

## Permit Fact Sheet

### General Information

|                                     |                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Permit Number                       | WI-0056308-07-0                                                                                                                                                                                                                                                                                                       |
| Permittee Name and Address          | Daybreak Foods Creekwood Cage Free<br>N5344 Crossman Road, Lake Mills, WI 53551                                                                                                                                                                                                                                       |
| Permitted Facility Name and Address | <b>Layer Facility-</b> N5344 Crossman Road, Lake Mills, WI 53551; S ½ of SE 1/4 Sec. 27, T07N, R13E<br><b>Pullet Facility-</b> N5432 County Road A, Lake Mills, WI 53551; SW ¼ of SW ¼ Sec. 27, T07N, R13E<br><b>Old Pullet Facility-</b> N5505 Crossman Road, Lake Mills, WI 53551; NE ¼ of SW ¼ Sec. 27, T07N, R13E |
| Permit Term                         | January 01, 2026, to December 31, 2030                                                                                                                                                                                                                                                                                |
| Receiving Water                     | Unnamed tributaries to the Koshkonong Creek and the Crawfish River watersheds and groundwaters of the state                                                                                                                                                                                                           |
| Discharge Type                      | Existing and Continuous                                                                                                                                                                                                                                                                                               |

| Animal Units                                |            |            |                                                                                      |            |                            |
|---------------------------------------------|------------|------------|--------------------------------------------------------------------------------------|------------|----------------------------|
| Animal Type                                 | Current AU |            | Proposed AU<br>(Note: If all zeroes, expansions are not expected during permit term) |            |                            |
|                                             | Mixed      | Individual | Mixed                                                                                | Individual | Date of Proposed Expansion |
| Layers (each) - non-liquid system           | 20753      | 25527      | 0                                                                                    | 0          |                            |
| Broilers/Pullets (each) - non-liquid system | 3120       | 4992       | 0                                                                                    | 0          |                            |
| Total                                       | 23873      | 25527      | 0                                                                                    | 0          |                            |

### Facility Description

Daybreak Foods Creekwood Cage Free is an existing Concentrated Animal Feeding Operation (CAFO) located in the Township of Lake Mills in Jefferson County, WI. Daybreak Foods Creek Wood Cage Free is owned and operated by Daybreak Foods Inc. Daybreak Foods Creekwood Cage Free consists of a Layer Facility located N5344 Crossman Road, Pullet Facility at N5432 County Road A, and the Old Pullet Facility at N5505 Crossman Road. The Layer Site consist of five-layer barns, one solid manure storage and processing building, and egg washing and processing building. The Pullet Facility consists of 3 pullet barns and associated manure load out areas. The Old Pullet Facility has two old pullet buildings used for storage and the three-stage process wastewater waste storage facility used to store egg wash water.

The current flock size is 25,527 animal units (2,075,340 layer chickens, and 624,000 pullets). There is no planned expansion during this permit term. Daybreak Foods Creekwood Cage Free currently produces approximately 7,068,300

gallons of process wastewater, and approximately 50,000 tons of solid manure annually. All solid manure, eggshells, and composted mortalities are processed and sold as commercial fertilizer under their Department of Agriculture Trade and Consumer Protection Fertilizer License. Daybreak Foods Creekwood Cage Free currently has 519.4 acres (23.5 owned and 495.9 controlled through contracts, rental agreements or leases, or under manure agreements) of which 480.8 are spreadable acres.

## Substantial Compliance Determination.

### Enforcement During Last Permit:

- A compliance reminder was sent to Daybreak Food Creekwood Cage Free on November 5, 2024, for failure to adhere to permit section 1.3.1: Proper Operation and Maintenance; of the process wastewater waste storage facilities. Daybreak Foods Creekwood Cage Free took the required actions, and the complete response was received on December 10, 2024.

After a desk top review of all compliance schedule items, annual reports, and permit application materials and a site visit on Augusts 1, 2024 and November 11, 2024, this facility has been found to be in substantial compliance with their current permit.

## Sample Point Descriptions

| Sample Point Designation For Animal Waste |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Sample Point Number                       | Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| 004                                       | Storage Buildings: Sample point 004 is for two existing solid waste storage buildings (F1 and F2) located on the south side of the farm at N5505 Crossman Road. The storage buildings are concrete floored buildings located between the grain storage bins. Daybreak Foods plans to use these buildings in an emergency situation and are currently used for equipment storage. Manure, processed manure, or compost stored in these buildings could be distributed under the facilities approved alternative distribution agreement or further processed in the Manure Processing building (Sample Point 009). The storage buildings were last evaluated in 2017 and met permit requirements. |  |
| 006                                       | Process Wastewater: Sample point 006 is for liquid waste storage facilities located on the west side of Crossman Road (N5505). The process wastewater storage facilities consist of three cell poly-lined storage located north of pullet barn 3. The facility has a combined capacity of 4.2 million gallons (one aerobic digester, one aerated cell, and 3.4-million-gallon decanter storage) and was constructed in 2011. This storage accepts process wastewater from the egg washing and breaking facility located on the east side of Crossman Road (N5344).                                                                                                                              |  |
| 008                                       | Solid Pullet Manure: Sample Point 008 includes all the pullet manure generated at the pullet barns at N5432 County Highway A, Lake Mills, WI on the west side of the Crossman Road and part of the original Creekwood site. This manure will be transferred by trucks to the new Manure Drying and Processing Building (sample point 009) on the east side of Crossman Road (N5344). This includes the 3 new cage free pullet barns constructed in 2018 and 2019 with Department approved plans and specifications.                                                                                                                                                                             |  |

| Sample Point Designation For Animal Waste |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Sample Point Number                       | Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
| 009                                       | Manure Processing Building: Sample point 009 is for a solid waste storage facility located at the Layer Facility on the east side of Crossman Road (N5344) . The manure processing building liquid tight concrete floor and side walls and is located west of the five layer barns. The facility has a capacity of 1.74 million cubic feet, measuring 180 ft by 565 ft by 16 ft high and was constructed in 2018 with Department approved plans and specifications. This storage accepts manure from the adjoining layer barns via conveyer system and from the three pullet barns (Sample Point 008) via truck. Routine mortalities are also composted in this building. Manure and compost are dried, processed, mixed, loaded, and stored within this building. The processed manure and compost are then distributed in accordance to the farms alternative manure distribution plan (NR 243.142(2)(b)) approved with the farms nutrient management plan and the DATCP fertilizer license. |  |
| 011                                       | Storm Water Runoff Control System: Sample point 010 is for visual monitoring and inspection of all production site storm water conveyance systems. This includes roof gutter and downspout structures, driveways, drainage tile systems, grassed waterways and other diversion systems that transport uncontaminated storm water. Proper operation and maintenance is required to keep uncontaminated runoff diverted away from manure and process wastewater handling systems. Weekly inspections are required and shall be recorded according to monitoring program.                                                                                                                                                                                                                                                                                                                                                                                                                         |  |

## Permit Requirements

### 1 Livestock Operations - Proposed Operation and Management

#### Production Area Discharge Limitations

Beginning on the effective date of the permit, the permittee may not discharge pollutants from the operation's production area (e.g., manure storage areas, outdoor animal lots, composting and leachate containment systems, milking center wastewater treatment/containment systems, raw material storage areas) to navigable waters, except in the event a 25-year, 24-hour rainfall event (or greater) causes the discharge from a structure which is properly designed and maintained to contain a 25-year, 24-hour rainfall event for this location as determined under s. NR 243.04. If an allowable discharge occurs from the production area, state water quality standards may not be exceeded.

#### Runoff Control

The permit requires control of contaminated runoff from all elements of the production area to prevent a discharge of pollutants to navigable waters in accordance with the Production Area Discharge Limitations and to comply with surface water quality standards and groundwater standards. Beginning on the effective date of this permit, (if needed) interim measures shall be implemented to prevent discharges of pollutants to navigable waters. In addition, permanent runoff control system(s) shall be designed, operated and maintained in accordance with the requirements found in USDA Natural Resources Conservation Service standards and ch. NR 243, Wis. Adm. Code. If any upgrading or modifications to runoff controls are necessary, formal engineering plans and specifications must submitted to the Department for approval.

#### Manure and Process Wastewater Storage

The permit requires the operation to have adequate storage for manure and process wastewater and that storage or containment facilities are designed, operated and maintained to prevent overflows and discharges to waters of the state. In order to prevent overflows, the permittee must maintain levels of materials in liquid storage or containment facilities at or

below certain levels including a one foot margin of safety that can never be exceeded. If any upgrading or modifications to the storage facilities are necessary, formal engineering plans and specifications must be submitted to the Department for approval.

The permittee currently has approximately 217 days of storage for liquid manure. The permittee must maintain 180 days of storage, unless temporary reductions in required storage are approved by the Department.

### **Solid Manure Stacking**

The operation has proposed to stack solid manure. All stacking of solid manure shall be done in accordance with ch. NR 243, Wis. Adm. Code, which includes restrictions from NRCS Standard 313. Stacking of manure is considered to be part of the production area and is subject to the Production Area Discharge Limitations.

### **Ancillary Service and Storage Areas**

The permittee shall take preventative maintenance actions and conduct visual inspections to minimize pollutant discharges from areas of the operation that are not part of the production area or land application areas. These areas are called ancillary service and storage areas and include access roads, shipping and receiving areas, maintenance areas, refuse piles and CAFO outdoor vegetated areas.

### **Nutrient Management**

With a current flock size of 25,527 animal units (2,075,340 layers and 624,000 pullets), it is estimated that approximately 50,000 tons and 7,000,000 gallons of manure and process wastewater will be produced per year. The permittee owns *approximately* 23.5 acres of cropland and rents about 495.9 acres. Given the rotation commonly used by the permittee, 480.8 acres are available (or open) to receive manure and process wastewater on an annual basis. The permit requires all landspreading of manure and process wastewater be completed in accordance with an approved nutrient management plan. The permit will require sampling and analysis of manure and process wastewater that will be landspread. Landspreading rates must be adjusted based on sample analysis. The permit requires the permittee to maintain a daily log that documents landspreading activities. The permit also requires the submittal of an annual report that summarizes all landspreading activities. Plans must be updated annually to reflect cropping plans and other operational changes. Among the requirements, the plans must include detailed landspreading information including field by field nutrient budgets.

The permittee is required to implement a number of practices to address potential water quality impacts associated with the land application of manure and process wastewater. Among the permit conditions are restrictions on manure ponding, restrictions on runoff of manure and process wastewater from cropped fields, and setbacks from wells and direct conduits to groundwater (e.g., sinkholes, fractured bedrock at the surface). In addition, the permittee must implement a phosphorus based nutrient management plan that addresses phosphorus delivery to surface waters by basing manure and process wastewater applications on soil test phosphorus levels or the Wisconsin Phosphorus index. Additional phosphorus application restrictions apply to fields that are high in soil test phosphorus (>100 ppm).

The permittee must also implement conservation practices when applying manure near navigable waters and their conduits, referred to as the Surface Water Quality Management Area (SWQMA). These practices include a 100-foot setback from navigable waters and their conduits, a 35-foot vegetated buffer adjacent to the navigable water or conduit, or a practice that provides equivalent pollutant reductions equivalent to or better than the 100-foot setback.

In addition, the permittee must comply with restrictions on land application of manure and process wastewater on frozen or snow-covered ground. Included in these restrictions is a prohibition on surface applications of solid manure ( $\geq 12\%$  solids) on frozen or snow-covered ground during February and March. Non-emergency surface applications of liquid manure (<12%) on frozen or snow-covered ground are prohibited.

### **Monitoring and Sampling Requirements**

The permittee must submit a monitoring and inspection program that outlines how the permittee will conduct self-inspections to determine compliance with permit conditions. These self-inspections include visual inspections of water lines, diversion devices, storage and containment structures and other parts of the production area. The permit requires periodic inspections and calibrations of landspreading equipment. The permittee must take corrective actions to problems identified inspections or otherwise notify the Department. Samples of manure, process wastewater and soils receiving land applied materials from the operation must also be collected and analyzed.

## Sampling Points

The permit identifies the different sources of land applied materials (e.g., manure storage facilities, milking centers, egg-washing facilities) as “Sampling Points.” For these Sampling Points, the permittee is required to sample and analyze the different sources for nutrients and other parameters which serve as the basis for determining rates of application for these materials. Other areas are also identified as Sampling Points as a means of identifying them as areas requiring action by the permittee, such as an upgrade or evaluation of a certain system or structure (e.g., runoff control systems), even though sampling is not actually required.

### 1.1 Sample Point Number: 004- Storage Buildings; 008- Solid Pullet Manure ; 009- Manure Processing Building (Solid Manure Sample Points)

| Monitoring Requirements and Limitations |            |                 |                  |             |       |
|-----------------------------------------|------------|-----------------|------------------|-------------|-------|
| Parameter                               | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Nitrogen, Total                         |            | lbs/ton         | Quarterly        | Grab        |       |
| Nitrogen, Available                     |            | lbs/ton         | Quarterly        | Calculated  |       |
| Phosphorus, Total                       |            | lbs/ton         | Quarterly        | Grab        |       |
| Phosphorus, Available                   |            | lbs/ton         | Quarterly        | Calculated  |       |
| Solids, Total                           |            | Percent         | Quarterly        | Grab        |       |

#### 1.1.1 Changes from Previous Permit

Sample Point 004 and 008 was updated to describe the current use and naming convention

Sample point 009 description was updated with current engineering volumes, current use and management, and naming convention

#### 1.1.2 Explanation of Operation and Management Requirements

Solid manure sources must be properly stored and land applied according to the permit and nutrient management plan.

### 1.2 Sample Point Number: 006- Process Wastewater (Liquid Sample Points)

| Monitoring Requirements and Limitations |            |                 |                  |             |       |
|-----------------------------------------|------------|-----------------|------------------|-------------|-------|
| Parameter                               | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Nitrogen, Total                         |            | lb/1000gal      | 2/Month          | Grab        |       |
| Nitrogen, Available                     |            | lb/1000gal      | 2/Month          | Calculated  |       |
| Phosphorus, Total                       |            | lb/1000gal      | 2/Month          | Grab        |       |
| Phosphorus, Available                   |            | lb/1000gal      | 2/Month          | Calculated  |       |
| Solids, Total                           |            | Percent         | 2/Month          | Grab        |       |

### 1.2.1 Changes from Previous Permit

Sample Point 006 description was updated with the current engineering volumes and naming convention.

### 1.2.2 Explanation of Operation and Management Requirements

Process wastewater sources must be properly stored and land applied according to the permit and nutrient management plan.

## 1.3 Sample Point Number: 011- Storm Water Systems (Runoff Controls Sample Points)

### 1.3.1 Changes from Previous Permit

Sample Point 011 was added to account for the monitoring and inspection of the stormwater conveyance systems around the production area (s. NR 243.13 (7)).

### 1.3.2 Explanation of Operation and Management Requirements

There is no required nutrient sampling for the runoff control sample points. Rather, weekly or quarterly inspections are required and shall be recorded according to the monitoring plan and submitted with the Annual Report.

## 2 Schedules

### 2.1 Monitoring & Inspection Program

| Required Action                                                                                                                                                                                                                               | Due Date   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Proposed Monitoring and Inspection Program: Consistent with the Monitoring and Sampling Requirements subsection, the permittee shall submit a proposed monitoring and inspection program within 30 days of the effective date of this permit. | 01/31/2026 |

## 2.2 Explanation of Schedules

A monitoring and inspection program is required to be submitted per s. NR 243.19(1).

## 2.3 Emergency Response Plan

| Required Action                                                                                                                                         | Due Date   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Develop Emergency Response Plan: Develop a written Emergency Response Plan within 30 days of permit coverage, available to the Department upon request. | 01/31/2026 |

## 2.4 Explanation of Schedules

An emergency response plan is required to be developed per s. NR 243.13(6)(a).

## 2.5 Annual Reports

Submit Annual Reports by January 31st of each year in accordance with the Annual Reports subsection in Standard Requirements.

| Required Action                                                                                                                                                   | Due Date   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Submit Annual Report #1: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E. | 01/31/2026 |
| Submit Annual Report #2: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E. | 01/31/2027 |
| Submit Annual Report #3: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E. | 01/31/2028 |
| Submit Annual Report #4: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E. | 01/31/2029 |
| Submit Annual Report #5: To include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E. | 01/31/2030 |
| Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed.                                                             |            |

## 2.6 Explanation of Schedules

Annual reports are required to be submitted per s. NR 243.19(3).

## 2.7 Nutrient Management Plan

Submit annual nutrient management plan (NMP) updates by March 31 of each year. Note, in addition to annual NMP updates, submit NMP amendments and substantial revisions to the department for written approval prior to implementation of any changes to the NMP.

| Required Action                                                                                                                                                                                 | Due Date   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Submit NMP Update #1: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D. | 03/31/2026 |
| Submit NMP Update #2: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D. | 03/31/2027 |
| Submit NMP Update #3: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D. | 03/31/2028 |
| Submit NMP Update #4: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D. | 03/31/2029 |
| Submit NMP Update #5: To include actual cropping, tillage, and nutrient application data from the previous calendar or crop year, consistent with the requirements of department for 3400-025D. | 03/31/2030 |
| Ongoing Management Plan Annual Updates: Continue to submit Annual Updates to the Nutrient Management Plan until permit reissuance has been completed.                                           |            |

## 2.8 Explanation of Schedules

Nutrient management plan updates are required to be submitted per s. NR 243.19(3).

## 2.9 Submit Permit Reissuance Application

| Required Action                                                                                              | Due Date   |
|--------------------------------------------------------------------------------------------------------------|------------|
| Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration. | 07/01/2030 |

## 2.10 Explanation of Schedules

Application required to be submitted per s. NR 243.12(1)(2(d)).

## Other Comments

None

## Attachments

Inspection Report with Map- November 5, 2024

Inspection Report December 23, 2024

Conditional Nutrient Management Plan Approval Letter(s)- June 17, 2025

Evaluation of Days of Storage- No Additional Action Letter- August 21, 2025

Compliance Reminder – November 5, 2024

Public Notice

## **Justification Of Any Waivers From Permit Application Requirements**

No waivers requested or granted as part of this permit reissuance

**Prepared By: Eric Struck      Agricultural Runoff Management Specialist**

**Date: October 14, 2025**



November 5, 2024

Daybreak Foods – Creekwood - Cage Free  
Berret Rehm  
N5432 County Highway  
Lake Mills WI 53551

WPDES Permit No. WI-0056308-06-0  
Jefferson County

**Subject: Mass Mortality Plan Proposal and Inspection Report Letter**

Dear Mr. Rehm:

On August 1, 2024 the Wisconsin Department of Natural Resources (WDNR) conducted a site inspection for Daybreak Food – Creekwood- Cage Free as part of the WPDES permit reissuance process and to discuss the proposed plan for a mass mortality event. This inspection covered the layer facility only, the pullet facility will be inspected at a later date. A copy of this inspection report is attached. Based on the site visit there are no additional items that will be required as part of the final permit application for the layer facility. Additional items maybe required for the proposed mass mortality plan.

Please review the attached site inspection report. The end of the report summarizes items to be included in the mass mortality plan.

The final permit application should be submitted by April 1, 2025. Permit application materials must be submitted through the ePermitting System located at <http://dnr.wi.gov/permits/water/>. The following is required for a complete permit application:

**Permit Application Materials Required for All Operations:**

- 3400-025 form (Livestock/Poultry Operation WPDES Permit Application)
- 3400-025A form (Animal Units Calculation Worksheet)
- 3400-025B form (Nutrient Management Plan Checklist)
- 3400-025C form (Reviewable Facilities of Systems Checklist)
- Soil survey map(s) for each site managed by your operation
- Labeled aerial map(s) showing the features and structures located at each site managed by your operation (clearly delineate what is existing and proposed)
- Calculations documenting a minimum of 180 days liquid manure (and process wastewater) storage
- Supporting documentation for 180-day storage calculations
- A complete 5-year Nutrient Management Plan (NMP). If necessary, include a description of permanent spray irrigation systems and any other landspreading or treatment systems (proposed or active)
- \*Plans and specifications for reviewable facilities (if proposed)

**\*Note: Plans and specifications must be submitted through the ePermitting system as a separate submittal**

If you have any questions regarding this letter, inspection report, or permit requirements, please contact me at (608) 422-1512 or [eric.struck@wisconsin.gov](mailto:eric.struck@wisconsin.gov). If you have any questions on the ePermitting submittal process, please contact Falon French at (608) 228-5265 or [faon.french@wisconsin.gov](mailto:faon.french@wisconsin.gov).

Sincerely,

A handwritten signature in black ink that reads "Eric J. Struck". The signature is written in a cursive style with a large, stylized "E" and "S".

Eric J. Struck

Agricultural Runoff Management Specialist – Bureau of Watershed Management

Wisconsin Department of Natural Resources

Cell: (608)-422-1512

[eric.struck@wisconsin.gov](mailto:eric.struck@wisconsin.gov)

Attachments: Inspection report August 1, 2024  
USGS Soil Web Survey Maps generated by Struck.

CC: Laura Bub, Falon French, James Salscheider (WDNR)  
Philips Crop Care  
Joe Strupp, Sam Peterson- Jefferson County



## **CAFO Compliance Report: November 5, 2024**

Inspection Date: August 1, 2024

Inspection Type: Reissuance

Operation Name: Daybreak Foods – Creekwood - Cage Free

WPDES Permit No. WI-0056308-06-0

Operation Address: Layer Facility, N5344 Crossman Road, Lake Mills, WI 53551  
Pullet Facility, N5432 County Highway A, Lake Mills, WI 53551  
Compost Barn, N5505 Crossman Road, Lake Mills, WI 53551

County: Jefferson

Watershed: Lower Koshkonong Creek and the Lower Crawfish River

On-Site representatives: Chad Johnson and Kevin Gast

DNR Staff / Report Writers: Eric Struck

---

On August 1, 2024, Eric Struck meet with representatives of Daybreak Foods – Creekwood – Cage Free (Daybreak) to discuss a mass mortality plan for highly pathogenic avian influenza and inspect the production area at Layer Facility for reissuance of their WPDES Permit. The inspection began about 1 pm and concluded at about 3:30 pm. The weather the day of the inspection was sunny with temps in the 80's. About a half inch of rain had fallen in the week prior to the inspection and no water samples were taken. The inspection covered the entire production area of the Layer Facility. The pullet facility, composting barns, and waste storage facilities will be inspected at a later date. Due to bio security reasons the inspection was limited to outdoor areas and the manure storage building, areas of animal housing and egg processing were not entered.

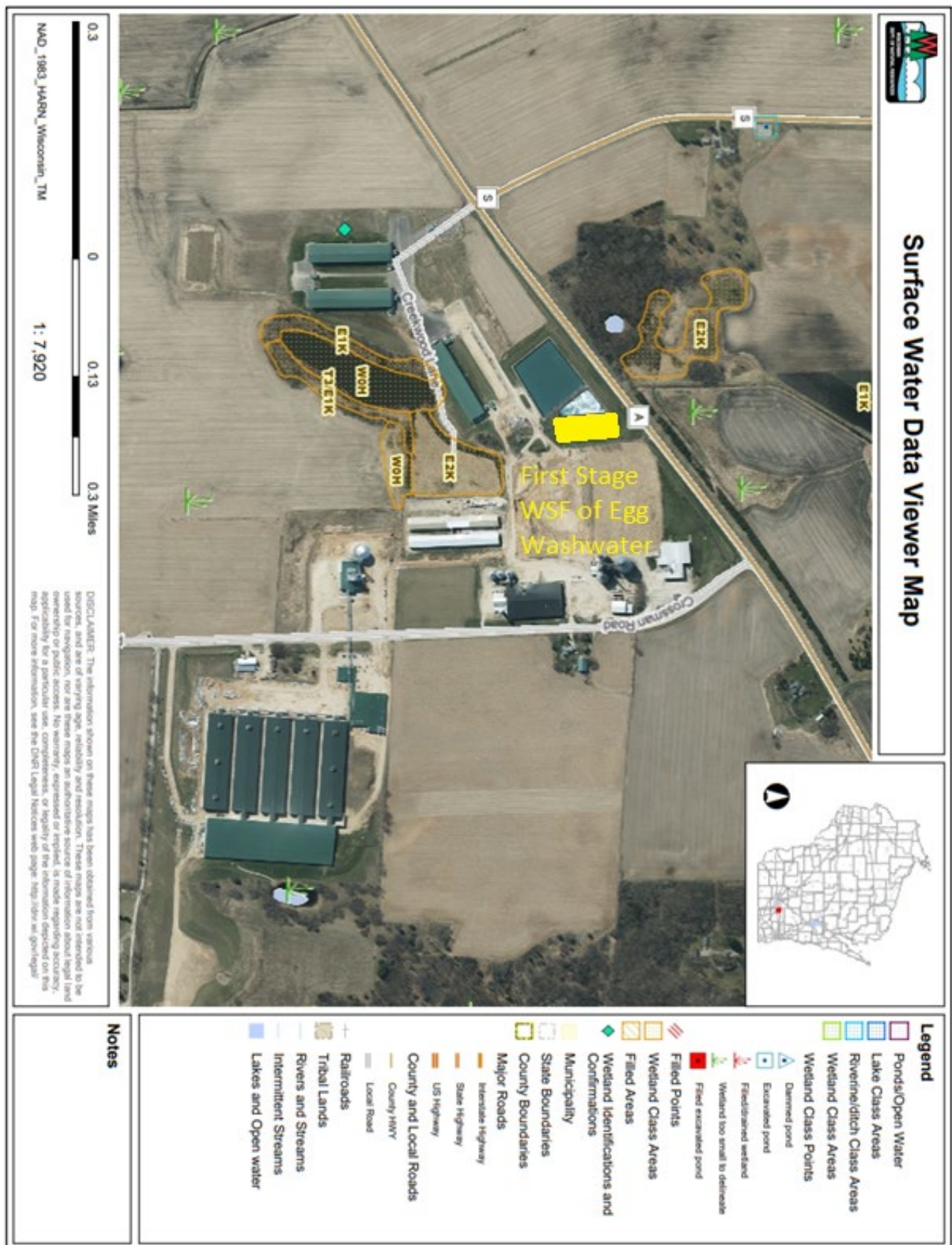
Please see the final section of the inspection report for a list of action items, areas of concern, and any addition requirements. Daybreak's WPDES permit expires on September 30, 2025, with a complete reissuance application due on **April 1, 2025**.

