Chloride Variance Application

Form 3400-193 (R 4/06) Page 1 of 2

Please find the mailing address for the DNR location nearest you by visiting our website
http://dnr.wi.gov/Contact/SSbyCity.html

Notice: Information requested is required for the Department to determine whether or not to grant a variance under the provisions of sections NR 106.80 through 106.96, Wis. Adm. Code. Failure to provide all of the requested information may result in denial of your application. Personal information collected will be used to administer the watershed program and may be provided to requesters as required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.]

Applicant Information

Company Name Village of Turtle Lake		Contact Name Cory Davis	
WPDES Permit No WI-0025631-10-0		Street Address 520 Logan Ave P.O. Box 11	
Facility Name Village of Turtle Lake		City Turtle Lake	State WI ZIP Code 54889
Street Address Wastewater Treatment PLANT		Telephone Number(include area code) 715-986-2820	FAX Number 715-986-2950
City Turtle Lake	State WI ZIP Code 54889	E-mail Address vtlpw@turtlelakewi.com	
Receiving Water open-water wetland to an unnamed stream into moon Creek within the Hay River watershed in the lower Chippewa Drainage Basin, Barron County			Average Discharge Flow Rate 500,000 GPD

Capital Cost

Have you done a study to determine the capital cost of end-of-pipe chloride removal for your facility? Yes - Please include the information with this worksheet or mail it with the signature portion of the permit application. No - Please complete this estimate of relative capital cost:

Chloride Removal Capital Cost:

$1.125 x Annual Average Design Flow (in MGD) X 1,000,000 = 614,250

Chloride Removal as a Percentage of Annual Capital Cost:

$$\frac{\text{Chloride Removal Capital Cost (from above)}}{\text{Capital Cost of Current Wastewater Facility}} \times 100 = 13.65\ \%$$

Operational (O&M) Cost Based on the Cost Estimate

Have you done a study to determine the annual O & M cost of end-of-pipe chloride removal for your facility? yes

Yes - Please include the information with this worksheet or mail it with the signature portion of the permit application.

No - Please complete this estimate of relative O&M cost:

Chloride Removal O&M Cost:

($1.00 x Annual Average Design Flow (in MGD) x 1000 x 365) = $ 199,290

Chloride Removal as a Percentage of Annual O&M Cost:

$$\frac{\text{Chloride Removal O\&M Cost (from above)}}{\text{O\&M Costs of Current Wastewater Facility}} \times 100 = 31\ \%$$

Treatment Facility Information

Do you know of a facility that could accept the concentrated brine solution that would result from end-of-pipe chloride treatment?

Yes / No

If yes, Name of Facility Duluth, mn

The information in the following questions is requested to assist the permittee and the Department in determining appropriate effluent values or limitations, compliance schedules and source reduction measures.

Sample Information

Have you sampled at least eleven effluent samples for chloride over the course of at least a year? Yes / No

Source Reduction Efforts

If your current permit contains a compliance schedule for implementing chloride source reduction measures, what difficulties or impediments have you experienced in achieving additional chloride reductions? [Attach separate page, if necessary.]

For Municipalities Only	Yes	No
a) Have you identified industrial contributors of chloride to your sewer system?	X	
b) Have you requested voluntary reductions of chloride from any industrial users to your sewer system?	X	
c) Have you instituted sewer use ordinances regulating or limiting the discharge of chloride from significant industrial users?	X	
d) Does your community have centralized softening of source water through a water utility?		X
e) Have you determined typical concentrations of chloride from domestic users of your sewer system?		X
f) Does your community implement a public information program on proper maintenance and improved efficiency of residential softeners?		X
g) Have you implemented local ordinances to mandate the use of efficient softeners?		X
For Industry Only	**Yes**	**No**
a) Is privately softened water, use of brine, or use of salt integral to your production process?		
b) Do you operate a private softener for your industrial process?		
c) Have you optimized operation of your water softener (adjustment of regeneration interval, salt dosage, replacement of backwash controller)?		
d) Have you determined which industrial processes can be run without softened water?		
e) Have you implemented practices to reduce or reuse any brine solutions or softened water in your industrial process?		
f) Have you implemented housekeeping practices to reduce spillage of any brine solutions, or to minimize the contribution of salt to the wastewater treatment system?		

Additional Information or Comments

We have identified an Industry that is a high chloride user.

Certification

Based on the information provided, I believe that attainment of the applicable water quality standards for chloride may cause substantial and widespread adverse social and economic impacts in the area where this discharge is located. I understand that, as a condition of the variance, the Department and the permittee will need to agree upon an interim effluent limitation, a target value or target limitation, and a compliance schedule to implement source reduction. I understand that these conditions will be included in the WPDES permit issued to this facility. I certify that the information provided is true, accurate and complete.

Individual Submitting Request (Individual must be an Authorized Representative) Cory Davis	Title Public Works Director
Signature of Official	Date Signed 8/14/14

2/23/2015

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Attachment to Variance Application for Municipal Facilities
September 14, 2012

Notice: This form must be completed and submitted to the Department to request the variance. Failure to provide all requested information may result in denial of your application. Personally identifiable information collected on this form will be used to administer the watershed management program and may be provided to requestors as required by Wisconsin Open Records law [ss. 19.31, Wis. Stats.]

Facility and Permit Information
WPDES Permit No. WI-0025631-10-0
Facility Name Village of Turtle Lake, Turtle Lake Wisconsin

1. **Specifically, what steps do you plan to undertake (and when) in the next 5-year permit term to reduce levels of the pollutant (mercury, chloride or other pollutant for which you request a variance) to the treatment plant?** – Examples: "Inspect dental facilities to confirm proper maintenance of amalgam separators"; "Ensure community clean sweep events"; "Evaluate ordinances to require tune-ups of residential point-of-use softeners".

1. Speak with the industries that are possibly discharging a significant amount of chlorides. As of January 2015, these industries are Wisconsin Whey Protein, World Foods, and Lake Country Dairy. Greenwhey Energy is currently unable to discharge to the Village.
2. Identify if other sources such as I/I (runoff from salted roads) or water softeners (public or private sources) are significant.

2. **How significant are the reductions you expect with the steps described above?**– Examples: Show expected levels that can be attained over the next five years.

Chloride reduction potential is unknown at this time. The investigation of source reduction and minimization from industrial users will determine if and how much chloride reduction is possible.

3. **What is the history of variances at your facility?** – Examples: previous variances and previous permit limits, significant changes and efforts made to reduce discharges. Dates of Pollutant Minimization Plans (PMP), Source reduction Measures (SRM) or other plans. Status of annual reports. Summary of steps that have been already taken.

There have been no prior variances and prior permits did not have chloride limits.

4. **Provide trend analysis dating back to before the implementation of PMP, SRM or other variance steps.** – Examples: Include influent and effluent data. For mercury include all data and show trends including sludge data. For chlorides include mass and concentration trends. Reference or attach any facility planning or evaluation study that evaluated facility performance capabilities (Note – Only include studies that are recent or otherwise applicable for the evaluation of the existing facility and current conditions).

See attached chloride summary. Greenwhey Energy stopped discharging to the Village on December 18th, 2014.

Variance Request and Certification

Based on the information provided, I am requesting a variance on the basis that attainment of the applicable water quality standard may cause substantial and widespread adverse social and economic impacts in the area where this discharge is located.

I certify that the information provided is true, accurate and complete.

Print or type name of individual submitting request (must be an Authorized Representative for the treatment facility) Cory Davis	Title Public Works Director
Signature of Official	Date Signed 2/24/15