

AGENCY OF NATURAL RESOURCES  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
WASTEWATER MANAGEMENT DIVISION  
103 SOUTH MAIN STREET  
WATERBURY, VERMONT 05671-0405

FACT SHEET  
(June 2005)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO  
DISCHARGE TO WATERS OF THE UNITED STATES

NPDES NO: VT0020931  
FILE NO: 07-02  
PERMIT NO: 3-1312  
PROJECT ID NO: EJ95-0106

NAME AND ADDRESS OF APPLICANT:

Vermont Department of Fish and Wildlife  
103 South Main Street  
Waterbury, VT 05671-0501

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Ed Weed Fish Culture Station  
14 Bell Hill Road  
Grand Isle, Vermont

RECEIVING WATER: Lake Champlain

CLASSIFICATION: Class B. Class B waters are suitable for bathing and recreation, irrigation and agricultural uses; good fish habitat; good aesthetic value; acceptable for public water supply with filtration and disinfection.

I. Proposed Action, Type of Facility, and Discharge Location

The above named applicant applied on March 23, 2005 to the Vermont Department of Environmental Conservation for renewal of the permit to discharge into the designated receiving water. At this time the Department has made a tentative decision to reissue the discharge permit. The facility is engaged in the hatching and rearing of fish. The discharge is from the outfall of an effluent polishing pond, by way of a stabilized channel, to Lake Champlain.

## II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters is based on state and federal laws and regulations, the discharge permit application, and the recent self-monitoring data.

## III. Limitations and Conditions

The effluent limitations of the permit, the monitoring requirements, and any implementation schedule (if required), may be found on the following pages of the permit:

Effluent Limitations: Page 2 of 14  
Monitoring Requirements: Pages 2 and 3 of 14

## IV. Permit Basis and Explanation of Effluent Limitation Derivation

The Department of Fish and Wildlife owns and operates the Ed Weed Fish Culture Station. The Station began construction of this flow-through facility in 1990 with the first year class raised through the '92/93 season. At present six species of salmonids are reared at the Station: landlocked Atlantic Salmon, Brook Trout, Brown Trout, Rainbow Trout to include migratory Steelhead, and Lake Trout. The facility contains 20 raceways and is producing about 130,000 pounds of fish annually. Depending on specific program needs, fish are reared and distributed at various life stages. The water used at the Station is pumped from Lake Champlain via one of two 250 HP pumps. The facility can pump from shallow water (20'), deep water (180'), or a blend of both waters depending on the temperature needs in the raceways. In 1997 a filter building was constructed to address zebra mussel control. All water entering the facility is also disinfected by ultraviolet technology.

Wastewater flowing through the raceways is sent directly to the 1.3 acre polishing pond for treatment. Wastewater *from the cleaning* of the raceways is directed first to a 55,000 gallon clarifier and then to the polishing pond for treatment. Alum is added at the clarifier to aid in settling. The pond is periodically measured for sludge depth which remains very low. Liquid sludge is removed from the 40,000 gallon solids holding tank twice a year in the summer and is utilized by a nearby farmer for fertilizer.

Effluent discharged from the polishing pond flows about 200 yards down a stabilized channel and enters Lake Champlain.

In 2004 EPA promulgated new regulations for the concentrated aquatic animal production (CAAP) point source category (40 CFR Part 451). Subpart A applies to flow-through facilities that produce at least 100,000 pounds annually of aquatic animals. The intent is to reduce discharges of solids and other materials by the implementation of operational measures. The EPA CAAP regulations establish best management practices (BMPs) for the reduction of solids and other wastes instead of setting numeric effluent

limitations. Since the Ed Weed Fish Culture Station has actual effluent numeric limits designed to meet water quality standards (for solids, turbidity and phosphorus) it is not necessary to implement additional BMPs to meet the best practicable control technology currently available (BPT). The effluent limitations, which are at least as stringent as the BMPs, serve this purpose.

**Flow** - The effluent flow limitation remains at 11.5 MGD, monthly average. The facility maintains a continuous discharge. The flow rate is measured daily via the effluent weir after the polishing pond.

**Total Suspended Solids (TSS)** – The TSS limit remains unchanged at 5.8 mg/l, monthly average, and 10.0 mg/l, daily maximum. Monitoring remains at monthly. The permittee may choose to take an influent sample with the effluent sample and report the net results or simply sample the effluent and report that reading. A review of recent self-monitoring data indicates that the effluent sample results alone should consistently meet the permit limits. However, there are times when the net results may be needed to meet the permitted limitations (i.e. when a significant number of ducks are utilizing the polishing pond). The previous permit required influent monitoring and the use of net results. The proposed permit allows the permittee the choice.

**pH** - The pH limitation remains at 6.5 - 8.5 Standard Units as specified in Section 3-01 B.9. in the Vermont Water Quality Standards, effective July 2, 2000. Monitoring remains at monthly.