During the inspection areas of the property were inspected as possible sites for the composting of mortalities from a potential outbreak of high pathogenic avian influenza (HPAI). Areas to the east of the layer facility were walked. Other potential areas around the layer barn production area were also discussed. Some other areas discussed included areas near the waste storage facilities (WSF), pullet barns, and old compost barns. Struck was going to reach out to staff that worked on previous outbreaks to determine the area utilized for composting and volume of carbon source used. Daybreak and Struck discussed the development of a mass mortality plan with the facility. Daybreak asked for additional recommendations for the plan. Daybreak plans to provide a written plan for department review. The final review would be done in partnership with other programs and agencies, such as the as Department of Agriculture Trade and Consumer Protection (DATCP), and Jefferson County.

## Brief Facility Description

Daybreak is its 6<sup>th</sup> permit term. The facility recently rebuilt the production area with 5 cage free laying barns with a manure storage facility and kept three existing pullet barns. All eggs produced at the new laying barns are processed in the new washing facility. The eggs are washed, broken, or graded. Approximately 15,000 to 22,000 gallons of egg wash water are produced daily. The facility has been working on improvements to save water usage. The industrial process wastewater is processed through a three-stage digester system. The first stage was historically an anerobic digesters. With the construction of the new barns and egg processing building the anerobic digester was not functioning as originally designed. The cover was removed in the spring of 2024 and aerators were added to the storage creating an aerobic digester storage facility. Aerators were also added to the second and third stage storage to help facilitated the digestion of backlogged material in the first stage. Stage 1 and Stage 2 have a capacity of 875,000 gallons each, stage 3 has a capacity of 3,300,000 gallons. The storages were constructed from in 2011 and 2012. Currently Daybreak is disposing of the process wastewater either through local municipalities or other disposal companies. Daybreak does maintain the ability to land apply process wastewater according to their approved nutrient management plan.

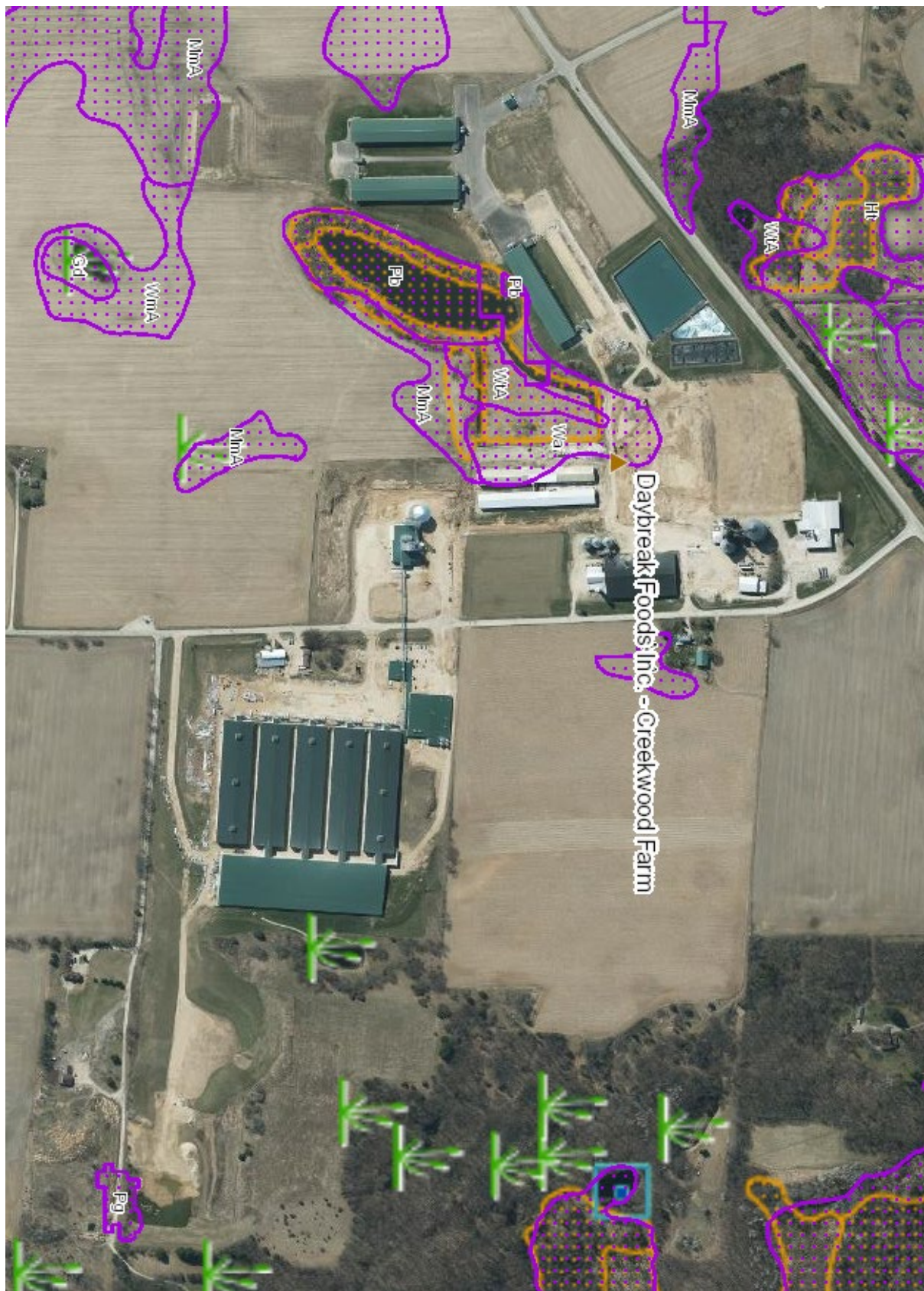
The facility produces approximately 50,000 tons of solid chicken manure annually. Manure is conveyed out of the layer barns and into the Manure Drying and Processing building where it processed into a fertilizer. Manure is also hauled via truck from the pullet houses to the Manure Drying and Processing building. All mortality is currently being composted inside the manure storage building and is blended with manure and is processed as fertilizer. Eggshells from the egg processing facility are delivered to the Manure Drying and Processing building and blended into the fertilizer as an added nutrient benefit. There are also 2 remaining concrete sheds approved for solid manure in an emergency. All manure, eggshells, and mortalities are processed and sold as commercial fertilizer under their Department of Agriculture Trade and Consumer Protection Fertilizer License.



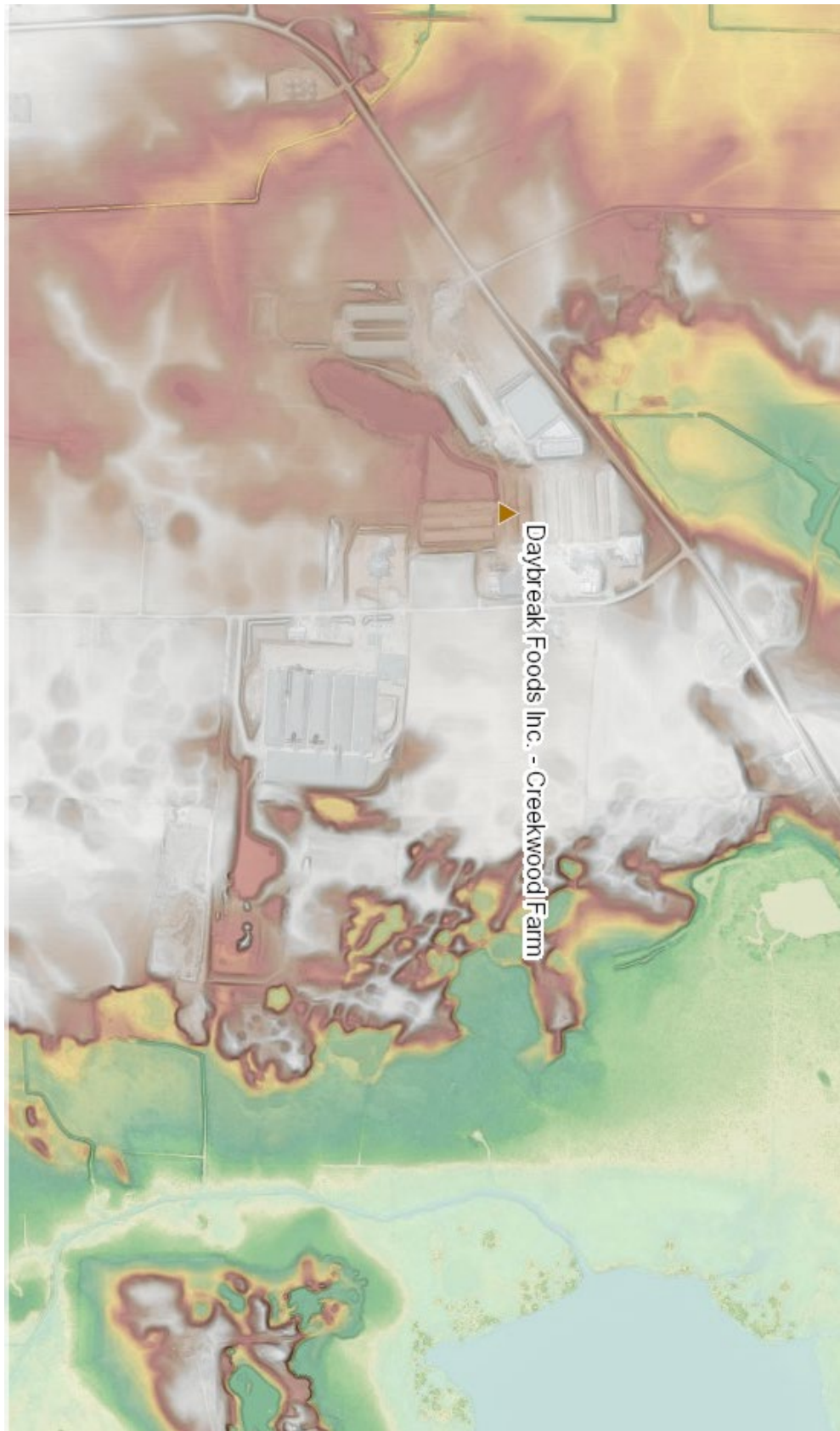
Map 1. Map from WDNR Surface Water Data Viewer. Wetland and surface water layers shown. Yellow shape highlights the first stage of the egg wash water waste storage facilities that act as an aerobic digester treatment facility. Foam observed to the north and east of the first stage.



Map 2. Map from WDNR Ag Surface Water Data Viewer. Wells and surface water layers shown.



Map 3. Map from WDNR Ag Surface Water Data Viewer. Wetlands and wetlands soils layers shown.



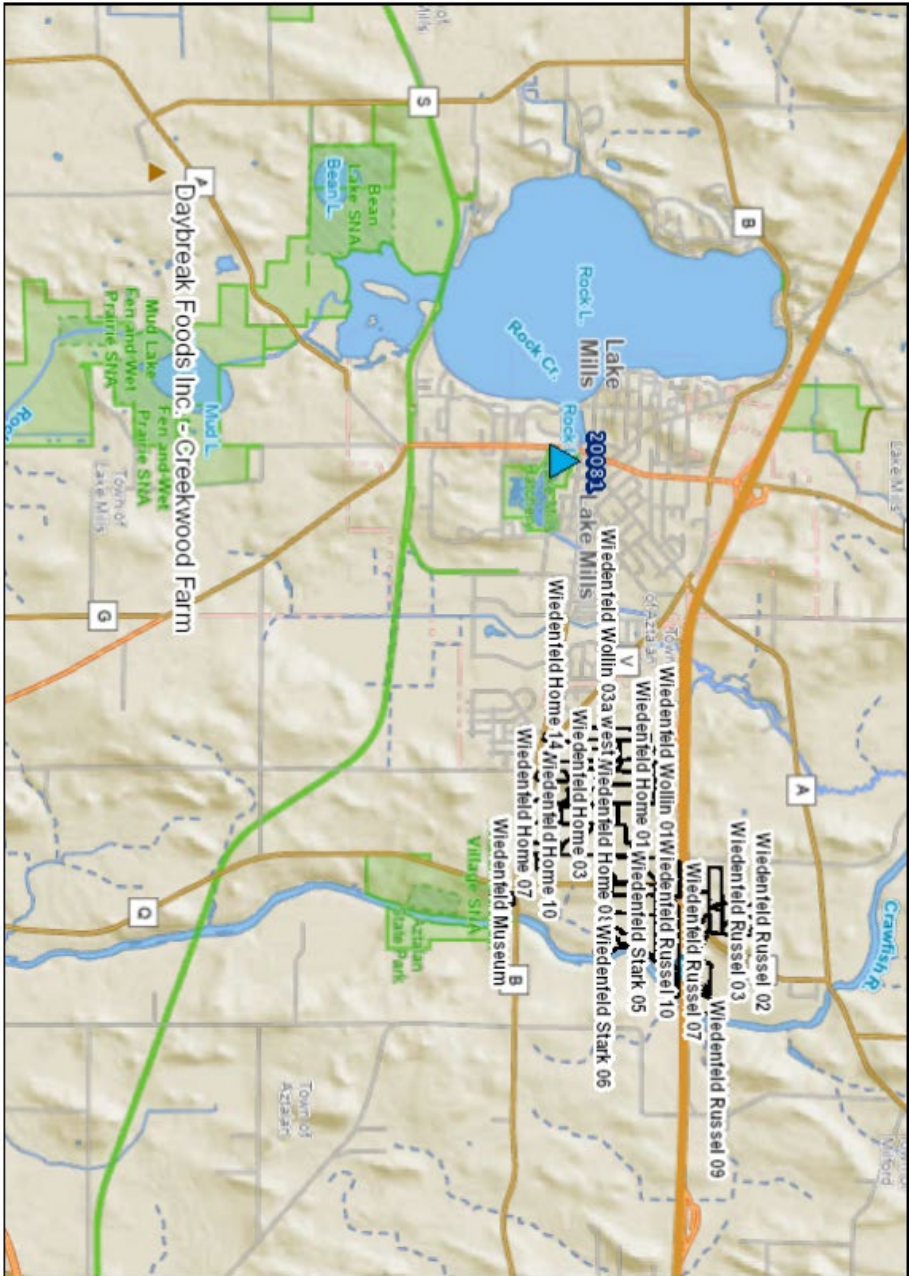
Map 4. Map from WDNR Ag Surface Water Data Viewer. Lidar DEM with hillside shading layers on to show topography.

# Map Title

## Legend

- WT\_CAFQ\_FARMS\_AND\_FIELDS
- CAFO Facilities
- Chickens
- CAFO Fields
- DG\_SW\_Water\_Use\_Points\_WTM\_Int
- Surface Water Withdrawals

## Notes



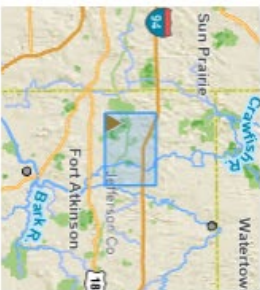
1:56,777



Service layer credits:  
WI DNR | Robert Small

**This map is a product generated by a DNR mapping application.**  
 This map is for informational purposes only and may not have been prepared for or be suitable for legal, engineering or surveying purposes.  
 The user is solely responsible for verifying the accuracy of information before using for any purpose. By using this product for any purpose user  
 agrees to be bound by all disclaimers found here: <https://dnr.wisconsin.gov/legal>

Date Printed: 10/29/2024



Map 5. Map from WDNR DG Surface Water Data Viewer. Daybreak fields layer on with surface water..

## SITE OBSERVATIONS

### Feedlot Runoff

All animals and feed at Daybreak are housed under roof.



|                 |                                          |
|-----------------|------------------------------------------|
| Photo #         |                                          |
| Date/Time:      | August 1, 2024                           |
| Location        | Daybreak Foods<br>Creekwood Cage<br>Free |
| Photo taken by: | Struck                                   |

Description: Facing north at the egg processing building, all feed stored in bins on the right. Feed is transferred from the feed mill on the west side of Crossman Road. Large parking lot may serve as a mixing or prep area for composting, or raw material storage.

### Waste Storage Facilities

Solid waste storage facilities **are** managed to not have current or past indicators of discharges (includes headland stacking sites).

Solid waste storage structures **are** well-maintained, in good repair, and in compliance with permit requirements.

Manure generated at the layer facility is handled as a solid. The manure is conveyed to the manure processing and storage building where it is dried further and stored until it is sold as commercial fertilizer. The manure storage building was constructed in 2018 and provides the facility with at least 60 days of solid manure storage. Manure from the pullet facility is also trucked over to the manure storage building for processing. Eggshells and composted mortalities are also mixed with the dried manure. Manure is loaded in semi-trailers in the manure storage building. Much of the manure is trucked out of state as comical fertilizer.

### Process Wastewater (other than feed storage area leachate/runoff)

Process wastewater sources (milking center, wash water, etc.) are/are not managed to not have current or past indicators of discharges.

The majority of eggs produced by Daybreak are broken and sold as liquid egg product. Daybreak does wash and grade the eggs at the layer facility. The process egg wash water is transferred to the liquid waste storage facilities located at the pullet facility on the west side of Crossman Road. The pullet facility will be inspected at a later date.

Currently Daybreak does not land apply any solid or liquid waste. Daybreak has long term plans to land apply the process wastewater from the egg washing facility. Struck discussed the sampling requirement and to work with the farms crop consultant to ensure all reporting requirements are up to date.

### Feed Storage Area Runoff

Feed storage areas and associated process wastewater (leachate, runoff) are managed to not have current or past indicators of discharges.

Feed storage areas and runoff control systems are well-maintained, in good repair and in compliance with permit requirements.

Daybreak has a feed mill located on the west side Crossman Road. Feed is stored in grain bins and underroof. Feed is conveyed to the layer facility over Crossman Road. The conveyer is covered, and no waste was observed outside.

### Animal Mortality Disposal

Animal mortalities are managed to not have current or past indicators of discharges.

Daybreak has recently began composting routine mortalities in the manure storage building. One of the bays of the manure storage building is used for composting. Daybreak uses a row turner to turn the compost rows. Thermometer were placed in the row to check temperatures and the employee in charge of the storage building maintained logs of the composting and temperature. The compost once finished is mixed with manure as a fertilizer product.



|                    |                                             |
|--------------------|---------------------------------------------|
| Photo #            |                                             |
| Date/Time:         | August 1, 2024                              |
| Location           | Daybreak<br>Foods<br>Creekwood<br>Cage Free |
| Photo taken<br>by: | Struck                                      |

Description: Routine mortality composting in waste storage building, no leachate observed. Thermometers placement in compost.

## Mass Mortality Plan development

S&R Egg brought in approximately 65,000 cubic yards of woodchips to use for composting and the site covered approximately 40 acres. With the equipment used at this site rows were approximately 15 feet apart. The department will provide a compost calculator in the form of an Excel spreadsheet. This will help with the estimated area required for mortality compost, and the volume of carbon sources needed. This should be used with your plan development. Daybreak compost row turner would allow for the rows to be about two feet apart, reducing the area needed for composting.

Daybreak owns approximately 18 acres behind the layer facility production site (Site #1). This was one of the areas looked at for possible mass mortality composting. Other areas discussed included the field east of the waste storage facilities (Site #2, approximately 8.4 acres), fields to the south of the pullet barns, and the field south of the composting barns (Site #3 approximately 15.2 acres). The composting barns could also be used for composting and storage. Daybreak also owns a second site that has been closed and has one field that could potentially be used. To access Site #1 a road would need to be installed and some grading of the site potential needed. This would most likely require a storm water permit and engineering approval. Prescreening for a stormwater permit is possible and Daybreak should work with the department as the earth work planning progresses.

Struck reviewed the soils of the three sites named above using the USDA Web Soil Survey. The maps are provided as attachment to this report. Each of the sites show potential area of that meet the separation required for NR 502.12, of 5 feet of separation from ground water. Further confirmation should be performed for the proposed plan. Confirmation should include separation from ground water and bedrock, excess and ownership, and other runoff concerns.

The layer facility already has a truck wash area. The truck wash area may need some modification for the volume of water that would be used in a mass mortality event. The modification to the truck wash area may require plan and specification approval. Changes to the truck wash area and driveways may also require a stormwater permit.

The mass mortality plan should also include a plan for the finished compost. It can be sold under your DATCP fertilizer permit. It can also be land applied. You may need additional acres added to your nutrient management plan. Please work with your crop consultant to determine if adequate land base is available. Additional land maybe added though a substantial revision submitted on SharePoint.

A detailed site map is also useful for planning. This should include what is stored in each building, animals, waste, feed, etc. While developing plan maps other items to consider is traffic flow, preparation areas, and mixing areas. Designating areas for parking (employee, responders, and staff), equipment use, rental, fueling, and storage, raw material sourcing and storage, mortality, feed, and egg transportation, and establish command center are all things to consider in the plan.



|                 |                                          |
|-----------------|------------------------------------------|
| Photo #         |                                          |
| Date/Time:      | August 1, 2024                           |
| Location        | Daybreak Foods<br>Creekwood Cage<br>Free |
| Photo taken by: | Struck                                   |

Description: Facing west from the north side of the production area. Arch is the existing truck wash area used for decontamination of entering trucks. This may need to be modified for intense use during a mass mortality event. Changes may need plan approval.



|                 |                                          |
|-----------------|------------------------------------------|
| Photo #         |                                          |
| Date/Time:      | August 1, 2024                           |
| Location        | Daybreak Foods<br>Creekwood Cage<br>Free |
| Photo taken by: | Struck                                   |

Description: Facing east to from the north side of the production area at possible location of an access road to access Site #1. Road would be used to provide one way traffic around the site.



|                 |                                          |
|-----------------|------------------------------------------|
| Photo #         |                                          |
| Date/Time:      | August 1, 2024                           |
| Location        | Daybreak Foods<br>Creekwood Cage<br>Free |
| Photo taken by: | Struck                                   |

Description: Facing South Southwest from Site #1 of the proposed composting area east of the five layer barns.

#### Ancillary Service Areas

Preventative maintenance actions and visual inspections are occurring to minimize pollutant discharges from ancillary service and storage areas (i.e. storm water conveyance systems, driveways, etc.).

Management practices are implemented to sustain sufficient vegetative cover on CAFO outdoor vegetated areas.

Daybreak does have a truck wash station to sanitize trucks as they enter the facility. The driveways and ditches around the production area were clean and clear of waste or debris.

## **RECORDS REVIEW**

The permittee **has** current WPDES Permit and Nutrient Management Plan onsite.

The permittee **provided** complete production site inspection records that are required to be retained.

The permittee **provided** adequate documentation that the facility has a minimum of 180 days of liquid manure storage capacity.

The permittee **provided** land application records to demonstrate compliance with nutrient management plan requirements.

