, and designate it as a CAFO if, after an on-site inspection, it is determined to be a significant contributor of manure or process wastewater to waters of the United States. In making this determination, the department shall consider the following factors:

a. The size of the operation and the amount of manure or process wastewater reaching waters of the United States;
b. The location of the operation relative to waters of the United States;
c. The means of conveyance of manure or process wastewater to waters of the United States;
d. The slope, vegetation, rainfall, and other factors affecting the likelihood or frequency of discharge of manure or process wastewater into waters of the United States; and
e. Other relevant factors.

65.103(2) No animal feeding operation with an animal capacity less than that specified for a medium CAFO shall be designated as a CAFO unless manure or process wastewater from the operation is discharged into a water of the United States:

a. Through a man-made ditch, flushing system, or other similar man-made device; or
b. Which originates outside of and passes over, across or through the facility or otherwise comes into direct contact with animals confined in the operation.

65.103(3) The owner or operator of a designated CAFO shall apply for an NPDES permit no later than 90 days after receiving written notice of the designation.

The DNR's mission:

To conserve and enhance our natural resources in cooperation with individuals and organizations to improve the quality of life for Iowans and ensure a legacy for future generations.

Introduction and Instructions for the

Nutrient Management Plan Form

Iowa law requires certain animal feeding operations to develop and obtain Department of Natural Resources (DNR) approval of a nutrient management plan (NMP) and to apply manure and feedlot effluent in accordance with the plan.

Who Needs to Submit a Plan?

- The owner of an open feedlot[1] operation which has an animal unit capacity of 1000 or more animal units.
- The owner of an animal feeding operation who is required to have a national pollutant discharge elimination system (NPDES) permit.

NOTE: A comprehensive nutrient management plan or CNMP can be substituted for the NMP if the producer is applying for federal cost-share under the Environmental Quality Incentives Program (EQIP). An existing manure management plan (MMP) may be used for the confinement[2] operation portion of a combined[3] operation.

Instructions for Use of These Forms

- Make additional copies of pages 2 and 3 as needed.
  - Submit one copy of the plan and all the attachments to your local DNR field office (listed below) when submitting updates to existing NMPs.
- In addition to the required forms, the information indicated below must be maintained as part of the nutrient management plan.

Supporting Information to be maintained with the current NMP (in addition to required forms):

- A plat map which shows the location of the animal feeding operation and of all fields being used for manure application;
- Aerial photos (available from the county Farm Services Agency office) or similar photos of all fields being used for manure application. For each field, mark the field boundaries, areas not available or unsuitable for manure application, and areas where specific restrictions on manure application apply. For an animal feeding operation that is required to have an NPDES permit, these restrictions include setback requirements for land application of manure, litter and process wastewater as set forth in endnote “cc” on page 9 of this form.
- Information documenting the optimum yields calculated for the manure application fields (if required – see endnote “f”);
- Manure and effluent sampling results, if sample results were used to determine the manure and effluent’s nutrient content for this plan;
- Operations using irrigation to apply manure must provide information indicating how they will comply with applicable restrictions and requirements, and any additional methods or practices that will be used to reduce potential odors;
- Written manure application agreements for all fields identified in the plan that are not owned or rented for crop production purposes by the owner of the animal feeding operation;
- Natural Resources Conservation Service (NRCS) P index “detailed report” from the Iowa P index calculator (available at http://www.ia.nrcs.usda.gov/) and a document (e.g., RUSLE2 profile erosion calculation record) indicating the inputs and results of RUSLE2 for each field in the plan.

Plan Updates & Recordkeeping

- Prior to making changes in an operation’s nutrient management practices, the operation must update the plan to show the proposed changes. Updates should be maintained on site.
- Records of manure and effluent application must be maintained and be available for the DNR to inspect. For a list of record keeping requirements, see 65.112(10) “b”. Records must be maintained for

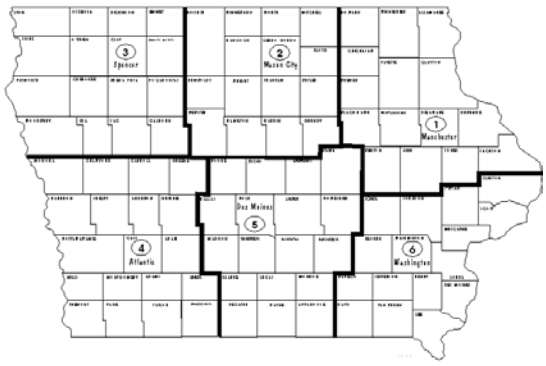
[1] Open Feedlot: Unroofed or partially roofed area where livestock or poultry are confined for more that 45 days out of any 12-month period.
[2] Confinement: Totally roofed area where livestock or poultry are confined for more than 45 days out of any 12-month period.
[3] Combined: combined operation includes both of the other two definitions in items 1 & 2, above.

five years after the year of manure application or for the length of the crop rotation, whichever is greater.

Assistance

Assistance in developing a nutrient management plan may be available from a number of sources, including private consultants, Iowa State University Extension, and USDA's Natural Resources Conservation Service. Some of these sources will prepare a complete plan for an operation, while others will only provide general assistance. Contact your county Extension or NRCS office to determine the assistance they will provide, as well as to obtain a list of consultants who will prepare plans. If you have specific questions about the Nutrient Management Plan forms, contact your regional DNR Field Office. See attached map for contact information and to determine the appropriate office.

IOWA DEPARTMENT OF NATURAL RESOURCES
Environmental Services Division Field Office Locations



DNR Environmental Services Division

Field Office #1
909 West Main, Ste 4
Manchester, IA 52057
563-927-2640

Field Office #2
2300 15th St SW
Mason City, IA 50401
641-424-4073

Field Office #3
1900 N. Grand Ave.
Spencer, IA 51301
712-262-4177

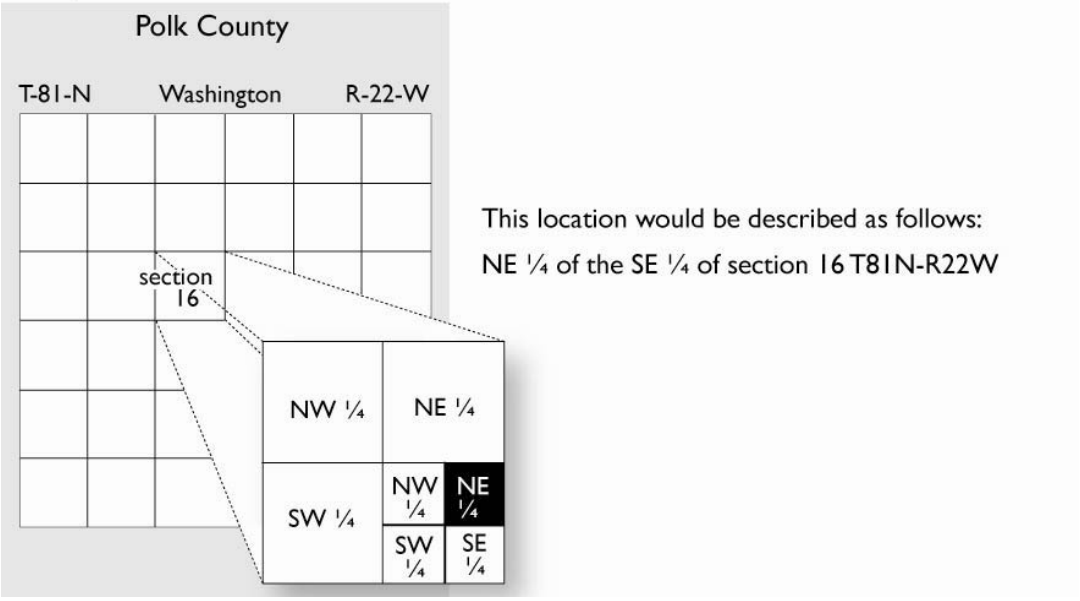
Field Office #4
1401 Sunnyside Lane
Atlantic, IA 50022
712-243-1934

Field Office #5
7900 Hickman Rd Ste 200
Windsor Heights, IA 50324
515-725-0268

Field Office #6
1023 W. Madison
Washington, IA 52353
319-653-2135

Example of Legal Description for Facility

Please refer to the example below when describing the location of your operation on Page 1. This property is located in Washington Township, Polk County.



Remember: Report all manure releases to the DNR's 24-hr. Spill Line at (515) 281-8694 within 6 hours of the onset or discovery of the spill.

Nutrient Management Plan Form
Operation Information

Instructions: Complete this form for your animal feeding operation. Endnotes are provided on pages 8-10.

The information within this form, and the attachments, describes my animal feeding operation, my manure storage and handling system, and my planned manure management system. I (we) will manage the manure, and the nutrients it contains, as described within this nutrient management plan and any revisions of the plan, individual field information, and field summary sheet, and in accordance with current rules and regulations. Deviations permitted by Iowa law will be documented and maintained in my records.

_____ _____ **Date:** _____

(Signature) **(Print Name)**

Name of operation: _____ **Facility ID No.** ___ ___ ___ ___ ___

Location of the operation: _____

(911 Address)

_____ _____ _____

(Town) (State) (Zip Code)

_____ ¼ of the _____ ¼ of Sec _____ T _____ R _____ _____ _____

(1/4 1/4) (1/4) (Section) (Tier) (Range) (Township Name) (County)

Owner and Contacts of the animal feeding operation:

Owner _____ Phone _____

Address _____

Email (optional) _____ Cell phone (optional) _____

Contact person (if different than owner) _____ Phone _____

Address _____

Email (optional) _____ Cell phone (optional) _____

This nutrient management plan is for: (check one)

☐ existing operation, not expanding ☐ existing operation, expanding

☐ existing operation, new owner ☐ new operation

Construction and Expansion Dates: _____ date of initial construction

_____ _____ _____ and date(s) of all expansion(s)

Table 1. Information about livestock production and nutrient management system

1	2	3	4	5	6	7
Animal Type[a]	Description of Manure Storage/ Manure Type (e.g. scraped solids from open lot , effluent from runoff basin, bedded barn manure , liquid manure from below building pit)	Max. Number of Animals Housed (head)	N^b	P_2O_5 [b]	gal/space/day or ton/space/yr[c]	Annual Manure Production[d] (gallons or tons)
			lb/1000 gal / lb/ton			
					Total Tons	
					Total Gallons	

Confinement Animals Covered by MMP? ☐ Yes ☐ No (if yes, application rate calculations are not required in this plan)

Source of Nutrient Content Data (columns 4, 5): standard tables, analysis of manure samples, other**:**

Nutrient Management Plan Form

Determining Maximum Allowable Manure Application Rates

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, and method of application) that occurs at this operation. Endnotes are given on pages 8, 9 and 10.

