



North Dakota Department of Health



Water Quality and Odor Regulations
For Animal Feeding Operations

Department of Health Authority

- Department of Health has responsibility to protect water and air of the state
- Department has been given primacy by EPA to enforce portions of the Clean Water Act and Clean Air Act.
- Department has also been given additional authority to enforce nuisance regulations regarding odor and hydrogen sulfide (H₂S)
- Department has some limited authority over location of livestock facilities

Water Quality Requirements

- **All Animal Feeding Operations must prevent manure and manure runoff from impacting waters of the state**
 - **Animal Feeding Operation (AFO)**: An operation is an AFO if the following conditions are met:
 - Animals are stabled or confined, and fed or maintained for a total of 45 days in any 12-month period.
 - Vegetative growth or post harvest residues are not sustained during the normal growing season in the lot or facility.
 - **Waters of the State**: All waters within the jurisdiction of this state including all streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, and all other bodies or accumulations of water on or under the surface of the earth, natural or artificial, public or private, situated wholly or partly within or bordering upon the state, except those private waters that do not combine or effect a junction with natural surface or underground waters just defined.

Operations requiring permits

- All Large Confined Animal Feeding Operations (CAFO's) must obtain a permit prior to July 2007
- Any medium AFO within $\frac{1}{4}$ mile of surface water must apply for a permit prior to July of 2008
- Any livestock operation that is impacting waters of the state must take steps to prevent that impact
- New operations requiring a permit must obtain a permit prior to construction
- Other operations may want to obtain a permit as well

Livestock Numbers

	Number of Head for each Category		
	Small	Medium	Large
Mature dairy cow, whether milking or dry	< 200	200 – 699	700 +
Cattle other than mature dairy cows or veal calves	<300	300 - 999	1000 +
Swine 55# or more	< 750	750-2499	2500 +
Swine under 55#	< 3000	3000 - 9999	10,000 +

Water Quality Requirements

To obtain a permit, the facility must provide:

- Design plan showing all manure and process wastewater is contained
- Operation and Maintenance plan showing the steps taken to ensure the system continues to operate properly
- Nutrient Management Plan showing:
 - Adequate land available for manure application
 - Manure will be applied in a way that will not impact water quality

Manure Storage Requirements

■ Manure storage-Confinement

- Minimum of 270 days of storage for manure and process wastewater, 365 day preferred
- Open storage must also maintain room for a storm even
 - 100 year/24 hour storm event for swine
 - 25 yr/24 hr for all others

■ Runoff storage- Outside lots

- 270 days of runoff
- Plus room for a 25 yr/24 hour storm event

Soil and Groundwater Info

- Manure storage
 - Seepage rate less than 1/16 inch per day
 - Lab tests on soil material
 - Soil borings
 - Post construction testing
- Sensitive areas
 - Additional liner requirements
 - Monitoring wells
 - Leak detection

Nutrient Management Plan

- Must have sufficient acres to utilize manure
- Includes soil and manure testing
- Includes crop rotation and yield
- Procedures for land application of manure
- Records of manure application

Operation and Maintenance

- Details of regular maintenance items and standard operating procedures
- Must be done to ensure system continues to operate properly

Water Quality- Permitting Process

- The department receives the design, NMP, etc.
- Information is reviewed for completeness.
- If any information is incomplete the department will contact the producer, 319, or the local NRCS office.
- If or when information is complete the department will continue the review for compliance with state law.
- When the design meets state regulations a permit or public notice will be issued. (30 day public notice is dependant on size of facility)
- Typically takes 30 to 60 days, depending on public notice, from when all the complete and accurate information is received until the permit is issued.

Department of Health Oversight

- At least one inspection every year for Large facilities
- Other facilities inspected every 2 to 5 years based on size and track record
- New facilities may be inspected more often during first year or two until facility has “proved” itself
- Inspection cover the storage structures, diversions, NMP and O/M info
- Also follow-up on any complaint

Enforcement

- Most concerns identified during an inspection are addressed without the need for enforcement
- Notice of Violation (formal) or Letter of Apparent Non-compliance (informal) may be issued for serious or on going violations
- Knowingly making any false statement, representation or certification is punishable by \$5000 per day per violation and/or 6 months in jail
- Department can seek monetary fines of up to \$10,000 per day per violation and/or 1 year in jail for a willful violation of the rules, or any permit conditions
- Department can seek injunctive relief order from court to prevent/stop violation

Odor Regulations- Nuisance laws

- Apply to everyone
- Odor readings taken on a complaint basis
- Location where odor readings are taken based on
 - Applicable setback distances
 - Who was established first
- Prohibit odors 7 Odor Concentration Units (O.C.U) or higher, as measured with scentometer

Odor Regulations-Enforcement

- Upon first apparent violation, as documented by a certified odor inspector, the facility will receive notice of the apparent noncompliance and will be required to establish an odor management plan.
- If another violation is documented more than 15 days after implementing the odor management plan enforcement action may be taken.
 - Violation must be documented by two inspectors and by two readings each, taken at least 15 minutes apart but no more than two hours apart

Odor Setbacks

- Department of Health has authority to regulate location of an Animal Feeding Operation (AFO) if neither the county nor the township regulate the nature, scope and location of AFO's
- Regulates new or expanding animal feeding operations which are permitted under chapter 61-28
- Setback distances have been established based on type and size, calculated in animal units, of the facility.
- Setbacks are from any existing residence, church, school, business, public building, park or campground.
- A permitted animal feeding operation may expand its permitted capacity by twenty-five percent (25%) on one occasion without triggering a higher setback distance.