The permittee **has copies** of their emergency response and monitoring and inspection plans onsite.

The permittee **is** up to date on required reporting and actions as specified in the Schedules section of permit.

## **SUMMARY**

### **Areas of Concern**

- None identified during the inspection.

### **Permit Violations Alleged Noncompliance**

- None identified during the inspection.

### **Action Items**

- Review sampling requirement for land application of egg wash water.
- Permit reissuance application is due April 1, 2025
- Work on mass mortality plan completion.

### **Items for Next Permit Term**

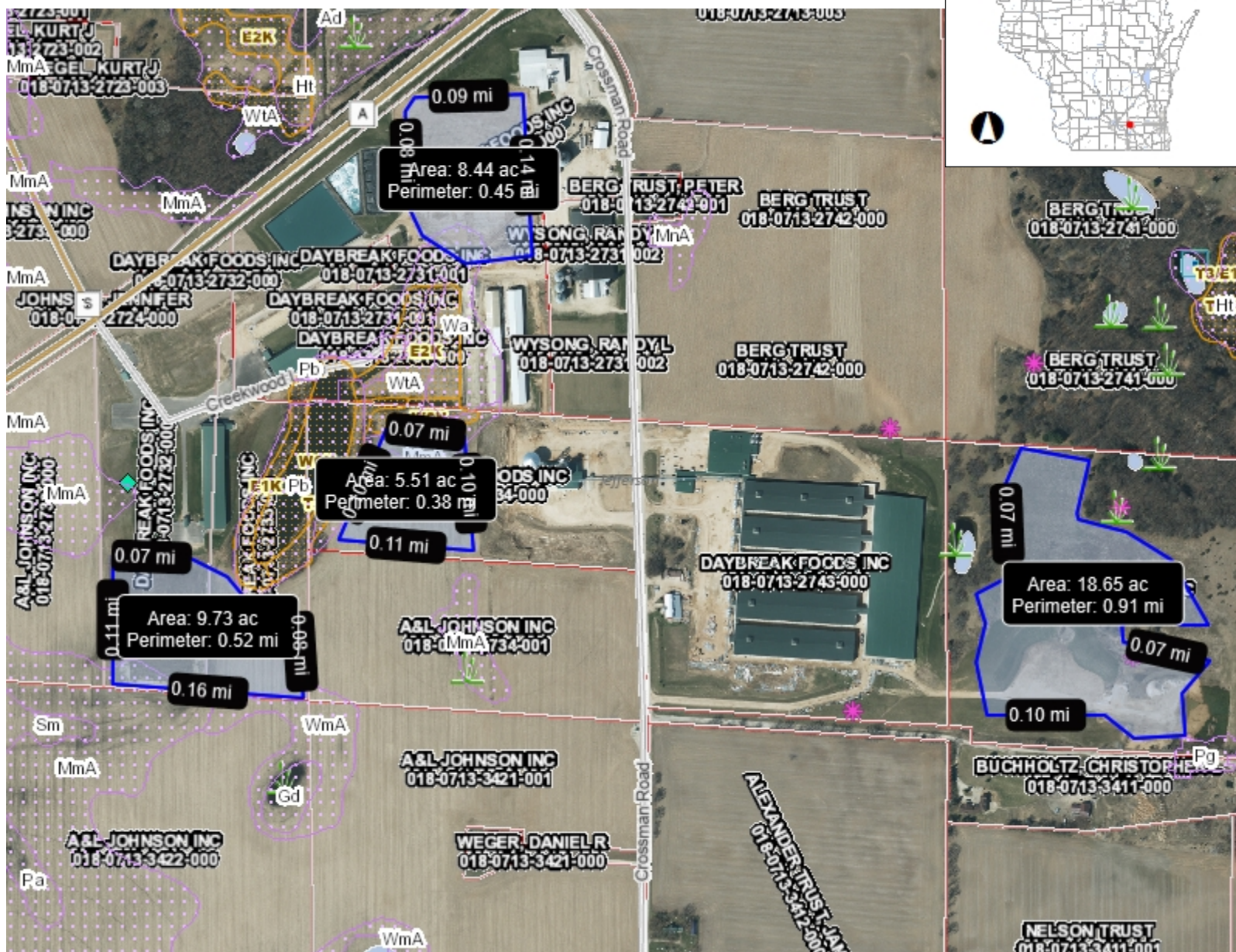
- None identified during the inspection.
- Update mass mortality plan as needed.

## **Mass Mortality Plan Considerations**

- Complete Compost Calculator.
  - o Carbon Source.
  - o Estimated Area required.
- Investigate Compost site.
  - o Depth to ground water.
  - o Access/Driveways.
  - o Runoff concerns.
  - o Earth moving.
  - o Stormwater prevention measures.
- Develop a Site Map.
  - o Desired areas for composting
    - Ordered row lay out.
  - o All buildings, content, and use.
  - o Traffic patterns.
  - o Storage of mortalities and compost.
  - o Mixing and prep areas.
  - o Equipment storage and maintenance.
  - o Command center and parking.
  - o Decontamination areas.
- Permitting considerations.
  - o Stormwater Permit.
    - Consultant help.
    - Archaeological prescreening.
    - Endangered resources prescreening.
  - o Plans and Specifications for CAFO Permit.
    - Storage and transfers changes.
  - o Substantial Revisions to Nutrient Management Plan.
    - Add lands to the plan.
- Plan for finished compost.
  - o Sold as fertilizer.
  - o Land application.
    - Update Nutrient Management Plan.
- Other Considerations
  - o Equipment needs and rentals.
  - o Bird Removal.
  - o Feed and Egg composting.
  - o Additional Site Improvements.
- Submit Written Plan for review.



# Surface Water Data Viewer Map



## Legend

- Wetland Indicators
- Ponds/Open Water
- Lake Class Areas
- Riverine/ditch Class Areas
- Wetland Class Areas
- Wetland Class Points
  - Dammed pond
  - Excavated pond
  - Filled/draind wetland
  - Wetland too small to delineate
  - Filled excavated pond
- Filled Points
- Wetland Class Areas
- Filled Areas
- Wetland Identifications and Confirmations
- NRCS Wetspots
- County Boundary
- Cities, Towns & Villages
  - City
  - Village
  - Civil Town
- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- Rivers and Streams

0.3 0 0.13 0.3 Miles

NAD\_1983\_HARN\_Wisconsin\_TM

1: 7,920

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: <http://dnr.wi.gov/legal/>

## Notes

# Soil Map—Jefferson County, Wisconsin



**Natural Resources  
Conservation Service**

Web Soil Survey  
National Cooperative Soil Survey

10/30/2024  
Page 1 of 3

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name                                         | Acres in AOI | Percent of AOI |
|------------------------------------|-------------------------------------------------------|--------------|----------------|
| CaB2                               | Casco loam, 2 to 6 percent slopes, eroded             | 7.2          | 6.5%           |
| CaC2                               | Casco loam, 6 to 12 percent slopes, eroded            | 35.9         | 32.6%          |
| CrD2                               | Casco-Rodman complex, 12 to 20 percent slopes, eroded | 32.4         | 29.5%          |
| CrE                                | Casco-Rodman complex, 30 to 45 percent slopes         | 1.1          | 1.0%           |
| FsA                                | Fox silt loam, 0 to 2 percent slopes                  | 4.3          | 3.9%           |
| FsB                                | Fox silt loam, 2 to 6 percent slopes                  | 15.9         | 14.5%          |
| Ht                                 | Houghton muck, 0 to 2 percent slopes                  | 3.8          | 3.5%           |
| Pg                                 | Pits, gravel                                          | 9.3          | 8.5%           |
| <b>Totals for Area of Interest</b> |                                                       | <b>109.9</b> | <b>100.0%</b>  |

## Jefferson County, Wisconsin

### CaB2—Casco loam, 2 to 6 percent slopes, eroded

#### Map Unit Setting

*National map unit symbol:* 2tjw8

*Elevation:* 650 to 1,050 feet

*Mean annual precipitation:* 31 to 37 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 124 to 190 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Casco, eroded, and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Casco, Eroded

##### Setting

*Landform:* Outwash plains

*Landform position (three-dimensional):* Riser

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loamy alluvium over calcareous, stratified sandy and gravelly outwash

##### Typical profile

*Ap - 0 to 6 inches:* loam

*Bt - 6 to 17 inches:* clay loam

*2C - 17 to 79 inches:* stratified sand to gravel

##### Properties and qualities

*Slope:* 2 to 6 percent

*Depth to restrictive feature:* 11 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Somewhat excessively drained

*Runoff class:* Medium

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.60 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 25 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Very low (about 2.8 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* B  
*Ecological site:* F095XB007WI - Loamy Upland with Carbonates  
*Forage suitability group:* Low AWC, adequately drained  
(G095BY002WI)  
*Other vegetative classification:* Low AWC, adequately drained  
(G095BY002WI)  
*Hydric soil rating:* No

### Minor Components

#### **Fox**

*Percent of map unit:* 8 percent  
*Landform:* Outwash plains  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Ecological site:* F095XB010WI - Loamy and Clayey Upland  
*Hydric soil rating:* No

#### **Casco, severely eroded**

*Percent of map unit:* 7 percent  
*Landform:* Outwash plains  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* F095XB007WI - Loamy Upland with Carbonates  
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### CaC2—Casco loam, 6 to 12 percent slopes, eroded

#### Map Unit Setting

*National map unit symbol:* 2tjwb

*Elevation:* 620 to 1,180 feet

*Mean annual precipitation:* 29 to 37 inches

*Mean annual air temperature:* 43 to 48 degrees F

*Frost-free period:* 134 to 193 days

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Casco, eroded, and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Casco, Eroded

##### Setting

*Landform:* Moraines

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Parent material:* Loamy alluvium over calcareous, stratified sandy and gravelly outwash

##### Typical profile

*Ap - 0 to 5 inches:* loam

*Bt - 5 to 17 inches:* clay loam

*2C - 17 to 79 inches:* stratified sand to gravel

##### Properties and qualities

*Slope:* 6 to 12 percent

*Depth to restrictive feature:* 11 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Somewhat excessively drained

*Runoff class:* Medium

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.60 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 25 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Very low (about 2.8 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* B  
*Ecological site:* F095XB007WI - Loamy Upland with Carbonates  
*Forage suitability group:* Low AWC, adequately drained  
(G095BY002WI)  
*Other vegetative classification:* Low AWC, adequately drained  
(G095BY002WI)  
*Hydric soil rating:* No

### **Minor Components**

#### **Fox**

*Percent of map unit:* 8 percent  
*Landform:* Moraines  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Ecological site:* F095XB010WI - Loamy and Clayey Upland  
*Hydric soil rating:* No

#### **Rodman**

*Percent of map unit:* 7 percent  
*Landform:* Moraines  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Ecological site:* F095XB009WI - Sandy Upland  
*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### CrD2—Casco-Rodman complex, 12 to 20 percent slopes, eroded

#### Map Unit Setting

*National map unit symbol:* 2tjwm

*Elevation:* 640 to 1,200 feet

*Mean annual precipitation:* 29 to 35 inches

*Mean annual air temperature:* 43 to 48 degrees F

*Frost-free period:* 124 to 192 days

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Casco, eroded, and similar soils:* 53 percent

*Rodman, eroded, and similar soils:* 37 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Casco, Eroded

##### Setting

*Landform:* Moraines

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Loamy alluvium over calcareous, stratified sandy and gravelly outwash

##### Typical profile

*Ap - 0 to 5 inches:* loam

*Bt - 5 to 17 inches:* clay loam

*2C - 17 to 79 inches:* stratified sand to gravel

##### Properties and qualities

*Slope:* 12 to 20 percent

*Depth to restrictive feature:* 11 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Somewhat excessively drained

*Runoff class:* Medium

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.60 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 25 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Very low (about 2.8 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6e

*Hydrologic Soil Group:* B

*Ecological site:* F095XB007WI - Loamy Upland with Carbonates

*Forage suitability group:* Low AWC, adequately drained with  
limitations (G095BY003WI)

*Other vegetative classification:* Low AWC, adequately drained with  
limitations (G095BY003WI)

*Hydric soil rating:* No

### **Description of Rodman, Eroded**

#### **Setting**

*Landform:* Moraines

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Sandy and gravelly outwash

#### **Typical profile**

*Ap - 0 to 4 inches:* gravelly sandy loam

*Bw - 4 to 10 inches:* gravelly sandy loam

*C - 10 to 79 inches:* stratified sand to gravel

#### **Properties and qualities**

*Slope:* 12 to 20 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Excessively drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* High  
(2.00 to 6.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 45 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0  
mmhos/cm)

*Available water supply, 0 to 60 inches:* Very low (about 2.6 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6s

*Hydrologic Soil Group:* A

*Ecological site:* F095XB009WI - Sandy Upland

*Forage suitability group:* Low AWC, adequately drained with  
limitations (G095BY003WI)

*Other vegetative classification:* Low AWC, adequately drained with  
limitations (G095BY003WI)

*Hydric soil rating:* No

### Minor Components

#### Fox

*Percent of map unit:* 10 percent

*Landform:* Moraines

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Ecological site:* F095XB010WI - Loamy and Clayey Upland

*Hydric soil rating:* No

### Data Source Information

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### CrE—Casco-Rodman complex, 30 to 45 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2tjwq

*Elevation:* 790 to 1,160 feet

*Mean annual precipitation:* 31 to 37 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 136 to 172 days

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Casco and similar soils:* 53 percent

*Rodman and similar soils:* 37 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Casco

##### Setting

*Landform:* Moraines

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Parent material:* Loamy alluvium over calcareous, stratified sandy and gravelly outwash

##### Typical profile

*Ap - 0 to 5 inches:* loam

*Bt - 5 to 17 inches:* clay loam

*2C - 17 to 79 inches:* stratified sand to gravel

##### Properties and qualities

*Slope:* 30 to 45 percent

*Depth to restrictive feature:* 11 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Somewhat excessively drained

*Runoff class:* Medium

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.60 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 25 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Very low (about 2.8 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* B  
*Ecological site:* F095XB007WI - Loamy Upland with Carbonates  
*Forage suitability group:* Not suited, slopes > 30% (G000XY011WI)  
*Other vegetative classification:* Not suited, slopes > 30%  
(G000XY011WI)  
*Hydric soil rating:* No

### **Description of Rodman**

#### **Setting**

*Landform:* Moraines  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Parent material:* Sandy and gravelly outwash

#### **Typical profile**

*Ap - 0 to 4 inches:* gravelly sandy loam  
*Bw - 4 to 10 inches:* gravelly sandy loam  
*C - 10 to 79 inches:* stratified extremely gravelly sand to gravel

#### **Properties and qualities**

*Slope:* 30 to 45 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Excessively drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* High  
(2.00 to 6.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 45 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0  
mmhos/cm)  
*Available water supply, 0 to 60 inches:* Very low (about 2.6 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* A  
*Ecological site:* F095XB009WI - Sandy Upland  
*Forage suitability group:* Not suited, slopes > 30% (G000XY011WI)  
*Other vegetative classification:* Not suited, slopes > 30%  
(G000XY011WI)  
*Hydric soil rating:* No

### Minor Components

#### Boyer

*Percent of map unit:* 10 percent

*Landform:* Moraines

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* F095XB007WI - Loamy Upland with Carbonates

*Other vegetative classification:* Low AWC, adequately drained  
(G095BY002WI)

*Hydric soil rating:* No

### Data Source Information

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### FsA—Fox silt loam, 0 to 2 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2tjyk

*Elevation:* 640 to 1,180 feet

*Mean annual precipitation:* 31 to 38 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 124 to 194 days

*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Fox and similar soils:* 90 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Fox

##### Setting

*Landform:* Outwash plains

*Landform position (three-dimensional):* Rise

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Loess over loamy glaciofluvial deposits over sandy and gravelly outwash

##### Typical profile

*Ap - 0 to 9 inches:* silt loam

*Bt1 - 9 to 21 inches:* silty clay loam

*2Bt2 - 21 to 31 inches:* sandy clay loam

*3C - 31 to 79 inches:* stratified sand to gravel

##### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* 30 to 40 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.57 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 45 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2s  
*Hydrologic Soil Group:* B  
*Ecological site:* F095XB010WI - Loamy and Clayey Upland  
*Forage suitability group:* Mod AWC, adequately drained  
(G095BY005WI)  
*Other vegetative classification:* Mod AWC, adequately drained  
(G095BY005WI)  
*Hydric soil rating:* No

### **Minor Components**

#### **St. charles, gravelly substratum**

*Percent of map unit:* 5 percent  
*Landform:* Outwash plains  
*Ecological site:* F095XB010WI - Loamy and Clayey Upland  
*Hydric soil rating:* No

#### **Kane**

*Percent of map unit:* 5 percent  
*Landform:* Outwash plains  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Ecological site:* F095XB005WI - Moist Loamy or Clayey Lowland  
*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### FsB—Fox silt loam, 2 to 6 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2tjx0

*Elevation:* 570 to 1,150 feet

*Mean annual precipitation:* 31 to 37 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 124 to 176 days

*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Fox and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Fox

##### Setting

*Landform:* Outwash plains

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Crest

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Loess over loamy glaciofluvial deposits over sandy and gravelly outwash

##### Typical profile

*Ap - 0 to 7 inches:* silt loam

*Bt1 - 7 to 21 inches:* silty clay loam

*2Bt2 - 21 to 31 inches:* sandy clay loam

*3C - 31 to 79 inches:* stratified sand to gravel

##### Properties and qualities

*Slope:* 2 to 6 percent

*Depth to restrictive feature:* 30 to 40 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.57 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 45 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Low (about 5.2 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* B

*Ecological site:* F095XB010WI - Loamy and Clayey Upland

*Forage suitability group:* Mod AWC, adequately drained  
(G095BY005WI)

*Other vegetative classification:* Mod AWC, adequately drained  
(G095BY005WI)

*Hydric soil rating:* No

### **Minor Components**

#### **Casco**

*Percent of map unit:* 8 percent

*Landform:* Outwash plains

*Landform position (three-dimensional):* Riser

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* F095XB007WI - Loamy Upland with Carbonates

*Hydric soil rating:* No

#### **St. charles, gravelly substratum**

*Percent of map unit:* 7 percent

*Landform:* Outwash plains

*Ecological site:* F095XB010WI - Loamy and Clayey Upland

*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### Ht—Houghton muck, 0 to 2 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2szff

*Elevation:* 600 to 1,090 feet

*Mean annual precipitation:* 31 to 35 inches

*Mean annual air temperature:* 43 to 48 degrees F

*Frost-free period:* 124 to 192 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Houghton, muck, and similar soils:* 90 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Houghton, Muck

##### Setting

*Landform:* Depressions

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Parent material:* Herbaceous organic material

##### Typical profile

*Oap - 0 to 6 inches:* muck

*Oa - 6 to 79 inches:* muck

##### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Very poorly drained

*Runoff class:* Negligible

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately low to high (0.14 to 5.95 in/hr)

*Depth to water table:* About 0 to 4 inches

*Frequency of flooding:* None

*Frequency of ponding:* Frequent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Very high (about 23.9 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3w

*Hydrologic Soil Group:* A/D

*Ecological site:* F095XB001WI - Mucky Swamp

*Forage suitability group:* Not suited, flooded or organics  
(G095BY010WI)

*Other vegetative classification:* Not suited, flooded or organics  
(G095BY010WI)

*Hydric soil rating:* Yes

### **Minor Components**

#### **Houghton, ponded**

*Percent of map unit:* 4 percent

*Landform:* Depressions

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Ecological site:* F095XB001WI - Mucky Swamp

*Other vegetative classification:* Not suited, flooded or organics  
(G095BY010WI)

*Hydric soil rating:* Yes

#### **Palms**

*Percent of map unit:* 2 percent

*Landform:* Lakebeds (relict)

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Ecological site:* F095XB001WI - Mucky Swamp

*Other vegetative classification:* Not suited, flooded or organics  
(G095AY010WI)

*Hydric soil rating:* Yes

#### **Adrian**

*Percent of map unit:* 2 percent

*Landform:* Lakebeds (relict)

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Ecological site:* F095XB001WI - Mucky Swamp

*Hydric soil rating:* Yes

#### **Edwards**

*Percent of map unit:* 1 percent

*Landform:* Depressions

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Ecological site:* F095XB001WI - Mucky Swamp

*Hydric soil rating:* Yes

#### **Willette, muck**

*Percent of map unit:* 1 percent

*Landform:* Depressions

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Ecological site:* F095XA001WI - Mucky Swamp  
*Hydric soil rating:* Yes

## Data Source Information

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### Pg—Pits, gravel

#### Map Unit Setting

*National map unit symbol:* g70h

*Elevation:* 660 to 980 feet

*Mean annual precipitation:* 31 to 35 inches

*Mean annual air temperature:* 43 to 46 degrees F

*Frost-free period:* 110 to 150 days

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Pits, gravel:* 99 percent

*Minor components:* 1 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Pits, Gravel

##### Setting

*Parent material:* Gravelly outwash

##### Typical profile

*H1 - 0 to 10 inches:* stratified extremely gravelly coarse sand to very gravelly sand

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8s

*Hydric soil rating:* Unranked

#### Minor Components

##### Aquents

*Percent of map unit:* 1 percent

*Landform:* Depressions

*Landform position (three-dimensional):* Dip

*Ecological site:* F090BY004WI - Loamy Floodplain

*Other vegetative classification:* Fraxinus nigra/Onoclea sensibilis ,  
Black Ash/Sensitive Fern (1FnOn)

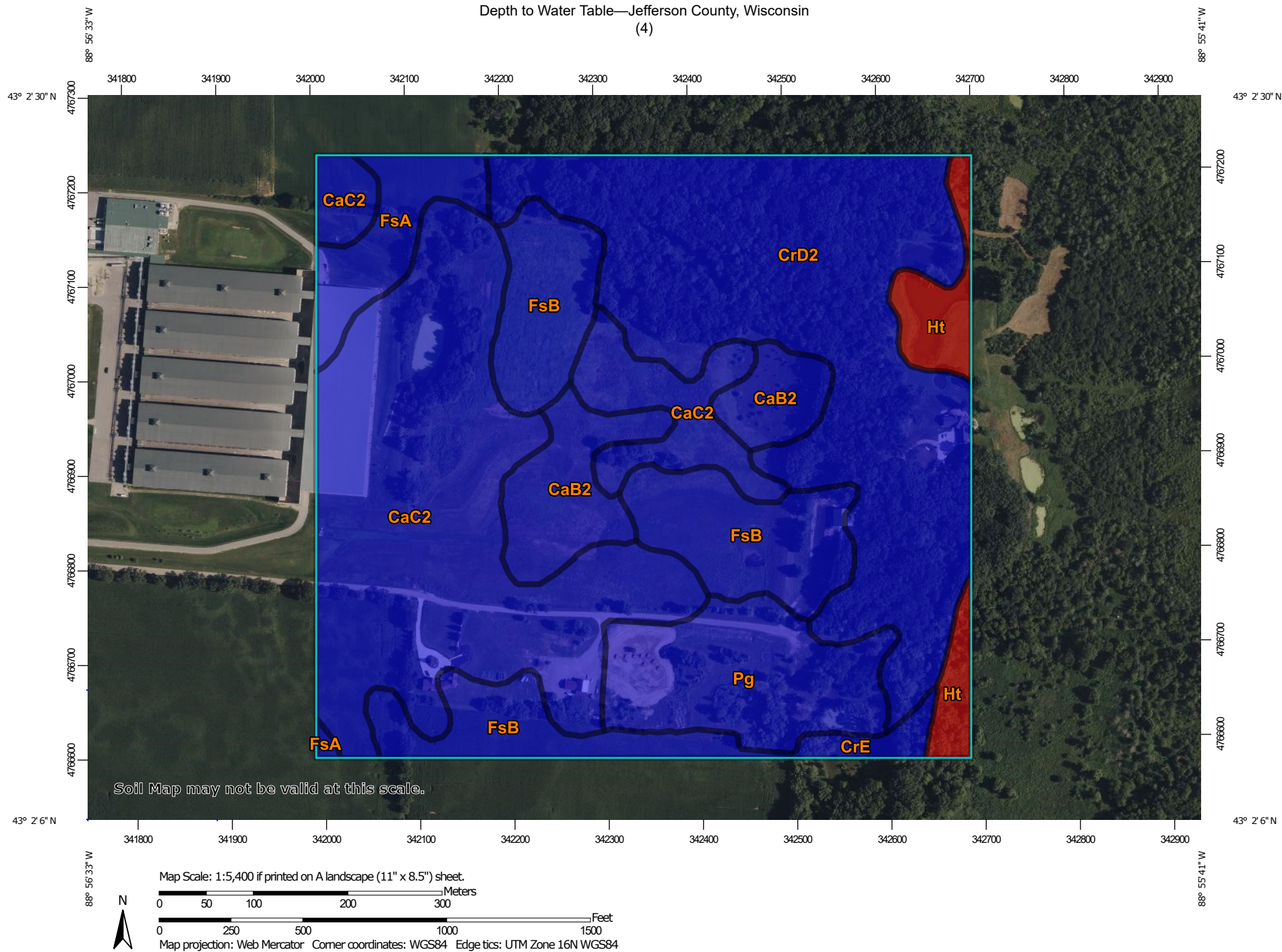
*Hydric soil rating:* Yes

## Data Source Information

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 23, Sep 3, 2024

# Depth to Water Table—Jefferson County, Wisconsin (4)



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons

-  0 - 25
-  25 - 50
-  50 - 100
-  100 - 150
-  150 - 200
-  > 200
-  Not rated or not available

#### Soil Rating Lines

-  0 - 25
-  25 - 50
-  50 - 100
-  100 - 150
-  150 - 200
-  > 200
-  Not rated or not available

#### Soil Rating Points

-  0 - 25
-  25 - 50
-  50 - 100
-  100 - 150
-  150 - 200
-  > 200

 Not rated or not available

### Water Features

 Streams and Canals

### Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Depth to Water Table

| Map unit symbol                    | Map unit name                                         | Rating (centimeters) | Acres in AOI | Percent of AOI |
|------------------------------------|-------------------------------------------------------|----------------------|--------------|----------------|
| CaB2                               | Casco loam, 2 to 6 percent slopes, eroded             | >200                 | 7.2          | 6.5%           |
| CaC2                               | Casco loam, 6 to 12 percent slopes, eroded            | >200                 | 35.9         | 32.6%          |
| CrD2                               | Casco-Rodman complex, 12 to 20 percent slopes, eroded | >200                 | 32.4         | 29.5%          |
| CrE                                | Casco-Rodman complex, 30 to 45 percent slopes         | >200                 | 1.1          | 1.0%           |
| FsA                                | Fox silt loam, 0 to 2 percent slopes                  | >200                 | 4.3          | 3.9%           |
| FsB                                | Fox silt loam, 2 to 6 percent slopes                  | >200                 | 15.9         | 14.5%          |
| Ht                                 | Houghton muck, 0 to 2 percent slopes                  | 0                    | 3.8          | 3.5%           |
| Pg                                 | Pits, gravel                                          | >200                 | 9.3          | 8.5%           |
| <b>Totals for Area of Interest</b> |                                                       |                      | <b>109.9</b> | <b>100.0%</b>  |

## Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

## Rating Options

*Units of Measure:* centimeters

*Aggregation Method:* Dominant Component

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Component" returns the attribute value associated with the component with the highest percent composition in the map unit. If more than one component shares the highest percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher attribute value should be returned in the case of a percent composition tie. The result returned by this aggregation method may or may not represent the dominant condition throughout the map unit.

