



CAFO Information and Strategies for Protecting Trout Streams

Executive Summary

[Wisconsin Trout Unlimited's \(WITU\)](#) focus are the cold-water resources of the state of Wisconsin, and agriculture presents the single largest source of degradation, groundwater withdrawals, and threats of significant fish kills. WITU is not opposed to agriculture or all concentrated animal feeding operations (CAFO) but we are concerned with the threats that they present to cold-water resources in the state as evidenced by recent fish kills and studies that have demonstrated their environmental impacts. Additionally, CAFO density (number of CAFOs per watershed) and their associated groundwater wells have proven to be significant impacts on trout and trout streams. As CAFOs continue to increase in the state – an average of 13 new CAFOs per year have been approved – we expect an exponential increase in issues associated with industrial agriculture.

CAFOs are regulated by local units of government in accordance with livestock siting regulations established by the [Wisconsin Department of Agriculture, Trade and Consumer Protection \(DATCP\)](#) and the [Wisconsin Department of Natural Resources \(WDNR\)](#) through their oversight of the [National Pollution Discharge Elimination System \(NPDES\)](#) as required by the [United States Environmental Protection Agency \(US-EPA\)](#) through the [Clean Water Act \(CWA\)](#). Wisconsin state statutes that regulate CAFOs are [NR 150](#) and [NR 151](#) which manage runoff and [NR 243](#) which regulate animal feeding operations. As the laws are written, it is very difficult to prevent a CAFO from being sited and permitted. You may encounter situations in which local municipalities are also involved in the regulation of CAFOs.

Recommendations

These are our recommendations for individuals and Trout Unlimited Chapters

1. **Reduction of Demand for CAFO products.** Industrial agriculture exists because of supply and demand for inexpensive meat and dairy products. Buying your meat, eggs, and dairy products from local farmers decreases demand for industrial agriculture products.
2. **Stay Informed.** CAFOs are regulated by [DATCP](#) and [WDNR](#) through [NR 150](#), [NR 151](#) and [NR 243](#) and NPDES applications are [published by the WDNR](#). Get to know your [Regional CAFO Specialist](#).
3. **Partner with Like-Minded Organizations.** Wisconsin is home to a host of conservation organizations that are actively working to reduce the human health and environmental issues associated with CAFOs.
4. **Be Involved Locally.** Laws regulating CAFOs are extremely CAFO friendly, but cities, villages, towns, and counties all play a role in the regulation of CAFOs. Working with local leaders and your local [DNR Regional CAFO Specialist](#) will help your chapter have a voice in siting and regulation CAFOs in your area.
5. **Emphasize Impacts to Human Health.** Due to how the laws are written and thus enforced, impacts of industrial agriculture on the environment are generally not considered in the siting or permitting process but human health impacts can be considered.

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Introduction

Confined animal feeding operations (CAFO) have become part of Wisconsin's modern agricultural landscape. By definition they are large and regulated and comparatively different to historic farming operations in our state. Not surprisingly a variety of issues are inherent with large, confined livestock operations, but for Trout Unlimited the single focus issue is the impact that CAFOs have, or potentially have, on water quality (and quantity) around the state. As CAFOs proliferate so do the threats they present to cold water resources.

TU recognizes that the demand for agricultural products is a demand created by all of us consumers of agricultural products. Agriculture produces the supply to meet the demands of an ever-growing population. It should be pointed out that the demand for agricultural products is a demand created by all of us who consume those products. Agriculture is creating the supply to satisfy the ever-growing demands of our growing population. A number of large agriculture businesses are operating in compliance with existing state laws. Unfortunately, many others are not. It is the operations that are either out of compliance or who have accidents that are the focus of TU concern.

While recognizing that CAFOs are now firmly in place as part of agricultural operations, Trout Unlimited will continue to demand that CAFOs need to be permitted and operated in a manner that eliminates damage to water resources in Wisconsin either from excessive groundwater withdrawals or from improper handling or spreading of manure.

A number of Trout Unlimited chapters in Wisconsin are located in areas impacted by CAFOs. The State Council has heard questions from several of the chapters about what can be done when CAFOs are proposed in locations that may not be compatible with cold water resources. Chapters feel frustrated and are not aware of what they can do to try and limit potential damage to local resources.

