

March 24, 2025

Ms. Christine Bianchi Minnesota Pollution Control Agency 520 Lafayette Road North St. Paul, Minnesota 55155 Email: <u>christine.bianchi@state.mn.us</u> Submitted via Website: <u>https://mpca.commentinput.com/comment/search</u>

RE: Seneca Foods Corporation – Glencoe National Pollutant Discharge Elimination System/State Disposal System Comments on Draft Permit MN0001236

Dear Ms. Bianchi:

Seneca Foods Corporation (Seneca) has received the Minnesota Pollution Control Agency's (MPCA's) response to our pre-public notice comments and the public notice version of the draft permit (MN0001236) in an email from you dated February 19, 2025. As required in the notice, Seneca's comments on the draft permit are being provided to MPCA on March 24, 2025. Seneca continues to appreciate the discussion and guidance provided by MPCA on water quality trading, future limits on total nitrogen, etc. and welcomes the opportunity for further discussion prior to the final issuance of the permit so Seneca can fully investigate and select the best approach to meet these challenging limits. With respect to a minimum control level (MCL) of 1.0 mg/l total phosphorus for SD002, in particular, Seneca requests to meet with the Department on this significant issue prior to the issuance of the final permit.

Interim Limit for Phosphorus – 5.7.30

As expressed previously, Seneca has significant concerns about the technical impracticability and reasonableness of this proposed permit requirement to meet an "interim total phosphorus limit of 1.0 mg/l (SD 002) as soon as possible, but no later than two (2) years after permit issuance." We believe this condition and its short compliance window is unreasonable under the circumstances and not adequately supported by the record, rendering this condition arbitrary and capricious. As shown in the graph below, Seneca's current discharge levels are far from achieving this:



In MPCA's response to Seneca's comments on the pre-public notice version of the draft permit and statement of basis, it was indicated that: "MPCA is open to hearing more specific details about the logistical limitations, alleged infeasibility, or treatability concerns of the proposed limit and timeframe" including "a chemical addition phosphorus treatment program using the existing wastewater settling structures at the facility" as an example.

Seneca has used chemical addition with the existing wastewater lagoons at the facility. Typically, chemicals such as potassium permanganate, aluminum sulfate, and sulfuric acid were added to reduce total suspended solids (TSS) and lower pH, particularly for the fall discharge events in September. The details are shown in the following table for the period from 2018 to current, although chemical additions occurred prior to this period also:

							Quantity of Chemical Pond
	Fİ	ow	CBOD	TSS	Phosphorus	Pond Treatment	Treatment (lbs.)
Month	MoTot	Daily Av	MoAve mg/L	MoAve mg/L	MoAve mg/L		
May 2018	67	4.484	17	23	7.90		
September 2018	79	4.943	8.3	17	5.82		
October 2018	50	5.535	25	26	7.10		
April 2019	37	6.145	19	23	5.60		
May 2019	31	6.201	16	41	5.70		
						Rond 7 Aluminum Sulfate TSS	
						Treatment Sent, 11th, Pond 7	46 764 lbs of aluminum sulfate
						Sulfuric Acid pH Treatmont	an Sont 11th 100.068 lbs of
Contombor 2010	62	4 506	17	22	4.00	Sontomber 24th	off Sept 11(1, 100,008 lbs. of
October 2019	03	4.500	17	32	4.90	September 24th.	sulfunc acid on sept. 24th
October 2019	3/	4.071	28	72	2.80		
November 2019	48	6.049	8	27	6.20	Dened 7 Culturis Asid all Tasstas ant	
		6 504			c 00	Pond / Sulfuric Acid pH Treatment	
April 2020	66	6.581	16	34	6.80	April 16th	18,201 lbs. of sulfuric acid
May 2020	38	4.257	6.3	9	5.10		
September 2020	41	6.797	12	28	4.30		
October 2020	42	3.859	12	27	4.60		
March 2021	33	5.435	15	19	9.30		
April 2021	91	6.469	15.6	38.4	7.88		
						Pond 7 Aluminum Sulfate TSS	61,740 lbs. of aluminum sulfate
						Treatment Sept. 10th, Pond 7	on Sept. 10th, 3,249 lbs. of
						Potassium Permanganate TSS	potassium permanganate on
						Treatment Sept. 21st, Pond 7	Sept. 21st, 72,231 lbs. of
						Sulfuric Acid pH Treatment Sept.	sulfuric acid
September 2021	58	6.464	9.3	24	0.97	21st	
October 2021	34	2.857	19	38	13.00		
						Pond 7 Aluminum Sulfate TSS	
November 2021	23	4.591	5.5	25	3.00	Treatment Nov. 23	76,440 lbs. of aluminum sulfate
December 2021	32	5.359	12	45	6.80		
						Pond 7 Aluminum Sulfate TSS	
April 2022	26	6.566	15	47	7.20	Treatment April 29th	68,066 lbs. of aluminum sulfate
						Pond 7 Aluminum Sulfate TSS	
May 2022	72	6.013	12	28	5.40	Treatment May 17th	61,569 lbs. of aluminum sulfate
						Pond 7 LG Sonic Buoy Activated in	
September 2022	67	5.561	9.7	22	4.30	August	
November 2022	22	3.707	14	35	9.90		
						Pond 5 LG Sonic Buoy Activated in	
April 2023	46	6.506	16	41	8.40	April	
May 2023	59	6.56	19	53	8.34		
, June 2023	2	1.979	21	51	7.06		
September 2023	53	6.59	5.77	20	5.04		
November 2023	46	6.612	2.44	23	5,22		
March 2024	46	6.651	172	20	4.84		
September 2024	94	6,739	3 14	15	5.04	1	1
November 2024	47	6.651	1.46	18	6.44		

