

INDIRECT DISCHARGE PERMIT FACT SHEET

April 28, 2016

PERMIT NO.: ID-9-0263

APPLICANT: Crossett Brook Middle School
5672 VT Route 100
Duxbury, VT 05676

NATURE OF WASTE: Treated domestic sewage

DISPOSAL LOCATION: Leachfields behind Crossett Brook Middle School

RECEIVING WATER: Crossett Brook

AQUATIC PERMITTING CRITERIA

Based on monitoring data for the period January 2011 - December 2015, the following table demonstrates that the indirect discharge of treated sewage from the Crossett Brook Middle School has not violated the aquatic permitting criteria of the Indirect Discharge Rules in Crossett Brook during the previous permit period.

Parameter	Discharge Conc. (a)	Upstream Conc. (b)	Calculated Downstream Conc. (c)	Downstream Conc. (d)	IDR Limits
TDP	0.043 mg/L	0.011 mg/L	0.011 mg/L	0.009 mg/L	0.012 mg/L (e)
NO3	36.2 mg/L	0.105 mg/L	0.244 mg/L	0.083 mg/L	2.0 mg/L
pH	-	-	-	6.75 S.U.	6.27 - 7.05 (f)

Notes:

- All Total Dissolved Phosphorous (TDP) and Nitrate (NO3) values based on normal distribution or best fit.
- (a) For TDP and NO3, concentration represents 5% Exceedance Value based on 10 groundwater samples collected from monitoring well MW-4 located downgradient of the leachfields. Monitoring well MW-2 may not be intercepting effluent.
- (b) For TDP and NO3, concentration represents 95% Confidence Value based on 10 stream samples collected upstream of the leachfields.
- (c) Mass balance calculation based on effluent design flows of 9,325 gpd and a Crossett Brook estimated low median monthly flow rate of 2,420,000 gpd.
- (d) For TDP and NO3, concentration represents 95% Confidence Value based on 10 stream samples collected downstream of the leachfields. Mean value for pH.
- (e) Reflects 0.001 mg/l allowed increase above background concentration
- (f) Based on background pH range.

PROPOSED ACTION

The Department of Environmental Conservation intends to issue a permit renewal to the Waterbury-Duxbury School District for the discharge of treated effluent from the Crossett Brook Middle School.

CHANGES TO THE EXISTING PERMIT

The following substantive changes to indirect discharge permit ID-9-0263 are proposed:

1. Condition E1 requires the permittee to submit a revised Quality Assurance/Quality Control Plan for approval by August 1, 2016 for sampling and analyses of effluent, groundwater and surface water quality. Water quality results from 1997 – 2015 indicate that monitoring well MW-2, assumed to be downgradient of the leachfields, may not be intercepting effluent from the leachfields. In addition, the surface water sampling locations may need to be adjusted due to possible influences from two tributaries between the sampling stations. The current QA/QC Plan was written in 1997.
2. The requirement that groundwater level measurements be taken weekly between March 1st and May 31st has been eliminated from the permit. Historic results indicate that groundwater levels are consistently 10 feet or more below the elevation of the leachfield trenches. Groundwater elevations are still required to be measured when groundwater samples are collected.
3. The daily water meter reading requirement has been moved to Condition E5 as a stand-alone requirement. Conditions E5 and E6 have been renumbered E6 and E7.

Tentative determinations regarding conditions to be included in the pending Vermont Indirect Discharge Permit have been made by the Vermont Agency of Natural Resources, Department of Environmental Conservation. The conditions imposed will assure that the Vermont Water Quality Standards and applicable provisions of 10 V.S.A. Chapter 47 will be met.