*Component Percent Cutoff: None Specified*

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

*Tie-break Rule: Lower*

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

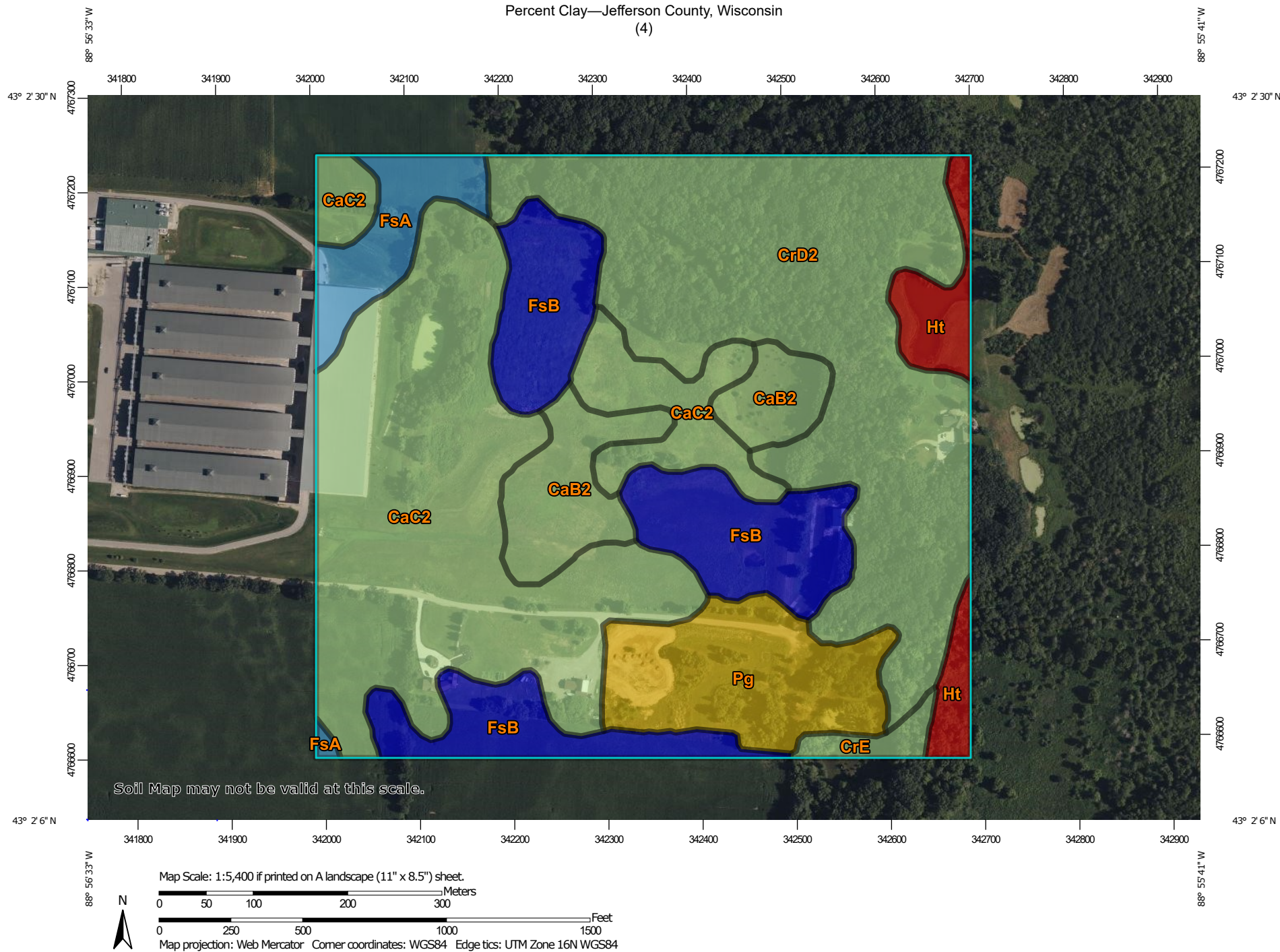
*Interpret Nulls as Zero: No*

This option indicates if a null value for a component should be converted to zero before aggregation occurs. This will be done only if a map unit has at least one component where this value is not null.

*Beginning Month: January*

*Ending Month: December*

Percent Clay—Jefferson County, Wisconsin  
(4)



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons

-  ≤ 0.0
-  > 0.0 and ≤ 2.0
-  > 2.0 and ≤ 7.4
-  > 7.4 and ≤ 10.9
-  > 10.9 and ≤ 11.2
-  Not rated or not available

#### Soil Rating Lines

-  ≤ 0.0
-  > 0.0 and ≤ 2.0
-  > 2.0 and ≤ 7.4
-  > 7.4 and ≤ 10.9
-  > 10.9 and ≤ 11.2
-  Not rated or not available

#### Soil Rating Points

-  ≤ 0.0
-  > 0.0 and ≤ 2.0
-  > 2.0 and ≤ 7.4
-  > 7.4 and ≤ 10.9
-  > 10.9 and ≤ 11.2
-  Not rated or not available

### Water Features

 Streams and Canals

### Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

### Background

-  Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Percent Clay

| Map unit symbol                    | Map unit name                                         | Rating (percent) | Acres in AOI | Percent of AOI |
|------------------------------------|-------------------------------------------------------|------------------|--------------|----------------|
| CaB2                               | Casco loam, 2 to 6 percent slopes, eroded             | 7.3              | 7.2          | 6.5%           |
| CaC2                               | Casco loam, 6 to 12 percent slopes, eroded            | 7.4              | 35.9         | 32.6%          |
| CrD2                               | Casco-Rodman complex, 12 to 20 percent slopes, eroded | 7.4              | 32.4         | 29.5%          |
| CrE                                | Casco-Rodman complex, 30 to 45 percent slopes         | 7.4              | 1.1          | 1.0%           |
| FsA                                | Fox silt loam, 0 to 2 percent slopes                  | 10.9             | 4.3          | 3.9%           |
| FsB                                | Fox silt loam, 2 to 6 percent slopes                  | 11.2             | 15.9         | 14.5%          |
| Ht                                 | Houghton muck, 0 to 2 percent slopes                  | 0.0              | 3.8          | 3.5%           |
| Pg                                 | Pits, gravel                                          | 2.0              | 9.3          | 8.5%           |
| <b>Totals for Area of Interest</b> |                                                       |                  | <b>109.9</b> | <b>100.0%</b>  |

## Description

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth-moving operations.

Most of the material is in one of three groups of clay minerals or a mixture of these clay minerals. The groups are kaolinite, smectite, and hydrous mica, the best known member of which is illite.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

## Rating Options

*Units of Measure:* percent

*Aggregation Method:* Dominant Component

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Component" returns the attribute value associated with the component with the highest percent composition in the map unit. If more than one component shares the highest percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher attribute value should be returned in the case of a percent composition tie. The result returned by this aggregation method may or may not represent the dominant condition throughout the map unit.

*Component Percent Cutoff:* None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

*Tie-break Rule:* Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

*Interpret Nulls as Zero:* No

This option indicates if a null value for a component should be converted to zero before aggregation occurs. This will be done only if a map unit has at least one component where this value is not null.

*Layer Options (Horizon Aggregation Method):* Depth Range (Weighted Average)

For an attribute of a soil horizon, a depth qualification must be specified. In most cases it is probably most appropriate to specify a fixed depth range, either in centimeters or inches. The Bottom Depth must be greater than the Top Depth, and the Top Depth can be greater than zero. The choice of "inches" or "centimeters" only applies to the depth of soil to be evaluated. It has no influence on the units of measure the data are presented in.

When "Surface Layer" is specified as the depth qualifier, only the surface layer or horizon is considered when deriving a value for a component, but keep in mind that the thickness of the surface layer varies from component to component.

When "All Layers" is specified as the depth qualifier, all layers recorded for a component are considered when deriving the value for that component.

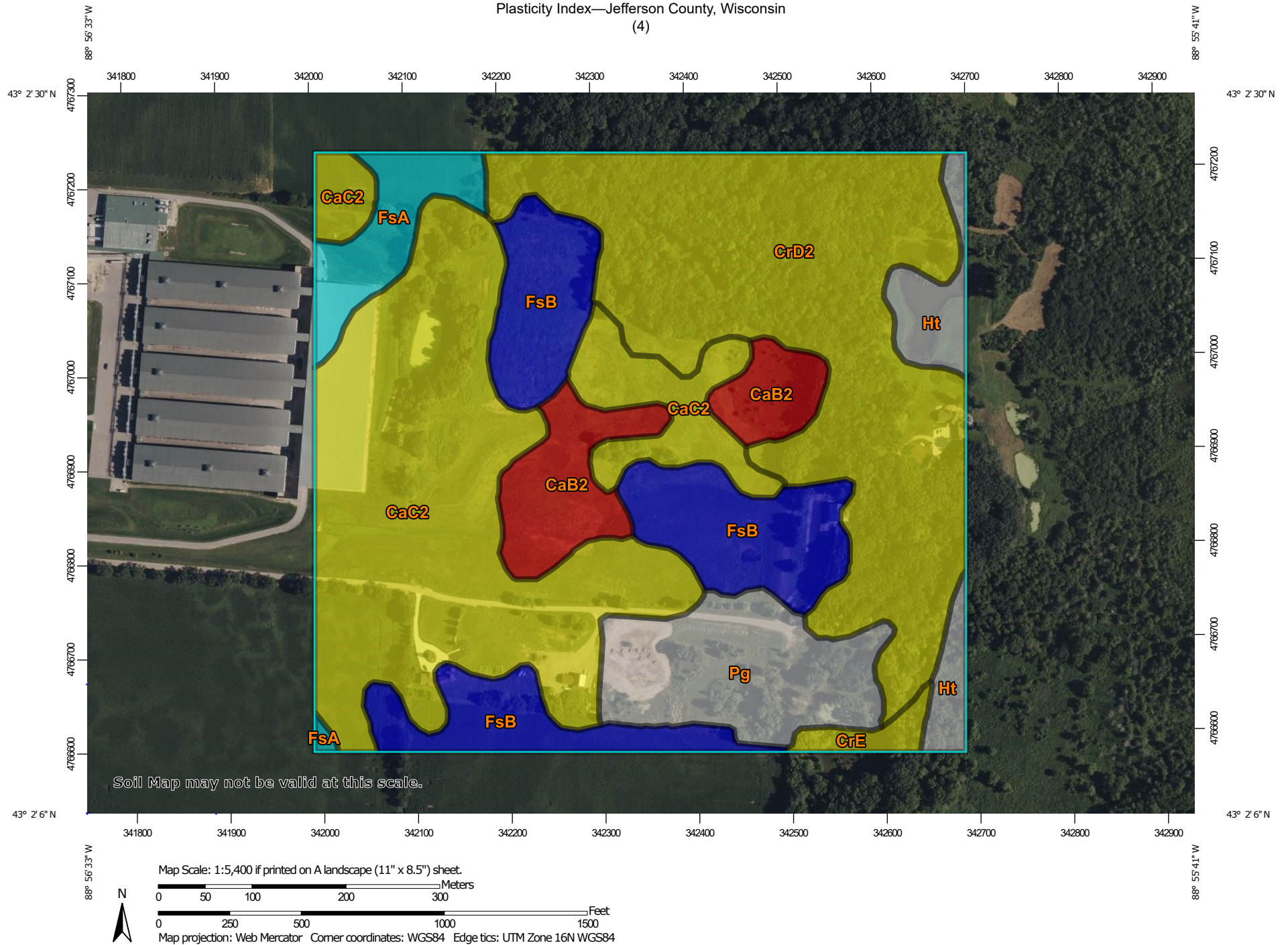
Whenever more than one layer or horizon is considered when deriving a value for a component, and the attribute being aggregated is a numeric attribute, a weighted average value is returned, where the weighting factor is the layer or horizon thickness.

*Top Depth:* 0

*Bottom Depth:* 80

*Units of Measure:* Inches

Plasticity Index—Jefferson County, Wisconsin  
(4)



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons

-   $\leq 8.3$   
  $> 8.3$  and  $\leq 8.6$   
  $> 8.6$  and  $\leq 15.3$   
  $> 15.3$  and  $\leq 16.0$   
 Not rated or not available

#### Soil Rating Lines

-   $\leq 8.3$   
  $> 8.3$  and  $\leq 8.6$   
  $> 8.6$  and  $\leq 15.3$   
  $> 15.3$  and  $\leq 16.0$   
 Not rated or not available

#### Soil Rating Points

-   $\leq 8.3$   
  $> 8.3$  and  $\leq 8.6$   
  $> 8.6$  and  $\leq 15.3$   
  $> 15.3$  and  $\leq 16.0$   
 Not rated or not available

### Water Features

 Streams and Canals

### Transportation

 Rails  
 Interstate Highways

 US Routes  
 Major Roads  
 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Plasticity Index

| Map unit symbol                    | Map unit name                                         | Rating (percent) | Acres in AOI | Percent of AOI |
|------------------------------------|-------------------------------------------------------|------------------|--------------|----------------|
| CaB2                               | Casco loam, 2 to 6 percent slopes, eroded             | 8.3              | 7.2          | 6.5%           |
| CaC2                               | Casco loam, 6 to 12 percent slopes, eroded            | 8.6              | 35.9         | 32.6%          |
| CrD2                               | Casco-Rodman complex, 12 to 20 percent slopes, eroded | 8.6              | 32.4         | 29.5%          |
| CrE                                | Casco-Rodman complex, 30 to 45 percent slopes         | 8.6              | 1.1          | 1.0%           |
| FsA                                | Fox silt loam, 0 to 2 percent slopes                  | 15.3             | 4.3          | 3.9%           |
| FsB                                | Fox silt loam, 2 to 6 percent slopes                  | 16.0             | 15.9         | 14.5%          |
| Ht                                 | Houghton muck, 0 to 2 percent slopes                  |                  | 3.8          | 3.5%           |
| Pg                                 | Pits, gravel                                          |                  | 9.3          | 8.5%           |
| <b>Totals for Area of Interest</b> |                                                       |                  | <b>109.9</b> | <b>100.0%</b>  |

## Description

Plasticity index (PI) is one of the standard Atterberg limits used to indicate the plasticity characteristics of a soil. It is defined as the numerical difference between the liquid limit and plastic limit of the soil. It is the range of water content in which a soil exhibits the characteristics of a plastic solid.

The plastic limit is the water content that corresponds to an arbitrary limit between the plastic and semisolid states of a soil. The liquid limit is the water content, on a percent by weight basis, of the soil (passing #40 sieve) at which the soil changes from a plastic to a liquid state.

Soils that have a high plasticity index have a wide range of moisture content in which the soil performs as a plastic material. Highly and moderately plastic clays have large PI values. Plasticity index is used in classifying soils in the Unified and AASHTO classification systems.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

## Rating Options

*Units of Measure:* percent

*Aggregation Method:* Dominant Component

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Component" returns the attribute value associated with the component with the highest percent composition in the map unit. If more than one component shares the highest percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher attribute value should be returned in the case of a percent composition tie. The result returned by this aggregation method may or may not represent the dominant condition throughout the map unit.

*Component Percent Cutoff:* None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

*Tie-break Rule:* Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

*Interpret Nulls as Zero:* No

This option indicates if a null value for a component should be converted to zero before aggregation occurs. This will be done only if a map unit has at least one component where this value is not null.

*Layer Options (Horizon Aggregation Method):* Depth Range (Weighted Average)

For an attribute of a soil horizon, a depth qualification must be specified. In most cases it is probably most appropriate to specify a fixed depth range, either in centimeters or inches. The Bottom Depth must be greater than the Top Depth, and the Top Depth can be greater than zero. The choice of "inches" or "centimeters" only applies to the depth of soil to be evaluated. It has no influence on the units of measure the data are presented in.

When "Surface Layer" is specified as the depth qualifier, only the surface layer or horizon is considered when deriving a value for a component, but keep in mind that the thickness of the surface layer varies from component to component.

When "All Layers" is specified as the depth qualifier, all layers recorded for a component are considered when deriving the value for that component.

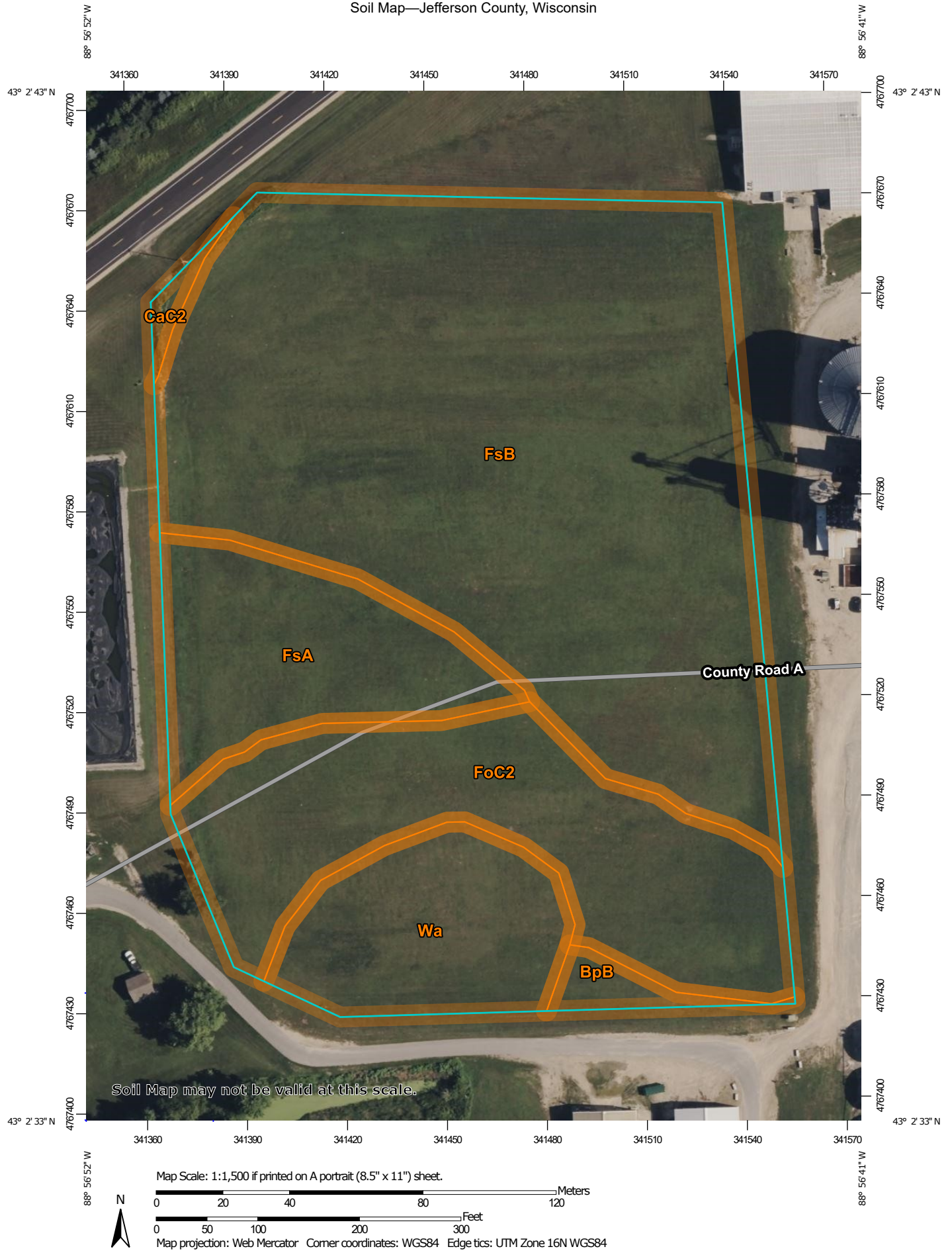
Whenever more than one layer or horizon is considered when deriving a value for a component, and the attribute being aggregated is a numeric attribute, a weighted average value is returned, where the weighting factor is the layer or horizon thickness.