Since these treatments were primarily in response to pre-discharge sample results and the need to reduce TSS and pH, Seneca does not have a full set of data showing before and after phosphorus concentrations. These chemicals were added manually and mixed into the pond by contractors with motorboats. Permanganate use was discontinued due to safety concerns and anti-terrorism standards promulgated by the Department of Homeland Security.

With the assistance of Bolton & Menk, it is estimated that approximately 185,000 pounds of alum for 200 MG/year would be necessary – in theory, considering high algae concentrations, and assuming proper temperature and pH, etc. – to reduce the phosphorus in Pond 7 to close to 1.0 mg/l. This is a feed rate of approximately 925 pounds alum per million gallons wastewater. As seen in the above table, Seneca's historical feed rates of alum are around this level (855 lb alum/MG in May 2022, 1,064 lb alum/MG in September 2021) but the actual results are still 4 and 5 times higher than 1.0 mg/l phosphorus. In November 2021, 3,323 lb alum/MG was added – over three times the recommended dosage – and the results are 3.0 mg/l phosphorus. This demonstrates that Seneca has completed several

iterations of chemical precipitation in the existing pond system at and above recommended feed rates for alum, and the results consistently exceed 1.0 mg/l phosphorus in the discharge by orders of magnitude. This suggests that chemical addition as a long-term phosphorus control strategy is not reliable or sustainable.

Additionally, mixing is a challenge in the existing system, and it may be better to add chemicals as the wastewater is transferred from an upper pond to Ponds 5 and/or 7. However, these chemicals are temperature sensitive so Seneca would not be able to discharge during colder periods (and Seneca does not have the storage capacity to hold without discharging for colder periods). Sometimes the cBOD treatment is not complete when wastewater is transferred to Ponds 5 and/or 7, and this also complicates feeding alum during transfer. Ferric chloride has not been an option historically since it would add chloride concentration and Seneca's existing discharge has been near the chloride limit. An additional concern with chemical addition is sludge accumulation. Such sludge accumulation not only reduces the capacity of the system, reducing retention times, but also increases the possibility of re-suspension of nutrients from the sludge. The sheer volume of alum necessary to reduce phosphorus in this existing lagoon system is evidently several times higher than a textbook indicates because of mixing issues, cold temperatures, and elevated pH, rendering this treatment option technically infeasible and impracticable.

Further, the interim limit of 1.0 mg/l total phosphorus over a two-year compliance window does not seem appropriate under these circumstances. A longer compliance schedule is justified and has been discussed previously with the agency. First, the current levels of phosphorus are much higher with a monthly average concentration of 6.2 mg/l from 2018 to 2024. Out of 30 months of discharge, only one time was the monthly average concentration slightly below 1.0 mg/l (at 0.97 mg/l) and the month immediately following was 13.0 mg/l total phosphorus. Short of shutting down this operation and putting 951 (806 seasonal employees and 145 full time employees) jobs at risk, requiring compliance with the interim limit in only two years is unreasonable, arbitrary and capricious.

Second, achieving a limit of 1.0 mg/l total phosphorus in the lagoon discharge (the "interim limit") is actually consistent with the final goal/limit for this project, one which we have already agreed would be implemented in 7 years. The graph below shows what the annual mass would be if the actual discharge volumes from 2018 to 2024 met 1.0 mg/l total phosphorus. If the RES period was avoided for discharge, meeting 1.0 mg/l total phosphorus would result in compliance with the proposed *future* limit of 1,183 kg/yr. In other words, 1.0 mg/l phosphorus is not an appropriate <u>interim</u> limit, because it is effectively the <u>final</u> concentration that Seneca needs to meet in 7 years to comply with the future phosphorus limits. The consequence of this is the agency imposing the final limit in two years with effectively no interim limit and an unreasonably short compliance period.



