STATE OF MINNESOTA

Minnesota Pollution Control Agency

Municipal Division

National Pollutant Discharge Elimination System (NPDES)/
State Disposal System (SDS) Permit MN0031241

PERMITTEE: City of Lonsdale
FACILITY NAME: Lonsdale Wastewater Treatment Facility
RECEIVING WATER: Unnamed Ditch (Class 7, 3C, 4A, 4B, 5, 6 Water)

CITY: Lonsdale **COUNTY:** Rice
ISSUANCE DATE: **EXPIRATION DATE:**

The state of Minnesota, on behalf of its citizens, through the Minnesota Pollution Control Agency (MPCA), authorizes the Permittee to operate a disposal system at the facility named above and to discharge from this facility to the receiving water named above, in accordance with the requirements of this permit.

The goal of this permit is to reduce pollutant levels in point source discharges and protect water quality in accordance with Minnesota and US statutes and rules, including Minn. Stat. chs. 115 and 116, Minn. R. chs. 7001, 7041, 7049, 7050, 7053, 7060, and the U.S. Clean Water Act.

This permit is effective on the issuance date identified above, and supersedes the previous permit that was issued for this facility on June 30, 2008. This permit expires at midnight on the expiration date identified above.

Signature: _____

Aaron N. Luckstein
Supervisor, Southeast Regional Unit
Rochester Office
Municipal Division

for The Minnesota Pollution Control Agency

Submit DMRs to:
Attention: Discharge Monitoring Reports
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Submit Other WQ Reports to:
Attention: WQ Submittals Center
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Questions on this permit?

- For DMR and other permit reporting issues, contact: Tamara Dahl, 507-476-4252.
- For specific permit requirements or permit compliance status, contact: Joseph Braun, 507-206-2602.
- General permit or NPDES program questions, contact: MPCA, 651-282-6143 or 1-800-657-3938.

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Facility Description

The Lonsdale Wastewater Treatment Facility (Facility) is located in the SW¼ of Section 25, Township 112 North, Range 22 West, Lonsdale, Rice County, Minnesota. This is a Class B facility.

The application indicates that the existing Facility consists of influent screening and grit removal, two extended aeration-activated sludge basins, chemical phosphorus removal, two final clarifiers, and ultraviolet light disinfection. Biosolids are treated in an aerobic digester and land-applied to approved agricultural sites. There are no bypass points known to exist in the system.

The Facility is designed to treat an influent average wet weather (AWW) design flow of 0.687 million gallons per day (mgd), an average dry weather design flow of 0.493 mgd, and a peak hourly wet weather flow of 3.24 mgd with a five-day carbonaceous biochemical oxygen demand strength of 200 milligrams per liter. The Facility has a continuous discharge (Station SD003) to an unnamed ditch (Class 7, 3C, 4A, 4B, 5, and 6 waters) that flows into Union Lake.

The location of the Facility is shown on the "Topographic Map of Permitted Facility" (page 4). The location of designated monitoring stations is specified on the "Summary of Stations" (page 5).

In accordance with MPCA rules regarding nondegradation for all waters that are not Outstanding Resource Value Waters, nondegradation review is required for any new or expanded significant discharge (Minn. R. 7050.0185). A significant discharge is 1) a new discharge (not in existence before January 1, 1988) that is greater than 200,000 gallons per day (gpd) to any water other than a Class 7 water, or 2) an expanded discharge that expands by greater than 200,000 gpd that discharges to any water other than a Class 7 water, or 3) a new or expanded discharge containing any toxic pollutant at a mass loading rate likely to increase the concentration of the toxicant in the receiving water by greater than one percent over the baseline quality. The flow rate used to determine significance is the design AWW flow. The January 1, 1988, design AWW flow for this Facility is 0.092 mgd. The Facility expanded to its current design flow in 2005 with the construction of the mechanical plant. Nondegradation review was completed as a part of this construction project.

This Permit also complies with Minn. R. 7053.0275 regarding anti-backsliding.

Any point source discharger of sewage, industrial, or other wastes for which an National Pollutant Discharge Elimination System (NPDES) Permit has been issued by the MPCA that contains effluent limits more stringent than those that would be established by parts 7053.0215 to 7053.0265 shall continue to meet the effluent limits established by the permit, unless the permittee establishes that less stringent effluent limits are allowable pursuant to federal law, under section 402(o) of the Clean Water Act, United States Code, title 33, section 1342.

Expanded Fecal Coliform Bacteria Wasteload Allocation for the Lonsdale Wastewater Treatment Facility

In 2003, the MPCA approved a design for the Facility to expand from an AWW design flow of 0.2418 mgd to 0.687 mgd. The authorization for the construction and operation of the expanded Facility was included in the June 27, 2003, permit issuance, with a fecal coliform limit of 200 organisms per 100 milliliters (mL) (May through October) for the surface discharge. Initiation of operation of the expanded Facility occurred in October 2004.

On April 5, 2006, the Lower Mississippi River Basin Total Maximum Daily Load (TMDL) - Regional Fecal Coliform report was approved by the U.S. Environmental Protection Agency. For wastewater treatment facilities, the wasteload allocations (WLA) were calculated by multiplying AWW design flow for continuously-discharging facilities or the maximum permitted discharge rate for controlled-discharge facilities by the permitted discharge limit of 200 organisms per 100 mL. As long as the facilities' discharge at or below this permit limit, they will not cause violations of the fecal coliform water quality standard regardless of their fecal coliform load.

Unfortunately, the Lower Mississippi River Basin TMDL - Regional fecal coliform study did not calculate the WLA for the Facility with the expanded AWW design flow of 0.687 mgd. The TMDL calculated the WLA at the AWW design flow of 0.2418 mgd.

An analysis of the effects of expanded WLA, prepared by Tetratech for the Zumbro River Turbidity TMDL (Cleland 2011), demonstrates that current discharges can be expanded, and new NPDES discharges can be added while maintaining water quality standards provided the permitted NPDES effluent concentrations remain at or below the in-stream concentration targets.

The permit's calendar month geometric mean fecal coliform bacteria effluent limit of 200 organisms per 100 mL is equivalent to the applicable water quality standard, and ensures that discharges from the Facility will not cause or contribute to excursions in excess of the standard.

The Facility is designed to treat an AWW flow of up to 0.687 mgd. The expanded surface discharge will not result in a decrease in the Cannon River's water quality because fecal coliform bacteria loading capacities will increase as a result of the increased stream flow resulting from the expanded discharge. The discharge flow rate of 0.687 mgd from the Facility will result in a 0.689 cubic feet per second stream flow increase in the Cannon River, which in turn will expand the fecal coliform bacteria loading capacity by 0.101 trillion organisms/month. The Permit will continue to include an effluent limit of 200 organisms per 100 mL, which equates to a fecal coliform load of 0.156 trillion organisms/month.