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April 17, 2026

Mr. Tanner Connors
Wisconsin Department of Natural Resources
3911 Fish Hatchery Rd.
Fitchburg, WI 53711

Re: 2026 Phosphorus Pollutant Minimization Plan – Wastewater Treatment Facility
Village of Lime Ridge, WI

Dear Tanner:

As requested, the following is the Phosphorus Pollutant Minimization Plan for the Village of Lime Ridge's Wastewater Treatment Facility (WWTF).

Phosphorus Pollutant Minimization Plan

Introduction

To meet the proposed final Effluent Total Phosphorus (TP) limits, the WWTF would require a major facility upgrade to implement traditional Phosphorus treatment. This upgrade would force user rates to exceed 2% of the median household income (MHI). The Village has determined that it is not eligible for the Multi-Discharger Variance (MDV) as the Village would be unable to meet 1.0 mg/L TP without a major facility upgrade. Therefore, the Village of Lime Ridge is pursuing an Individual Phosphorus Variance (IPV).

As part of the IPV application process, the Village is submitting a Pollutant Minimization Plan (PMP) for TP. This plan contains several key components including:

1. Reduction of Influent TP at the source.
2. Reduction of Effluent TP at the WWTF.
3. Reduction of TP in runoff from non-point sources within the watershed.

This Phosphorus Pollutant Minimization Plan evaluates proposed actions that the Village of Lime Ridge will pursue over the next Wisconsin Pollutant Discharge Elimination System (WPDES) Permit term to address each of these components. The following information indicates the actions and proposed schedule. A proposed schedule is provided in Table 1. The Village will continue its evaluation of compliance alternatives to determine which will be most economically feasible. The Village will likely take a multi-pronged approach toward ultimate TP compliance by utilizing the key components mentioned above.

Reduction of Influent Phosphorus Sources

The Village is primarily composed of residential and commercial users with no major industries that could be contributing Phosphorus. Therefore, the influent wastewater entering the WWTF is domestic-strength wastewater. Previously, the Village had contacted Branding Iron Roadhouse,

Lime Ridge Agri Supply, Men Mar Auto Service, Champion Chisel Works, and local Churches and determined that they were not discharging Phosphorus-based products. The Village may be able to further reduce TP loadings by implementing practices such as altering the Sewer Use Ordinance to further regulate wastewater discharges. The Village intends to distribute public information in an effort to educate users on Phosphorus-reduction measures. The Village also plans to continue its evaluation of local businesses to identify any other potential Phosphorus-reduction measures that can be taken. The Village plans to inspect the wastewater discharge facilities at each business and determine whether a rate increase, discharge monitoring, and/or pretreatment would be warranted.

Reduction of Effluent Phosphorus Concentrations

The Village of Lime Ridge owns and operates a WWTF that utilizes a recirculating sand filter (RSF) system consisting of a septic tank, a dosing chamber, and three (3) RSF beds. Primary waste from the wastewater treatment process is stored in the septic tanks, and the contents removed and disposed by a licensed and certified septage hauler in accordance with NR113 of the Wisconsin Administrative Code. Phosphorus is currently removed from the wastewater through the settling of Phosphorus-containing solids in the septic tanks. The recirculating sand filters minimally treat effluent TP. As mentioned in previous reports, the Village had investigated adding chemical to treat for TP but would risk clogging the sand filters due to the flocs formed during chemical addition. The Village has also evaluated other systems including filtration systems, spray irrigation, and seepage cells. However, these technologies are not cost-effective and would result in user rates exceeding 2% of the MHI. The Village will continue to investigate potential Phosphorus treatment technologies.

Reduction of Phosphorus Runoff within the Watershed

The Village of Lime Ridge has already evaluated potential watershed partners for TP reduction with negative results. Potential partners are identified through local contacts or on a County Parcels Map. Aerial maps, contour maps, GIS, windshield survey, on site visits etc. are used to evaluate which partners should be evaluated. The Village would prefer partners to be located upstream of the WWTF and must be located within the Village's HUC-12 Watershed. Potential partners are first contacted by phone or in person to provide them with background information and evaluate interest. If interested, a Village representative will schedule and lead a meeting with the property. The meetings will typically occur on site and will evaluate the site for potential trading practices. At these meetings, the Village will provide potential partners the proposed practices, pros/cons of water quality trading, overall goal of the proposed partnership, and Village contact information.

