DRAFT FOR DISCUSSION ONLY - June 16, 2025

TOWN OF ISABELLE
PIERCE COUNTY, WISCONSIN

ORDINANCE NO. 25-01
CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFO) ORDINANCE

WHEREAS, the Town Board of the Town of Isabelle established the Town of Isabelle Operations Ordinance Committee (Committee) to complete a review of the possible impacts of permit issuance under the CAFO Ordinance;

WHEREAS, the Town devoted a substantial amount of time and expertise in reviewing the potential impacts of large-scale livestock farming with respect to the particular natural resources of the Town of Isabelle;

WHEREAS, the Committee reviewed the scientific literature and formulated recommendations to the Town of Isabelle Town Board for ordinance provisions to address the concerns raised by CAFOs;

NOW, THEREFORE, the Town Board of the Town of Isabelle makes the following Findings of Fact and declarations in support of this Ordinance:

Local Findings

1. The Town of Isabelle Comprehensive Plan was adopted in 2009. The Plan acknowledges the importance of evaluating environmental impacts and the effects one land use may have on adjacent properties or an area as a whole. It attempts to forestall potential conflicts arising from incompatible or inappropriate land use. Goals are to maintain quality of life, safety and protect the natural resource base. Ordinances are recommended to be submitted by an applicant and approved by the Town Board. These should include but not limited to: Public utilities needed, a site plan, a plan for storage and disposal of solid waste and hazardous materials, water usage in terms of high capacity wells. In June of 2001 all Wisconsin Counties were obligated to adopt an ordinance for nonmetallic mine reclamation. The purpose of the ordinance is to address environmental issues such as surface and groundwater contamination. There was sand mining in areas of Isabelle. Many areas were fracked and therefore cracked in the substructure rock formations allowing contaminated water to pollute the groundwater and wells. This vulnerability remains. (Town of Isabelle's Comprehensive Plan)

2. The Town is located in Pierce County. The county's Waste Storage Ordinance was updated in 2023. It addresses concerns about the impact of livestock waste on the health of residents, livestock, animals, plants and to the property tax base. The ordinance also recognizes that improper management of waste storage facilities and use of waste may cause pollution to ground and surface waters. Anyone who constructs or enlarges a waste storage facility is required to be permitted. Waste is defined as manure, milking center waste and other organic waste. Manure is defined as livestock feces and urine as well as other materials such as bedding, water, soil, hair, feathers and debris. Erosion, tillage, setback and phosphorus standards must be met. New or altered facilities must be designed, constructed and maintained to minimize the risk of structural failure and to minimize the potential for waste to discharge to surface water or groundwater. Waste storage facilities may not lack structural

integrity or have significant leakage. Liquid waste storage capacity shall be a minimum of 180 days for reasonably foreseeable storage needs based on the operator's waste and nutrient management strategy. The Certificate of Use requires annual reports on Nutrient Management Plans requires landowner agreements for land not owned by the applicant, compliance with standards and 180 days of liquid waste proof storage capacity. (Pierce County Waste Storage Ordinance 23-02)

3. The Town conducted a comprehensive literature review which provides thorough documentation of the risks associated with CAFOs included as Appendix A. Maps of data specific to the Town of Isabelle are included in Appendix B.

4. The Town recognizes the importance of protecting water and air quality, and that proper management, including proper management of nutrients from livestock operations, is essential to the protection of groundwater, surface water and air quality, public health, domestic and wild animal health, property values, safety and welfare.

5. The 2024 Wisconsin Ground Water Coordinating Council reports that nutrient application from fertilizers and manure on agricultural fields accounts for 90 percent of nitrate in groundwater. Models estimate that 13.5% of Pierce County wells have nitrates levels over the 10 mg/L standard. Nitrate contamination continues to rise. Though research is ongoing, the Wisconsin Department of Health Services concludes that high levels of nitrate in drinking water can pose some serious public health risks, including:
    - Infants below the age of 6 months can become seriously ill with a condition called methemoglobenemia or “blue-baby syndrome.”
    - Birth defects affecting how the brain and spinal cord form that can occur early in pregnancy before a person even knows that they are pregnant.
    - Long term consumption of water high in nitrates may increase the risk of thyroid disease and bladder and colon cancer.

(2024 WI Ground Water) (WI DHS)

6. Like all of Pierce County, the Town of Isabelle is ranked high by WDNR for groundwater contamination potential. Therefore the protection of this resource is of utmost importance to all who live and work here. (Town of Isabelle Comprehensive Plan) (2024 WI Ground Water)

7. All of the Town's 263 residents rely on groundwater for drinking, cooking, bathing, irrigating and watering livestock. Excess nitrates and other contaminants potentially found in well water present significant health risk to the Town of Isabelle residents. (Town of Isabelle Comprehensive Plan)

8. At this time, there is no systematic or ongoing testing of private wells done by the State of Wisconsin or Pierce County. However, a 2024 review of the Wisconsin Well Water Quality Viewer, maintained by UW-Sevens Point, found 52 well tests from the Town of Isabelle. Of these fifty-two, 9 wells (17%) tested above the national safe drinking water limit for nitrates of 10 mg/L.

   Pierce County Land Conservation department, Ad Hoc Groundwater Committee and the Finance Committee have proposed that the county fund a 5-year, 300-well testing program through UW-Stevens Point. That program was approved in 2025. (Pierce County Groundwater Committee) (UWSP-Well Water)

9. The Town has a vulnerable landscape with large areas susceptible to groundwater pollution. Five factors contribute to groundwater susceptibility, including: type of soil, bedrock and materials between soil and bedrock; depth to bedrock; and depth to groundwater table. Data from the Wisconsin Department of Natural Resources (WDNR) Groundwater Susceptibility Model were divided into five evenly spread categories ranging from high to low. Of the Town's total acres:
    - 43% are moderately high to highly susceptible
    - 24% are moderately susceptible
    - 33% are moderately low susceptibility
    - 0% are least susceptible

    (See Appendix B. Map 1.)

10. For approximately 45% of the Town of Isabelle's acres, groundwater is at depths greater than 50 feet below the land surface. 13% of acres lie from 20 feet to 50 feet and 42% are less than 20 feet.

Depth to Groundwater	
1-20ft	42%
20ft - 50ft	13%
Over 50ft	45%

    (See Appendix B. Map 2.)

11. Data for the Town of Isabelle extracted from WiscLand 2 show the approximate land cover as follows:

Land Cover - WiscLand (NOT land use)	**Percent**
Agriculture	17%
Barren	1%
Forest	24%
Grassland	9%
Open Water	38%
Urban/Developed	3%
Wetland	9%

    (See Appendix B. Map 3.)

12. Of the Town of Isabelle's total acres the Natural Resources Conservation Service (NRCS) Web Soil Survey for Fragile Soil Index shows that:
    - 7% Fragile
    - 44% Moderately Fragile
    - 9% Slightly Fragile
    - 0% Not Fragile
    - 40% None or Not Rated

    (See Appendix B. Map 4.)

13. Of the Town of Isabelle's total acres the NRCS Web Soil Survey shows the limitations rating for Manure and Food-Processing Waste as follows:
    - 41% Very Limited – Limitations cannot generally be overcome. Poor performance and high maintenance can be expected.
    - 20% Somewhat Limited –Limitations can be overcome or minimized by special planning, design, or installation.
    - 39% Not Limited or Not Rated

    (See Appendix B. Map 5.)

14. The Town of Isabelle has 3 main water features, Isabelle Creek, the Rush River watershed, and the Mississippi River and its backwaters. The Mississippi River as it passes through Lake Pepin is listed as impaired due to phosphorus pollution. Isabelle Creek has a high rate of sediment running into the Mississippi river. These issues stem from watershed erosion, stream bank erosion and feedlot runoff. Water quality is dependent on preventing runoff of soil, chemical pollutants and animal waste into rivers and lakes. (Town of Isabelle's Comp Plan) (WDNR Impaired Water).

15. The Town lies in the driftless ecosystem of the Lake Pepin/Rush River and smaller tributaries of the basin of the Mississippi River. Under the U.S. Clean Water Act, Lake Pepin is classified as impaired because of phosphorus pollution. Lake Pepin forms the boundary between the states of Minnesota and Wisconsin. Minnesota Pollution Control Agency's 2021 Total Maximum Daily Load (TMDL) report for Lake Pepin was approved by the U.S. Environmental Protection Agency (U.S. EPA). This TMDL characterizes the watershed, models phosphorus loading and sets allocations for meeting phosphorus water quality criteria. However, approval of this TMDL was only for the Minnesota side of the watershed. Wisconsin's portion of the Lake Pepin watershed was included in the TMDL modeling effort; however, the allocations were specifically excluded from U.S. EPA's approval. Wisconsin DNR is developing a TMDL to cover the Wisconsin potion of the Lake Pepin watershed. (EPA 2021 Decision Document) (MPCA Lake Pepin TMDL) (WDNR Lake Pepin)

16. The Ellsworth Fire Services Association is funded by and serves the Villages of Bay City and Ellsworth along with the Towns of Ellsworth, El Paso, Hartland, Isabelle, Martell, Salem, Trimbelle and Trenton. It also contracts for fire service with the Village of Maiden Rock and the Town of Diamond Bluff. The Ellsworth Fire Department has 2 stations and is operated by 55 volunteer Firefighters, one Chief, two Deputy Chiefs and six Assistant Chiefs. Some firefighters have training specific to agriculture. The department has the following equipment:
    - 4 - engines
    - 1 - ladder truck
    - 4 - 2,000-gallon water tender trucks
    - 1 - rescue squad
    - 3 - brush trucks
    - 1 - command vehicle
    - 1 -utility truck
    - 1 - utility task vehicle
    - 1 - portable drifting trailer

17. As agricultural operations, CAFOs are not required to submit engineering, plumbing or electrical plans. Potential concerns of fire fighters include, but are not limited to:
    - Where to contain thousands of animals evacuated from a burning building
    - How to contain firefighting water runoff
    - Large scale of the buildings in proportion to local firefighting equipment
    - Location of fire doors, hook-ups for access to high capacity wells, gas lines
    - Availability of generators in case of power outage
    - Need for rally point for all farm workers to ensure all are accounted for in event of fire
    - Need for pre-incident meeting and on-site staff emergency training

    (Pierce County Land Use Permit)

18. Local fire departments work in partnership with the Chippewa Valley Technical College (CVTC) on training programs. CVTC does not have firefighting training specific to CAFOs. The National Fire Protection Agency (NFPA) publishes a range of standards and codes. Their NFPA 150: Fire and Life Safety in Animal Housing Facilities Code does not specifically address CAFOs or the anaerobic digesters that many CAFOs are now adding. (NFPA Hawes email) (NFPA 150) (Chippewa Valley Schwartz email)

19. The Town of Isabelle's total 2023 tax assessed property value is approximately $44.49 million. Property values could be affected by CAFOs depending on where they are located:
    - Property values within 1/2 mile of 8 selected sites range in value from $1.5 million to $8.3 million

    (See Appendix B. Map 6)

Condition 1 Findings - Operations, Public Health

1. On November 2, 2019, the American Public Health Association enacted a policy statement advising federal, state and local governments and public health agencies to impose a moratorium on all new and expanding CAFOs. Under this recommendation, the halt would be in place until additional scientific data has been collected and public health concerns associated with CAFOs are addressed. (APHA 2019)

2. CAFOs confine large numbers of animals of the same species—such as beef and dairy cattle, swine, broilers (poultry raised for meat consumption) and laying hens—on a small area of land. The scale, density, and practices associated with these operations present a range of public health and ecological hazards, including large volumes of untreated animal waste, the release of environmental contaminants to air, water, and soil, and the generation and spread of antibiotic-resistant pathogens. (Johns Hopkins 2008) (USEPA 2004)

3. There is a significant body of evidence which shows CAFOs are directly associated with occupational and community health risks, as well as the social and economic decline of rural communities. Current regulatory structures make it difficult to adequately address these concerns. (Donham 2007) (Fry 2014) (Foltz 2002) (Graham 2008)