Odor Setback Distances

Animal units	0 - 299	300-1000	1001-2000	2001 - 5000	5001 up
Swine	None	½ Mile	¾ Mile	1 Mile	1 ½ miles
Other livestock	None	½ Mile	½ Mile	¾ Mile	1 Mile

Common animal units *

Animal type	Animal units
One mature dairy cow, whether milking or dry	1.33 a.u.
One dairy cow, heifer or bull other than described above	1.0 a.u.
One swine, weighing 55 pounds or more	0.4 a.u.
One swine, weighing less than 55 pounds	0.1 a.u.

* Animal unit for other types of livestock also apply

Odor Setbacks- Easements

- Legal agreement between the operator of the facility and the preexisting use.
- The setbacks do not apply if the owner/operator applying for the permit, obtains an odor easement from the preexisting use that is closer than the setback distance.
- Allows facility to impact the property over which they hold the easement
- Must be filed with the county recorder

Odor Setbacks- Enforcement

- If there is no local zoning and a new facility cannot meet the setback distance
 - No permit can be issued to that facility unless they obtain an odor easement from the preexisting use
- If there is no local zoning and an expanding facility cannot meet the setback distance
 - They will be issued a permit at their existing numbers and not be allowed to expand
 - They may expand by 25% one time after becoming permitted

H₂S Nuisance Regulations

- Prohibits concentrations of H₂S 50 ppb or higher
 - Readings taken on a complaint basis at the complainants property boundary or in public areas
 - Violation if two readings taken at least 15 minutes apart, but within 2 hours, exceed 50 ppb
 - 1 ppb (part per billion) is approximately the same as 1 minute in 2000 years

Model Zoning

- Model Zoning Ordinance is an example for use by counties and townships
 - Carries no statutory weight
 - Must be enacted and enforced by the local entity
- Ordinance was developed using input from cities, townships, and counties, as well as producer groups
- ND Attorney General's opinion 2005-L-27 related to zoning authority over AFO's
 - <http://www.ag.nd.gov/Opinions/2005/Letter/2005-L-27.pdf>
 - NDCC Chapter 11-33 and 58-03
<http://www.legis.nd.gov/information/statutes/cent-code.html>

Top Ten

Unwritten Rules for Permitting Large CAFO's

10. Be a Good Neighbor

- Work with those closest to your facility, not against them
- Your immediate neighbors' opinions matter more than any other groups

Top Ten

Unwritten Rules for Permitting Large CAFO's

9. Appearance is (Most) Everything

- Out of sight, out of mind
- People do not want to see rubbish, garbage, unkept grass or dead animals at your operation

Top Ten

Unwritten Rules for Permitting Large CAFO's

8. Reputation is your Most Expensive Asset
 - Protect it at all costs!
 - You will be judged by those you associate with:
 - Engineering Firm
 - Contractor
 - Local Producers
 - Entire Industry
 - Everyone else!

Top Ten

Unwritten Rules for Permitting Large CAFO's

7. Ask Permission, not Forgiveness

- Governmental agencies do not like surprises!
- Plans are easy (cheap) to change, storage structures and ponds are not

Top Ten

Unwritten Rules for Permitting Large CAFO's

6. Show Them the Money

- Local political subdivisions are interested in the bottom line, what your facility can contribute to their coffers.
- The Department of Health is not.

Top Ten

Unwritten Rules for Permitting Large CAFO's

5. Tell the Truth, and Nothing but the Truth
 - Any lie, half-truth, or misinformation will destroy all credibility with the department and the public
 - Tell your own story before others can tell it for you

Top Ten

Unwritten Rules for Permitting Large CAFO's

4. Control your Info

- Remember that all info you submit to a governmental agency will be public records
- Don't say anything in any correspondence that you wouldn't want printed in the newspaper
- Rumors and misinformation will be substituted when accurate info is missing

Top Ten

Unwritten Rules for Permitting Large CAFO's

3. Don't Cut Corners!

- More time and effort (\$\$) can be spent trying to meet the bare minimum than it would take to do things right
- Try to comply with the spirit of the requirements, not look for loopholes in the wording

Top Ten

Unwritten Rules for Permitting Large CAFO's

2. Be Perfect!

- One small mistake can derail a whole facility
- Proofread all information you submit. Then proofread it again.

Top Ten

Unwritten Rules for Permitting Large CAFO's

1. Go Where you're Wanted

- There are lots of good sites available, pick one.
- Locating in a bad spot to save \$\$ on real estate will cost you more in the long run.

For More Information

Karl Rockeman (328-5225)

Brady Espe (328-5228)

North Dakota Department of Health

918 E Divide Ave 4th Floor

Bismarck, ND 58501

Email: krockema@state.nd.us
bespe@state.nd.us

www.ndhealth.gov