Once a potential watershed project is identified, the Village will perform the following items:

- Calculate potential trading credits.
- Evaluate preliminary project costs.
- Contact the DNR regarding the project.
- If trading is determined to generate enough credits, a water quality trading plan will be prepared for DNR review.
- Develop Water Quality Trade Agreements.

- Register Trading Credits.
- Achieve compliance with final Phosphorus Limit through Water Quality Trading.

*Note: The timing of these items will vary depending on when the potential watershed project is identified.

The Village of Lime Ridge had preliminarily evaluated watershed reductions within the community's limited storm sewer system and did not appear to be a viable option for TP compliance. The Village's storm sewer collects runoff from approximately 10 acres of residential development.

The Village will continue to evaluate watershed opportunities. If a WQT opportunity is identified, the Village would then commence investigation and implementation of Best Management Practices (BMPs) for optimal TP reduction at the site. The Village would need to pursue Water Quality Trading (WQT) credits and develop a Trading Plan, which would involve:

1. Soil sampling to determine TP concentration in the soil.
2. Computer modeling to determine the pounds of TP in the runoff.
3. Developing a Trade Agreement.
4. Installing Best Management Practices (BMPs) to reduce TP runoff.
5. Applying for Trading Credits with the DNR.
6. Monitoring to maintain the Trading Credits.

Alternatively, the Village could pursue Adaptive Management (AM) which would require in-stream monitoring combined with BMP installations within the watershed. The Village would be responsible for demonstrating reduction of TP concentrations within the Narrows Creek from the BMP installations. Compliance is ultimately achieved by meeting the Water Quality Criteria (WQC) within the Narrows Creek. However, Adaptive Management requires a the WWTF to meet an Effluent TP Limit of 0.6 mg/L which would not be attainable without a significant upgrade at the WWTF.

Table 1 – Proposed PMP Schedule

Action Items	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reduce Influent Phosphorus.					
a. Distribute information to residents regarding TP reduction measures.	X				
b. Continue evaluation of local businesses for potential TP reduction actions.	X				
c. Update the Village's Sewer Use Ordinance which including evaluation of a rate increase to cover the costs of future compliance alternatives.					X
d. Investigate other possible point sources of TP.	X	X	X	X	X
e. Reduce inflow & infiltration to the sanitary collection system.	X	X	X	X	X
2. Reduce Effluent Phosphorus at the WWTF.					
a. Perform annual operations and maintenance to prevent regressing of current TP treatment capabilities.	X	X	X	X	X
b. Continue evaluation of TP treatment technologies that would require a major facility upgrade.	X	X	X	X	X
c. Continue evaluation of TP treatment technologies that would not require a major facility upgrade.	X	X	X	X	X
3. Investigate reduction of watershed-based Phosphorus.					
a. Test Narrows Creek TP concentration monthly (May through October).					X
b. Continue evaluation of potential partners within the watershed.	X	X	X	X	X
4. Submit DNR Phosphorus Compliance Reports as per Schedule 4.1 of the WPDES Permit.	X	X	X	X	X
5. Evaluate Phosphorus Compliance Alternatives for WPDES Permit Reissuance.					
a. Water Quality Trading (WQT)					X
b. Individual Phosphorus Variance (IPV)					X
c. Facility Upgrade					X
d. Alternative Discharge					X
e. Regionalization					X



If you have any questions, please feel free to contact me at (608) 348-5355. Thank you.

Sincerely,
DELTA 3 Engineering, Inc.

Logan Hoppman

Logan Hoppman, P.E.
Civil-Environmental Engineer

LMH:lh
Enclosures
Cc: Jordan Fure – Delta 3 Engineering, Inc.
Bart Nies – Delta 3 Engineering, Inc.
Corene Sklar – Village Sanitary Sewer Committee
Dave Huth – WWTF Operator