VERMONT

Vermont Department of Environmental Conservation
Watershed Management Division
1 National Life Drive, Main-2
Montpelier VT 05620-3522

Agency of Natural Resources

[phone] 802-828-1535
[fax] 802-828-1544

August 21, 2014

David Borthwick-Lesile
Grand Isle Consolidated Water District
P.O. Box 9
Grand Isle, VT 05458

RE: Amended Discharge Permit No. 3-1545

Dear Mr. Bortwick-Lesile,

Enclosed is your copy of Amended Discharge Permit No. 3-1545 which has been signed on behalf of the Commissioner of the Department of Environmental Conservation. This amended permit modifies your flow limitation from 22,400 gpd, daily maximum, to 22,400 gpd, monthly average, to provide greater flexibility in the operation of your facility to ensure proper treatment of the potable water.

Please review the permit carefully and make note of the effluent limitations, monitoring requirements, and other special conditions.

Based on additional consideration during the comment period by the Agency, the requirement to monitor and report the daily maximum flow was included in the final permit. Other than that modification the final permit is unchanged from the draft that was placed on public notice for comment.

If there are any questions regarding this permit please contact Randy Bean at our office.

Sincerely,

Ernest F. Kelley, Manager
Wastewater Management Program

attachments
cc
Brad Washburn, Green Mountain Engineering

AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
1 NATIONAL LIFE DRIVE
MONTPELIER, VERMONT 05620-3522

Permit No.: 3-1545
File No.: 07-02
PIN: EJ95-0120
NPDES No.:VT0001490

AMENDED
DISCHARGE PERMIT

In compliance with the provisions of the Vermont Water Pollution Control Act, as amended, (10 V.S.A. Chapter 47 §1251 et. seq), the Vermont Water Pollution Control Permit Regulations and the Federal Clean Water Act, as amended (33 U.S.C. § 1251 et. seq),

Grand Isle Consolidated Water District
P.O. Box 9
Grand Isle, VT 05458

(hereinafter referred to as the "permittee") is authorized, by the Secretary, Agency of Natural Resources, to discharge from a facility located at:

West Road Shore
Grand Isle, Vermont

to Lake Champlain, Class B at the point of discharge in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III hereof.

This permit shall become effective on date of signing.

This permit and the authorization to discharge shall expire on March 31, 2017.

State of Vermont
Agency of Natural Resources

David K. Mears, Commissioner
Department of Environmental Conservation

BY:

Digitally signed by Pete LaFlamme
DN: cn=Pete LaFlamme
Date: 2014.08.19 15:07:47 -04'00'

Peter LaFlamme, Director
Watershed Management Division

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. From the date of signing through March 31, 2017, the permittee is authorized to discharge from outfall serial number S/N 001: treated filter backwash from a potable water treatment facility. Such discharges shall be limited and monitored by the permittee as specified below:

Discharge Limitations			Monitoring Requirements	
Effluent Characteristic	**Monthly Average**	**Daily Maximum**	**Measurement Frequency**	**Sample Type**
Flow	***22,400 gpd***	***Monitor only See Condition A.2.e below***	Daily	Calculated estimate(1)
Total Suspended Solids		10 mg/l	1 x monthly	Grab
Turbidity	10 NTU (2)		1 x monthly	Grab
Total Residual Chlorine		1.0 mg/l	1 x monthly	Grab
pH		6.5 to 8.5 SU	1 x monthly	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at effluent sampling station at the end of the outfall pipe.

(1) Flow shall be calculated based on the number of backwash cycles plus the constant daily flows from analyzers.

(2) Annual Average limitation based on during dry weather conditions.

