WISCONSIN ASSOCIATION OF LAKES, INC.

is a nonprofit group of citizens,
organizations, and businesses working for clean, safe, healthy lakes for everyone.

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Rule revisions necessary to keep lakes manure free

Manure runoff from fields and/or detention ponds can cause short-term and long-term problems for our lakes. Manure runoff is a problem that has a solution, but we need strong Manure Management Discharge Rules (NR 243) to help us work together towards healthier lakes.

NR 243 affects how Wisconsin's largest farms (Concentrated Animal Feeding Operations or CAFOs) handle, spread, and store their manure. Manure runoff has contaminated rural families wells and drinking water, killed fish, and undermined the private and public financial investments in stream and lake improvements property owners and taxpayers are making to keep our lakes clean, safe, and healthy.

Revisions to these important rules were unanimously approved by the Natural Resources Board this May. On August 3rd the Assembly and Senate Agricultural Committees will hold a public hearing on the proposed revisions to NR 243.

"Many farmers manage their manure spreading well, and avoid runoff," says Peter Murray, Executive Director of the Wisconsin Association of Lakes. "But some farms don't do as well, which is why this rule is important. We need everyone's help within the watershed to keep our lake's water quality safe and pleasant to enjoy and use. It is important all farmers practice sound manure management to protect our watersheds and lakes."

Short-term effects, long-term problems

A sudden flood of nutrients from manure runoff events can trigger fish kills, and provide the fuel for reoccurring, smelly algae blooms. Dramatic changes in water quality can choke out native species open up the door for invasives—such as Eurasian water milfoil and carp—to become established in the lake.

Spreading manure on saturated lake watershed soils can cause water quality decline that can be difficult, and sometimes impossible to reverse. Like balancing a scale, a chronic source of extra nutrients can tip lakes from clear water into a murky, eutrophic state that makes recreation unpleasant and drags down lakefront property values.

What is the cost to our lakes?

Dane County: Dorian Creek (Tributary to Lake Mendota)

In February 2005, a manure runoff event from one eighty acre field contributed enough phosphorus to Lake Mendota to produce 1.2 million pounds of algae.

The manure was spread on frozen ground, and it is estimated all of that manure ran off the field during the rapid thawing and rain events that spring, dumping into Dorian Creek. Virtually all the phosphorus from that manure runoff event ended up in Lake Mendota.

This **one** runoff event into **one** lake was the equivalent of the amount of phosphorus that Dane county's lawn fertilizer phosphorus ban prevents from entering **all** of the county's lakes.

Dane county is making significant investments to reduce the amount of phosphorus entering the lake system. Between 1997 and 2004, the agricultural community has received $692,000 cost shared dollars to install best management practices to limit runoff. Dane county park staff estimate 80% of the County's limited weed harvesting program ($188,560) is spent on Madison's lakes.

For Lake Mendota alone, the cost of eutrophication has been estimated to be about $50 million in lost recreation and property values. Almost 55% of the phosphorus entering the Lake Mendota watershed comes from fertilizer, which includes manure.

Vernon County: Jersey Valley Lake

In March 2005, a manure runoff event transformed Jersey Valley Lake from a popular fishing and recreation spot to a dead zone. Liquid manure was spread on seven inches of fresh snow; then it rained.

The resulting manure runoff depleted the amount of oxygen in the water by two-thirds, suffocating all the lake's fish. Visibility, usually 18 feet, was reduced to less than a foot. Subsequent tests found the lake contaminated by coliform and E-coli bacteria. The swimming beach became a public health risk rather than a summer destination.

The County was forced to draw down the lake. What was a 52 acre 32 foot deep lake is now a 5 acre mud puddle. Once a popular fishing spot with abundant large mouth bass and panfish, the manure runoff event killed all Jersey Valley Lake's fish.

Jersey Valley Lake was one of the few publicly available bodies of water in Vernon County. A county survey found that local people used to log more than 300 recreation hours a day in the summer at the lake. Now the lake and the park are closed. As one Vernon County employee commented, "There aren't any grandpas fishing with their grandkids there anymore. How do you measure that?"

Dodge County: Lake Emily

Lake Emily, located in Dodge County, used to be a beautiful lake, but not anymore. In the spring of 2002, a local farm applied 1 million gallons of liquid manure without knifing it in to the fields.

A couple of days of rain followed. According to residents, the roads were so full of manure that driving was difficult. The manure runoff went into a retention ponds and Lake Emily.

Lake Emily is a small, shallow lake that used to be really clear. Now residents describe their lake as a weedbed so thick that cranes can walk across it. The weeds have caused boating problems: motors can't chop through the thick beds.

Accessing the shoreline is so difficult that people are having trouble fishing, however the fish population has declined with the water quality. Large mouth bass were abundant and northern pike common before the runoff event; now residents observe a marked reduction in the number of fish in their lake.

The dramatic change in water quality has also changed the plants able to survive in the now nutrient laden lake. Both curly leaf pondweed and Eurasian water milfoil—aquatic invasive species—have become established. Both Curley leaf pondweed and Eurasian water milfoil thrive in lakes receiving phosphorus laden runoff.

The local lake association is small, and does not have the funds for the costly management it will take to change the water from a pond of pea soup back into a clear lake. In 2005, three years after the spill, private property owners were spending more than $500 each to chemically treat weeds so their properties are usable.