4. Researchers at the Johns Hopkins Center for a Livable Future found that the primary human health concerns related to industrial food animal production, or CAFOs, include: infections resulting from transmission of harmful microorganisms from animal operations to nearby residents; respiratory effects from increased exposure to air pollution from animal operations;

and multiple negative health impacts due to increased exposure to ground and/or surface waters that can be contaminated by manure from animal operations. (Johns Hopkins 2008)

5. A 2009 American Academy of Pediatrics policy statement recommends that pediatricians ask families if they obtain their water from private wells and encourage parents to test and maintain their wells at least annually for coliform bacteria and nitrates. Tests of rural Wisconsin wells found that 47% of wells had an exceedance of one or more health-based water quality standards. Surveys from other states report similar findings. (AAP 2009) (Knobeloch 2013) (MacDonald 2017)

6. The National Association of Local Boards of Health published a 2010 report identifying the following Environmental Health Effects of CAFOs:
    - Groundwater
    - Surface Water
    - Air Quality
    - Climate Change
    - Odors
    - Insect Vectors
    - Pathogens
    - Antibiotics
    - Property Values

Pollutants commonly found in air surrounding CAFOs include the following:

CAFO Emissions	Source	Traits	Health Risks
Ammonia	Formed when microbes decompose undigested organic nitrogen compounds in manure	Colorless, sharp pungent odor	Respiratory irritant, chemical burns to the respiratory tract, skin, and eyes, severe cough, chronic lung disease
Hydrogen Sulfide	Anaerobic bacterial decomposition of protein and other sulfur containing organic matter	Odor of rotten eggs	Inflammation of the moist membranes of eye and respiratory tract, olfactory neuron loss, death
Methane	Microbial degradation of organic matter under anaerobic conditions	Colorless, odorless, highly flammable	No health risks. Is a greenhouse gas and contributes to climate change.
Particulate Matter	Feed, bedding materials, dry manure, unpaved soil surfaces, animal dander, poultry feathers	Comprised of fecal matter, feed materials, pollen, bacteria, fungi, skin cells, silicates	Chronic bronchitis chronic respiratory symptoms, declines in lung function, organic dust toxic syndrome

Pathogens found in animal manure that have been determined to cause illness in humans include the following:

Pathogen	Disease	Symptoms
Bacillus anthracis	Anthrax	Skin sores, headache, fever, chills, nausea, vomiting
Escherichia coli	Colibacilosis, Coliform mastitis-metris	Diarrhea, abdominal gas
Leptospira pomona	Leptospirosis	Abdominal pain, muscle pain, vomiting, fever
Listeria monocytogenes	Listerosis	Fever fatigue, nausea, vomiting, diarrhea
Salmonella species	Salmonellosis	Abdominal pain, diarrhea, nausea, chills, fever, headache
Clostirdum tetani	Tetanus	Violent muscle spasms, lockjaw, difficulty breathing
Histoplasma capsulatum	Histoplasmosis	Fever, chills, muscle ache, cough, rash, joint pain and stiffness
Microsporum and Trichophyton	Ringworm	Itching, rash
Giardia lamblia	Giardiasis	Diarrhea, abdominal pain, abdominal gas, nausea, vomiting, fever
Cryptosporidium species	Cryptosporidosis	Diarrhea, dehydration, weakness, abdominal cramping

(Hribar 2010)

7. The impact on CAFOs of human pandemics such as Covid-19 would represent a risk for Town of Isabelle residents. Most CAFO operators contract with processing plants to deliver milk, beef, pork or chicken. Wisconsin dairies were forced to dump milk as schools, restaurants, hotels and other business buyers closed down. Processors across the nation and Wisconsin saw Covid-19 infection rates among workers as high as 54% with estimates of 59,000 total infections and 269 deaths. These high rates forced more than 100 plants to close, according to the Centers for Disease Control. This caused problems for swine CAFOs which cannot ship animals over 280 pounds to slaughter. The closure of so many processors meant that CAFOs had nowhere to ship their animals. National Pork Producers Council president, Howard Roth said on April 29, 2020 that "millions of pigs can't enter the food chain" and will have to be killed and disposed of. The JBS plant in Worthington, MN reopened to euthanize, not process, up to 13,000 hogs a day saying that the "carcasses will be rendered, sent to landfills, composted or buried." Smithfield's Sioux Falls, SD plant shut down for four weeks. Another shutdown caused by human pandemics would leave the Town of Isabelle vulnerable when CAFOs would be forced to kill and dispose of tens of thousands of animals. (Ag Week 2020) (Dyal 2020) (Milligan 2021) (Barrett) (National Pork 2020) (USEPA) (US House

2021)

8. Highly infectious animal viruses such as African Swine Fever (ASF) would be a high risk for Town of Isabelle. Millions of hogs have died or been killed globally due to ASF, commonly called hog Ebola. The disease is 100% fatal and the pathogen is especially hardy. Asian countries such as China, Vietnam and Korea have been hit hard. Germany is building a wall along its Polish front to stop a potential ASF invasion. On July 28, 2021, the US Department of Agriculture announced the first documentation of ASF in the Western Hemisphere's Dominican Republic. Veterinary health experts are concerned that ASF will invade the United States, spread rapidly among large concentrated swine facilities, and have a devastating negative effect on the swine industry. (USDA Sep 2021) (UMN Sep 2021)

9. While researchers believe ASF cannot be transmitted from pigs to humans, many public health issues have been raised, such as how to:
    - Euthanize tens of thousands of animals.
    - Ensure capacity to dispose of tens of thousands of carcasses through composting, incineration or landfilling.
    - Dispose of leachate from carcasses.
    - Disinfect infected trucks and facility materials such as metal cages, tractors and feed.
    - Treat and dispose of water used for disinfection.

    (USDA August 2019) (USDA ASF)

10. Large outbreaks of the avian flu (H5N1) virus in poultry and dairy operations also pose a potential risk for the Town of Isabelle. The United States Center for Disease Control (CDC) reports the first H5N1 outbreak was detected in February 2022 at a commercial poultry operation in Indiana. As of late September 2024 more than 100 million poultry in 48 states, including Wisconsin, have been affected. Egg, turkey and dairy groups have petitioned USDA to approve a vaccine but it can pose barriers to global exports. Many countries ban imports of vaccinated poultry because of concerns that the vaccine could mask the presence of the virus.

    A multistate outbreak of H5N1 in dairy cows was first reported on March 25, 2024. As of early February 2025, H5N1 cases in 957 dairy herds in 16 states, not including Wisconsin, have been reported.

    On April 1, 2024, CDC confirmed what is thought to be the first person infected with exposure to dairy cows in Texas. That was the first documented instance of a likely mammal to human spread of the virus. CDC continues to report additional cases of people who had exposure to infected dairy cows. The first suspected human-to-human cases were reported in September 2024. As of early February 2025, there were 67 confirmed human cases and one confirmed human death. That latest human case counts are available at CDC Mammals.

    Historically, this avian flu virus has caused up to 30% fatality in humans. Some experts deem the risk level for the general U.S. population to be low. Others feel that the dairy industry has needlessly constrained efforts to stop the virus from mutating by refusing to test herds and workers or require protective equipment for workers. The USDA is also viewed as being unable to address H5N1 in a vigorous way. A Texas study analyzed samples from three wastewater plants near known dairy outbreaks and found high levels of a marker for H5N1. They think the virus likely came from effluents from processing plants for milk or beef.

International development and stockpiling of human vaccine is needed. US Health and Human Services made grants of $176 and $590 million in 2024 and 2025 to Moderna for development of mRNA vaccines. A virus strain found in dairy cows in the U.S. in 2024 may only need one mutation for it to be able to spread among humans. Spillover of animal viruses into human populations stem ultimately from our ways of life and how they shape the human–animal interface. (CDC Mammals) (Cohen) (Douglas) (HHS 2025) (Lancet) (Moderna) (Ting-Hui) (UMN Osterholm) (Physician's Weekly)

11. Fueled by financial giants such as BlackRock Real Assets, CAFO developers are now working to integrate their facilities into the fossil fuel industry's infrastructure with biogas from waste digesters and claims of cutting methane pollution from livestock. Federal, state and university programs also promote development of biogas from waste digesters with taxpayer dollars. Under California's Low Carbon Fuel Standard (LCFS) program, companies financially benefit from building digesters and selling renewable natural gas (RNG). The 2022 federal Inflation Reduction Act (IRA) provided over $2 billion for USDA's Rural Energy for America (REAP) program to promote rural or agriculture-related renewable energy. Digesters can qualify for this funding. There are a range of public health and environmental risks associated with digesters:
    - Digesters' byproduct is called digestate. During the digester process, phosphorus, nitrogen nutrients and ammonia, as well as other components, are concentrated into dry and liquid products spread on farm fields.
    - On-farm co-digesters mix animal waste with a number of inputs from outside the farm including food waste (can include industrial food manufacturing waste), yard waste and biosolids, making it difficult to determine digestate nutrient levels.
    - Digesters do not destroy all pathogens and pathogens reproduce over time after digestate is removed from the digester.
    - Digestate's impact on various aspects of soil health is not well understood.
    - Digesters and biogas production produce toxic air pollutants.
    - Expansion of natural gas infrastructure hinders a renewable energy future and efforts to cut carbon emissions through carbon lock-in and stranded assets. Methane reductions are overstated.
    - High technical skills are needed to operate, maintain and repair digesters.

    (Burch) (D'Onofrio) (EPA-AD) (Holly) (Goldstein) (Kemfert) (Levin) (Nag) (Penn State 2023a) (Penn State 2023b) (UC Davis) (Zhang)

Condition 2 Findings - Waste

1. The increase in concentration of livestock and poultry and transition to large, high-density, CAFOs over the last several decades has resulted in the concentration of animal waste and process water over small geographic areas. While it can be a valuable fertilizer, untreated animal waste spread at the magnitude produced by CAFO operations represents a public health and ecological hazard impacting groundwater, surface water, air, property values and a community's quality of life. (USEPA 2013)

2. Untreated wastes from these operations can contaminate ground and surface waters with nitrates, drug residues, parasites, viruses, bacteria and other hazards. Studies demonstrate negative impacts on ecosystems and that humans can be exposed to waterborne contaminants from livestock and poultry operations through the recreational use of contaminated surface water and the ingestion of contaminated drinking water. Exposure to elevated levels of

nitrates in drinking water is associated with adverse health effects, including cancer, birth defects and other reproductive problems, thyroid problems and methemoglobinemia. (Brender 2013) (Burkholder 2007) (Chiu 2007) (Graham 2010) (Gulis 2009) (Manassaram 2006) (Price 2007) (Showers 2008) (Spencer 2004) (USEPA 2012) (Ward 2009)

3. Animal wastes are also rich in organics and high in biochemical oxygen-demanding materials (BOD). For example, treated human sewage contains 20–60 mg BOD/L, raw human sewage contains 300–400 mg BOD/L, and swine waste slurry contains 20,000–30,000 mg BOD/L. (Burkholder)

4. Nutrient runoff is implicated in the growth of harmful algal blooms, which may pose health risks for people who swim or fish in recreational waters, or who consume contaminated fish and shellfish. Exposure to algal toxins has been linked to neurological impairments, liver damage, gastrointestinal illness, severe dermatitis, and other adverse health effects. (Carmichael 2001) (Heisler 2008) (Paerl 2001) (USEPA 2013)

5. Wisconsin CAFOs are required to have a Nutrient Management Plan (NMP) to get a permit under the Clean Water Act from the WDNR. The rules governing how these permits are issued and implemented are contained in NR 243. Wisconsin's agricultural standards and prohibitions for runoff management are contained in NR 151. WDNR released draft revisions to NR 151 in March 2021 but stopped the process in November 2021. (WI NR151 change) (WI NR 151) (WI NR 243)