2. **Special Conditions:**

a. The discharge of algicides, slimicides, or any other chemical substance for backflushing the water intake line is prohibited.

b. Floor drains shall be used for normal raw and process water discharge only. The discharge of chlorine or any other chemical substance via the floor drains other than in trace amounts is prohibited.

i. Only chemicals normally used in the operation of a water treatment facility shall be stored in the facility.

ii. All chemicals shall be stored in a properly designed chemical storage area.

iii. Any chemical spills shall be isolated and disposed in accordance with State and Federal Regulations.

c. The accumulated sludge in the backwash settling tanks shall be measured quarterly. The dates of the measurements and the depth of the accumulated sludge shall be included on the appropriate Discharge Monitoring Report.

d. The accumulated sludge shall be removed from the backwash settling tanks at least twice per year, once in the spring and once in the fall. The dates of sludge removal and the volume of sludge removed shall be included on the appropriate Discharge Monitoring Report. Sludge shall be managed in accordance with Condition II.A.8. of this permit.

e. If the Agency determines that this discharge causes or contributes to violations of Water Quality Standards in the receiving water, then this permit may be reopened and additional effluent limitations and monitoring requirements established.

f. This discharge shall not cause a violation of Water Quality Standards in the receiving water.

B. REAPPLICATION

If the permittee desires to continue to discharge after the expiration date of this permit, he shall apply on the application forms then in use at least 180 days before the permit expires.

Reapply for a Discharge permit by September 30, 2016.

C. OPERATING FEES

This discharge is subject to operating fees. The permittees shall submit the operating fees in accord with the procedures provided by the Secretary.

D. MONITORING AND REPORTING

1. Sampling and Analysis

The sampling, preservation, handling, and analytical methods used shall conform to regulations published pursuant to Section 304(g) of the Clean Water Act, under which such procedures may be required. Guidelines establishing these test procedures have been published in the Code of Federal Regulations, Title 40, Part 136 (Federal Register, Vol. 56, No. 195, July 1, 1999 or as amended).

If applicable, *Escherichia coli* shall be tested using one of the following methods:

a. "Most Probable Number" (MPN) method 9223B found in Standard Methods for the Examination of Water and Wastewater, 18th or subsequent approved edition(s). Premade formulations are available as Colilert and Colilert 18 from IDEXX Labs Inc., Westbrook, ME;

b. EPA "membrane filtration" (MF) method 1603 using modified mTEC; or

c. A single step membrane filtration (MF) method using mColiBlue 24 available from Hach Company, Loveland, CO.

Samples shall be representative of the volume and quality of effluent discharged over the sampling and reporting period. All samples are to be taken during normal operating hours. The permittee shall identify the effluent sampling location used for each discharge.

2. Reporting

The Permittee is required to submit monitoring results as specified on a Discharge Monitoring Report (Form WR-43). Reports are due on the 15th day of each month, beginning with the month following the effective date of this permit.

If, in any reporting period, there has been no discharge, the permittee must submit that information by the report due date.

Signed copies of these, and all other reports required herein, shall be submitted to the Secretary at the following address:

Agency of Natural Resources
Department of Environmental Conservation
Watershed Management Division
1 National Life Drive
Montpelier, Vermont 05620-3522

All reports shall be signed:

a. In the case of corporations, by a principal executive officer of at least the level of vice president, or his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the permit form originates;

b. In the case of a partnership, by a general partner;

c. In the case of a sole proprietorship, by the proprietor;

d. In the case of a municipal, State, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

3. Recording of Results

The permittee shall maintain records of all information resulting from any monitoring activities required including:

a. The exact place, date, and time of sampling;
b. The dates and times the analyses were performed;
c. The person(s) who performed the analyses;

d. The analytical techniques and methods used including sample collection handling and preservation techniques;
e. The results of all required analyses.
f. The records of monitoring activities and results, including all instrumentation and calibration and maintenance records;
g. The original calculation and data bench sheets of the operator who performed analysis of the influent or effluent pursuant to requirements of Section I.(A) of this permit.

The results of monitoring requirements shall be reported (in the units specified) on the Vermont reporting form WR-43 or other forms approved by the Secretary.

4. Additional Monitoring

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form WR-43. Such increased frequency shall also be indicated.