*Top Depth: 0*

*Bottom Depth: 80*

*Units of Measure: Centimeters*

Soil Map—Jefferson County, Wisconsin



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name                                   | Acres in AOI | Percent of AOI |
|------------------------------------|-------------------------------------------------|--------------|----------------|
| BpB                                | Boyer sandy loam, 2 to 6 percent slopes         | 0.1          | 1.3%           |
| CaC2                               | Casco loam, 6 to 12 percent slopes, eroded      | 0.1          | 0.6%           |
| FoC2                               | Fox loam, 6 to 12 percent slopes, eroded        | 2.1          | 20.2%          |
| FsA                                | Fox silt loam, 0 to 2 percent slopes            | 1.2          | 11.2%          |
| FsB                                | Fox silt loam, 2 to 6 percent slopes            | 6.0          | 57.1%          |
| Wa                                 | Wacousta silty clay loam, 0 to 2 percent slopes | 1.0          | 9.6%           |
| <b>Totals for Area of Interest</b> |                                                 | <b>10.5</b>  | <b>100.0%</b>  |

## Jefferson County, Wisconsin

### BpB—Boyer sandy loam, 2 to 6 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2szgn

*Elevation:* 610 to 980 feet

*Mean annual precipitation:* 31 to 35 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 130 to 190 days

*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Boyer and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Boyer

##### Setting

*Landform:* Outwash plains

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Crest

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Sandy and loamy drift over sandy and gravelly outwash

##### Typical profile

*Ap - 0 to 9 inches:* sandy loam

*Bt - 9 to 25 inches:* sandy clay loam

*2C - 25 to 79 inches:* stratified sand to gravel

##### Properties and qualities

*Slope:* 2 to 6 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.60 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 25 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 2.0

*Available water supply, 0 to 60 inches:* Low (about 4.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3s  
*Hydrologic Soil Group:* B  
*Ecological site:* F095XB007WI - Loamy Upland with Carbonates  
*Forage suitability group:* Low AWC, adequately drained  
(G095BY002WI)  
*Other vegetative classification:* Low AWC, adequately drained  
(G095BY002WI)  
*Hydric soil rating:* No

### Minor Components

#### Fox

*Percent of map unit:* 7 percent  
*Landform:* Outwash plains  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Crest  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Ecological site:* F095XB010WI - Loamy and Clayey Upland  
*Hydric soil rating:* No

#### Casco

*Percent of map unit:* 5 percent  
*Landform:* Outwash plains  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Ecological site:* F095XB007WI - Loamy Upland with Carbonates  
*Hydric soil rating:* No

#### Dresden

*Percent of map unit:* 3 percent  
*Landform:* Outwash plains  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Crest  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Ecological site:* F095XB007WI - Loamy Upland with Carbonates  
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### CaC2—Casco loam, 6 to 12 percent slopes, eroded

#### Map Unit Setting

*National map unit symbol:* 2tjwb

*Elevation:* 620 to 1,180 feet

*Mean annual precipitation:* 29 to 37 inches

*Mean annual air temperature:* 43 to 48 degrees F

*Frost-free period:* 134 to 193 days

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Casco, eroded, and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Casco, Eroded

##### Setting

*Landform:* Moraines

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Parent material:* Loamy alluvium over calcareous, stratified sandy and gravelly outwash

##### Typical profile

*Ap - 0 to 5 inches:* loam

*Bt - 5 to 17 inches:* clay loam

*2C - 17 to 79 inches:* stratified sand to gravel

##### Properties and qualities

*Slope:* 6 to 12 percent

*Depth to restrictive feature:* 11 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Somewhat excessively drained

*Runoff class:* Medium

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.60 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 25 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Very low (about 2.8 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* B  
*Ecological site:* F095XB007WI - Loamy Upland with Carbonates  
*Forage suitability group:* Low AWC, adequately drained  
(G095BY002WI)  
*Other vegetative classification:* Low AWC, adequately drained  
(G095BY002WI)  
*Hydric soil rating:* No

### Minor Components

#### Fox

*Percent of map unit:* 8 percent  
*Landform:* Moraines  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Ecological site:* F095XB010WI - Loamy and Clayey Upland  
*Hydric soil rating:* No

#### Rodman

*Percent of map unit:* 7 percent  
*Landform:* Moraines  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Ecological site:* F095XB009WI - Sandy Upland  
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### FoC2—Fox loam, 6 to 12 percent slopes, eroded

#### Map Unit Setting

*National map unit symbol:* 2szgk

*Elevation:* 830 to 1,090 feet

*Mean annual precipitation:* 31 to 35 inches

*Mean annual air temperature:* 43 to 48 degrees F

*Frost-free period:* 130 to 190 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Fox, eroded, and similar soils:* 92 percent

*Minor components:* 8 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Fox, Eroded

##### Setting

*Landform:* Outwash plains

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Fine-loamy glaciofluvial deposits over sandy and gravelly outwash

##### Typical profile

*Ap - 0 to 5 inches:* loam

*Bt1 - 5 to 21 inches:* clay loam

*2Bt2 - 21 to 33 inches:* sandy clay loam

*2C - 33 to 79 inches:* stratified sand to gravel

##### Properties and qualities

*Slope:* 6 to 12 percent

*Depth to restrictive feature:* 20 to 26 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high (0.20 to 0.60 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 25 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 2.0

*Available water supply, 0 to 60 inches:* Low (about 3.8 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* C

*Ecological site:* F095XB010WI - Loamy and Clayey Upland

*Forage suitability group:* Mod AWC, adequately drained  
(G095BY005WI)

*Other vegetative classification:* Mod AWC, adequately drained  
(G095BY005WI)

*Hydric soil rating:* No

### **Minor Components**

#### **Casco, eroded**

*Percent of map unit:* 5 percent

*Landform:* Moraines

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Concave

*Ecological site:* F095XB007WI - Loamy Upland with Carbonates

*Hydric soil rating:* No

#### **Boyer**

*Percent of map unit:* 3 percent

*Landform:* Outwash plains

*Landform position (three-dimensional):* Rise

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Ecological site:* F095XB007WI - Loamy Upland with Carbonates

*Other vegetative classification:* Low AWC, adequately drained  
(G095BY002WI)

*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### FsA—Fox silt loam, 0 to 2 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2tjyk

*Elevation:* 640 to 1,180 feet

*Mean annual precipitation:* 31 to 38 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 124 to 194 days

*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Fox and similar soils:* 90 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Fox

##### Setting

*Landform:* Outwash plains

*Landform position (three-dimensional):* Rise

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Loess over loamy glaciofluvial deposits over sandy and gravelly outwash

##### Typical profile

*Ap - 0 to 9 inches:* silt loam

*Bt1 - 9 to 21 inches:* silty clay loam

*2Bt2 - 21 to 31 inches:* sandy clay loam

*3C - 31 to 79 inches:* stratified sand to gravel

##### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* 30 to 40 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.57 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 45 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Low (about 5.3 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated): 2s*  
*Hydrologic Soil Group: B*  
*Ecological site: F095XB010WI - Loamy and Clayey Upland*  
*Forage suitability group: Mod AWC, adequately drained*  
*(G095BY005WI)*  
*Other vegetative classification: Mod AWC, adequately drained*  
*(G095BY005WI)*  
*Hydric soil rating: No*

#### **Minor Components**

##### **St. charles, gravelly substratum**

*Percent of map unit: 5 percent*  
*Landform: Outwash plains*  
*Ecological site: F095XB010WI - Loamy and Clayey Upland*  
*Hydric soil rating: No*

##### **Kane**

*Percent of map unit: 5 percent*  
*Landform: Outwash plains*  
*Landform position (three-dimensional): Dip*  
*Down-slope shape: Concave*  
*Across-slope shape: Linear*  
*Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland*  
*Hydric soil rating: No*

## **Data Source Information**

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### FsB—Fox silt loam, 2 to 6 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2tjx0

*Elevation:* 570 to 1,150 feet

*Mean annual precipitation:* 31 to 37 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 124 to 176 days

*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Fox and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Fox

##### Setting

*Landform:* Outwash plains

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Crest

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Loess over loamy glaciofluvial deposits over sandy and gravelly outwash

##### Typical profile

*Ap - 0 to 7 inches:* silt loam

*Bt1 - 7 to 21 inches:* silty clay loam

*2Bt2 - 21 to 31 inches:* sandy clay loam

*3C - 31 to 79 inches:* stratified sand to gravel

##### Properties and qualities

*Slope:* 2 to 6 percent

*Depth to restrictive feature:* 30 to 40 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.57 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 45 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Low (about 5.2 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* B

*Ecological site:* F095XB010WI - Loamy and Clayey Upland

*Forage suitability group:* Mod AWC, adequately drained  
(G095BY005WI)

*Other vegetative classification:* Mod AWC, adequately drained  
(G095BY005WI)

*Hydric soil rating:* No

### **Minor Components**

#### **Casco**

*Percent of map unit:* 8 percent

*Landform:* Outwash plains

*Landform position (three-dimensional):* Riser

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Ecological site:* F095XB007WI - Loamy Upland with Carbonates

*Hydric soil rating:* No

#### **St. charles, gravelly substratum**

*Percent of map unit:* 7 percent

*Landform:* Outwash plains

*Ecological site:* F095XB010WI - Loamy and Clayey Upland

*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### Wa—Wacousta silty clay loam, 0 to 2 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2tjx1

*Elevation:* 690 to 1,020 feet

*Mean annual precipitation:* 32 to 35 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 110 to 172 days

*Farmland classification:* Prime farmland if drained

#### Map Unit Composition

*Wacousta and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Wacousta

##### Setting

*Landform:* Interdrumlins

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Parent material:* Stratified silty lacustrine deposits

##### Typical profile

*Ap - 0 to 13 inches:* silty clay loam

*Bg - 13 to 19 inches:* silty clay loam

*Cg - 19 to 79 inches:* silt loam

##### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Very poorly drained

*Runoff class:* Negligible

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.60 to 2.00 in/hr)

*Depth to water table:* About 0 inches

*Frequency of flooding:* None

*Frequency of ponding:* Frequent

*Calcium carbonate, maximum content:* 30 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Very high (about 12.6 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3w

*Hydrologic Soil Group:* B/D  
*Ecological site:* F095XB004WI - Wet Loamy or Clayey Lowland  
*Forage suitability group:* High AWC, high water table  
(G095BY007WI)  
*Other vegetative classification:* High AWC, high water table  
(G095BY007WI)  
*Hydric soil rating:* Yes

### Minor Components

#### Sable

*Percent of map unit:* 8 percent  
*Landform:* Interdrumlins  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Ecological site:* F095XB004WI - Wet Loamy or Clayey Lowland  
*Hydric soil rating:* Yes

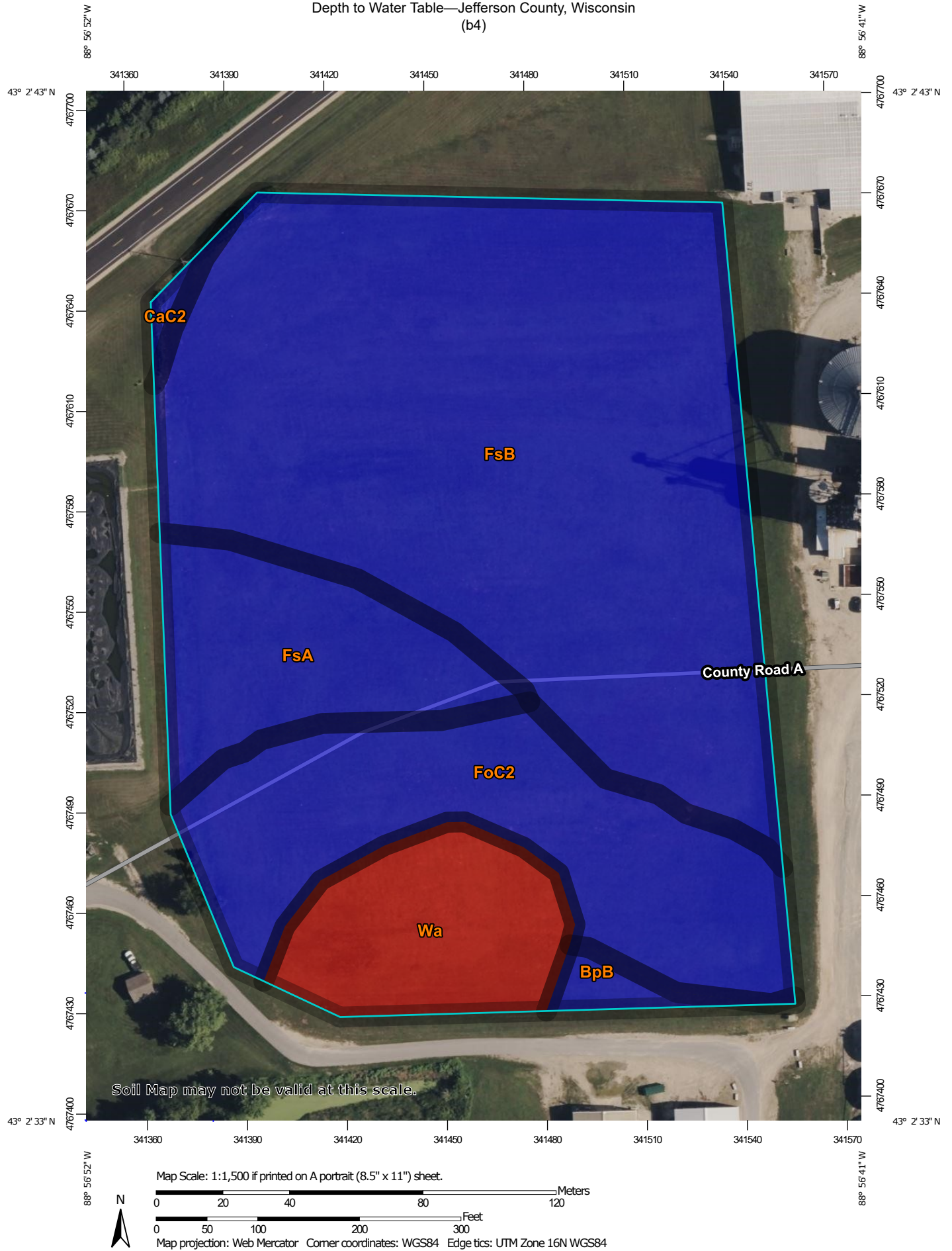
#### Sebewa

*Percent of map unit:* 7 percent  
*Landform:* Interdrumlins  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Ecological site:* F095XB004WI - Wet Loamy or Clayey Lowland  
*Hydric soil rating:* Yes

## Data Source Information

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

# Depth to Water Table—Jefferson County, Wisconsin (b4)



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons

-  0 - 25
-  25 - 50
-  50 - 100
-  100 - 150
-  150 - 200
-  > 200
-  Not rated or not available

#### Soil Rating Lines

-  0 - 25
-  25 - 50
-  50 - 100
-  100 - 150
-  150 - 200
-  > 200
-  Not rated or not available

#### Soil Rating Points

-  0 - 25
-  25 - 50
-  50 - 100
-  100 - 150
-  150 - 200
-  > 200

 Not rated or not available

### Water Features

 Streams and Canals

### Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Depth to Water Table

| Map unit symbol                    | Map unit name                                   | Rating (centimeters) | Acres in AOI | Percent of AOI |
|------------------------------------|-------------------------------------------------|----------------------|--------------|----------------|
| BpB                                | Boyer sandy loam, 2 to 6 percent slopes         | >200                 | 0.1          | 1.3%           |
| CaC2                               | Casco loam, 6 to 12 percent slopes, eroded      | >200                 | 0.1          | 0.6%           |
| FoC2                               | Fox loam, 6 to 12 percent slopes, eroded        | >200                 | 2.1          | 20.2%          |
| FsA                                | Fox silt loam, 0 to 2 percent slopes            | >200                 | 1.2          | 11.2%          |
| FsB                                | Fox silt loam, 2 to 6 percent slopes            | >200                 | 6.0          | 57.1%          |
| Wa                                 | Wacousta silty clay loam, 0 to 2 percent slopes | 0                    | 1.0          | 9.6%           |
| <b>Totals for Area of Interest</b> |                                                 |                      | <b>10.5</b>  | <b>100.0%</b>  |

## Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

## Rating Options

*Units of Measure:* centimeters

*Aggregation Method:* Dominant Component

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Component" returns the attribute value associated with the component with the highest percent composition in the map unit. If more than one component shares the highest percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher attribute value should be returned in the case of a percent composition tie. The result returned by this aggregation method may or may not represent the dominant condition throughout the map unit.

*Component Percent Cutoff: None Specified*

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

*Tie-break Rule: Lower*

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

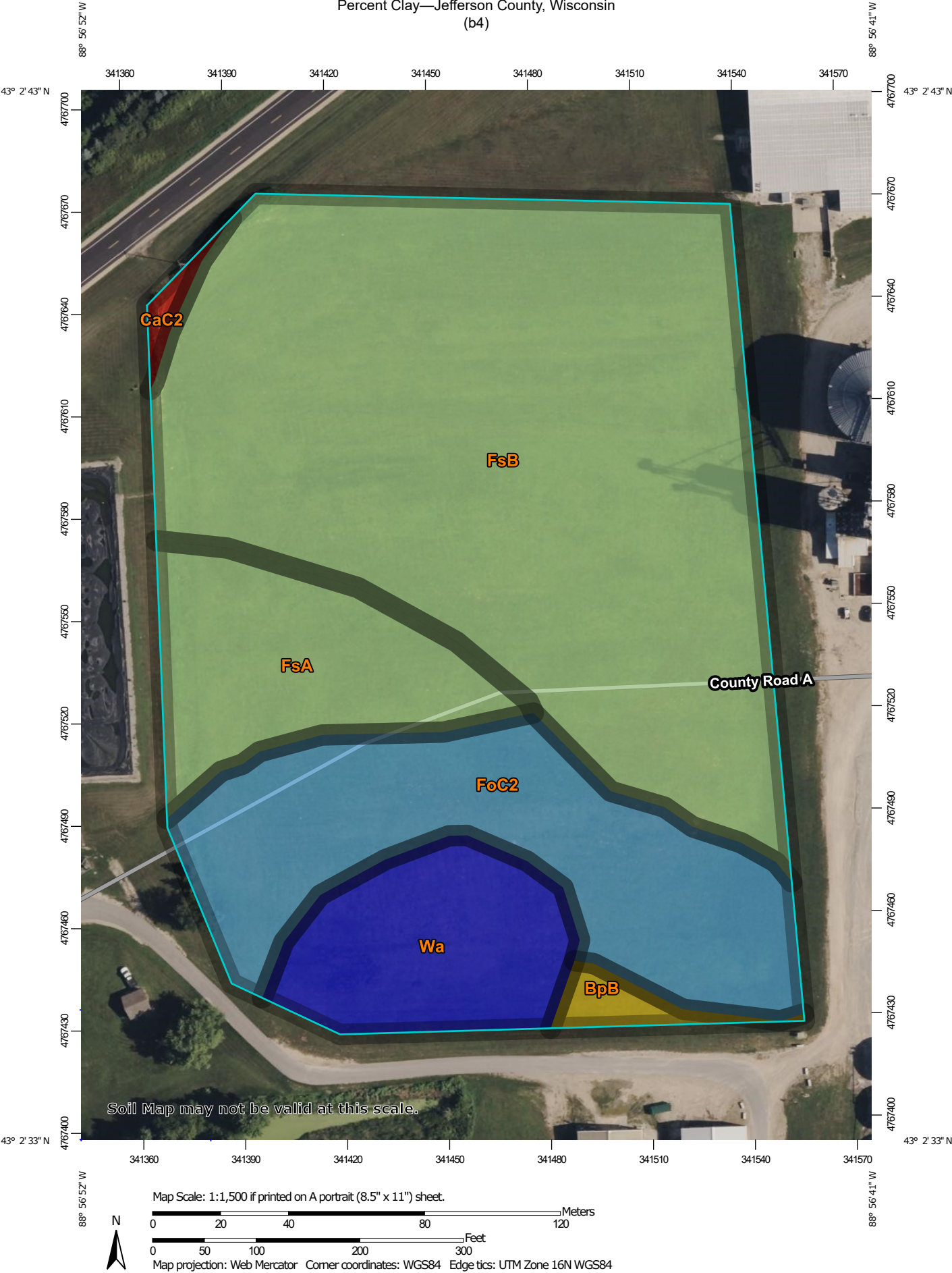
*Interpret Nulls as Zero: No*

This option indicates if a null value for a component should be converted to zero before aggregation occurs. This will be done only if a map unit has at least one component where this value is not null.

*Beginning Month: January*

*Ending Month: December*

Percent Clay—Jefferson County, Wisconsin  
(b4)



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons

-  ≤ 14.0
-  > 14.0 and ≤ 17.1
-  > 17.1 and ≤ 23.5
-  > 23.5 and ≤ 24.9
-  > 24.9 and ≤ 27.9
-  Not rated or not available

#### Soil Rating Lines

-  ≤ 14.0
-  > 14.0 and ≤ 17.1
-  > 17.1 and ≤ 23.5
-  > 23.5 and ≤ 24.9
-  > 24.9 and ≤ 27.9
-  Not rated or not available

#### Soil Rating Points

-  ≤ 14.0
-  > 14.0 and ≤ 17.1
-  > 17.1 and ≤ 23.5
-  > 23.5 and ≤ 24.9
-  > 24.9 and ≤ 27.9
-  Not rated or not available

### Water Features

 Streams and Canals

### Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

### Background

-  Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Percent Clay

| Map unit symbol                    | Map unit name                                   | Rating (percent) | Acres in AOI | Percent of AOI |
|------------------------------------|-------------------------------------------------|------------------|--------------|----------------|
| BpB                                | Boyer sandy loam, 2 to 6 percent slopes         | 17.1             | 0.1          | 1.3%           |
| CaC2                               | Casco loam, 6 to 12 percent slopes, eroded      | 14.0             | 0.1          | 0.6%           |
| FoC2                               | Fox loam, 6 to 12 percent slopes, eroded        | 24.9             | 2.1          | 20.2%          |
| FsA                                | Fox silt loam, 0 to 2 percent slopes            | 22.7             | 1.2          | 11.2%          |
| FsB                                | Fox silt loam, 2 to 6 percent slopes            | 23.5             | 6.0          | 57.1%          |
| Wa                                 | Wacousta silty clay loam, 0 to 2 percent slopes | 27.9             | 1.0          | 9.6%           |
| <b>Totals for Area of Interest</b> |                                                 |                  | <b>10.5</b>  | <b>100.0%</b>  |

## Description

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth-moving operations.

Most of the material is in one of three groups of clay minerals or a mixture of these clay minerals. The groups are kaolinite, smectite, and hydrous mica, the best known member of which is illite.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

## Rating Options

*Units of Measure:* percent

*Aggregation Method:* Dominant Component

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher

*Interpret Nulls as Zero:* No

*Layer Options (Horizon Aggregation Method):* Depth Range (Weighted Average)

*Top Depth:* 0

*Bottom Depth:* 80

*Units of Measure:* Centimeters

# Soil Map—Jefferson County, Wisconsin



Soil Map may not be valid at this scale.

Map Scale: 1:3,070 if printed on A landscape (11" x 8.5") sheet.