Management Identification (Mgt ID[e]): _____
(Identify this application scenario by letter, refer to endnote e)

Method used to determine optimum yield[f]: _____ **Timing of Application:** _____

Method of Application[g]: _____ **Application Loss Factor[g]:** _____

If spray irrigation is used, identify method[h]: _____

Table 2. Manure Nutrient Concentration

Manure Nutrient Content **(lbs/1000gal or lbs/ton)[i]**					
Total N		**P_2O_5**			
% **TN available 1st year[j]**		% **2nd year**		% **3rd year**	
Available N 1st year[k]		**2nd year[l]**		**3rd year[m]**	

Table 3. Crop Usage Rates[n]

(lbs/bu or lbs/ton)	N	P_2O_5
Corn		0.32
Soybean	3.8	0.72
Alfalfa	50	13

* Use blank space above to add crop not listed.

Table 4. Calculations for rate based on nitrogen (always required)

1	**Applying Manure For[o]** (crop to be grown)					
2	**Optimum Crop Yield[f]**	bu or ton/acre				
3	**P_2O_5 removed with crop by harvest[p]**	lb/acre				
4	**Crop N utilization[q]**	lb/acre				
5a	**Legume N credit[r]**	lb/acre				
5b	**Commercial N planned[s]**	lb/acre				
5c	**Manure N carryover credit[t]**	lb/acre				
6	**Remaining crop N need[u]**	lb/acre				
7	**Manure rate to supply remaining N[v]**	gal/acre or ton/acre				
8	**P_2O_5 applied with N-based rate[w]**	lb/acre				

Table 5. Calculations for rate based on phosphorus (required if P-based rates are planned)

9	**Commercial P_2O_5 planned[x]**	lb/acre				
10	**Manure rate to supply P removal[y]**	gal/acre or ton/acre				
11	**Manure rate for P based plan[z]**	gal/acre or ton/acre				
12	**Manure N applied with P-based plan[aa]**	lb/acre				

Table 6. Application rates that will be carried over to page 3.

13	**Planned Manure Application Rate[bb]**	gal/acre or ton/acre				

When applicable, manure application rates must be based on the P index value as follows:
(0-2) N-based manure management.
(>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.
(>5-15) No manure application until practices are adopted to reduce P index to 5 or below.

(>15) No manure application.

Nutrient Management Plan Form

Year by Year Nutrient Management Plan Summary

Instructions: Complete this form for each of the next **five** growing seasons, to demonstrate sufficient land base to apply manure over multiple crop years. If this page is identical for multiple years (e.g. every other year), submit only once for the identical years, and indicate which years the form represents. Endnotes are given on pages 8, 9 and 10.

Crop Year(s): _____

1	2	3	4	5	6	7	8	9	10
Field Designation[cc]	Field Location ___ ¼ of the ___1/4 Sec ___ T____ R____ Township Name _____ County Name _____	Mgt ID[dd]	Planned Crop	Acres receiving manure[ee]	Own, rent, or agreement (include length of agreement)[ff]	P Index Value[gg]	Planned Application[hh] Gal or ton/acre	Planned Application[hh] Gal or ton/field	Correct Soil Test for P[ii]

Total acres available for manure application _____

Total Gallons that could be applied _____

Total Tons that could be applied _____

ANIMAL MORTALITIES

NPDES requirement:

- Ensure proper management of mortalities (i.e., dead animals) to ensure that they are not disposed of in a liquid manure, storm water, or process wastewater storage or treatment system not specifically designed to treat animal mortalities. [40 CFR 122.42(e)(1)(II)]

ELG Requirement:

- Mortalities must not be disposed of in any liquid manure or process wastewater system, and must be handled in such a way as to prevent the discharge of pollutants to surface water, unless alternative technologies pursuant to § 412.31(a)(2) and approved by the Director are designed to handle mortalities. [40 CFR 412.37(a)(4)]

A. Method of Animal Mortality Handling

1. ☐ Composting
2. ☐ Rendering
3. ☐ Burial
4. ☐ Other: _____

B. Method of Mortality Storage Prior to Final Disposal

C. Recordkeeping – Animal Mortalities

The following records must be maintained on site at the permitted facility for at least five years from the date they are created. It is recommended that these records be kept with the NMP.

- Documentation of mortality handling practices.

DIVERSION OF CLEAN WATER

NPDES Requirements:

- Ensure that clean water is diverted, as appropriate, from the production area. [40 CFR 122.42)e)(1)(iii)]
- There must be routine visual inspections of the CAFO production area. At a minimum, the following must be visually inspected:
  - Weekly inspections of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water to the wastewater and manure storage structure; [40 CFR 412.37(a)(1)(i)]

A. Diversion of Clean Water From the Production Area

Is clean water diverted from the production area? ☐ Yes ☐ No

a. If Yes, describe the clean water diversion system:

b. If No, please ensure that the attached calculations for determining total storage capacity (question II.B.3) account for all runoff, including clean water that has not been diverted from the production area.

B. Recordkeeping – Diversion of Clean Water

The following records must be maintained on site at the permitted facility for at least five years from the date they are created. It is recommended that these records be kept with the NMP.

- Records of weekly visual inspections of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water to the wastewater and manure storage structure.

PREVENTION OF DIRECT CONTACT OF ANIMALS WITH WATERS OF THE UNITED STATES

NPDES Requirement:

- Prevent direct contact of confined animals with waters of the United States. [40 CFR 122.42(e)(1)(iv)]

A. Prevention of Direct Contact

Do the animals have access to waters of the United States within the production area? ☐ Yes ☐ No

B. Measures to Prevent Direct Contact

List the measures used to prevent direct contact (e.g. fencing) of animals with waters of the United States within the production area:

CHEMICAL HANDLING

NPDES requirement:

- Ensure that chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants. [40 CFR 122.42(e)(1)(v)]

A. Measures for Chemical Handling

Check the appropriate boxes below to indicate the measures taken to prevent pesticides, commercial fertilizers, hazardous and toxic chemicals, and petroleum by-products from contaminating process wastewater or storm water storage and treatment systems:

1. ☐ Chemicals are stored in proper containers. Please describe:

2. ☐ Chemicals are properly disposed of that have expired or will not be used. Please describe:

3. ☐ Chemical containers are properly disposed. Please describe:

4. ☐ Chemical storage areas are self-contained (no drains or other pathways for spilled chemicals to exit the storage area). Please describe:

5. ☐ Chemical storage areas are covered to prevent contact with rain and snow. Please describe:

6. ☐ Emergency procedures and equipment are in place to contain and clean up chemical spills. Please describe:

7. ☐ Chemical handling and equipment wash areas are designed and constructed to prevent contamination of surface waters and wastewater and storm water storage and treatment systems. Please describe:

8. ☐ Chemicals are handled according to the label. Please describe:

B. Recordkeeping – Chemical Handling

The following records must be maintained on site at the permitted facility for at least five years from the date they are created. It is recommended that these records be kept with the NMP.

- Records of inspections and maintenance activities conducted to ensure that chemical and other contaminants do not enter any manure, litter, process wastewater, or storm water storage or treatment system not specifically designed to treat such chemicals **and other contaminants.**

MANURE AND EFFLUENT STORAGE

NPDES requirement:

- Ensure adequate storage of manure, litter, and process wastewater, including procedures to ensure proper operation and maintenance of the facilities. [40 CFR 122.42(e)(1)(i)]

ELG requirements:

- The production area [must be] designed, constructed, operated and maintained to contain all manure, litter, and process wastewater including the runoff and the direct precipitation from a 25-year, 24-hour rainfall event. [40 CFR 412.31(a)(1)(i)] OR the facility has requested and the DNR Director has approved Voluntary Alternative Performance Standards in accordance with 40 CFR 412.31(a)(2).
- There must be routine visual inspections of the CAFO production area. At a minimum, the following must be visually inspected:
  - Weekly inspections of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water to the wastewater and manure storage structure;
  - Daily inspection of water lines, including drinking water or cooling water lines;
  - Weekly inspections of the manure, litter, and process wastewater impoundments; the inspection will note the level in liquid impoundments as indicated by the depth marker in paragraph (a)(2) of this section. [40 CFR 412.37(a)(1)]
- All open surface liquid impoundments must have a depth marker which clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour rainfall event. [40 CFR 412.37(a)(2)]

A. Storage Structure Operation and Maintenance

- Describe procedures to operate and maintain storage structures to hold all wastes accumulated during the storage period, the direct precipitation and runoff from a 25-year, 24-hour storm, including visual inspections, as appropriate. Attach additional sheets if needed.

B. Recordkeeping- Storage

The following records must be maintained on site at the permitted facility for at least five years from the date they are created. It is recommended that these records be kept with the NMP.

1. Records of weekly visual inspections of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water to the wastewater and manure storage structure.
2. Records of daily inspection s of water lines, including drinking water or cooling water lines;
3. Records of weekly inspections of the manure, litter, and process wastewater impoundments
4. Weekly records of depth of manure and wastewater in all liquid impoundments as indicated by the depth marker.
5. Design documentation for all manure, litter, and wastewater storage structures.
6. Documentation of all overflows from manure

INSPECTION OF LAND APPLICATION EQUIPMENT

ELG Requirement:

- Inspect land application equipment for leaks. The operator must periodically inspect equipment used for land application of manure, litter, and other process wastewater. [40 CFR 412.4(c)(4)]

A. Equipment Inspection Procedures.

Describe procedures to periodically inspect land application equipment for leaks, including the frequency and timing of inspections:

B. Recordkeeping- Equipment Inspection.

The following records must be maintained on site at the permitted facility for at least five years from the date they are created. It is recommended that these records be kept with the NMP.

- Records of periodic land application equipment inspections, including date and description of each inspection.

[a] For example: Mature dairy cattle, whether milked or dry are one type. Veal calves are another type. All other cattle, including finisher beef cattle, dairy heifers, feeder calves, etc… are a third type of cattle and should be added together.

[b] Settled solids, scraped solids, feedlot effluent, etc…

[c] From Iowa State University Extension Publication Pm 1003 Using Manure Nutrients for Crop Production, or other sources- identify source in space provided below Table 1 on page 1.

[d] Column 7 = Column 3 * Column 6. If using gal/space/day in Column 6, you must convert units to gal/space/year by multiplying by 365.

[e] Use the management ID to identify each unique combination of the following factors (crop rotation, optimum crop yields, manure nutrient concentration, remaining crop N need, method of application) that occur. The idea behind the management ID is to group fields with identical management on the same page 2, to avoid the redundancy of doing the exact same calculations for multiple fields.

For example, if 8 fields in the plan are in a corn/bean rotation with yields of 160 and 50 bu/acre and all will receive injected manure with the same nutrient concentration and availability, then page two would only need to be filled out once for the 8 fields and the management ID (e.g. "A") would represent all 8 fields. The same management ID could be used to describe these fields even if they were in different phases of the crop rotation (i.e. some are in corn and some in beans each year).

[f] Yields can be used from any of the following:

- USDA Iowa Ag statistics county yield averages
- Multi-peril insurance proven yields
- USDA Farm Service Agency proven yields
- Individual farm proven yields
- Soil survey interpretation records

Documentation of the information used to determine optimum yields must kept with the plan (DNR may require submittal of yield documentation). Documentation may include copies of historical farm yield records, soil survey maps and average yields for the soils found, FSA yield data, etc... If Iowa Ag Statistics county average yields, Appendix A8, are used, documentation is not required to determine optimum yields for corn and soybean crops. The optimum yield for each crop may be set equal to either the average of the last 5-year county yields plus 10 percent or the average of the highest 4 out of the last 5-year county average. If crops other than corn or soybeans are grown, Iowa Ag Statistics yield data for those crops will need to be obtained and optimum yield levels calculated (both the yield data and the calculations should be kept with the plan). If proven yield methods are used to determine optimum yields, the Appendix B2 Worksheet should be used to calculate the optimum yields.