PART II

A. MANAGEMENT REQUIREMENTS

1. Facility Modification / Change in Discharge:

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and/or criminal penalties pursuant to 10 V.S.A. Chapters 47, 201 and/or 2011. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the permit issuing authority of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. Noncompliance Notification

In the event the permittee is unable to comply with any of the conditions of this permit due, among other reasons, to:

a. breakdown or maintenance of waste treatment equipment (biological and physical-chemical systems including, but not limited to, all pipes, transfer pumps,

compressors, collection ponds or tanks for the segregation of treated or untreated wastes, ion exchange columns, or carbon absorption units),

b. accidents caused by human error or negligence, or

c. other causes such as acts of nature,

the permittee shall notify the Secretary within 24 hours of becoming aware of such condition or by the next business day and shall provide the Secretary with the following information, in writing, within five (5) days:

i. cause of non-compliance

ii. a description of the non-complying discharge including its impact upon the receiving water;

iii. anticipated time the condition of non-compliance is expected to continue or, if such condition has been corrected, the duration of the period of non-compliance;

iv. steps taken by the permittee to reduce and eliminate the non-complying discharge; and

v. steps to be taken by the permittee to prevent recurrence of the condition of non-compliance.

3. Operation and Maintenance

All waste collection, control, treatment, and disposal facilities shall be operated in a manner consistent with the following:

a. The permittee shall, at all times, maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

b. The permittee shall provide an adequate operating staff which is duly qualified to carry out the operation, maintenance, and testing functions required to insure compliance with the conditions of this permit.

4. Quality Control

The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at regular intervals to ensure accuracy of measurements, or shall ensure that both activities will be conducted.

The permittee shall keep records of these activities and shall provide such records upon request of the Secretary.

The permittee shall analyze any additional samples as may be required by the Agency of Natural Resources to ensure analytical quality control.

5. Bypass

The diversion or bypass of facilities, necessary to maintain compliance with the terms and conditions of this permit, is prohibited, except where authorized under terms and conditions of an emergency pollution permit issued pursuant to 10 V.S.A. Section 1268.

6. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any adverse impact to waters of the State resulting from non-compliance with any condition specified in this permit, including accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed, calibration and maintenance of instrumentation, and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, and shall be submitted to Department representatives upon request. This period shall be extended during the course of unresolved litigation regarding the discharge of pollutants or when requested by the Secretary.

8. Solids Management

Collected screenings, sludges, and other solids removed in the course of treatment and control of wastewaters shall be stored, treated and disposed of in accord with 10 V.S.A., Chapter 159 and with the terms and conditions of any certification, interim or final, transitional operation authorization or order issued pursuant to 10 V.S.A., Chapter 159 that is in effect on the effective date of this permit or is issued during the term of this permit.

9. Emergency Pollution Permits

Maintenance activities, or emergencies resulting from equipment failure or malfunction, including power outages, which result in an effluent which exceeds the effluent limitations specified herein, shall be considered a violation of the conditions of this permit, unless the permittee immediately applies for, and obtains, an emergency pollution permit under the provisions of 10 V.S.A., Chapter 47, Section 1268. The permittee shall notify the Department of the emergency situation by the next working day.

10 V.S.A., Chapter 47, Section 1268 reads as follows:

"When a discharge permit holder finds that pollution abatement facilities require repairs, replacement or other corrective action in order for them to continue to meet standards specified in the permit, he may apply in the manner specified by the secretary for an

emergency pollution permit for a term sufficient to effect repairs, replacements or other corrective action. The permit may be issued without prior public notice if the nature of the emergency will not provide sufficient time to give notice; provided that the secretary shall give public notice as soon as possible but in any event no later than five days after the effective date of the emergency pollution permit. No emergency pollution permit shall be issued unless the applicant certifies and the secretary finds that:

(1) there is no present, reasonable alternative means of disposing of the waste other than by discharging it into the waters of the state during the limited period of time of the emergency;

(2) the denial of an emergency pollution permit would work an extreme hardship upon the applicant;

(3) the granting of an emergency pollution permit will result in some public benefit;

(4) the discharge will not be unreasonably harmful to the quality of the receiving waters;

(5) the cause or reason for the emergency is not due to wilful or intended acts or omissions of the applicant."