0 45 90 180 270 Meters

0 100 200 400 600 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84



**Natural Resources  
Conservation Service**

Web Soil Survey  
National Cooperative Soil Survey

10/30/2024  
Page 1 of 3

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name                              | Acres in AOI | Percent of AOI |
|------------------------------------|--------------------------------------------|--------------|----------------|
| BpB                                | Boyer sandy loam, 2 to 6 percent slopes    | 15.4         | 83.0%          |
| MmA                                | Matherton silt loam, 0 to 3 percent slopes | 3.0          | 16.3%          |
| Pb                                 | Palms muck, ponded, 0 to 2 percent slopes  | 0.1          | 0.5%           |
| WmA                                | Wasepi sandy loam, 0 to 3 percent slopes   | 0.0          | 0.2%           |
| <b>Totals for Area of Interest</b> |                                            | <b>18.6</b>  | <b>100.0%</b>  |

## Jefferson County, Wisconsin

### BpB—Boyer sandy loam, 2 to 6 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2szgn

*Elevation:* 610 to 980 feet

*Mean annual precipitation:* 31 to 35 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 130 to 190 days

*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Boyer and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Boyer

##### Setting

*Landform:* Outwash plains

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Crest

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Sandy and loamy drift over sandy and gravelly outwash

##### Typical profile

*Ap - 0 to 9 inches:* sandy loam

*Bt - 9 to 25 inches:* sandy clay loam

*2C - 25 to 79 inches:* stratified sand to gravel

##### Properties and qualities

*Slope:* 2 to 6 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.60 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 25 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 2.0

*Available water supply, 0 to 60 inches:* Low (about 4.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3s  
*Hydrologic Soil Group:* B  
*Ecological site:* F095XB007WI - Loamy Upland with Carbonates  
*Forage suitability group:* Low AWC, adequately drained  
(G095BY002WI)  
*Other vegetative classification:* Low AWC, adequately drained  
(G095BY002WI)  
*Hydric soil rating:* No

### Minor Components

#### Fox

*Percent of map unit:* 7 percent  
*Landform:* Outwash plains  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Crest  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Ecological site:* F095XB010WI - Loamy and Clayey Upland  
*Hydric soil rating:* No

#### Casco

*Percent of map unit:* 5 percent  
*Landform:* Outwash plains  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Ecological site:* F095XB007WI - Loamy Upland with Carbonates  
*Hydric soil rating:* No

#### Dresden

*Percent of map unit:* 3 percent  
*Landform:* Outwash plains  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Crest  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Ecological site:* F095XB007WI - Loamy Upland with Carbonates  
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### MmA—Matherton silt loam, 0 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* g705

*Elevation:* 780 to 1,060 feet

*Mean annual precipitation:* 28 to 35 inches

*Mean annual air temperature:* 36 to 57 degrees F

*Frost-free period:* 135 to 170 days

*Farmland classification:* Prime farmland if drained

#### Map Unit Composition

*Matherton and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Matherton

##### Setting

*Landform:* Terraces

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loamy glaciofluvial deposits over stratified sandy and gravelly outwash

##### Typical profile

*Ap, BE - 0 to 13 inches:* silt loam

*Bt, 2Bt - 13 to 29 inches:* sandy clay loam

*2BC, 2B - 29 to 60 inches:* gravelly sand

##### Properties and qualities

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.57 to 1.98 in/hr)

*Depth to water table:* About 12 to 24 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 25 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Low (about 5.9 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2w

*Hydrologic Soil Group:* B/D

*Ecological site:* F095XB005WI - Moist Loamy or Clayey Lowland

*Forage suitability group:* Mod AWC, high water table  
(G095BY004WI)  
*Other vegetative classification:* Mod AWC, high water table  
(G095BY004WI)  
*Hydric soil rating:* No

#### **Minor Components**

##### **Sebewa**

*Percent of map unit:* 4 percent  
*Landform:* Depressions  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Ecological site:* F095XB004WI - Wet Loamy or Clayey Lowland  
*Hydric soil rating:* Yes

##### **Wasepi**

*Percent of map unit:* 3 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* F095XB005WI - Moist Loamy or Clayey Lowland  
*Hydric soil rating:* No

##### **Aztalan**

*Percent of map unit:* 3 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* F095XB005WI - Moist Loamy or Clayey Lowland  
*Hydric soil rating:* No

##### **Matherton, clayey substratum**

*Percent of map unit:* 3 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Ecological site:* F095XB005WI - Moist Loamy or Clayey Lowland  
*Hydric soil rating:* No

##### **Fox**

*Percent of map unit:* 2 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Ecological site:* F095XB010WI - Loamy and Clayey Upland

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### Pb—Palms muck, ponded, 0 to 2 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2szdf

*Elevation:* 780 to 1,120 feet

*Mean annual precipitation:* 33 to 35 inches

*Mean annual air temperature:* 45 to 47 degrees F

*Frost-free period:* 138 to 172 days

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Palms, muck, ponded, and similar soils:* 93 percent

*Minor components:* 7 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Palms, Muck, Ponded

##### Setting

*Landform:* Interdrumlins

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Parent material:* Herbaceous organic material over loamy drift

##### Typical profile

*Oa - 0 to 31 inches:* muck

*2Cg - 31 to 79 inches:* silt loam

##### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Very poorly drained

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately low to high (0.14 to 1.98 in/hr)

*Depth to water table:* About 0 inches

*Frequency of flooding:* None

*Frequency of ponding:* Frequent

*Calcium carbonate, maximum content:* 20 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Very high (about 16.5 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 5w

*Hydrologic Soil Group:* B/D

*Ecological site:* F095XB001WI - Mucky Swamp

*Forage suitability group:* Not suited, flooded or organics  
(G095BY010WI)

*Other vegetative classification:* Not suited, flooded or organics  
(G095BY010WI)

*Hydric soil rating:* Yes

### **Minor Components**

#### **Houghton, muck**

*Percent of map unit:* 5 percent

*Landform:* Depressions

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Ecological site:* F095XB001WI - Mucky Swamp

*Other vegetative classification:* Not suited, flooded or organics  
(G095BY010WI)

*Hydric soil rating:* Yes

#### **Adrian**

*Percent of map unit:* 2 percent

*Landform:* Interdrumlins

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Ecological site:* F095XB001WI - Mucky Swamp

*Hydric soil rating:* Yes

## **Data Source Information**

Soil Survey Area: Jefferson County, Wisconsin

Survey Area Data: Version 23, Sep 3, 2024

## Jefferson County, Wisconsin

### WmA—Wasepi sandy loam, 0 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* g71b

*Elevation:* 780 to 1,060 feet

*Mean annual precipitation:* 28 to 35 inches

*Mean annual air temperature:* 36 to 57 degrees F

*Frost-free period:* 135 to 170 days

*Farmland classification:* Prime farmland if drained

#### Map Unit Composition

*Wasepi and similar soils:* 90 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Wasepi

##### Setting

*Landform:* Stream terraces

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Concave

*Across-slope shape:* Linear

*Parent material:* Sandy and loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

##### Typical profile

*Ap - 0 to 9 inches:* sandy loam

*Bt,2Bt - 9 to 38 inches:* sandy loam

*2C - 38 to 60 inches:* very gravelly sand

##### Properties and qualities

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* High  
(1.98 to 5.95 in/hr)

*Depth to water table:* About 12 to 24 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 10 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Moderate (about 6.3 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3s

*Hydrologic Soil Group:* A/D  
*Ecological site:* F095XB005WI - Moist Loamy or Clayey Lowland  
*Forage suitability group:* Mod AWC, high water table  
(G095BY004WI)  
*Other vegetative classification:* Mod AWC, high water table  
(G095BY004WI)  
*Hydric soil rating:* No

### Minor Components

#### Gilford

*Percent of map unit:* 5 percent  
*Landform:* Depressions  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Ecological site:* F095XB004WI - Wet Loamy or Clayey Lowland  
*Hydric soil rating:* Yes

#### Matherton

*Percent of map unit:* 3 percent  
*Landform:* Stream terraces  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Ecological site:* F095XB005WI - Moist Loamy or Clayey Lowland  
*Hydric soil rating:* No

#### Boyer

*Percent of map unit:* 2 percent  
*Landform:* Rises  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Ecological site:* F095XB007WI - Loamy Upland with Carbonates  
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

# Depth to Water Table—Jefferson County, Wisconsin



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons

-  0 - 25
-  25 - 50
-  50 - 100
-  100 - 150
-  150 - 200
-  > 200
-  Not rated or not available

#### Soil Rating Lines

-  0 - 25
-  25 - 50
-  50 - 100
-  100 - 150
-  150 - 200
-  > 200
-  Not rated or not available

#### Soil Rating Points

-  0 - 25
-  25 - 50
-  50 - 100
-  100 - 150
-  150 - 200
-  > 200

 Not rated or not available

### Water Features

 Streams and Canals

### Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin  
Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Depth to Water Table

| Map unit symbol                    | Map unit name                              | Rating (centimeters) | Acres in AOI | Percent of AOI |
|------------------------------------|--------------------------------------------|----------------------|--------------|----------------|
| BpB                                | Boyer sandy loam, 2 to 6 percent slopes    | >200                 | 15.4         | 83.0%          |
| MmA                                | Matherton silt loam, 0 to 3 percent slopes | 46                   | 3.0          | 16.3%          |
| Pb                                 | Palms muck, ponded, 0 to 2 percent slopes  | 0                    | 0.1          | 0.5%           |
| WmA                                | Wasepi sandy loam, 0 to 3 percent slopes   | 46                   | 0.0          | 0.2%           |
| <b>Totals for Area of Interest</b> |                                            |                      | <b>18.6</b>  | <b>100.0%</b>  |

## Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

## Rating Options

*Units of Measure:* centimeters

*Aggregation Method:* Dominant Component

*Component Percent Cutoff:* None Specified

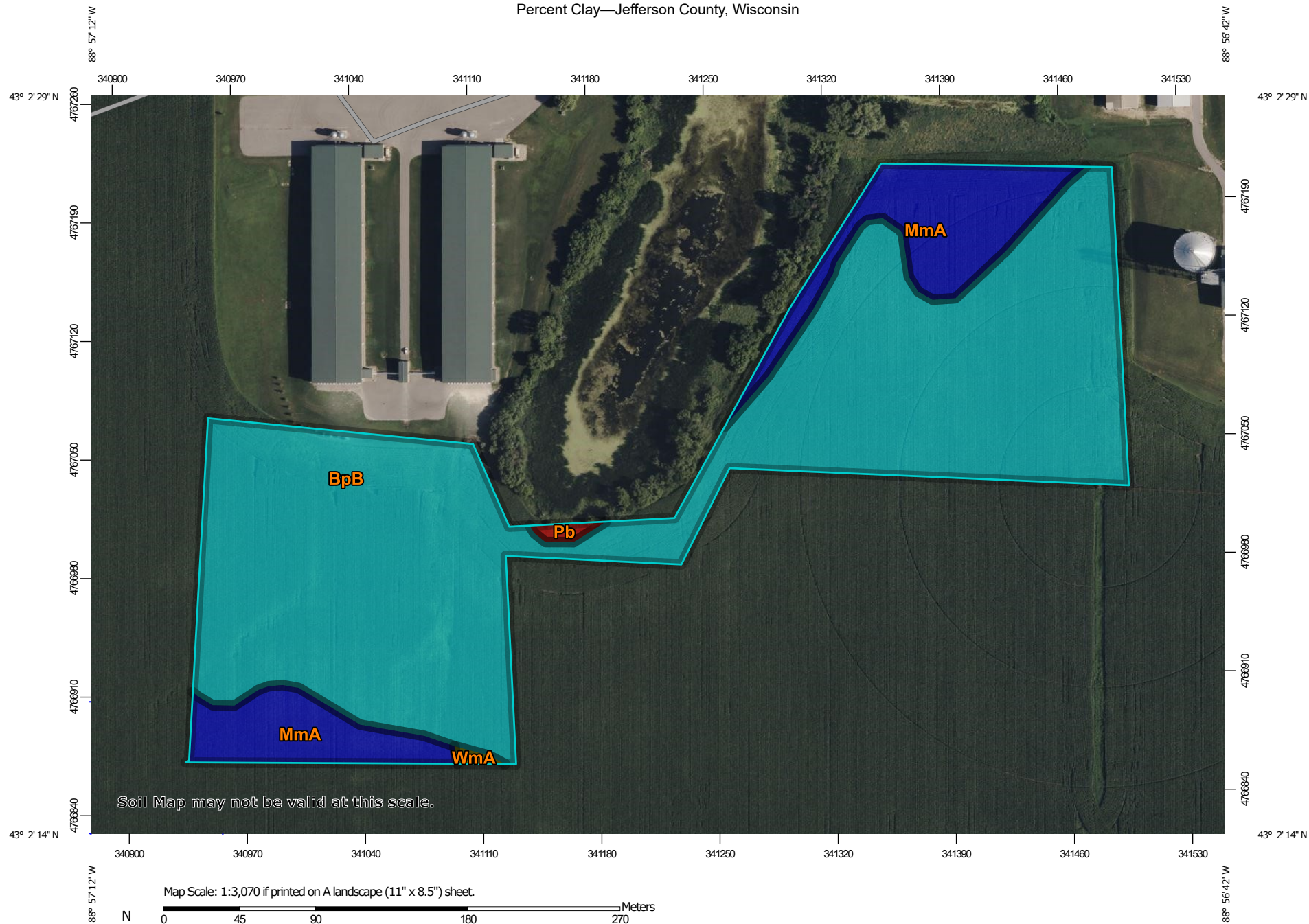
*Tie-break Rule:* Lower

*Interpret Nulls as Zero:* No

*Beginning Month:* January

*Ending Month:* December

# Percent Clay—Jefferson County, Wisconsin



Soil Map may not be valid at this scale.

Map Scale: 1:3,070 if printed on A landscape (11" x 8.5") sheet.

0 45 90 180 270 Meters

0 100 200 400 600 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge ticks: UTM Zone 16N WGS84



Natural Resources  
Conservation Service

Web Soil Survey  
National Cooperative Soil Survey

10/30/2024  
Page 1 of 4

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons

 ≤ 0.1  
 > 0.1 and ≤ 12.9  
 > 12.9 and ≤ 17.1  
 > 17.1 and ≤ 21.1  
 Not rated or not available

#### Soil Rating Lines

 ≤ 0.1  
 > 0.1 and ≤ 12.9  
 > 12.9 and ≤ 17.1  
 > 17.1 and ≤ 21.1  
 Not rated or not available

#### Soil Rating Points

 ≤ 0.1  
 > 0.1 and ≤ 12.9  
 > 12.9 and ≤ 17.1  
 > 17.1 and ≤ 21.1  
 Not rated or not available

### Water Features

 Streams and Canals

### Transportation

 Rails  
 Interstate Highways

 US Routes  
 Major Roads  
 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin  
 Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Percent Clay

| Map unit symbol                    | Map unit name                              | Rating (percent) | Acres in AOI | Percent of AOI |
|------------------------------------|--------------------------------------------|------------------|--------------|----------------|
| BpB                                | Boyer sandy loam, 2 to 6 percent slopes    | 17.1             | 15.4         | 83.0%          |
| MmA                                | Matherton silt loam, 0 to 3 percent slopes | 21.1             | 3.0          | 16.3%          |
| Pb                                 | Palms muck, ponded, 0 to 2 percent slopes  | 0.1              | 0.1          | 0.5%           |
| WmA                                | Wasepi sandy loam, 0 to 3 percent slopes   | 12.9             | 0.0          | 0.2%           |
| <b>Totals for Area of Interest</b> |                                            |                  | <b>18.6</b>  | <b>100.0%</b>  |

## Description

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth-moving operations.

Most of the material is in one of three groups of clay minerals or a mixture of these clay minerals. The groups are kaolinite, smectite, and hydrous mica, the best known member of which is illite.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

## Rating Options

*Units of Measure:* percent

*Aggregation Method:* Dominant Component

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher

*Interpret Nulls as Zero:* No

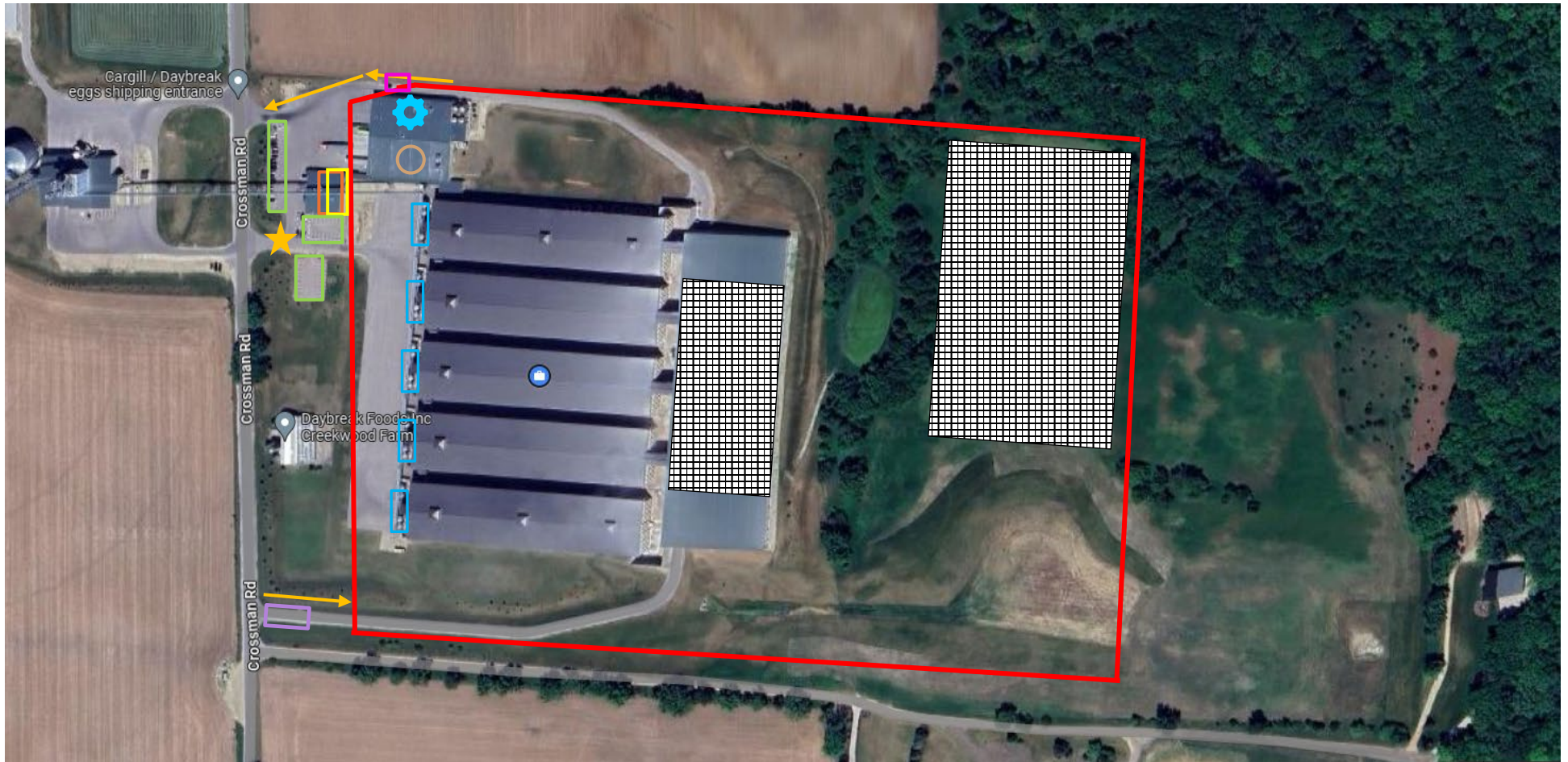
*Layer Options (Horizon Aggregation Method):* Depth Range (Weighted Average)

*Top Depth:* 0

*Bottom Depth:* 80

*Units of Measure:* Centimeters





- Employee parking = **Green Line**
- Entrance (trucks, materials)= **Purple Line**
- Spray Station Exit= **Pink Line**
- Feed Bins= **Blue Line**
- Quarantine Line = **Red Line**
- Shower = **Orange Line**
- Disinfection stations= **Yellow Line**
- Facility Entrance= **★**
- Outside personnel access to showers = **○**
- Compost = **■**
- Processing= **⚙**



-  Wetland Indicators  
 Lake Class Areas  
 Riverine/ditch Class Areas  
 Wetland Class Areas  
 Wetland Class Points  
 Dammed pond  
 Excavated pond  
 Filled/drained wetland  
 Wetland too small to delineate  
 Filled excavated pond  
 Filled Points  
 Wetland Class Areas  
 Filled Areas  
 Lake Class Areas  
 Riverine/ditch Class Areas  
 Wetland Class Areas  
 Wetland Class Points  
 Dammed pond  
 Excavated pond  
 Filled/drained wetland  
 Wetland too small to delineate  
 Filled excavated pond  
 Filled Points  
 Wetland Class Areas  
 Filled Areas  
 Wetland Identifications and Confirmations  
 NRCS Wetspots  
 Municipality  
 State Boundaries  
 County Boundaries  
 Major Roads  
 Interstate Highway  
 State Highway  
 US Highway

## Notes

0.3                      0                      0.13                      0.3 Miles

NAD 1983 HARN Wisconsin TM

1: 7,920

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: <http://dnr.wi.gov/legal/>



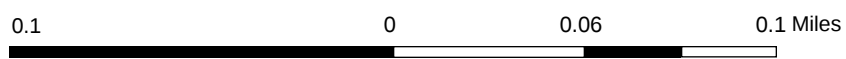
# Surface Water Data Viewer Map



## Legend

- Wetland Indicators
- Lake Class Areas
- Riverine/ditch Class Areas
- Wetland Class Areas
- Wetland Class Points
  - Dammed pond
  - Excavated pond
  - Filled/draind wetland
  - Wetland too small to delineate
  - Filled excavated pond
- Filled Points
- Wetland Class Areas
- Filled Areas
- Lake Class Areas
- Riverine/ditch Class Areas
- Wetland Class Areas
- Wetland Class Points
  - Dammed pond
  - Excavated pond
  - Filled/draind wetland
  - Wetland too small to delineate
  - Filled excavated pond
- Filled Points
- Wetland Class Areas
- Filled Areas
- Wetland Identifications and Confirmations
- NRCS Wetspots
- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway

## Notes



NAD\_1983\_HARN\_Wisconsin\_TM

1: 3,960

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: <http://dnr.wi.gov/legal/>

Daybreak Foods Inc. - Creekwood Farm

ZU00 ZT990 ZT884







December 23, 2024

Daybreak Foods – Creekwood - Cage  
Free Berret Rehm  
N5432 County Highway  
Lake Mills WI 53551

WPDES Permit No. WI-0056308-06-0  
Jefferson County

**Subject: Inspection Report Letter and Mass Mortality Plan Proposal**

Dear Mr. Rehm:

On November 8, 2024 the Wisconsin Department of Natural Resources (WDNR) conducted a site inspection for Daybreak Food – Creekwood- Cage Free as part of the WPDES permit reissuance process and to discuss the proposed plan for a mass mortality event. This inspection covered the Pullet facility, Composting Barns, and Waste Storage Facilities. A copy of this inspection report is attached. Based on the site visit there are no additional items that will be required as part of the final permit application for the layer facility.

Please review the attached site inspection report. As you continue to work on the mass mortality plan please reach out with any questions.

The final permit application should be submitted by April 1, 2025. Permit application materials must be submitted through the ePermitting System located at <http://dnr.wi.gov/permits/water/>. The following is required for a complete permit application:

**Permit Application Materials Required for All Operations:**

- 3400-025 form (Livestock/Poultry Operation WPDES Permit Application)
- 3400-025A form (Animal Units Calculation Worksheet)
- 3400-025B form (Nutrient Management Plan Checklist)
- 3400-025C form (Reviewable Facilities of Systems Checklist)
- Soil survey map(s) for each site managed by your operation
- Labeled aerial map(s) showing the features and structures located at each site managed by your operation (clearly delineate what is existing and proposed)
- Calculations documenting a minimum of 180 days liquid manure (and process wastewater) storage
- Supporting documentation for 180-day storage calculations
- A complete 5-year Nutrient Management Plan (NMP). If necessary, include a description of permanent spray irrigation systems and any other landspreading or treatment systems (proposed or active)
- \*Plans and specifications for reviewable facilities (if proposed)

**\*Note: Plans and specifications must be submitted through the ePermitting system as a separate submittal**

If you have any questions regarding this letter, inspection report, or permit requirements, please contact me at (608) 422-1512 or [eric.struck@wisconsin.gov](mailto:eric.struck@wisconsin.gov). If you have any questions on the ePermitting submittal process, please contact Falon French at (608) 228-5265 or [faon.french@wisconsin.gov](mailto:faon.french@wisconsin.gov).

Sincerely,

A handwritten signature in black ink that reads "Eric J. Struck". The signature is written in a cursive style with a large, stylized "E" and "S".

Eric J. Struck

Agricultural Runoff Management Specialist – Bureau of Watershed Management  
Wisconsin Department of Natural Resources  
Cell: (608)-422-1512  
[eric.struck@wisconsin.gov](mailto:eric.struck@wisconsin.gov)

Attachments: Inspection report November 8, 2024

CC: Laura Bub, Falon French, James Salscheider (WDNR)  
Philips Crop Care  
Joe Strupp (Jefferson County)



## **CAFO Compliance Report: December 23, 2024**

Inspection Date: November 8, 2024

Inspection Type: Reissuance

Operation Name: Daybreak Foods – Creekwood - Cage Free

WPDES Permit No. WI-0056308-06-0

Operation Address: Layer Facility, N5344 Crossman Road, Lake Mills, WI 53551  
Pullet Facility, N5432 County Highway A, Lake Mills, WI 53551  
Compost Barn, N5505 Crossman Road, Lake Mills, WI 53551

County: Jefferson

Watershed: Lower Koshkonong Creek and the Lower Crawfish River

On-Site representatives: Barret Rehm, Chad Johnson and Kevin Gast

DNR Staff / Report Writers: Eric Struck

---

On November 8, 2024, Eric Struck meet with representatives of Daybreak Foods – Creekwood – Cage Free (Daybreak) to discuss a mass mortality plan for highly pathogenic avian influenza and inspect the production area at Pullet Facility for reissuance of their WPDES Permit. The inspection began about 10 am and concluded at about 12:30 pm. The weather the day of the inspection was sunny with temps in the 50's. About an inch of rain had fallen in the week prior to the inspection and no water samples were taken. The inspection covered the entire production area of the Pullet Facility, waste storage facilities, and Composting Barns. Due to bio security reasons the inspection was limited to outdoor areas.

