Permit Fact Sheet

General Information

Permit Number	WI-0050822-09-0
Permittee Name and Address	Seneca Foods Corporation Mayville PO Box 27, MAYVILLE, WI 53050
Permitted Facility Name and Address	Seneca Foods Corporation Mayville 500 S CLARK ST
Permit Term	June 01, 2026 to March 31, 2031
Discharge Location	Outfall 013 North drain tile is located in the SW ¼ of NE ¼ Section 34 T12N, R16E, Dodge County. Outfall 014 is permanently abandoned. Approved 128.7 areas of Spray Irrigation fields are located in Sections 23, 26, and 27, T12N, R16E, Dodge County. Approved 26.1 acres located in Section 34, T12N, R16E, Dodge County.
Receiving Water	Unnamed tributary to the East Branch of the Rock River and groundwaters of the Rock River Drainage Basin
Stream Flow ($Q_{7,10}$)	0 cfs
Stream Classification	Classification used in accordance with chs. NR 102 and 104, Wis. Adm. Code: Limited aquatic life community, non-public water supply. (See WQBEL for more details)
Discharge Type	Existing, Seasonal

Facility Description

Seneca Foods Corporation Mayville is a vegetable processing facility that processes peas and sweet corn during a harvest period, typically extending from mid-June to early October (also sometime mid-May through November). This facility operates 24 hours a day, seven days a week. Wastewater typically includes vegetable wash water, blancher water, cooker-cooling water, boiler blow down, and equipment sanitation water. Wastewater is mechanically screened and discharged by force-main to the spray field receiving area. Outfall 013, also known as North Drain Tile, is located in Spray Field G. Drain tiles under the spray irrigation system carry water that is discharged to the Unnamed Tributary of the East Branch of the Rock River. Effluent samples are taken at the pump valve prior to discharging. The spray field locations are as follows: Spray Field B: NW1/4 NW1/4, Sec 26; Spray Field C: SE1/4 ne1/4, Sec 27; Spray Field D: E1/2 SE1/4, Sec 27; Spray Field E: W1/2 SE1/4, Sec 27; Spray Field F: SW1/4 NW1/4 Sec 26; Spray Field G: SE1/4 NE 1/4 Sec 34; All in T12N-R16E, Town of Kekoskee, Dodge Co.

Substantial Compliance Determination

After a desk top review of all discharge monitoring reports, groundwater monitoring, land application and land treatment reports, compliance schedule items, and a site visit on 8/21/2025, this facility has been found to be in substantial compliance with their current permit.

Compliance determination made by Zach Watson on 8/29/2025.

Sample Point Descriptions

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**
013	0.0073 MGD (June 2021 – November 2021)	Surface Water: North drain tile discharge located in Spray Field G. Sample taken from the pump valve prior to discharge to the waterway. Flow estimated by pump run time.
001	0.17 MGD (2025)	Land Treatment: Discharge from Outfall 001 shall be limited to process wastewater. Samples shall be collected prior to discharging to the 128.7-acre spray fields B, C, D, E and F located in Section 26 and 27 and 26.1-acre spray field G located Section 34 all in T12N, R16E, Dodge County.
003		Land Application: Land Spreading of Liquid Wastes (silage leachate and/or process wastewater)
004		Land Application: Landspreading of Byproduct Solids

Sample Point Designation For Groundwater Monitoring Systems			
System	**Sample Pt Number**	**Well Name**	**Comments**
Spray fields B, C, D, E and F	806	MW-106 (806)	
	811	MW-111 (811)	
	813	MW-113 (813)	
	816	MW-103 (816)	
	817	MW-104 (817)	
	818	MW-105 (818)	
	819	MW-115 (819)	
	893	MW-123 (893)	
Spray field G	886	MW-116 (886)	
	887	MW-117 (887)	
	888	MW-118 (888)	
	891	MW-121 (891)	
	892	MW-122 (892)	

Permit Requirements

1 Surface Water - Monitoring and Limitations

1.1 Sample Point Number: 013- North Drain Tile

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gpd	Daily	Estimated	
BOD5, Total	Daily Max	10 mg/L	Weekly	Grab	
BOD5, Total	Monthly Avg	10 mg/L	Weekly	Grab	
BOD5, Total	Daily Max	449 lbs/day	Weekly	Calculated	
BOD5, Total	Monthly Avg	292 lbs/day	Weekly	Calculated	
BOD5, Total	Annual Avg	201 lbs/day	Weekly	Calculated	
Suspended Solids, Total	Daily Max	40 mg/L	Weekly	Grab	Effective upon reissuance and this limit will be retained beyond the effective date of the final limits as it represents a minimum control level.
Suspended Solids, Total	Weekly Avg	30 mg/L	Weekly	Grab	Effective upon reissuance and this limit will be retained beyond the effective date of the final limits as it represents a minimum control level.
Suspended Solids, Total	Monthly Avg	20 mg/L	Weekly	Grab	Effective upon reissuance and this limit will be retained beyond the effective date of the final limits as it represents a minimum control level.
Suspended Solids, Total	Annual Avg	423 lbs/day	Weekly	Calculated	
Suspended Solids, Total		lbs/day	Weekly	Calculated	Report daily mass discharged using Equation 1a. in the Water Quality Trading (WQT) section.
WQT Credits Used (TSS)		lbs/month	Monthly	Calculated	Report the WQT TSS Computed Compliance value using Equation 3c in

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
					the Water Quality Trading (WQT) section. Available TSS Credits are specified in Table 1 and in the approved Water Quality Trading Plan.
WQT Computed Compliance (TSS)	Daily Max	5.67 lbs/day	Monthly	Calculated	Report the WQT TSS Computed Compliance value using Equation 5a. in the Water Quality Trading (WQT) section. Values entered on the last day of each week.
WQT Computed Compliance (TSS)	Monthly Avg	3.46 lbs/day	Monthly	Calculated	Report the WQT TSS Computed Compliance value using Equation 5b. in the Water Quality Trading (WQT) section. Value entered on the last day of the month
WQT Credits Used (TSS)	Annual Total	17,060 lbs/yr	Annual	Calculated	The sum of total monthly credits used may not exceed Table 1 values listed.
pH Field	Daily Min	6.0 su	Daily	Grab	
pH Field	Daily Max	9.0 su	Daily	Grab	
Dissolved Oxygen	Daily Min	6.3 mg/L	Daily	Grab	
Chloride		mg/L	Weekly	Grab	Monitoring only in 2030.
Phosphorus, Total	Monthly Avg	0.7 mg/L	Weekly	Grab	Effective upon reissuance and this limit will be retained beyond the effective date of the final limits as it represents a minimum control level. See Water Quality Trading (WQT) sections for more information.
Phosphorus, Total		lbs/day	Weekly	Calculated	Report daily mass discharged using Equation 1a. in the Water Quality Trading (WQT) section.

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
WQT Credits Used (TP)		lbs/month	Monthly	Calculated	Report WQT TP Credits used per month using Equation 2c. in the Water Quality Trading (WQT) section. Available TP Credits are specified in Table 2 and in the approved Water Quality Trading Plan.
WQT Computed Compliance (TP)	Monthly Avg	0.225 mg/L	Monthly	Calculated	Report the WQT TP Computed Compliance value using Equation 4a. in the Water Quality Trading (WQT) section. Value entered on the last day of the month.
WQT Computed Compliance (TP)	6-Month Avg	0.075 mg/L	Monthly	Calculated	Compliance with the six-month average limit is evaluated at the end of the six-month period on June 30 and Dec 31.
WQT Computed Compliance (TP)	6-Month Avg	0.02 lbs/day	Monthly	Calculated	Report the WQT TP Computed Compliance value using Equation 4b. in the Water Quality Trading (WQT) section. Compliance with the six-month average limit is evaluated at the end of the six-month period on June 30 and Dec 31.
WQT Credits Used (TP)	Annual Total	53.2 lbs/yr	Annual	Calculated	The sum of total monthly credits used may not exceed Table 2 values listed.
Acute WET		TUa	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET section.
Chronic WET		TUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	See WET section.

1.1.1 Changes from Previous Permit

Effluent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below.

- **Flow-** The sample frequency for flow has been changed from "weekly" to "daily". Daily flow reporting is the required minimum reporting frequency.
- **BOD-** Technology based effluent limits for BOD mass added.
- **Total Suspended Solids-** Technology based effluent limit as an annual average added. Weekly average concentration limit added and monthly average limit updated.
- **Dissolved Oxygen**- Oxygen limit updated based on updated stream classification.
- **pH & Dissolved Oxygen**- Sample frequency increased.
- **Chloride**- Sampling year updated.
- **WQT Computed Compliance TP**- Updated monthly average WQT computed compliance limit added.
- **WQT-** The table numbers and formatting for WQT was updated in the permit along with updates based on the updated WQT Plan for this permit reissuance.
- **Temperature-** Temperature monitoring removed.
- **WET-** Number of chronic tests increased.

1.1.2 Explanation of Limits and Monitoring Requirements

Detailed discussions of limits and monitoring requirements can be found in the attached water quality-based effluent limits (WQBEL) and technology based effluent limits memos dated January 30, 2026.

Monitoring Frequencies- The Monitoring Frequencies for Individual Wastewater Permits guidance (April 12, 2021) recommends that standard monitoring frequencies be included in individual wastewater permits based on the size and type of the facility, in order to characterize effluent quality and variability, to detect events of noncompliance, and to ensure consistency in permits issued across the state. Guidance and requirements in administrative code were considered when determining the appropriate monitoring frequencies for pollutants that have final effluent limits in effect during this permit term. Flow data is required to be reported daily and therefore the sample frequency for flow has been updated to daily. Sample frequency for pH and DO increased to daily which is the standard sampling frequency. In the recent past there has not been discharge from this outfall therefore there is not sufficient data to indicate a reduced sampling frequency is warranted.

Expression of Limits- In accordance with the federal regulation 40 CFR 122.45(d) and s. NR 205.065, Wis. Adm. Code, limits in this permit are to be expressed as daily maximum and monthly average limits whenever practicable.

TSS - The wastewater treatment facility is not able to meet the WQBEL. This permit authorizes the use of trading as a tool to demonstrate compliance with the TSS WQBELs. This permit includes terms and conditions related to the Water Quality Trading Plan (WQT-2026-0005) or approved amendments thereof. The total 'WQT TSS Credits' available are designated in the approved WQT Plan. The permittee proposes to utilize agricultural lands which have been converted from row cropping to permanent grass cover. The WQT Plan proposes the generation of 17,060 lbs/year of TSS credits for the next five years.

Additional WQT subsections in the permit provide information on compliance determinations, annual reporting and re-opening of the permit.

Phosphorus – Phosphorus requirements are based on the Phosphorus Rules that became effective December 1, 2010 as detailed in NR 102 Water Quality Standards and NR 217 Effluent Standards and Limitations for Phosphorus. Chapter NR 217 of the Wis. Adm. Code addresses point source dischargers of phosphorus to surface waters. Currently in NR 217 Wis. Adm. Code there are two methods used to determine if a phosphorus limit is needed: a technology based effluent limit (TBEL) and a water quality based effluent limit (WQBEL). Based on the size and classification of the stream, the water quality criteria for the Unnamed Tributary to the East Branch of the Rock River is 0.075 mg/l. In this case, the WQBEL is 0.225 mg/L (monthly average), 0.075 mg/L & 0.02 lbs/day (6-month average). For the reasons explained in

the April 30, 2012 paper entitled 'Justification for Use of Monthly, Growing Season and Annual Average Periods for Expression of WPDES Permit Limits for Phosphorus Discharges in Wisconsin', WDNR has determined that it is impracticable to express the phosphorus WQBEL for the permittee as a maximum daily, weekly or monthly value. The final effluent limit for phosphorus is expressed as a six-month average. It is also expressed as a monthly average equal to three times the derived WQBEL (which equates to 0.225 mg/L). This final effluent limit was derived from and complies with the applicable water quality criterion. A phosphorus concentration limit is necessary to prevent backsliding during the term of the permit. The MCL of 0.7 mg/L will be retained in the permit.

The wastewater treatment facility is not able to meet the WQBEL. This permit authorizes the use of trading as a tool to demonstrate compliance with the phosphorus WQBELs. This permit includes terms and conditions related to the Water Quality Trading Plan (WQT-2026-0005) or approved amendments thereof. The total 'WQT TP Credits' available are designated in the approved WQT Plan. The permittee proposes to utilize agricultural lands which have been converted from row cropping to permanent grass cover. The WQT Plan proposes the generation of 53.2 lbs/year of phosphorus credits for the next five years.

Additional WQT subsections in the permit provide information on compliance determinations, annual reporting and re-opening of the permit.

Technology Based Effluent Limits- Chapter NR 225, Wis. Adm. Code, specifies effluent guidelines for discharges from canned and preserved fruits and vegetables categories of point sources and subcategories. Seneca Foods Corporation Mayville would fall under the Canned and Preserved Vegetables subcategory as defined in s. NR 225.02, Wis. Adm. Code. Technology based effluent limits for BOD and TSS added to the permit based on the reported production levels at Seneca Mayville. These limits are in addition to water quality-based effluent limits and are retained in future permits with updates at each permit term based on production numbers.

2 Land Treatment – Monitoring and Limitations

2.1 Sample Point Number: 001- SPRAY IRRIGATION

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Total Daily	
Hydraulic Application Rate	Monthly Avg	3,500 gal/ac/day	Monthly	Calculated	May - October
Hydraulic Application Rate	Monthly Avg	0 gal/ac/day	Monthly	Calculated	November - April
BOD5, Total		mg/L	Weekly	Composite	
Chloride		mg/L	Weekly	Composite	
Nitrogen, Total Kjeldahl		mg/L	Weekly	Composite	
Nitrogen, Max Applied On Any Zone	Annual Total	300 lbs/ac/yr	Annual	Total Annual	
Chloride, Max Applied On Any		lbs/ac/yr	Annual	Total Annual	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Zone					
Soil - Nitrogen, Available		mg/kg	Annual	Grab	
Soil - Phosphorus, Available		mg/kg	Annual	Grab	
Soil - Potassium, Available		mg/kg	Annual	Grab	
Soil - pH Lab		su	Annual	Grab	
Other Sources of Nitrogen		lbs/ac/yr	Annual	Measure	

2.1.1 Changes from Previous Permit:

Effluent limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below.

Nitrogen max applied on any zone has an updated annual total limit.

Soil Survey requirements that were previously reported in the annual report have been added to the eDMR for reporting.

Chloride max applied any zone reporting added.

2.1.2 Explanation of Limits and Monitoring Requirements

All requirements for land treatment of industrial wastewater are determined in accordance with ch. NR 214, Wis. Adm. Code. All categorical limits are based on ch. NR 214 Subchapter II (14), Wis. Adm. Code. More information on the limitations can be found in the GW Evaluation dated January 12, 2026.

3 Groundwater – Monitoring and Limitations

3.1 Groundwater Monitoring System for Spray fields B, C, D, E and F

Location of Monitoring system: perimeter of spray fields B, C, D, E and F

Groundwater Monitoring Well(s) to be Sampled: MW-106 (806), MW-111 (811), MW-113 (813), MW-103 (816), MW-104 (817), MW-118 (818), MW-115 (819), MW-123 (893)

Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality: MW-113 (813)

Groundwater Monitoring Well(s) Used for Point of Standards Application: MW-103 (816), MW-111 (811)

Parameter	**Units**	**Preventative Action Limit**	**Enforcement Standard**	**Frequency**
Groundwater Elevation	feet MSL	N/A	N/A	Quarterly

Depth To Groundwater	feet	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	170	250	Quarterly
COD	mg/L	40	N/A	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Nitrite + Nitrate (as N) Dissolved	mg/L	2.6	N/A	Quarterly
Nitrogen, Organic Dissolved	mg/L	2.7	N/A	Quarterly
pH Field	su	8.5	N/A	Quarterly
Solids, Total Dissolved	mg/L	705	N/A	Quarterly

3.1.1 Changes from Previous Permit:

Groundwater limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below.

PAL limits updated for Chloride, COD, Nitrite + Nitrate, Organic Nitrogen, pH, and TDS added. Sulfate sampling, PAL and ES limits removed.

3.1.2 Explanation of Limits and Monitoring Requirements

Groundwater limits and requirements are determined in accordance with ch. NR 140, Wis. Adm. Code. Indicator parameter Preventive Action Limit (PAL) values are established per s. NR 140.20, Wis. Adm. Code. Alternative Concentration Limits as allowed under s. NR 140.28, Wis. Adm. Code, are established on a case-by-case basis.

For more information, please refer to the GW Evaluation dated January 12, 2026.

3.2 Groundwater Monitoring System for the Spray Field G

Location of Monitoring system: perimeter of spray field G

Groundwater Monitoring Well(s) to be Sampled: MW-116 (886), MW-117 (887), MW-118 (888), MW-121 (891), MW-122 (892)

Groundwater Monitoring Well(s) Used to Evaluate Background Groundwater Quality: MW-116 (886)

Groundwater Monitoring Well(s) Used for Point of Standards Application: MW-122 (892), MW-121 (891), MW-117 (887)

Parameter	**Units**	**Preventative Action Limit**	**Enforcement Standard**	**Frequency**
Depth To Groundwater	feet	N/A	N/A	Quarterly
Groundwater Elevation	feet MSL	N/A	N/A	Quarterly
Chloride Dissolved	mg/L	125	250	Quarterly
COD	mg/L	40	N/A	Quarterly
Nitrogen, Ammonia Dissolved	mg/L	0.97	9.7	Quarterly
Nitrogen, Nitrite + Nitrate (as	mg/L	2.0	10	Quarterly

N) Dissolved				
Nitrogen, Organic Dissolved	mg/L	2.3	N/A	Quarterly
pH Field	su	8.4	N/A	Quarterly
Solids, Total Dissolved	mg/L	685	N/A	Quarterly

3.2.1 Changes from Previous Permit:

Groundwater limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below.

Field H removed, Preventative Action Limit for Chloride, COD, Nitrite + Nitrate, Organic Nitrogen, pH, and TDS added. Sulfate sampling, PAL and ES limits removed.

3.2.2 Explanation of Limits and Monitoring Requirements

Groundwater limits and requirements are determined in accordance with ch. NR 140, Wis. Adm. Code. Indicator parameter Preventive Action Limit (PAL) values are established per s. NR 140.20, Wis. Adm. Code.

For more information, please refer to the GW Evaluation dated January 12, 2026.

4 Land Application - Sludge/By-Product Solids (industrial only)

4.1 Sample Point Number: 003- Wastewater/Silage Leachate

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gal/month	Monthly	Total Monthly	
Solids, Total		Percent	Monthly	Grab	
BOD_5, Total		mg/L	Monthly	Grab	
Chloride		mg/L	Monthly	Grab	
Nitrogen, Total Kjeldahl		mg/L	Monthly	Grab	
Phosphorus, Total		mg/L	Monthly	Grab	
Phosphorus, Water Extractable		% of Tot P	Monthly	Grab	
Potassium, Total Recoverable		mg/L	Monthly	Grab	
pH Field		su	Annual	Grab	

4.1.1 Changes from Previous Permit:

Limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below. Changes to this land application outfall are reflective of the General Permit for Liquid Wastewater Land Application.

Total Solids – Total solids is a regular sampling requirement for liquid wastewater land application outfalls and therefore has been added.

Water Extractable Phosphorus – Sample frequency changed to monthly to be in alignment with the general permit and other similar facilities.

Sample Frequency- The sample frequencies have been updated to reflect the standard frequency for liquid wastewater land application outfalls. Sampling is only required during a sampling period that land application occurs.

4.1.2 Explanation of Limits and Monitoring Requirements

Requirements for land application of industrial sludge are determined in accordance with ch. NR 214, Wis. Adm. Code.

4.2 Sample Point Number: 004- Vegetable Byproduct Solids

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Volume		gal/month	Monthly	Total Monthly	
Solids, Total		Percent	Quarterly	Grab	
Nitrogen, Total Kjeldahl		Percent	Quarterly	Grab	
Chloride		Percent	Quarterly	Grab	
Phosphorus, Total		Percent	Quarterly	Grab	
Phosphorus, Water Extractable		% of Tot P	Quarterly	Grab	
Potassium, Total Recoverable		Percent	Quarterly	Grab	

4.2.1 Changes from Previous Permit:

Limitations and monitoring requirements were evaluated for this permit term and the following changes were made from the previous permit. See additional explanation of limits under "Explanation of Limits and Monitoring Requirements" below. Changes to this land application outfall are reflective of the General Permit for By-Product Solids Land Application.

Sample Frequency- The sample frequencies have been updated to reflect the standard frequency for by-product solids land application outfalls. Sampling is only required during a sampling period that land application occurs.

4.2.2 Explanation of Limits and Monitoring Requirements

Requirements for land application of industrial sludge are determined in accordance with ch. NR 214, Wis. Adm. Code.

5 Schedules

5.1 Annual Water Quality Trading (WQT) Report

Required Action	Due Date
Annual WQT Report: Submit an annual WQT report that shall cover the first year of the permit term. The WQT Report shall include: The number of pollutant reduction credits (lbs/month) used each month of the previous year to demonstrate compliance; The source of each month's pollutant reduction credits by identifying the approved water quality trading plan that details the source; A summary of the annual inspection of each nonpoint source management practice that generated any of the pollutant reduction credits used during the previous year; and Identification of noncompliance or failure to implement any terms or conditions of this permit with respect to water quality trading that have not been reported in discharge monitoring reports.	01/01/2027
Annual WQT Report #2: Submit an annual WQT report that shall cover the previous year.	01/31/2028
Annual WQT Report #3: Submit an annual WQT report that shall cover the previous year.	01/31/2029
Annual WQT Report #4: Submit an annual WQT report that shall cover the previous year.	01/31/2030
Annual WQT Report #5: Submit the 5th annual WQT report. If the permittee wishes to continue to comply with phosphorus limits through WQT in subsequent permit terms, the permittee shall submit a revised WQT plan including a demonstration of credit need, compliance record of the existing WQT, and any additional practices needed to maintain compliance over time.	01/31/2031
Annual WQT Report Required After Permit Expiration: In the event that this permit is not reissued by the expiration date, the permittee shall continue to submit annual WQT reports by January 31 each year covering the total number of pollutant credits used, the source of the pollution reduction credits, a summary of annual inspection reports performed, and identification of noncompliance or failure to implement any terms or conditions of the approved water quality trading plan for the previous calendar year.	