The State Council, in an effort to support our local volunteers, has put together this resource guide and is making it available to chapters and their partners. The Council will continue to advocate for adequate protections of our cold-water resources on a statewide level while at the same time supporting our local chapter's efforts to protect their own home waters.

Often, chapters want to involve themselves in the siting and permitting process for agricultural projects that have the potential to create damage to cold water resources, but the chapters feel overwhelmed and simply don't know what to do. It can be very time consuming and certainly takes dedication, but with some knowledge and dedication to the task, local chapters are in the best position to take on local issues. In addition, many local governments are more responsive to citizen concerns than state and federal agencies.

The rest of this report will try to provide information and suggestions for local chapters to use in dealing with potentially damaging projects. Much of the discomfort that chapters feel can be alleviated by simply having the knowledge about what kinds of strategies and activities can be undertaken.

Wisconsin CAFO Information

*CAFO is an acronym that stands for Concentrated Animal Feeding Operation. The definition comes originally from the federal Clean Water Act of the 1970's. In Wisconsin a CAFO is an operation housing 1000 animal units or more. 700 dairy cows are equal to 1000 animal units. A small animal feeding operation (1-299 animal units) or a medium animal feeding operation (300-999 animal units) may also be defined or designated as a CAFO in accordance with NR 243.26.

*The waste from a single cow equals the waste generated by 18 people, in terms of biochemical oxygen demand (BOD). Thus, a 2000 cow CAFO has the same water pollution potential as a community of 36,000 people without sewage treatment.

* Manure disposal has remained fundamentally unchanged for many years. Land spreading of one kind or another remains the primary method of disposal.

* When the regulatory CAFO program began in 1985 there were no dairy CAFOs in Wisconsin. There were 5 or 6 CAFO's in 1985-hogs and turkeys but no dairy. A recent count showed 317 CAFOs in Wisconsin; 90% of which are dairy operations. The number has risen every year since 2005, and CAFOs have been added at the rate of approximately 13 per year for the last 15 years.

*If a CAFO permit application meets all standards the DNR must issue the permit.

*CAFO permits are issued for a five-year period. CAFOs are generally inspected at least once during the five-year period. Inspections are generally proactive in nature and focused on preventing problems before they can occur. Historically, monitoring land spreading activity has not been a component of DNR inspections. Land spreading accounts for the majority of the water quality impact from livestock operations

Laws Regulating CAFOs

Before chapter members begin to speak out against any CAFO or agricultural project it is necessary for members representing the chapter to be well informed about the laws in effect in the State of Wisconsin that govern both the siting and the operation of agricultural operations. In addition to state regulations chapters will need to be aware that there may very well be county regulations in place in addition to the state statutes. Take the time to become familiar with the following sections of Wisconsin laws.

CAFO WPDES permits are issued under the authority of Chapter 283, Wisconsin Statutes. The two primary Wisconsin Administrative Rules governing Runoff and Animal Feeding Operations are NR 151 (runoff) and NR 243 (animal feeding operations). In addition to NR 151 and NR 243, NR 150, also known as the Wisconsin Environmental Policy Act applies as well. The purpose of NR 150 is to assure that the department decision makers, other decision makers, and the interested public have information to be able to fully consider the short- and long-term effects of department policies, plans, programs, and

actions on the quality of the human environment. This is the administrative code that can require submittal of an Environmental Impact Statement from CAFO applicants in a limited number of instances.

Anyone wanting to read the statutes and regulations to become more familiar with them can find them by going to the following links:

NR 150: https://docs.legis.wisconsin.gov/code/admin_code/nr/100/150/1?up=1

NR 151: https://docs.legis.wisconsin.gov/code/admin_code/nr/100/151/1?up=1

NR 243: https://docs.legis.wisconsin.gov/code/admin_code/nr/200/243

Concentrated Animal Feeding Operations (CAFOs) and the Law

Introduction

This section gives a brief overview of laws related to the siting and operation of large livestock feeding operations in Wisconsin. For a more detailed understanding of these laws and their administration, the reader may wish to go to the Department of Natural Resources (DNR) and the Department of Agriculture, Trade and Consumer Protection (DATCP) websites.