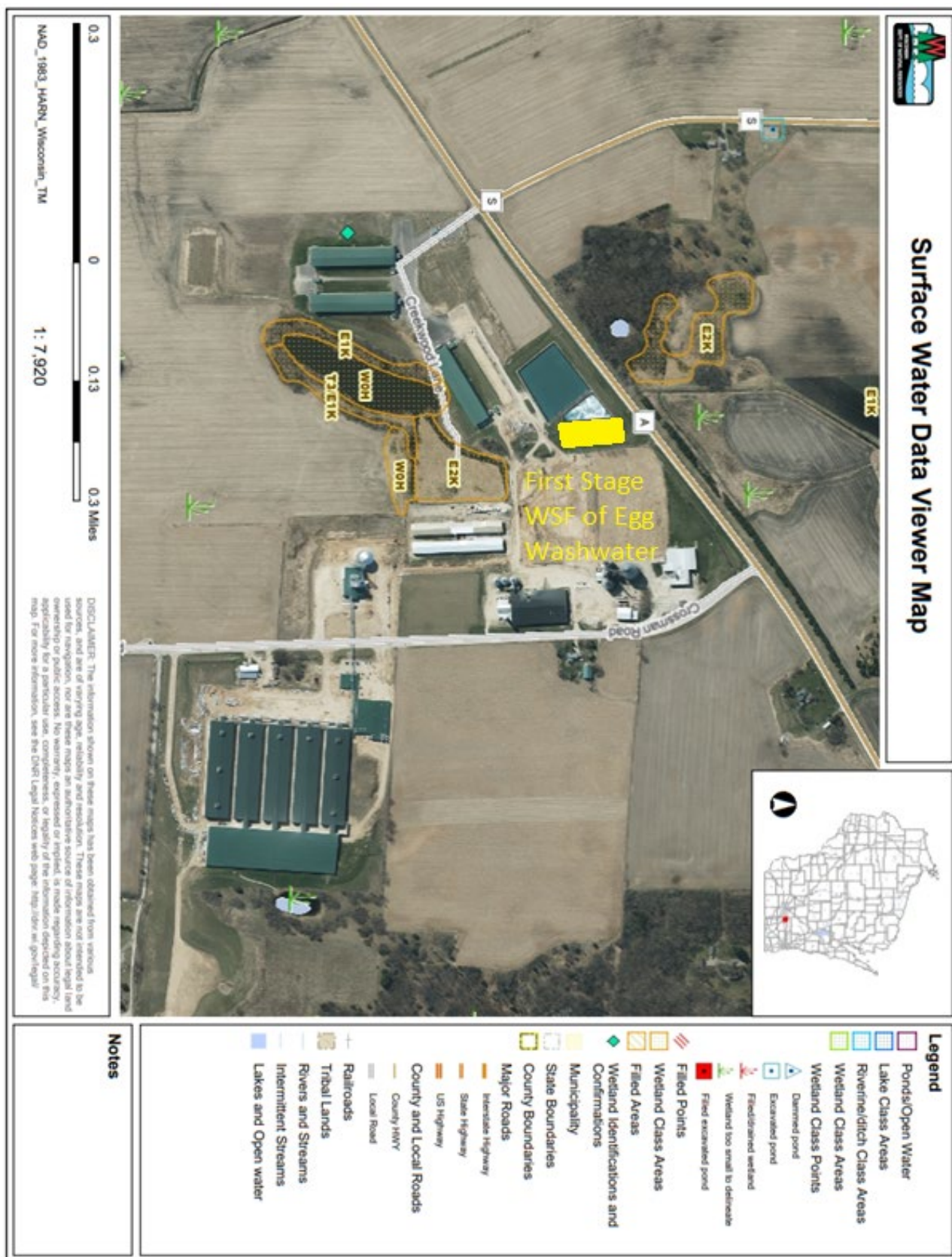
Please see the final section of the inspection report for a list of action items, areas of concern, and any addition requirements. Daybreak's WPDES permit expires on September 30, 2025, with a complete reissuance application due on **April 1, 2025**.

Prior to the inspection Struck and representatives of Daybreak Foods discussed the ongoing planning for a mass mortality event. Struck shared resources from the solid waste program and provided details on the use of the USDA Web Soil Survey. The soil survey provided information on soil type, slope, depth to groundwater, depth to bedrock, and other soil characteristics useful for determining proper sites for composting. Daybreak was going to use the resources to finalize a plan for review. The final review would be done in partnership with other programs and agencies, such as the as Department of Agriculture Trade and Consumer Protection (DATCP), and Jefferson County.

## Brief Facility Description

Daybreak is its 6<sup>th</sup> permit term. The facility recently rebuilt the production area with 5 cage free laying barns with a manure storage facility and kept three existing pullet barns. All eggs produced at the new laying barns are processed in the new washing facility. The eggs are washed, broken, or graded. Approximately 15,000 to 22,000 gallons of egg wash water are produced daily. The facility has been working on improvements to save water usage. The industrial process wastewater is processed through a three-stage digester system. The first stage was historically an anerobic digesters. With the construction of the new barns and egg processing building the anerobic digester was not functioning as originally designed. The cover was removed in the spring of 2024 and aerators were added to the storage creating an aerobic digester storage facility. Aerators were also added to the second and third stage storage to help facilitated the digestion of backlogged material in the first stage. Stage 1 and Stage 2 have a capacity of 875,000 gallons each, stage 3 has a capacity of 3,300,000 gallons. The storages were constructed from in 2011 and 2012. Currently Daybreak is disposing of the process wastewater either through local municipalities or other disposal companies. Daybreak does maintain the ability to land apply process wastewater according to their approved nutrient management plan.

The facility produces approximately 50,000 tons of solid chicken manure annually. Manure is conveyed out of the layer barns and into the Manure Drying and Processing building where it processed into a fertilizer. Manure is also hauled via truck from the pullet houses to the Manure Drying and Processing building. All mortality is currently being composted inside the manure storage building and is blended with manure and is processed as fertilizer. Eggshells from the egg processing facility are delivered to the Manure Drying and Processing building and blended into the fertilizer as an added nutrient benefit. There are also 2 remaining concrete sheds approved for solid manure in an emergency. All manure, eggshells, and mortalities are processed and sold as commercial fertilizer under their Department of Agriculture Trade and Consumer Protection Fertilizer License.



Map 1. Map from WDNR Surface Water Data Viewer. Wetland and surface water layers shown. Yellow shape highlights the first stage of the egg wash water waste storage facilities that act as an aerobic digester treatment facility. Foam observed to the north and east of the first stage.

## SITE OBSERVATIONS

### Feedlot Runoff

All animals are housed under roof.



|                 |                                 |
|-----------------|---------------------------------|
| Photo #         | 2645                            |
| Date/Time:      | November 8, 2024                |
| Location        | Daybreak Foods-<br>Pullet Barns |
| Photo taken by: | E. Struck                       |

Description: Well located between the east and middle pullet barn.

### Waste Storage Facilities

Waste from the pullet facilities are conveyed out of the barns several times a week. Waste is loaded into trucks in covered conveyer buildings. The waste is then taken to the waste storage building at the Layer Facility where it is processed and sold as commercial fertilizer.



|                 |                             |
|-----------------|-----------------------------|
| Photo #         | 2644                        |
| Date/Time:      | November 8, 2024            |
| Location        | Daybreak Foods-Pullet Barns |
| Photo taken by: | E. Struck                   |

Description: Facing east along east pullet barn. Covered manure load out building at east end of barn.



|                 |                             |
|-----------------|-----------------------------|
| Photo #         | 2646                        |
| Date/Time:      | November 8, 2024            |
| Location        | Daybreak Foods-Pullet Barns |
| Photo taken by: | E. Struck                   |

Description: Facing south between the middle and west pullet barn at the covered manure load out building, beyond the building is the mesh installed as wind block.



|                 |                             |
|-----------------|-----------------------------|
| Photo #         | 2647                        |
| Date/Time:      | November 8, 2024            |
| Location        | Daybreak Foods-Pullet Barns |
| Photo taken by: | E. Struck                   |

Description: Close up of covered manure load out building with mesh wall to the south to act as a wind barrier.

There liquid waste storage facilities are located in the northwest section of the production area. They form a simple three stage aerobic digester system. Each of the storages are HDPE lined and appear in good condition. The farm has installed a number of aerators in the waste storages facilities. The aerators provide oxygen for the aerobic digestion. The aerators are also used to break up foam that has formed. Daybreak plans to complete draw down the first and second stage waste storage facilities and manual remove all settled solids. The solids are mostly eggshells that have built up over time. The removed solids will be transported to the manure storage building and process with waste and sold as commercial fertilizer under their DATCAP Fertilizer License. The removal of solids is anticipated to reduce the formation of foam and greatly reduce the odor. The third stage has a sprinkler system that is used to break up foam and aid in the mixing. The sprinkler is in the middle of the storage. It is programed to run 24-hours a day, while above 32 F, and when winds speeds are less than 12 MPH. If winds exceed 12 MPH the sprinkler shuts down, there is a delay before it restarts. The sprinkler cycled several times during the inspection. The range of the sprinkler was visible with the ring of thinner foam in the center of the waste storage facility.



|                 |                                         |
|-----------------|-----------------------------------------|
| Photo #         | 2639                                    |
| Date/Time:      | November 8, 2024                        |
| Location        | Daybreak Foods-Waste Storage Facilities |
| Photo taken by: | E. Struck                               |

Description: Facing north northeast at cell 1 of the waste storage facilities used for egg wash process wastewater. Only a few feet of liquid remain, lines for aerator visible. Liner in good condition.



|                 |                                         |
|-----------------|-----------------------------------------|
| Photo #         | 2640                                    |
| Date/Time:      | November 8, 2024                        |
| Location        | Daybreak Foods-Waste Storage Facilities |
| Photo taken by: | E. Struck                               |

Description: Facing north at cell 2 of the waste storage facilities used for egg wash process wastewater. Only a few feet of liquid waste remaining. Some aerators still running. Liner in good condition



|                 |                                          |
|-----------------|------------------------------------------|
| Photo #         | 2641                                     |
| Date/Time:      | November 8, 2024                         |
| Location        | Daybreak Foods- Waste Storage Facilities |
| Photo taken by: | E. Struck                                |

Description: Facing west at cell 3 of the waste storage facilities used for egg wash process wastewater. Sprinkler system install in center of storage. Extend of range visible by darker ring around sprinkler. Control panel with anemometer behind photographer.



|                 |                                         |
|-----------------|-----------------------------------------|
| Photo #         | 2642                                    |
| Date/Time:      | November 8, 2024                        |
| Location        | Daybreak Foods-Waste Storage Facilities |
| Photo taken by: | E. Struck                               |

Description: Close up photo of side wall liner on cell 3 of the process waste water storage facility.



|                                                                                              |                                         |
|----------------------------------------------------------------------------------------------|-----------------------------------------|
| Photo #                                                                                      | 2643                                    |
| Date/Time:                                                                                   | November 8, 2024                        |
| Location                                                                                     | Daybreak Foods-Waste Storage Facilities |
| Photo taken by:                                                                              | E. Struck                               |
| Description: Facing west at southern side of Cell 3. Markers visible for depth measurements. |                                         |

The compost barn and remaining old pullet barn were empty during the inspection. They have no intended use for manure or bird storage. They might be used for a mass mortality event. Daybreak stated in a mass mortality event the building maybe used for storage of mortalities, carbon sources, mixing, and process. Currently they are used for machine storage.



|                                                                                                                                                   |                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Photo #                                                                                                                                           | 2638                            |
| Date/Time:                                                                                                                                        | November 8, 2024                |
| Location                                                                                                                                          | Daybreak Foods-Old Pullet Barns |
| Photo taken by:                                                                                                                                   | E. Struck                       |
| Description: Facing north northwest at old pullet barn and old manure storage building. Buildings proposed to be used for a mass mortality event. |                                 |

### Process Wastewater (other than feed storage area leachate/runoff)

The Layer Facility has an egg washing and breaking facility that produces process wastewater. Process wastewater is pumped to the first stage of the waste storage facility. The process wastewater is treated in the waste storage facility and is either disposed of through a waste disposal company or is land applied according to the farms approved nutrient management plan.

### Feed Storage Area Runoff

All feed is stored in covered storage bins.

### Animal Mortality Disposal

All mortalities are taken to the waste storage building at the Layer Facility for composting.

## **RECORDS REVIEW**

Records review was not done during this visit as it was reviewed the August 1, 2024 inspection.

## **SUMMARY**

### Areas of Concern

- None Identified during the inspection.

### Permit Violations Alleged Noncompliance

- None Identified during the inspection.

### Action Items

- Continue progress on mass mortality plan.
- Permit Reissuance application April 1, 2025

### Items for Next Permit Term

- None identified during the inspection.
- Update mass mortality plan as needed.



June 17, 2025

Jefferson County  
Approval

Chad Johnson  
Daybreak Foods Creekwood Cage Free  
N5344 Crossman Rd  
Lake Mills, WI 53551

SUBJECT: Conditional Approval of Daybreak Foods Creekwood Cage Free Nutrient Management Plan, WPDES Permit No. 0056308-07-0

Dear Mr. Johnson:

After completing a review of Daybreak Foods Creekwood Cage Free 2025-2029 Nutrient Management Plan (NMP) the Wisconsin Department of Natural Resources (Department) is providing conditional approval that it is consistent with Nutrient Management Requirements in s. NR 243, Wis. Adm. Code. This part of your WPDES permit application is now ready for the public notice and comment process as required by Ch. 283 Stats.

Before applying manure onto approved fields each season, the Department recommends Daybreak Foods Creekwood Cage Free review the NMP with those individuals involved with manure applications to ensure all remain familiar with the approved manure spreading protocol, spreading maps, field and map verification, record keeping requirements, and all the conditions of this approval.

### FINDINGS OF FACT

The Department confirms that:

1. A current flock size of 25,527 animal units (2,075,340 layers and 624,000 pullets). Currently there are no planned expansions in the next permit term.
2. Manure generation and spreading records indicate your flock will annually generate approximately 7,000,000 gallons of process wastewater. All solid manure generated will be mechanically manipulated and distributed via NR 243.142(2)(b).
3. The use of application restriction options 1 and 5 within surface water quality management areas.
4. The use of phosphorus delivery method P Index.
5. That Daybreak Foods Creekwood Cage Free currently has 519.4 acres (23.5 owned and 495.9 controlled through contracts, rental agreements or leases, or under manure agreements) of which 480.8 are spreadable acres.
6. That all fields will be checked for the following features prior to/during manure or process wastewater applications: soil areas with possible shallow groundwater (i.e., within 24 inches of surface) at the time of

manure application; required setbacks associated with wells, navigable waters, conduits to navigable waters, grassed waterways, wetlands, possible soil erosion/flow channels.

7. That surface applications of manure will not be completed when precipitation capable of producing runoff is forecasted within 24 hours of the time of planned application.

### **CONDITIONAL NUTRIENT MANAGEMENT PLAN APPROVAL**

The Department hereby approves the 2025-2029 Daybreak Foods Creekwood Cage Free Nutrient Management Plan subject to the following conditions and the applicable requirements of Ch. NR 243, Wis. Adm. Code:

#### **FIELD AND MANURE MANAGEMENT**

1. Fields not included in the NMP and new fields shall not receive manure or process wastewater applications until they have been properly soil sampled, entered into Snap Plus, evaluated for their nutrient needs, and approved by the Department.
2. The following fields have also been approved to receive industrial, municipal, or septage waste:

| <b>Field Name</b>                 | <b>Other Permittee Name</b>        | <b>Other Permittee Field Name</b> | <b>DNR #</b> |
|-----------------------------------|------------------------------------|-----------------------------------|--------------|
| Wiedenfeld Home 01 North          | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-1                          | 102061       |
| Wiedenfeld Home 02 Wollin Rd      | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-2                          | 102062       |
| Wiedenfeld Home 03 big N of bags  | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-17                         | 102075       |
| Wiedenfeld Home 03 big N of bags  | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-18                         | 102076       |
| Wiedenfeld Home 03 big N of bags  | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-2                          | 102062       |
| Wiedenfeld Home 05-06 East middle | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-7                          | 102066       |
| Wiedenfeld Home 05-06 West middle | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-6                          | 102065       |
| Wiedenfeld Home 05-06 West middle | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-7                          | 102066       |
| Wiedenfeld Home 07 east of barn   | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-15                         | 102073       |
| Wiedenfeld Home 07 east of barn   | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-16                         | 102074       |
| Wiedenfeld Home 08A west NE       | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-10                         | 102068       |
| Wiedenfeld Home 08B east NE       | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-11                         | 102069       |
| Wiedenfeld Home 09 contour        | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-12                         | 102071       |
| Wiedenfeld Home 09 contour        | DAYBREAK FOODS CREEKWOOD CAGE FREE | WEIDEN-13                         | 102072       |

|                                           |                                       |           |        |
|-------------------------------------------|---------------------------------------|-----------|--------|
| Wiedenfeld Home 09<br>contour             | DAYBREAK FOODS<br>CREEKWOOD CAGE FREE | WEIDEN-19 | 102077 |
| Wiedenfeld Home 10<br>south of contour    | DAYBREAK FOODS<br>CREEKWOOD CAGE FREE | WEIDEN-13 | 102072 |
| Wiedenfeld Home 10<br>south of contour    | DAYBREAK FOODS<br>CREEKWOOD CAGE FREE | WEIDEN-19 | 102077 |
| Wiedenfeld Home 11<br>corner              | DAYBREAK FOODS<br>CREEKWOOD CAGE FREE | WEIDEN-19 | 102077 |
| Wiedenfeld Stark 01A<br>triangle          | DAYBREAK FOODS<br>CREEKWOOD CAGE FREE | STARK-3   | 103431 |
| Wiedenfeld Stark 01B<br>triangle          | DAYBREAK FOODS<br>CREEKWOOD CAGE FREE | STARK-3   | 103431 |
| Wiedenfeld Stark 02<br>cemetery west of Q | DAYBREAK FOODS<br>CREEKWOOD CAGE FREE | STARK-2   | 103430 |
| Wiedenfeld Stark 03A<br>West west of Q    | DAYBREAK FOODS<br>CREEKWOOD CAGE FREE | STARK-1   | 103429 |
| Wiedenfeld Stark 03B<br>East west of Q    | DAYBREAK FOODS<br>CREEKWOOD CAGE FREE | STARK-1   | 103429 |
| Wiedenfeld Stark 04<br>rectangle          | DAYBREAK FOODS<br>CREEKWOOD CAGE FREE | STARK-4   | 103432 |

Prior to any manure applications on these fields Daybreak Foods Creekwood Cage Free shall contact the entities listed above to obtain recent spreading records and make the necessary adjustments to the planned manure application rates. At the end of each year Daybreak Foods Creekwood Cage Free shall contact each entity listed above to obtain spreading records from the previous year so that they can be properly tracked in the NMP. Please Note: Daybreak Foods Creekwood Cage Free is responsible for obtaining nutrient content values for all other wastes spread on any field in their NMP.

3. If existing fields yield a soil test results equal to or greater than 200 ppm P, those fields would be prohibited from receiving manure or process wastewater applications, unless you obtain Department approval in accordance with NR 243.14(5)(b)2., Wis. Adm. Code.
4. All liquid manure samples collected may be analyzed, at a minimum, for percent dry matter, total nitrogen, percent  $\text{NH}_4\text{-N}$ , percent  $\text{NO}_3\text{-N}$ , phosphorus, potassium, and sulfur.
5. If manure sample results have a dry matter (DM) content less than 2.0% and the percent ammonium ( $\text{NH}_4^+$ ) is greater than 75% of the total N, Daybreak Foods Creekwood Cage Free may use the following equation to adjust the first year available nitrogen when applications are injected or incorporated within 1 hour:

$$\text{First-Year Available N} = \text{NH}_4\text{-N} + [0.25 \times (\text{Total N} - \text{NH}_4\text{-N})]$$

6. Daybreak Foods Creekwood Cage Free shall record daily manure applications by using form 3200-123A. These forms shall be retained at the farm and provided to the department upon request.
7. Daybreak Foods Creekwood Cage Free shall annually submit a spreading report that summarizes the land application activities listed under NR 243.19(3)(c)5., Wis. Adm. Code by using form 3200-123.

#### WINTER SPREADING

8. Liquid manure applications during winter conditions, as defined by NR 243.14(7), Wis. Adm. Code, are prohibited with the exception of emergency applications.

9. The following field(s) are approved for winter spreading of process wastewater only:

- |                                          |                                        |                                       |
|------------------------------------------|----------------------------------------|---------------------------------------|
| - Wiedenfeld Home 01 North               | - Wiedenfeld Home 02 Wollin Rd         | - Wiedenfeld Home 03 big N of bags    |
| - Wiedenfeld Home 05-06 East Middle      | - Wiedenfeld Home 07 east of barn      | - Wiedenfeld Home 08A west NE         |
| - Wiedenfeld Home 08B east NE            | - Wiedenfeld Home 10 South of contour  | - Wiedenfeld Russel 02 middle contour |
| - Wiedenfeld Russel 10A Big S of 94      | - Wiedenfeld Stark 01A triangle        | - Wiedenfeld 01B triangle             |
| - Wiedenfeld Stark 02 cemetery west of Q | - Wiedenfeld Stark 04 rectangle        | - Wiedenfeld Stark 05 back            |
| - Wiedenfeld Wollin 01 wayside           | - Wiedenfeld Wollin 02 square          | - Wiedenfeld Wollin 03A West back     |
| - Wiedenfeld Wollin 03B East back        | - Wiedenfeld Wollin 04A West Wollin Rd |                                       |

10. The following field(s) are denied for winter spreading of process wastewater:

- |                                        |                                       |                                       |
|----------------------------------------|---------------------------------------|---------------------------------------|
| - Wiedenfeld Home 09 contour           | - Wiedenfeld Russel 04 West rectangle | - Wiedenfeld Russel 06 Manske Rd      |
| - Wiedenfeld Russel 10B River S or 94  | - Wiedenfeld Stark 03A West of Q      | - Wiedenfeld Stark 03B East West of Q |
| - Wiedenfeld Wollin 04B East Wollin Rd |                                       |                                       |

11. Winter spreading of solid and liquid manure may not occur during the “high risk runoff period” pursuant to s. NR 243.14(6)(c) and NR 243.14(7)(c), respectively.

12. Winter applications of liquid manure shall only occur under emergency situations, after notifying the Department and receiving verbal approval.

13. Liquid applications shall be limited to 3,500 gallons per acre or 30 lbs. P per acre, whichever is less, on slopes 2-6% and 7,000 gallons per acre or 60 lbs. P per acre, whichever is less, on slopes 0-2%. Winter applications of solid manure shall be limited to 60 lbs. P per acre.

#### HEADLAND STACKING

14. No headland stacking sites are approved.

#### MANURE & PROCESS WASTEWATER IRRIGATION

15. The following fields are denied for process wastewater applications using a traveling gun irrigation equipment:

- |                              |                       |                             |
|------------------------------|-----------------------|-----------------------------|
| - Wiedenfeld Home 14 Grandma | - Wieden Home 0-House | - Wiedenfeld Home 11 corner |
|------------------------------|-----------------------|-----------------------------|

- Wiedenfeld Museum Farm
- Wiedenfeld Home 12 Gornol Corner

**16. All other fields included in this NMP (as of June 16, 2025) are approved for process wastewater applications using a traveling gun irrigation equipment:**

17. Irrigation application rates shall be limited to 10,000 gallons per acre (may be less in SWQMAs), per application event or 10,000 gallons per acre over a 5 day period if split applications are used.
18. Daybreak Foods Creekwood Cage Free shall allow a rest period of 5 days or more between each application event. If field conditions allow, this rest period can be reduced to 3 days.
19. Irrigation applications during daytime hours shall not occur if sustained wind speeds of 10 miles per hour or more are documented. Sustained wind shall be defined as the average wind speed over a 15 minute period.
20. Irrigation applications during night time hours are prohibited.
21. Irrigation applications shall not occur when wind gusts exceed 20 miles per hour.
22. Daybreak Foods Creekwood Cage Free shall visually monitor fields receiving manure irrigation applications every 2 hours or more frequently.
23. If Daybreak Foods Creekwood Cage Free receives approval from an adjacent dwelling resident to apply within 250 feet, the reduced setback does not become effective until a copy of the agreement is submitted to the department.
24. If additional fields are selected by Daybreak Foods Creekwood Cage Free for irrigation applications, those fields cannot be used for that purpose until department review and written approval is obtained.

**MANURE DISTRIBUTION- RESPONSIBILITY FOR LARGE CAFO MANURE AND PROCESS WASTEWATER (NR 243.142).**

25. Daybreak Foods Creekwood Cage Free is approved to distribute manure or process wastewater under NR 243.142 (2)(b)(2).
26. The facilities manure is mechanically dried, and moisture is reduced to less than 35% by weight. This fertilizer product if used for organic food crop production follows the USDA's National Organic Program's standards related to raw-manure use. The standards call for a 120-day interval between the application of raw manure for crops in contact with the soil and 90 days for crops not in contact with the soil.
27. The manure is sold under WI fertilizer license number WI 30-017959-023496:
28. All entities that manure is distributed to via this exemption will be required to follow the following criteria when land applying:
  - The purchaser agrees that the purchased fertilizer will be beneficially used for agricultural plant nutrient applications and will be applied following NRCS 590 standards for manure and fertilizer applications.
  - Fertilizer will be land applied within 5 days.
  - If the person receiving manure intends to store the manure, the permittee shall demonstrate to the department that the distributed manure will be delivered to proper storage. For purposes of this paragraph, proper storage means one of the following:
    - o The fertilizer will be stored in a facility that complies with NRCS Standard 313, December 2005.