[g] Use list of application methods and application loss factors provided in Appendix A7. If methods other than those listed in Appendix A7 are used, identify the methods and the nitrogen loss factors for those methods.

[h] Center pivot irrigation, traveling guns, low-pressure drop nozzle systems, etc…

[i] From standard tables (Appendix A1), your own samples, or other sources.

[j] A nutrient management plan may be developed based on the assumption that less than 100 percent of the nitrogen remaining in the manure after deducting application losses will be available for plant use in the first crop year after manure application. See Iowa State University Extension Publication PMR 1003 Using Manure Nutrients for Crop Production for suggested availability values.

[k] 1st year available N = Total N x Application loss factor x Percentage of TN available in the first year (e.g. for 95% N available in first year multiply by 0.95), Appendix B3 can be used to make the calculation.

[l] 2nd year available N = Total N x Application loss factor x Percentage of TN available in the second year. Appendix B3 can be used to make the calculation.

[m] 3rd year available N = Total N x Application loss factor x Percentage of TN available in the third year. Appendix B3 can be used to make the calculation.

[n] Appendices A5 and A6 list crop nitrogen and phosphorus requirements for various crops. These values, or crop use requirements from other credible sources, may be used to determine the crop nitrogen needs and phosphorus removal rates for the crops included in the crop schedule for the fields. For non-legume crops such as corn or grasses, the crop N need value represents the amount of nitrogen required to produce the optimum yield for that crop, and is determined by multiplying the crop nitrogen requirement (in lb/bu or lb/ton of yield) times the optimum crop yield. For legume crops such as soybeans or alfalfa, the crop utilization value represents the amount of nitrogen these legumes will utilize from the soil in producing the optimum crop yield, provided nitrogen is available at these levels in the soil. Again, this amount is determined by multiplying the crop utilization rate (in lb/bu or lb/ton of yield) times the optimum crop yield.

[o] As a minimum, Table 4 should indicate the full crop rotation for the management ID (i.e., for a corn, corn, soybean rotation, Table 4 should cover a minimum of three crop years).

[p] P_2O_5 removed with crop by harvest = P_2O_5 crop usage rate (Table 3) x Optimum crop yield (row 2)

[q] Crop N utilization = N crop usage rate (Table 3) x Optimum crop yield (row 2)

[r] Credit for nitrogen carryover from prior year legume crops should be determined as follows:

- last year's soybean crop: 1 lb nitrogen per bushel of yield, maximum of 50 lb nitrogen per acre credit
- legume forage crop:
  - last year's crop with 50 to 100% alfalfa or other legume in stand: 100 to 140 lb nitrogen per acre
  - last year's crop with 20 to 50% alfalfa or other legume in legume/grass mixture: 50 to 80 lb nitrogen per acre
  - two years ago crop with 50 to 100% alfalfa or other legume in stand: 30 lb nitrogen per acre
- last year's legume green manure crop: 100 lb nitrogen per acre

[s] Amount of N applied with commercial fertilizer (e.g. starter, with herbicide carrier, etc...).

[t] Manure N carryover credit represents the amount of nitrogen available for crop use due to manure applications made in prior crop years. The carryover N credit is determined by:

1. multiplying the amount of manure (in 1000 gal/acre or ton/acre) applied to the field in the previous crop by the 2nd Year Available N concentration for the applicable manure storage source and method of application;
2. multiplying the amount of manure (in 1000 gal/acre or ton/acre) applied to the field two crop years ago by the 3nd Year Available N concentration for the applicable manure storage source and method of application; adding the resulting N carryover credit values together.

[u] Remaining crop N need = Crop N utilization (row 4) minus (–) Legume N credit (row 5a) – Commercial N planned (row 5b) – Manure N carryover credit (row 5c)

[v] Manure rate to supply remaining N = Remaining crop N need (row 6) divided by (/) 1st year available N (Table 2) (x 1000 for liquid manure)

[w] P_2O_5 applied with N-based rate = Manure rate to supply remaining N need (row 7) x P_2O_5 concentration (Table 2) (Divide by 1000 for liquid manure)

[x] Amount of P_2O_5 applied with commercial fertilizers.

[y] Manure rate to supply P removal = (P_2O_5 removed with crop by harvest (row 3) – Commercial P_2O_5 planned (row 9))/ Manure P_2O_5 content (Table 2) (x 1000 for liquid manure).

[z] Manure rates for a P based plan can apply up to the amount of P_2O_5 removed with harvest by the next 4 anticipated crops in a single application if the application rate doesn't exceed the N-based rate (row 7) and no additional P is applied for the period covered by the application. For example, in a corn/soybean rotation if the "manure rate to supply P removal" (row 10) was 4 ton/acre for the corn crop and 3 ton/acre for the bean crop, then 7 ton/acre could be applied in a single application if the nitrogen rate was not exceeded. Phosphorus in addition to crop removal may be applied if soil tests are very low or low in phosphorus and additional phosphorus is recommended by Pm-1688 "General Guide to Crop Nutrient and Limestone Recommendations in Iowa."

[aa] Manure N applied with P-based plan = Manure rate for P based plan (row 11) x 1st year available N (Table 2) (divided by 1000 for liquid manure)

[bb] Manure application rate that is planned. Use these values for page 3 of the form.

[cc] Field designation may be by Farm Services Agency (FSA) field number, landowner's name, or other suitable designation. A plat map showing the animal feeding operation and all application fields should be kept in the plan. In addition, aerial photos (e.g. FSA section photos) of the fields receiving manure should be in the plan with the boundaries of the individual application fields marked. Also marked on aerial photos should be areas of the fields that are unavailable or unsuitable for manure application, and areas where specific restrictions on manure application apply. DNR may require submittal of plat maps and aerial photos. Areas with specific restrictions on manure application include:

- within 200 feet of a designated area: A designated area means a known sinkhole, or a cistern, abandoned well, unplugged agricultural drainage well, agricultural drainage well surface tile inlet, drinking water well, lake, or a farm pond or a privately owned lake as defined in Iowa Code Section 462A.2. A designated area does not include a terrace tile inlet or surface tile inlet other than an agricultural drainage well surface tile inlet. Iowa law requires manure from an animal feeding operation be injected or incorporated within the same day of application if applied within 200 feet of a designated area. However, this restriction does not apply if a 50-foot buffer of permanent vegetation surrounds the designated area and no manure is applied within the 50-foot buffer.
- Setback requirements for an animal feeding operation that is required to have an NPDES permit. As provided in 40 CFR 412.4(c)(5), "Unless the CAFO exercises one of the compliance alternatives provided for in paragraph (c)(5)(i) or (c)(5)(ii) of this section, manure, litter, and process wastewater may not be applied closer than 100 feet to any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface waters.
  - i. Vegetated buffer compliance alternative. As a compliance alternative, the CAFO may substitute the 100-foot setback with a 35-foot wide vegetated buffer where applications of manure, litter, or process wastewater are prohibited.
  - ii. Alternative practices compliance alternative. As a compliance alternative, the CAFO may demonstrate that a setback or buffer is not necessary because implementation of alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent or better than the reductions that would be achieved by the 100-foot setback."

- areas where liquid manure is applied through spray irrigation systems: see endnote "i" for page 2.

[dd] Identify how the field will be managed using management IDs from page 2.

[ee] The number of acres of the field that will receive manure. Acres not available for manure application include areas where topography, soils, or other factors make manure application impossible; areas where manure will not be applied; areas where application is prohibited under a manure disposal agreement; and areas where Iowa law or DNR rules prohibit manure application. It may also include areas where Iowa law or DNR rules restrict manure application to methods different than those being used by the operation.

[ff] A copy of all written manure application agreements for all fields identified in the plan that are not owned or rented for crop production purposes by the owner of the animal feeding operation must be kept with the plan (agreements must be signed by the landowner or renter). DNR requires submittal of manure application agreements. If manure is applied based on an agreement, also indicate in column 6 the length of the agreement (e.g. annual, 3-yr, 10-yr).

[gg] Submit an NRCS P index detailed report containing a P index for each field in the NMP. Additionally, when the P index is required, the plan must include a document (e.g. NRCS RUSLE2 profile erosion calculation record) indicating the inputs and results of RUSLE2 for each field in the plan (These documents must be submitted to the DNR).

[hh] Gallons or tons per acre from Page 2. Gallons or tons per field = gallons or tons per acre (column 8) x acres receiving manure (column 5).

[ii] Soil sampling must meet minimum requirements. Refer to Rule 65.112 in the Iowa Administrative Code for minimum soil sampling requirements.

IOWA DEPARTMENT OF NATURAL RESOURCES
ENFORCEMENT CHECKLIST FOR AFO/CAFO INSPECTIONS

INSPECTION DESCRIPTION

Date of Inspection _____

Facility Name _____ Facility ID# _____

Facility Address _____

Inspector's Name _____

INSPECTION FINDINGS

Narrative Description of Investigation (evidence of current violations; indicators of past violations; future concerns):

- ☐ Photographs and/or Video
- ☐ Water Samples (upstream and downstream)
- ☐ Personal Interviews
- ☐ Other _____

ACTION FOLLOWING INSPECTION

- ☐ No further action taken – no violation(s) observed
- ☐ Informal Meeting Date _____
- ☐ Letter of Inquiry Date _____
- ☐ Letter of Noncompliance Date _____
  (Within 30 days of confirmation of Violation)
- ☐ Notice of Violation Letter Date _____
  (Within 30 days of confirmation of Violation)

REFERRAL

- ☐ Fish kill/acute water quality degradation
  (Manure spills and/or discharges that result in destruction of aquatic life, including fish, are a top priority)
- ☐ Serious water quality degradation
  (Release of pollutants may result in degradation of an aquatic resource without an obvious fish kill, but the effect may be impaired use and enjoyment of the water resource or chronic pollution harming aquatic life) This priority would include discharges from large CAFOs or medium AFOs/CAFOs (open feedlots or confinements)
- ☐ Discharges of pollutants to state waters not authorized by an NPDES permit
  (This priority would include discharges from large CAFOs or medium AFOs/CAFOs (open feedlots or confinements) to waters of the state, not authorized under conditions of an NDPES permit issued by the DNR. This would include large CAFOs or medium AFOs/CAFOs that have a documented discharge contrary to and/or without the required permit. An impact on water quality is documented)
- ☐ Failure to obtain required NPDES permit
  (A large CAFO or medium AFO/CAFO is found to have any documented discharge without, or in violation, of an NPDES permit)

☐ Unauthorized construction
(Construction of AFO/CAFO structures (including open feedlots) without, or contrary to, a permit or other required documentation is also a DNR priority. Proper compliance with AFO siting and construction requirements is essential elements of the AFO program, which helps keep pollutants out of streams)

☐ Significant violations of NPDES permit and/or conditions in the permit
(Violations of a significant nature and/or repeated violations of operating or reporting requirements)

☐ Failure to submit MMP updates
(MMPs are the cornerstone of the animal feeding program. The MMP helps ensure that any proposed or current confinement feeding operation over 500 animal units has adequate land to use the manure nutrients it produces)

☐ Failure to obtain proper manure application certification
(The manure applicator certification program is an important component of the AFO regulations. The program ensures that manure is transported and applied properly)

☐ Other _____

☐ No referral warranted – does not meet referral criteria

Date of Referral to Legal _____

Fields of Opportunities

STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

SUBJECT: Confinement Compliance Inspection for - , County - , – Facility #

Dear Mr. :

Attached is a copy of the report resulting from the confinement facility compliance inspection on .

