



South Dakota
Department of Environment
and Natural Resources



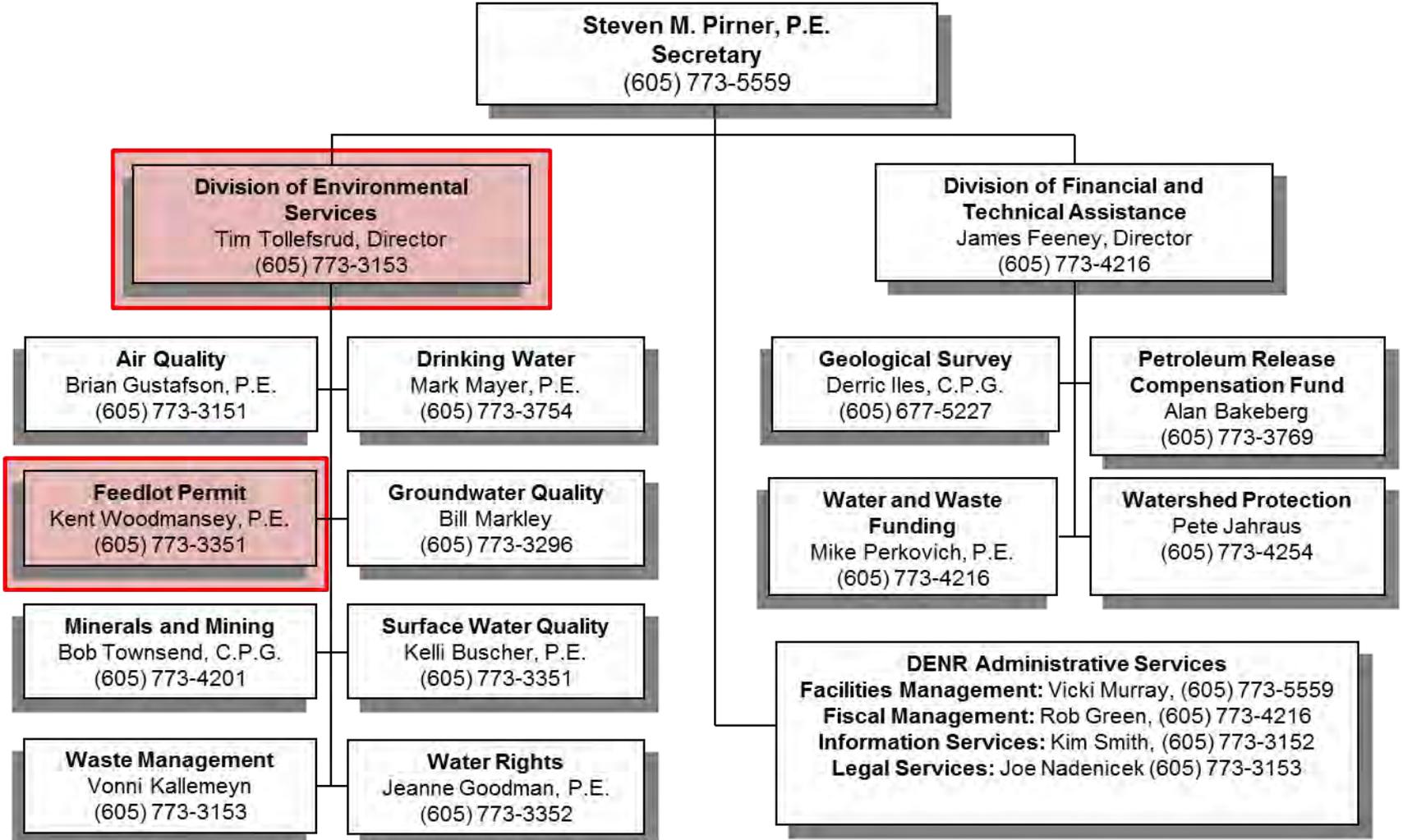
Proposed General CAFO
Water Pollution Control
Permit Changes
and Reissuance Process

September 17, 2015



Department of Environment and Natural Resources

“The mission of DENR is to protect public health and the environment by providing environmental monitoring and natural resource assessment, technical and financial assistance for environmental projects, and environmental regulatory services; all done with reduced red tape, expanded e-government functions, and exceptional customer service to promote a prosperous economy while protecting South Dakota's environment and natural resources for today and tomorrow.”



Goal is to
prevent
water
pollution.