The United States Environmental Protection Agency (USEPA), DNR, DATCP, and political subdivisions (a city, village, town, or county) all play a role in regulating CAFOs. In addition to these laws specifically related to CAFOs, there are general laws relating to water quality that CAFOs need to follow. These include: shoreland zoning, floodplain zoning, state nonpoint pollution standards, farm runoff standards, manure storage structures standards, wetlands regulations, nutrient management plans when spreading manure or artificial fertilizer, construction site erosion control, DNR Chapter 30 permits related to navigable waterways, stormwater management, well setbacks from livestock structures and regulation of high capacity wells.

How the USEPA and DNR implement the Clean Water Act as it relates to CAFOs

USEPA administers the federal Clean Water Act (1972), which regulates point sources that discharge pollutants to waters of the United States. The core of this regulation is a permitting system: The National Pollutant Discharge Elimination System (NPDES) (<https://www.epa.gov/NPDES>). The Act states livestock operations that meet the definition of a CAFO are “point sources” and must have this water quality permit.

Does USEPA issue these water quality permits in Wisconsin? While it could, it has never done so. Instead, the authority to issue the permits has been delegated to the DNR where the equivalent permits (named Wisconsin Pollutant Discharge Elimination System (WPDES)) are issued and enforced by DNR. The approved administrative rules related to this permitting are generally a mirror of the federal rules and are at Wis. Admin. Code Ch. NR 243. In addition, farm runoff standards are found at Wis. Admin. Code Ch. NR 151.

What role does USEPA play in regulating Wisconsin CAFOs? USEPA helps fund and oversees the work of DNR to ensure the Clean Water Act is properly administered and enforced. USEPA retains the authority to apply the federal rules, conduct inspections of CAFOs, and take enforcement actions against a non-complying CAFO. This enforcement work may come at the request of DNR or USEPA may act if it concludes DNR is not properly administering the program. USEPA manages its work in Wisconsin from Chicago, IL (Region 5).

The core objective of the DNR regulation of CAFOs under the Clean Water Act is to protect water quality by reducing or preventing manure or process wastewater pollution of public waters from land applications and production site wastes. See (<http://dnr.wisconsin.gov/topic/CAFO>) and (<http://livestocksiting.wi.gov>). The permit application process provides opportunity for interested parties to submit comments and participate in public hearings.

Livestock Operations Subject to Clean Water Act CAFO Regulations

All CAFO operations of 1000 or more “animal units” must have a WPDES permit. Counting animal units is not as simple as counting the number of animals. Wisconsin can utilize two different methods for calculating animal units. The first mirrors the federal method for “non-mixed animal units.” This method only considers animal units from the highest total of any particular animal type. Wisconsin also developed the “mixed animal unit” method, where animal units for different animal types are summed together. Each method has some slightly different animal unit ratios, for instance, a milking cow equals 1.43 using the non-mixed method and 1.4 using the mixed method. Wisconsin considers the highest total from either method to represent the total animal unit count for the operation. Animal unit ratios can be found on the [3400-025a form](#). For example, one milking cow equals 1.4 animal units so 700 hundred milking cows equal about 1000 animal units. A beef animal over 600 lbs. equals 1.0 animal unit. A pig over 55 lbs. equals 0.4 animal units and an egg laying chicken equals 0.01 animal units with about 30,000 layers reaching 1000 units. So, whether you are subject to CAFO laws depends on whether you have met the threshold number of animal units. Federal, state, and local governments all use the concept of animal units and they are counted in a similar manner.

DATCP, Local Government and Siting CAFOs

In addition to regulation under the Clean Water Act, CAFOs may also be subject to local government regulation relating to siting new or expanding CAFOs. In 2004 the Wisconsin legislature addressed the issue of local authority to regulate CAFOs (Wisconsin Act 235, Wis. Stat. sec. 93.90). The law gave authority to local governments to regulate siting and operations of CAFOs but only if local government adopted a licensing or zoning ordinance which applies uniform regulations established by DATCP. The resulting administrative rules are at Wis. Admin. Code. ATCP Ch. 51. They set out administrative procedures and establish statewide standards that applicants must satisfy before receiving local approval to site the CAFO.

Importantly, these regulations create a regulatory threshold of 500 animal units rather than the 1000 under the Clean Water Act. Therefore, there may be local government regulation of these smaller CAFOs

that are not regulated as CAFOs under the Clean Water Act and do not need a WPDES permit issued by DNR.