Your attention is directed to the requirements and recommendations portion of the report.

If you have any questions, or feel this report does not represent the conditions at your facility, please call me at .

Sincerely,

Name, Environmental Specialist/Senior
email@dnr.state.ia.us
Field Services and Compliance Bureau

a
c: -Reza Khosravi, AFO, WQB, ESD, DNR, Des Moines
-Stephen Pollard, U.S. EPA Region 7,WWPD/WENF, 11201 Renner Blvd., Lenexa, KS 66219

enc: -Confinement Facility Inspection Report
-MMP Inspection form
-Animal Feeding Operation (AFO) Regulatory Status Form

IOWA DEPARTMENT OF NATURAL RESOURCES
CONFINEMENT INSPECTION REPORT

FACILITY DESCRIPTION

FACILITY LOCATION	FACILITY: **FACILITY NAME**			FACILITY ID#: **ID#**
	ADDRESS: **FACILITY ADDRESS**	CITY: **CITY**	STATE: **IA**	ZIP: **ZIP**
	PLSS: **Section SECTION, TOWNSHIP Township (TTIERN, RRANGEW), COUNTY County**			
OWNER	NAME: **OWNER NAME**			
	ADDRESS: **OWNER ADDRESS**	CITY: **CITY**	STATE: **IA**	ZIP: **ZIP**
	WORK: **712/XXX-XXXX**	HOME: **712/XXX-XXXX**	CELL: **712/XXX-XXXX**	
	EMAIL: **EMAIL**			

ANIMAL INFORMATION	ANIMAL TYPE(S)	CAPACITY	CURRENT HEAD	NUMBER OF BUILDINGS
	BEEF/DAIRY/SWINE	**ANIMALS**	**ANIMALS**	
	DATE OF CONSTRUCION:		DATE OF EXPANSION:	

INSPECTION INFORMATION

INSPECTION DATE	THIS INSPECTION **DATE**	LAST INSPECTION: **DATE**
PERSONS INTERVIEWED	NAME: **NAME**	TITLE: **TITLE**
	NAME: **NAME**	TITLE: **TITLE**
	NAME: **NAME**	TITLE: **TITLE**
NEAREST WATERCOURSE	STREAM NAME: **STREAM NAME**	
	DESCRIPTION OF FLOW PATH:	

COMPLIANCE SUMMARY

OBSERVATIONS	NUTRIENT MANAGEMENT: ☐CNMP ☐NMP ☐MMP ☐Other ☐No formal plan		
	MANURE STOCKPILING: ☐In controlled area ☐In compliance with rules ☐Not applicable – direct haul ☐Stockpiling in an uncontrolled area	MORTALITY MANAGEMENT: ☐Rendering ☐Composting ☐Incineration ☐On-site burial ☐Landfill	RUNOFF FROM FEED STORAGE ☐No outdoor feed storage area ☐Discharge from feedstock storage area is controlled ☐Feed storage is located in an uncontrolled area
	CLEAN WATER DIVERTED: ☐Yes ☐No	DISCHARGE TO A WATER OF THE U.S. VIA MAN-MADE CONVEYANCE: ☐Yes ☐No	DIRECT ANIMAL CONTACT WITH WATERS OF THE U.S.: ☐Yes ☐No
	ADJACENT FACILITIES: ☐ Confinement ☐ Open Lot ☐None		
	EVIDENCE OF DISCHARGES: ☐Yes ☐No		
NPDES PERMIT STATUS	The facility, as observed during the inspection, was a Large CAFO and needed but did not have an NPDES permit. NPDES permit is required: ☐Yes ☐No		
COMPLIANCE STATUS	This facility did not appear to be in compliance with Iowa's environmental regulations at the time of the inspection. Actual conditions may vary over time with the operation and maintenance of the facility. Facility is in compliance: ☐Yes ☐No		

AUTHENTICATION	INSPECTOR:	DATE:	REVIEWER:	DATE:

FACILITY EVALUATION

FACILITY

MANURE HANDLING

MISCELLANEOUS

DOCUMENTATION COLLECTED

REQUIREMENTS

RECOMMENDATIONS

Fields of Opportunities

STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

SUBJECT: Open Feedlot Compliance Inspection for - , County - , – Facility #

Dear Mr. :

Attached is a copy of the report resulting from the open feedlot compliance inspection on . Your attention is directed to the requirements and recommendations listed below.

If you have any questions, or feel this report does not represent the conditions at your facility, please call me at XXX/XXX-XXXX.

Sincerely,

Name, Environmental Specialist/Senior
email@dnr.state.ia.us
Field Services and Compliance Bureau

c: -Reza Khosravi, AFO, WQB, ESD, DNR, Des Moines
-Stephen Pollard, U.S. EPA Region 7,WWPD/WENF, 11201 Renner Blvd., Lenexa, KS 66219

enc: -NPDES Inspection Report
-NMP Inspection Report

IOWA DEPARTMENT OF NATURAL RESOURCES
OPEN FEEDLOT INSPECTION REPORT

FACILITY DESCRIPTION

FACILITY LOCATION	FACILITY: **FACILITY NAME**			FACILITY ID#: **ID#**
	ADDRESS: **FACILITY ADDRESS**	CITY: **CITY**	STATE: **IA**	ZIP: **ZIP**
	PLSS: **Section SECTION, TOWNSHIP Township (TTIERN, RRANGEW), COUNTY County**			
OWNER	NAME: **OWNER NAME**			
	ADDRESS: **OWNER ADDRESS**	CITY: **CITY**	STATE: **IA**	ZIP: **ZIP**
	WORK: **712/XXX-XXXX**	HOME: **712/XXX-XXXX**	CELL: **712/XXX-XXXX**	
	EMAIL: **EMAIL**			

ANIMAL INFORMATION	ANIMAL TYPE(S)	CAPACITY	CURRENT HEAD	HIGHEST COUNT IN LAST 12 MONTHS
	BEEF/DAIRY/SWINE	**ANIMALS**	**ANIMALS**	**ANIMALS**
	Number of Pens		**Months Populated**	

INSPECTION INFORMATION

INSPECTION DATE	THIS INSPECTION **DATE**	LAST INSPECTION: **DATE**
PERSONS INTERVIEWED	NAME: **NAME**	TITLE: **TITLE**
	NAME: **NAME**	TITLE: **TITLE**
	NAME: **NAME**	TITLE: **TITLE**
RECEIVING WATERCOURSE	STREAM NAME: **STREAM NAME**	
	DESCRIPTION OF FLOW PATH:	

COMPLIANCE SUMMARY

OBSERVATIONS	SOLIDS SETTLING BASIN(S): ☐Entire lot ☐Partial ☐None	POST SETTLING TREATMENT: ☐SOFEB ☐None ☐Infiltration ☐Land application	NUTRIENT MANAGEMENT: ☐CNMP ☐NMP ☐MMP ☐Other ☐No formal plan
	MANURE STOCKPILING: ☐stacking in controlled area of pens ☐In compliance with rules ☐Not applicable – direct haul ☐Stockpile located in an uncontrolled area	MORTALITY MANAGEMENT: ☐Rendering ☐Composting ☐Incineration ☐On-site burial ☐Landfill	RUNOFF FROM FEED STORAGE ☐No outdoor feed storage area ☐Discharge from feedstock storage area is controlled ☐Feed storage located in an uncontrolled area
	CLEAN WATER DIVERTED: ☐Yes ☐No	DISCHARGE TO A WATER OF THE U.S. VIA MAN-MADE CONVEYANCE: ☐Yes ☐No	DIRECT ANIMAL CONTACT WITH WATERS OF THE U.S.: ☐Yes ☐No
	ADJACENT FACILITIES: ☐ Confinement ☐ Open Lot ☐None		
	EVIDENCE OF DISCHARGES: ☐Yes ☐No		

AUTHENTICATION	INSPECTOR:	DATE:	REVIEWER:	DATE:

IOWA DEPARTMENT OF NATURAL RESOURCES
OPEN FEEDLOT INSPECTION REPORT

FACILITY EVALUATION

FEEDLOT PENS

SOLIDS SETTLING BASIN (SSB) #1

SOLIDS SETTLING BASIN (SSB) #2

POST SOLIDS SETTLING TREATMENT #1

POST SOLIDS SETTLING TREATMENT #2

MANURE HANDLING

DOCUMENTATION COLLECTED

Iowa Department of Natural Resources

Baseline Inventory of All Known Large CAFOS's and Medium-Sized AFO's in Iowa

Field Office	Confinement 300 - 999 a. u.	Confinement 1000+ a.u.	Open Lots 300 - 999 a.u.	Open Lots 1000+ a.u.	Combined 300 - 999 a.u.	Combined 1000+ a.u.	Total	Total MMP's
FO1	584	253	129	9	8	17	**1000**	767
FO2	532	951	75	7	8	10	**1583**	1472
FO3	1452	1039	599	157	176	211	**3634**	2155
FO4	411	322	263	65	18	22	**1101**	628
FO5	239	189	89	10	14	12	**553**	412
FO6	415	230	48	6	10	2	**711**	660
Total	**3633**	**2984**	**1203**	**254**	**234**	**274**	**8582**	**6094**

Workplan Objective 4.A.1
shared/Fo3/AG/Facility Inventory

Based on information
from AFO Database **9/19/2013**

Attachment 2

Plan to locate unknown large CAFOs and medium-sized AFOs

Identification/Location

Including but not limited to:

1. Observe and examine latest available photos readily available on public mapping information, township by township, section by section, county by county. Document open lots and confinement buildings and compare findings with the AFO database.

2. Record unknown AFOs on a section map and date for future reference. Establish ownership utilizing plat maps and county assessor's webpage.

3. Prioritize according to potential size (number and size of confinement buildings, area of open lots or a combination of the two). Owners may be contacted by telephone or in person to determine facility capacity.

4. Goal of having desk-top identification done by **March 30, 2015**. This plan may be adjusted as needed and as technology changes. Track and record facilities per procedure yet to be developed.

5. Facilities identified as large CAFOs or medium AFOs by this plan will supplement the baseline inventory. They will receive a desk-top assessment and will be evaluated according to the desk-top SOP.

6. Other means of observation or identification: DNR drive-by, referral from other agencies, reports from the general public, etc.