Proposed General Permit Changes and Process

1. Program and General Permit History
2. Reasons for Proposed Permit Changes
3. Summary of Proposed General Permit Changes
4. General Permit Reissuance Process

1. Program & General Permit History

1. Program & General Permit History

- In 1993 when South Dakota was delegated the National Pollutant Discharge Elimination System (NPDES) Program by the EPA there was no permit for CAFOs in place
- In 1996 the South Dakota Pork Producers approached the department about putting in place a permit because of expected growth in the swine industry. A general permit for new swine CAFOs was issued in 1997

1. Program & General Permit History

- In 1997 the South Dakota Department of Agriculture asked the department to put together a permit for all other animal types. That general permit was issued in 1998
- In 2003 a general permit for all concentrated animal feeding operations was issued

1. Program & General Permit History

- 2007 South Dakota legislative session – SB 9 (34A-2-36.2) was passed requiring concentrated animal feeding operations to operate under a general or individual water pollution control permit
- Without a permit concerns were:
 - No road map for environmental compliance
 - local hearings for conditional use permits more controversial

1. Program & General Permit History

- October 2008 – General permit expired
- DENR administratively extended permit anticipating new federal rules addressing court case
- November 2008 – Federal regulations were published in Federal Register
- On March 15, 2011, the U.S. Court of Appeals for the Fifth Circuit issued its decision on EPA's 2008 regulations