5.1.1 Explanation of Schedule

Reports are required, starting in 2027, that include the following information:

- Verification that site inspections occurred;
- Brief summary of site inspection findings;
- Identification of noncompliance or failure to implement any terms or conditions of the permit or trading plan that have not been reported in discharge monitoring reports;
- Any applicable notices of termination or management practice registration; and
- A summary of credits used each month over the calendar year.

5.2 Chloride Source Reduction Measures (SRMs) for Groundwater Discharges

Required Action	Due Date
Chloride Reduction Plan: The permittee shall complete and submit for Department review and approval a chloride reduction plan (CRP). The CRP is an initial step toward controlling chloride and ensuring compliance with chloride limits based on applicable groundwater standards. The CRP shall evaluate all applicable source reduction measures (SRMs) and establish appropriate implementation activities for the SRMs. The CRP shall include a schedule for implementing the selected SRMs.	01/31/2027
Annual Progress Report: Once the chloride reduction plan (CRP) is approved by the Department, the permittee shall submit an annual progress report, under the authority of s. NR 205.07(1)(h), Wis. Adm. Code. If a SRM implementation date of an approved CRP is not met, this may constitute a violation of the permit. Submittal of the first annual progress report is required by the Date Due.	01/31/2028
Second Annual Progress Report: Submit progress report in implementing the chloride reduction plan (CRP).	01/31/2029
Final Annual Progress Report: Submit progress report in implementing the chloride reduction plan (CRP).	01/31/2030

5.2.1 Explanation of Schedule

This schedule requires the permittee to continue to evaluate methods to reduce impact of chloride to the groundwater.

5.3 Land Treatment Management Plan

A management plan is required for the land treatment system.

Required Action	Due Date
Land Treatment Management Plan: Submit an update to the management plan to optimize the land treatment system performance and demonstrate compliance with Wisconsin Administrative Code NR 214.	06/01/2027

5.3.1 Explanation of Schedule

An up-to-date Land Treatment Management plan is a standard requirement in reissued industrial permits per ch. NR 214, Wis. Adm. Code.

5.4 Land Application Management Plan

A management plan is required for the land application system.

Required Action	Due Date
Land Application Management Plan: Submit an update to the management plan to optimize the land application system performance and demonstrate compliance with Wisconsin Administrative Code NR 214.	06/01/2027

5.4.1 Explanation of Schedule

An up-to-date Land Application Management plan is a standard requirement in reissued industrial permits per s. NR 214.17(6)(c), Wis. Adm. Code.

Other Comments

None

Attachments

Categorical Limits Calculations – January 30, 2026

Water Quality Based Effluent Limits – January 30, 2026

NR 140 Groundwater Evaluation Report – January 12, 2026

Justification Of Any Waivers From Permit Application Requirements

No waivers requested or granted as part of this permit reissuance

Prepared By: Jennifer Jerich, Wastewater Specialist

Date: 4/15/2026

Revised post Fact Check: 4/17/2026

Revised post Public Notice:

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: January 30, 2026

TO: Jennifer Jerich – SCR/Horicon

FROM: Sarah Luck – SCR/Fitchburg

SUBJECT: Water Quality-Based Effluent Limitations for Seneca Foods Corporation Mayville
WPDES Permit No. WI-0050822-09-0

This is in response to your request for an evaluation of the need for water quality-based effluent limitations (WQBELs) using chapters NR 102, 104, 105, 106, 207, 210, 212, and 217 of the Wisconsin Administrative Code (where applicable) for the discharge from Seneca Foods Corporation Mayville in Dodge County. This industrial facility is located in the Sinissippi Lake Watershed (UR08) and discharges through drain tiles via Outfall 013 to the Unnamed Tributary of the East Branch of the Rock River in the East Branch Rock River Watershed (UR13) in the Upper Rock River Basin. This discharge is located in the Rock River Total Maximum Daily Load (TMDL) area but was not given a TMDL allocation in the report approved by EPA on 09/28/2011. The evaluation of the permit recommendations is discussed in more detail in the attached report.

Based on our review, the following recommendations are made on a chemical-specific basis at Outfall 013:

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Six-Month Average	Annual Average	Footnotes
Flow Rate							1
BOD_5 Concentration limits TBEL mass limits	 10 mg/L 449 lbs/day			 10 mg/L 292 lbs/day		 - 201 lbs/day	2
TSS Concentration limit TMDL mass limit TBEL mass limits	 40 mg/L 5.67 lbs/day -		 30 mg/L	 20 mg/L 3.46 lbs/day -		 - - 423 lbs/day	3
pH	9.0 s.u.	6.0 s.u.					4
Dissolved Oxygen		6.3 mg/L					5
Chloride							6
Phosphorus							7
WQT MCL				0.7 mg/L			
Final				0.225 mg/L	0.075 mg/L 0.02 lbs/day		
Acute WET							8,10
Chronic WET							9,10

Footnotes:

1. Monitoring only.
2. BOD mass limits are categorical limits based on ch. NR 225, Wis. Adm. Code. These limits are addressed in a separate memo, dated 01/30/2026, and are based on current production.
3. Weekly average and monthly average TSS concentration limits have been updated to be consistent with limited aquatic life receiving waters. Daily maximum and monthly average TSS mass limits do not change and are based on reduction goals of the Rock River TMDL. Annual

average mass limits are categorical limits based on ch. NR 225, Wis. Adm. Code, and are addressed in a separate memo, dated 01/30/2026, and are based on current production.

4. No changes from the current permit.
5. The dissolved oxygen limit has been updated based on the new receiving water classification and the provisions in ch. NR 207, Wis. Adm. Code.
6. If discharge resumes, chloride monitoring is recommended to ensure that a minimum of 11 sample results are available at the next permit issuance.
7. A minimum control level (MCL) is required for water quality trading (WQT). This value is 0.7 mg/L as a monthly average and should not be exceeded during the permit term. The final water quality-based effluent limits are 0.225 mg/L as a monthly average, 0.075 mg/L as a six-month average, and a respective mass limit. The six-month average should typically be averaged during the months of May – October and November – April; however, since Seneca Corporation Mayville discharges from May through November, a seven-month averaging period may be used corresponding to months the discharge occurs (May through November).
8. Two acute WET tests are recommended. According to the *State of Wisconsin Aquatic Life Toxicity Testing Methods Manual* (s. NR 219.04, Table A, Wis. Adm. Code), a synthetic (standard) laboratory water may be used as the dilution water and primary control in acute WET tests.
9. Three chronic WET tests are recommended. The Instream Waste Concentration (IWC) to assess chronic test results is 100%. According to the *State of Wisconsin Aquatic Life Toxicity Testing Methods Manual* (s. NR 219.04, Table A, Wis. Adm. Code), chronic testing shall be performed using a dilution series of 100%, 75%, 50%, 25% & 12.5%. The primary control water used in chronic WET tests conducted on Outfall 013 shall be a synthetic (standard) laboratory water since no flow is available upstream of the discharge.
10. Sampling WET concurrently with any chemical-specific toxic substances is recommended. Seneca Foods Corporation Mayville will need to plan ahead with WET scheduling well before discharge is expected to occur so that tests are not missed.

Additional limits to comply with the expression of limits requirements in ss. NR 106.07 and NR 205.065(7), Wis. Adm. Code, are not required due to the non-continuous nature of the discharge.

Please consult the attached report for details regarding the above recommendations. If there are any questions or comments, please contact Sarah Luck (Sarah.Luck@wisconsin.gov) or Diane Figiel (Diane.Figiel@wisconsin.gov).

Attachments (2) – Narrative and Site Map

PREPARED BY: Sarah Luck _____ Date: January 30, 2026

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Attachment #1

Water Quality-Based Effluent Limitations for
Seneca Foods Corporation Mayville

WPDES Permit No. WI-0050822-09-0

PART 1 – BACKGROUND INFORMATION

Facility Description

Seneca Foods Corporation Mayville is a vegetable processing facility that processes peas and sweet corn during a harvest period, typically extending from mid-June to early October (also sometime mid-May through November). This facility operates 24 hours a day, seven days a week. Wastewater typically includes vegetable wash water, blancher water, cooker-cooling water, boiler blow down, and equipment sanitation water. Wastewater is mechanically screened and discharged by force-main to the spray field receiving area. Outfall 013, also known as North Drain Tile, is located in Spray Field G. Drain tiles under the spray irrigation system carry water that is discharged to the Unnamed Tributary of the East Branch of the Rock River. Effluent samples are taken at the pump valve prior to discharging.

The previous permit contained surface water discharge from two outfalls: 013 (North Tile) and 014 (South Tile). **Outfall 014 was permanently abandoned** following the 2023 pack season.

Attachment #2 is a map of the area showing the approximate location of Outfall 013.

Existing Permit Limitations

The current permit, which expires on March 31, 2026, includes the following effluent limitations and monitoring requirements.

Parameter	Daily Maximum	Daily Minimum	Weekly Average	Monthly Average	Footnotes
Flow Rate					1
BOD_5	10 mg/L			10 mg/L	-
TSS Concentration limit TMDL mass limit	 40 mg/L 5.67 lbs/day			 40 mg/L 3.46 lbs/day	2
pH	9.0 s.u.	6.0 s.u.			-
Dissolved Oxygen		7.0 mg/L			-
Chloride					1
Phosphorus WQT MCL Final TMDL Mass				 0.7 mg/L 0.03 lbs/day	2
Temperature					1
Acute WET					3
Chronic WET					3

Footnotes:

1. Monitoring only. Chloride and temperature only required monitoring in 2024.
2. The facility complied with TSS mass and phosphorus mass limits with water quality trading.
3. Two acute WET tests and annual chronic WET tests were required. The IWC for chronic WET was 100%.

Receiving Water Information

- Name: Unnamed Tributary to the East Branch of the Rock River
- Waterbody Identification Code (WBIC): 3000009
- Classification used in accordance with chs. NR 102 and 104, Wis. Adm. Code: Limited aquatic life community, non-public water supply. This classification is based on a site visit conducted by Department staff and not an explicit listing in ch. NR 104, Wis. Adm. Code.
  The facility has historically received warmwater sport fish limits at the outfall by default. The Department conducted a site visit on 07/09/2024 to determine the appropriate classification of the receiving water. Based on the site visit and discussion with Department staff, documented in the memo dated 05/15/2025, the following was determined:
  Unnamed Tributary
  The appropriate natural community is macroinvertebrate and likely limited aquatic life designated use.
  Unnamed Tributary (downstream of Petit Road, approximately one mile downstream of Outfall 013)
  The appropriate natural community is Cool-warm Headwater and warmwater sport fish designated use.
- Low flows used in accordance with chs. NR 106 and 217, Wis. Adm. Code:
  Unnamed Tributary (from the outfall and downstream for one mile)
  $7\text{-}Q_{10}$ = 0 cubic feet per second (cfs)
  $7\text{-}Q_2$ = 0 cfs
  Unnamed Tributary (downstream of Petit Road, approximately one mile downstream of Outfall 013)
  These low flows are estimates from Surface Water Data Viewer just before the confluence with the East Branch of the Rock River
  $7\text{-}Q_{10}$ = 0.03 cubic feet per second (cfs)
  $7\text{-}Q_2$ = 0.08 cfs
- Hardness = 437 mg/L as $CaCO_3$. Effluent hardness is used in place of receiving water because there is no receiving water flow upstream of the discharge.
- % of low flow used to calculate limits in accordance with s. NR 106.06(4)(c)5., Wis. Adm. Code: Not applicable where the receiving water low flows are zero.
- Source of background concentration data: Background concentrations are not included because they do not impact the calculated WQBEL when the receiving water low flows are equal to zero.
- Multiple dischargers: None.
- Impaired water status: The East Branch of the Rock River, approximately 2.8 miles downstream of Outfall 013, is listed as impaired for total phosphorus and sediment/total suspended solids (listed in 2006).

Effluent Information

- Flow rate:
  Maximum annual average (excluding zero flow days) = 0.0268 million gallons per day (MGD)
  This is the maximum 12-month rolling average from June 2016 through September 2020 which was used in the previous limits evaluation. During the current permit, the facility only discharged

43 days from June 2021 through November 2021. For reference, the actual average flow during that time was 0.0073 MGD (excluding zero flow days). **This facility has not had a discharge from Outfall 013 since November 2021.**

- Hardness = 437 mg/L as $CaCO_3$. This value represents the geometric mean of data (n = 4) from July 2025 through August 2025 reported on the permit application.
- Acute dilution factor used in accordance with s. NR 106.06(3)(c), Wis. Adm. Code: Not applicable – this facility does not have an approved Zone of Initial Dilution (ZID).
- Wastewater source: Process wastewater
- Water supply: City of Mayville
- Additives: Seneca Foods Corporation Mayville has clarified that they do not use any additives to treat the discharge of drain tile water to surface water. Chemicals are used for sanitation and processing, but this is a small part of the wastewater that is spray irrigated, and the Department feels that the distance and substrate that the spray irrigated water travels, along with the dilution from any groundwater present, is likely to minimize the risk of toxicity once it reaches the surface water. Therefore, no additive review is warranted.
- Effluent characterization: This facility is categorized as a secondary industry, so the permit application required effluent sample analyses for a limited number of common pollutants, as specified in s. NR 200.065, Table 1, Wis. Adm. Code, primarily metal substances plus ammonia and hardness.
- Effluent data for substances for which a single sample was analyzed is shown in the tables in Part 2 below, in the column titled "MEAN EFFL. CONC.". Otherwise, substances with multiple effluent data are shown in the tables below or in their respective parts in this evaluation.

Copper Effluent Data

Sample Date	Conc. (µg/L)
07/22/25	<1.9
08/02/25	<1.9
08/09/25	<1.9
08/16/25	<1.9

"<" means that the pollutant was not detected at the indicated limit of detection.

The following table presents the average concentrations and loadings at Outfall 013 from June 2021 through November 2021 for all parameters with limits in the current permit to meet the requirements of s. NR 201.03(6), Wis. Adm. Code:

Parameters with Effluent Limits

	Average Measurement	Average Mass Discharged
BOD_5	2.2 mg/L*	
TSS	8.6 mg/L	0.39 lbs/day
pH field	6.85 s.u.	
Dissolved Oxygen	6.9 mg/L	
Phosphorus	0.13 mg/L	0.007 lbs/day

*Results below the limit of detection (LOD) were included as zeroes in calculation of average.

Attachment #1

PART 2 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR TOXIC SUBSTANCES – EXCEPT AMMONIA NITROGEN

Permit limits for toxic substances are required whenever any of the following occur:

1. The maximum effluent concentration exceeds the calculated limit (s. NR 106.05(3), Wis. Adm. Code)
2. If 11 or more detected results are available in the effluent, the upper 99th percentile (or P_{99}) value exceeds the comparable calculated limit (s. NR 106.05(4), Wis. Adm. Code)
3. If fewer than 11 detected results are available, the mean effluent concentration exceeds 1/5 of the calculated limit (s. NR 106.05(6), Wis. Adm. Code)

Acute Limits based on 1-Q_{10}

Daily maximum effluent limitations for toxic substances are based on the acute toxicity criteria (ATC), listed in ch. NR 105, Wis. Adm. Code. Previously daily maximum limits for toxic substances were calculated as two times the ATC. However, changes to ch. NR 106, Wis. Adm. Code, (September 1, 2016) require the Department to calculate acute limitations using the same mass balance equation as used for other limits along with the 1-Q_{10} receiving water low flow to determine if more restrictive effluent limitations are needed to protect the receiving stream from discharges which may cause or contribute to an exceedance of the acute water quality standards. The mass balance equation is provided below.

$$\text{Limitation} = \frac{(WQC)\,(Qs + (1-f)\,Qe) - (Qs - f\,Qe)\,(Cs)}{Qe}$$

Where:

WQC = Acute toxicity criterion or secondary acute value according to ch. NR 105, Wis. Adm. Code.

Qs = average minimum 1-day flow which occurs once in 10 years (1-day Q_{10}) if the 1-day Q_{10} flow data is not available = 80% of the average minimum 7-day flow which occurs once in 10 years (7-day Q_{10}).

Qe = Effluent flow (in units of volume per unit time) as specified in s. NR 106.06(4)(d), Wis. Adm. Code.

f = Fraction of the effluent flow that is withdrawn from the receiving water, and

Cs = Background concentration of the substance (in units of mass per unit volume) as specified in s. NR 106.06(4)(e), Wis. Adm. Code.

If the receiving water is effluent dominated under low stream flow conditions, the 1-Q_{10} method of limit calculation produces the most stringent daily maximum limitations and should be used while making reasonable potential determinations.

The following tables list the calculated WQBELs for this discharge along with the results of effluent sampling. All concentrations are expressed in terms of micrograms per Liter (µg/L), except for hardness (mg/L) and chloride (mg/L).

Daily Maximum Limits based on Acute Toxicity Criteria (ATC)

RECEIVING WATER FLOW = 0 cfs

SUBSTANCE	REF. HARD.* (mg/L)	ATC	MAX. EFFL. LIMIT**	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Chlorine		19.0	19.0	3.81	<100

Attachment #1

SUBSTANCE	REF. HARD.* (mg/L)	ATC	MAX. EFFL. LIMIT**	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Arsenic		340	339.8	68.0	2.2
Cadmium	437	156.5	156.5	31.3	0.28
Chromium	301	4446	4445.8	889	<1.0
Copper	437	62.3	62.3	12.5	<1.9
Lead	356	365	364.7	72.9	0.24
Nickel	268	1080	1080.3	216	1.1
Zinc	333	345	344.7	68.9	<10.3
Chloride (mg/L)		757	757.0	151	-

* The indicated hardness may differ from the effluent hardness because the effluent hardness exceeded the maximum range in ch. NR 105, Wis. Adm. Code, over which the acute criteria are applicable. In that case, the maximum of the range is used to calculate the criterion.
** Per the changes to s. NR 106.07(3), Wis. Adm. Code, effective 09/01/2016 consideration of ambient concentrations and 1-Q_{10} flow rates yields a more restrictive limit than the 2 × ATC method of limit calculation.

Weekly Average Limits based on Chronic Toxicity Criteria (CTC)
RECEIVING WATER FLOW = 0 cfs

SUBSTANCE	REF. HARD.* (mg/L)	CTC	WEEKLY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Chlorine		7.28	7.28	1.46	<100
Arsenic		152.2	152	30.4	2.2
Cadmium	175	3.82	3.82	0.76	0.28
Chromium	301	325.75	326	65.2	<1.0
Copper	437	36.54	36.5	7.31	<1.9
Lead	356	95.51	95.5	19.1	0.24
Nickel	268	169.08	169	33.8	1.1
Zinc	333	344.68	345	68.9	<10.3
Chloride (mg/L)		395	395	79.0	-

* The indicated hardness may differ from the effluent hardness because the effluent hardness exceeded the maximum range in ch. NR 105, Wis. Adm. Code, over which the acute criteria are applicable. In that case, the maximum of the range is used to calculate the criterion.

Monthly Average Limits based on Wildlife Criteria (WC)
The effluent characterization did not include any effluent sampling results for substances for which Wildlife Criteria exist.

Monthly Average Limits based on Human Threshold Criteria (HTC)
RECEIVING WATER FLOW = 0 cfs

SUBSTANCE	HTC	MO'LY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Cadmium	880	880	176.0	0.28
Chromium (+3)	8,400,000	8,400,000	1,680,000	<1.0
Lead	2,240	2,240	448.0	0.24

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SUBSTANCE	HTC	MO'LY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Nickel	110,000	110,000	22,000	1.1

Monthly Average Limits based on Human Cancer Criteria (HCC)
RECEIVING WATER FLOW = 0 cfs

SUBSTANCE	HCC	MO'LY AVE. LIMIT	1/5 OF EFFL. LIMIT	MEAN EFFL. CONC.
Arsenic	40	40	8.0	2.2

In addition to evaluating the need for limits for each individual substance for which HCC exist, s. NR 106.06(8), Wis. Adm. Code, requires the evaluation of the cumulative cancer risk. Because no effluent limits are needed based on HCC, determination of the cumulative cancer risk is not needed per s. NR 106.06(8), Wis. Adm. Code.

Conclusions and Recommendations
Based on a comparison of the effluent data and calculated effluent limitations, **no effluent limitations are recommended.** Limits and monitoring recommendations are made in the paragraphs below.

Chloride – Chloride sampling did not occur during the current permit term. However, considering effluent data from May 2019 through October 2019, the 1-day P_{99} chloride concentration was 24.7 mg/L, and the 4-day P_{99} of effluent data was 19.6 mg/L. These effluent concentrations are below the calculated WQBELs for chloride; therefore, **no effluent limits are recommended. If discharge resumes, chloride monitoring is recommended to ensure that a minimum of 11 sample results are available at the next permit issuance** to meet the data requirements of s. NR 106.85, Wis. Adm. Code.

PFOS and PFOA – The need for PFOS and PFOA monitoring is evaluated in accordance with s. NR 106.98(2), Wis. Adm. Code. Based on the type of discharge and known levels of PFOS/PFOA in the source water (all of the municipal water supply samples for Mayville were non-detect), **PFOS and PFOA monitoring is not recommended during the reissued permit term.** The Department may re-evaluate the need for sampling at the next permit reissuance if new information becomes available that suggests PFOS or PFOA may be present in the discharge at levels of concern.

PART 3 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR CONVENTIONAL POLLUTANTS

BOD
Concentration Limits
The current permit contains biological oxygen demand (BOD) concentration limits of 10 mg/L as a daily maximum and 10 mg/L as a monthly average. **No changes are recommended for the BOD concentration limits** since the limits currently in effect are more restrictive than those for limited aquatic life receiving waters.