This permit condition is also unreasonable given that it simply sets Seneca up for failure. Given that there is no quick fix for phosphorus available in the existing system, Seneca will likely be exceeding the proposed intervention limit 100% of the time during the two-year compliance window. The requirements when exceeding the invention limit are set forth below and are onerous, given noncompliance is not expected to be episodic, emphasis added:

- A. Determine the cause of the intervention limit exceedance and take corrective actions to eliminate the exceedance;
- B. Within thirty (30) days of discovery of the exceedance, submit a written report of the corrective actions that were taken to eliminate the exceedance with a plan to prevent further exceedances in the future; and
- C. Submit an evaluation of the results of this corrective action as part of the annual progress report required by the compliance schedule section of this permit.

This will result in near continuous reporting of noncompliance, of which the agency is well aware. This also exposes Seneca to unreasonable risk of Clean Water Act citizen suits, created by this proposed permit.

When you look at all the evaluations, plans, progress reports, etc. that need to occur for specific pollutants (shown below in table format), Seneca is seriously concerned about the feasibility of accomplishing essentially the entire 7-year compliance plan phosphorus within two years of permit issuance, calling into question the reasonableness and practicability of the proposed permit condition. It is understood that MPCA is seeking some progress in this period, likely via water quality trading or inpond treatment, but Seneca has already evaluated the potential approaches to reach 1.0 mg/l phosphorus alone (which as stated previously, is the concentration necessary to hit the annual mass limit), notwithstanding the other pollutants, and that was a \$10 million dollar capital investment in wastewater treatment. That project can be reevaluated in light of current conditions, but in any event could not be practically executed within a two-year compliance window. As far as "alleged infeasibility" of in-pond treatment, the entire Bolton & Menk engineering plan (at approximately \$10 million dollar capital investment) was developed because in-pond treatment could not consistently meet the final mass limit for phosphorus, presently Seneca with a noncompliance risk that it could not tolerate. The data discussed above concerning in-pond treatment proves this. Based on our thorough evaluation, there are simply no interim treatment options to reach a 1.0 mg/l phosphorus level without a major up-

grade. If there were, that would have been Seneca's plan for phosphorus under its existing expired permit.

Pollutant	Task	Due Date	
N/A	Field Equipment and Calibration Plan	Due 60 Days After Permit Issuance	
N/A	Piping Integrity Plan	Due 90 Days After Permit Issuance	
phosphorus, oxygen demand (cBOD, ammonia), total nitrogen	Water Quality Trading Progress Report	Due 180 Days After Permit Issuance	
phosphorus	Phosphorus Intervention Limit Plan	Due 180 Days After Permit Issuance	
N/A	Pond Performance Evaluation Plan	Due 180 Days After Permit Issuance	
phosphorus, oxygen demand (cBOD, ammonia), total nitrogen	Annual Progress Report	Due 1 Year After Permit Issuance	
phosphorus	Phosphorus Intervention Limit	Due 2 Years After Permit Issuance	
phosphorus, oxygen demand (cBOD, ammonia), total nitrogen	Water Quality Trading Plan	Due 2 Years After Permit Issuance	
total nitrogen	Nitrogen Management Plan	Due 3 Years After Permit Issuance	
phosphorus, oxygen demand (cBOD, ammonia), total nitrogen	Annual Progress Report	Due 3 Years After Permit Issuance	
phosphorus, oxygen demand (cBOD, ammonia)	Plans and Specs.	Due 4 Years After Permit Issuance	
phosphorus, oxygen demand (cBOD, ammonia)	Notice to Proceed	Due 5 Years After Permit Issuance	
phosphorus, oxygen demand (cBOD, ammonia)	MPCA Notification	Due at Least 14 days Prior to Completion	
phosphorus, oxygen demand (cBOD, ammonia)	Annual Progress Report	Due 6 Years After Permit Issuance	
phosphorus, oxygen demand (cBOD, ammonia)	Initiation of Operation	Due 6.5 years After Permit Issuance/Notice of Operation Needs to be Submitted Within 90 Days of Initial Startup.	
N/A	Pond Evaluation Report	Due 180 Days Prior to Permit Expiration	
phosphorus, oxygen demand (cBOD, ammonia)	Final Compliance	No Later Than 7 Years After Permit Issuance	

Water quality trading alone is likely insufficient to ensure compliance with the interim and final limit. Based on MPCA's trading screening tool, in particular for phosphorus, there are initial concerns that Seneca is not contracting enough acreage in this area to accomplish significant progress via cover crops under water quality trading. The screenshot below shows this area could reduce phosphorus by only 0.2 Ib/acre/year with cover crops after early harvest crops.



Despite this concern, Seneca has begun to work with Barr to help us assess the potential for cover crops and other water quality trades based on MPCA's encouragement about trading in our March 20, 2024 meeting in St. Paul. The next issue – regarding a minimum control level of 1.0 mg/l for total phosphorus from the actual discharge for SD002 – is a complete departure from what MPCA indicated in that meeting.