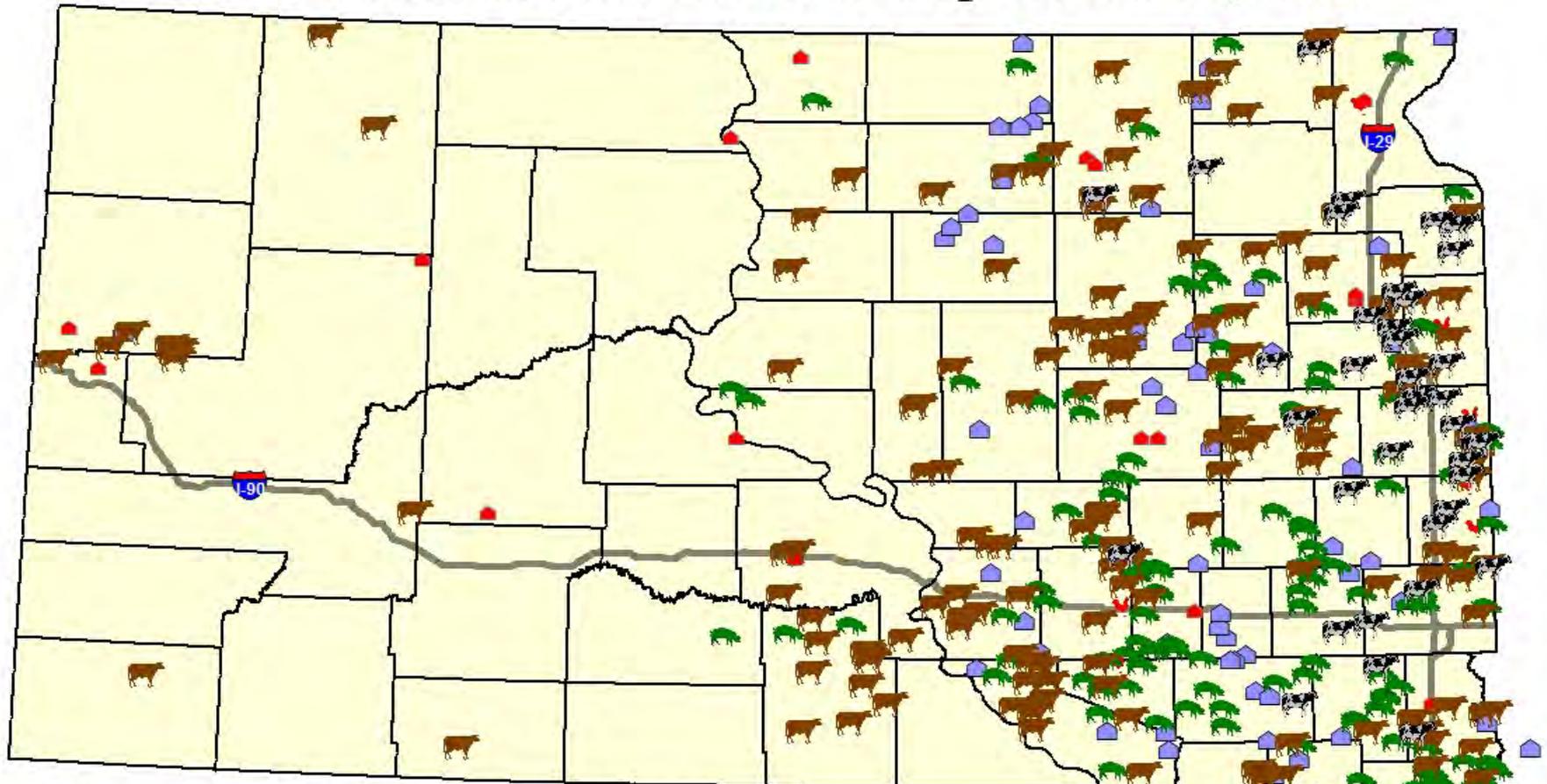
1. Program & General Permit History

- 2011 Lawsuit against EPA on Iowa's CAFO Program
- 2011 Proposed NPDES CAFO Reporting Rule
- 2012 EPA Withdraws Proposed NPDES CAFO Reporting Rule
- 2012 Final CAFO Rule to Remove 5th Circuit Court's Vacated Elements

1. Program & General Permit History

- 2013 Agreement Between EPA and Iowa on CAFO Program

SD DENR Permitted CAFOs - September 15, 2015



-  41 Mature Dairy Cattle - 103,232 head
-  162 Beef and Other Cattle - 521,648 head
-  124 Swine - 621,557 head
-  7 Poultry - 4,663,060 head
-  61 Multi Animals - 3,427,449 head
-  19 Livestock Auctions
- 5 CAFOs Located in Another State with Land Application Areas in SD

419 Total Permits

2. Reasons for Proposed Permit Changes

2. Reasons for Proposed General Permit Changes

- 2012 EPA Regulation Changes
- NRCS' 590 Nutrient Management Standards Updates
- Suggestions by South Dakota Producers and Engineers
- Changes based on DENR's interaction with producers, engineers, crop consultants, and others

3. Summary of Proposed Permit Changes

3. Summary of Changes

- Several states either have or are working on issuing both state and National Pollutant Discharge Elimination System (NPDES) permits. Minnesota is the closest state with both a state and NPDES general permit
- This draft general permit can be either a state or NPDES permit. Below the permit number on the first page of the permit it will indicate whether the permit is a state or NPDES permit.

3. Summary of Changes

Differences Between State and NPDES Permit

State Permit

- Any discharge from an operation's manure management system is a permit violation

NPDES Permit

- The permit allows certain operations to have a discharge from their manure containment system in the event of a 25-year, 24-hour storm event if the manure management system is properly designed, constructed, operated, and maintained

3. Summary of Changes

Differences Between State and NPDES Permit

State Permit

- Applications for new operations or for those increasing their animal numbers are public noticed in the local paper
- DENR will respond to any comments received in the 30 day comment period
- No opportunity for contested case hearing

NPDES Permit

- Applications for new operations and those making major modifications (see definitions) are public noticed in the local paper
- DENR will respond to any comments received in the 30 day comment period
- Opportunity for contested case hearing

3. Summary of Changes

Differences Between State and NPDES Permit

State Permit

- Annual reports must include the same information as in the current permit (see pages 37-38)

NPDES Permit

- Annual reports must include the same information required by the state permit plus the actual crop(s) planted and actual yield(s) for each field where manure, litter, or process wastewater was applied, copies of the results from manure, litter, process wastewater and soil sampling, copies of the calculations showing the total nitrogen and phosphorus (if required) to be applied to each field including the amount of any supplemental fertilizer applied during the previous 12 months for fields owned, rented, or leased by the producer

3. Summary of Changes

Differences Between State and NPDES Permit

State Permit

- Permit and reporting information will be maintained by the state

NPDES Permit

- EPA is working on an electronic reporting regulation that will require CAFO data to be electronically reported to EPA

3. Summary of Changes

Differences Between State and NPDES Permit

State Permit

- Results of the Natural Resource Conservation Services' Soil Plant Air Water (SPA-W) model verifying the manure management system is designed to not discharge is required for operations with open lots or open manure containment systems

NPDES Permit

- Results of the Natural Resource Conservation Services' Soil Plant Air Water (SPA-W) model verifying the manure management system is designed to not discharge is only required for new source swine, poultry, and veal operations with open lots or open manure containment systems

3. Summary of Changes

Definitions (pages 3-7)