Mass Limits
Chapter NR 225, Wis. Adm. Code, specifies effluent guidelines that are applicable to pollutants or

pollutant properties in discharges of process waste resulting from the production of canned fruits and vegetables. These limits are addressed in a separate memo, dated 01/30/2026, and are based on current production information provided by the facility.

Effluent Data
For informational purposes, the following table summarizes effluent BOD_5 monitoring data from June 2021 through November 2021.

BOD_5 Effluent Data

Sample Date	BOD_5 (mg/L)	Sample Date	BOD_5 (mg/L)	Sample Date	BOD_5 (mg/L)
06/08/21	<4.0	07/13/21	<2.0	10/26/21	2.3
06/15/21	<2.0	07/20/21	<2.0	11/04/21	<2.0
06/22/21	<2.0	07/27/21	4.5	11/18/21	19.2
06/29/21	<2.0	08/03/21	2.7		
07/06/21	<2.0	10/19/21	<5.0		
Mean = 2.2 mg/L					

"<" means that the pollutant was not detected at the indicated limit of detection. The mean concentration was calculated using zero in place of the non-detected results.

TSS
Concentration Limits
Concentration total suspended solids (TSS) limits currently are 40 mg/L as a daily maximum and monthly average. Since the classification has changed to limited aquatic life at the outfall, the TSS limits given in s. NR 104.02(3)(b), Wis. Adm. Code, would apply: **30 mg/L as a weekly average and 20 mg/L as a monthly average.** This change does not require an assessment of antidegradation or antibacksliding since the new weekly average and monthly average limits are more restrictive than the monthly average limit currently in effect.

TMDL Limits
The Rock River TMDL has wasteload allocations (WLA) for total suspended solids (TSS). Since Seneca Foods Corporation Mayville was not given an allocation, the TSS load reduction target was considered. For dischargers in Reach 14, the load reduction target is 15%.

TSS mass limits were last calculated for Seneca Foods Corporation Mayville in 2013. At that time a daily maximum mass limit was calculated by applying the 15% reduction to the daily maximum concentration limit of 40 mg/L:

[40 mg/L – (40 mg/L x 15%)] x 0.02 MGD x 8.34 = **5.67 lbs/day, expressed as a daily maximum limitation,** where 0.02 MGD was the average flow from 2013

EPA's statistical method for deriving water quality-based effluent limits as presented in 5.4 and 5.5 of the *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001) can be used to convert this limitation to monthly average permit limits. In this guidance, USEPA's statistical method for converting from daily maximum to monthly average limits is summarized in Table 5-3. Given the infrequency of discharge, a default CV of 0.6 and weekly effluent monitoring was used to determine a multiplier of 1.64 in order to derive the monthly average limitation:

5.67 lbs/day ÷ 1.64 = **3.46 lbs/day, expressed as a monthly average limitation**

For reference, these limits are equivalent to concentration limits of 25 mg/L, expressed as a daily maximum, and 15 mg/L, expressed as a monthly average, based on the effluent flow rate of 0.0268 MGD.

Since Seneca Foods Corporation Mayville is meeting these limits (since no wasteload allocation was given in the TMDL), the limits do not need to be recalculated at this time. This determination would need to be revisited if the effluent variability or TSS monitoring frequency changes significantly.

TBEL Mass Limits
Chapter NR 225, Wis. Adm. Code, specifies effluent guidelines that are applicable to pollutants or pollutant properties in discharges of process waste resulting from the production of canned fruits and vegetables. These limits are addressed in a separate memo, dated 01/30/2026, and are based on current production information provided by the facility.

Effluent Data
For informational purposes, the following table summarizes effluent TSS monitoring data from June 2021 through November 2021.

TSS Effluent Data

	Concentration (mg/L)	Mass (lbs/day)
06/08/21	2.0	0.0 (no flow reported)
06/15/21	15.8	0.53
06/22/21	1.6	0.02
06/29/21	2.8	0.04
07/06/21	14.8	0.20
07/13/21	1.8	0.02
07/20/21	3.0	0.04
07/27/21	19.0	0.26
08/03/21	4.4	0.06
10/19/21	14.4	1.23
10/26/21	21.0	1.79
11/04/21	3.6	0.30
11/18/21	7.4	0.62
1-day P_{99}	36.2	2.6
4-day P_{99}	20.3	1.4
30-day P_{99}	12.1	0.68
Mean	8.6	0.39
Sample size	13	13

Dissolved Oxygen
A dissolved oxygen (DO) daily minimum limit of 7.0 mg/L was originally implemented due to the default classification of the receiving water. However, as a result of the site visit conducted by the Department and the subsequent change in classification, Seneca Foods Corporation Mayville requested a relaxation of the DO limit.

Antidegradation and Antibacksliding

Under the federal Clean Water Act, states are required to have an antidegradation policy and implementation procedures for the policy as part of their surface water quality standards. Antidegradation provisions support the Clean Water Act's goal of restoring and maintaining the nation's waters by imposing requirements that must be met before water quality may be lowered in a surface water. Chapter NR 207, Wis. Adm. Code, contains Wisconsin's antidegradation and antibacksliding policy and implementation procedures and provides a threshold for which limits cannot be relaxed unless it has been demonstrated to the Department that such a change is justified as a result of necessary economic and social development. That threshold is referred to as significant lowering of water quality (SLOWQ) and is determined in s. NR 207.05, Wis. Adm. Code.

Wisconsin updated ch. NR 207, Wis. Adm. Code, in 2026, with the new threshold provision of 10% becoming effective July 1, 2026. Therefore, any permits with effective dates on or after July 1, 2026 must conform to the updated provisions.

The table below shows the DO limit that could be given for Seneca Foods Corporation Mayville without a demonstration of important economic or social development by the facility.

SLOWQ Calculation for DO Limit

Permit Effective ***Prior*** to 6/30/26[1]		Permit Effective ***After*** 6/30/26[2]	
Existing level (Background)	7.0 mg/L	Existing level (Background)	7.0 mg/L
2/3 of existing level	4.6 mg/L	90% of existing level	6.3 mg/L
DO criterion (WWSF – downstream protection)	5.0 mg/L[3]	DO criterion (WWSF – downstream protection)	5.0 mg/L[3]
1/3 of criterion	1.6 mg/L	10% of criterion	0.1 mg/L
SLOWQ threshold for DO	**6.3 mg/L**	**10% threshold for DO**	**6.8 mg/L**

Footnotes:

1. Calculated in accordance with NR 207.05(4)(a)2., Wis. Adm. Code.
2. Calculated in accordance with s. NR 207.031(8)(a)3.c.2), Wis. Adm. Code.
3. While the immediate receiving water is limited aquatic life, the SLOWQ calculation for DO should consider protection of the downstream warm water sport fish classification in accordance with s. NR 207.03(7)(a)1., Wis. Adm. Code (s. NR 207.031(5), Wis. Adm. Code, in the updated code). Surface waters shall attain a minimum dissolved oxygen concentration of 5 mg/L at all times per NR 102.04(4)(a)2., Wis. Adm. Code.

Effluent Data

For informational purposes, the following table summarizes effluent DO monitoring data from June 2021 through November 2021.

Dissolved Oxygen Effluent Data

Sample Date	DO (mg/L)	Sample Date	DO (mg/L)	Sample Date	DO (mg/L)
06/08/21	6.2	07/06/21	7.2	08/03/21	7.2
06/15/21	6.3	07/13/21	8.8	10/26/21	6.0
06/22/21	6.2	07/22/21	7.0	11/11/21	7.1
06/29/21	7.0	07/27/21	7.1	11/18/21	6.1

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Sample Date	DO (mg/L)	Sample Date	DO (mg/L)	Sample Date	DO (mg/L)
1-day P_{99} = 8.9 mg/L					
Mean = 6.9 mg/L					

pH

In accordance with s. NR 102.04(4)(c), Wis. Adm. Code, **pH shall be within the range of 6.0 s.u. to 9.0 s.u.** for fish and aquatic life.

Effluent Data

For informational purposes, the following table summarizes effluent pH monitoring data from June 2021 through November 2021.

pH Effluent Data

Sample Date	pH (s.u.)	Sample Date	pH (s.u.)	Sample Date	pH (s.u.)
06/08/21	6.70	07/13/21	6.90	10/26/21	6.89
06/15/21	6.73	07/22/21	6.95	11/04/21	7.03
06/22/21	6.78	07/27/21	6.94	11/11/21	6.40
06/29/21	6.64	08/03/21	6.94	11/18/21	7.30
07/06/21	6.73	10/19/21	7.01		
Mean = 6.85 s.u.					

PART 4 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR AMMONIA NITROGEN

The State of Wisconsin promulgated revised water quality standards for ammonia nitrogen in ch. NR 105, Wis. Adm. Code, effective March 1, 2004 which includes criteria based on both acute and chronic toxicity to aquatic life. Given the fact that the Seneca Foods Corporation Mayville does not currently have ammonia nitrogen limits, the need for limits is evaluated at this time. The table below shows the results of effluent ammonia nitrogen sampling at Outfall 013 during July and August 2025 as reported on the permit application:

Ammonia Nitrogen Effluent Data

Sample Date	Ammonia Nitrogen (mg/L)
07/22/25	0.25
08/02/25	0.19
08/09/25	<0.14
08/16/25	<0.14
Mean	0.11

"<" means that the pollutant was not detected at the indicated limit of detection. The mean concentration was calculated using zero in place of the non-detected results.

Based on this effluent data, there is no reasonable potential for the discharge to exceed the most stringent ammonia nitrogen limits that would be calculated. **Therefore, neither ammonia nitrogen limits nor monitoring are recommended during the reissued permit term.**

PART 5 – PHOSPHORUS

Technology-Based Effluent Limit
Subchapter II of Chapter NR 217, Wis. Adm. Code, requires industrial facilities that discharge greater than 60 pounds of total phosphorus per month to comply with a 12-month rolling average limit of 1.0 mg/L, or an approved alternative concentration limit.

Since Seneca Foods Corporation Mayville has phosphorus limits in effect that are more stringent than 1.0 mg/L, the need for a TBEL will not be considered further.

In addition, the need for a WQBEL for phosphorus must be considered.

Water Quality-Based Effluent Limits (WQBEL)
Revisions to administrative rules regulating phosphorus took effect on December 1, 2010. These rule revisions include additions to s. NR 102.06, Wis. Adm. Code, which establish phosphorus standards for surface waters. Subchapter III of NR 217, Wis. Adm. Code, establishes procedures for determining WQBELs for phosphorus, based on the applicable standards in ch. NR 102, Wis. Adm. Code.

Phosphorus criteria in s. NR 102.06, Wis. Adm. Code, do not apply to limited aquatic life waters as described in s. NR 102.06(6)(d), Wis. Adm. Code. These waters were not included in the USGS/WDNR stream and river studies and, therefore, the Department lacked the technical basis to determine and propose applicable criteria. At some time in the future, the Department may adopt phosphorus criteria based on new studies focusing on limited aquatic life waters. *The Guidance for Implementing Wisconsin's Phosphorus Water Quality Standards for Point Source Discharges (2020)* suggests that during the interim, WQBELs should be based on the criteria and flow conditions for the next stream segment downstream (or downstream lake or reservoir, if appropriate), because ss. 217.12 and 217.13, Wis. Adm. Code, state that the Department must set WQBELs to protect downstream waters. The discharge location of the wastewater from Seneca Foods Corporation Mayville is classified as limited aquatic life from the point of discharge for approximately one mile until Petit Road where the classification then changes to warmwater sport fish.

Section NR 102.06(3)(a), Wis. Adm. Code, specifically names river segments for which a phosphorus criterion of 0.100 mg/L applies. For other stream segments that are not specified in s. NR 102.06(3)(a), Wis. Adm. Code, s. NR 102.06(3)(b), Wis. Adm. Code, specifies a phosphorus criterion of 0.075 mg/L. The phosphorus criterion of 0.075 mg/L applies for the Unnamed Tributary to the East Branch of the Rock River.

The conservation of mass equation is described in s. NR 217.13(2)(a), Wis. Adm. Code, for phosphorus WQBELs and includes variables of water quality criterion (WQC), receiving water flow rate (Qs), effluent flow rate (Qe), and upstream phosphorus concentrations (Cs) provided below.

$$\text{Limitation} = [(WQC)(Qs+(1-f)\ Qe) - (Qs-f\ Qe)\ (Cs)]/Qe$$

Where:

WQC = 0.075 mg/L for the Unnamed Tributary to the East Branch of the Rock River
Qs = 100% of the 7-Q_2 of 0.08 cfs
Cs = background concentration of phosphorus in the receiving water pursuant to s. NR 217.13(2)(d), Wis. Adm. Code

Qe = effluent flow rate = 0.0268 MGD = 0.041 cfs
f = the fraction of effluent withdrawn from the receiving water = 0

The impairment status of the Unnamed Tributary to the East Branch of the Rock River is unknown (the Unnamed Tributary to the East Branch of the Rock River has not been evaluated for any impairments), and there is no instream background data. However, given the impairment of similar streams and the impairment of the East Branch of the Rock River approximately 2.8 miles downstream of the outfall (1.8 miles from the classification change at Petit Road), it is recommended that phosphorus limits be set equal to the water quality criterion to prevent the discharge from contributing to further impairment. The facility may opt to sample the receiving water. The WQBEL may be amended if background phosphorus stream data, collected during the period of May – October and with regards to other stipulations laid out in s. NR 217.13(2)(d), Wis. Adm. Code, is submitted to the Department shows the instream concentration of total phosphorus is less than the applicable criterion.

Effluent Data
The following table summarizes effluent total phosphorus monitoring data from June 2021 through November 2021.

Total Phosphorus Effluent Data

	Concentration (mg/L)	Mass (lbs/day)
06/08/21	<0.029	0
06/15/21	0.089	0.0030
06/22/21	0.12	0.0016
06/29/21	0.047	0.0006
07/06/21	0.038	0.0005
07/13/21	0.052	0.0007
07/20/21	0.13	0.0018
07/27/21	0.051	0.0007
08/03/21	0.11	0.0010
10/19/21	0.22	0.0188
10/26/21	0.42	0.0358
11/04/21	0.11	0.0092
11/18/21	0.20	0.0167
1-day P_{99}	0.53	0.05
4-day P_{99}	0.30	0.03
30-day P_{99}	0.18	0.01
Mean	0.122	0.007
Sample size	13	13

Reasonable Potential Determination
The discharge has reasonable potential to cause or contribute to an exceedance of the water quality criterion because the 30-day P_{99} of reported effluent total phosphorus data is greater than the calculated WQBEL**.** Therefore, **a WQBEL is required.**

Limit Expression
According to s. NR 217.14(2), Wis. Adm. Code, because the calculated WQBEL is less than or equal to 0.3 mg/L, the effluent limit of 0.075 mg/L may be expressed as a six-month average. If a concentration limitation expressed as a six-month average is included in the permit, a monthly average concentration limitation of 0.225 mg/L, equal to three times the WQBEL calculated under s. NR 217.13, Wis. Adm. Code shall also be included in the permit. The six-month average should typically be averaged during the months of May – October and November – April; however, **since Seneca Corporation Mayville discharges from May through November, a seven-month averaging period may be used corresponding to months the discharge occurs** (May through November).

Mass Limits
A mass limit is also required, pursuant to s. NR 217.14(1)(a), Wis. Adm. Code, because the discharge is to a surface water that is upstream of a receiving water that has an approved TMDL. **This final mass limit shall be 0.075 mg/L × 8.34 × 0.0268 MGD = 0.02 lbs/day expressed as a six-month average.**

TMDL Limits
Seneca Foods Corporation Mayville is located in Reach 14 of the East Branch River from Gill Creek to Mile 11. The phosphorus load reduction target for treatment facilities in this reach is 78%.

Seneca Foods Corporation Mayville was not specified an allocation in the Rock River TMDL, and so a calculated TMDL limit of 0.03 lbs/day, which was based on a 78% reduction of the 1-day P_{99} from May 2011 through July 2015 and 0.0268 MGD is the maximum annual average flow from June 2016 through September 2020, was given:

[(0.7 mg/L – (0.7 mg/L x 78%)] x 0.0268 MGD x 8.34 = 0.03 lbs/day

However, as discussed on the previous page, s. NR 217.13, Wis. Adm. Code, limits are needed in order to be protective of the immediate receiving water. Those limits are more restrictive than those TMDL limits previously in effect and will therefore meet TMDL reduction goals in this reach. Therefore, **no additional TMDL limits are required.**

Antidegradation and antibackliding do not need to be considered for the removal of the TMDL limit since the s. NR 217.13, Wis. Adm. Code, limits are more restrictive.

Water Quality Trading Minimum Control Level
A water quality trading (WQT) plan has been submitted as an alternative compliance option to offset any total phosphorus discharged from Outfall 013 that exceed the phosphorus WQBELs. The phosphorus WQBELs may be expressed as computed compliance limits, but a minimum control level (MCL) must be set as a limit not to be exceeded at the outfall location. **Therefore, the current phosphorus MCL of 0.7 mg/L as a monthly average is recommended to continue** during the reissued permit term to serve as the MCL.

PART 6 – WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR THERMAL

Surface water quality standards for temperature took effect on October 1, 2010. These regulations are detailed in chs. NR 102 (Subchapter II – Water Quality Standards for Temperature) and NR 106 (Subchapter V – Effluent Limitations for Temperature) of the Wisconsin Administrative Code. Daily maximum and weekly average temperature criteria are available for the 12 different months of the year

depending on the receiving water classification.

Reasonable Potential
Evaluation of thermal limitations is required for discharges to streams to determine if there are potential impacts from the thermal discharge. A single thermal data point of 57.2°F was collected on 08/02/2025 and was reported on the permit application. No other representative temperature data for this discharge is available. However, since this is a drain tile discharge following spray irrigation, and since the discharge volume is relatively small, it is best professional judgement that temperatures at the discharge would likely be close to ambient and impacts on the downstream reach are not considered to be present. Therefore, **no limits nor monitoring for temperature are required.**

PART 7 – WHOLE EFFLUENT TOXICITY (WET)

WET testing is used to measure, predict, and control the discharge of toxic materials that may be harmful to aquatic life. In WET tests, organisms are exposed to a series of effluent concentrations for a given time and effects are recorded. Decisions below related to the selection of representative data and the need for WET limits were made according to ss. NR 106.08 and 106.09, Wis. Adm. Code. WET monitoring frequency and toxicity reduction evaluation (TRE) recommendations were made using the best professional judgment of staff familiar with the discharge after consideration of the guidance in the *Whole Effluent Toxicity (WET) Program Guidance Document* (2022).

- Acute tests predict the concentration that causes lethality of aquatic organisms during a 48 to 96-hour exposure. To assure that a discharge is not acutely toxic to organisms in the receiving water, WET tests must produce a statistically valid LC_{50} (Lethal Concentration to 50% of the test organisms) greater than 100% effluent, according to s. NR 106.09(2)(b), Wis. Adm Code.

- Chronic tests predict the concentration that interferes with the growth or reproduction of test organisms during a seven-day exposure. To assure that a discharge is not chronically toxic to organisms in the receiving water, WET tests must produce a statistically valid IC_{25} (Inhibition Concentration) greater than the instream waste concentration (IWC), according to s. NR 106.09(3)(b), Wis. Adm Code. The IWC is an estimate of the proportion of effluent to total volume of water (receiving water + effluent). The **IWC of 100%,** shown in the WET Checklist summary below, was calculated according to the following equation, as specified in s. NR 106.03(6), Wis. Adm Code:

$$IWC\ (as\ \%) = Q_e \div \{(1 - f)\ Q_e + Q_s\} \times 100$$

Where:
Q_e = annual average flow = 0.0268 MGD = 0.04154 cfs
f = fraction of the Q_e withdrawn from the receiving water = 0
Q_s = ¼ of the 7-Q_{10} = 0 cfs ÷ 4 = 0 cfs

- The IWC should consider the presence of aquatic organisms at the outfall. The site visit conducted on 07/09/2024 indicated no flow and a macroinvertebrate natural community at the outfall. In such cases, it would be likely to then calculate the IWC downstream where the classification changes to support aquatic life. However, the IWC cannot be lowered without satisfying antidegradation/antibacksliding requirements. Therefore, no changes to the IWC are recommended at this time.

- According to the *State of Wisconsin Aquatic Life Toxicity Testing Methods Manual* (s. NR 219.04, Table A, Wis. Adm. Code), a synthetic (standard) laboratory water may be used as the dilution water

and primary control in acute WET tests, unless the use of different dilution water is approved by the Department prior to use. The primary control water must be specified in the WPDES permit.

- Shown below is a tabulation of all available WET data for Outfall 013. Efforts are made to ensure that decisions about WET monitoring and limits are made based on representative data, as specified in s. NR 106.08 (3), Wis. Adm Code. Data which is not believed to be representative of the discharge was not included in reasonable potential calculations. The table below differentiates between tests used and not used when making WET determinations.

  Tests conducted prior to 2005 are not presented in the table below due to significant changes that were made to WET test methods in 2004 and were assumed to be fully implemented by certified labs by no later than June 2005. Data collected before July 1, 2005 does not show repeated toxicity that was never resolved and is not the only data that is available.

WET Data History

Date Test Initiated	Acute Results LC_{50} % (% survival in 100% effluent)				Chronic Results IC_{25} %			
	C. dubia	Fathead minnow	Pass or Fail?	Used in RP?	*C. dubia*	Fathead Minnow	Pass or Fail?	Use in RP?
08/23/2007	>100	>100	Pass	Yes	>100	46.66	Pass	No[1]
07/25/2017	>100	>100	Pass	Yes	>100	>100	Pass	Yes
08/13/2019	-	-	-	-	>100	>100	Pass	Yes
07/28/2020	>100	>100	Pass	Yes	>100	>100	Pass	Yes

[1] Permanent changes were made to remove the suspected source of this toxicity. Starting in 2006 the facility has been working to reduce the chloride present in their discharge to land treatment. Chloride levels in Outfall 013 ranged from 20 – 50 mg/L in 2007 and currently range from approximately 10 – 20 mg/L. Therefore, this test is no longer considered to be representative of the discharge and was not included in the RP calculation.