Attachment 3

Comprehensive Survey Standard Operating Procedure (SOP)

Following is a comprehensive survey standard operating procedure (SOP) intended to provide guidelines for DNR field staff for inspections of medium-sized AFOs and large CAFOs. DNR will conduct a comprehensive survey of all large CAFOs and medium-sized AFOs that currently do not have NPDES permits to identify, independent of information supplied by regulated persons, CAFOs that discharge to a water of the U.S. and have failed to comply with NPDES permit application or other Iowa AFO program requirements.

Note: Routine inspections (such as MMP inspections, NPDES inspections and earthen basin inspections among others), depending on staffing and resource issues, will also be conducted on a regularly scheduled basis, beyond the scope of this plan. These types of inspections are currently conducted by IDNR inspectors.

Priorities

This guidance is intended to prioritize inspections based on potential threats to water quality to best utilize IDNR staff resources in the protection of the environment. Utilizing the aforementioned guidance, the assessments will generally be performed based on the following priorities:

1) AFOs in response to spills, releases (significant releases as defined) or legitimate complaints that involve discharges to a water of the U.S. Facilities that have had spills or releases within the past 5 years of execution of the work plan will be assessed. Part of the assessment will include whether the conditions that gave rise to a discharge to a water of the U.S. at an unpermitted CAFO have been changed or corrected such that the CAFO does not discharge to a water of the U.S.

2) Large open feedlot CAFOs and medium-sized open feedlot AFOs, including combined facilities, which have both open feedlots and confinement facilities. These are a high priority because open feedlots are exposed to precipitation and are therefore more likely to discharge to a water of the U.S.

3) Low priority medium-sized open lot AFOs as determined by a desk-top assessment.

4) Confinement operations that meet the definition of a large CAFO.

5) Low priority medium-sized confinement, and combined AFOs as determined by a desk-top assessment.

6) Medium-sized confinement AFOs.

Deviations from this prioritization scheme will be necessary to conduct evaluations and assessments which maximize efficient use of personnel and other resources. For example, a lower priority facility may be located near a higher priority facility some distance from the IDNR Field Office. It would be much more efficient to visit the lower priority facility considering the drive time involved from the Field Office, thereby efficiently utilizing staff and equipment. **All facilities will receive a desktop assessment prior to inspection.**

<u>The following shall be used as guidance to perform the comprehensive survey:</u>

Establish baseline inventory using AFO database:

1) All known large CAFOs by EPA definition
    - Confined (totally roofed) CAFOs
    - Open lot CAFOs
    - Combined (open lot and roofed) CAFOs

2) All known medium-sized AFOs – by size according to animal types:
    - Confined medium-sized AFOs
    - Open lot medium-sized AFOs
    - Combined medium-sized AFOs

Based on the information obtained from the baseline inventory, the following criteria will be used to determine if desk-top only assessments are sufficient and whether additional on-site inspections will initially be conducted for these facilities.

A. Large confined CAFOs:

1) Reported and documented discharge to water of the U.S. within the last 5 years will require an on-site inspection. Documented discharges could be the result of an investigation into a fish kill, self-reported release or legally sufficient (legitimate) complaint that led to discovery of a release. The assessment will include whether the conditions that gave rise to a discharge to a water of the U.S. at an unpermitted CAFO have been changed or corrected such that the CAFO does not discharge to a water of the U.S.

2) Reported and documented significant releases within the past 5 years, if it can be shown that the release had an actual, imminent or probable discharge to a water of the state, require an on-site assessment. If a facility has neither the conditions in #1 or #2, then #3 will be used to determine priorities for an on-site inspection.

3) Other large confined CAFOs not meeting criteria in #I or #2

    a. Conduct a desk-top assessment utilizing mapping and aerial photography readily available to the public on the internet (Bing maps, Google Earth, etc.) – look for flow paths, tile outlets, etc.

    b. File review for site-specific risk factors relevant to the likelihood of a discharge to waters of the U.S. including, but not limited to the following:

        - Distance to waters of the U.S. (less than or equal to ¼ mile)
        - Nature of operation (liquid or dry manure storage)
        - Slope and topography (is there sufficient slope and/or topographical features or conveyances that would quickly convey manure to a water of the U.S.)
        - Uncovered manure storage (earthen basins, storage tanks, etc. or covered manure storage)
        - Quantity of waste generated - 2000 and greater AU capacity

Note: If facility is less than ¼ mile from surface water AND stores manure in a liquid form, an on-site inspection will be conducted. Other factors such as slope, topographical features, conveyances, and quantity of waste generated may be considered in determination of the need for an on-site inspection. All other large confinement CAFOs, for the purpose of this work plan only, will initially receive the desk-top assessment. On-site inspections for these facilities will become a low priority.

B. Open lot large CAFOs:

Utilizing the AFO database and mapping, the AFO siting Atlas, and aerial photography readily available to the public on the internet, on-site assessments will be conducted on all open lot facilities determined to be large CAFOs without NPDES permits to determine regulatory status. NPDES facilities will continue to be routinely inspected, with all facilities inspected a minimum of once per five years or at least once during the completion of this plan.

C. Combined (open lot and confinement facilities) large CAFOs:

Utilizing the AFO database and mapping, the AFO siting Atlas, and aerial photography readily available to the public on the internet, on-site assessments will be conducted on all open lot facilities determined to be large combined CAFOs (without NPDES permits) to determine regulatory status. To "determine regulatory status" means: "are they in compliance with Chapter 65 and the CAFO rule?"

D. Medium-sized confined AFOs (by animal type and number):

On-site inspections for medium-sized confinement AFOs, as determined by the AFO database, will be conducted in the following circumstances:

1) Reported and documented discharge to water of the U.S. within the last 5 years will require an on-site assessment.

2) Reported and documented significant releases, if it can be shown that the release had an actual, imminent or probable discharge to a water of the state, require an on-site assessment.

3) On all other medium-sized confinement AFOs, the DNR will conduct a desk-top audit utilizing mapping, the AFO siting atlas, and aerial photography readily available to the public on the internet (Bing maps, Google Earth, etc.). In addition to that information the DNR will utilize the following:

    - File review for site-specific information relevant to the likelihood of a discharge to waters of the U.S. including, but not limited to the following:
    - Distance to surface waters (less than or equal to ¼ mile)
    - Nature of operation (liquid or dry manure storage)
    - Slope and topography
    - Covered or uncovered manure storage

- Proximity to a man-made conveyance

Note: An on-site assessment may be conducted if a combination of the above bulleted items and information from the files and aerial maps indicate a facility may have the potential to discharge through a man-made conveyance or a stream running through the facility.

E. Combined (open lot and confinement) medium-sized AFOs:

Utilizing the AFO database, mapping and aerial photography readily available to the public on the internet, on-site inspections may be conducted on all combined facilities, determined to be medium-sized AFOs, to ascertain regulatory status.

If the desk-top assessment utilizing the AFO database, mapping and aerial photography, indicates potential to discharge is low, combined medium-sized AFOs will initially receive only desk-top assessments or become a very low priority.

F. Open lot medium-sized AFOs:

Utilizing the AFO database, mapping and aerial photography readily available to the public on the internet, on-site inspections may be conducted on all open lot facilities, determined to be medium-sized AFOs, to ascertain regulatory status.

If the desk-top assessment utilizing the AFO database, mapping and aerial photography, indicates potential to discharge is low, open lot medium-sized AFOs will initially receive only desk-top assessments and become a low priority.

Note: in some cases, small open lots will be visited to determine size threshold if information is not otherwise available. If it is determined that a facility is below medium-sized AFO threshold levels, no further investigations or inspections will be performed at that facility unless obvious environmental violations are observed.

7/3/2013

Iowa Department of Natural Resources Concentrated Animal Feeding Operation NPDES On-Site Inspection Standard Operating Procedure

Purpose

The purpose of this Standard Operating Procedure (SOP) is to establish uniform procedures for conducting and reporting results of Clean Water Act compliance on-site inspections and compliance with the laws of the State of Iowa at large and medium concentrated animal feeding operations (CAFOs) that are operating **with** a National Pollutant Discharge Elimination System (NPDES) permit.

Pre-inspection Planning

A. File Review

1. Complete review of Nutrient Management Plan (NMP) using Nutrient Management Plan Review Checklist (Iowa DNR Form #542-0139) and portions of Nutrient Management Plan Compliance Review (Iowa DNR Form #542-2022) – *See Appendix A and B for details.*
2. Review previous inspection report(s) – Note any operational or structural deficiencies.
3. Review quarterly and annual self-monitoring reports – Iowa DNR Form #542-1551 and Iowa DNR Form #542-1552 – *See Appendix C and D for details.*
4. Review other file information including correspondence, Notices of Violation (NOVs), compliance schedules, site maps, complaints, spills, groundwater/tile monitoring and any other pertinent information.
5. Review facility NPDES permit, noting expiration date, compliance schedules, required monitoring, discharge receiving stream, manure control system in place, and any special conditions.
6. Note facility capacity, pen numbers, animals in confinement (if any) utilizing files and the Animal Feeding Operation (AFO) database.
7. Identify potential discharge flow paths, conduits, conveyances, tile intakes and outlets and other features of interest.
8. Identify nearest water of the U.S.
9. Note any reported discharges.
10. Review Field Office Database (FOCD) for that facility.

B. Set Inspection Date

1. Contact facility owner/manager one (1) to three (3) working days prior to the inspection.
2. Request that the owner/manager have facility records available for inspection and a current copy of the NMP.
3. Ask if there are any facility bio-security protocols (if not, explain you will follow Iowa DNR bio-security protocol).
4. State purpose and time needed for the inspection.
5. Record contact information (date, time, person contacted).
6. Enter inspection date and time on inspector's Outlook calendar.

Inspection Procedures

A. Materials/supplies needed

1. Files, including NMP and quarterly/annual reports.
2. Site map/aerial and engineering drawing/plans if available.
3. Pre-inspection notes and Iowa DNR Forms 542-0139 and 542-2022.
4. Sample bottles/cooler with ice packs, test kits (oxygen, pH, ammonia).
5. Notebook, camera, GPS device, copy of IAC rules, pens/pencils, boots/plastic booties.

B. Facility Drive-by

1. Document (observations, photographs, etc.) site topography, drainage, neighboring property, and/or any special areas of interest identified during pre-inspection planning.
2. Locate/identify closest water of the U.S. in the drainage area of potential feedlot runoff.
3. Document any potential points of discharge of manure, litter or process wastewater.

C. Pre-inspection meeting

1. Present credentials (business card, state employee ID).
2. Introductions of all persons present during the inspection (include in record).
3. State purpose/scope of the inspection (facility record review, tour of facility, etc.).
4. Ask about facility capacity, maximum number of head confined at one time over the last 12 months, number of pens (make sure all head on-site and within 1250 feet are counted, including confinement animals, and all other animal types).
5. Make sure site address and contact information (mailing address, phone numbers) are correct (include in record).