1.0 mg/l Phosphorus as MCL Precludes WQT

A target of 1.0 mg/l total phosphorus is our long term (7 year) goal because it allows us to meet the annual mass limit as shown in the graph presently previously. But a minimum control level (MCL) of 1.0 mg/l phosphorus completely negates any opportunity for water quality trading for the long-term goal for phosphorus and essentially converts an *interim* limit into a *final* limit . Seneca can see a MCL set for parameters that could have acute aquatic toxicity, such as too high of BOD (causing oxygen depletion). But phosphorus concerns are for algae blooms, etc. so wouldn't reducing the non-point source phosphorus upstream of the discharge have the same effect as reducing the effects of the discharge itself?

This MPCA database (screenshot below) shows that many discharges are in excess of 1.0 mg/l phosphorus, so it is clearly not the current MCL across the state.



It is agreed that 1.0 mg/l is an effective target for Seneca's discharge to meet the annual mass limit (notwithstanding the lower concentration necessary during the RES period), but Seneca understood that water quality trading was one alternative to accomplish compliance with the phosphorus and other limits in 7 years.

This is a substantial and significant issue for Seneca and it appears MPCA has changed direction on this topic. Please note this history and excerpts (with *emphasis* added in some areas) from our discussions and correspondence:

- March 20, 2024 Seneca and MPCA meet in St. Paul to discuss how to move forward with the phosphorus compliance schedule given MPCA indicated there will be limits implemented for cBOD and ammonia in this permit renewal.
- April 22, 2024 As requested in the meeting, Seneca submits a proposed compliance schedule. This submittal is attached. Note some of the excerpts about trading:
 - <u>MPCA and Seneca agreed that</u>: Water quality trading is one option to mitigate significant capital expenditures while achieving measurable improvements in the watershed.
 - MPCA will work to reissue a new NPDES/SDS permit for the facility, extending the final compliance date for total phosphorus, before the original compliance date of September 30, 2025.
- May 29, 2024 MPCA responded to the proposed compliance schedule provided by Seneca. Note these excerpts, particularly the statements of conducting interim <u>monitoring</u> during Phase I, not having an interim <u>limit</u>:
 - The *permit includes interim <u>monitoring</u> (Phase 1)* and final total phosphorus, CBOD5, and total ammonia-nitrogen effluent limits (Phase 2).

- Interim <u>monitoring</u> (Phase1) and permit requirements are effective at permit reissuance.
- Final effluent limits for total phosphorus, total ammonia-nitrogen and CBOD5 are required to be met as soon as possible, but no later than seven years after permit issuance.
- The email also included a "Draft Compliance Schedule Seneca.pdf" which stated:
 - "Water quality based effluent limits (WQBELs) are required because the Permittee's discharge has the reasonable potential to cause or contribute to downstream impaired waters for total phosphorus, fiveday carbonaceous biochemical oxygen demand and total ammonianitrogen (oxygen demand). The *permit includes interim monitoring* (Phase 1) and final total phosphorus, five-day carbonaceous biochemical oxygen demand (CBOD5), and total ammonia-nitrogen effluent limits (Phase 2).
 - Interim monitoring (Phase1) and permit requirements are effective at permit reissuance.
 - The Permittee shall meet the final total phosphorus river eutrophication standard (RES) effluent limit of 0.32mg/L (June - September) and Lake Pepin total maximum daily load (TMDL) Wasteload Allocation (WLA) of 1,183kg/12 months as soon as possible, but no later than seven years after permit issuance.
 - In order to meet the oxygen demand WLA assigned in the South Fork Crow River Watershed TMDL, the Permittee shall meet the final CBOD5 concentration limit of 10 mg/l, and total ammonia-nitrogen concentration limit of 10 mg/l as soon as possible, but no later than seven years after permit issuance.
 - The Permittee proposes to investigate the use of water quality trading (WQT) to achieve total phosphorus, CBOD5, and total ammonianitrogen reductions. A compliance schedule has been included in this permit to accommodate the time required to identify, evaluate, and implement nonpoint source WQT projects, secure funding, evaluate discharge alternatives, design, and/or build for advanced pollutant removal technology.
- Nowhere in this proposed compliance schedule did MPCA mention a MCL of 1.0 mg/l total phosphorus for SD002 and being barred from using trading to achieve phosphorus reductions after the initial two-year compliance period. Again, these changed positions, if implemented, results in Seneca having to comply with the final limit without trading as a compliance option, within two-years. A result which is entirely impracticable and unachievable, rendering this change in agency position unreasonable, arbitrary and capricious.
- October 31, 2024 MPCA provides a pre-public notice version of the Statement of Basis and the draft permit. The Statement of Basis does not include anything on a MCL of 1.0 mg/l total phosphorus. The draft permit unexpectedly includes an "interim intervention limit" of 1.0 mg/l total phosphorus. Section 5.7.35 indicates: "Trades that would allow discharges in excess of applicable Technology Based Effluent Limits (TBELs) or Minimum Control Levels are prohibited." But *there is no TBEL indicated in the draft permit for phosphorus*. The only TBEL mentioned in the Statement of Basis is for BOD and TSS.

