AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation
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Montpelier, VT 05620-3521

INDIRECT DISCHARGE PERMIT
FACT SHEET

November 2017

PERMIT NO.: ID-9-0278
PERMITTEE: Town of Warren
NATURE OF WASTE: Treated Domestic Sewage
DISPOSAL METHOD: Leachfields
DISPOSAL LOCATION: Latitude N 44° 07' 04" and Longitude W 72° 51' 11"
RECEIVING WATERS: Unnamed Tributary of Mad River; Mad River
DRAINAGE BASIN: Winooski River

Aquatic Permitting Criteria

Based on water quality monitoring data for the period October 2012 – August 2017, the following table demonstrates that the indirect discharge of treated domestic sewage from Brooks Field in Warren, Vermont meets the aquatic permitting criteria of the Indirect Discharge Rules in the Unnamed Tributary of Mad River:

Parameter	Discharge Conc. (a)	Upstream Conc. (b)	Calculated Downstream Conc. (c)	Downstream Conc. (d)	IDR Limits
TDP	0.008 mg/L	0.010 mg/L	0.009 mg/L	0.011 mg/L	0.011 mg/L (e)
NO3	3.0 mg/L	0.08 mg/L	1.0 mg/L	1.9 mg/L	2.0 mg/L
pH	6.11 S.U.	7.35 S.U.	-	7.31 S.U.	6.94 - 7.67 (f)

Notes:
All total dissolved phosphorus (TDP) and Nitrate (NO3) values based on normal distribution of raw or transformed data.
(a) Mean value based on 102 groundwater sampling results (95 for TDP) from monitoring wells downgradient of leachfields.
(b) 95% Confidence Value based on 15 upstream sampling results (14 for TDP) from the unnamed tributary of the Mad River. Mean value used for pH.
(c) Based on assumed discharge of 15,000 gpd and estimated low median monthly flow of 31,300 gpd in the unnamed tributary of the Mad River.
(d) 95% Confidence Value based on 15 downstream sampling results (14 for TDP) from the unnamed tributary of the Mad River. Mean value used for pH.
(e) Reflects 0.001 mg/L allowed increase above background concentration.
(f) Based on background pH range.

Based on the findings of a 1998 hydrogeologic investigation, the above demonstration assumes that 75% of the 20,000 gallons per day of permitted capacity of the Brooks Field discharges indirectly to the unnamed tributary of the Mad River, and the other 25% discharges indirectly to the Mad River. Given the much larger dilution capacity of the Mad River as compared to the unnamed tributary, the indirect discharge to the Mad River would also meet the aquatic permitting criteria of the Indirect Discharge Rules.

Proposed Action

The Department of Environmental Conservation intends to issue an indirect discharge permit renewal to the permittee. The following changes have been made to the draft permit:

- Condition E2 (Effluent Monitoring): Total dissolved phosphorus has been changed to total phosphorus, and nitrate nitrogen replaces nitrite-nitrate nitrogen.

No other noteworthy changes to permit conditions have been made.

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.