D. Facility Inspection (record review may precede facility inspection)

1. Tour of facility including number of pens, manure control and storage structures, clean water diversions, any application equipment including pumps and irrigation units.
2. Inspect manure control structures for integrity of berms, areas of erosion concern and freeboard (are structures being maintained, dewatered, and functioning as designed?).
3. Determine if runoff from process wastewater, including feed storage areas and stockpiles are contained.
4. View areas downhill of operation to ascertain if there are any uncontrolled discharges to the surface of the ground, wells, sinkholes, or waters of the state.
5. Basin should have a properly marked liquid staff level measuring gauge.
6. Ask owner/manager about removal of settable solids, pen scraping, stockpiles, and dewatering schedule (match with manure control system specified in NPDES permit).
7. Observe any on-site or off-site stockpiles of manure to determine if runoff discharges to a water of the U.S.
8. View chemical storage area.
9. Inspect feed storage and mortality handling areas.
10. Record and document conditions and facilities with photographs.
11. If discharges are observed document in detail, including photographs, and sample as appropriate.
12. If samples are taken from monitoring wells or groundwater lowering devices describe in detail.
13. Take GPS coordinates at driveway, if needed.

E. Record and Nutrient Management Plan Review

1. Note NMP preparer.
2. Review NPDES permit with owner/manager (expiration date, monitoring and recordkeeping and reporting requirements).
3. Use Nutrient Management Plan Compliance Review Form *(see Appendix B, Iowa DNR Form #542-2022).*
4. Review previously noted deficiencies in operations/structures/records and determine if they have been corrected.
5. Review required records per NPDES permit.
6. Review quarterly and annual operation reports, making sure liquid levels match manure control system type.
7. Review land application records – 5 years required, making sure there is an accurate method to ensure effluent and solid application rates.
8. Determine if application equipment inspections have been completed.

9. Review NMP.

F. Exit Interview

1. Review preliminary findings of inspection and provide a copy of inspection notes.
2. Cover any violations or potential violations discovered during inspection or pre-inspection.
3. Ask for any additional information not available but related to and needed for the inspection.
4. Go over any requirements and recommendations based on the inspection.
5. Explain the timeline for receiving a written report and copies of any samples taken.
6. Ask owner/operator/manager if they have any questions.

G. Samples and other inspection information

1. Fill out chain of custody form.
2. Mail or hand deliver samples taken (if any).
3. Print and label all photos that were taken.
4. Database update – Compare head numbers, animal types and housing type to database and update.
5. Note and update facility name, addresses, contact information, etc., in AFO database.

Post-Inspection

A. Written Report

1. Complete inspection report within two weeks of inspection or receipt of sample results using standard NPDES Compliance Inspection Report – *see Appendix E.*
2. Fill out facility information on the report including NPDES permit number, facility ID#, name and address of the facility, person interviewed, inspection date and time, manure control system type, size and type of facility.
3. Check satisfactory or unsatisfactory in Permit Compliance Summary on the report. Note reasons for unsatisfactory rating in comments section of the report.
4. Summary should include major points outlined from the pre-inspection, inspection, record review and exit interview.
5. General Facility Description should include a brief description of facility, including capacity, number of pens, manure control structures, and methods of land application. Also include manure control system type, its storage capacity, and legal description including number of acres included in the runoff control system.
6. Self-Monitoring should include comments about self-monitoring, operation reports and

records.

7. Facility Evaluation should include comments about other supportive portions of the facility including stockpiles, feed storage and mortality areas, and chemicals storage.
8. Requirements and Recommendations – Requirements are items that are violations or potential violations or areas of non-compliance. These may be violations of the Code of Iowa, Iowa Administrative Code or NPDES permit requirements. Each violation must be noted by the appropriate citation. Included in requirements are facility structure maintenance items. Requirements would normally include specific timeframes for correction of violations. Recommendations are suggested items noted or observed that are not necessarily violations but may be suggestions to improve record-keeping and/or operational aspects to improve environmental performance of the facility.
9. Print and label all photos that were taken and note at appropriate location in the report.

B. Report Submittal to Facility

1. Transmit letter and NPDES Compliance Inspection Report, including appropriate appendixes, photos, sample results and maps/diagrams.
2. Letter should be a standard letter, letter of non-compliance, notice of violation (NOV), or notice of referral, as appropriate. Letter should include citation for rule or NPDES violation.
3. If there is a referral based on the inspection, the violation(s) must meet the enforcement criteria identified in the Iowa DNR Enforcement Management System Manual and approval from the Field Office Supervisor and AFO Enforcement Coordinator.

C. Office/Database Update

1. Update all information in AFO database and FOCD.
2. Record inspection and transmittal date in NDPES database.
3. Add inspection report and any updates to the file.
4. Mark Outlook calendar for any subsequent follow-up or due dates.

September 11, 2013

Attachment #5

Iowa
Fields of Opportunities

STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

dBase updated___

SUBJECT: Open Feedlot Compliance Inspection - County – Facility #
NPDES Permit #

Dear Mr. :

Attached is a copy of the report resulting from the National Pollutant Discharge Elimination System (NPDES) compliance inspection on . Your attention is directed to the requirements and recommendations portion of the report.

If you have any questions, or feel this report does not represent the conditions at your facility, please call me at 712/262-4177.

c: -Reza Khosravi, AFO, WQB, ESD, DNR, Des Moines
-EPA, Animal Feeding Unit, 901 N. 5th St., Kansas City, KS 66101

enc: NPDES Inspection Report
NMP Inspection form

FIELD OFFICE #3 / 1900 N. Grand / Gateway North, Suite E17 / Spencer, Iowa 51301-2200
712-262-4177 / FAX 712-262-2901

IOWA DEPARTMENT OF NATURAL RESOURCES
OPEN FEEDLOT NPDES COMPLIANCE INSPECTION

NPDES Permit # **Facility ID#** **Page 1 of**

FACILITY	NAME:		PERMIT EXPIRATION DATE:		
	ADDRESS:	CITY:	STATE: Iowa	ZIP:	
PERSONS INTERVIEWED	NAME:	PHONE:			
RECEIVING WATERCOURSE	STREAM NAME:				
INSPECTION DATE	DATE THIS INSPECTION:	DATE LAST INSPECTION:	TIME OF INSPECTION:		
SYSTEM TYPE	☐System 1 (once per year) ☐System 3 (April/July/Oct.) ☐System 5 (April/May/Oct./Nov.) ☐System 2 (July/Oct.) ☐System 4 (Each Significant Precip. Event) ☐AT System				
ANIMAL INFORMATION	ANIMAL TYPE(S)	PERMITTED HEAD	CURRENT HEAD		

PERMIT COMPLIANCE SUMMARY			
SELF-MONITORING	QUARTERLY OPERATION REPORTS SUBMITTED: ☐Sat. ☐Unsat.*	REQUIRED DATA ON QUARTLERY REPORT: ☐Sat. ☐Unsat.*	ROUTINE VISUAL INSPECTIONS: ☐Sat. ☐Unsat.*
	ANNUAL REPORTS SUBMITTED: ☐Sat. ☐Unsat.*	REQUIRED DATA ON ANNUAL REPORT: ☐Sat. ☐Unsat.*	ANNUAL MANURE SAMPLE TAKEN: ☐Sat. ☐Unsat.*
	NMP PUBLIC NOTICE: ☐Sat. ☐Unsat.*	CURRENT NMP: ☐Sat. ☐Unsat.*	LAND APPLICATION RECORDS: ☐Sat. ☐Unsat.*
	ANIMAL INVENTORY RECORDS: ☐Sat. ☐Unsat.*	EQUIPMENT INSPECTION DOCUMENTED ☐Sat. ☐Unsat.*	DEPTH GAUGE INSTALL & MONITORING: ☐Sat. ☐Unsat.*
OBSERVATIONS	SOLIDS SETTLING STRUCTURES: ☐Sat. ☐Unsat.*	BASIN OR AT STRUCTURES ☐Sat. ☐Unsat.*	EVIDENCE OF OVERFLOW or DISCHARGE: ☐Yes ☐No
	MANURE STOCKPILING ☐Sat. ☐Unsat.*	MANAGEMENT OF DEAD ANIMALS ☐Sat. ☐Unsat.*	MANAGEMENT OF CHEMICALS ☐Sat. ☐Unsat.*
	SURFACE DRAINAGE IS DIVERTED FROM OPENLOT ☐Sat. ☐Unsat.*	ANIMALS HAVE NO CONTACT WITH WATERS OF US ☐Sat. ☐Unsat.*	FEEDSTOCK PROPERLY HANDLED & STORED ☐Sat. ☐Unsat.*

* See comments

AUTHENTICATION	INSPECTOR:	DATE:	REVIEWER:	DATE:

GENERAL FACILITY DESCRIPTION

SELF MONITORING

Operation Reports Submitted; Required Data Entered on Reports
The operation reports were submitted on time and all required data was reported.

FACILITY EVALUATION

REQUIREMENTS AND RECOMMENDATIONS

IOWA DEPARTMENT OF NATURAL RESOURCES

AFO Desktop Assessment Form

Assessor:	**ASSESSOR NAME**	**Assessment Date:**	

Documentation Examined:

☐ AFO Siting Atlas	☐ Facility File	☐ FOCD	☐ AFO Database
☐ MMP	☐ Public Mapping Information _____	☐ Other _____	

FACILITY LOCATION	FACILITY: **FACILITY NAME**			FACILITY ID#: **ID#**
	ADDRESS: **FACILITY ADDRESS**	CITY: **CITY**	STATE: **IA**	ZIP: **ZIP**
	PLSS: **Section SECTION, TOWNSHIP Township (TTIERN, RRANGEW), COUNTY County**			
OWNER	NAME: **OWNER NAME**			
	ADDRESS: **OWNER ADDRESS**	CITY: **CITY**	STATE: **IA**	ZIP: **ZIP**
	WORK: **XXX-XXX-XXXX**	HOME: **XXX-XXX-XXXX**	CELL: **XXX-XXX-XXXX**	
	EMAIL: **EMAIL**			

ANIMAL INFORMATION	ANIMAL TYPE(S)	CAPACITY	CURRENT HEAD	# OF PENS	# OF BUILDINGS
	BEEF/DAIRY/SWINE				

FACILITY TYPE	☐ Confinement	☐ Open Lot	☐ Combined	
STORAGE TYPE	☐ Liquid	☐ Dry	☐ Covered	☐ Uncovered

STORAGE STRUCTURE TYPE	☐ Earthen Manure Storage Structure	#	☐ Anaerobic Lagoon	#
	☐ Below Building Pit	#	☐ Aerobic Lagoon	#
	☐ Outside Concrete Pit	#	☐ Outside Stockpile	#
	☐ Slurry-store	#	☐ Covered Stockpile	#
	☐ Unknown			

AFO/CAFO Status	☐ Large CAFO†	☐ Medium AFO	☐ Small AFO	

† All large CAFOs require an onsite inspection.

NEAREST WATERCOURSE	Watercourse Name:	
	Distance between facility and nearest watercourse:	☐ < ¼ mile†† ☐ > ¼ mile
	Description of flow path(s) to watercourse:	

†† All medium combined or open lot AFOs within a ¼ mile of a watercourse **and** that drain towards that watercourse require an onsite inspection. All medium confinement AFOs that utilize uncovered manure/litter storage **and** are within a ¼ mile of a watercourse **and** that drain towards that watercourse require an onsite inspection.