- According to s. NR 106.08, Wis. Adm. Code, WET reasonable potential is determined by multiplying the highest toxicity value that has been measured in the effluent by a safety factor, to predict the likelihood (95% probability) of toxicity occurring in the effluent above the applicable WET limit. The safety factor used in the equation changes based on the number of toxicity detects in the dataset. The fewer detects present, the higher the safety factor, because there is more uncertainty surrounding the predicted value. **WET limits must be given, according to s. NR 106.08(6), Wis. Adm. Code, whenever the applicable Reasonable Potential equation results in a value greater than 1.0.**

  According to s. NR 106.08(6)(d), Wis. Adm. Code, TUa and TUc effluent values are equal to zero whenever toxicity is not detected (i.e. when the LC_{50}, IC_{25} or $IC_{50} \geq 100\%$).

  Acute Reasonable Potential = 0 < 1.0, reasonable potential is not shown, and **an acute WET limit is not required.**

  Chronic Reasonable Potential = 0 < 1.0, reasonable potential is not shown, and **a chronic WET limit is not required.**

The WET checklist was developed to help DNR staff make recommendations regarding WET limits, monitoring, and other related permit conditions. The checklist indicates whether acute and chronic WET

limits are needed, based on requirements specified in s. NR 106.08, Wis. Adm. Code. The checklist steps the user through a series of questions, assesses points based on the potential for effluent toxicity, and suggests monitoring frequencies based on points accumulated during the checklist analysis. As toxicity potential increases, more points accumulate, and more monitoring is recommended to ensure that toxicity is not occurring. A summary of the WET checklist analysis completed for this permittee is shown in the table below. Staff recommendations based on best professional judgment are provided below the summary table. For guidance related to reasonable potential and the WET checklist, see Chapter 1.3 of the WET Guidance Document: https://dnr.wisconsin.gov/topic/Wastewater/WET.html.

WET Checklist Summary

	Acute	Chronic
AMZ/IWC	Not Applicable. **0 Points**	IWC = 100% **15 Points**
Historical Data	3 tests used to calculate RP. No tests failed. No data in the last five years. **5 Points**	3 tests used to calculate RP. No tests failed. No data in the last five years. **5 Points**
Effluent Variability	Little variability, no violations or upsets, consistent operations. **0 Points**	Same as Acute. **0 Points**
Receiving Water Classification	< 4 mi to non-variance **5 Points**	Same as Acute. **5 Points**
Chemical-Specific Data	No reasonable potential for limits based on ATC. Ammonia, arsenic, cadmium, chloride, lead, nickel detected. Additional Compounds of Concern: None. **3 Points**	No reasonable potential for limits based on CTC. Ammonia, arsenic, cadmium, chloride, lead, nickel detected. Additional Compounds of Concern: None. **3 Points**
Additives	No additives expected in surface water discharge. **0 Points**	No additives expected in surface water discharge. **0 Points**
Discharge Category	Industrial food processor. **5 Points**	Same as Acute. **5 Points**
Wastewater Treatment	Primary Treatment (screening and land application) **8 Points**	Same as Acute. **8 Points**
Downstream Impacts	No impacts known. **0 Points**	Same as Acute. **0 Points**
Total Checklist Points:	**26 Points**	**41 Points**
Recommended Monitoring Frequency (from Checklist):	3 tests during permit term.	1x yearly.
Limit Required?	No	No
TRE Recommended? (from Checklist)	No	No

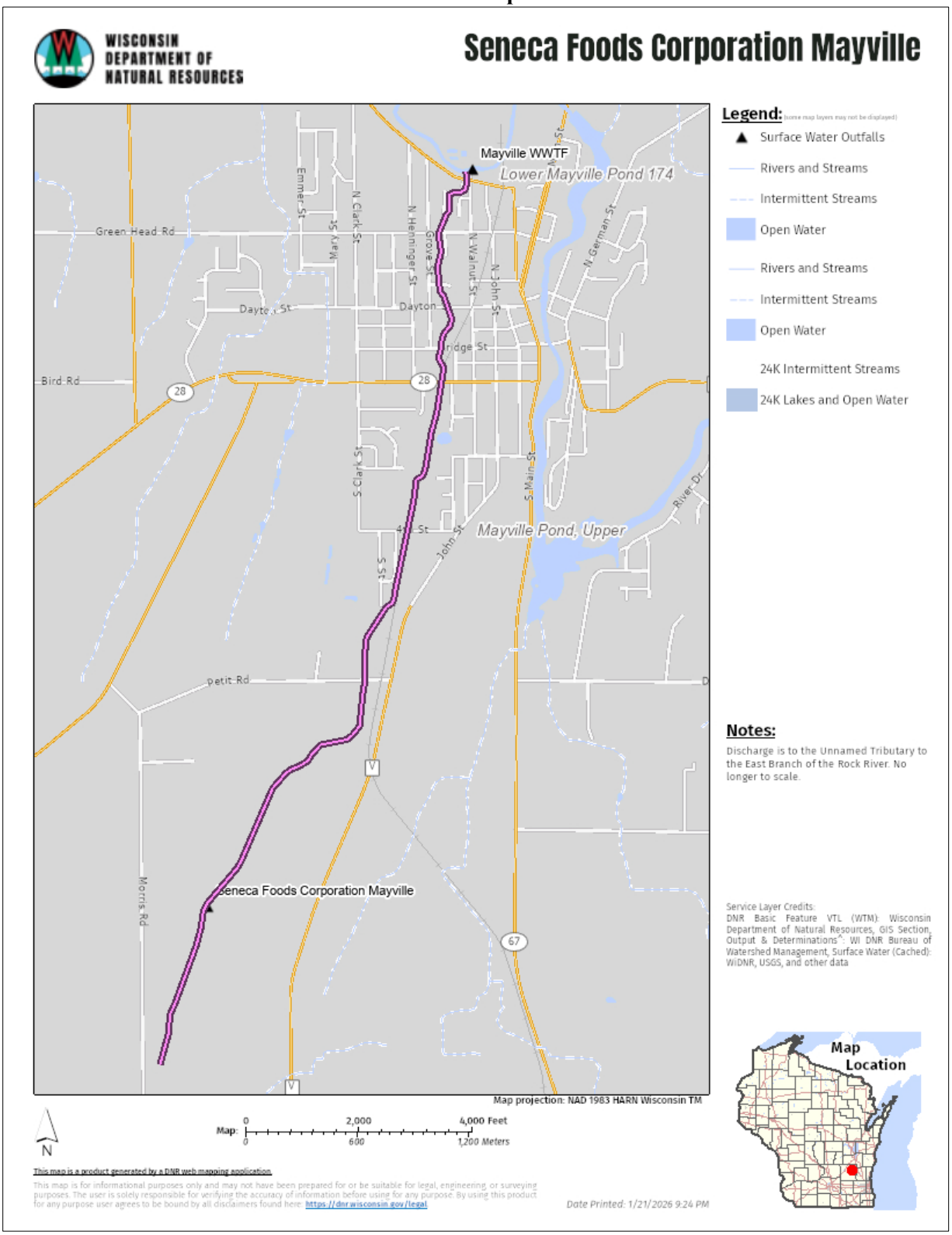
- After consideration of the guidance provided in the Department's *WET Program Guidance Document* (2022) and other information described above, **two acute and three chronic WET tests are recommended in the reissued permit**.
  Deviations from the WET checklist recommendations were made for the following reasons:

1. 8 points were assessed for primary treatment only. Since the surface water discharge is from drain tiles, treatment technology is not necessarily needed. Therefore, five points are deducted for wastewater treatment which reduces the acute WET testing frequency to two tests during the permit term.
2. The WET checklist assumes the discharge is occurring year-round on a continuous basis. However, since Seneca Foods Corporation Mayville is a seasonal discharger for seven months of the year, it is reasonable to assume fewer tests are needed to assess the toxicity potential. Chronic testing can be reduced to three WET tests, and acute WET testing can be reduced to twice during the permit term which is the minimum if acute WET testing is recommended.

- Seneca Foods Corporation Mayville will need to plan ahead with WET scheduling well before discharge is expected to occur so that tests are not missed.

Attachment #2

Site Map



CORRESPONDENCE/MEMORANDUM

DATE: January 12, 2026 FILE REF: FIN 6972

TO: File

FROM: Zach Watson Hydrogeologist - SCR

SUBJECT: Groundwater Evaluation for Seneca Foods Mayville WI-0050822-08

General Information and Treatment System Description

Seneca Foods Corporation vegetable processing facility is located at 500 South Clark Street, Mayville, Wisconsin. The Mayville plant processes peas and sweet corn during a harvest period, typically extending from mid-June to early October. Actual days of processing can vary from 80 to 110 days during an approximate 120-day canning season. During the processing season, canning and spray field, activities generally occur over a 7-day workweek. An average of about 0.20 to 0.35 MGD of wastewater is generated on those days when processing occurs. Annually, 20 to 26 MG of wastewater is generated. Wastewater typically includes vegetable wash water, blancher water, cooker-cooling water, boiler blow down and equipment sanitation water. Wastewater generated within the processing plant flows by gravity to a primary holding tank adjacent to the plant. From the primary holding tank, wastewater is pumped through a single rotary screen, and the screen opening sizes is .020. Solids removed are used for animal feed, and the screened wastewater flows by gravity to a 19,000-gallon secondary holding tank. Wastewater is discharged by force-main to the spray field receiving area. The spray field receiving area, located southwest of the plant, occupies 128.7 acres of company land and in S1/2 SW1/4 Section 23, NW1/4 NW1/4 Section 26 and SE1/4 NE1/4 and SE1/4 Section 27, T12N-R16E Town of Kekoskee, Dodge County. Seneca is also leasing acreage from Glacier Ridge Landfill with a receiving area of 26.1 acres located in the SW1/4 NW1/4 Section 34, Village of Kekoskee, Dodge County. The spray fields are surrounded by a groundwater monitoring network consisting of thirteen groundwater monitoring wells.

From December 8, 2023 Letter to Zach Watson from Seneca Foods Mayville

"Seneca had been leasing acreage from GFL Environmental (GFL) who owns and operates a municipal solid waste landfill in Mayville on the east side of County Highway V. Leased acreage included Irrigation Field G, Irrigation Field H, and the water quality trading fields for phosphorus and total suspended solids for the North Tile (Outfall 013). Prior to the 2023 season, GFL notified Seneca that the lease for Irrigation Field H would not be continued since GFL was going to be constructing a recycling sorting facility on that location. As a result of that reduction in irrigation acreage, Seneca applied for and received DNR approval for 5 land application sites for wastewater land application to use in conjunction with the remaining irrigation system for the 2023 pack and beyond.

As shown on the attached site map, Irrigation Field H had deep tile installed that discharged groundwater to a wetland via the South Tile (Outfall 014). As a result of GFL's construction activities, the tile was crushed and there is no longer a tile discharge via the South Tile. There are two monitoring wells located on the south side of the former Irrigation Field H – MW-119 and MW-120 – that Seneca proposes to abandon since they are located on the edge of GFL's recycling sorting facility now, not near Seneca's irrigation activities."

Table 1 – Monitoring Requirements and Limitations – Spray Irrigation (Outfall 001)

Parameter	Current and Proposed Permit WI-0050822-08 and WI-0050822-09		
	Limit Type	Limits and Units	Sample Frequency
Flow Rate		MGD	Daily
Hydraulic Application Rate	Monthly Average	3,500 gal/ac/day	Monthly (May through October)
Hydraulic Application Rate	Monthly Average	0 gal/ac/day	Monthly (November through April)
BOD5, Total		mg/l	Weekly
Chloride		mg/l	Weekly
Total Kjeldahl Nitrogen		mg/l	Weekly
Nitrogen, Max Applied on any Zone	Annual Total	***300 lbs/ac/yr**	Annual

***Recommended changes from current permit**

Table 2 – Groundwater Monitoring System for Fields B, C, D, E and F

Sample Point	Well Name	Current Permit and Proposed WI-0050822-08 and WI-0050822-09	
		Well Location	Well Designation
806	MW-106		Non-point of Standards
811	MW-111		Point of Standards
813	MW-113	Background	Non-point of Standards
816	MW-103		Point of Standards
817	MW-104		Non-point of Standards
818	MW-105		Non-point of Standards
819	MW-115		Non-point of Standards
893	MW-123		Non-point of Standards

Table 3 – Groundwater Monitoring System for Fields G ~~and H~~

Sample Point	Well Name	Current Permit and Proposed WI-0050822-08 and WI-0050822-09	
		Well Location	Well Designation
886	MW-116	Background	Non-point of Standards
887	MW-117		Point of Standards
888	MW-118		Non-point of Standards
~~**889**~~	~~**MW-119**~~		~~**Non-point of Standards**~~
~~**890**~~	~~**MW-120**~~		~~**Point of Standards**~~
891	MW-121		Point of Standards
892	MW-122		Point of Standards

***Recommended changes from current permit**

Monitoring wells MW-119 and MW-120 abandoned in June 2024. Field H abandoned in 2023.

Table 4 – Sprayfields B, C, D, E, and F Groundwater Standards

Parameter	Current Permit WI-0050822-08		Proposed Permit WI-0050822-09	
	PAL	ES	PAL	ES
Depth to Groundwater	N/A	N/A	N/A	N/A
Groundwater Elevation	N/A	N/A	N/A	N/A
Chloride Dissolved	240 mg/l	250 mg/l	***170 mg/l**	250 mg/l
COD	33 mg/l	N/A	***40 mg/l**	N/A
Ammonia Dissolved	0.97 mg/l	9.7 mg/l	0.97 mg/l	9.7 mg/l
Nitrite+Nitrate Dissolved	4.6 mg/l	10 mg/l	***2.6 mg/l**	10 mg/l
Organic Nitrogen Dissolved	2.3 mg/l	N/A	***2.7 mg/l**	N/A
pH Field	8.4 su	N/A	***8.5 su**	N/A
Total Dissolved Solids	690 mg/l	N/A	***705 mg/l**	N/A
~~***Sulfate**~~	~~**150 mg/l**~~	~~**250 mg/l**~~	~~N/A~~	~~N/A~~

***Recommended changes for upcoming permit**

Table 5 – Sprayfield G Groundwater Standards

Parameter	Current Permit WI-0050822-08		Proposed Permit WI-0050822-09	
	PAL	ES	PAL	ES
Depth to Groundwater	N/A	N/A	N/A	N/A
Groundwater Elevation	N/A	N/A	N/A	N/A
Chloride Dissolved	140 mg/l	250 mg/l	***125 mg/l**	250 mg/l
COD	32 mg/l	N/A	***40 mg/l**	N/A
Ammonia Dissolved	0.97 mg/l	9.7 mg/l	0.97 mg/l	9.7 mg/l
Nitrite+Nitrate Dissolved	2.1 mg/l	10 mg/l	***2.0 mg/l**	10 mg/l
Organic Nitrogen Dissolved	2.2 mg/l	N/A	***2.3 mg/l**	N/A
pH Field	8.4 su	N/A	***8.4 su**	N/A
Total Dissolved Solids	600 mg/l	N/A	***685 mg/l**	N/A
~~***Sulfate**~~	~~**150 mg/l**~~	~~**250 mg/l**~~	N/A	N/A

Geology

The bedrock underlying the treatment facility is the Ordovician-aged Sinnippee Group consisting of the Galena, Decorah and Platteville formations. The Galena and Platteville formations are primarily dolostones separated by the Decorah shale. Depth to bedrock is approximately 50 – 100 feet below ground surface. The overlying sediment is the Holy Hill formation comprised of sandy till from the Late Wisconsin glaciation. Surface soils are primarily silt loams. The area consists of drumlins oriented north to south. Ground surface elevations range from approximately 930 – 1,050 feet above mean sea level.

Hydrogeology

Groundwater elevations vary from approximately 930 – 1,030 feet above mean sea level. Depth to groundwater varies from approximately 2 – 16 feet below ground surface. The drumlin dominated landscape results in significant changes in groundwater elevation throughout the sprayfields. The interpretation of

groundwater flow paths is likely much more complex than as is interpreted in July 30, 2025 water table flow map. Groundwater flow at Fields B, C, D, E and F appears to be primarily from west to east. Groundwater flow at Field G is primarily from the south to north.

Land Treatment Effluent Quality and Loading Rates

The results for chloride are significantly variable ranging from approximately 100 – 900 mg/l. The results for total kjeldahl nitrogen are also quite variable and ranged up to approximately 450 mg/l during the current permit term. The result for nitrite+nitrate in the permit application sample was an estimated (i.e., between the limit of detection and limit of quantitation) value. Therefore, the concentration of nitrite+nitrate in the effluent is considered negligible and total Kjeldahl nitrogen is presumed to be equivalent to total nitrogen. BOD5 is most often on the order of 5,000 – 10,000 mg/l but reached as high as approximately 25,000 mg/l during the current permit term. The average annual concentrations for these parameters are provided in **Table 6**. Annual nitrogen and chloride loading rates are provided in **Tables 7 and 8**, respectively.

Table 6 – Annual Average Sprayfield Effluent Concentrations (mg/l)

	BOD5	Chloride	Total Kjeldahl Nitrogen
2021	5,497	322.4	135.4
2022	7,104	215.8	107.7
2023	10,743	381.7	217.8
2024	2,785	350.2	138.3
2025	2,352	280.5	141.3

Table 7 – Annual Sprayfield Nitrogen Loading Rates (lbs/ac/yr)

Year	Field B	Field C	Field D	Field E	Field F	Field G	Field H
2021	8.7	222.9	190.0	215.0	182.5	91.6	108.7
2022	34.4	215.2	187.8	211.8	132.5	155.9	143.3
2023	112.8	313.7	353.4	289.9	297.5	317.9	N/A
2024	100.6	127.1	136.8	137.1	125.9	198.3	N/A

Field H was abandoned in 2023

Table 8 – Annual Sprayfield Chloride Loading Rates (lbs/ac/yr)

Year	Field B	Field C	Field D	Field E	Field F	Field G	Field H
2021	26.6	545.1	452.7	516.6	436.3	219.7	266.0
2022	68.8	443.7	376.3	434.6	270.3	321.9	291.4
2023	172.6	456.9	513.8	483.1	468.2	519.3	N/A
2024	216.5	329.9	357.7	356.8	3675	518.6	N/A

Field H was abandoned in 2023

Background Groundwater Quality

Background groundwater quality is defined by the results from samples collected at MW-113 and MW-116 for Fields B, C, D, E and F and Field G, respectively. The results for chloride have recently begun to increase at

MW-113 with several PAL exceedances during recent sampling events. The results for chloride at MW-116 are low and stable. The results for nitrite+nitrate also exhibited a general increase in concentration over the permit term. The average concentration of nitrite+nitrate at MW-113 was 1.4 mg/l over the permit term with a handful of exceedances of the NR 140 PAL. The results for nitrite+nitrate at MW-116 are mostly non-detect. The results for COD, organic nitrogen and ammonia are mostly non-detect.

Downgradient Groundwater Quality

The results for chloride are low (i.e., < 50 mg/l) at most downgradient monitoring wells except for MW-106, MW-115 and MW-123. The results for chloride are highest at MW-106 where they remain relatively stable at approximately 250 – 300 mg/l. The results for chloride at MW-115 have exhibited an increasing trend during the permit term from approximately 50 mg/l to 150 mg/l. The results for nitrite+nitrate are low (i.e., < 1 mg/l) at the downgradient monitoring wells. The results for COD, organic nitrogen and ammonia are mostly non-detect at the downgradient monitoring wells.

Treatment System Impact to Groundwater Quality

The results for nitrite+nitrate and ammonia in groundwater indicate that Seneca Foods Mayville is loading their sprayfields at rates that are protective of local groundwater quality. The results for chloride are elevated at a few downgradient monitoring wells. It is expected that the results for chloride at monitoring well MW-106 are elevated in part due to its proximity to Petit Rd. Overall, the loading of chloride to these sprayfields (i.e., 100 – 500 lbs/ac/yr) is not excessive and not expected to result in significant increases over time but Seneca Foods Mayville should work to bring down the periodic chloride concentrations that are well above the NR 140 ES to ensure groundwater chloride concentrations remain below the NR 140 PAL.

Indicator Parameter PALs

Indicator Parameter PALs are developed following the procedures described in s. NR 140.20(2), Wis. Adm. Code and "Calculating Preventive Action Limits and Evaluating Groundwater Quality Exemptions for Groundwater Dischargers". Indicator parameters do not have Enforcement Standards. The PAL for an indicator parameter is a benchmark for evaluating site specific trends. When significant increases in the trends are observed, the facility and the department's response action under s. NR 140.24 Wis. Adm. Code should be to investigate the source of the compound. The indicator PALs for this facility were calculated using whichever of the two following methods provides a greater PAL.