- November 14, 2024 Seneca submits comments on the pre-public notice versions of the documents. Included were these comments:
 - Seneca has some major concerns about this intervention limit of 1.0 mg/l. It seems counter to the agree upon 7-year compliance period to have this go into effect within 2 years. If the MPCA's goal is protect from back-sliding on phosphorus while trading is worked on, wouldn't it make more sense to have an interim invention limit set at the low end of current discharge levels? The lowest monthly average on phosphorus was 0.97 mg/l in September 2021 but the usual monthly average range is 2.8 to 13.0 mg/l. Does "intervention limit" mean exceeding it is not a permit violation? There is no way Seneca can accept a limit in place at 2 years after issuance that we would consistently violate.
 - With respect to 5.7.35 Seneca asked: "Need clarification on what this means for Glencoe. Is there some concentration limit that must be met, regardless of trading efforts? Please spell this out, by parameter, so we understand."
- February 19, 2025 MPCA responds to Seneca comments on the pre-public notice versions.
 - The minimum control level (MCL) is a water quality trading baseline which NPDES permitted credit buyers and sellers must attain for eligibility to participate in water quality trading. For credit buyers, existing technology-based effluent limits (TBELs), secondary treatment standards or state discharge restrictions (SDRs) are generally considered adequate MCLs, although there are exceptions where existing TBELs are established at levels that are not protective of water quality standards. Where adequate TBELs, secondary treatment standards or SDRs have not been established when a trade is proposed, the MPCA will establish MCL requirements in NPDES permits on a site-specific basis considering generally accepted practices and achievable effluent limit levels for similar facilities to inform MCL development. Please see section 4.2 of the MPCA's Water Quality Trading Guidance for additional information about MCLs.
 - The facility's existing 25 mg/L CBOD5 limit is considered adequate to serve as the MCL for trading projects. *The draft permit's proposed 1 mg/L total phosphorus intervention limit is also adequate to serve as the MCL.* An MCL for ammonia-nitrogen has yet to be determined, and MPCA would appreciate your input on it.

There are other excerpts in correspondence with MPCA that suggests that water quality trading is an acceptable approach to meet the proposed interim invention limit of 1.0 mg/l total phosphorus. But given that trading would not be allowed after the two-year compliance period when the final limit is imposed, it makes no sense for Seneca to pursue trading over such a short window and it is completely counter to the months of discussion we have had on trading. Given the way the proposed permit is structured – which is a complete change from our prior compliance period discussions—the only option Seneca would have to comply is the \$10 million capital project discussed above, and even then, it is impossible to get that project completed in a two-year timeframe. This renders interim limit compliance period a nullity and is further evidence of the unreasonableness of the proposed permit conditions.

Seneca assumes reaching the projected 10 mg/l ammonia-nitrogen limit in 7 years can be accomplished via trading since no MCL was established with this draft permit. Was MPCA planning on letting Seneca work on trading for ammonia-nitrogen for this permit term and then tell us there is an MCL that we have to meet on ammonia-nitrogen and none of those trades are acceptable?

This designation of 1.0 mg/l phosphorus as the MCL is impractical and counter to over a year's worth of discussion with MPCA, both permitting and WQT staff. It is arbitrary, capricious, and unreasonable; and is tantamount to a facility closure order. Seneca can't accept a permit with 1.0 mg/l phosphorus as the

MCL, eliminating any potential for water quality trading beyond the proposed two-year compliance window.

MPCA Trade Credit Approval - 5.7.69

In this section, the permit states: "Permittee shall submit a request at least 90 days (unless otherwise specified by the MPCA) before the Permittee expects to receive an approval response from the MPCA." Particularly with respect to a potential annual effort with cover crops, Seneca requests an alternative review period since there would be an inadequate time between when sweet corn and pea acreage is contracted (different fields each year) and when cover crops would begin to be planted. Perhaps the overall cover crop program and procedures could be reviewed and approved by MPCA once, and then the annual iteration for cover crops on specific fields could be shortened to 30 days?

Lagoon Freeboard – 5.10-124

The lagoon freeboard continues to hamper Seneca's compliance with the new limits. These ponds are currently operated as a controlled discharge. The RES limit for the seasonal period of June 1 to September 30 is challenging to meet. Seneca and its consultant think the best approach is to avoid discharge in this period. To avoid the RES period, there is a shorter discharge window and more need for storage. The lost capacity from the shortened window can be recovered by modifying the permit to seasonally allow a reduced freeboard in the stabilization ponds or to reduce the required minimum freeboard to 2.0 feet from 3 feet. Seneca's justification for this request is as follows:

- The facility has invested significant resources in these ponds with riprap added or replaced on all ponds up to the top of interior toe of dike. This exceeds the minimum of 12-inches required by both 10-States Standards and MPCA design standards for riprap in relationship to the high-water level. The 10-States Standard also still allows topsoil and seeding on pond dikes. The MPCA has been requiring riprap for many years. Grassed slopes are far more sensitive to wave erosion and collapse. Greater freeboard would be needed for grassed dikes with higher risk of erosion and bank failure. Nearby states such as Colorado and Nebraska list a minimum freeboard of 12-inches showing examples of lower freeboards being approved by state review agencies.
- Seneca has a long operating history with these ponds with no overtopping issues and/or wave action affecting the dikes due to more liberal freeboard requirements in prior permits or the extreme weather events.
- If ponds 2 and 9 can be approved for 2.5 feet of freeboard, why can't ponds 3, 4, 5, 6/7, and 8 be at 2.0 feet of freeboard?