Three of the siting standards relate to water quality: 1) manure storage, process wastewater, and leachate management 2) nutrient management and 3) runoff management. Regulation of these areas are substantially the same as the requirements in a WPDES permit. By adopting the required siting ordinance, a local government can, in effect, enforce these federal/state water quality standards.

Caution: Note that this local control of siting a new or expanded CAFO and the ability of local government to enforce the siting standards only applies if the local government has adopted an ordinance that essentially adopts the rules in ATCP Ch. 51. If no local government in the location a CAFO is proposed has passed the required ordinance, local governments have little authority to control the siting provided the site is in an area zoned for agriculture. Therefore, those looking to participate in the siting process at the local level need to first determine whether a local unit of government has adopted the necessary siting ordinance. The DATCP website related to livestock siting provides a map of those counties and other local governments that have the required ordinance. Remember, the DATCP does not enforce these standards and they only are in force in areas where a local government unit has adopted them.

A good way to better understand the local siting process is to go to the [DATCP website](#) and then go to [livestock siting](#). Also, to understand what is required of an applicant, go to [ATCP Ch. 51, Appendix A](#). It contains the application form with instructions that a livestock operator needs to complete to obtain local approval. If the applicant satisfies the requirements in the application and the application is credible and internally consistent, the local government has little discretion to deny the application. Also, the local government may not place conditions on the approval that go beyond reasonable monitoring of the operation to ensure compliance with the state standards. The applicant may voluntarily agree to additional conditions, but they are not likely to be enforceable.

For those citizens who wish to participate in the siting process at the local level, there is public notice and an opportunity to participate. After a local government decision on the application is made, only local aggrieved parties (neighbors, the applicant, or the local government) may appeal the decision to the [Livestock Facility Siting Review Board](#). The Board is administratively attached to DATCP but is independent of it. DATCP cannot override a decision of the Board.

The Board limits its review to the record at the local level and generally does not allow outside interest groups to intervene in the case. The Board meets and decides the case in a public hearing. All past case decisions are at the DATCP website under livestock siting. Decisions of the Board may be appealed to Circuit Court.

Getting to Know Your County Regional Specialist

It is also a strong recommendation from this committee that each chapter that has a concern about agricultural operations in their assigned area should develop communication between the chapter and the DNR Regional Specialist. All counties in Wisconsin are covered by one of the 15 Regional Specialists;

each of whom is responsible for about 22 CAFOs. They are the DNR position that primarily deals with large agricultural operations within their assigned counties. Through them you can sign up to be notified about new permit requests or changes to existing permits. You can get questions answered. And they would be one of the primary contacts in the event that problems develop with any particular CAFO operation. To get contact information about the Regional Specialist for your area you can go to the CAFO Contacts Page (see <https://dnr.wisconsin.gov/topic/CAFO/contacts.html>) and click on the county of interest within the blue map of Wisconsin. The specific County CAFO Specialist for that county will be the first contact listed.

[An Approach to Dealing with a Proposed CAFO](#)

It is very difficult to have a CAFO permit denied in Wisconsin. If a permit application is properly completed and meets all requirements DNR is required to issue a permit. In this section we will offer an alternative approach for chapters to consider when dealing with a proposed CAFO. Earlier we discussed developing communications with your CAFO Regional Specialist. If you have developed that line of communication, you can receive notification about CAFO permit applications at the earliest stages, which would be necessary to implement the strategy that follows.

When evaluating the potential threat to cold-water resources presented by a proposed CAFO, chapters should focus on clearly identifying whether there is a substantial threat to a particular stream or streams. Specifically, how does the proposed facility threaten a cold-water resource? Does the threat come from the proposed manure storage facility? Is there a specific runoff concern? Does the nutrient management plan, which delineates all the fields where manure will be land spread, threaten a cold-water resource? Much of the information to answer these questions can be found by examining the contents of the application for a WPDES permit or for local siting approval. Permit application materials for CAFOs can be found at the following link: <https://dnr.wisconsin.gov/permits/water>. Once at the page, click on "Track" and then search for a particular CAFO facility. There would be at least three document sets associated with each CAFO application. One for the application forms and maps, another for the 5-year nutrient management plan, and a third for the liquid manure storage capacity calculations. There may be additional document sets for each engineering evaluation and/or plans and specifications submittal. The public record related to the application may contain additional relevant information. On site observation, if possible, can also be useful. There have been multiple ugly scenes in Wisconsin between CAFO operators and citizens involving roadside photography, water sample collection, trespass, etc. Please use discretion and best judgment.