**Turbidity** – The previous permit included a turbidity limit of 10 NTU year round. However Section 3-04 B. and Appendix A of the Water Quality Standards allow a summertime turbidity limit of 25 NTU from June 1 through September 30 for this portion of Lake Champlain. As a result the permit is proposed to be changed to include both limits depending on the time of year. As with TSS, the permittee may choose to take an influent sample with the effluent sample and report the net results or simply sample the effluent and report that reading. A review of recent self-monitoring data indicates that the effluent sample results alone should consistently meet the permit limits. However, there are times when the net results may be needed to meet the permitted limitations. The previous permit required influent monitoring and the use of net results. The proposed permit allows the permittee the choice. Monitoring remains the same at monthly.

**Total Phosphorus** - The concentration limitation of 0.8 mg/l, monthly average, remains unchanged from the previous permit. The concentration limit is based on requirements in Title 10, Chapter 47 §1266a. Weekly summer and monthly winter monitoring has been changed to twice monthly year round in the proposed permit.

In addition, The 2002 “Lake Champlain Phosphorus Total Maximum Daily Load” established a phosphorus mass loading allocation for the facility based on the 11.5 mgd flow of the facility. That allocation (0.914 metric tons per year or 2015 pounds per year) is being incorporated into this permit.

The annual total pounds is the sum of the twelve monthly totals, which are calculated by multiplying the total monthly flow x the monthly average phosphorus concentration x

8.34. The annual total must be submitted with the December monthly monitoring report and the running total pounds for each calendar year shall be included with each month's self-monitoring report.

The monthly lbs/day limitations remain unchanged from the previous permit. These limitations essentially track with the Lake Champlain TMDL limit of 2015 lbs/day. These limits were included in the initial permit for the facility and were based primarily on the fish feeding bioprogram that was used to balance the needs of the fish with the need to minimize the phosphorus discharge. In addition, at that time the Department recognized that phosphorus in the effluent may cause noticeably increased periphyton algae growth along the shoreline within a half-mile of the outfall. The limits are proposed to remain in the permit. It has been found that the discharge will allow the full support of uses as required by Section 1-04. of the Water Quality Standards.

As with TSS and Turbidity, the permittee may choose to take an influent sample with the effluent sample and report the net results, for the mass limits not the concentration limit, or simply sample the effluent and report that reading. A review of recent self-monitoring data indicates that the effluent sample results alone should consistently meet the permit limits. However, there are times when the net results may be needed to meet the permitted limitations. The previous permit required influent monitoring and the use of net results. The proposed permit allows the permittee the choice.

**Total Ammonia Nitrogen** - Previous permits included ammonia limits of 0.56 mg/l, monthly average, and 0.84 mg/l, daily maximum which were based on Federal Ambient Water Quality Criteria for ammonia. Utilizing EPA's '1999 Update of Ambient Water Quality Criteria for Ammonia', the in-lake standard (not considering dilution) is 0.94 mg/l, monthly average (chronic) and 3.15 mg/l, daily maximum, (acute). (These numbers were derived using a conservative pH of 8.3 and a temperature of 22° C.) Since recent self-monitoring data indicate that the effluent is consistently well below these in-lake standards a 'monitor only' requirement is proposed for the permit. Monitoring remains at quarterly.

**Use of Fishery Chemicals for the Prevention and Control of Pathogens and Disease**—The Fish and Wildlife Department has requested approval for those chemicals that were authorized for use in the previous permit. The permit continues to allow the use of a calculated effluent concentration based on the quantity of chemical used rather than effluent monitoring. The list of chemicals the permittee may utilize is unchanged.

V. Procedures for Formulation of Final Determinations

The public comment period for receiving comments on this draft permit is from June 20, 2005 through July 20, 2005 during which time interested persons may submit their written views on the draft permit. All written comments received by 4:30 PM on July 20, 2005 will be retained by the Department and considered in the formulation of the final determination to issue, deny or modify the draft permit. The period of comment may be extended at the discretion of the Department.

Written comments should be sent to:

Vermont Agency of Natural Resources  
Department of Environmental Conservation  
Wastewater Management Division - Sewing Building  
103 South Main Street  
Waterbury, VT 05671-0405

Comments may also be faxed to: 802-241-2596.

Any interested person or groups of persons may request or petition for a public hearing with respect to this draft permit. Any such request or petition for a public hearing shall be filed within the public comment period described above and shall indicate the interest of the party filing such request and the reasons why a hearing is warranted.