With the size of Seneca's ponds, a difference of a half foot or more of freeboard makes for millions of gallons of additional storage and treatment. Seneca will be investing significant resources in WQT and/or wastewater treatment and being able to avoid construction of an additional pond allows these resources to be directed to other wastewater areas.

Annual Limit for BOD, not cBOD – Need Monitoring Time

There is a new limit proposed for BOD for SD002 of 115,236 kg/year calendar year total. All of Seneca's historical data is for cBOD, not BOD. Below is an excerpt explaining the relationship between carbonaceous BOD, total BOD, and nitrogenous BOD. The major point is that total BOD is going to be higher than cBOD; therefore, Seneca requests a monitoring period before this limit goes into effect, so it can be confirmed that no treatment changes are needed to comply with the annual mass limit on BOD.

The TKN (Total Kjeldahl Nitrogen) test measures the amount of reactive nitrogen (ammonia and organic nitrogen) in the sample that can be used by autotrophic bacteria and when they do, require oxygen, thus exerting a N-BOD, which would be equal to 4.6 x TKN mg/l. Theoretically you can calculate Total Biological Oxygen Demand of any influent = 1.5 x BOD5 + 4.6 x TKN. While Carbonaceous BOD theoretically should require ~1.5 parts of O2 per part of BOD to be removed, nitrogenous BOD is significantly higher. For nitrogenous BOD the demand for oxygen is 4.6 lb O2/ lb BOD (4.6Kg/Kg) removed.

Minor Clarifications/Comments/Questions

The table below identifies some other areas of comment or question:

Section	Permit Language	Comment
Permitted	"Solids from the	Please edit to provide some flexibility: "Solids from the
facility	wastewater management	wastewater management system are removed as needed,
description,	system are removed	typically annually" since Seneca may not always
page 3	annually"	remove solids annually.
5.4.4	The WQBEL (during the	Is there any credit or benefit given in the long-term
	RES period) is "based on	average calculation if no discharge occurs in a year during
	achieving a long-term	the RES period? It seems like the long-term average
	average (multi-summer) of	concentration should include a 0 mg/l for no discharge
	0.15 mg/L,"	years in the multi-year average.
5.6.23	The thermal load of the	Please clarify what the "receiving water" is for SD001. Is
	discharge at SD001 can not	it the ditch as it leaves Seneca property of the downstream
	increase the temperature of	South Fork of the Crow River?
	the "receiving water" more	
	than 5 degrees Fahrenheit.	
5.7.34	A progress report on Water	Seneca appreciates changing this initial report to a
	Quality Trading is due 180	progress report. We have an initial project contracted
	days after permit issuance.	with Barr to work on some feasibility questions.
5.7.37	"The WQT plan shall also	Seneca has already done extensive planning on the
	include an analysis of	phosphorus treatment study during the current permit
	wastewater treatment	term. It is more appropriate to focus first on the feasibility
	options"	and the options under water quality trading, then identify
		the gap that remains, and finally proceed with
		investigating treatment options to fill the gap, if a gap
		remains after trading. The WQT Plan should not have to
5 7 41		include wastewater treatment options.
5.7.41	Under the heading of	As stated elsewhere, the proposed intervention limit is
	Construction Treatment	basically the same final concentration Seneca needs to
	Schedule", the permit	meet the comply with the limits in / years. And 180 days
	device of normality in the second	and permit issuance is way too premature to plan
	days of permit issuance on	construction since Seneca will just be figuring out the
	now the facility will meet	leasionity of wQ1.
	the phosphorus intervention	
	limit.	