6. Runoff from land application of waste and leaks from storage facilities at permitted facilities can cause groundwater contamination. That is of particular concern for residents who rely on private wells for drinking water and household use because private wells are not monitored by government agencies to ensure safe levels of pathogens. In Wisconsin, the risk of finding pathogens in wells is seasonably variable but typically highest following spring snowmelt or large rainstorms that generate runoff, since these events can create large pulses of water that move quickly through the ground. (Fox 2016) (Uejio 2014) (Ward 2009)

7. Baseline and ongoing water quality data collection engages the community and protects residents dependent on private wells from potential exposure to contamination. (AAP 2009) (Schmalzried 2010)

8. CAFO operators have a limited number of days when they can do land application based on varying weather, soil types, harvest status, equipment availability and condition of waste. Maps from the Runoff Risk Advisory Forecast and SNAP Plus provide information that, combined with knowledge of field-specific conditions, allow for better decisions on the timing of nutrient applications. (UWI -SNAP) (WI DATCP Runoff)

9. Historically, livestock farmers disposed of manure by applying it to fields as fertilizer. But a CAFO often has more manure than it can use at any one time. Excess is typically stored in lagoons which can contaminate water via seepage, breaches or overflow. During the cold spring of 2013, a Minnesota CAFO discharged an estimated 1 million gallons of animal waste when a lagoon wall ruptured. This type of impact can be decreased with better practices like liners, leak detection systems, berms designed for 100-year events and requirements for engineered enclosed waste storage tanks and treatment facilities. (USEPA 2012)

10. DATCP's 2019 Livestock Facility Siting Technical Expert Committee proposed upgrading

Wisconsin's rules for waste storage, compost, process water, leachate, nutrient management structures. No action has been taken. (WDATCP 2019)

11. For decades CAFOs thought the federal Resource Conservation and Recovery Act (RCRA), applied to garbage landfills. That changed in 2015, when a federal judge in Washington State ruled that RCRA did apply to CAFO waste as part of a lawsuit against the 7,000 head Cow Palace. Settlement required mitigation measures including manure storage liners, monitoring wells, compliance monitoring and a reduction in the use of manure as fertilizer. (Ziemba 2015)

12. CAFOs house animals in highly specialized facilities engineered to capture and store manure. Many operations own less land than needed to safely use the manure to fertilize crops. Some fields can be listed in multiple NMPs or owned by people who have not granted access. WDNR has, but rarely used, authority to require operators to have Manure Easements or Land Application Agreements with owners of land where they plan to spread it. However, under intense local pressure, in 2023 WDNR did require Cumberland LLC in Burnett County to submit written verification of permission from land owners to apply manure and process wastewater to all fields that are not under common ownership. In 2024 the DNR initially required Ridge Breeze Dairy in Pierce County to submit land owner agreements but then went back to only requiring affidavits from land operators/growers. (Bennet) (Drake Law) (Polk County) (Redman) (U of Missouri)

13. Digestate from anaerobic digesters does not act like raw manure, making nutrient management more difficult and potentially increasing agricultural runoff and water pollution. Digesters do not decrease the volume or nutrients of the waste processed. Digestate is still routinely applied to fields that already have high levels of phosphorus, which increases the risk of phosphorus run-off. Much of the nitrogen in livestock waste is converted from its organic form to ammonium. Ammonium can be transformed to either ammonia or nitrate. Nitrate can leach through the soil and eventually reach groundwater. Field application and management to reduce nitrogen losses may be more demanding for digestate than for untreated liquid manure. (Horta) (Penn State 2023a) (Penn State 2023b)

Condition 3 Findings - Animal Population and Depopulation

1. Experts recommend approaching CAFO animal depopulation as a three-step, or 3D, process - Depopulation, Disposal and Disinfectant. All or parts of this process apply under three circumstances:
    - **Standard mortality** - The tonnage of dead animals produced annually by normal operations is substantial. Dairy cow mortality levels in the United States have been increasing over time. Historical data suggest that dairy cow mortality ranged between 1 and 5% of rolling herd inventory per year into the 1970's, while current estimates suggest an average of 8 to 10% mortality in dairy herds across the U.S. with a range between 2 and 15%. As of January 2025, dairy cow mortality/cull rates for herds with supportive treatment of H5N1 were reported to be 2%. Poultry mortality rates require daily management and vary during different parts of life. A poultry mortality rate of 0.1% is generally considered normal; rates over 0.5% are cause for concern. Mortality rates in a typical 5,000 sow farrow-to-finish farming system run up to 10% and will produce over 200,000 pounds of carcasses annually. In many systems losses can be higher. Horizontal integration of livestock agriculture systems can concentrate

mortality losses into smaller and smaller geographic areas.

- **Non-diseased animal catastrophe** - The need for the 3D process can be triggered by catastrophic events such as hurricanes, tornadoes or fire. In addition, CAFOs can be impacted by human pandemics. For example, chicken and hog CAFOs were forced to depopulate in 2020 when high worker Covid-19 infection rates shut down processing plants.
- **Diseased animal catastrophe** - CAFO operators face disease outbreaks such as Foot-and-Mouth in cattle, Avian Influenza (H5N1) and Porcine Reproductive and Respiratory Syndrome (PRRS). Mass poultry die-offs such as in the case of a highly pathogenic avian influenza outbreak are very challenging. Minnesota and Iowa have an especially virulent PRRS mutant affecting both sow and hog finishing barns. USDA earmarked $500 million in September 2021 in an effort to keep the global African Swine Fever outbreak from entering and spreading in the United States.

(APHIS web) (AVMA avian) (Champrix) (Costa 2019) (Morrow 2001) (Narishkin 2020) (NPPC 2020) (Mississippi SU) (NPPC Sep 2021) (Washington SU) (Swinecast 1168) (UGA) (UMN 2014) (USDA Aug 2019) (USDA ASF week) (USEPA carcass)

2. USDA and veterinarian associations recommend that CAFO operators have a Depopulation, Disposal and Disinfectant plan. However, under normal operation, plans are not required. Plans are required if there is a catastrophe covered by a government indemnification program. (USDA ASF week) (USDA Nov 2020)

3. USDA and veterinarian associations recommend euthanasia protocols ranging from electrocution to blunt force, injections, gas or heat. Workers can find the work distressing. (AASV 2016) (USDA avian) (USDA swine)

4. Once the animals are euthanized, workers in protective equipment remove them from the CAFO buildings. Accessing the animals may require opening walls. Temporary storage of the carcasses outside the buildings during the removal is challenging because high levels of body fluids quickly begin to leach out and spill across surfaces. According to the USDA, the average 6,800 hog CAFO will produce more than 27,000 gallons of leachate within days. That is enough to fill a 20' x 40' pool, 4.5 feet deep. (USDA Aug 2019) (USEPA 2018)

5. There are a wide range of disposal methods, including: Composting on-site; Composting off-site; Burial; Burial above ground; Rendering; Incineration; Incineration (energy from waste); Burning (open/air curtain); Burning (mobile gasifier or similar). Each disposal method has costs and benefits depending on the particular CAFO's location, needs and available resources. (Arora 2017) (Costa 2019) (Hseu 2017) (USDA Aug 2019) (USEPA 2018) (USEPA covid) (UMN 2014)

6. Chemical disinfection of all contaminated structures, equipment, vehicles, and surfaces on the premises follows animal euthanasia and disposal. Insecticides and rodenticides are also applied. Facilities may be left fallow with adequate fencing and security against unauthorized entry or wildlife incursions. (UMN Pitkin) (USDA Aug 2019)

7. Closely related but safer surrogate viruses are used to test disinfectant efficacy to prevent accidental infections. However, this is challenging because surrogate viruses do not always act like the actual virus, depending on the chemical. Eliminating residual microbial DNA or RNA, as well as pathogenic microbes which are often the reason for reoccurring disease, can

be especially difficult. (Steinmann) (USDA Aug 2019)

8. In some operations, it may be economically feasible to depopulate and disinfect the facilities and, after a few weeks, repopulate with stock free of target diseases. Producers should thoroughly analyze risk factors for herd re-infection as well as the level of biosecurity that can be maintained throughout the depopulation, disinfection, and repopulation processes. All previously highly pathogenic avian influenza (HPAI) infected premises must be both CLEANED and DISINFECTED. Cleaning and disinfection practices during an outbreak will focus on virus elimination in a cost-effective manner. Hog CAFOs located in swine-dense areas are at high risk for re-infection of several important swine pathogens. (SwineCast 1168) (USDA Aug 2019) (USDA Oct 2022)

9. Disposal and disinfection present concerns for local communities, including:
    - Potential on-site groundwater contamination by diseased decomposing animals and chemicals used to disinfect buildings, equipment and vehicles.
    - Liability for landfill operators from potential groundwater contamination.
    - Air pollution from incineration.
    - Potential for pathogen contamination spread if livestock leave the CAFO.
    - Difficulty finding new buyers for land with large burial sites.

    (UMN 2014) (USDA Aug 2019)

Condition 4 Findings - Biosecurity, Animal Health

1. In the context of animal agriculture, biosecurity is a series of management steps and practices implemented to prevent the introduction of infectious agents, especially Foreign Animal Diseases (FAD), into a herd or flock, the spread of these agents through the herd, and out of the herd to other animals or humans, herds or flocks. A strong biosecurity program is critical and must be properly implemented not just developed as a plan on paper. (Alarcón 2020) (FAO 2020) (Graham 2008) (Paploski) (UMN Pitkin)

2. Biosecurity plans are not required by existing federal, state or local laws and regulations that apply to the Town of Isabelle.

3. The spread of disease throughout a CAFO facility is enhanced by the closeness of the animals and interior housing. Labor shortages make it challenging to implement and maintain strong biosecurity because crews move among multiple buildings on a CAFO and among different CAFOs. Once introduced, hardy, highly transmissible pathogens can re-infect animals returned to a depopulated and disinfected building. Disinfection is difficult to do so that the target pathogen is completely eliminated. (ISU 2021) (UMN Pitkin)

4. Neighboring farms are at risk from airborne animal diseases contracted by contained animals living in a controlled and ventilated environment. Exhaust fans running 24/7 can introduce pathogens into the surrounding community. (UMN Aug 2021) (Schulz 2012) (UMN Pitkin)

5. Disease can also be transmitted from animals to humans as zoonosis, otherwise known as spillover events. Three sequentially linked populations can facilitate the transmission: the CAFO species, the CAFO workers (bridging population), and the rest of the local human population. Salmonella from dairy cows, Avian Influenza from poultry and H1N1 Influenza from swine are examples of zoonotic diseases. Findings challenge the assumption that large

modern production is more biosecure than small holder operations. (Deschuyffeleer 2012) (Graham 2008) (Jahne 2015) (Ma 2009) (Saenz 2006) (Shaw 2018)

6. Disease outbreaks can have far-reaching effects on the industry. Even a short-term market closure can lead to long-term consequences to market structure. One prominent example is Porcine Epidemic Diarrhea virus (PEDv), which was first detected in the U.S. in Iowa in 2013. Just one year later, premises in 32 states had reported losses. Fourteen percent of beef and 27% of pork produced in the US is exported. Outbreaks can trigger trade barriers with a rapid economic impact. In late 2003, one case of Bovine Spongiform Encephalopathy (BSE) was identified in a Washington State cow. Within days, 53 countries banned U.S. cattle and beef products. U.S. beef exports of $3.95 billion in 2003 accounted for 9.6 percent of U.S. commercial beef production. Exports for 2004 declined 82 percent below the 2003 level. While sales volumes recovered, loss of export competitiveness still lingered more than a decade later. In 2020, the value of U.S. poultry & poultry product exports to the world had still failed to return to the pre-2015 highly pathogenic avian influenza (HPAI) outbreak levels. (Chen 2020) (Coffey 2000) (Song 2015) (USDA-FAS 2020) (USMEF-FAQ)