- The distributed manure will be stored in a manner that will not cause exceedances of groundwater and surface water quality standards or impair wetland functional values. c. No headland stacking is allowed.

**29. Daybreak Foods Creekwood Cage Free shall retain all records of sale and signed agreements for distributed manure and report them with the annual NMP updates.**

**SUBMITAL AND RECORDKEEPING REQUIREMENTS**

30. A copy of this conditional approval shall be included in all future annual Nutrient Management Plan Updates in addition to the NR 243 and NRCS 590 checklists.
31. Within 30 days of this approval, Daybreak Foods Creekwood Cage Free shall identify and submit an irrigation log that will be used to track irrigation applications along with visual field inspection information. An example log form was attached to the approval email.

This conditional approval does not limit the Department's regulatory authority to require NMP revisions (based upon new information or manure irrigation research findings) or request additional information in order to confirm or ensure your farm operation remains in compliance with NR 243 and your WPDES permit conditions. If additional information, project changes or other circumstances indicate a possible need to modify this approval, the Department may ask you to provide further information relating to this activity.

Please keep in mind that approval by the Department of Natural Resources – Runoff Management Program does not relieve you of obligations to meet all other applicable federal, state or local permits, zoning and regulatory requirements.

If you have any questions regarding this approval I can be reached at 715-214-5503 or [Aaron.Orourke@Wisconsin.gov](mailto:Aaron.Orourke@Wisconsin.gov).

Sincerely,



Aaron O'Rourke  
WDNR Nutrient Management Program Coordinator  
Wisconsin Department of Natural Resources

cc: Eric Struck, WDNR Agricultural Runoff Specialist ([Eric.Struck@Wisconsin.gov](mailto:Eric.Struck@Wisconsin.gov))  
Laura Bub, WDNR Watershed Field Supervisor ([Laura.Bub@Wisconsin.gov](mailto:Laura.Bub@Wisconsin.gov))  
Ben Uvaas, Acting WDNR Ag Runoff Section Chief ([Benjamin.Uvaas@Wisconsin.gov](mailto:Benjamin.Uvaas@Wisconsin.gov))  
Ashley Scheel, WDNR CAFO NMP Reviewer ([Ashley.Scheel@Wisconsin.gov](mailto:Ashley.Scheel@Wisconsin.gov))  
Falon French, WDNR Intake Specialist ([Falon.French@Wisconsin.gov](mailto:Falon.French@Wisconsin.gov))  
Patricia Cicero, Jefferson County ([patriciac@jeffersoncountywi.gov](mailto:patriciac@jeffersoncountywi.gov))  
Phillip Laatsch, Phillip's Crop Care ([phillipscropcare@yahoo.com](mailto:phillipscropcare@yahoo.com))

File



August 21, 2025

FILE REF: R-2025-0087  
WPDES Permit #: WI-0056308

Barret Rehm  
Daybreak Foods Creekwood Cage Free  
Po Box 800  
Lake Mills, WI 53551-1080

Subject: Evaluation Review for Days of Storage for Solid Manure, at Daybreak Foods Creekwood Cage Free Sec 27, T07N, R13E, Lake Mills Township, Jefferson County – NO ADDITIONAL ACTION REQUIRED

Dear Mr. Rehm:

This letter is to inform you that the Wisconsin Department of Natural Resources (Department) has completed its review of the calculation of days of storage submitted by Bob Pofahl from Resource Engineering Associates, Inc. on April 1, 2025.

The Department reviewed the submitted calculations in accordance with ss. NR 243.16(1)(c) and (d), NR 243.15(3)(h) and NR 243.17(5), Wis. Adm. Code. Under s. NR 243.16(3), Wis. Adm. Code, the Department may require additional practices, conditions, or permittee actions based on review of the submitted evaluation. For the solids manure storage calculations, the Department has determined **no additional actions** on your part are required.

**Days of Available Process Wastewater Storage:** The submitted information states that Daybreak Foods Creekwood Cage free has approximately 217 days of liquid process wastewater storage. The current number of animal units provided for the calculation is 25,526 consisting of layers and broilers. The liquid waste calculations are based on liquid waste hauling logs and a collection period of 365 days. The farm collects egg wash wastewater in a wastewater treatment process consisting of an 800,000 gallon aerated treatment cell, a 3.4 million-gallon decanter lagoon and a digester. The total storage is approximately 4.2 million gallons. The farm estimates it produces 7,068,300 gallons of liquid waste based on submitted hauling logs. The farm collects no runoff from the site.

**Days of Available Solid Manure Storage:** The submitted information states that Daybreak Foods Creekwood Cage free has approximately 397 days of solid storage. The current number of animal units provided for the calculation is 25,526 consisting of layers and broilers. The solid manure calculations are based on estimated or calculated values of a collection prior of 365 days. The farm uses a concrete solid waste storage facility that measures 180 ft by 565 ft with 16ft high walls. The capacity for this solid storage facility is approximately 1.74 million cubic feet. The farm estimates it produces 1.6 million gallons of solid waste annually based on calculated values.

Should you have any questions, please contact Tabatha Davis, DNR Madison office or your regional CAFO Specialist.

#### **NOTICE OF APPEAL RIGHTS**

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to WIS. STAT. §§ 227.52 and 227.53, you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition

with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to WIS. STAT. § 227.42, you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with WIS. ADMIN. CODE § NR 2.05(5), and served on the Secretary in accordance with WIS. ADMIN. CODE § NR 2.03. The filing of a request for a contested case hearing does not extend the 30-day period for filing a petition for judicial review.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES



---

Bernard Michaud, P.E.  
Water Resources Engineer  
Watershed Management Program

Email: Barrett Rehm; Daybreak Foods, Inc.  
(920) 648-8341; barrett@daybreakfoods.com

Robert Pofahl; Resource Engineering Associates,  
Inc. (608) 819-2773; bob@reaeng.com

Aaron O'Rourke DNR, Eau Claire  
(715) 839-3775; aaron.orourke@wisconsin.gov

Matt Woodrow, P.E. DATCP (920) 427-8505;  
matthew.woodrow@wisconsin.gov



---

Tabatha Davis  
Engineering Intern  
Watershed Management Program

Joe Strupp; Jefferson County  
(920) 674-7483; joes@jeffersoncountyiwi.gov

Laura A Bub DNR, South Central Region  
(608) 275-3203; Laura.Bub@wisconsin.gov

Eric J Struck; DNR-Southeast Region  
(608) 422-1512; eric.struck@wisconsin.gov

Tabatha Davis DNR, Central Office  
(608) 712-2324; tabatha.davis@wisconsin.gov



November 5, 2024

Daybreak Foods- Creekwood- Cage Free  
Berret Rehm  
N5432 County Highway A  
Lake Mills WI 53551

WPDES Permit No. WI-0056308-06  
Jefferson County

**Subject: Compliance Reminder- Foam leaving waste storage facility—Response Requested**

Dear Mr. Rehm:

On September 18, 2024, the Department of Natural Resources (department) responded to a complaint regarding foam leaving the first stage of the egg wash water waste storage facilities located Daybreak Foods – Creekwood - Cage Free (Daybreak) at the intersection of Cty Hwy A and Crossman Road. On September 19, 2024, the department verified the presence of foam outside of the waste storage facility. Foam was observed on the side hill of the wastewater storage facilities south of Cty Hwy A. Based on these observations, the department believes that Daybreak Egg Creekwood was in noncompliance with its Wisconsin Pollutant Discharge Elimination System (WPDES) Permit # WI-0056308-06-0 that became effective on December 1, 2020. The department believes that Daybreak Egg Creekwood is in noncompliance with the following permit requirement:

- I. **1.3.1 Proper Operation and Maintenance-** The permittee shall always properly operate and maintain all manure and process wastewater facilities and systems in compliance with the conditions of this permit. The permittee shall comply with the permit and s. NR 243.17.

*Foam from the first stage digester waste storage facility was observed blowing and rolling from the waste storage facility. All waste should be contained to the waste storage facility to ensure compliance with permit discharge limitations.*

- II. **1.3.1 Proper Operation and Maintenance-** The permittee shall always properly operate and maintain all manure and process wastewater facilities and systems in compliance with the conditions of this permit. The permittee shall comply with the permit and s. NR 243.17.
- a) Prior to introducing any influent additives to a digester, other than manure, the permittee shall obtain written Department approval. If any materials other than manure are used in the digester, the permittee shall maintain daily records of the volumes of all manure and non-manure components added to the digester influent. As part of its approval, the Department may apply additional requirements in accordance with s. NR 243.17(1). As part of the Department's review, the Department may also require amendments to the permittee's nutrient management plan and the permittee shall submit an amended plan to the Department to incorporate the additional requirements.

*Daybreak had communicated to the department about the addition of probiotic and bacterial additives to seed the aerobic digester pond. Different bacteria strains have been added through the season to aid in the efficiency of the digester. Daybreak did not seek written approval prior to introducing additives to the waste storage facility.*

- III. **3.1.16 Noncompliance - 24 Hour Reporting-** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. This includes any upset which exceeds any effluent limitation in the permit, or violations of the discharge limitations listed in the permit.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources immediately of any discharge not authorized by the permit. The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800 943-0003.

*Daybreak failed to report the discharge from the storage facility to the WDNR Spills Hotline and failed to notify the WDNR Regional CAFO Specialist Any waste liquid or solid, leaving the waste storage facility is considered a spill. Any future event should be reported to the department's Emergency Spills Hotline (1-800-943-003). Your CAFO Specialist should also be contacted. Further follow up and reporting is required per your WPDES Permit.*

In response to this letter please submit the following information to the department by **November 27, 2024**

**I. Summary of Events**

1. Formal response to the cause and content of the foam.
2. Clean up actions taken by the farm.
3. Current state of the storages.
  - a. Level of storages
  - b. Presence of foam
  - c. Current operation plan for aerators and sprinklers
4. Plan to contain future foam in the waste storage.
  - a. Preventative measures and changes in operation
  - b. Structural and facility changes

**II. List of additives**

1. Provide a list of additives used in the storage, to include:
  - i. Applicable Safety Data Sheet and datasheet available for each additive.
  - ii. Dates and volumes used.
  - iii. Function of the additive.
2. Provide a plan moving forward, to include:
  - i. List additives that will be continued to be used.
  - ii. Function of the additives to be used.
3. Maintain records of the additives used to be submitted with annual report.
4. Request approval for any additives prior to use in the waste storage facility.

Please understand that you are in noncompliance and will remain in noncompliance until you take all necessary actions to address noncompliance issues listed above. Failure to respond in a timely manner may result in escalated enforcement actions.

If you have any questions regarding this letter, or permit requirements, please contact me at (608) 422-1512 or [eric.struck@wisconsin.gov](mailto:eric.struck@wisconsin.gov).

Sincerely,

A handwritten signature in black ink that reads "Eric J. Struck". The signature is written in a cursive, flowing style.

Eric J. Struck  
Agricultural Runoff Management Specialist – Bureau of Watershed Management  
Wisconsin Department of Natural Resources  
3911 Fish Hatchery Road, Fitchburg, WI 53711  
Cell: (608)-422-1512  
[eric.struck@wisconsin.gov](mailto:eric.struck@wisconsin.gov)

Attachments: Inspection report July 29, 2024

CC: Laura Bub, James Salscheider (WDNR)  
Philips Corp Care



## **CAFO Compliance Report: November 5, 2024**

Inspection Date: September 19, 2024  
Inspection Type: Complaint/Runoff Response  
Operation Name: Daybreak Foods – Creekwood - Cage Free  
WPDES Permit No. WI-0056308-06-0  
Operation Address: N5432 County Highway A, Lake Mills, WI  
County: Jefferson  
Watershed: Lower Koshkonong Creek and the Lower Crawfish River  
On-Site representatives: Drive By: Phone Calls to Chad Johnson and Barret Rehm  
DNR Staff / Report Writers: Eric Struck

---

On September 18, 2024, Eric Struck drove around the area of Daybreak Foods – Creekwood – Cage Free (Daybreak) facility in response to a complaint and possible violation to the WPDES permit held by Daybreak. Struck drove down County Hwy A and Crossman Road that morning observing from the road right away. The weather the day of the inspection was dry and sunny with the temps in the 80's. No rain had fallen in the week prior to the inspection and no water samples were taken. The inspection covered only area visible from the roadway.

Please see the final section of the inspection report for a list of action items, areas of concern, and any addition requirements. Daybreak's WPDES permit expires on September 30, 2025, with a complete reissuance application due on April 1, 2025.

### **Brief Facility Description**

Daybreak is its 6<sup>th</sup> permit term. The facility recently rebuilt the production area with five cage free laying barns with a manure storage facility and kept three existing pullet barns. All eggs produced at the new laying barns are processed in the new washing facility. The eggs are washed, broken, or graded. Approximately 15,000 to 22,000 gallons of egg wash water are produced daily. The facility has been working on improvements to save water usage. The industrial process wastewater is processed through a three-stage digester system. The first stage was historically an anerobic digester. With the construction of the new barns and egg processing building the anerobic digester was not functioning as originally designed. The cover was removed in the spring of 2024 and aerators were added to the storage creating an aerobic digester storage facility. Aerators were also added to the second and third stage storage facilities to help facilitate the digestion of backlogged material in the first stage. Stage 1 and Stage 2 storage facilities have a capacity of 875,000 gallons each, stage 3 storage facility has a capacity of 3,300,000 gallons. The storages were constructed in 2011 and 2012. Currently Daybreak is disposing of the process wastewater either through local municipalities or other waste disposal companies. Daybreak maintains the ability to land apply process wastewater according to their approved nutrient management plan. All chicken manure is dried, processed, and sold as commercial fertilizer under the farm's DATCAP fertilizer licenses. Manure is stored under roof and transported by covered conveyors or covered semi-trailers.



## SITE OBSERVATIONS

On September 18, 2024, the Department of Natural Resources (department) received a complaint of foam leaving the waste storage facility located at Daybreak Foods – Creekwood – Cage Free (Daybreak) facility. One September 18, 2024, Eric Struck, CAFO Wastewater Specialist, followed up with Chad Johnson of Daybreak. Chad stated with the windy and dry conditions the foam on first stage storage had blown to the north side of the storage and was blowing up and over the storage embankment. The farm was in the process of trying to move aerators to stop the foam from concentrating in that area of the storage.

On morning September 19, 2024, Struck did a drive past the facility. Struck observed foam on the waste storage embankment and the ditch line along County Hwy A. The complaint received by the department showed that foam had reached across Hwy A. While Struck was driving around the facility no new foam was observed leaving the facility. Foam was still present on the northern and northeastern side of the first stage of waste storage facility. Struck called Johnson about the foam and directed them to clean up the remaining foam. Johnson also discussed further actions that were planned to prevent foam from leaving the waste storage facility again. This included the installation of tarps or fabric on the safety fence and the installation and moving of aeration and sprinklers. They also discussed the possible cause of the foam, strong winds, the lack of precipitation, concentration of the wastewater, and aeration. The foam was able to hold form much longer than had ever been seen before. Struck asked to be notified if any further excess foam formation was observed and directed ongoing clean up and additional actions to prevent further discharge events.

On September 23, 2024 Rehm and Struck spoke about the foam. Rehm stated the foam was likely the result of a bacteria change over in the first stage of the storage coupled with the current water and weather conditions. This created the condition perfect for the foam creation. Rehm stated they are working with their wastewater engineering firm on the cause and potential solutions to the foam. Rehm said there are no known sources of PFAS at the facility and the facility is using no new additives. The current additives are biological in nature aiding in the population of beneficial bacteria in the waste storage system. Struck stated the department would review and approve all additives that have been added and would need to approve any future additives prior to use, including biological additives. Rehm also stated that they intend to move some of the aerators and sprinklers to help break up the formation of foam. The farm also is awaiting a larger pump to be installed to help circulate the water even more.

Struck later followed up with Rehm and Johnson about further permit requirements. First that any foam leaving the facility should be called in to the departments spill hotline at 1-800-943-0003. This should be done immediately, a spill report is required to be submitted 5 days later, spills should also be recorded and report and in the farms annual report. Secondly the department is required to approve any additives used in a digester. Daybreak egg is required to supply the department with a list of additives previous used with available SDS datasheets, along with any records of dates and volumes used. Any future use of additives should be preapproved by the department in writing. Struck also reminded the farm of the sampling requirement of liquid waste of two samples per month while land applying. Struck also noted any changes to the liner or side wall of the storage would require plan and specification review. The aerators and sprinklers being used site above the storage and are designed to operate within the storage, so no plan review is required.

On October 9, 2024, Struck again followed up with Rehm on the storages. The remaining fabric still needed to be installed and Daybreak had sent a company truck to pick up the pump to aid in circulation. Struck covered the requirements again and stated that would be included in a formal letter to the facility. Struck also asked to be notified when the storage would be at its lowest level before winter to observe the liner and finish the reissuance inspection for permit reissuance.



|                 |                                        |
|-----------------|----------------------------------------|
| Photo #         | 2438                                   |
| Date/Time:      | September 19, 2024                     |
| Location        | Daybreak Foods – Creekwood - Cage Free |
| Photo taken by: | Struck                                 |

Description: Facing southwest from County Hwy A, at the northeast corner of the first stage of the waste storage facilities. Foam balls observed on the side hill of the waste storage facility reaching the bottom of ditch line.



|                 |                                        |
|-----------------|----------------------------------------|
| Photo #         | 2440                                   |
| Date/Time:      | September 19, 2024                     |
| Location        | Daybreak Foods – Creekwood - Cage Free |
| Photo taken by: | Struck                                 |

Description: Description: Facing south from County Hwy A, at the northern side of the first stage of the waste storage facilities. Foam balls observed on the side hill of the waste storage facility reaching the bottom of ditch line.

## **SUMMARY**

### Areas of Concern

- Foam leaving the waste storage facility.

### Permit Violations Alleged Noncompliance

- Waste in the form of foam leaving the waste storage facility.
- Failure to report a spill.
- Failure to request approval for digester additives.

### Action Items

- Clean up foam and any debris from foam and waste that left the waste storage facility.
- Monitor Foam formation and take appropriate steps to stop foam from leaving the waste storage facility.
- Submit a report to the department of the cause and clean up response to the foam.
- Report any Foam or fugitive waste as spill to the WDNR Spill Hotline at 1-800 943-0003.
- Submit to the department for review and approval, a list of additives used in the waste storage facility to seed the aerobic digestion. Please include volumes, dates, and both biological and or chemical. Supply SDS and other information available for department review.
- Request approval for any future additives, both biological and chemical to be used in the waste storage facility for any reason.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

PUBLIC NOTICE OF AVAILABILITY OF A NUTRIENT MANAGEMENT PLAN AND INFORMATIONAL HEARING AND INTENT TO REISSUE A WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM (WPDES) PERMIT No.WI-0056308-07-0

Permittee: Daybreak Foods Creekwood Cage Free, N5344 Crossman Road, Lake Mills, WI, 53551

Facility Where Discharge Occurs: Layer Facility- N5344 Crossman Road, Lake Mills, WI 53551; S ½ of SE 1/4 Sec. 27, T07N, R13E; Pullet Facility- N5432 County Road A, Lake Mills, WI 53551; SW ¼ of SW ¼ Sec. 27, T07N, R13E; Old Pullet Facility- N5505 Crossman Road, Lake Mills, WI 53551; NE ¼ of SW ¼ Sec. 27, T07N, R13E

Receiving Water And Location: Surface water and groundwater within the Unnamed tributaries to the Koshkonong Creek and the Crawfish River Watersheds

Brief Facility Description : Daybreak Foods Creekwood Cage Free is an existing Concentrated Animal Feeding Operation (CAFO) located in the Township of Lake Mills in Jefferson County, WI. Daybreak Foods Creek Wood Cage Free is owned and operated by Daybreak Foods Inc. Daybreak Foods Creekwood Cage Free consists of a Layer Facility located N5344 Crossman Road, Pullet Facility at N5432 County Road A, and the Old Pullet Facility at N5505 Crossman Road. The Layer Site consist of five-layer barns, one solid manure storage and processing building, and egg washing and processing building. The Pullet Facility consists of 3 pullet barns and associated manure load out areas. The Old Pullet Facility has two old pullet buildings used for storage and the three-stage process wastewater waste storage facility used to store egg wash water.

The current flock size is 25,527 animal units (2,075,340 layer chickens, and 624,000 pullets). There is no planned expansion during this permit term. Daybreak Foods Creekwood Cage Free currently produces approximately 7,068,300 gallons of process wastewater, and approximately 50,000 tons of solid manure annually. All solid manure, eggshells, and composted mortalities are processed and sold as commercial fertilizer under their Department of Agriculture Trade and Consumer Protection Fertilizer License. Daybreak Foods Creekwood Cage Free currently has 519.4 acres (23.5 owned and 495.9 controlled through contracts, rental agreements or leases, or under manure agreements) of which 480.8 are spreadable acres.

The Department has tentatively decided that the above specified WPDES permit should be reissued.

Permit Drafter's Name, Address, Phone and Email: Eric Struck, WDNR, 141 NW Barstow Street, Suite 180, Waukesha, WI, 53188-3789, (608) 422-1512, Eric.Struck@wisconsin.gov

**Informational Hearing Date, Time, and Location:**

**December 11, 2025, 3 pm, Virtual Hearing using Zoom. If you want to attend the hearing, please fill out the registration form at the following link:**

**: <https://us02web.zoom.us/meeting/register/sKcuf-9kQDCXvTAvuuoSiw>**

The Department of Natural Resources, pursuant to Section 283.49, Wisconsin Statutes, has scheduled a public informational hearing for the purpose of giving all interested persons an opportunity to make a statement with respect to the proposed permit action, the terms of the nutrient management plan, and the application for this operation.

The hearing officer will conduct the hearing in an orderly fashion and will use procedures specified in Subchapter II of ch. NR 203, Wis. Adm. Code, necessary to insure broad public participation in the hearing.

The hearing office will open the hearing and make a concise statement of the scope and purpose of the hearing and shall state what procedures will be use during the course of the hearing. The hearing officer shall explain the method of notification of the final decision to grant or deny the permit and the methods by which the decision may be reviewed in a public adjudicatory hearing.

The hearing officer may place limits on individual oral statements to insure an opportunity for all persons present to make statements in a reasonable period of time and to prevent undue repetition. The hearing officer may also limit the number of representatives making oral statements on behalf of any person or group.

Informational and clarifying questions and oral statements shall be directed through the hearing officer. Cross-examination shall not be allowed.

Persons wishing to comment on or object to the proposed permit action, the terms of the nutrient management plan, or the application, are invited to do so by attending the public hearing or by submitting any comments or objections

in writing to the Department of Natural Resources, at the above named permit drafter's address. All comments or suggestions received from members of the public no later than 7 days following the date of this public hearing will be used, along with other information on file and testimony presented at the hearing, in making a final determination. Anyone providing comments in response to this public notice will receive a notification of the Department's final decision regarding permit coverage. Where designated as a reviewable surface water discharge permit, the U.S. Environmental Protection Agency is allowed up to 90 days to submit comments or objections regarding this permit determination.

Information on file for this permit action, including the draft permit and fact sheet (if required), the operation's nutrient management plan and application may be inspected and copied at the permit drafter's office, Monday through Friday (except holidays), between 9:00 a.m. and 3:30 p.m. Please call the permit drafter for directions to their office location, if necessary. Information on this permit action and hearing may also be obtained by calling the permit drafter at (608) 422-1512 or by writing to the Department. Reasonable costs (15 cents per page for copies and 7 cents per page for scanning) will be charged for information in the file other than the public notice and fact sheet. Permit information is also available on the internet at: <http://dnr.wi.gov/topic/wastewater/PublicNotices.html>. Pursuant to the Americans with Disabilities Act, reasonable accommodation, including the provision of informational material in an alternative format, will be made to qualified individuals upon request.

NAME OF PUBLISHING NEWSPAPER: **Enter Name of Publishing Newspaper**

ADDRESS OF PUBLISHING NEWSPAPER: **Enter Address of Publishing Newspaper**

Date Notice Issued: **Enter Date Notice Issued**