Section	Permit Language	Comment
5.7.46	Notify MPCA of initiation of operation, due 6.5 years after permit issuance.	Seneca understands that annual updates are necessary as we move towards final compliance within 7 years, but the initiation of operation at 6.5 years is unnecessary. It is Seneca's obligation to begin operation of the system at a point that allows compliance with the new limit on or before its effective date.
5.7.52	"Best Management Practices (BMP) alternatives include include soil erosion BMPs"	In our comments on the pre-public notice version of the documents, Seneca provided an example calculation for cover crops. In the response letter from MPCA, it was stated: "The example calculations that were submitted were not completed correctly for estimating sediment delivery and therefore, significant revisions are necessary. The calculations were completed for erosion control which can be a more simplified calculation." Seneca was hoping for a little more explanation on what was wrong in the example, but in general, if "soil erosion BMPs" are potential trades, why wouldn't cover crops be calculated with an erosion control calculations? Particularly since Seneca may want to work on projects that improve oxygen demand as well as phosphorus?
5.7.66	"No trading credits can be generated by BMPs that are legally required in accordance with federal, state, or local regulations."	To make sure Seneca is clear on what is intended with this statement, Seneca would understand that a cover crop in place under One Watershed, One Plan or a NRCS voluntary cover crop would not be "legally required" and therefore eligible for potential credit? In contrast, a buffer strip installed per the Minnesota Buffer Strip Law or a NPDES required nutrient management practice at a CAFO would be legally required and therefore not eligible for trading credits?
5.9.110	Piping Integrity Plan	As Seneca indicated in our comments on the pre-public notice version: Seneca has company policies requiring an annual pressure test on forcemains because we understand the importance of maintaining the wastewater infrastructure at our operations. Further, we have learned over time what are the best materials to use for systems at vegetable processing operations so that they have a significant lifespan. Glencoe can not operate if we can not transfer wastewater as it is generated to the wastewater lagoon system. Piping and forcemain integrity is important, but this is Seneca's responsibility and domain. Further, MPCA had an opportunity to review and comment on materials of construction when the plans and specs were submitted originally. Seneca does not understand the need for a Piping Integrity Plan being submitted to MPCA.

Section	Permit Language	Comment
5.9.113	Annual piping report due March 31.	Seneca has an existing company policy in place where the forcemain to the wastewater treatment system from the plant is pressure tested prior to each pack. Since this has been a successful program, Seneca expects to submit details on this for the piping integrity plan, if this plan is required in the final permit. As a vegetable packing industry, an annual report date of July 1 makes more sense so that MPCA gets timely information for the pressure testing done for the current pack. With a March 31 annual report, Seneca would have to submit information from the prior pack.
Limits and Monitoring – Part 7	Monitoring for sulfate in SD002.	In the MPCA response, it was explained that sulfate standards were set to protect wild rice waters. Seneca is not aware of wild rice waters downstream of our discharge. Does the standard apply statewide or where wild rice waters are located?
Limits and Monitoring – Part 7	SD003	It is understood that using SD003 as a calculation station would allow Seneca to utilize the allocation to SD001 cooling water discharges for SD002 lagoon discharges, if SD001 was not active. It is shown for phosphorus in the draft permit. Could cBOD and BOD also take advantage of the calculation station since the MPCA comment letter explained that there was 192 lb/day oxygen demand allocated to SD001?
	Allowable trading areas	In MPCA's response on the pre-public notice comments, it was stated: "Also, trading projects to offset the 0.15 mg/L June-September wasteload allocation would have to occur in the watershed of the South Fork Crow River, Buffalo Creek to North Fork Crow River (AUID 07010205-508)." Would MPCA please expand this answer and specifically indicate what area other water quality trades are limited to for Seneca with a 2.6 trade ratio and with other trade ratios?

If you have any questions, please contact the undersigned at <u>mhenschler@senecafoods.com</u>. Thank you for your consideration.

Sincerely, Seneca Foods Corporation

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Matt Henschler Senior Vice President – Technical Services & Contract Manufacturing

cc: Zach Woytcke Jacob Burr Paul Wiemann Laura Mushinski



April 22, 2024

Christine Bianchi Minnesota Pollution Control Agency (MPCA) Industrial Division 520 Lafayette Road North St. Paul, MN 55155 <u>christine.bianchi@state.mn.us</u>

RE: Seneca Foods Corporation – Glencoe Permit No. MN0001236 Proposed Compliance Schedule for New Limits on SD002

Dear Ms. Bianchi:

On behalf of Seneca Foods Corporation (Seneca), thank you for meeting with us on March 20, 2024. As discussed, Seneca's Glencoe, MN facility is currently operating pursuant to National Pollutant Discharge Elimination System/State Disposal System Permit No. MN0001236 issued on September 30, 2018. As part of this permit, Seneca was working on a multi-year compliance schedule to meet new total phosphorus limits by September 30, 2025 for the treated process wastewater that is discharged from either Pond 6/7 or Pond 5 on a controlled basis to Buffalo Creek via an unnamed ditch via SD 002.

Further background and context is addressed in Seneca's February 23, 2024 correspondence. On February 5, 2024 and February 13, 2024, Seneca received two letters from MPCA. The first letter was regarding more stringent water quality-based effluent limitations (WQBELs) for carbonaceous biochemical oxygen demand (cBOD) and ammonia – nitrogen. The second letter was regarding approval for a portion of Seneca's plans and specifications to meet future phosphorus limits which recommended, in light of the future limits for cBOD and ammonia, that Seneca may want to reconsider the submitted design. On March 20, 2024, Seneca and MPCA representatives met at MPCA offices in St. Paul. The meeting focused on the Glencoe facility's wastewater limits and compliance strategy, given the looming deadline for phosphorus final compliance of September 30, 2025 coupled with MPCA's February 5 and 13, 2024 correspondence concerning anticipated new limits for cBOD and ammonia – nitrogen and such limits' impact on Seneca's phosphorus compliance plans.