- New definitions of ARSD, Designed to Not Discharge, Discharge, Major Modification, Maximum Operating Level, New or Expanding Operation, and New Source
- Modified definition of 25-year, 24-hour storm event, and Producer

3. Summary of Changes

1.2.1. Operations required to obtain permit coverage (pages 7 – 8)

- Same operations required to get permitted by the current permit need to get permitted in the proposed permit
- Minor updates from the current permit. Includes requirements for out of state manure which was in a different location in the current permit

3. Summary of Changes

1.2.2. Permit Application Requirements (pages 8 – 14)

- Existing operations with permit coverage have 1 to 4 years to get permitted under this permit (Appendix J). Operations keep permit coverage under the current general permit until they get coverage under the new permit

3. Summary of Changes

1.2.2. Permit Application Requirements (pages 8 – 14)

- Operations with DENR approval under the 2003 general permit have until their approval expires, but no later than 4 years to submit an application
- Operations that obtain DENR approval under the proposed permit will have 2 years to begin construction but must obtain permit coverage in 3 years

3. Summary of Changes

1.2.2. Permit Application Requirements (pages 8 – 14)

- Existing operations with permit coverage planning a major modification shall submit an application for coverage under the proposed permit and obtain approval (state permit) or permit coverage (NPDES permit) before they make their modification

3. Summary of Changes

1.2.2. Permit Application Requirements (pages 8 – 14)

- Operations need to submit verification the producer has attended an environmental training program in last 3 years with their permit application

3. Summary of Changes

1.2.2. Permit Application Requirements (pages 8 – 14)

- Asking for information on people that own at least 10% of an operation so a bad actor cannot hide
- Housed or open lots with uncovered manure containment systems need to include the results of the SPAW model to verify they are designed to not discharge if they want a state permit

3. Summary of Changes

1.2.3. Permit Processing (pages 14 – 16)

- Updates the permit processing requirements to allow the permit to either be a state or NPDES permit. The state and NPDES will have similar but different permit processes. Some changes need to be made to the language of the proposed permit, but the permit processes are described in following slides

3. Summary of Changes

1.2.3. Permit Processing (pages 14 – 16)

State Permit

- Permit application received
- If operation is new or increasing its animal numbers, it is public noticed in a local paper and on DENR's website

NPDES Permit

- Permit application received
- DENR staff review the permit application to make sure it meets the permit requirements, may ask the producer for more information, and recommends approval or denial of permit coverage

3. Summary of Changes

1.2.3. Permit Processing (pages 14 – 16)

State Permit

- DENR staff review the permit application to make sure it meets the permit's requirements, and if necessary will ask the producer for more information
- If public comments are received, DENR responds to comments
- No opportunity for contested case hearing

NPDES Permit

- Recommendation is public noticed in a local paper and on DENR's website
- If public comments are received, DENR responds to comments
- There is an opportunity for a contested case hearing

3. Summary of Changes

1.2.3. Permit Processing (pages 14 – 16)

State Permit

- If all permit requirements are met, DENR approves the plans and specifications and construction can begin
- DENR conducts at least one construction inspection

NPDES Permit

- If the application meets all permit requirements and depending on the outcome of any contested case hearing, permit coverage is granted or denied. If granted construction can begin.
- DENR conducts at least one construction inspection

3. Summary of Changes

1.2.3. Permit Processing (pages 14 – 16)

State Permit

- The producer's engineer submits a Notice of Completion indicating construction was completed in accordance with the approved plans
- If all conditions of approval are met, permit coverage is granted and a Certificate of Compliance issued
- Operation can populate

NPDES Permit

- The producer's engineer submits a Notice of Completion indicating construction was completed in accordance with the approved plans
- If all conditions are met, a Certificate of Compliance is issued
- Operation can populate

3. Summary of Changes

1.2.3. Permit Processing (pages 14 – 16)

State and NPDES Permit

- If at any time after a permit application is public noticed and before permit coverage is granted (state permit) or a Certificate of Compliance is granted (NPDES permit), the permit application is significantly modified as described in the next slides, it must start the permitting process over. This includes a new public notice.