7. Well-conceived and executed scientific studies on virus variants are sobering. For example, a 2019 study at the University of Minnesota assessed genome sequences from more than 4,000 Porcine Reproductive and Respiratory Syndrome (PRRS) virus isolates from the Morrison Swine Health Monitoring Project over nine years (2009-2017). They documented the circulation, emergence, and sequential turnover of different PRRS virus lineages. Results point to immune response as a major driver of virus diversification. Rapid turnover of the dominant virus lineage leads to complex multi-strain virus dynamics in which different virus variants interact and increase and decrease by swine immune-mediated competition and selection. Immune-mediated virus selection is a major challenge for vaccine development, design of veterinary surveillance programs and implementation of effective disease prevention strategies. (Paploski) (UMN Sep 2021)
8. Implementing protocols and technology necessary to characterize rapidly evolving, highly pathogenic and efficiently transmitted viruses is extremely difficult. Understanding the ancestral relationships and evolution of viruses as they spread quickly among CAFOs requires state-of-the-art genome sequencing and virologic epidemiology. (Kikuti)

9. Field reports from veterinarians managing multiple herds at multiple locations belonging to large systems indicate that new PRRS virus variants are able to elude filtration systems. Filtration systems are not preventing virus spread. There are often multiple virus strains in infected animals that can spread rapidly to adjacent facilities throughout the neighborhood. (Sanhueza 2020) (SwineCast 1168) (UMN Aug 2021)

10. A September 2021 forum with veterinarians from academia and corporations described the 2021 PRRS outbreak as a "complete off-the-rails disaster..." with "so much virus in the neighborhood that it overwhelmed the filters." There is little ability to track neighboring management practices such as vaccination protocol and movement of animals and personnel to and between CAFOs or the existence and implementation of biosecurity plans. Experts recommend that corporations consider abandoning the "central hog belt" and starting over in new geographical areas. (SwineCast 1168)

11. The movement of people and equipment among livestock facilities is a primary route of transmission for disease. Mitigation strategies should go beyond ordinary preventative measures. Strategies such as animal traceability, disease syndrome reporting and analysis and

risk-based herd health management are all ways to enhance the resilience of livestock production. Inspection of cleanliness and disinfection of incoming transport vehicles may be necessary. CAFO managers and owners must be willing to invest and workers must be willing to comply with mitigation strategies. (FAO 2020) (Graham 2008) (SwineCast 1168)

12. Contaminated feed and ingredients may represent a risk for transport of pathogens at the domestic and global levels. (AASV 2020) (Dee 2018) (Niederwerder 2019)

13. Infectious disease testing, transmission-prevention and control are measures to detect disease and control it when found. Testing for infectious disease within a facility should be performed on a schedule and at a frequency based on the common diseases of concern, the age of the animal group at risk, observations of the health of individual animals and groups of animals. If a disease is detected, response actions should be implemented immediately. (UMN Sep 2021) (UMN 2015) (UMN Pitkin)

14. With the growth of CAFOs, some states have enacted ballot proposals and laws focused on improving conditions for the animals. California's Proposition 12 is one of the most far reaching and tool full effect in 2022. (CDFA Prop 12)

Condition 5 Findings - Animal Transportation

1. Disease outbreaks require restriction of pathogen transmission at all production levels, including transportation. Because of the increasing movement of animals in multisite production, as well as the centralization of the U.S. packing industry, the chances of organism transmission has increased. All trucks, trailers, and other vehicles used for transporting animals, animal products, products, feed, offal, and contaminated equipment are a potential risk in the spread of disease. Under favorable conditions, viruses can survive anywhere from a few days for influenza to 18 months for African Swine Fever. (Thompson 2001) (Rule 2008)

2. Efficient, experienced and quiet handling of livestock, using recommended techniques and facilities, as well as taking measures to eliminate pain and accidental injury, will reduce stress in the animals and prevent quality deficiencies in meat and by-products. Vehicle design affects air-flow, vibration, heating and cooling. Loading density, length of travel and rest duration are also important. Key factors affecting the welfare of large animals during transport include: attitudes to animals and the need for training of staff; methods of payment of staff; laws and retailers' codes; genetics, especially selection for high productivity; rearing conditions and experience; the mixing of animals from different social groups; handling procedures: driving methods; stocking density; increased susceptibility to disease and increased spread of disease. (Broom 2003) (Chambers 2001) (Rioja-Lang 2019)

3. A 2024 study of Michigan dairy herds and poultry flocks infected with the H5N1 virus found that about 62 percent of farms shared vehicles to transport cattle, and only 12% cleaned the vehicles before use. Forty percent of the affected dairies had regular visits for deadstock removal, 53 percent utilized the same deadstock removal company and 40 percent had animals removed from the premises by that company within 30 days prior to clinical onset. (USDA June 9, 2024)

4. Swine are commonly transported to slaughter in vehicles that have not been cleaned and disinfected between loads. In many cases, the risks and associated costs of disease introduced

late in the growing period are thought to be less than the cost of cleaning and disinfecting vehicles. Transport vehicles are often shared by different owners, enabling the spread of disease across large regions. (Lowe 2014)

5. Much of the recent research on disinfecting transport vehicles comes from the swine industry as it faces the PRRS and PED viruses. Implementation of "all in–all out" sites, in which all animals in a group are removed before arrival of the next group, limits the spread of disease introduced by transport vehicles. Critical factors in sanitation programs include selecting an efficacious disinfectant, using it at the proper dilution rate and means of application, and allowing for sufficient contact time. High-pressure washing of transport trailers, followed by 90 to 120 minutes exposure to disinfectants is likely to eliminate residual infectious. A final heating step can be effective at inactivating virus to the point of preventing future infection. Studies suggest that it may be possible to inactivate PED virus in the presence of feces by heating trailers to 71°C for 10 minutes or by maintaining them at room temperature (20°C) for at least 7 days. (Dee 2006) (Thomas 2015)

6. Federal interstate regulations provide for quarantine, restriction of movement, maintenance of sanitation, and identification of animals to prevent the spread of animal disease. Accredited veterinarians certify livestock and poultry. USDA APHIS | Interstate Regulations

7. USDA's "28-hour rule" for livestock transportation dictates that livestock — poultry is exempt — can only be on a truck for 28 hours, at which point they must be off-loaded and provided with food, water and at least 5 hours of rest. (49 USC Ch. 805)

8. Wisconsin requires official identification for out of state dairy and swine herds and poultry flock. Generally speaking, animal truckers must be licensed in Wisconsin. In addition, vehicles used to haul animals must be licensed by the Wisconsin Department of Agriculture, Trade and Consumer Protection; this is separate from vehicle registrations issued by the Department of Transportation. (DATCP Home Animal Movement), (Wi Legislature: Chapter ATCP 10)

9. Vehicle traffic at a facility can be broken down into those that are involved with livestock shipments, non-livestock shipments, and employee/personal vehicle traffic. Facilities should consider the following:
    - Separate parking and entrances for livestock, non-livestock, and personal vehicle traffic.
    - Segregated traffic flows for vehicles entering the livestock areas from non-livestock areas when leaving facility.
    - Washing/cleaning and disinfecting station for vehicles entering the livestock areas when leaving the facility.
    - Ability to contact drivers and owners of previous livestock shipments

    (UMN 2015)

Condition 6 Findings - Private and Public Drinking and Agricultural Wells

1. Private and public drinking water wells are regulated very differently:
    a. **Public drinking water systems -** Passed in 1974, the federal Safe Drinking Water Act, sets standards for water treatment as well as systematic collection and analysis of water quality for these systems.
    b. **Private wells** - Safe Drinking Water Act standards ***do not*** apply to private wells. No state or federal laws requires existing private wells to be tested for contaminants. All of the Town of Isabelle's drinking water comes from private wells.

    (AAP 2009) (MacDonald 2017) (Safe Water Drinking Act) (Ward 2009)

2. Wells pumping less than 36 million gallons a year are not regulated. Wells with a pumping capacity that exceed 100,000 gallons a day (70 gallons per minute or 36 million gallons a year) are regulated by the WDNR as high capacity wells. This includes agricultural wells. Wells are further classified by a water loss above or below 2 million gallons a day in a 30-day period from the basin from which it is withdrawn as a result of interbasin diversion or consumptive use or both. (Wi DNR High Capacity Wells) (Wi Legislature: 281.35)

3. Wisconsin's constitutional public trust doctrine requires the state to protect its "navigable waters" for the public's benefit. A July 2021 ruling by the Wisconsin Supreme Court affirmed that wells above and below the 30-day period threshold require the WDNR to determine that no public water rights in navigable waters will be adversely affected and that the proposed withdrawal will not have a significant detrimental effect on the quantity and quality of the waters of the state. Permits may include conditions as to location, depth, pumping capacity, rate of flow, and ultimate use, that ensure that the high capacity well does not cause significant environmental impact. (Wi Legislature: 281.34) (Wi Supreme Court Case: 2018AP59)

4. A wide range of organizations argued to the Wisconsin Supreme Court that the state does not have authority to protect public waters from some types of well pumping. These include: Wisconsin Manufacturers & Commerce, Dairy Business Association, Midwest Food Processors Association, Wisconsin Potato & Vegetable Growers Association, Wisconsin Cheese Makers Association, Wisconsin Farm Bureau Federation, Wisconsin Paper Council, Wisconsin Corn Growers Association and the Wisconsin Legislature. (Kirwin) (Wi Supreme Court Case: 2018AP59)

5. Knowledge of surface and groundwater located up and down gradient from CAFOs makes it possible to analyze samples for fecal indicators, virus and bacteria. Pumping tests are needed to assess whether groundwater levels and volumes are sufficient to supply a CAFO's needs. (Sapkota) (Schmalzried 2010)

6. CAFOs use well water for watering animals, cleaning facilities, animal cooling and in some instances for moving manure from the barn to the storage structure. Dairies use water to clean milking systems, parlors and bulk tanks, prepping cows for milking and milk pre-cooling. When animal groups leave a swine facility it is thoroughly cleaned by pre-soaking and/or pressure washing. During periods of extreme heat, pigs may be cooled by periodically dripping water on the animals back or by small misters. (Brumm 2006) (Cullens 2011) (Guthrie 2011) (Harmon 2008) (May MSU) (Thomas MSU)

7. Water use varies widely depending on animal species, number and size of animals, conservation practices and environmental conditions. Dairy CAFOs are most likely to require high capacity wells. Each cow requires between 30 and 50 gallons of water per day. Wash water can occupy 25% to 50% of lagoon capacity. For example, a 6,125 animal unit (4,287 cows) CAFO using 40 gallons/cow/day would require an estimated 62.5 million gallons a year. (Cullens 2011) (Eastridge)

8. Daily water consumption for pigs range from less than 0.5 gallons/ pig/day for newly weaned pigs to greater than 1.5 gallons/pig/day for grow-finish pigs and 3 to 4 gallons/day for the gestating female to 5 to 6 gallons/day for the lactating female. Pen space utilization rates typically run 85- 90% or occupied pen spaces of 310 to 330 days per year. The mix of pigs can vary widely. As an example, the following table calculates yearly consumption based on data in the Form 3400-025A from the 2021 application for an Agricultural Livestock Operation Permit by Cumberland LLC's Swine CAFO in Burnett County, Wisconsin. Cumberland estimates water consumption at 10.9 million gallons a year. However, based on University of Nebraska research as shown in the chart below, estimated water consumption from this 6,163 animal unit (26,250 pigs) CAFO would be 19.3 million gallons a year.