- ∑ [Background groundwater quality + (Standard Deviation of results x 3)]
- ∑ [Background groundwater quality + Minimum Increase (NR 140.20 Table 3)]

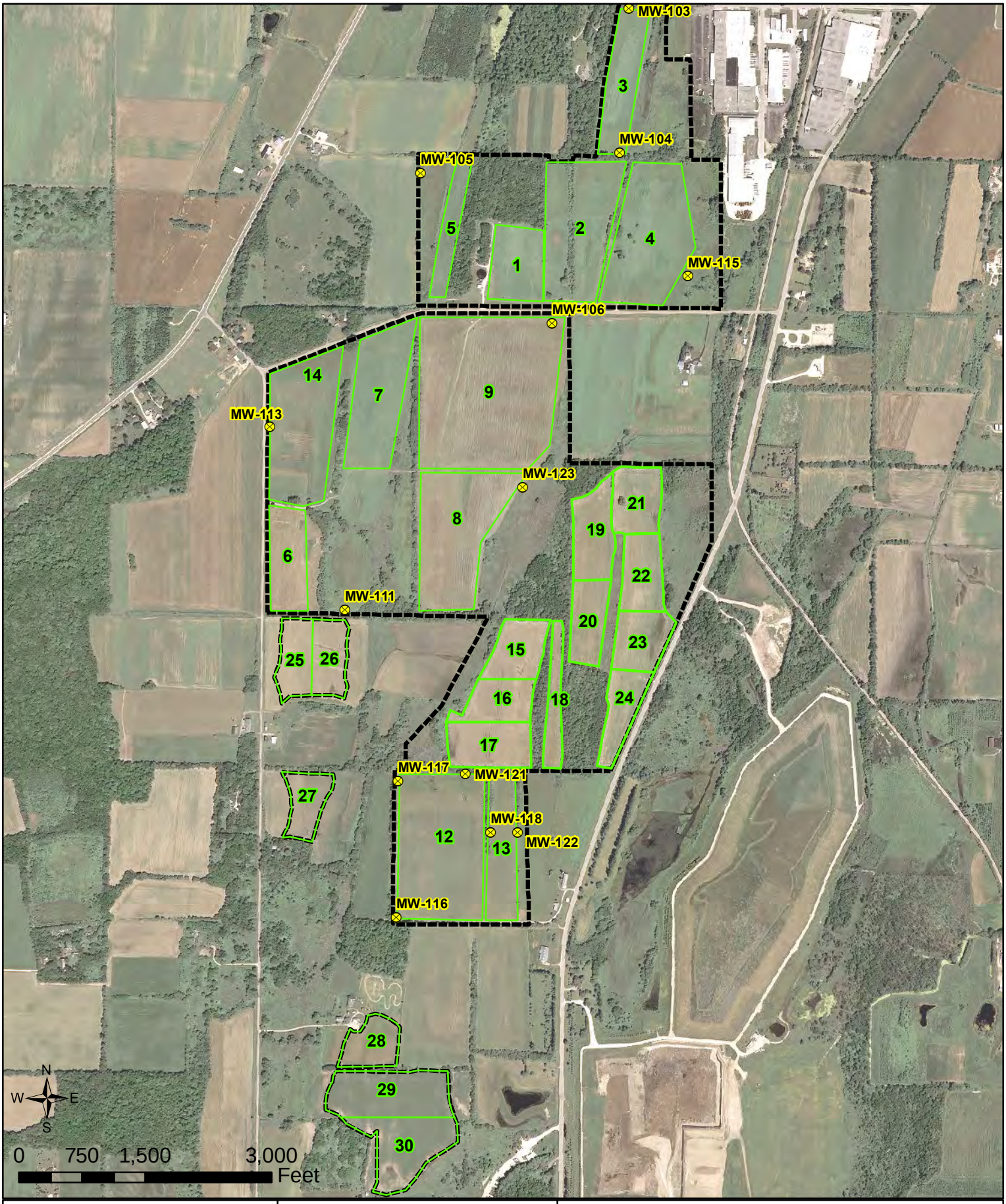
Indicator parameter PALs for the current permit term were calculated using monitoring data from MW-113 and MW-116 during the prior permit term. The indicator parameter PALs for use in the upcoming permit WI-0050822-09 are presented in **Table 4 and 5** and were calculated using results from MW-113 and MW-116 (January 1, 2021 – September 30, 2025).

Alternative Concentration Limits

Alternative concentration Limits (ACLs) can be developed and provided for a groundwater monitoring system to replace the PAL or ES (s. NR 140.28, Wis. Adm. Code). ACLs are provided if the conditions at the background monitoring well(s) indicate that it is appropriate. The methodology and considerations for developing and providing ACLs are outlined in the guidance document "Calculating Preventive Action Limits and Evaluating Groundwater Quality Exemptions for Groundwater Dischargers". ACLs were calculated and provided in **Table 4** for chloride and nitrite+nitrate using results from MW-113 (January 1, 2021 – September 30, 2025).

Conclusions, Recommendations and Schedule Requirements

- Monitoring wells MW-119 and MW-120 were abandoned in 2024. Remove these wells from the upcoming permit.
- Field H and Outfall 014 no longer exist. Remove these outfalls from the upcoming permit.
- Sulfate has remained below the NR 140 PAL at all monitoring wells except for MW-111. Monitoring for sulfate is atypical in groundwater surrounding land treatment systems. Because this parameter does not appear to provide any value it is suggested that sulfate be removed from the list of monitoring requirements in groundwater.
- Revise the nitrogen loading rate for all sprayfields from 600 lbs/ac/yr to 300 lbs/ac/yr.
- Request that Seneca Foods Mayville submit an updated Land Treatment Management Plan within the first year of the reissued permit.
- Include a compliance schedule for annual Chloride Source Reduction reports.



Monitoring Well

Soil Sample Collection Area

Site Boundary

APPLIED SCIENCE, INC.
SCIENCE • ENGINEERING • MANAGEMENT
1601 AIRPORT RD | SUITE 110 | WAUKESHA, WI 53188
AS@APPLIEDSCIENCEINC.COM – (414) 897-9933

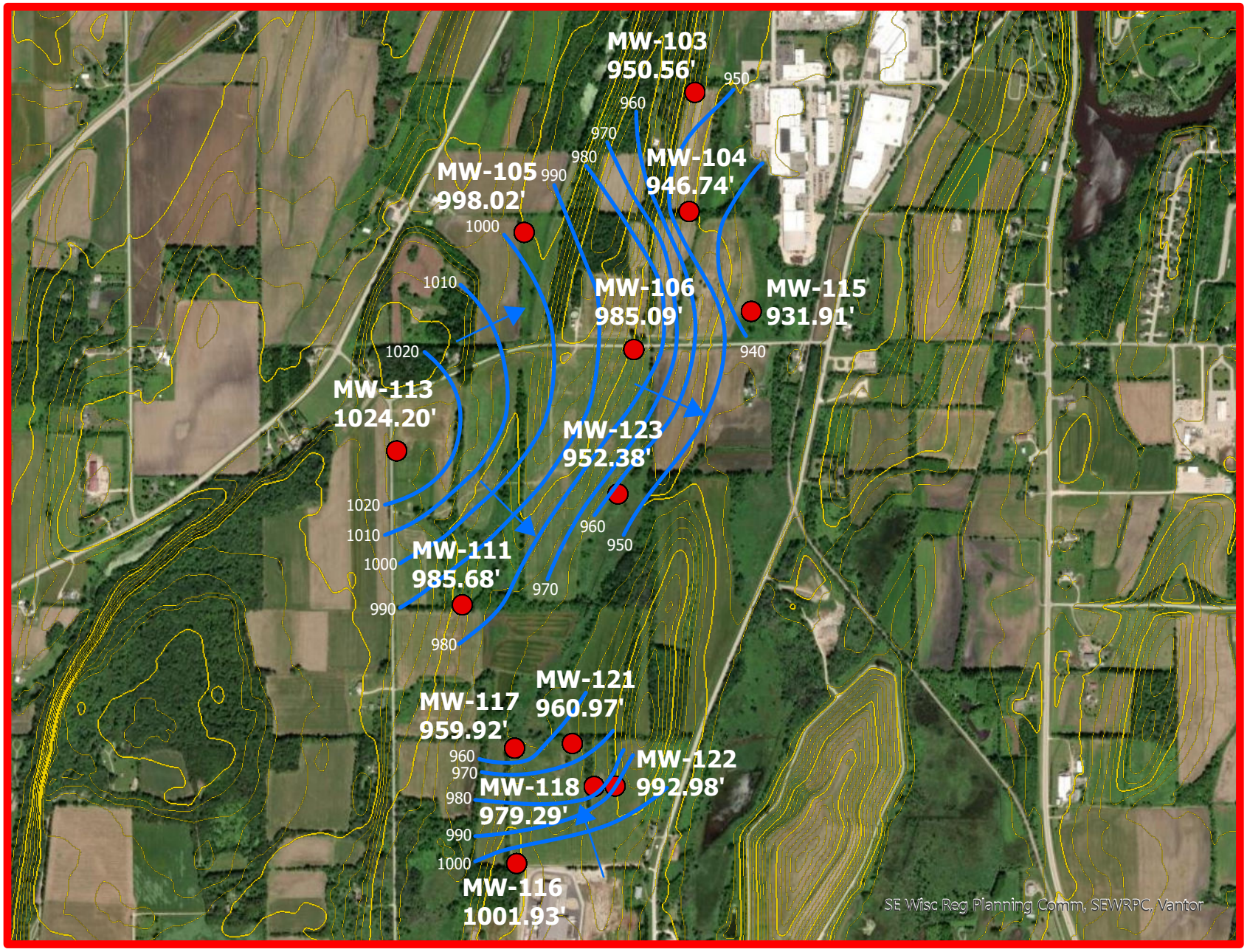
SOIL SAMPLE COLLECTION AREAS

SENECA FOODS CORPORATION
MAYVILLE, WISCONSIN

FIGURE NO. A

DRAWN	CHECKED	APPROVED	REVISED	PROJECT NO.	FILE
ARD	NPH	NPH	10/21/2024	C12901	SoilSampleAreas

Water Table Flow Map July 30, 2025 - Seneca Foods Mayville



Site Location

500 S Clark St.
Mayville, WI 53050

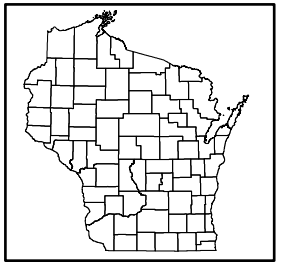
Legend

- Water Table Contour (7/30/2025 - 10' FAMSL)
- Groundwater Flow Direction

Notes

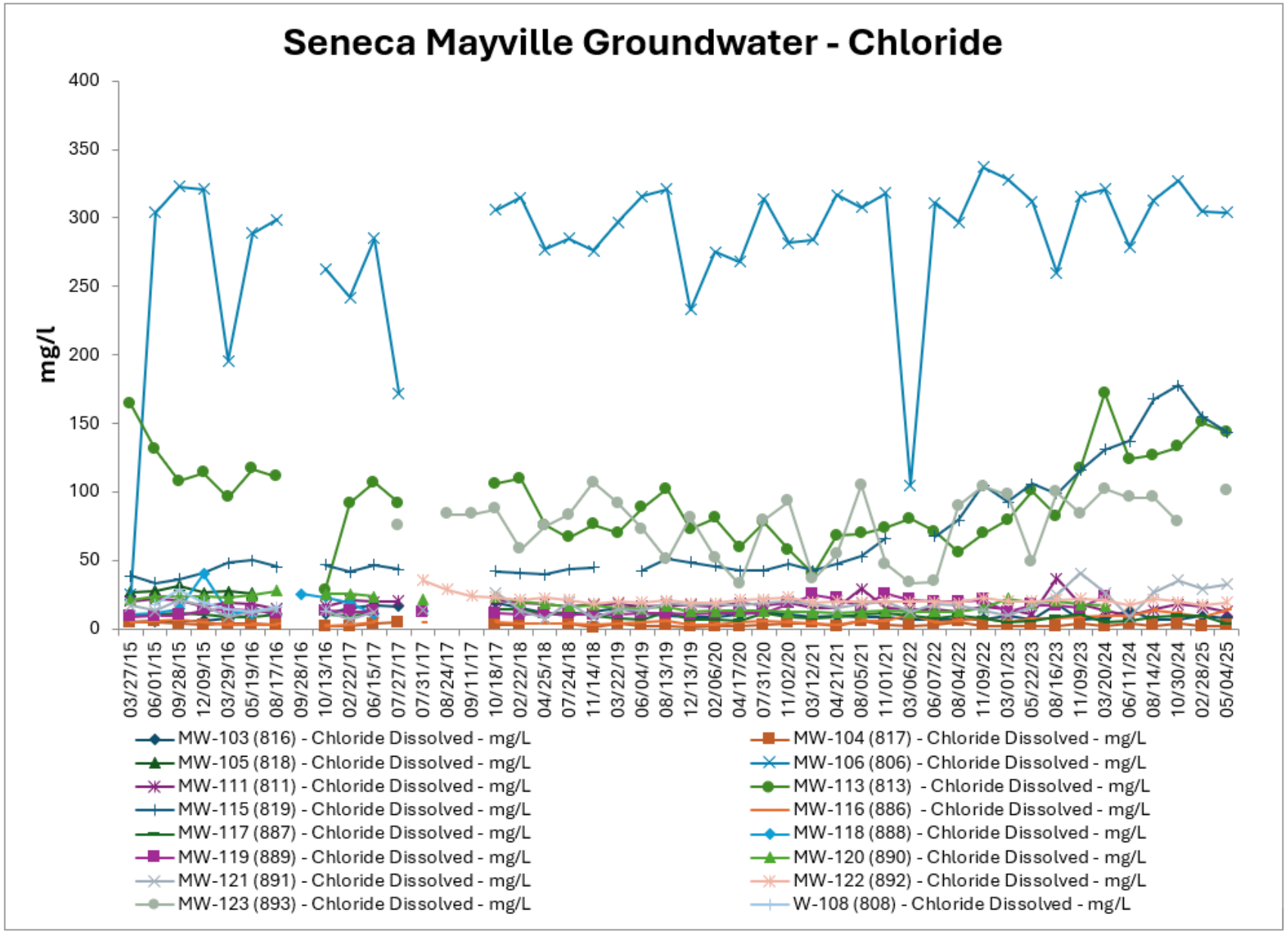
Water table contours are hand drawn using the reported elevations in feet above mean sea level collected on July 30, 2025.