COMPLIANCE HISTORY	Has there been a discharge to a Water of the U.S. within the last 5 years?	☐ Yes†††	☐ No
	If yes, did the facility permanently remedy the cause of the discharge?	☐ Yes ☐ No	☐ Unknown

††† All medium confinement AFOs that have discharged to water of the U.S. within the last 5 years require an onsite inspection.

	Has there been a significant release within the last 5 years?	☐ Yes	☐ No
	If yes, did the release present a significant threat of discharge?	☐ Yes* ☐ No	☐ Unknown

* All medium confinement AFOs that have had a significant release in the last 5 years and the release presented a significant threat of discharging to a water of the U.S. require and onsite inspection.

	Have there been any complaint investigations?	☐ Yes	☐ No
	If yes, describe:		
	Has an onsite inspection been conducted at this facility since 11/1/11?	☐ Yes	☐ No
	If yes, was the inspection functionally equivalent to facility type specific SOP (i.e., confinement, open feedlot or combined)?	☐ Yes** ☐ No	☐ N/A
	Inspection Date:	Describe:	

** No onsite inspection is required if a functionally equivalent inspection has been performed since 11/1/11.

RUNOFF ASSESSMENT	Is there evidence that manure, litter, or process wastewater is uncontrolled and/or unmanaged?	☐ Yes	☐ No	☐ Unknown
	If yes, describe:			
	Are there tile intakes within 100 feet of the production area?	☐ Yes	☐ No	☐ Unknown
	If yes, describe:			
	Does the facility utilize uncovered/uncontrolled composting areas?	☐ Yes	☐ No	☐ Unknown
	If yes, describe:			
	Note: If assessor answered "Yes" to any of the questions in this section, then a onsite inspection should be performed.			
	Assessment Notes/Comments:			
	☐ ONSITE INSPECTION REQUIRED.	☐ ONSITE INSPECTION NOT REQUIRED.		
AUTHENTICATION	INSPECTOR:	DATE:	REVIEWER:	DATE:

Note: This assessment was based on the information available on the date of the assessment. Conditions at this facility could change.

Iowa Department of Natural Resources Open Feedlot (non-NPDES) On-Site Inspection Standard Operating Procedure

Purpose

The purpose of this Standard Operating Procedure (SOP) is to establish uniform procedures for conducting and reporting results of Clean Water Act compliance on-site inspections and compliance with the laws of the State of Iowa at large and medium open feedlot animal feeding operations that are operating **without** a National Pollutant Discharge Elimination System (NPDES) permit.

Pre-inspection Planning

A. File Review

Utilizing available information from Iowa DNR facility file information, Iowa DNR databases and/or any mapping information that is readily available to the public, inspectors shall:

1. Review file information (if any) including correspondence, Notices of Violation(NOV), compliance schedules, site maps, complaints, spills, and any other pertinent information
2. Note facility capacity (if known), pen numbers, animals in a confinement feeding operation (if any)
3. Identify potential discharge flow paths, conduits, conveyances, tile intakes and outlets and other features of interest
4. Identify nearest water of the United States (U.S.)
5. Review Field Office Compliance Database (FOCD) for that facility

B. Set Inspection Date

1. Contact facility owner/manager one (1) to three (3) working days prior to the inspection
2. Request that the owner/manager have facility records available for inspection
3. State purpose and time needed for the inspection
4. Record contact information (date, time, person contacted)
5. Enter inspection date and time on inspector's Outlook calendar
6. Ask if there are any facility bio-security protocols (if not, explain you will follow Iowa DNR bio-security protocol)

Inspection Procedures

A. Materials/supplies needed

1. Files
2. Site map/aerial and engineering drawing/plans if available
3. Pre-inspection notes
4. Sample bottles/cooler with ice packs, test kits (oxygen, pH, ammonia)

5. Notebook, camera, GPS device, copy of IAC rules, pens/pencils, boots/plastic booties

B. Facility Drive-by

1. Document (observations, photographs, etc.) site topography, drainage, neighboring property, and/or any special areas of interest identified during pre-inspection planning
2. Locate/identify closest water of the U.S. in drainage area of potential feedlot runoff
3. Document any potential points of discharge of manure, litter or process wastewater

C. Pre-inspection meeting

1. Present credentials (business card, state employee ID)
2. Introductions of all persons present during the inspection (include in record)
3. State purpose/scope of the inspection (facility record review, tour of facility, etc.)
4. Ask about facility capacity, maximum number of head confined at one time over the last 12 months, number of pens (make sure all head on-site and within 2500 feet are counted, including animals in a confinement feeding operation, and all other animal types)
5. Make sure site address and contact information (mailing address, phone numbers) are correct (include in record)

D. Facility Inspection

1. Tour of facility including all pens, manure control and storage structures, clean water diversions, and any manure application equipment including pumps and irrigation units
2. If a discharge was noted during file review, document whether the conditions that gave rise to the discharge to a water of the U.S. at the facility have been changed or corrected such that the facility does not discharge to a water of the U.S. Please note in detail
3. Inspect manure control structures (if any) for integrity of berms, areas of erosion concern and freeboard (are structures being maintained, dewatered, and functioning as designed?)
4. Determine if runoff from production areas, including feed storage areas and stockpiles are contained
5. View areas downhill of feedlot to ascertain if there are any discharges to the surface of the ground, wells, sinkholes, tile line intakes, or waters of the U.S.
6. Determine if there are discharges of manure, litter or process wastewater from the facility into a water of the U.S. through a man-made ditch, flushing system, or similar man-made device
7. Determine if there are discharges of manure, litter or process wastewater into a water of the U.S. which originates outside of and passes over, across or through the facility or otherwise comes into contact with animals confined in the facility
8. Ask owner/manager about removal of settable solids, pen scraping, stockpiles, and dewatering schedule (if liquid manure is stored)
9. Review manure and process wastewater land application practices and all available land

application records

10. Observe any on-site or off-site stockpiles of manure or litter to determine if runoff discharges to a water of the U.S.
11. Record and document conditions and facilities
12. If discharges are observed or evidence is present that shows discharges have occurred in the past, document in detail, including photographs, and sample as appropriate
13. Take GPS coordinates at driveway entrance, if needed

E. Exit Interview

1. Review preliminary findings of inspection and provide a copy of inspection notes
2. Cover any violations or potential violations discovered during inspection or pre- inspection
3. Ask for any additional information not available but related to and needed for the inspection
4. Go over any requirements and recommendations based on the inspection
5. Explain the timeline for receiving a written report and copies of any samples taken
6. Ask owner/operator/manager if they have any questions

F. Samples and other inspection information

1. Fill out chain of custody form
2. Mail or hand deliver samples taken (if any)
3. Print and label all photos that were taken
4. Database update – Compare head numbers, animal types and housing type to database and update
5. Note and update facility name, addresses, contact information, etc., in AFO database

Post-Inspection

A. Written Report

1. Complete inspection report within two weeks of inspection or receipt of sample results using standard DNR Open Feedlot Inspection Report – *see Appendix A*
2. Fill out facility description on the report including Facility ID number, name and address of the facility, person interviewed, inspection date and time, size and type of facility
3. Fill out inspection information section on the report including inspection date, purpose of inspection, persons interviewed, and receiving watercourse
4. Fill out compliance summary section including observations of manure control structures or types, man-made conveyances or contact with surface water and AFO/CAFO status: Large CAFO (NDPES status), medium CAFO, medium-sized AFO, or small AFO. Provide description and documentation to support conclusions
5. General Facility Description should include a brief description of facility, including capacity,

number of pens, manure control structures, and methods of land application. Also include manure control system type, its storage capacity, and legal description including number of acres included in the runoff control system

6. Summary should include major points outlined from the pre-inspection, inspection, record review and exit interview
7. Facility Evaluation should include comments about other supportive portions of the facility including stockpiles, feed storage and mortality areas
8. Document, based on all the information from the file review and the inspection, whether the facility discharges (continuously, intermittently or sporadically) to a water of the U.S. and requires an NPDES permit at this time. Document that an NPDES permit is not required at this time if, based on all the information from the file review and the inspection, it is determined that the facility does not discharge to a water of the U.S. Provide description and documentation to support conclusions
9. Requirements and Recommendations – Requirements are items that are violations or potential violations or areas of non-compliance. These may be violations of the Code of Iowa, Iowa Administrative Code or NPDES permit requirements. Each violation must be noted by the appropriate citation. Included in requirements are facility structure maintenance items. Requirements would normally include specific timeframes for correction of violations. Recommendations are suggested items noted or observed that are not necessarily violations but may be suggestions to improve record-keeping and/or operational aspects to improve environmental performance of the facility
10. Print and label all photos that were taken and note at appropriate location in the report

B. Report Submittal to Facility

1. Transmit letter and Iowa DNR Open Feedlot inspection Report, including appropriate appendixes, photos, sample results and maps/diagrams
2. Letter should be a standard letter, letter of non-compliance, NOV, or notice of referral, as appropriate. Letter should include citation for rule or NPDES violation
3. If there is a referral based on the inspection, the violation(s) must meet the enforcement criteria identified in the DNR Enforcement Management System Manual and approval from the Field Office Supervisor and AFO Enforcement Coordinator
4. Complete and include AFO Regulatory Status Form.

C. Office/Database Updates

1. Update all information in AFO database and FOCD
2. Add inspection report and any updates to the file
3. Mark Outlook calendar for any subsequent follow-up or due dates

Attachment #8

Iowa Department of Natural Resources

Concentrated Animal Feeding Operation (CAFO) Inspection

Standard Operating Procedure (SOP) for Confinement Facilities

Pre-inspection

File Review

- Review of Manure Management Plan (MMP) using Manure Management Plan Compliance Review Checklist (Non-sales of Manure, Sales of Manure) (DNR Forms #542-8119 & 542-8120 – *See Appendix A and B for details*
- Review previous manure management plan inspection(s) and earthen basin inspections (if applicable) – Note any deficiencies
- Review file – Especially note any spills or releases of manure from the facility. If there were any spills or releases, was there documentation that the manure reached a water of the U.S.?
- Review other file information including correspondence, Notices of Violation (NOVs), compliance schedules, site maps, complaints, groundwater/tile monitoring and any other pertinent information including manure storage type (under building deep pits, outside formed storage, deep bedded manure storage, covered solid manure storage or earthen basin)
- Note facility capacity, number of buildings housing animals, animal types, and animals in open lots (if any) utilizing files and the Animal Feeding Operation (AFO) database
- Review Field Office Database (FOCD) for that facility

Set Inspection Date

- Contact facility owner/manager one (1) to three (3) working days prior to the inspection
- Request that the owner/manager have facility records available for inspection and a current copy of the MMP
- State purpose and time needed for the inspection
- Record contact information (date, time, person contacted)
- Enter inspection date and time on inspector's Outlook calendar
- Ask if there are any facility bio-security protocols (if not, explain you will follow Departmental bio-security protocol)

Day of Inspection

Materials/supplies needed

- Files, including MMP
- Site map/aerial and engineering drawing/plans if available, construction permits, etc.
- Pre-inspection notes and DNR Forms 542-8119 and 542-8120
- Sample bottles/cooler with ice packs, test kits (oxygen, pH, ammonia)
- Notebook, camera, GPS device, copy of IAC rules, pens/pencils, boots/disposable plastic boots

Facility Drive-by

- Note site topography, drainage, neighboring property, any special areas of interest
- Locate/identify closest water of the U.S. in drainage area
- Potential points of discharge (if any)

Pre-inspection meeting

- Present credentials (business card, state employee ID)
- Introductions of all persons present during the inspection (include in record)
- State purpose/scope of the inspection (facility record review, tour of facility, etc.)
- Ask about facility capacity, current number of head confined, number of buildings, include open lot animals, and all animal types
- Make sure site address and contact information (mailing address, phone numbers) are correct (include in record)

Facility Inspection (record review may precede facility inspection)

Please note: IDNR protocol includes external inspection of facility and grounds only. Due to biosecurity and safety concerns, inspectors will not enter confinement buildings.