Number & Type of Animal	**Pen Utilization**	**Water Consumption**	**Yearly Water Consumption Gallons**
7,500 - Sows (3,000 Animal Units)	330 days	6 gal/space/day	14,850,000
14,625 - Pigs up to 55 pounds (1,463 Animal Units)	330 days	.5 gal/space/day	2,413,125
4,125 - Pigs 55 pounds to market (1,650 Animal Units)	330 days	1.5 gal/space/day	2,041,875
Total animals - 26,250 (Total Animal Units 6,163)			**19,305,000**

(Brumm 2006) (WDNR Cumberland Form 3400-025A - p 2) (WDNR Cumberland EQA - p 4)

Condition 7 Findings - Air Pollution

1. One of the biggest concerns about large livestock operations is the impact on public health and property values of toxic air pollution from manure spreading as well as dust and manure blown from powerful building fans. While science-based regulations for manure spreading attempt to protect water, there is very limited regulation of air pollution. Federal regulators have not developed standards. A 2010 WDNR study identified 30 beneficial management practices for mitigating hazardous air emissions from animal waste. No action was taken. (APHA 2019) (FWW 2021) (Spencer 2004) (USEPA 2013) (USEPA 2017) (UMN 2021) (WDNR 2010)

2. Community members living near CAFO operations face increased exposure to air pollution which can cause or exacerbate respiratory conditions including asthma; eye irritation, difficulty breathing, wheezing, sore throat, chest tightness, nausea; and bronchitis and allergic reactions. Air emissions include particulates, volatile organic compounds, and gases such as nitrous oxide, hydrogen sulfide, and ammonia. Odors associated with air pollutants from large-scale hog operations have been shown to interfere with daily activities, quality of life, social gatherings, and community cohesion and contribute to stress and acute increased blood pressure. (Cambra 2010) (Donham 2007) (Heederick 2007) (Horton 2009) (Hribar 2010)

(Mirabelli 2006) (Schinasi 2011) (Wing 2000) (Wing 2013)

3. An analysis of Wisconsin health data from 2008 to 2016 for rural residents found relationships between living close to dairy CAFOs and negative respiratory health such as allergies, asthma, uncontrolled asthma, need for medication and impaired lung function. This includes reduced lung function and self-reported asthma at distances of 3 to 4 miles. This may contribute to health disparities among rural residents. North Carolina citizens show high rates of infant mortality, asthma, low birth weights, kidney disease and tuberculosis in communities near hog factories. (Kravchenko 2018) (Schultz 2019)

4. Ruminant digestion is the largest human-caused source of methane emissions in the United States. A 2015 US EPA study of greenhouse causing gases estimated 25.4 percent of total methane emissions came from ruminants. These emissions are highly dependent on dairy and beef populations. From 1990 to 1995, emissions increased and then generally decreased from 1996 to 2004, mainly due to fluctuations in beef cattle populations and increased digestibility of feed for feedlot cattle. Emissions increased from 2005 to 2007, as both dairy and beef populations increased. Research indicates that the feed digestibility of dairy cow diets also decreased during this period. Emissions decreased again from 2008 to 2015 as beef cattle populations again decreased. (USEPA GHG 2017)

5. Dairies installing biogas waste digester point to methane reductions but there are concerns that they produce air pollution and drive industry consolidation into bigger and bigger farms. A 2017 study of dairies found digesters could reduce overall greenhouse gas emissions, mostly methane, by 25 percent. At the same time, the study found increases in nitrous oxide and ammonia emissions rose by 81 percent. The AgSTAR Livestock Anaerobic Digester voluntary database lists 43 operational Wisconsin dairy digesters. They range in size from 130 to 9,100 cows per facility with a median of 2,100 cows per digester. Wisconsin has 22 dairy digester facilities producing electricity and/or heat from biogas that ranged from 130 to 8,500 cows per facility with a median of 1,950 cows. The 11 existing dairy digester facilities producing only Renewable Natural Gas (RNG) ranged from 1,700 to 9,100 cows per facility with a median of 4,000 cows. Two Wisconsin dairy digester facilities are under construction to produce RNG with sizes of 5,200 cows and 30,000 cows per facility. (Holly) (Jervis) (Kaeding) (Markham)

6. Statistical analyses confirm that source terms such as distance to a hog CAFO and live weight per operation, as well as temperature, wind speed and wind direction are important predictors of atmospheric ammonia (NH_3) at community locations. The results indicate potential zones of exposure for human populations who live or go to school near hog CAFOs. (Wilson 2007)

7. North Carolina now recognizes the impact of air pollution on communities in the 2020 Odor Control Check List as part of "Title VI: Increasing equity, transparency and environmental protection...." (NCDEQ 2020)

8. Under Wisconsin Statute 93.90 and Wis. Admin. Code Ch. ATCP 51 setbacks for livestock structures with an infinite number of animals cannot exceed 200 feet. Maximum setbacks allowed for manure storage cannot exceed 350 feet. (Wi Admin Code Ch. 51) (Wi Legislature: Chapter ATCP 93.90)

9. The 2019 Technical Expert Committee (TEC) of the Wisconsin Department of Agriculture Trade and Consumer Protection recommends that setbacks be established using the

University of Minnesota Extension's "Odor From Feedlots Estimation Tool" (OFFSET). (UMN OFFSET) (WDATCP TEC 2019)

10. In 2019, Wisconsin Department of Agriculture Trade and Consumer Protection developed a draft and final draft rule for Wis. Admin. Code Ch. ATCP 51. In the draft rule setbacks for high odor structures run from 600 to 2,560 feet. In the final draft setbacks run from 350 to 1,450 feet. However, the Wisconsin Legislature refused to hear the rule and none of the proposed changes were adopted. (WDATCP TEC 2019) (ATCP 51 2019 Draft Rule)

11. Neighboring farms are at risk from airborne animal diseases contracted by contained animals living in a controlled ventilated environment where exhaust fans move airborne particles to the outdoors. Pathogens are also transmitted outdoors in the air flow threating herds in the surrounding community. Microorganisms could be spread by air flow up to 3000 meters from the chicken production buildings. (Baykov 1999) (Spencer 2004)

Condition 8 Findings - Private and Public Property Rights and Values

1. Economic concentration of agricultural operations tends to remove a higher percentage of money from rural communities than when the industry is dominated by smaller farm operations, which tend to circulate money within the community. Communities dominated by smaller owner-operated farms have a richer civic and social fabric with more retail purchases made locally and with income more equitably distributed. (Foltz)

2. Concentration of agriculture has associated impacts on the local economy and community. This includes decreased tax receipts and declining local purchases with larger operations. The social and economic well-being of local rural communities benefit from increasing the number of farmers, not simply increasing the volume of commodity produced. (Foltz)

3. Communities face expensive pollution cleanup, euthanasia and closure costs when CAFOs go out of business. This can be further complicated when livestock producers are contractors for large processing companies that file for bankruptcy or terminate contracts. In 2024, dozens of chicken factories in Iowa, Minnesota and Wisconsin were unable to feed their flocks after Pure Prairie Poultry filed for bankruptcy and stopped reimbursements. Some contractors used social media to plead with people to come take the starving birds. Millions had to be euthanized at tax payer expense. Years after the state of Oregon permitted the 30,000 head Lost Valley Dairy, the factory is now being decommissioned and attempts at remediation for water pollution continue. (Ballentine) (Dairy News 2024) (Figueroa)

4. Financial health of government and citizens is based in large part on property values. Large livestock facilities can bring new investment while also negatively impacting property values. CAFOs can have large adverse impacts on home values within 3 miles and directly downwind. Empirical evidence indicates that residences near Animal Operations are significantly affected, and data seems to suggest a valuation impact of up to 26 percent for nearby properties, depending on distance, wind direction, and other factors. There has been some suggestion that properties immediately abutting a CAFO can be diminished as much as 88 percent. Nearby small farms can be impacted by such factors as water degradation and insects. (Isakson) (Kilpatrick 2001) (Kilpatrick 2015) (Kim) (Lawley) (Wi DOR)

5. Using longitudinal data from 1995-2017 on a large spatial scale, research finds that CAFO intensity increases the levels of nutrients, specifically total phosphorus and ammonia, in

surface water. Adding one CAFO to a Hydrologic Unit Code-8 (HUC8) region leads to a 1.7% increase in total phosphorus levels and a 2.7% increase in ammonia levels, relative to sample mean levels. Results imply that the marginal CAFO in Wisconsin produces non-market surface water quality damages of at least $203,541 per year. (Raff 2021)

6. Environmental policies at both the state and federal levels for CAFOs directly affect the economy of Wisconsin communities. For example, state and federal policies are using tax dollars to build a market for biogas from anaerobic digesters on CAFOs. These policies force local communities to deal with ever larger CAFOs looking to cash in on programs that former USDA Secretary Tom Vilsack claimed would save American farmers. Instead, more consolidation means fewer farms. (D'Onofrio) (WBAY TV)

7. St. Croix County, Wisconsin denied a Conditional Use Permit to a digester developer in 2019 based on nine reasons it would be substantially adverse to property values in the neighborhood affected. These included multiple professional real estate agent opinions and examples from other digesters. (St. Croix County 2019)

8. CAFO workers care for thousands of animals. These are skilled workers with a multitude of tasks such as: breeding, birthing, feeding, collecting waste, moving animals, removing mortalities, milking and cleaning equipment. However, CAFOs are not required to develop plans to address a sudden loss of the workforce or the impact it could have on the local community. One threat to CAFO workforce is H5 Bird Flu infections. As of mid-January 2025, 928 dairy herds in 16 states were infected with the H5 virus. That includes an estimated 70 percent of California's herds. No Wisconsin dairy herds are known to be infected. Fourteen infected poultry flocks in four Wisconsin counties have been identified in the last 12 months. Sixty-seven workers in ten states, including Wisconsin, have been infected by the H5 virus from exposure to infected animals. Thirty-six of these were in California dairy workers. Twenty-three poultry workers have been infected including one in Wisconsin's Barron County. Seven percent of dairy workers sampled in Michigan and Colorado during the summer of 2024 showed evidence of recent infection. The Centers for Disease Control (CDC) recommends labs nationwide determine within 24 hours of admission whether people hospitalized with flu symptoms are infected with seasonal influenza or H5. Widespread worker infections could result in sudden worker shortages. (CDC H5 Human) (CDC Flu Season) (CDC Mammals) (CDC Serologic) (Musto) (WDATCP Dairy) (WDATCP Poultry)

Condition 9 Findings - Compliance and Enforcement

1. WDNR struggles to keep up with CAFOs required to have WPDES permits. The number of CAFOs grew from 135 in 2005 to 342 in 2024. Sixty (60) or 18% of Wisconsin CAFOs are operating under expired WPDES permits. In Pierce County, one of the four CAFOs WPDES permits are expired. (WLAB 2016) (WDNR CAFO page)

2. Enforcement of WPDES permits relies, for the most part, on self-reporting and whistleblowers. One WDNR regional staff person covers compliance for eight counties running 245 miles from Douglas County on Lake Superior to Buffalo County on the Mississippi River. (WDNR employee)

3. Issues with Emerald Sky Dairy illustrate the enforcement challenges communities face. Located in St. Croix County, Emerald Sky is now owned by Breeze Dairy Group, an Appleton, Wisconsin company that also owns the Ridge Breeze Dairy in Pierce County.

Under Emerald Sky's former owners, Nebraska-based Tuls Dairies, the facility had five known manure violations in three years. The worst was a 2016 spill of 275,000 gallons that was reported by a whistleblower in 2017. The dairy received an $80,000 fine in May 2019. In November 2019, an anonymous call reported manure flowing down a ditch that dumps into Hutton Creek. DNR staff documented manure flowing into the creek and dead fish. St. Croix County Development Committee had to send a letter to the DNR in February 2020 demanding "full and quick enforcement of manure application rules and statutes for CAFOs located in St. Croix County." (Kremer 2017) (St. Croix CDC 2020) (Wi Circuit Court-000002) (WDNR Emerald 2019)

4. Enforcement by Wisconsin Department of Justice (DOJ) under the state Attorney General on CAFOs with WPDES permits can be very uneven. Enforcement on 2017 violations in St. Croix County took years. However, in 2021 DOJ took enforcement action against CAFOs owned by Rolling Hills, Kostechka, Tri-Star, Maple Leaf, Redtail Ridge, Jon-De Capital and Verhasselt Farms.