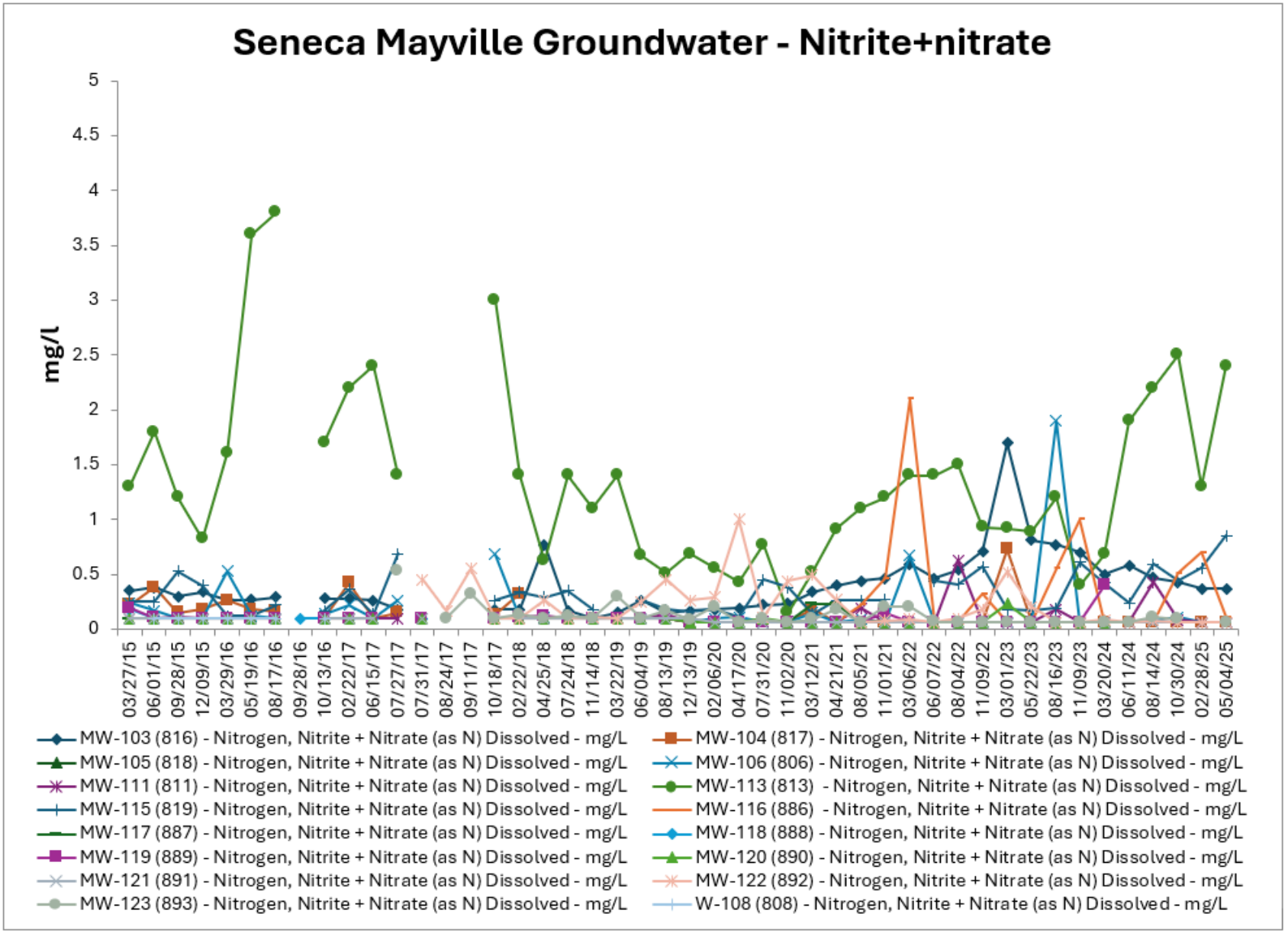
Created By: watsoz
Date: 1/9/2026

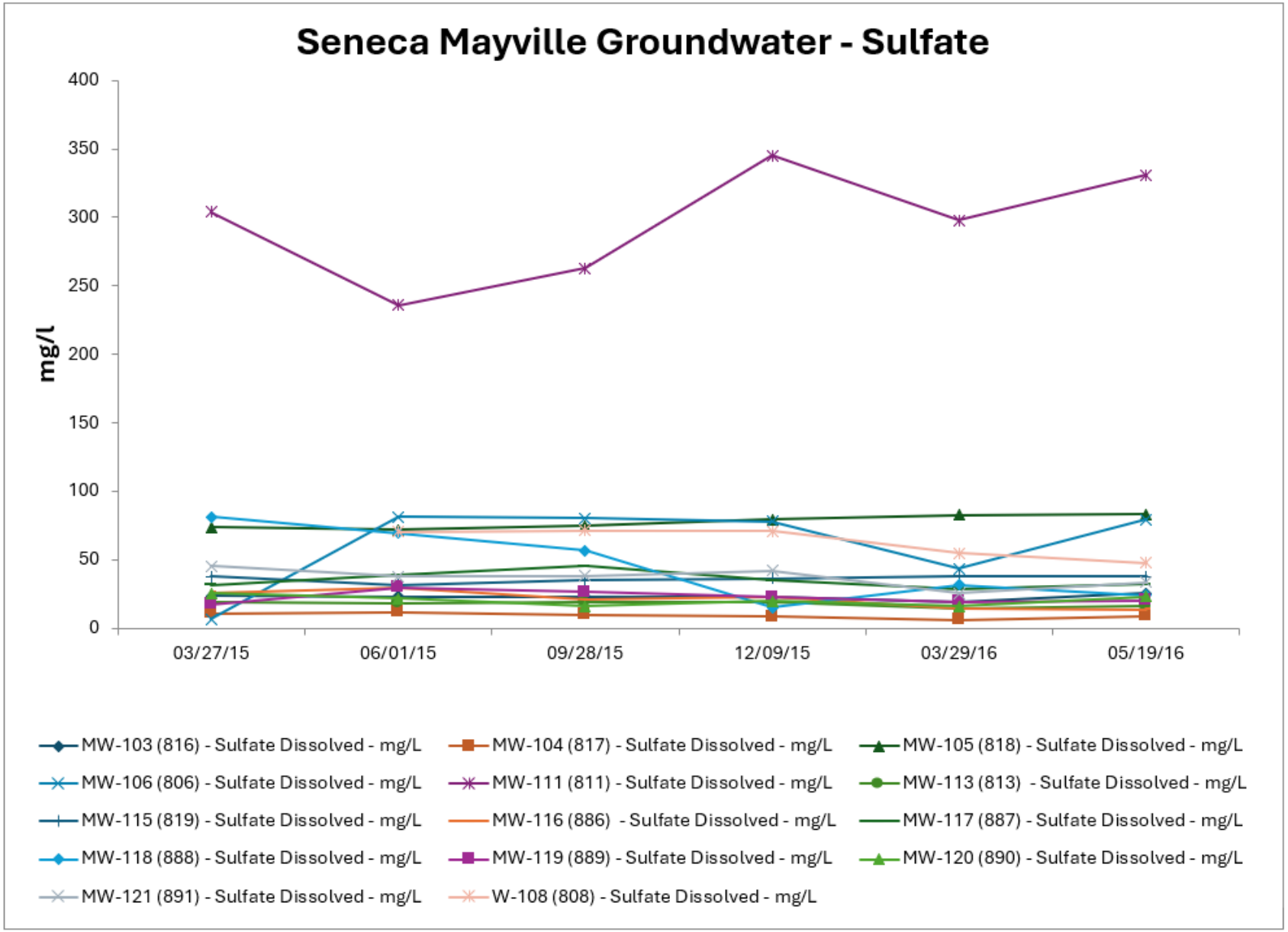


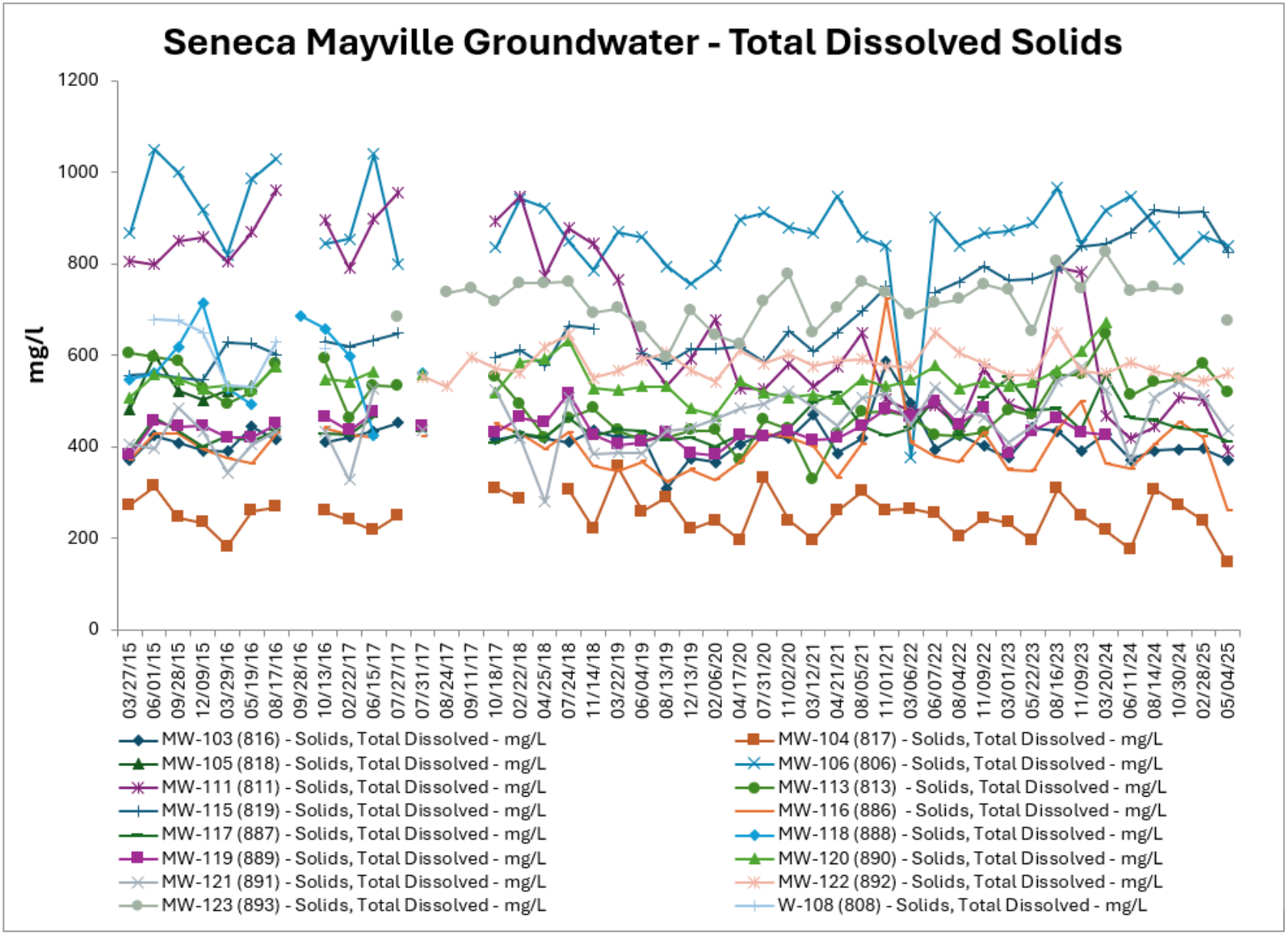
0 490 980 1,470 1,960 2,450 2,940 Feet

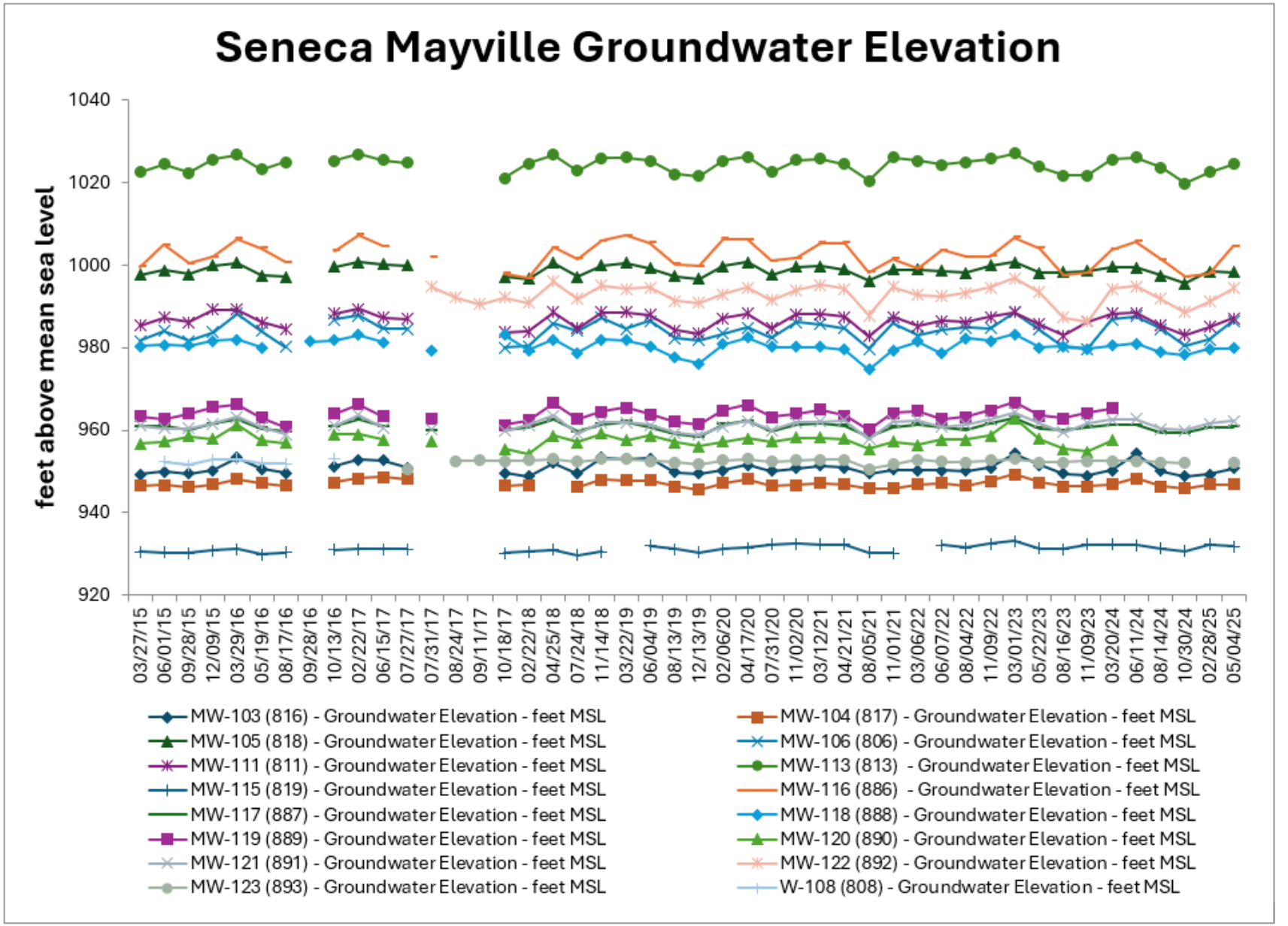
1:17,188

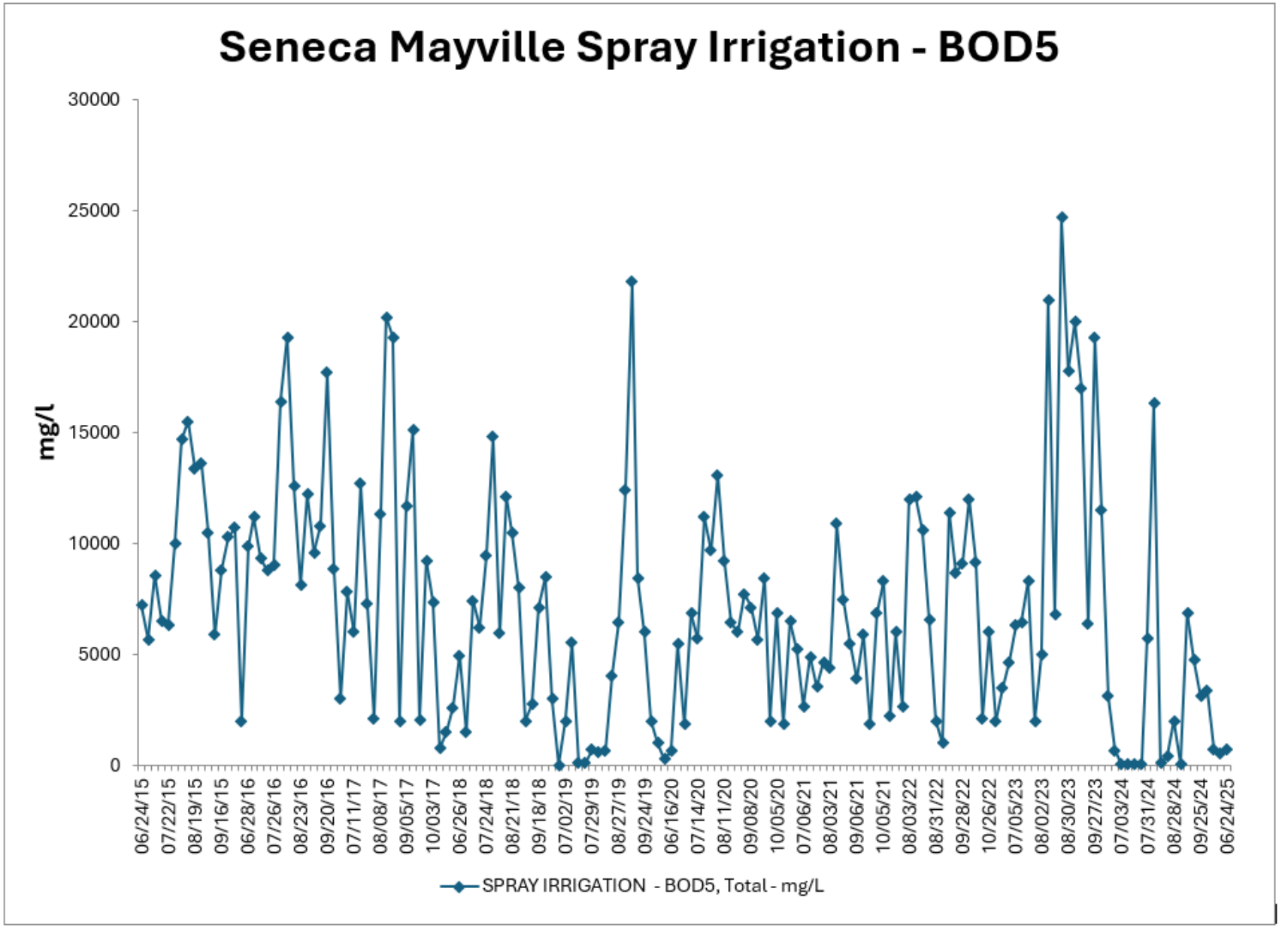

Seneca Mayville Groundwater - Chloride
mg/l
400
350
300
250
200
150
100
50
0
03/27/15
06/01/15
09/28/15
12/09/15
03/29/16
05/19/16
08/17/16
09/28/16
10/13/16
02/22/17
06/15/17
07/27/17
07/31/17
08/24/17
09/11/17
10/18/17
02/22/18
04/25/18
07/24/18
11/14/18
03/22/19
06/04/19
08/13/19
12/13/19
02/06/20
04/17/20
07/31/20
11/02/20
03/12/21
04/21/21
08/05/21
11/01/21
03/06/22
06/07/22
08/04/22
11/09/22
03/01/23
05/22/23
08/16/23
11/09/23
03/20/24
06/11/24
08/14/24
10/30/24
02/28/25
05/04/25
MW-103 (816) - Chloride Dissolved - mg/L
MW-104 (817) - Chloride Dissolved - mg/L
MW-105 (818) - Chloride Dissolved - mg/L
MW-106 (806) - Chloride Dissolved - mg/L
MW-111 (811) - Chloride Dissolved - mg/L
MW-113 (813) - Chloride Dissolved - mg/L
MW-115 (819) - Chloride Dissolved - mg/L
MW-116 (886) - Chloride Dissolved - mg/L
MW-117 (887) - Chloride Dissolved - mg/L
MW-118 (888) - Chloride Dissolved - mg/L
MW-119 (889) - Chloride Dissolved - mg/L
MW-120 (890) - Chloride Dissolved - mg/L
MW-121 (891) - Chloride Dissolved - mg/L
MW-122 (892) - Chloride Dissolved - mg/L
MW-123 (893) - Chloride Dissolved - mg/L
W-108 (808) - Chloride Dissolved - mg/L

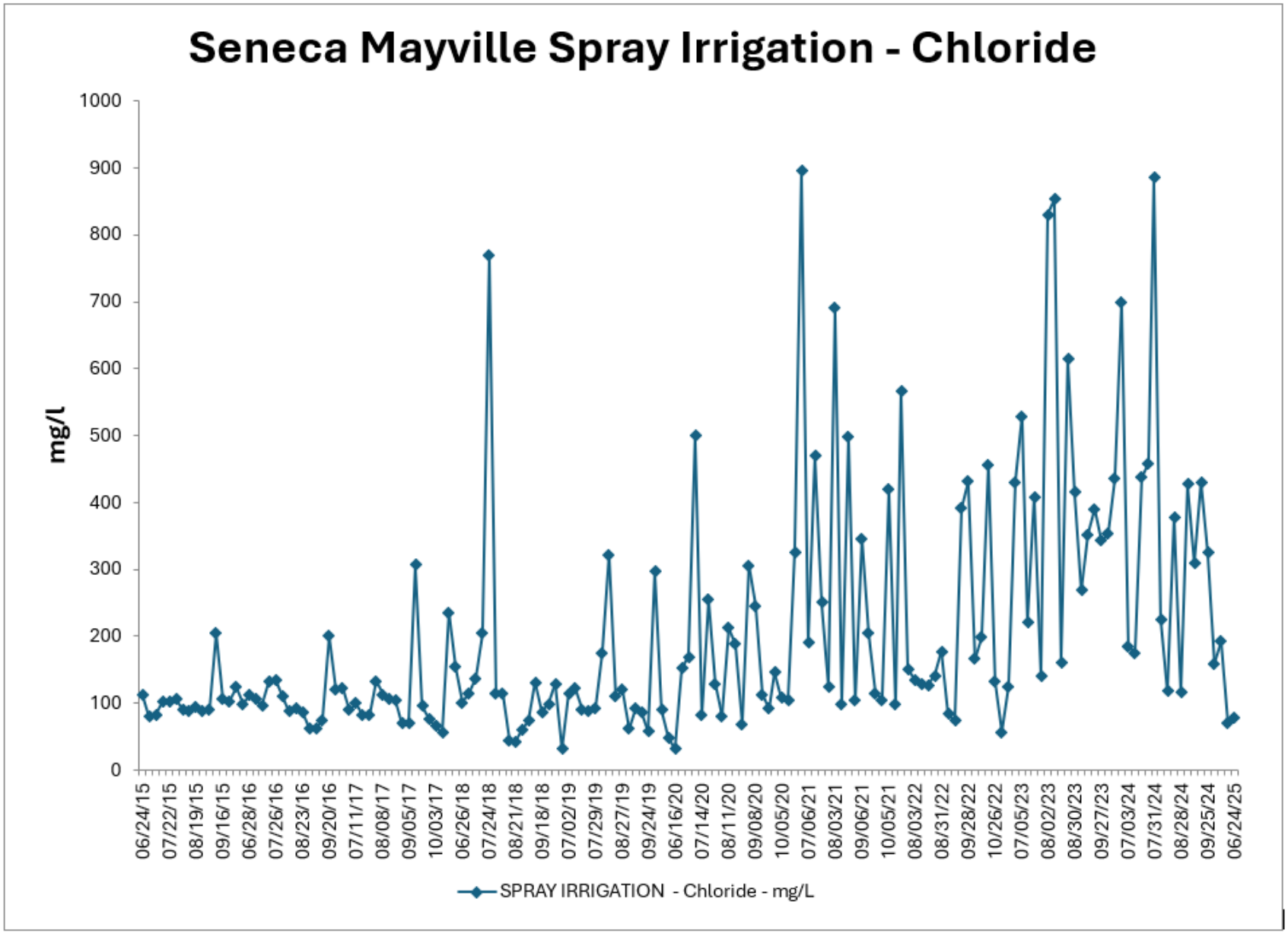

Seneca Mayville Groundwater - Nitrite+nitrate
mg/l
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
03/27/15
06/01/15
09/28/15
12/09/15
03/29/16
05/19/16
08/17/16
09/28/16
10/13/16
02/22/17
06/15/17
07/27/17
07/31/17
08/24/17
09/11/17
10/18/17
02/22/18
04/25/18
07/24/18
11/14/18
03/22/19
06/04/19
08/13/19
12/13/19
02/06/20
04/17/20
07/31/20
11/02/20
03/12/21
04/21/21
08/05/21
11/01/21
03/06/22
06/07/22
08/04/22
11/09/22
03/01/23
05/22/23
08/16/23
11/09/23
03/20/24
06/11/24
08/14/24
10/30/24
02/28/25
05/04/25
MW-103 (816) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-104 (817) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-105 (818) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-106 (806) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-111 (811) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-113 (813) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-115 (819) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-116 (886) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-117 (887) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-118 (888) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-119 (889) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-120 (890) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-121 (891) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-122 (892) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
MW-123 (893) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L
W-108 (808) - Nitrogen, Nitrite + Nitrate (as N) Dissolved - mg/L


Seneca Mayville Groundwater - Sulfate
mg/l
400
350
300
250
200
150
100
50
0
03/27/15
06/01/15
09/28/15
12/09/15
03/29/16
05/19/16
MW-103 (816) - Sulfate Dissolved - mg/L
MW-104 (817) - Sulfate Dissolved - mg/L
MW-105 (818) - Sulfate Dissolved - mg/L
MW-106 (806) - Sulfate Dissolved - mg/L
MW-111 (811) - Sulfate Dissolved - mg/L
MW-113 (813) - Sulfate Dissolved - mg/L
MW-115 (819) - Sulfate Dissolved - mg/L
MW-116 (886) - Sulfate Dissolved - mg/L
MW-117 (887) - Sulfate Dissolved - mg/L
MW-118 (888) - Sulfate Dissolved - mg/L
MW-119 (889) - Sulfate Dissolved - mg/L
MW-120 (890) - Sulfate Dissolved - mg/L
MW-121 (891) - Sulfate Dissolved - mg/L
W-108 (808) - Sulfate Dissolved - mg/L


Seneca Mayville Groundwater - Total Dissolved Solids
mg/l
1200
1000
800
600
400
200
0
03/27/15
06/01/15
09/28/15
12/09/15
03/29/16
05/19/16
08/17/16
09/28/16
10/13/16
02/22/17
06/15/17
07/27/17
07/31/17
08/24/17
09/11/17
10/18/17
02/22/18
04/25/18
07/24/18
11/14/18
03/22/19
06/04/19
08/13/19
12/13/19
02/06/20
04/17/20
07/31/20
11/02/20
03/12/21
04/21/21
08/05/21
11/01/21
03/06/22
06/07/22
08/04/22
11/09/22
03/01/23
05/22/23
08/16/23
11/09/23
03/20/24
06/11/24
08/14/24
10/30/24
02/28/25
05/04/25
MW-103 (816) - Solids, Total Dissolved - mg/L
MW-104 (817) - Solids, Total Dissolved - mg/L
MW-105 (818) - Solids, Total Dissolved - mg/L
MW-106 (806) - Solids, Total Dissolved - mg/L
MW-111 (811) - Solids, Total Dissolved - mg/L
MW-113 (813) - Solids, Total Dissolved - mg/L
MW-115 (819) - Solids, Total Dissolved - mg/L
MW-116 (886) - Solids, Total Dissolved - mg/L
MW-117 (887) - Solids, Total Dissolved - mg/L
MW-118 (888) - Solids, Total Dissolved - mg/L
MW-119 (889) - Solids, Total Dissolved - mg/L
MW-120 (890) - Solids, Total Dissolved - mg/L
MW-121 (891) - Solids, Total Dissolved - mg/L
MW-122 (892) - Solids, Total Dissolved - mg/L
MW-123 (893) - Solids, Total Dissolved - mg/L
W-108 (808) - Solids, Total Dissolved - mg/L


Seneca Mayville Groundwater Elevation
feet above mean sea level
1040
1020
1000
980
960
940
920
03/27/15
06/01/15
09/28/15
12/09/15
03/29/16
05/19/16
08/17/16
09/28/16
10/13/16
02/22/17
06/15/17
07/27/17
07/31/17
08/24/17
09/11/17
10/18/17
02/22/18
04/25/18
07/24/18
11/14/18
03/22/19
06/04/19
08/13/19
12/13/19
02/06/20
04/17/20
07/31/20
11/02/20
03/12/21
04/21/21
08/05/21
11/01/21
03/06/22
06/07/22
08/04/22
11/09/22
03/01/23
05/22/23
08/16/23
11/09/23
03/20/24
06/11/24
08/14/24
10/30/24
02/28/25
05/04/25
MW-103 (816) - Groundwater Elevation - feet MSL
MW-104 (817) - Groundwater Elevation - feet MSL
MW-105 (818) - Groundwater Elevation - feet MSL
MW-106 (806) - Groundwater Elevation - feet MSL
MW-111 (811) - Groundwater Elevation - feet MSL
MW-113 (813) - Groundwater Elevation - feet MSL
MW-115 (819) - Groundwater Elevation - feet MSL
MW-116 (886) - Groundwater Elevation - feet MSL
MW-117 (887) - Groundwater Elevation - feet MSL
MW-118 (888) - Groundwater Elevation - feet MSL
MW-119 (889) - Groundwater Elevation - feet MSL
MW-120 (890) - Groundwater Elevation - feet MSL
MW-121 (891) - Groundwater Elevation - feet MSL
MW-122 (892) - Groundwater Elevation - feet MSL
MW-123 (893) - Groundwater Elevation - feet MSL
W-108 (808) - Groundwater Elevation - feet MSL