3. Summary of Changes

1.2.3. Permit Processing (pages 14 – 16)

A significant modification to a permit application is:

- Any revised or as-built plans that include a change in location of the liquid manure containment system where additional soil borings are required;
- A change to the type of manure or process wastewater storage structure;

3. Summary of Changes

1.2.3. Permit Processing (pages 14 – 16)

- An increase in the amount of manure or process wastewater generated
- A decrease in the manure or process wastewater storage volume in the manure containment system; or
- A modification to the nutrient management plan resulting in a change in crop rotation or an increase in land application field acres

3. Summary of Changes

1.2.3. Permit Processing (pages 14 – 16)

NPDES Permit

- When an operation with a NPDES permit is proposing to increase its animal numbers, it will be public noticed once in a local paper and on the department's one stop public notice website for 30 days
- When an operation with a NPDES permit is proposing to make a major modification that doesn't increase their animal numbers (see definition) to their permit application, the modification will be public noticed on the department's one stop public notice website for 14 days
- The department will respond to any comments received and there is the opportunity for a contested case hearing on the permit conditions that address the modification

3. Summary of Changes

1.2.3. Permit Processing (pages 14 – 16)

State Permit

- Any discharge to waters of the state is a violation of the state permit and may be subject to DENR enforcement. An operation that discharges to waters of the state can keep its state permit if the Secretary determines the specific cause has been appropriately corrected so the manure management system does not discharge, and the operation has not had two discharges to waters of the state for the same cause in any five year period.

3. Summary of Changes

1.4. Effluent Limits (pages 16 – 17)

- Operations with State permits and NPDES permits for New Source Swine, Poultry, Veal Operations and Other Housed Lots with Covered Manure Containment Systems – The permit allows no discharge from these operations.

3. Summary of Changes

1.4. Effluent Limits (pages 16 – 17)

- Operations with NPDES permits for open lots or housed lots with uncovered manure containment systems – The permit allows a discharge from these operations as long as:
 - Their manure containment system is properly designed, constructed, operated and maintained at all times,

3. Summary of Changes

1.4. Effluent Limits (pages 16 – 17)

- The producer has records to document a 25-year, 24-hour precipitation event was exceeded,
- The producer has inspection records indicating the operation has been properly operated and maintained,
- The discharge is a result of a precipitation event,

3. Summary of Changes

1.4. Effluent Limits (pages 16 – 17)

- No feasible alternative to discharging existed,
- Only manure or process wastewater in excess of the storage capacity above the maximum operating level or necessary to prevent system failure is discharged to waters of the state, and
- DENR is notified as required by the permit.

3. Summary of Changes

1.4.3. Design, Construction, Operation, and Maintenance Requirements (pages 17 – 26)

- Clarify ditches to divert clean water or process wastewater must carry the peak flow in a 25-year, 24-hour storm event,
- Clarify piping and pipe testing requirements,
- Clarify the use of sumps in concrete pump out pits in lieu of one foot residual in the pit.

3. Summary of Changes

1.4.3. Design, Construction, Operation, and Maintenance Requirements (pages 17 – 26)

- Clarify sediment basin design requirements
- Clarify requirements to prevent pipe surcharging on holding pond inlet piping

3. Summary of Changes

1.4.3. Design, Construction, Operation, and Maintenance Requirements (pages 17 – 26)

- Add the requirement that the SPAW model be used for New Source Swine, Poultry, and Veal Operations to verify they are designed for no discharge
- Clarify that the producer needs to own the land where manure containment system is located or have a long term agreement with the land owner

3. Summary of Changes

1.4.3. Design, Construction, Operation, and Maintenance Requirements (pages 17 – 26)

- Specify how to determine if a containment is located out of the 100-year floodplain if no FEMA map is available
- Require all operations with production areas or land applications within $\frac{1}{4}$ mile of streams where according to the U.S. Fish and Wildlife Service, Topeka Shiners are present must develop and implement an Endangered Species Action Plan.

3. Summary of Changes

1.4.3. Design, Construction, Operation, and Maintenance Requirements (pages 17 – 26)

- Add setback requirements that match DENR's Water Rights Program requirements for wells where top of the aquifer is at least 100 feet below land surface
- Clarify a site plan needs to be submitted for mortality management sites where manure or process wastewater is not used. The system can not discharge.