5. Tracking where animal wastes are spread is very challenging. In one Iowa study, public records were used to document manure management by CAFOs housing 59,700 finishing hogs in a 3,840 acre area. Together, they generated an estimated 1.79 million pounds of nitrogen (N) each year, more than 70% of which volatilized into the atmosphere. CAFOs minimized the area required for applying manure by underestimating manure N content, projecting above average crop yields, and applying manure to soybeans. Some fields were claimed by more than one operator, and some field sizes were overestimated. Manure application based on crop demand for phosphorus would require 23,104 acres of cropland, compared to the 2,446 acres actually used. (Jackson 2000)

Condition 10 Findings - Monitoring

1. The Wisconsin Supreme Court ruled in July 2021 that WDNR has the authority to require offsite groundwater monitoring as part of a CAFO wastewater discharge permit. The ruling does not require permits to include monitoring. Kinnard Farms in Kewaunee County and the Wisconsin Legislature argued that Act 21 prevents the DNR from taking steps through its permitting process to protect groundwater. (Kirwin) (WI Supreme 2016AP1688)

2. Large-scale industrial food animal production can cause numerous public health and environmental problems and should thus be monitored to prevent harm to surrounding communities. Since each situation is different, monitoring program design should be tailored to particular situations. (Hribar 2010) (USEPA 2003)

3. The most fundamental step in the development of a monitoring plan is to define the goals and objectives. Designing a monitoring plan also includes selecting sampling variables, a sampling strategy, station locations, data analysis techniques, the length of the monitoring program, and the overall level of effort to be invested. (USEPA 2003)

4. Most groundwater contamination incidents involve substances released at or only slightly below the land surface. Contamination can occur by infiltration, recharge from surface water, direct migration, and interaquifer exchange. The first and second mechanisms primarily affect surface aquifers, the third and fourth may affect either surface or deep aquifers. (USEPA 1994)

5. Groundwater monitoring is necessary to determine: background groundwater quality; existing groundwater conditions near retention ponds, corrals, and land application areas; effect of the improved management practices on groundwater quality. (CAEPA 2010)

6. Livestock operators must have a reporting and monitoring system to ensure odor control practices are implemented in accordance with specifications. New Wisconsin rules should require local governments to monitor permitted livestock facilities using a checklist that is comprehensive and forward looking and that covers whether an operation anticipates adding animals or building livestock structures. Local governments should have the option of monitoring by conducting site visits or requiring self-reporting by livestock operators. (WDATCP 2019)

7. Data collection of particulate-matter air exposure in rural areas is needed because of the huge gap in knowledge as compared to gases emitted by CAFOs. Exposure mechanisms for particulates are expected to be different than those for gases because particulates from CAFOs are biologically active and are known to be relatively large. Therefore, data is needed on sedimentation out of the air, resuspension and aerosols from waste spreading. (Heederik 2007)

Condition 11 Findings - Preserve Quality of Life

Roads - Damage and Traffic Disruptions

1. Rural roads account for an estimated 33 percent of the vehicle miles traveled in the U.S., but 56 percent of fatalities. Rural roads may have design elements that increase the risk of fatalities or serious injuries, such as inappropriately high speed limits, narrow lane widths and shoulders, steep ditches, or trees close to the roadway. Transport of animals and feed on roads not designed for increased use and added weight loads can cause road deterioration and traffic disruptions. Low population density and sparse land use of rural communities can increase detection, response, and travel times for emergency services, reducing key factors in crash survivability. (USDOT 2012)

2. The Wisconsin Towns Association (WTA) estimated in 2019 that a 700 cow CAFO would produce 7 million gallons of animal waste requiring a John Deere 8230 tractor pulling a 2-axle Husky manure tanker to make 2,071 trips annually. That would prematurely decrease the life of a road by 30 years of the original 50-year life, if the road was built with 3 inches of asphalt over 5 inches of gravel on fair base soils. A road built with 5.5 inches of asphalt over 9 inches of gravel, would have no premature aging of the road. (WTA 2019)

3. WTA recommended to DATCP in 2019 that new livestock siting rules strongly consider:
    - Transportation infrastructure needs associated with a new or expanded facility
    - Current state of the transportation infrastructure proposed to be used
    - Gap between needs and current status
    - Process for identifying both short term damage and long term physical degradation of infrastructure resulting from the operation
    - Method for the operation to fund road damage and life cycle costs accruing to the operation at the owner's expense.

    (WTA 2019)

4. Heavy vehicles which were not anticipated at the time the pavement structure was designed can cause additional damage and create the need for rehabilitation or reconstruction sooner than expected. These unexpected heavy vehicles could be generated by new industrial facilities, temporary heavy construction in a limited geographical area and other reasons. Best practices entail the completion of a traffic study and roads needs analysis, including provision for additional signage, speed limits and signals as part of the planning. This analysis should be performed in conjunction with both state and local authorities. (MNDOT 2014) (USDOT 2012)

5. Accident reports on 415 commercial livestock truck accidents were tabulated between 1994 and June 2007 in the United States and Canada. Data was collected from Google internet searches of newspaper and television news reports, unpublished industry sources and Alberta government agencies. Fifty-nine percent of the accidents occurred during the early morning hours from midnight to 9:00 am and 80% involved a single vehicle. Driver error was blamed for 85% of the wrecks. In 83% of the accidents, the vehicle rolled over and 84% of the truckers tipped over on their right side. In North America, vehicles travel on the right-hand side of the road and if a driver falls asleep at the wheel he usually drifts off toward the right. Driver fatigue is the most likely explanation for many of these accidents. (Woods 2008)

Fire

1. CAFOs can present increased fire safety costs and concerns for communities. A May 2021 fire near Waseca, MN burned two buildings, killed 12,000 hogs and required 20 tankers from nine fire departments. A March 2019 fire started after the roof collapsed at a Holden Farms CAFO near Mondovi, WI killed an estimated 4,000 hogs and required crews from five counties. Hazardous winter condition made the Mondovi scene dangerous sending an Eleva fire truck into the ditch. (Clemons 2019) (Moran 2021) (Pierce County Land Use Permit)

2. A Texas fire at South Fork Dairy exploded into the single deadliest event involving livestock in Texas history, when nearly 18,000 cows died in a barn the size of two Amazon distribution centers. The blaze began with a manure vacuum, the specialized, diesel-powered truck that had no apparent regulation or oversight from farm, transportation or workplace regulators. (Jervis)

3. The need for multiple rural fire departments to respond may stretch or exceed their capacity to address other fires at the same time. CAFOs may also be served by rural fire departments that do not have a sufficient water supply as provided by a municipal supply. (NFPA 1144)

4. Fire Safety Needs Analyses look at the: ability of multiple fire departments to respond to a fire, while still supporting the needs of the community; availability of sufficient water on site to douse a fire; and building designs and operating plans that reduce the likelihood of a fire. Standards are laid out by the National Fire Protection Association (NFPA) in NFPA 1141: Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas. (NFPA 1141)

5. Water Supply Needs Analyses look at the adequacy and reliability of a water supply to control and extinguish anticipated fires in the jurisdiction every day of the year. Guidelines are included in NFPA 1142: Standard on Water Supplies for Suburban and Rural Fire Fighting. An adequate water supply may entail the need to obtain permits and drill new supply wells. Storage may be needed for enough water to ensure the necessary pumping rate, as well as the total amount of water required to extinguish a large fire. (NFPA 1142)

6. Water Supply Needs Analyses should include an evaluation of the potential impact on surrounding private, public, and agricultural wells, as well as springs.

7. United Egg Producers (UEP) Fire Mitigation Task Force recommends facilities develop an Emergency Preparedness and Response Plan. Recommendations include: regular meetings with local fire departments; manure belt inspections; ongoing worker training and several other key components. (UEP)

8. A 2022 study by the Fire Protection Research Foundation found the leading causes of animal housing fires to be heating devices in winter months and malfunctioning of electrical systems. NFPA 150: Fire and Life Safety in Animal Housing Facilities Code addresses the fire and life safety needs of both animals and humans. CAFOs can also be affected by wild land fires. NFPA1144: Standard for Reducing Structure Ignition Hazards and Wildland Fires provides a methodology for assessing wildland fire ignition hazards around existing structures and developments to reduce the potential of structure ignition from wildland fires. (NFPA 1144) (NFPA 150) (Castro)

Conclusion

Given the potential impacts to health, safety and general welfare, the Town has an obligation to enact reasonable regulations on the operations of CAFOs.

In addition to the general impacts, the Town of Isabelle has also determined that this Ordinance is necessary to achieve water quality standards under Wis. Stat. 281.15 which are designed to protect the public interest including the present and prospective future use of the Town's water for public and private water systems, propagation of fish and aquatic life and wildlife, domestic and recreational purposes and agricultural, commercial, industrial and other legitimate uses.

The waters of the Town of Isabelle are vitally important to its residents. The impacts of CAFOs on water systems, fish and aquatic life, agricultural, commercial and industrial uses require the Town's protection and regulation. Water contamination and impairment may result in elevated levels of nitrates and the presence of pathogenic organisms.

Before a CAFO may begin operation within the Town of Isabelle, it is imperative that the operational risks be analyzed, base lines be established to control medical risks and the monitoring of each risk be established for evaluation and appropriate review.

It is for these reasons the Town of Isabelle enacts this Ordinance.

TOWN OF ISABELLE
CONCENTRATED ANIMAL FEEDING OPERATIONS ORDINANCE No. 25-01

The Town Board of the Town of Isabelle, Pierce County, Wisconsin, does ordain as follows:

Section 1. Authority

This Ordinance is adopted pursuant to the powers granted under the Wisconsin Constitution, and Wisconsin Statutes including but not limited to Section 92.15. This Ordinance is further adopted pursuant to the powers granted to the Town Board under the grant of village powers pursuant to Sec. 60.22 of Wis. Statutes for the protection of public health, safety and general welfare.

Section 2. Purpose

The purpose of this Ordinance is to effectively, efficiently and comprehensively regulate the operation of Large-Scale Concentrated Animal Feeding Operations of 1,000 animal units or greater ("CAFO") in the Town of Isabelle, without respect to siting, to protect public health (including human and animal health), safety, and general welfare, to prevent pollution and the creation of private nuisances and public nuisances, to preserve the quality of life, environment, and existing small-scale livestock and other agricultural operations of the Town of Isabelle and to achieve water quality standards within the Town of Isabelle. This Ordinance sets forth the procedures for obtaining a CAFO Operations Permit for the operation of new and expanded livestock facilities in the Town of Isabelle (sometimes referred to as "the Town").

The need for this Ordinance is based upon the Town's obligation to protect the health, safety and general welfare of the public and is based upon reasonable and scientifically defensible findings, as adopted by the Town Board, clearly showing that these requirements are absolutely necessary to protect public health and safety. Specifically, the Town finds that there is ample scientific research and evidence establishing that CAFOs pose a significant risk to the integrity of the Town's groundwater, surface water, air quality, the health and well-being of its residents and local property values. These findings are based in part on the scientific articles and research studies discussed and listed in Appendices A. & B.

Section 3. Definitions

1. "Animal Units" means the equivalent unit of livestock present at an operation as calculated under Wisconsin NR 243.05 using Animal Unit Calculation Worksheet Form 3400-25A.

2. "Applicant" or "permittee" refers to the owner of the entity seeking a CAFO Operations Permit under the terms of this Ordinance.

3. "Large-Scale Concentrated Animal Feeding Operation" or "CAFO" means;

    a. A lot or facility, other than a pasture or grazing area, where 1,000 or more animal units have been, are, or will be stabled or concentrated, and will be fed or maintained by the same owner(s), manager(s) or operator(s) for a total of 45 days or more in any 12-month period, two or more smaller lots or facilities under common ownership or common management or operation are a single Large-Scale Concentrated Animal Feeding Operation or CAFO if the total number of animals stabled or concentrated at the lots or facilities equal 1,000 or more animal units and at least one of the following is true: (1)

The operations are adjacent; (2) The operations utilize common systems for the land spreading of manure or wastes; (3) Animals are transferred between the lots or facilities; (4) The lots or facilities share staff, vehicles, or equipment; or (5) Manure, barnyard runoff or other wastes are comingled in a common storage facility at any time.

b. Any lot or any facility, regardless of location that meets the definition of Section 3.2.A. and uses land in the Town to manage waste.

4. "Operations" means a course of procedure or productive activity for purposes of conducting and carrying on the business of a CAFO including populating animal housing facilities, storing, spreading and managing animal and other waste materials, and conducting any other business activities.

