



Kewaunee C•A•R•E•S

Citizens Advocating Responsible
Environmental Stewardship

Currently addressing the water quality issue in Kewaunee County



The Problem: High levels of bacteria, nitrates and phosphorus in surface waters.

The Goal: Clean streams, rivers and lakes that support healthy populations of fish and other aquatic species.



The Problem: 30.1% of wells tested in Kewaunee County are contaminated with E.coli bacteria and nitrates

The Goal: Reduce pollution that affects the water supply



The Problem: Cladophora (green algae) thrives on the phosphorus content of the water entering Lake Michigan from agricultural runoff. This poses human health risks and causes beach closings because the water isn't safe to swim in.

The Goal: Reduce phosphorus levels in Lake Michigan



Identifying the particular source of pollution is difficult and costly. However, the proliferation of large animal factories in Kewaunee County is contributing to the surface and groundwater pollution.



These animal factories, also called CAFOs (Concentrated Animal Feeding Operations) produce enormous amounts of manure. The liquid manure is stored in multi-million gallon lagoons and then spread on the land.



Sometimes spreading occurs on land with shallow soils over porous limestone bedrock, called Karst. This land provides little filtration of contaminants before it reaches the groundwater that supplies private wells.



During snow melt or following heavy rain events, runoff from fields where manure has been applied is the most serious source of contamination. Working with farmers and land owners to prevent runoff will be a key part of reducing pollution.



A proposed method of manure application is through modified center pivot irrigation equipment. Because liquid manure is known to contain up to 160 pathogens that can affect humans and livestock, manure spread in this fashion can drift miles from the source, thus posing significant human health risk.



Kewaunee Cares is keeping an eye out for potential pollution violations. When violations occur, the Department of Natural Resources is notified to respond. Kewaunee Cares maintains its own records as backup documentation that includes water sample test results and photos.



Violations also can occur by careless transfer to spreading equipment at the roadside.



Ponding of manure due to over-application and lack of proper incorporation into the soil can be harmful to neighboring property or water sources including wells or ponds.



Occasionally there are more catastrophic spills.
This incident was on Shiloh Road just south of Sturgeon Bay.



Billboards are calling attention to the problem throughout the community. This is the first step in educating people about the problems and generating discussion toward solving the problems.



A survival rule of thumb says that humans can live up to 3 weeks without food, but only up to 3 days without water.

Of course, the real outcome depends on a number of variables including heat, shelter, general health and more.

But do we really want to put it to a test?

In Northeast Wisconsin, water is plentiful and readily available. However, the groundwater we all drink from is under increasing risk of contamination from several sources. Perhaps the greatest threat of water contamination in our community is from animal factories.

An animal factory is defined as a facility with 1,000 or more 'animal units'. For a dairy that is 700 cows. Some operations have more than 5,000 cows.

A factory operation of this size is not a farm. At least it's not the traditional family farm that's been the icon of Wisconsin and on the decline since the 1970s. Animal factories have replaced small to mid-sized farms at an alarming rate to achieve economies of scale. That means greater profit opportunity for animal factory operators and investors. But at what cost to the environment and community?

Animal factories have an assembly line process that puts thousands of cows in long confinement barns

where they stay every day of their useful life. Keeping such a huge number of dairy cows in a small space requires using antibiotics to keep the animals healthy.

Manure is an obvious by-product of feeding animals. With such huge volume and concentration of manure comes the task of disposing of it.

An average dairy cow produces as much waste each day as 20 humans. With an estimated 80,000 cows in Kewaunee County, that's about the same as a city of 1.6 million people.

Waste from a city that size would go through sewage treatment facilities before any reclaimed water is returned to the environment.

That's not the case for animal factories. They collect, store and then spread millions of gallons of liquid manure from their facilities to land throughout the county (or even neighboring counties) without any treatment before it's applied.



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Water Wise

Making choices to protect and sustain our water.

By the Numbers

30.1%

of private wells tested in Kewaunee County are contaminated with nitrates or bacteria.

(Source: Kewaunee County Land and Water Conservation Department)

42.4%

of the total land area in Kewaunee County is being spread with liquid manure by animal factories.

(Source: Kewaunee County Land and Water Conservation Department)

58 gallons

Americans now prefer to drink water instead of soft drinks and milk. Per capita consumption of water is 58 gallons per capita per year; soft drinks are at 44 gal./person annually and milk is trailing at 20 gallons per capita per year, and dropping.

(Source: Survey by Beverage Digest)



Safety Association, in high concentrations each of these gases pose a health threat to humans and livestock.

A nuisance odor associated with liquid manure comes primarily from open sulfide's distinct rotten egg smell. At low concentrations, this can irritate eyes and respiratory tract, while moderate levels can cause lachrymation, nausea and dizziness.

More importantly, microbial action breaks down the ammonia and nitrogen in the liquid manure into nitrates. Nitrates prevent red blood cells from carrying oxygen in our blood. High levels of nitrates in our drinking water are especially harmful to infants, potentially leading to 'blue baby syndrome' and death. Studies have also linked long-term ingestion of nitrates to certain forms of cancer, heart disease and diabetes in children. There is also strong evidence that the high use of antibiotics in animal factories contributes to an increase in antibiotic-resistant microbes causing infections to be less effective in treating human ailments.

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Effect on Community

Tourists lose water. One of the side effects of animal manure getting into Lake Michigan is the vigorous growth of green algae called Cladophora.

Phosphorus, one of the nutrients contained in manure, feeds the algae. Add sunlight and that's a perfect recipe for algae growth. Once waves bring it on shore, the algae starts to decay. Not only does it present visual and odor problems, it's also a health issue and contributes to beach closings when bacteria levels are high enough.

Also, think of the damage being done to sport fishing. Some Kewaunee County streams used to be prime trout fishing destinations. Now, runoff pollution, verified by water testing, is killing fish and other

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environmental health and economic vitality. Or, we can choose an unsustainable animal factory model that exploits and ravages our community and its resources for the profit of a few.

It's time to contact your state senators and representatives to ask them to get more involved in finding a solution to this environmental and social problem that affects their constituents (voters).

For years, the problem has grown under both political parties. So to blame all problems on the current administration is not productive.

What can be productive is that this administration and its appointees look seriously at making an attitude shift, even a policy shift, that protects our natural resources, now, and into the future. If something isn't done now, there won't be much of a future for our children and grandchildren.

Help us protect family farms and return Kewaunee County to a place where people want to visit, start a business and raise a family.

It all starts with the water. Stay thirsty for real change. We are.

Look at KewauneeCares.
@gmail.com.

or Action Council. Please help us keep
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its my donation of \$ _____.

tribution of \$ _____.

charitable, educational organization.

We've just recently published an insert describing the threats to water quality and human health. This went to 10,500 households in Kewaunee County via the Kewaunee Star News.



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Your support of our ongoing water testing and pollution
monitoring programs is appreciated.