Seneca Mayville Spray Irrigation - BOD5
mg/l
30000
25000
20000
15000
10000
5000
0
06/24/15
07/22/15
08/19/15
09/16/15
06/28/16
07/26/16
08/23/16
09/20/16
07/11/17
08/08/17
09/05/17
10/03/17
06/26/18
07/24/18
08/21/18
09/18/18
07/02/19
07/29/19
08/27/19
09/24/19
06/16/20
07/14/20
08/11/20
09/08/20
10/05/20
07/06/21
08/03/21
09/06/21
10/05/21
08/03/22
08/31/22
09/28/22
10/26/22
07/05/23
08/02/23
08/30/23
09/27/23
07/03/24
07/31/24
08/28/24
09/25/24
06/24/25
SPRAY IRRIGATION - BOD5, Total - mg/L


Seneca Mayville Spray Irrigation - Chloride
mg/l
1000
900
800
700
600
500
400
300
200
100
0
06/24/15
07/22/15
08/19/15
09/16/15
06/28/16
07/26/16
08/23/16
09/20/16
07/11/17
08/08/17
09/05/17
10/03/17
06/26/18
07/24/18
08/21/18
09/18/18
07/02/19
07/29/19
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08/03/21
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08/03/22
08/31/22
09/28/22
10/26/22
07/05/23
08/02/23
08/30/23
09/27/23
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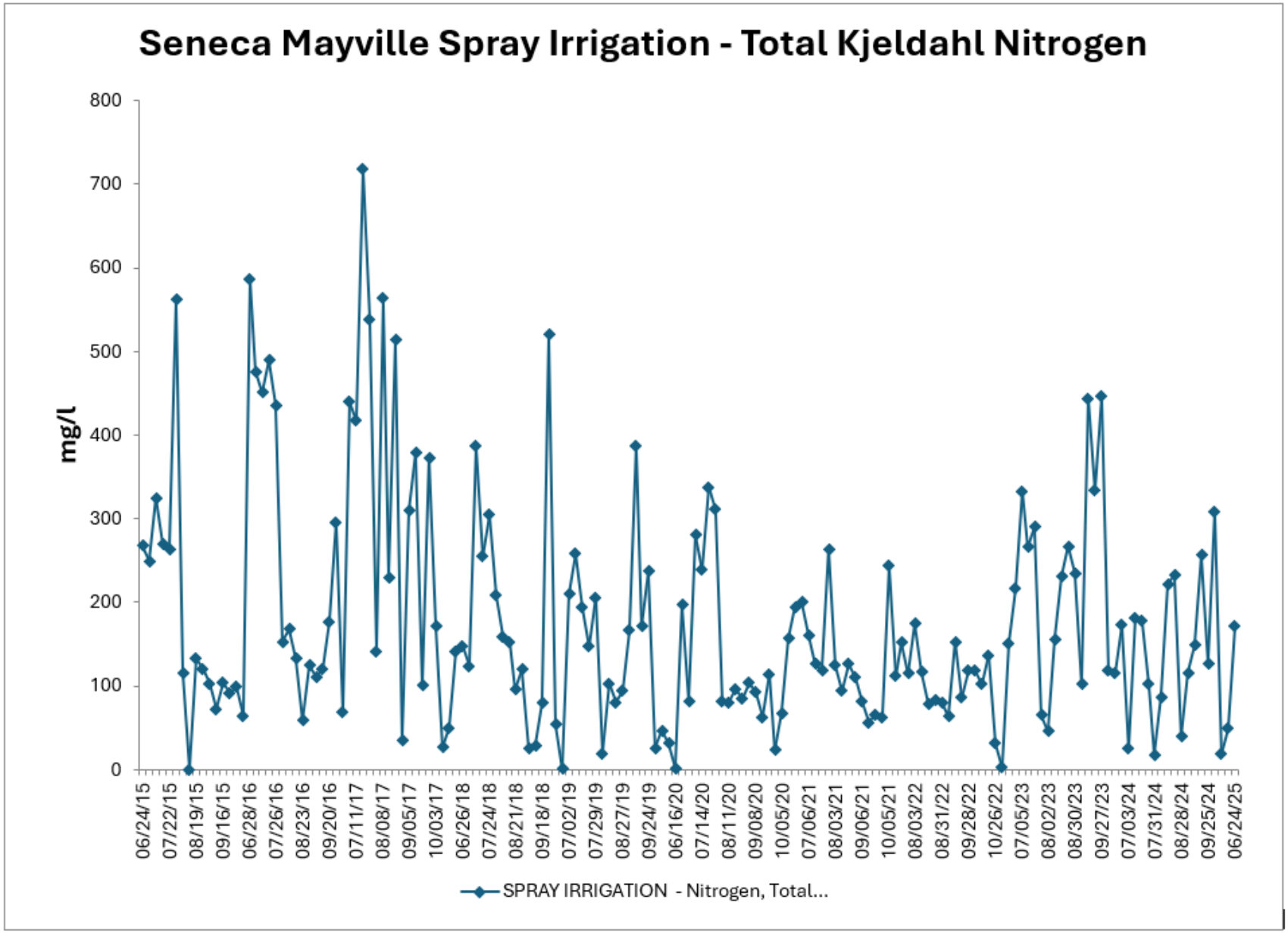
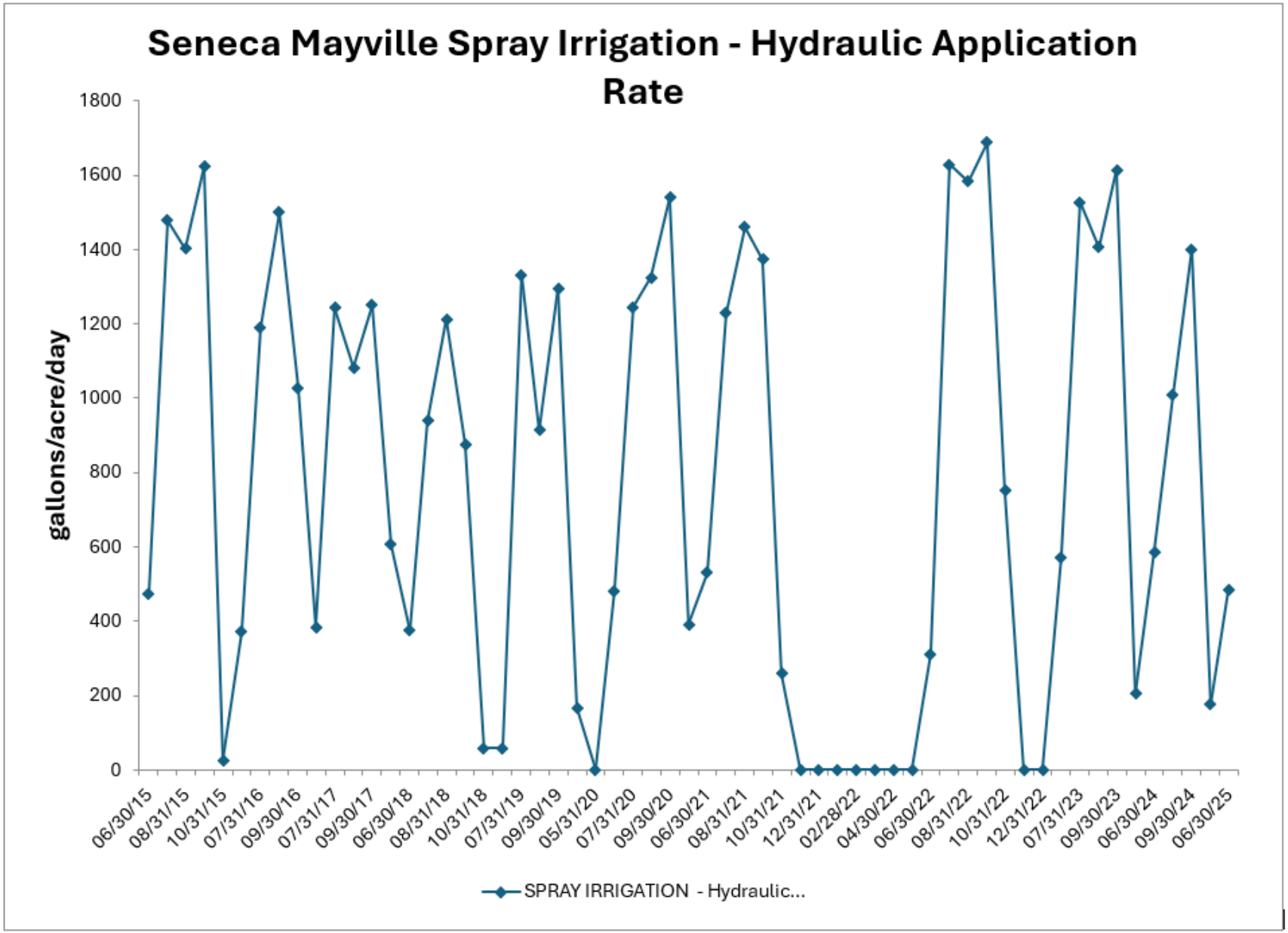
07/31/24
08/28/24
09/25/24
06/24/25
SPRAY IRRIGATION - Chloride - mg/L


Seneca Mayville Spray Irrigation - Total Kjeldahl Nitrogen
mg/l
800
700
600
500
400
300
200
100
0
06/24/15
07/22/15
08/19/15
09/16/15
06/28/16
07/26/16
08/23/16
09/20/16
07/11/17
08/08/17
09/05/17
10/03/17
06/26/18
07/24/18
08/21/18
09/18/18
07/02/19
07/29/19
08/27/19
09/24/19
06/16/20
07/14/20
08/11/20
09/08/20
10/05/20
07/06/21
08/03/21
09/06/21
10/05/21
08/03/22
08/31/22
09/28/22
10/26/22
07/05/23
08/02/23
08/30/23
09/27/23
07/03/24
07/31/24
08/28/24
09/25/24
06/24/25
SPRAY IRRIGATION - Nitrogen, Total...


Seneca Mayville Spray Irrigation - Hydraulic Application Rate
gallons/acre/day
1800
1600
1400
1200
1000
800
600
400
200
0
06/30/15
08/31/15
10/31/15
07/31/16
09/30/16
07/31/17
09/30/17
06/30/18
08/31/18
10/31/18
07/31/19
09/30/19
05/31/20
07/31/20
09/30/20
06/30/21
08/31/21
10/31/21
12/31/21
02/28/22
04/30/22
06/30/22
08/31/22
10/31/22
12/31/22
07/31/23
09/30/23
06/30/24
09/30/24
06/30/25
SPRAY IRRIGATION - Hydraulic...

Farm Fresh Goodness Made Great

December 8, 2023

Zach Watson
Senior Hydrogeologist
Water Quality Bureau
Wisconsin Department of Natural Resources
1500 N Johns Street
Dodgeville, WI 53533
Zachary.watson@wisconsin.gov

RE: Seneca Foods Corporation – Mayville
WPDES Permit No. WI-0050822-08-0
Update on Irrigation Field H, South Tile (Outfall 014), and Groundwater Monitoring
Request a Modification of the Dissolved Oxygen Limit on the North Tile (Outfall 013)

Dear Mr. Watson:

Seneca Foods Corporation (Seneca) in Mayville, Wisconsin, covered under WPDES Permit No. WI-0050822-08-0, has prepared this letter to:

- Update DNR about the status of Irrigation Field H, which is no longer in use for wastewater irrigation.
- Explain why the South Tile (Outfall 014) is no longer being sampled or monitored.
- Request the abandonment of two groundwater monitoring wells on the southern border of former Irrigation Field H.
- Request a modification of the dissolved oxygen minimum concentration limit for the North Tile (Outfall 013) since multiple years of monitoring have shown it is not possible to achieve 7.0 mg/l DO in a groundwater tile discharge.

Seneca had been leasing acreage from GFL Environmental (GFL)[1]who owns and operates a municipal solid waste landfill in Mayville on the east side of County Highway V. Leased acreage included Irrigation Field G, Irrigation Field H, and the water quality trading fields for phosphorus and total suspended solids for the North Tile (Outfall 013). Prior to the 2023 season, GFL notified Seneca that the lease for Irrigation Field H would not be continued since GFL was going to be constructing a recycling sorting facility on that location. As a result of that reduction in irrigation acreage, Seneca applied for and received DNR approval for 5 land application sites for wastewater land application to use in conjunction with the remaining irrigation system for the 2023 pack and beyond.

[1] GFL Environmental contact: Jacob Margelofsky, Operations Manager, N7296 County Rd V, Horicon, WI 53032, (920) 210-9311, jacob.margelofsky@gflenv.com.

As shown on the attached site map, Irrigation Field H had deep tile installed that discharged groundwater to a wetland via the South Tile (Outfall 014). As a result of GFL's construction activities, the tile was crushed and there is no longer a tile discharge via the South Tile. There are two monitoring wells located on the south side of the former Irrigation Field H – MW-119 and MW-120 – that Seneca proposes to abandon since they are located on the edge of GFL's recycling sorting facility now, not near Seneca's irrigation activities.

With respect to groundwater quality monitored by MW-119 and MW-120, please note the following:

- The DNR groundwater evaluation for the current permit (dated November 16, 2020) indicated that:
    - "South Spray Fields G and H are monitored by wells W-116 (886), W-117 (887), W-118 (888), W-119 (889), W-120 (890), W-121 (891) and W-122 (892). W-116 (886) is considered the background well based on the groundwater flow gradient of the current groundwater monitoring system. W-118 (888), W-119 (889), W-120 (890), W-121 (891) and W-122 (892) are downgradient wells and W-117 (887) is a side gradient well. W-117 (887), W-119 (889), W-120 (890), W-121 (891) and W-122 (892) are considered enforcement standard wells for fields G and H, based on their distance from edge of the land treatment system and/or location in relationship to the site (property) boundary."
    - "Exceedance Report South Fields G and H - This exceedance report is based on PALs, ACL and ESs contained in the permit that will expire on March 31, 2021. The sample date range was from December 2015 – April 2020.
        - W-119 (889) Downgradient - No Exceedances
        - W-120 (890) Downgradient - 1 of 19 sample results exceeded the PAL of 620 mg/L for TDS. There is a downward trend in the TDS concentration since March 2008."
- Groundwater results for MW-119 and MW-120 are attached for chlorides, nitrate + nitrite, and total dissolved solids for 2021 through August 2023. There were no exceedances during that period for either well.

Since MW-119 and MW-120 are no longer in the close vicinity of wastewater irrigation activities (Irrigation Field H was not in use starting with the 2023 season), the groundwater quality in these two wells is good (no exceedances of health and welfare parameters), and these two wells will now monitor a recycling center and stormwater collection pond not within Seneca control, Seneca requests permission to abandon these two monitoring wells. With DNR approval, these monitoring wells would be abandoned by a licensed well driller in accordance with Wis. Admin. Code NR 140.

Outfall 014 – the deep tile drainage from Field H to a wetland – is no longer in existence. GFL's construction activities included excavation of the field area down 3-6 feet from the ground surface, which effectively removed or crushed the plastic tile. Therefore, Seneca is no longer monitoring Outfall 014.

Seneca continues to use the other permitted irrigation fields, including Irrigation Field G which also has a deep tile system that can be discharged to surface water via Outfall 013. The minimum DO level for Outfall 013 is 7.0 mg/l. In contrast, the minimum DO level for former Outfall 014 (to a wetland) is 4.0 mg/l. Using a calibrated DO meter, Seneca has determined that the groundwater discharge from the North Tile can not achieve a DO of 7.0 mg/l. As a result, Seneca has not discharged to surface water from the North Tile (Outfall 013) for years.

Seneca is requesting a modified limit for a minimum DO to 4.0 mg/l for the Outfall 013 since Seneca's monitoring has shown achieving a minimum DO of 7.0 mg/l is not feasible for a groundwater discharge tile. Please note the following information with respect to this request:

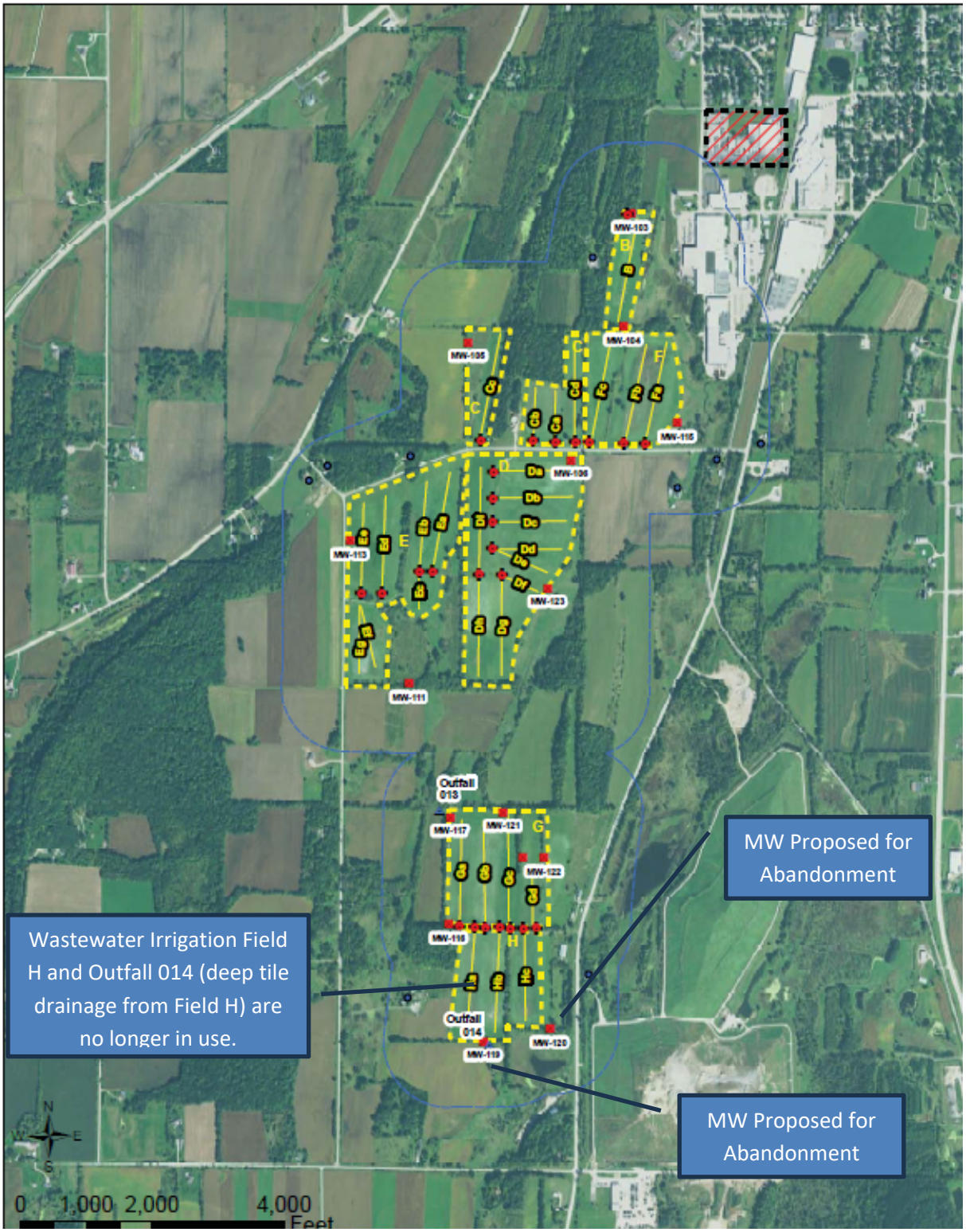
- Seneca did proceed with a Whole Effluent Toxicity (WET) Test in October 2022 and the results were successful, showing no acute or chronic toxicity. However, the DO results during this WET testing did not achieve the 7.0 mg/l minimum. This WET test was conducted on groundwater flow that was being re-applied to the irrigation, not surface water discharged because the minimum DO level could not be met. During the month of October 2022, there were 4 samples collected – the biochemical oxygen demand (BOD) of all 4 samples was <2.0 mg/l, the chlorides ranged from 12.3 to 12.8 mg/l, phosphorus was below detection at <0.050 mg/l, and total suspended solids (TSS) ranged from 2.6 to 6.3 mg/l. In contrast, the 4 samples collected this month did not reach the minimum DO limit, ranging from 3.3 to 5.5 mg/l DO. Despite this DO level but given the good quality of water based on the other parameters, there was no acute or chronic toxicity.
- In line with that data, this October (October 2023), there were 3 samples collected during the month during re-spray activities. The BOD ranged from <2.0 to 2.1 mg/l, chlorides ranged from 20.6 to 24.5 mg/l, phosphorus ranged from 0.095 to 0.13 mg/l, and TSS was 5.4 to 9.6 mg/l. Despite these other parameters meeting permit limits, the DO levels ranged from 4.8 to 5.9 mg/l so discharge to surface water could not occur.
- Monitoring of Outfall 014, another deep tile groundwater discharge from an irrigation field, but to a wetland, not surface water, has been monitored during irrigation months for many years. The only thing different about this groundwater is that it is discharged to a wetland instead of surface water. In the months of January, February, and March of 2022, in periods of time distant from wastewater irrigation periods (which occurs June – October) and when temperatures are low allowing for more oxygen-carrying capacity, the DO levels on Outfall 014 (deep tile discharge to a wetland) were 6.1, 4.5, and 4.1 mg/l DO.
- Seneca has numerous sampling events on the deep tile discharge, in preparation for discharge to surface water via Outfall 013, when every other parameter was well within permit limits but the minimum DO of 7.0 mg/l could not be met. So Seneca re-sprayed the deep tile discharge on the irrigation system rather than discharge at too low of a DO level.
- In order to maintain Outfall 013 in the permit, Seneca has entered into a water quality trading agreement for TSS and phosphorus; however, the DO issue has precluded any discharge from the outfall. The cost of renting the trading acreage, maintaining, and monitoring the trading acreage does not seem worth the effort when there are minimal expectations of ever reaching the minimum DO level and being able discharge.