5. "Pollution" means degradation that results in any violation of any environmental law as determined by an administrative proceeding, civil action, criminal action or other legal or administrative action investigation or proceeding.

6. "Private Nuisance" means a nontrespassory invasion of another's interest in the private use and enjoyment of land, and the invasion is either: (1) intentional and unreasonable, or (2) unintentional and otherwise actionable under the rules of controlling liability for negligent or reckless conduct, or for abnormally dangerous conditions or activities.

7. "Public Nuisance" means a thing, act, occupation, condition or use of property which shall continue for such length of time as to " (1) substantially annoy, injure or endanger the comfort, health, repose or safety of the public; (2) in any way render the public insecure in life, health or in the use of property; or (3) unreasonably and substantially interfere with, obstruct or tend to obstruct or render dangerous for passage or public use any street, alley, highway, navigable body of water or other public way or the use of public property or other public rights.

Section 4. License Required

Regardless of siting, a livestock facility with 1,000 or more animal units shall be allowed to conduct operations within the Town of Isabelle only as provided under this Ordinance. Applicants shall apply for a CAFO Operations Permit to operate in the Town of Isabelle under this Ordinance prior to conducting any operations.

1. General

A CAFO Operations Permit issued by the Town of Isabelle is required for new or expanded livestock facilities that will operate with 1,000 or more animal units.

2. Licenses for Existing Livestock Facilities

This ordinance does not apply to any livestock facility in operation in the Town not defined as a CAFO in Section 3, Paragraphs 3 a. & b. on the Effective Date, provided, however, this ordinance shall apply to any such facility at such time as its owner meets the definition of CAFO in Section 3, Paragraphs 3 a. & b.

Section 5. Licensing Administration

The Town Board shall administer this Ordinance and related matters thereto and shall have the authority to issues licenses under this Ordinance, and to designate the local authority/ies to whom the Operator is required to submit all reports and notices; and shall have the authority to enforce the license requirements, including immediate revocation of the license for flagrant violations.

Section 6. License Application and Standards

The applicant shall apply for a CAFO Operations Permit prior to beginning an expansion or conducting any operations associated with a Large-Scale Concentrated Animal Feeding Operation in the Town of Isabelle. The application shall be submitted on a form provided by the Town Clerk.

The Town Board shall decide whether to approve and issue a CAFO Operations Permit to an applicant that has submitted a complete application and paid the required application fee, after holding a public hearing on the application and considering any evidence concerning the application and the proposed operation presented by the applicant and any other interested persons or parties, including members of the public, other governmental agencies or entities, special legal counsel and expert consultants who may be hired by the Town Board to review the application and advise the Town Board.

The Town Board shall approve and issue a CAFO Operations Permit, either with or without conditions, if it is determined by a majority vote of all members, supported by clear and convincing evidence presented by the applicant, that: the applicant can and will comply with all conditions imposed by the Town; that the applicant's operations as proposed, with or without conditions, will protect public health (including human and animal health), safety, and general welfare, prevent pollution, prevent the creation of private nuisances, prevent the creation of public nuisances and preserve the quality of life, environment, existing small-scale livestock and other agricultural operations of the Town of Isabelle; and that the applicant and the application meet all other requirements of this Ordinance.

Section 7. License Application Fee

A non-refundable application fee of Three Dollars ($3) per proposed animal unit up to 2,000 animal units and One Dollar ($1.00) per proposed animal unit thereafter payable to the Town of Isabelle shall accompany an application for the purpose of offsetting the Town's costs to review and process the application. The Town may reevaluate and adjust accordingly the amount of the application fee on an annual basis.

Section 8. Application Procedure

1. An applicant for a CAFO Operations Permit shall complete a Town of Isabelle CAFO Operations Permit Application (See Appendix C.) and pay the required application fee. The applicant must be an owner of the corporate entity proposing to operate the CAFO and sign the application. The application must also be signed by the property owner, who agrees to be held by the same standards as the operator, and by one or more qualified and professionally licensed third party engineers or geoscientists who attest that they have prepared or have reviewed the plans and certify that they will meet the following performance requirements:

    a. Prevent the spread of infectious diseases from the CAFO to other animals, livestock and humans;

b. The CAFO Waste Management Plan as implemented with engineered perimeter berms and liners, or equivalent or better containment measures, will prevent any obnoxious odors emanating from waste management activities, any discharge of contaminated runoff to surface water, and any seepage to ground water, including impacts to surface water and ground water from offsite management or disposal of animal wastes or digestate and that the CAFO has applied for and will not operate until it has received a zero-discharge permit from the State, or in absence of action by the State, from the Town, a local zero discharge waste water and storm water permit(s);

c. The Animal Population Control and Depopulation Plans provide for the daily recording and reporting of animal counts and mortality and reporting to the Town-designated local authority within 24 hours of any unusual mortality, as defined in the plan, and that the provisions for managing the movement and transportation of livestock, containment and treatment of bodily fluids from carcasses, and safe disposal of carcasses, will prevent the spread of disease to other livestock, animals, workers and other residents and humans in the area;

d. The Biosecurity and Animal Health Plan provides for the health and humane treatment of all animals, routine observation and routine testing for diseases of concern--as defined in the plan-- and for the separation and quarantine of diseased animals and animals in contact with diseased animals, their euthanasia, and the handling and disposal of diseased animals, sufficient to prevent the spread of disease to workers, other livestock and animals, and to humans and provides for quarterly reporting of animal testing results and plan-specified enforceable metrics confirmation that the livestock and conditions at the facility, based on plan-identified metrics, are healthy by a third-party inspector and that any deviations from the metrics and any detection of diseases of concern will be immediately reported to the local health department and local authority; and that the plan provides for adequate financing and immediate implementation of emergency containment measures by third-party contractors, including testing of workers and contractors who may have come into contact with diseased animals, and other emergency measures in the event of an outbreak of disease, based on the latest authoritative disease containment guidance;

e. The Animal Transportation Plan, in combination with the biosecurity and animal health plans, will provide for the safe transportation of all livestock to and from the CAFO, the disinfection of transport trailers and treatment of water used to disinfect trailers, the prevention of disease, and provide for coordination with local traffic and road authorities to assure their safe transport and prevent traffic accidents and to provide the necessary emergency response measures in the event of an accident;

f. The Water Use Plan is based on a thorough hydrogeological characterization study, including identification of all onsite and nearby wells and springs, and artesian fed streams and any water bodies, including ponds, wetlands, and lakes, within 5 miles, and that the planned use of water will have no impact, considering projected 50-year growth of population in the area, on the flow rate, extent, volume and storage capacity for any existing well or spring, or artesian fed water body within 2 miles of the CAFO and the quarterly reporting of water use to the local authority or their designated hydrogeologist;

g. The Odor and Toxic Air Pollution Prevention Plan will prevent the presence of odiferous smells noticeable to human olfactories and the detection of toxic air pollutants along the property boundaries and provides for adequate offsets, waste containment, air and odor

emission control devices including particulate filters to prevent air pollution and the transmission of disease particles from the CAFO, anaerobic digester, or offsite waste management area;

h. The Community Economic, Land Use and Property Value Assessment and Impact Study has been performed by a licensed appraiser and a qualified land use planner, is scientifically sound and concludes that there will be no negative impact to properties within 1 mile of the proposed CAFO, and a net positive benefit to the Town, including considering the risks of the operations on the public health, particularly in the case of a sudden loss of workforce;

i. The Construction, Fire and Road Plans, including signed engineered drawings for the measures required to meet the performance requirements of this ordinance and the measures specified in the plan have been submitted with the application, and include a fire-prevention/fire-fighting capacity/fire-water capacity needs analysis, the requisite fire water storage/fire prevention/fire-fighting equipment and worker accountability plans, as well as a traffic study and road improvement needs analysis and road traffic and roadway improvement plans, along with letters of conformance, on agency letterhead, stating that application-submitted plans are complementary with and are in conformance with the associated traffic and road plans and requirements of and from the local, regional, state and federal road and transportation authorities;

j. The Compliance Assurance Testing, Sampling and Monitoring Plan shall provide for an identified chain-of-command, including local authority incident commanders, for the reporting and correction, including emergency measures, of any and all deviation(s) from the plan's enforceable metrics, as well as the daily monitoring of all operations for compliance with the enforceable metrics identified in the plan, including inspection and sampling of storm water discharges, quarterly ground water monitoring at locations that will allow corrective actions and containment measures to prevent offsite migration or vertical migration of contamination, identification and verification of the efficacy of testing methods and quality assurance reviews of test results, and reporting within 24 hours of any and all deviations from compliance metrics to the owner, the third-party corrective measures contractor, and the local authorities identified in the local permit;

k. The Compliance Assurance Plan shall document that the prepared plans and procedures are based on sound science and includes an updated review of best practices and technologies and test methods, and provides for specific compliance metrics to assure the performance requirements of the plans are met and the permit approval conditions are satisfied, and for annual audits, inspections, and certification by qualified and experienced, and licensed third party(ies), of compliance with the procedures and provisions of the various operational plans, including with the identified metrics in the plans;

2. Upon signing and submitting a CAFO Operations Permit Application to the Town Clerk, the applicant shall include and sign a notarized statement that the applicant agrees to fully compensate the Town for all legal services, expert consulting services, and other expenses which may be reasonably incurred by the Town in reviewing and considering the application, regardless of whether or not the application for a permit is subsequently approved, with or without conditions, or denied by the Town Board. The applicant statement shall also state that the applicant agrees to fully compensate the Town for all legal services, expert consulting services and other expenses, for verifying and enforcing compliance with the terms of the permit, with or without conditions, if approved by the Town Board. The applicant shall submit the application fee as required by the Town Clerk.

3. After receiving the application and the application fee, the Town Clerk shall mail a notice that a CAFO Operations Permit Application has been received to all landowners within 3 miles of the proposed CAFO with the date and time of a Town Board meeting at which the application will be considered. The notice shall provide information on how interested persons and parties may inspect and obtain a copy of the application.

4. The Town Clerk shall place the application on the agenda for the next regular Town Board meeting for which required notice can be provided.

5. At a formal public hearing held by the Town Board on the application at least sixty (60) days after it has been determined to be complete, the Town Board shall consider any evidence concerning the application and the proposed CAFO presented by the applicant and any other interested persons or parties, including members of the public and other governmental agencies or entities, and special legal counsel and expert consultants who may be hired by the Town to review the application and advise the Town Board.

6. In its review and consideration of a CAFO Operations Permit Application, the Town Board shall act in a quasi-judicial capacity, and its final decision on whether to approve and issue a CAFO Operations Permit, either with or without conditions, shall be based on written findings of fact and conclusions of law consistent with the provisions of this Ordinance, which shall be filed with the Town Clerk and served on the applicant by certified U.S. Mail.

7. The Town Board shall approve and issue a CAFO Operations Permit, either with or without conditions, if it determines by a majority vote of all members of the Town Board, supported by clear and convincing evidence presented by the applicant, that the operations of the proposed CAFO, with or without conditions, will protect health (including human and animal), safety, and general welfare, prevent pollution and the creation of private nuisances and public nuisances, and preserve the quality of life, environment, and existing small-scale livestock and other agricultural operations of the Town and that the application meets all other requirements of this Ordinance.

Section 9. Financial Surety

A CAFO Operations Permit shall require the applicant and all contractors, subcontractors, agents and representatives, to ensure that sufficient funds will be available for pollution clean-up, nuisance abatement, and proper closure of the operation if it is abandoned or otherwise ceases to operate as planned and permitted, based on the following provisions:

1. A determination shall be made regarding the financial assurance level required by the scale of the operation. As a condition of the license, the required financial assurance shall be filed with the Town of Isabelle in an amount sufficient to clean up environmental contamination if the same were to occur, to abate public nuisances caused by the operation, including but not limited to the testing and replacement of any potentially contaminated private and public wells and water supplies within the areas subject to operations, and to ensure proper closure of the operations should the applicant elect to close or should closure occur for some other reason. The amount of the financial assurance shall be based on a Closure/Cleanup/Decommissioning and Site Restoration Plan, sealed by a licensed engineer, and based on engineering estimates of the typical cost to address the contamination of ground water within a quarter-mile radius, the replacement cost for any wells or water supplies within a quarter mile, the remediation cost for 1/2 mile of the sediment of a receiving stream, and the complete removal, closure and restoration of the subject facility to approximate its original condition,

including demolition based on a site-specific closure plan, including: assuming 1 foot of affected soil below all ponds, tanks, pipes and animal holding areas, and including a reasonable contingency based upon the uncertainty in the estimate as identified by the engineer. Upon notification of the required amount of the financial assurance by the Town, but prior to commencing operations, the applicant shall file with the Town the financial assurance conditioned on faithful performance of all requirements for the license. Upon notification of receipt of adequate form of finance assurance (as noted below) or deposit approval and verification of conformance with license conditions as verified by a third party engineer, the applicant may commence operations.