Application shall be made to the Secretary of the Agency of Natural Resources, Department of Environmental Conservation, 1 National Life Drive, Montpelier, Vermont 05620-3522.

10. Power Failure

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

a. Provide an alternative power source sufficient to operate the wastewater control facilities, or if such alternative power source is not in existence,

b. Halt, reduce, or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Secretary or authorized representative, upon the presentation of proper credentials:

a. to enter upon the permittee's premises in which an effluent source or any records required to be kept under terms and conditions of the permit are located;

b. to have access to and copy any records required to be kept under the terms and conditions of the permit;

c. to inspect any monitoring equipment or method required in the permit; or

d. to sample any discharge of pollutants.

2. Transfer of Ownership or Control

This permit is not transferable without prior written approval of the Secretary. All application and operating fees must be paid in full prior to transfer of this permit. In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall provide a copy of this permit to the succeeding owner or controller and shall send written notification of the change in ownership or control to the Secretary. The permittee shall also inform the prospective owner or operator of their responsibility to make an application for transfer of this permit.

This request for transfer application must include as a minimum:

a. A properly completed application form provided by the Secretary and the applicable processing fee.

b. A written statement from the prospective owner or operator certifying:

i.. The conditions of the operation that contribute to, or affect, the discharge will not be materially different under the new ownership.

ii. The prospective owner or operator has read and is familiar with the terms of the permit and agrees to comply with all terms and conditions of the permit.

iii. The prospective owner or operator has adequate funding to operate and maintain the treatment system and remain in compliance with the terms and conditions of the permit.

c. The date of the sale or transfer.

The Secretary may require additional information dependent upon the current status of the facility operation, maintenance, and permit compliance.

3. Confidentiality

Pursuant to 10 V.S.A. 1259(b):

"Any records, reports or information obtained under this permit program shall be available to the public for inspection and copying. However, upon a showing satisfactory to the secretary that any records, reports or information or part thereof, other than effluent data, would, if made public, divulge methods or processes entitled to protection as trade secrets, the secretary shall treat and protect those records, reports or information as confidential.

Any records, reports or information accorded confidential treatment will be disclosed to authorized representatives of the state and the United States when relevant to any proceedings under this chapter."

4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

a. violation of any terms or conditions of this permit;

b. obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. a change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

5. Toxic Effluent Standards

That if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under section 307(a) of the Federal Clean Water Act for a toxic pollutant which is present in the permittee's discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in the permit, the secretary shall revise or modify the permit in accordance with the toxic effluent standard or prohibition and so notify the permittee.

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under 10 V.S.A. §1281.

7. Civil and Criminal Liability

Except as provided in, "Bypass" (Part II, paragraph A.5.), "Power Failure" (Part II, paragraph A.10.), and "Emergency Pollution Permits" (Part II, paragraph A.9.), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Civil and criminal penalties for non-compliance are provided for in 10 V.S.A. Chapters 47, 201 and 211.

8. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation.

9. Property Rights

Issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

10. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

11. Authority

This permit is issued under authority of 10 V.S.A. §1258 and §1259 of the Vermont Water Pollution Control Act, the Vermont Water Pollution Control Permit Regulations and Section 402 of the Clean Water Act, as amended. 10 V.S.A. §1259 states that: "No person shall discharge any waste, substance, or material into waters of the State, nor shall any person discharge any waste, substance, or material into an injection well or discharge into a publicly owned treatment works any waste which interferes with, passes through without treatment, or is otherwise incompatible with those works or would have a substantial adverse effect on those works or on water quality, without first obtaining a permit for that discharge from the Secretary".