A Chapter will be most effective if it clearly identifies and substantiates its concerns. Merely objecting because there is a trout stream in the area is unlikely to affect the outcome. Establishing a stable set of fact-based objections early in the process will increase Chapter credibility. Mere opposition for continually evolving or vague reasons could discredit the Chapter.

If a substantial risk to cold water resources is identified, the Chapter may wish to determine whether there is a way the threat could be mitigated or eliminated short of denial of the application. For example, if the concern is a particular pathway to a trout stream should there be a manure storage facility discharge, perhaps the pathway could be redirected away from the stream or other risk reducing measures could be taken. If the Chapter has opened communications with the CAFO applicant, direct discussions with the applicant could lead to measures by the applicant to resolve the Chapter concerns. A possible solution to the problem could include the applicant applying to the Natural Resources Conservation Service (NRCS) of the USDA for a cost sharing conservation grant.

By looking for practical solutions to the environmental concerns raised by a proposed CAFO, the Chapter may be able to effectively protect the threatened cold-water resource.

Enforcement:

There are two key parts of the CAFO approval and operating process. While getting informed about and attempting to influence the permitting process for CAFO's is critical, it is also equally important to monitor CAFO's compliance with the terms of any permit that is issued. This section deals with the second part of the process- enforcement.

All permitted CAFOs that are approved are subject to terms and conditions. Once a permit is issued for a CAFO, then interested parties in the Chapter should review the permit and see what actions the operator is required to take under the permit(s), including any conditional use permits issued by local governments. Interested parties will then be informed on what is required of the CAFO operator.

Should any person have reason to believe a violation of the terms of the permit(s) related to water quality or other laws related to protection of surface or ground waters may have occurred, one of their first actions should be to contact their local DNR person (see included list of regional contacts). Another action would be to report the suspected violation on the DNR website <https://dnrx.wisconsin.gov/rav/>. If the violation you are reporting requires an immediate response, a third action would be to call the DNR Tip Hotline at 1-(800)-TIP-WDNR (1-800-847-9367) to speak with a Law Enforcement dispatcher. DNR staff are available to receive your report from 7am to 10pm daily. *If an actual spill is witnessed*, then a call to the spill's hotline should be the first action taken (1-800-943-0003). Once you make the spill report to the hotline, an email will be generated to notify a multitude of staff including the CAFO specialist, law enforcement, spills team, and water quality biologists.

Enforcement by local governments can only occur if the local government has adopted a separate ordinance that allows them to have some form of regulation over the CAFO. However, few counties and almost no town or village governments have a program or the staff to monitor CAFOs. Therefore, enforcement almost always falls to the Wisconsin DNR and Department of Justice. However, if the CAFO is in a county that has adopted a CAFO related ordinance, then the suspected violation should be reported to the appropriate county staff.

Forming Partnerships

A common mistake made by TU chapters is the feeling that they are in an opposition alone. That is usually not the case. The reality is that, usually, there are several other groups and individuals from the local community who are also concerned about a project. By seeking out others with a common goal and forming partnerships more people are engaged to share the workload, various forms of expertise are brought together, bonds are created that may last for some time, and opposition takes on the appearance of being more widespread and coordinated. Your chapter might just be surprised at how many others are in your community who oppose any given threat to community water.

This can be a critical step in mounting opposition. Why try to go it alone when there is the possibility of putting together large partnerships?

Guidance from National TU that Chapters and Councils Need to Follow When Engaging on Issues and Forming Partnerships

While forming partnerships is certainly the preferred way to undertake resource issues there are some issues chapters need to be aware of when joining together with other groups.

Because of TU's status as a 501C3 charitable organization chapters should not be donating money to organizations that are not also 501C3 designated. To work around that issue often partnerships will come together and form a new umbrella organization which is a 501C3 and to which anyone is legally able to contribute. Of course, chapter members may make contributions to any organization if they are doing so as individuals.