2. The applicant may deposit cash or irrevocable letters of credit established with a bank acceptable to the Town as the required financial assurance.

3. The Town may reevaluate and adjust accordingly the amount of the financial assurance required on an annual basis.

Section 10. Conditions of Approval

A CAFO Operations Permit may be approved with conditions to protect public health (including human and animal health), safety, and general welfare, prevent pollution and the creation of private nuisances and public nuisances, and preserve the quality of life, environment, and existing small-scale livestock and other agricultural operations of the Town. It is not the intent of the ordinance to create a requirement that exceeds the State's water quality performance standards, prohibitions, conservation practice and technical standards. To the extent not expressly or otherwise preempted by Wis. Stat. 93.90, and Wis. Admin. Code Ch. ATCP 51 or any other provision of state or federal law, such conditions may include, but are not limited to:

1. Conditions relating to the operational characteristics of the proposed operation, to protect public health, prevent point and non-point sources of air and water pollution, and prevent private nuisances and public nuisances; including provisions for specific air emissions controls, retention ponds and berms to prevent releases to surface water, liners under operational areas to prevent infiltration to ground water, the annual testing of nearby wells and springs, and annual inspections for permit compliance by representatives of local authorities;

2. Conditions relating to the management of animal and other waste that, may be generated as part of an operation's ongoing operation, to protect public health, prevent point and non-point sources of air and water pollution, and prevent private nuisances and public nuisances, including the operator's paying for periodic inspections and air emission, surface water, and ground water testing by consultants retained by local authorities, including the following added provisions:

    a. The Waste Management Plan in Section 8.1.b. will include scientifically significant baseline data on the water quality of local human drinking and agricultural wells.
    b. For applications that include land spreading of manure,
        i. i. the amount of land used to spread waste as part of the Waste Management Plan in Section 8.1.b. will be based on spreadable acres, not total acres, and
        ii. ii. the application will include all Manure Land Application Agreements with landowners, with a minimum contract period of five (5) years, and such agreements must include provisions for application of wastes in accord with the Waste Management Plan required in Section 8. 1. b.;

3. Conditions relating to the population and depopulation of individual animal housing facilities, to

protect public health and prevent the spread of animal-borne and vector-borne disease, to assure a safe level of sanitation, and to assure human health hazard control or health protection for the community, including provisions for health department inspections and testing of dead animals and provisions for the safe treatment and transport off-site disposal of sanitation wastes at a separately permitted commercial facility;

4. Conditions relating to biosecurity and the maintenance of animal health and welfare, to prevent the spread of animal-borne and vector-borne disease, to protect public health, and provide for animal safety and welfare, including provisions for frequent testing of livestock for specific diseases of concern and development of emergency containment measures in the event of the detection of a disease of particular concern;

5. Conditions relating to transportation of animals as part of the ongoing operations, to protect public health, prevent pollution, and prevent private nuisances and public nuisances, including completion of a traffic and transportation needs analysis and applicant's paying for traffic control and roadway improvements, including provisions for high-pressure washing with disinfectant of all transport trailers coming into the Town to include treatment and disposal of water used for disinfectant;

6. Conditions relating to protection of private and public drinking and agricultural wells, and other public water supplies, as part of an ongoing operation to protect public health, prevent pollution, and prevent private nuisances and public nuisances, including provisions for completing a thorough survey and mapping of private and public wells and springs and artesian fed water bodies, including wetlands and karst areas, as well as a thorough hydrogeologic characterization of ground water within 5 miles of the proposed CAFO;

7. Conditions relating to air emissions and dust control as part of an ongoing operation, to protect public health, prevent pollution and prevent private nuisances and public nuisances, including provisions for property boundary offsets, air emission and air quality testing and for specific types of air emission controls on all facility exhaust fans, waste management areas, and livestock quarantine holding areas;

8. Conditions relating to protection of the private and public property rights and property values of affected property owners, as part of an ongoing operation, to protect the general welfare of the Town's residents and property owners, and to prevent private nuisances and public nuisances;

9. Conditions relating to permit compliance, enforcement and monitoring, including establishment of fees that may be assessed against the permittee to cover the costs of hiring, training, and maintaining Town personnel, or for contracting with private consultants, to conduct permit compliance, enforcement and monitoring activities for the Town, as well as provisions for annual certification of compliance by the owner/operator and by qualified and licensed third-party auditor, approved by the Town;

10. Conditions relating to the monitoring of surface water, ground water, air quality and all other environmental factors and considerations, including retention pond sampling and testing and ground water quality monitoring at compliance points sufficiently far from the facility's property line to allow implementation of prevention of offsite migration corrective action and containment measures acceptable to the Town;

11. Any other conditions deemed reasonably necessary or appropriate by the Town Board to effectively, efficiently, and comprehensively regulate the operations of a facility, to protect public health (including human and animal health), safety, and general welfare, prevent pollution and the creation

of private nuisances and public nuisances, and preserve the quality of life, environment, and existing small-scale livestock and other agricultural operations of the Town, including provisions for adequate fire-fighting equipment and storage of adequate fire-fighting water based on a needs analysis approved by the Town and a Fire Safety Needs Analysis Plan that is annually reviewed and updated based on the following:

a. Guidelines from the National Fire Protection Association NFPA 1141: Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas;
b. Water Supply Needs Analysis based on guidelines included in NFPA 1142: Standard on Water Supplies for Suburban and Rural Fire Fighting;
c. Wildlands Fire Analysis based NFPA1144: Standard for Reducing Structure Ignition Hazards and Wildland Fires;
d. Animal Housing Analysis based on NFPA 150: Fire and Life Safety in Animal Housing Facilities Code.

These conditions may apply not only to the CAFO facility itself, but also to any property upon which manure, carcasses, body tissue or other by products of the CAFO are spread, deposited or disposed of. Any conditions imposed under this Ordinance may be modified by the Town Board at the time of each annual renewal. Any modifications must be documented as required by section 11, below.

Section 11. Record of Decision

The Town Board must issue its decision in writing. The decision must be based on written findings of fact supported by evidence in the record.

Section 12. Transferability of License

A CAFO Operations Permit and the privileges granted by this license run with the land approved under the license and remain in effect, despite a change in ownership of the livestock facility, as long as the new operator does not violate the terms of the local approval.

Within thirty (30) days of a change of ownership of the livestock facility, the new owner(s) of the facility shall submit a signed and notarized affidavit to the Town Clerk ensuring compliance with the requirements of the ordinance. The new owner(s) will also file information with the Town Clerk providing pertinent information, including but not limited to such information as the name, address, phone and email of the new owner and date of transfer of ownership.

Section 13. Expiration of License

A CAFO Operations Permit remains in effect regardless of the amount of time that elapses before the livestock operator exercises the authority granted under this permit, and regardless of whether the livestock operator exercises the full authority granted by the approval. However, the Town may treat a CAFO Operations Permit as lapsed and withdraw the license if the license holder fails to do all of the following within 2 years after issuance of license:

1. Begin populating the CAFO.

2. Begin constructing all of the new or expanded livestock housing or waste storage structures proposed in the application for local approval.

3. Pay the renewal fee on or before January 1 of each calendar year as required by Section 14 of this Ordinance.

Section 14. License Terms, Modifications and Annual Renewal Fee

A CAFO Operations Permit and the privileges granted by a CAFO Operations Permit issued under this Ordinance is conditioned on the livestock operator's compliance with the standards in this Ordinance, and with commitments made in the application for a CAFO Operations Permit. The operator may make reasonable changes that maintain compliance with the standards in this Ordinance, and the Town Board shall not withhold authorization for those changes unless the Town can demonstrate good cause to do so. A violation of the Permit or a failure to comply with the commitments made in the application may result in suspension and/or termination of the Permit.

The Town Board, or its designee, shall work to ensure on an ongoing basis that all requirements and conditions of any permit issued under this Ordinance are followed by the permittee. To assist in accomplishing this task, any permit issued pursuant to this Ordinance shall be subject to an annual renewal fee in the amount of One Dollar ($1.00) per animal unit. The Town may reevaluate and adjust accordingly the amount of the application fee on an annual basis. Modifications to the conditions of a CAFO Operations Permit may be made as described in Sections 10 and 11.

Section 15. Penalties

Any person who violates any of the provisions of this Ordinance, or who fails, neglects or refuses to comply with the provisions of this Ordinance, or who knowingly makes any material false statement or knowing omission in any document required to be submitted under the provisions hereof, shall be subject to the following penalties:

1. Upon conviction by a court of law, pay a forfeiture of not less than $5,000 nor more than $10,000, plus the applicable surcharges, assessments, and costs for each violation.

2. Second and subsequent violations require forfeiture of not less than $10,000.

3. Each day a violation exists or continues shall be considered a separate offense under this Ordinance.

4. In addition, the Town Board may seek injunctive relief from a court of record to enjoin further violations.

5. In addition, the Town Board may suspend or revoke the local approval of a CAFO Operations Permit under this Ordinance after due notice to the livestock facility owner and a public hearing to determine whether the license should be suspended or revoked.

The Town shall exercise sound judgment in deciding whether to suspend or revoke a CAFO Operations Permit. The Town shall consider extenuating circumstances, such as adverse weather conditions, that may affect an operator's ability to comply.

In addition to any other penalty imposed by this Ordinance, the cost of abatement of any public nuisance on the licensed premises by the Town may be collected under this Ordinance or Sec. 823.06 of Wis. Statutes against the owner of the real estate upon which the public nuisance exists. Such costs of

abatement may be recovered against the real estate as a special charge under Sec. 66.0627 of Wis. Statutes unless paid earlier.

Section 16. Appeals

An applicant or any other person or party who is aggrieved by a final decision of the Town Board on whether to issue a CAFO Operations Permit, either with or without conditions, or a taxpayer, may, within thirty (30) days after the filing of the decision with the Town Clerk, commence an action seeking the remedy available by certiorari in Pierce County Circuit Court. The court shall not stay the decision appealed from, but may, with notice to the Town Board, grant a restraining order. The Town Board shall not be required to return the original papers acted upon by it, but it shall be sufficient to return certified or sworn copies thereof. If necessary, for the proper disposition of the matter, the court may take evidence, or appoint a referee to take evidence and report findings of fact and conclusions of law as it directs, which shall constitute a part of the proceedings upon which the determination of the court shall be made. The court may reverse or affirm, wholly or partly, or may modify, the decision brought up for review.

In any certiorari proceeding brought under the preceding paragraph, attorney fees and costs shall not be allowed against the Town Board unless it shall appear to the court that it acted with gross negligence, or in bad faith, or with malice in making the decision appealed from.

A final decision of the Town Board under this ordinance is not subject to appeal under Wis. Stat. 93.90(5), Wis. Stat 93.30, or Wis. Admin Code Ch. ATCP 51, which apply only to siting decisions.

Section 17. Severability

If any provision of this Ordinance or its application to any person or circumstance is held invalid, the invalidity does not affect other provisions or applications of this Ordinance that can be given effect without the invalid provision or application, and to that end, the provisions of this Ordinance are severable.

Section 18. Effective Date

This Ordinance is effective the day after publication.

Adopted this XXth day of XXX, 20XX by the Town Board of Supervisors.

_____

Town Chair

Attested:

_____

Town Clerk