In the March 20, 2024 meeting, MPCA and Seneca agreed that:

- Given the future limits for cBOD and ammonia nitrogen for SD002, Seneca must reconsider its plans for total phosphorus compliance.
- Water quality trading is one option to mitigate significant capital expenditures while achieving measurable improvements in the watershed.
- In light of this required reconsideration-- and with MPCA's concurrence in the meeting-- Seneca has halted the construction of the system originally designed for total phosphorus removal consisting of a new wastewater lagoon, Dissolved Air Flotation (DAF) device, and DAF solids handling.
- MPCA will work to reissue a new NPDES/SDS permit for the facility, extending the final compliance date for total phosphorus, before the original compliance date of September 30, 2025.

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• Seneca should submit a proposed compliance schedule to attain total phosphorus, and anticipated cBOD and ammonia – nitrogen limits.

Subsequent to the March 20, 2024 meeting, MPCA provided resources regarding water quality trading, and answered Seneca questions about trading in a teleconference on April 4, 2024. Since April 4, 2024, Seneca has also interviewed several consultants who have worked with other entities on water quality trading. After significant input from MPCA on water quality trading and discussions with consultants about trading, Seneca has prepared this letter to propose a compliance schedule for total phosphorus, cBOD, and ammonia – nitrogen.

For the purpose of this proposed compliance schedule, Seneca assumed the new NPDES/SDS permit for the Glencoe facility would be finalized and issued in mid-2025 and that the typical 5-year permit term would be used. It is also understood that, in accordance with 40 CFR 122.47, interim annual deadlines will be necessary in the course of the longer-term effort to achieve final compliance with these new limitations. The basic tenets behind this proposed schedule are as follows:

- In the best interest of the watershed, where nonpoint sources comprise the vast majority of the impairment, and in order for Seneca to make fiscally responsible investments that do not threaten the viability of its operations in Glencoe, water quality trading needs to be fully explored <u>before</u> additional investments in wastewater treatment are made.
- Seneca is willing to identify <u>and implement</u> nonpoint source water quality trading projects within the next permit cycle so that scope and impacts of water quality trading is known. Implementation would mean that watershed improvements would occur within the next permit cycle.
- Once water quality trading has been maximized, Seneca and its wastewater consultant would be ready to define what additional investments in wastewater treatment are necessary via an updated facility plan.
- Water quality trading, credits, and off-sets implemented prior to the final compliance date for future limits would "count" towards the compliance with future limits.
- The additional investments needed in wastewater treatment could take many different forms, and each path could have longer or shorter periods of time necessary to implement. For example, if after trading is maximized, the best course of action is to switch to spray irrigation and eliminate or reduce the surface water outfall; that said, securing the acreage necessary would be a longer-term effort. In contrast, if more limited wastewater treatment plant improvements are necessary to close the gap between water quality trading efforts and the future limits, these improvements could be made within a permit term or two. Consequently, much depends on the progress made during the next permit term where water quality trading is pursued.

Date	Task
September 2025	Reissued final permit with revised schedule for phosphorus and new
838	schedules to achieve compliance with new limits for cBOD and ammonia.
September 2026	Seneca submits a Water Quality Trading (WQT) Plan.
September 2027	Seneca identifies potential WQT projects and begins work on plans/specs for
	MPCA approval. An annual progress report is submitted to MPCA on WQT.
September 2028	Seneca identifies additional WQT projects, works on plans/specs for MPCA approval for identified projects, begins installation/implementation of MPCA approved projects. An annual progress report is submitted to MPCA on
	WQT.

Given the foregoing considerations, Seneca proposes:

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Date	Task
September 2029	Seneca identifies additional WQT projects, works on plans/specs for MPCA approval for identified projects, begins installation/implementation of MPCA approved projects. An annual progress report is submitted to MPCA on
	WQT.
September 2030	The gap between WQT efforts and future limits is identified. A facility plan
	to close that gap is prepared and submitted to MPCA. A proposed schedule
	of compliance is developed for subsequent permit term(s) dependent on the
	selected approach to achieve compliance.
Subsequent permit	Final compliance schedules for total phosphorus, cBOD, and ammonia would
terms	be developed in consultation with MPCA, based on which approach was
	identified to achieve compliance.

Seneca sincerely appreciates the assistance of MPCA staff in providing guidance documents, example permits, and answering questions concerning water quality trading. We believe this proposed schedule is ambitious, yet reasonable allowing time to fully develop water quality trading efforts, as a win-win for the watershed and our company. Please contact us to discuss further at your convenience at <u>mhenschler@senecafoods.com</u> or (608) 757-6054.

Sincerely, Seneca Foods Corporation

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Matt Henschler Senior Vice President – Technical Services & Contract Manufacturing