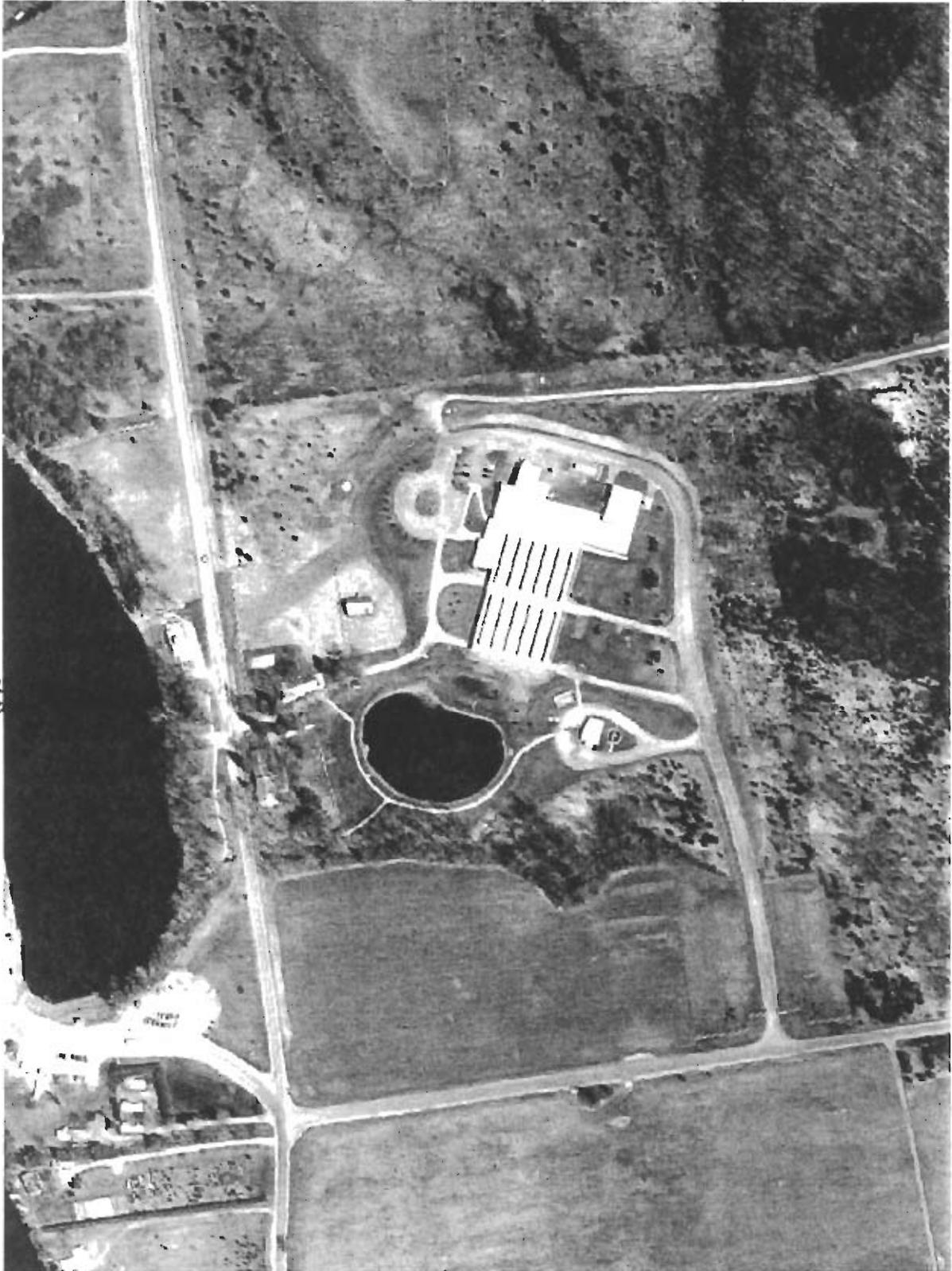
The Department will hold a hearing if there is significant public interest in holding such a hearing. Any public hearing brought in response to such a request or petition will be held in the geographical area of the proposed discharge or other appropriate area, at the discretion of the Department and may, as appropriate, consider related groups of draft permits. Any person may submit oral or written statements and data concerning the draft permit at the public hearing. The Department may establish reasonable limits on the time allowed for oral statements and may require the submission of statements in writing. All statements, comments, and data presented at the public hearing will be retained by the Department and considered in the formulation of the final determination to issue, deny, or modify the draft permit.

The complete application, draft permit, and other information are on file and may be inspected at the VTDEC, Wastewater Management Division, Waterbury Office. Copies will be made at a cost based on the current Secretary of State Official Fee Schedule for Copying Public Records from 8:00 AM to 4:30 PM, Monday through Friday. The draft permit and fact sheet may also be viewed on the Division's website at [www.anr.state.vt.us/dec/ww/wwmd.cfm](http://www.anr.state.vt.us/dec/ww/wwmd.cfm).

*No comments were received during the public notice period.*

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**USGS 8 km E of Plattsburgh, New York, United States 25 Apr 1995**

*Lake Champlain*



0 100M

0 100yd

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