# CAFO Applications within Surface Water Quality Management Areas (SWQMA)

**NOTE: This document generally explains some of the requirements of s. NR 243.14, Wis. Adm. Code, and is for informational purposes only. Please review your WPDES permit and s. NR 243.14 for all applicable requirements.**

## What is a SWQMA?

For the purposes of ch. NR 243 and WPDES permits issued to CAFOs, SWQMAs include the following areas:

- Areas within 1,000 feet from the ordinary high water mark of navigable waters that consist of a lake, pond or flowage.
- Areas within 1,000 feet from the high water mark of navigable waters that consist of a glacial pothole lake.
- Areas within 300 feet from the ordinary high water mark of navigable waters that consist of a river or stream or other non-lake navigable waters.
- Areas within 300 feet of conduits to navigable waters

SWQMA distances should be measured from the top of the channel for navigable waters and the middle of the channel for conduits to navigable waters.

The first question DNR staff often get is "how do I know a given stream, creek or channel is navigable?" Navigable waters have a defined bottom (bed) and side (bank), and enough water to float any boat, skiff, or canoe of the shallowest draft on a reoccurring basis. Clearly, lakes and perennial rivers and streams are navigable.

But what about those channels that have water in them only occasionally? While it may be a pleasant prospect, using a boat is rarely necessary to tell whether a stream or lake is navigable. Waterways can be presumed navigable if they appear on the USGS topographic map[1] as a perennial lake or stream. Intermittent streams are commonly navigable waterways as well if they appear on a topographic map. A final desktop source is permit applications for Department Waterway and Wetland permits (ch. 30) from 2000 to the present that are shown on maps available on DNR's web site via the Designated Waters Search[2].

[1] USGS topographic maps can be found at your local library, internet resources such as the Gazetteer (www.census.gov/cgi-bin/gazetteer), Google Earth (earth.google.com), and Topozone (topozone.com) or your county or city zoning department.

[2] http://maps.dnr.state.wi.us/imf/dnrimf.jsp?site=SurfaceWaterViewer.deswaters

The second question DNR staff often get is "what is a conduit to a navigable water?" For CAFO permits, a conduit to a navigable water means a natural or man-made area or structure that discharges to a navigable water via channelized flow. This includes open tile line intake structures, open vent pipes, sinkholes, agricultural well heads, and drainage ditches that discharge to navigable waters. The main channel of a grassed waterway is also a conduit if it discharges to navigable water. Side grassed waterways that discharge to a main channel of a grassed waterway are not considered direct conduits unless they are essentially two equal channels that end at the start of a main channel of a grassed waterway. Conduits to navigable waters do not include the components of a subsurface drainage system if they are not present at the soil surface.

## What restrictions apply to CAFO applications within the SWQMA?

CAFO WPDES permits do not prohibit applications of manure and process wastewater within the SWQMA. However, CAFOs must take additional precautions when applying manure or process wastewater within the SWQMA. One option when applying manure within the SWQMA is to maintain a 100-foot setback from navigable waters and their conduits. CAFO may not apply manure or process wastewater within the setback.

Another option is to implement practices equal to or better than the 100-foot setback. Operations may submit their own equivalent practice for Department approval or follow one of the equivalent practices outlined in NR 243.14(4). These practices include establishing a 35-foot vegetated buffer or a filter strip designed in accordance with NRCS Standard 393 where no manure is applied and:

- Option #1: Inject/immediately incorporate applied materials in the remainder of the SWQMA
- Option #2: Surface apply materials within the remainder of the SWQMA provided the field has at least 30% residue and follow the application rate restrictions in the table below. On a given field within the SWQMA, additional manure and process wastewater may be applied to meet crop

nutrient needs provided at least 7 days have elapsed since the last application.

| MAXIMUM RATES OF UNINCORPORATED LIQUID MANURE AND PROCESS WASTEWATER APPLIED WITHIN A SWQMA | |
|---|---|
| **Surface Texture Class** | **Max Application Rate (gallons/acre)** |
| Fine | 5,000 |
| Medium | 7,500 |
| Coarse | 10,000 |
| **Fine** – clay, silty clay, silty clay loam, clay loam. **Medium** – sandy clay, sandy clay loam, loam, silt loam, silt. **Coarse** – loamy sand, sandy loam, sand. This category includes peat and muck based on their infiltration capacity. | |

An operation can also reduce the 100-foot setback to 25 feet on fields that have been in long-term no-till provided they follow option #1 or #2.

**What SWQMA restrictions apply to wetlands?**

For the purposes of implementing nutrient management requirements and WPDES permits, wetlands mean areas delineated on a hydric soils map that are dominated by hydrophytic vegetation. They do not include prior converted or farmed wetlands. When applying manure and process wastewater near wetlands that are connected to and run parallel to navigable waters, the landward edge of the wetland is considered to be the beginning of the SWQMA. Wetland features that are connected to and run perpendicular to that navigable waters are treated as conduits to navigable waters and the SWQMA begins at the landward edge of the wetland. For wetlands that are not connected to navigable waters, manure and process wastewater may not be applied within 25 feet of the wetland.

**How does this impact my Nutrient Management Plan?**

Nutrient Management Plans (NMP) must outline SWQMA areas on hazard/restriction area maps required as part of NMP submittal. In addition, the NMP narrative and hazard/restriction area maps must identify which practices the operation will be implementing on a field-by-field basis to comply with the SWQMA restrictions. For example, different types or colors of cross-hatching could represent a specific type of practice (e.g., blue cross-hatching represents a 25-foot separation with injection/incorporation, yellow cross-hatching represents a 25-foot separation with a 5,000 gallons/acre application rate.