- Tour of facility including number of buildings, manure control and storage structures, and clean water diversions
- If a discharge was noted, whether the conditions that gave rise to the discharge to a water of the U.S. at an unpermitted CAFO have been changed or corrected such that the CAFO does not discharge to a water of the U.S. Please note in detail
- Inspect manure control structures for integrity of formed manure storage structures, berms, and freeboard (are structures being maintained, and functioning as designed?)
- Conduct standard earthen basin inspection (if applicable, using DNR Form #542-8118) – See appendix C
- View areas downhill of confinement to ascertain if there are any discharges to the surface of the ground, wells, sinkholes, or waters of the U.S.
- Observe inspection port for groundwater lowering tile (if any)
- Inspect storage and handling area for mortalities and compost facilities, if any
- If discharges are observed describe in detail, including photographs, and sample as appropriate using Departmental protocol
- Document if no discharges to a water of the U.S. are observed, and note that an NPDES permit is not required based on the file review and inspection
- If samples are taken from monitoring wells or groundwater lowering devices describe in detail
- Take GPS coordinates, if needed

Record and Manure Management Plan Review

- Note MMP preparer
- Use Manure Management Plan Compliance Review Form *(see Appendix A and B, DNR Forms #542-8119 and #542-8120)*
- Review previously noted deficiencies in operations/structures/records and determine if they have been corrected
- Review required records per MMP requirements
- Review land application records – 5 years required,
- Review MMP using appropriate form

Exit Interview

- Review preliminary findings of inspection
- Cover any violations or potential violations discovered during inspection or pre-inspection
- Ask for any additional information not available during inspection
- Go over any requirements and recommendations based on the inspection
- Explain the timeline for receiving a written report and copies of any samples taken
- Ask owner/operator/manager if they have any questions

Post-Inspection

Samples and other inspection information

- Fill out chain of custody form
- Mail or hand deliver samples taken (if any) according to Departmental protocol
- Print and label all photos that were taken
- Database update – Compare head numbers, animal types and housing type to database and update
- Note and update facility name, addresses, contact information, etc., in AFO database

Written Report

- Complete inspection report within two weeks of inspection or receipt of sample results
- Summary should include major points outlined from the pre-inspection, inspection, record review and exit interview
- Document and include in the report if no discharges to a water of the U.S. are observed, and note that an NPDES permit is not required based on the file review and inspection
- Requirements and Recommendations –

  Requirements are items that are violations or potential violations or areas of non-compliance. These may be violations of the Code of Iowa, Iowa Administrative Code or NPDES permit requirements. Each violation must be noted by the appropriate rule citation. Included in requirements are facility structure maintenance items. Requirements would normally include specific timeframes for correction.

Recommendations are suggested items noted or observed that are not necessarily violations but may be suggestions to improve record-keeping and/or operational aspects to improve environmental performance of the facility.

- Include any pictures taken and note at appropriate location in the report

Report Submittal to Facility

- Transmit letter and DNR CAFO inspection report, including appropriate appendixes, photos, sample results and maps/diagrams. Letter must include compliance status as determined by the inspection
- Letter should be a standard letter, letter of non-compliance, notice of violation (NOV), or notice of referral, as appropriate. Letter should include citation for rule or NPDES violation
- If there is a referral based on the inspection, the violation(s) must meet the enforcement criteria and agreement with the Field Office Supervisor and AFO Enforcement Coordinator

Post-Inspection Office Update

- Update all information in AFO database and FOCD
- Add inspection report and any updates to the file
- Mark Outlook calendar for any subsequent follow-up or due date

Note: The main purpose of the large CAFO compliance inspection is to determine appropriate compliance status of the facility (discharging or non-discharging CAFO). MMP and earthen basin inspections may or may not be included in the inspection, depending on Departmental resources available. These inspections are meant to be AFO/CAFO inspections and will not include other program areas; in other words, these will not be multi-media inspections.

Iowa Department of Natural Resources AFO Desk-top Assessment
Standard Operating Procedure

Following is the standard operating procedure (SOP) intended to provide guidance for Iowa DNR field staff in conducting desk-top assessments of medium-sized AFOs and large CAFOs.

Purpose

A primary purpose of the desk-top assessment will be to determine whether an on-site inspection is necessary. Classifying a facility as not needing an on-site inspection means that the desk-top assessment conducted pursuant to this SOP is sufficient to support a determination that the AFO does not discharge to a water of the U.S. Also, the desk-top assessment will establish and document baseline conditions at the facility.

Procedure

A desk-top assessment will consist of a review of all relevant currently available information about the facility to assess site-specific risk factors relevant to determining the likelihood of a discharge to a water of the U.S.

1. Gather available information. Sources of information that should be considered include, but are not limited to:
    - AFO siting atlas
    - Facility file, including permits, facility reports, citizen complaints, prior inspection reports, manure management plan, etc.
    - Field Office Compliance database
    - Animal Feeding Operation (AFO) database
    - Manure management plan
    - Public mapping information

2. Document baseline conditions at facility
    - Print the map or image for file reference
    - Note facility type (confinement, open lot, or combined)
    - Note number of buildings/pens housing animals
    - Note number of manure storage facilities, including the type for each
    - Note geographical and topographical features including, but not limited to, surface waters, potential conduits or flow paths to surface waters, neighboring or adjacent facilities, and any other relevant information

- Known discharges to a water of the U.S. within the past 5 years, and information about measures taken to permanently remedy the conditions that gave rise to the discharge, evaluated according to the relevant criteria in the Comprehensive Survey SOP
- Known releases, including information about the pollutant concentration and volume of the release and whether the release posed a threat of discharging pollutants to a water of the U.S.
- Complaint investigations
- Whether an on-site inspection by Iowa DNR at the facility after November 1, 2011, enables Iowa DNR to determine the facility does not discharge to a water of the U.S. The inspection must have been functionally equivalent to the on-site inspections to be conducted using the Open Feedlot and Confinement Facility (Non-NPDES) On-Site Inspection SOPs, including having written documentation of findings.

3. Assess and document key information and risk factors relevant to the likelihood that the facility discharges. Factors to be considered include but are not limited to:

- Animal types and numbers
- Manure storage system used (covered vs. uncovered)
- Systems and practices for managing feed, silage, compost, and mortalities
- Distance to a water of the U.S.
- Topography, including slope, presence of runoff flow paths, ditches, culverts or other conduits and drainage features that would convey manure to a water of the U.S., land cover and other notable features in runoff areas
- Proximity of tile line intake structures to production area if visible
- Compliance and spill/release history, including any steps the facility has taken to permanently remedy the cause of the discharge

4. Determine appropriate classification of facility on the Iowa DNR Animal Feeding Operation Regulatory Status Form.

5. Based upon the desk-top assessment, it will be noted that:
   - This facility will receive an on-site inspection. or
   - This facility will not receive an on-site inspection.

Attachment 10

Standard Operating Procedure

For

BIO-SECURITY PROCEDURES FOR CONDUCTING NPDES COMPLIANCE EVALUATION INSPECTIONS AT ANIMAL FEEDING OPERATIONS

Iowa Department of Natural Resources

March 19, 2014

Purpose

The purpose of this Bio-security Standard Operating Procedure (SOP) is to establish uniform procedures for ensuring that bio-security is maintained at animal feeding operations during compliance inspections, visits, complaint investigations, spills and/or any other on-site contact made by the Iowa Department of Natural Resources (IDNR) staff in performance of their duties at animal feeding operation facilities.

Summary of Procedures

The goal of this procedure is to maintain existing biosecurity at animal feeding operations being inspected or visited by IDNR personnel. This will be accomplished in three stages: pre-inspection planning, inspection procedures, and post-inspection activities.

Pre-inspection planning will be used to identify areas with known reportable diseases to animal agriculture. This information will be generally obtained by conversations with producers or by general knowledge within the industry or Department. The areas with known reportable diseases will be avoided, to the extent possible. During pre-inspection planning the existing bio-security at the facilities to be inspected will be determined by consulting with the facility owner or manager.

Inspection procedures will include those activities that occur during the actual inspection. This consists of personal bio-security measures, vehicle parking, and avoiding areas of the facility most vulnerable to disease transmission.

Post-inspection procedures include the activities that occur immediately after conclusion of the inspection. It also includes documentation of the bio-security protocol followed: before, during and after the inspection.

Pre-Inspection Planning

- If there are areas or facilities known to have reportable disease outbreaks, they should be avoided, if practical, until the outbreak subsides.

- During the initial contact with the owner/manager, ask if they have any facility specific bio-security protocols. If so, DNR environmental specialists will follow facility bio-security protocols to every extent reasonable. If not, inform them that you will follow IDNR bio-security protocol.

Inspection Procedures

- Vehicles should be relatively clean before any inspection or visit. Base footwear should be clean of all organic matter.

- Whenever feasible, vehicles should be parked just off the driveway or at the edge of the bio-security perimeter in the facility's bio-security protocol during a scheduled or non-scheduled inspection or visit. As an alternative, the facility owner/manager may designate another parking place. All reasonable attempts should be made to avoid muddy areas and/or areas that may contain manure.

- At no time during the inspection, shall DNR environmental specialists contact animals or enter the production areas of buildings or feedlots. Production area includes an office attached to a building that houses animals. Inspectors may enter an office that is not attached to a production building.

- Disinfect base footwear with a Departmental approved disinfectant.

- Disinfect hands with a Departmental approved disinfectant prior to inspection or visit.

- Cover base footwear with a Departmental approved disposable plastic boot or disinfected outer rubber boot.

- If ground conditions such as snow or ice make wearing plastic boots a safety (slip hazard) issue, disinfectant only on base footwear may be used with facility owner/manager approval. As an alternative, a rubber type boot may be placed over the base footwear and disinfected prior to the inspection.

If a DNR environmental specialist conducts multiple inspections in the same day, production phase will become the priority for scheduling. For example, a sow farrowing site shall be inspected first, followed by nursery animals, followed by finisher sites.

Post-Inspection Procedures

- All disposable footwear should be left at the facility. If that is not possible, the footwear shall be put into a sealed plastic bag and properly disposed. Base footwear and/or rubber boots shall be disinfected prior to leaving the facility and entering the environmental specialists' vehicle.

- Disinfect hands after entering the vehicle and prior to leaving the facility.

- Documentation of the bio-security protocol used will be made in the facility contact form.

- Any environmental samples taken will be placed in a container and shipped to the laboratory as soon as possible after the inspection.