3. Summary of Changes

1.4.3. Design, Construction, Operation, and Maintenance Requirements (pages 17 – 26)

- Adds design requirements for anaerobic digesters, calf hutches, and feed storage areas
- Reference the Natural Resources Conservation Services' requirements for clay liners and set minimum design and testing requirements for clay liners

3. Summary of Changes

1.4.3. Design, Construction, Operation, and Maintenance Requirements (pages 17 – 26)

- Specify requirements for drain tile near containment systems
- Specify synthetic liner requirements
- Update existing concrete standards
- Add setbacks between trees and shrubs and the manure containment system

3. Summary of Changes

1.4.3. Design, Construction, Operation, and Maintenance Requirements (pages 17 – 26)

- Allow the use of in-situ soil meeting 1×10^{-7} cm/sec permeability in lieu of constructing a liner for permanent stockpiling sites
- Clarify the capacity requirements of holding ponds for permanent stockpiling sites
- Specify location standards for temporary stockpiles, allow the use of berms for temporary stockpiles and allow temporary stockpiles for up to 120 days

3. Summary of Changes

1.4.4. Manure and Wastewater Land Application Sites (pages 26 – 38)

- Operations follow their existing nutrient management plan under the existing permit until they have coverage under this permit
- Clarify requirements for temporary and permanent piping used to transport manure for land application
- Add requirements for monitoring temporary piping systems for leaks and to prevent discharges

3. Summary of Changes

1.4.4. Manure and Wastewater Land Application Sites (pages 26 – 38)

- Includes recommendations for land application near drain tile
- Includes requirements for land application during saturated, snow covered, or frozen soil conditions to match NRCS' 590 standard requirements

3. Summary of Changes

1.4.4. Manure and Wastewater Land Application Sites (pages 26 – 38)

- Updated Table 2 – Phosphorous Index table to match NRCS' 590 standard
- Includes requirements for manure or process wastewater sent out of state
- Allow a producer to give up to 100 cubic yards of solid manure away each year if nutrient results are provided to the land owner

3. Summary of Changes

1.4.4. Manure and Wastewater Land Application Sites (pages 26 – 38)

- Includes requirements for two operations within two miles of each other to share a nutrient management plan
- Include soil and manure sampling methods and laboratory requirements
- Included Precision/Variable Rate requirements

3. Summary of Changes

1.4.7. Annual Reporting Requirements (pages 37 – 38)

- Added EPA's additional 2012 reporting requirements for NPDES permits

1.4.8. Other Permits That May Be Needed (pages 38 – 39)

- Require new or expanding operations with 2 x the number of animals to be a large CAFO using wells or surface water sources to install a water meter
- Included additional permits

3. Summary of Changes

1.7. Bankruptcy Reporting (page 39)

- Added bankruptcy reporting requirements

3. General Permit Reissuance Process

Currently in the informal process

- Comments can be submitted to DENR

Formal Process

- Public notice in at least three newspapers of general circulation and on DENR's one stop public notice website
- Notice to all municipalities, counties, tribal governments, and people on DENR's interested parties list

3. General Permit Reissuance Process

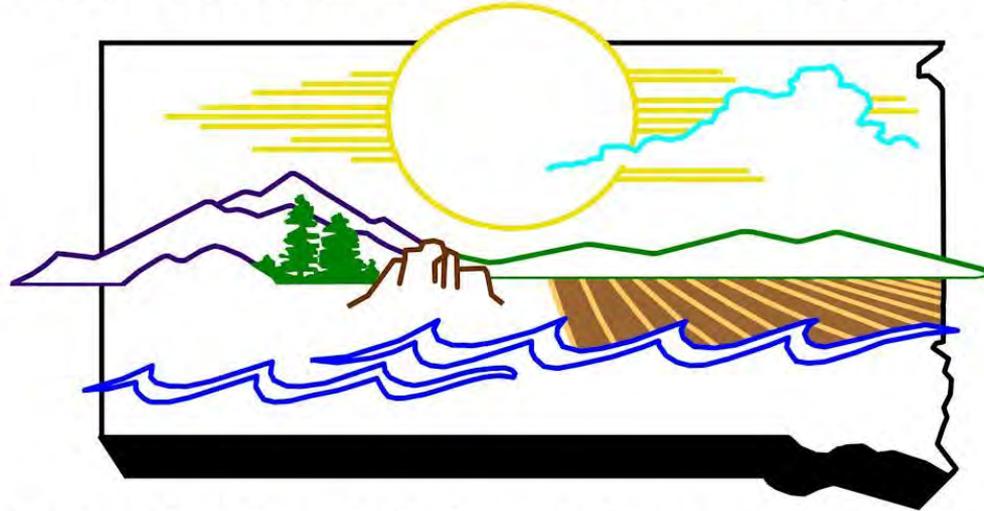
Formal Process

- DENR responds to all comments received
- Opportunity for a contested case hearing

Goal is to prevent water pollution!



South Dakota Department of
Environment and Natural Resources



Protecting South Dakota's Tomorrow ... Today

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