In summary, please note the update on no longer using Irrigation Field H and the end of the existence of the South Tile (Outfall 014), and please consider our requests to abandon two monitoring wells and to modify the minimum DO limit for Outfall 013. If you have any questions or would like to discuss this request, please contact the undersigned at gstapleton@senecafoods.com or (920) 387-7226. Thank you!

Sincerely,
Seneca Foods Corporation

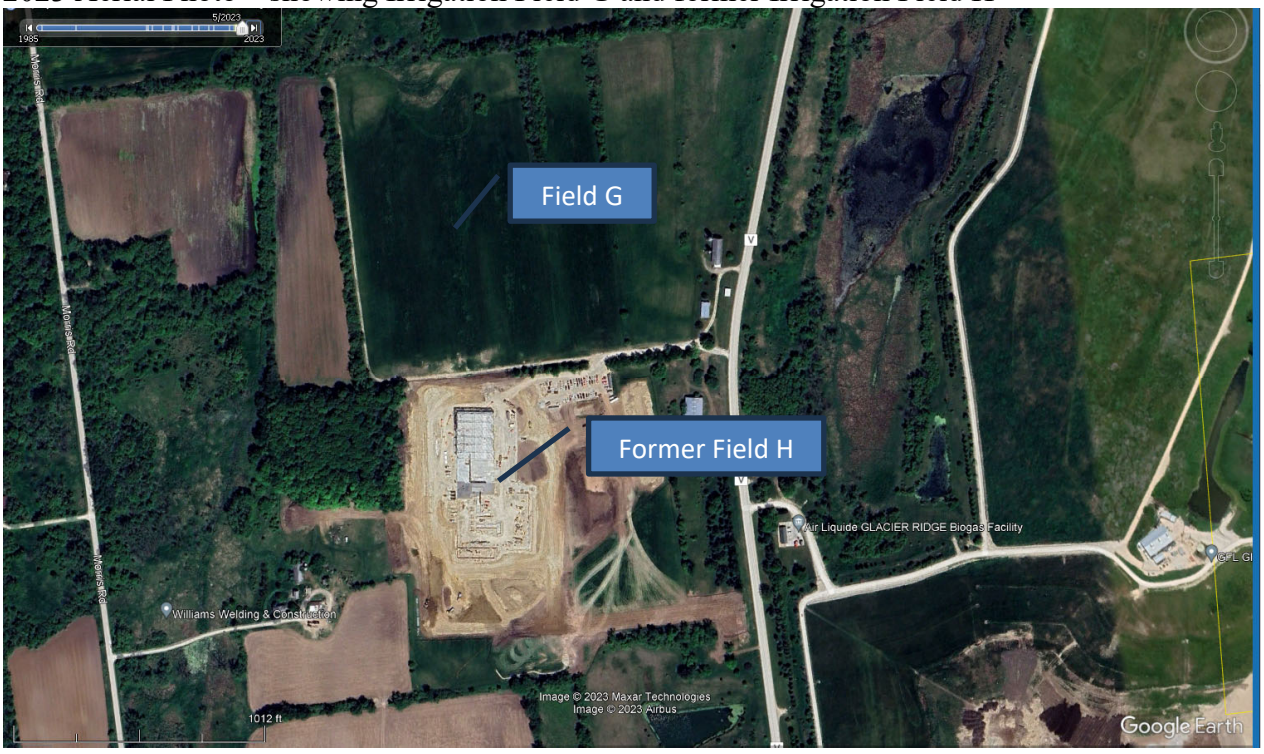
Gary Stapleton
Plant Manager

cc: Laura Mushinski, Seneca
Juan Muniz Jr., Seneca – Clyman & Mayville


MW-103
MW-104
MW-105
MW-106
MW-113
MW-111
MW-123
MW-115
Outfall 013
MW-117
MW-121
MW-122
MW-116
Outfall 014
MW-120
MW-119
MW Proposed for Abandonment
Wastewater Irrigation Field H and Outfall 014 (deep tile drainage from Field H) are no longer in use.
MW Proposed for Abandonment
N
W
E
S
0 1,000 2,000 4,000
Feet

2022 Aerial Photo – showing Irrigation Field G and H

2023 Aerial Photo – showing Irrigation Field G and former Irrigation Field H



Nitrate+Nitrite-N

Date	03/12/21	04/21/21	08/05/21	11/01/21	03/06/22	06/07/22	08/04/22	11/09/22	03/01/23	05/22/23	08/16/23	NO2+NO3-N	PAL	ES
W103	0.34	0.40	0.44	0.46	0.59	0.46	0.54	0.71	1.7	0.81	0.77	W103 *	4.6	10
W104	0.18	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	0.73	<0.059	<0.059	W104 *	4.6	10
W105	11.4	10.0	10.3	9.6	8.6	8.0	7.9	7.1	5.6	6.0	5.1	W105	4.6	10
W106	0.15	<0.059	0.091	0.068	0.67	<0.059	<0.059	<0.059	<0.059	<0.059	1.9	W106 *	4.6	10
W111	<0.059	<0.059	0.19	<0.059	<0.059	<0.059	0.63	<0.059	<0.059	<0.059	0.18	W111 *	4.6	10
W113	0.52	0.91	1.1	1.2	1.4	1.4	1.5	0.93	0.92	0.89	1.2	W113 B	4.6	10
W115	0.14	0.26	0.26	0.27	FROZEN	0.44	0.41	0.57	0.18	0.17	0.19	W115 *	4.6	10
W116	<0.059	<0.059	0.22	0.46	2.1	<0.059	<0.059	0.32	<0.059	<0.059	0.55	W116 B	2.1	10
W117	0.23	0.23	<0.059	0.073	<0.059	<0.059	<0.059	<0.059	0.063	<0.059	<0.059	W117 *	2.1	10
W118	---	---	---	---	---	---	---	---	---	---	---	W118 *	2.1	10
W119	<0.059	<0.059	<0.059	0.15	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	W119 *	2.1	10
W120	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	0.23	<0.059	<0.059	W120 *	2.1	10
W121	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	W121 *	2.1	10
W122	0.49	0.27	<0.059	0.077	0.088	<0.059	0.098	0.18	0.52	0.20	0.060	W122 *	2.1	10
W123	0.088	0.18	<0.059	0.20	0.20	0.068	<0.059	<0.059	<0.059	<0.059	<0.059	W123 *	4.6	10

Chloride

Date	03/12/21	04/21/21	08/05/21	11/01/21	03/06/22	06/07/22	08/04/22	11/09/22	03/01/23	05/22/23	08/16/23	Cl	PAL	ES
W103	9.2	9.4	8.8	9	7.4	6.6	7.0	7.4	9.5	7.0	18.0	W103 *	240	250
W104	4.4	2.0	5.9	2.8	2.3	3.6	5.4	2.4	2.7	2.5	2.1	W104 *	240	250
W105	18	21	23	23.2	17.0	16.4	17.0	17.7	18.4	18.0	31.6	W105	240	250
W106	284	317	308	318	105	311	297	337	328	312	260	W106 *	240	250
W111	15.1	15.3	29.4	15.4	14.7	14.2	12.3	16.3	14.7	10.8	36.9	W111 *	240	250
W113	40.4	68	69.4	74	80.7	70.9	55.9	69.4	79.7	101	82.3	W113 B	240	250
W115	42.8	47.2	53.0	66.5	FROZEN	67.9	79.5	105.0	92.7	106	98.8	W115 *	240	250
W116	4.3	3.0	6.3	6.4	10.4	5.1	6.4	7.7	5.3	7.8	8.3	W116 B	140	250
W117	8.0	8.4	11.0	12.0	10.2	8.3	10.0	8.1	4.8	6.0	9.2	W117 *	140	250
W118	---	---	---	---	---	---	---	---	---	---	---	W118 *	140	250
W119	25.4	22.4	16.4	25.9	21.2	19.9	19.8	21.4	12.5	17.5	17.3	W119 *	140	250
W120	12.5	12.0	12.2	13.6	12.4	13.0	12.7	15.7	22.2	18.8	20.4	W120 *	140	250
W121	18.4	15.1	18.6	20.4	13.1	18.2	17.0	13.7	10.1	16.8	25.2	W121 *	140	250
W122	19.7	20.6	20.0	20.4	20.1	20.0	19.2	23.0	20.5	20.6	21.3	W122 *	140	250
W123	36.4	54.6	105.0	47.2	33.5	34.6	89.8	104.0	97.9	49.1	100	W123 *	240	250

Total Dissolved Solids

Date	03/12/21	04/21/21	08/05/21	11/01/21	03/06/22	06/07/22	08/04/22	11/09/22	03/01/23	05/22/23	08/16/23	TDS	PAL
W103	470	386	418	586	496	394	426	402	376	442	434	W103 *	690
W104	196	260	302	262	264	254	204	244	234	194	308	W104 *	690
W105	462	458	470	460	440	436	440	436	422	448	528	W105	690
W106	866	948	860	838	376	900	840	866	872	890	966	W106 *	690
W111	532	574	648	504	478	490	444	570	494	474	792	W111 *	690
W113	328	428	476	478	466	426	424	432	480	470	556	W113 B	690
W115	608	650	696	750	FROZEN	738	760	794	764	768	786	W115 *	690
W116	400	332	406	724	410	378	368	432	350	348	438	W116 B	600
W117	496	518	446	424	442	508	426	506	552	480	484	W117 *	600
W118	---	---	---	---	---	---	---	---	---	---	---	W118 *	600
W119	414	418	446	482	466	500	448	486	386	434	462	W119 *	600
W120	514	504	548	532	546	578	528	542	532	540	568	W120 *	600
W121	486	446	506	516	448	530	482	466	408	446	544	W121 *	600
W122	576	588	592	576	574	650	606	582	556	558	648	W122 *	600
W123	650	704	760	738	688	714	722	754	742	652	806	W123 *	690

- New Permit 6/1/2016
- New Permit 6/1/2021

- PAL (Preventative Action Limit) Exceedence
- ES (Enforcement Standard) Exceedence

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: January 30, 2026

TO: Jennifer Jerich – SCR/Horicon

FROM: Sarah Luck – SCR/Fitchburg

SUBJECT: Technology-Based Effluent Limitations for Seneca Foods Corporation Mayville
WPDES Permit No. WI-0050822-09-0

Technology-Based Effluent Limitations (TBELs) Recommended for Outfall 013:

Parameter	Daily Maximum	Daily Minimum	Monthly Average	Annual Average
BOD_5, Total	449 lbs/day		292 lbs/day	201 lbs/day
TSS	823 lbs/day		608 lbs/day	423 lbs/day
pH	9.0 su	6.0 su		

PART 1 – BACKGROUND INFORMATION

Seneca Foods cans various vegetables throughout the growing season. This facility operates 24 hours a day, seven days a week. Operation usually starts mid-May and continues into November each year. Process wastewater is discharged to the groundwater and surface water via drain tiles under the spray irrigation system. Effluent samples are taken at the pump valve prior to discharging. This memo addresses the surface water discharge.

PART 2 – INDUSTRIAL CATEGORIES

Chapter NR 225, Wis. Adm. Code, specifies effluent guidelines for discharges from canned and preserved fruits and vegetables categories of point sources and subcategories. Seneca Foods Corporation Mayville would fall under the Canned and Preserved Vegetables subcategory as defined in s. NR 225.02, Wis. Adm. Code. These guidelines are based on federal effluent guidelines in 40 CFR Part 407 Subpart G. The permittee must meet the applicable effluent limit guidelines as described in this chapter. These effluent limit guidelines include:

- Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT) in s. NR 225.10, Wis. Adm. Code.
- Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT) in s. NR 225.11, Wis. Adm. Code.
- If determined to be a new source, new source performance standards (NSPS) in s. NR 225.12, Wis. Adm. Code.

If the calculated limits are less than or equal to the limits in the current permit, then the limits would be set equal to the recalculated limits. If the recalculated limits are less restrictive than the limits from the current permit, they cannot be increased unless the antidegradation and anti-backsliding provisions of ch. NR 207, Wis. Adm. Code, are met.

Section NR 220.13, Wis. Adm. Code, includes provisions that address cases where federal and state rule differ. Section 283.11, Wis. Stats., address compliance with federal standards. In this case, the state rules are consistent with federal rules with a few exceptions. In such cases, the permit will in all cases be based on the state rule notwithstanding the federal regulations. The omissions are described below.

- The state or federal rules do not specify a date for the definition for a new source. Therefore, it is necessary to review available federal guidance. The Boornazian memo (September 28, 2006) specifies a new source date for 40 CFR Part 407 Subparts A – H of March 21, 1974. The Department relies on the Boornazian memo to establish date of applicability for NSPS.
- State rules incorrectly list best available treatment (BAT) standards for BOD, TSS, oil & grease, fecal coliform, and pH. BAT applies to priority pollutants and nonconventional pollutants and does not apply BOD, TSS, oil & grease, fecal coliform, or pH.

- The federal standard rule lists revised Best Conventional Pollutant Control Technology (BCT) standards requirements. All BCT limitations are set to be the same as the best practicable control technology (BPT) standards. State rules in ch. NR 225, Wis. Adm. Code, do not list standards for BCT.

Since ch. NR 225, Wis. Adm. Code, only defines effluent limitations for BPT and BAT, and since it was already established above that BAT limits are incorrectly listed in state rule, technology-based effluent limits for Seneca Foods Corporation Mayville will be calculated using BPT.

PART 3 – LEVELS OF CONTROL

In addition to the industrial categories, the applicable technology-based limits are determined based on the selected level of control. For the canned and preserved vegetables subcategory, all point sources must meet the best practicable control technology (BPT) limits.

PART 4 – CURRENT PRODUCTION LEVELS

The current levels of production for each subcategory are provided by Seneca Foods Corporation Mayville.

Canned and Preserved Vegetables

Commodity	Material Used* (lbs/day)
Corn (organic and non-organic)	3,865,230
Peas (organic and non-organic)	881,498

**Average from 2021 – 2025 seasons*

PART 5 – TBEL CALCULATIONS FOR CANNED AND PRESERVED VEGETABLES

pH

Any discharge subject to BPT, BCT, or NSPS limitations or standards in this part must remain within the pH range of 6.0 to 9.0 su for Subparts A – E and a pH range of 6.0 to 9.5 su for Subparts F – H per 40 CFR Part 407.

Best Practicable Control Technology (BPT) Limits

The daily maximum, daily average (monthly average) and annual average limits for BOD_5 and TSS for each commodity are shown in the tables below. The following factors are from Table 1 of ch. NR 225, Wis. Adm. Code.

Raw Material (lbs/day)	BPT BOD Effluent Limitations (lbs/1000 lbs)			Calculated BOD Limits (lbs/day)[1]		
	Daily Max	Monthly Average	Annual Average	Daily Max	Monthly Average	Annual Average
3,865,230 (all corn)	0.71	0.48	0.38	2,744	1,855	1,237
881,498 (all peas)	2.42	1.50	1.08	2,133	1,322	952

Footnote:

1. The limits (lbs/day) = total BOD input (lbs/day) / 1000 * BPT limitations

Raw Material (lbs/day)	BPT TSS Effluent Limitations (lbs/1000 lbs)			Calculated TSS Limits (lbs/day)[1]		
	Daily Max	Monthly Average	Annual Average	Daily Max	Monthly Average	Annual Average
3,865,230 (all corn)	1.32	1.00	0.73	5,102	3,865	2,822
881,498 (all peas)	4.36	3.11	2.02	3,843	2,741	1,781

Footnote:

1. The limits (lbs/day) = total TSS input (lbs/day) / 1000 * BPT limitations

Final Calculated Limits

Process wastewater is treated by spray irrigation (Outfall 001) to Spray Fields B-G. Outfall 013, also known as North Drain Tile, is located in Spray Field G. The maximum annual average of flow from Outfall 001 from June 2021 through November 2025 (excluding zero-flow days) was 0.29 MGD. The maximum annual average (excluding zero-flow days) from Outfall 013 was 0.0268 MGD from June 2016 through September 2020 which was the last consistent discharge period (there has been no flow from Outfall 013 since November 2021). Based on the annual average flow rates, Outfall 013 represents approximately 9.2% of the spray irrigated wastewater. Therefore, since the calculated BOD and TSS mass limits are based on production for the entire facility, the total mass is multiplied by 9.2% to estimate the portion going to Outfall 013.

Commodity	Daily Max BOD (lbs/day)	Monthly Average BOD (lbs/day)	Annual Average BOD (lbs/day)	Daily Max TSS (lbs/day)	Monthly Average TSS (lbs/day)	Annual Average TSS (lbs/day)
Corn (all)	2,744	1,855	1,237	5,102	3,865	2,822
Peas (all)	2,133	1,322	952	3,843	2,741	1,781
Total	4,878	3,178	2,189	8,945	6,607	4,602
Total (9.2%)	**449**	**292**	**201**	**823**	**608**	**423**

PART 6 – FINAL CALCULATED LIMITS

The total discharge limits shall be the total of the amounts calculated from all subcategories of this memo. For each production line, the most restrictive calculated set of limits are used in the calculation of the final total discharge limits.

Final Calculated Effluent Limitations

Parameter & Units	Daily Maximum	Daily Minimum	Monthly Average	Annual Average
BOD_5	449 lbs/day		292 lbs/day	201 lbs/day
TSS	823 lbs/day		608 lbs/day	423 lbs/day
pH	9.0 su	6.0 su		

The daily maximum and monthly average BOD and TSS concentration limits in the WQBEL memo are also recommended to be included in the reissued permit along with the mass limits that are recommended in this TBEL memo. It should be noted the daily maximum and monthly average TSS mass

limits calculated for the TMDL (5.67 lbs/day and 3.46 lbs/day, respectively) are more stringent than the calculated TBEL limits and are therefore recommended in place of the TBEL limits; the annual average TSS TBEL limit of 423 lbs/day is recommended.

It should be noted the recommended daily maximum pH limit in Subpart G is 9.5 s.u. However, per s. NR 102.04(4)(c), Wis. Adm. Code, a daily maximum pH of 9.0 s.u. is recommended instead (and as described in the WQBEL memo recommendations).

Production Values Provided by Seneca Foods Corporation Mayville

Variety	2021 Days	2021 / Pounds	2022 Days	2022 / Pounds	2023 Days	2023 / Pounds	2024 Days	2024 / Pounds	2025 Days	2025 / Pounds	Days (total)	Lbs (total)	lbs/day 5 yr avg
Organic Peas	3	984,680	4	1,562,360	2	719,600	1	262,400	N/A	N/A	10	3,529,040	352,904
Peas	33	18,892,020	27	11,195,300	34	21,873,060	31	13,090,540	33	18,466,940	158	83,517,860	528,594
Corn	59	96,908,040	69	150,685,600	62	162,152,520	50	134,412,780	64	150,356,460	304	694,515,400	2,284,590
Organic Corn	N/A	N/A	3	4,741,920	N/A	N/A	N/A	N/A	N/A	N/A	3	4,741,920	1,580,640

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
3911 Fish Hatchery Road
Fitchburg, WI 53711

Tony Evers, Governor
Karen Hyun, Ph.D., Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

April 14, 2026

Laura Mushinski
Corporate Dir Envr Affairs
418 East Conde Street
Janesville, WI 53546-3004

Subject: Seneca Foods Corporation Mayville - WPDES Permit WI-0050822
Water Quality Trading Plan – CONDITIONAL APPROVAL

Dear Laura Mushinski:

The Department recently received a water quality trading plan (WQT Plan) for compliance with phosphorus and total suspended solids (TSS) effluent limits at the Seneca Foods Corporation Mayville facility. The initial plan was received in November of 2025 and updated versions were received in March and April of 2026. Based on WDNR review, the final WQT Plan (dated April 2026) is in general conformance with the WDNR Water Quality Trading Guidance and Section 283.84 of the Wisconsin Statutes. The WQT plan proposes to utilize agricultural lands which have been converted from row cropping to permanent grass cover. Credits generated from approved practices result in available credit quantities shown in Table 1 and Table 2. These credits will be incorporated into the reissued WPDES permit and will be used to demonstrate compliance with final phosphorus and TSS effluent limits.

Please note that this WQT plan approval is not to be construed as approval to commence work regulated under other state or local authorities, such as Chapter 30 waterways and wetlands permitting, floodplain, or construction activities.

Table 1: Total Phosphorus Credits Available per WQT-2026-0005

Year	Available Credits (lbs/yr) – Interim	Available Credits (lbs/yr) – Long Term	Available Credits (lbs/yr) – Total
2026	0	53.2	53.2
2027	0	53.2	53.2
2028	0	53.2	53.2
2029	0	53.2	53.2
2030	0	53.2	53.2
2031	0	53.2	53.2

Table 2: Total Suspended Solids Credits Available per WQT-2026-0005

Year	Available Credits (lbs/yr) – Interim	Available Credits (lbs/yr) – Long Term	Available Credits (lbs/yr) – Total
2026	0	17,060	17,060
2027	0	17,060	17,060
2028	0	17,060	17,060
2029	0	17,060	17,060
2030	0	17,060	17,060
2031	0	17,060	17,060

The Department conditionally approves the WQT Plan as a basis for water quality trading during the next WPDES permit term. The Department has assigned the WQT plan a tracking number of WQT-2026-0005 and will be referenced as such in the draft WPDES permit. The final WQT plan will be included as part of the public notice package for permit reissuance. The draft WPDES permit will include a requirement for an annual trading report and effluent monitoring for total phosphorus.

If you have any questions or comments, please contact me at 608-419-4155or at betsyjo.howe@wisconsin.gov

Thank You,

BetsyJo Howe

BetsyJo Howe
SCR WQT Coordinator
Wisconsin Department of Natural Resources

e-CC:

Robert Wendt, Applied Science
Nicholas Huettl, Applied Science
Jennifer Jerich, WDNR
Zach Watson, WDNR