Another issue chapters and councils need to be aware of is the matter of 501C3 organizations and political activity. Chapters need to always keep in mind that our 501C3 designation strictly prohibits supporting individual candidates.

The final area in which chapters need to operate carefully is in the area of using attorneys and filing suits. National Trout Unlimited currently has a policy that any chapter wanting to hire an attorney to undertake a legal action must receive prior approval from the National organization.

Emphasizing Impacts a CAFO Could Have on Local Health and Safety

CAFOs have the potential to negatively affect human health through air and water pollution as well as the spread of diseases. The Pew Commission on Industrial Farm Animal Production (PCIFAP) recognizes the effects of human health as unacceptable and states that their negative effects on human health cannot be ignored. They and other organizations recommend that significant protective actions must be taken to limit the human health impacts associated with industrial animal agriculture. In Iowa, children in a school near a CAFO had double the baseline rate of asthma (Sigurdarson and Klein 2006) and 44% of children raised on swine farms and nearly 56% of those that grew up on swine that fed antibiotics

were diagnosed with childhood asthma – a more than four-fold increase (Merchant *et al.* 2005). Extremely small particles in the air (PM_{2.5}) are responsible for 17,900 deaths in the United States each year, 15,900 are related to agriculture and 80% of those are linked to animal agriculture (Domingo *et al.* 2021). Air pollution associated with industrial agriculture is also associated with mental health issues and living near industrial farms is associated with negative quality of life outcomes (Donham *et al.* 2007).

The United States Center for Disease Control and Prevention (CDC) states that the most pressing concern from CAFOs are associated with the manure they produce, however, the most potentially significant human health impact is from epizootic diseases such as influenza virus mutations that “jump” from farm animals to humans. Swine and poultry CAFOs are particularly associated with the potential for novel influenza virus mutations that can spread to human populations (Moore *et al.* 2021). Additionally, industrial agriculture is associated with antibiotic resistance which poses a significant threat to human health (Gilchrest *et al.* 2007). Lastly, contamination of ground and surface waters pose significant environmental and human health impacts from excessive nutrients, microbial pathogens, and pharmaceuticals (Burkholder *et al.* 2007).

Wisconsin does not have the regulations and infrastructure in place to reduce the negative human health outcomes associated with industrial agriculture (Schultz and Jacobs 2017). The rapid expansion of CAFOs in the state has far outpaced the state’s response – such as oversight, health services, and siting regulations. For example, the Conference on Environmental Health Impacts of Concentrated Animal Feeding Operations (Gilchrest *et al.* 2007) recommended a spatial separation of swine and poultry operations to minimize the risk of epizootic outbreaks – 14 years later, no such laws exist in Wisconsin to minimize human health impacts. Likewise, Wisconsin has no regulations on CAFO density despite the evidence of greater harm to human and environmental health as CAFO density increases (Donham *et al.* 2007, Gilchrest *et al.* 2007, Raff and Meyer 2019, Moore *et al.* 2021). Communication barriers are cited as an important reason for the failure to protect human health from the impacts of CAFOs (Donham *et al.* 2007, Rabinowitz and Conti 2013, Moore *et al.* 2021) despite calls for improvement for decades. Recent studies in Wisconsin have shown the state has failed to protect human and environmental health associated with CAFOs as evidenced by the Southwest Wisconsin Groundwater and Geology (SWIGG) and studies in Kewaunee County (e.g. Muldoon *et al.* 2018). The political process has failed to protect human and environmental health despite warnings now dating back a decade and a half (Donham *et al.* 2007). Until the state prioritizes the human and environmental health effects of industrial agriculture, it is expected that environmental and human health outcomes will continue to be put at an increasing risk.

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Contributors: During 2020 the Wisconsin State Council of Trout Unlimited received questions from local chapters about what could be done to deal with water threats from the rapidly expanding number of CAFOs in Wisconsin. A committee was put together consisting of Trout Unlimited members from different areas of the state. This paper represents the work of that committee. Trout Unlimited members contributing their efforts to the committee include:

Linn Beck – Committee Chair Jason Freund Michael Williamson Tim Fraley

Bill Heth Bob Selk Kim McCarthy