PART III

A. OTHER REQUIREMENTS

This permit shall be modified, suspended or revoked to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b) (2) (C), and (D), 304(b) (2), and 307 (a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

2. Controls any pollutant not limited in the permit.

The permit as modified under this paragraph shall also contain any other requirements of the Vermont Water Pollution Control Act then applicable.

B. DEFINITIONS

For purposes of this permit, the following definitions shall apply:

The Act - The Vermont Water Pollution Control Act, 10 V.S.A. Chapter 47

Annual Average - The highest allowable average of daily discharges calculated as the sum of all daily discharges (mg/l, lbs or gallons) measured during a calendar year divided by the number of daily discharges measured during that year.

Average - The arithmetic means of values taken at the frequency required for each parameter over the specified period.

The Clean Water Act - The federal Clean Water Act, as amended.

Composite Sample - A sample consisting of a minimum of one grab sample per hour collected during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportionally to flow over that same time period.

Daily Discharge - The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.

For pollutants with limitation expressed in pounds the daily discharge is calculated as the total pounds of pollutants discharged over the day.

For pollutants with limitations expressed in mg/l the daily discharge is calculated as the average measurement of the pollutant over the day.

Grab Sample - An individual sample collected in a period of less than 15 minutes.

Incompatible Substance (Pollutant) - Any waste being discharged into the treatment works which interferes with, passes through without treatment, or is otherwise incompatible with said works or would have a substantial adverse effect on these works or on water quality. This includes all pollutants required to be regulated under the Federal Clean Water Act.

Instantaneous Maximum - A value not to be exceeded in any grab sample.

Major Contributing Industry - One that: (1) has a flow of 50,000 gallons or more per average work day; (2) has a flow greater than five percent of the flow carried by the municipal system receiving the waste; (3) has in its wastes a toxic pollutant in toxic amounts as defined in standards issued under Section 307(a) of the Act; or (4) has a significant impact, either singly or in combination with other contributing industries, on a publicly owned treatment works or on the quality of effluent from that treatment works.

Maximum Day (maximum daily discharge limitation) - The highest allowable "daily discharge" (mg/l, lbs or gallons).

Mean - The mean value is the arithmetic mean.

Monthly Average - (Average monthly discharge limitation) - The highest allowable average of daily discharges (mg/l, lbs or gallons) over a calendar month, calculated as the sum of all daily discharges (mg/l, lbs or gallons) measured during a calendar month divided by the number of daily discharges measured during that month.

NPDES - The National Pollutant Discharge Elimination System.

Secretary - The Secretary of the Agency of Natural Resources

State Certifying Agency Agency of Natural Resources
Department of Environmental Conservation
Watershed Management Division
1 National Life Drive
Montpelier, Vermont 05620-3522

Weekly Average - (Average weekly discharge limitation) - The highest allowable average of daily discharges (mg/l, lbs or gallons) over a calendar week, calculated as the sum of all daily discharges (mg/l, lbs or gallons) measured during a calendar week divided by the number of daily discharges measured during that week.

07/2000; u.12/2011

DATA TRACKING AND TECHNICAL FACT SHEET

Permittee: US Department of Commerce, NOAA, National Marine Fisheries Service, Northeast Fisheries Science Center, Milford Laboratory

PERMIT, ADDRESS, AND FACILITY DATA

PERMIT No. CT0090182 *APPLICATION #: 201302837* *FACILITY ID. 084-097*

Mailing Address:						***Location Address:***					
Street:	*74 Magruder Road*					***Street:***	*212 Rogers Avenue*				
City:	*Highlands*	***ST:***	***NJ***	***Zip:***	*07732*	***City:***	*Milford*	***ST:***	***CT***	***Zip:***	*06460*
Contact Name:	*Linda Arlen*					***DMR Contact***	*Linda Arlen*				
Phone No.:	*(732) 872-3093*					***Phone No.:***	*(732) 872-3093*				

PERMIT INFORMATION

DURATION *5 YEAR X* *10 YEAR ___* *30 YEAR _____*

TYPE *New ___* *Reissuance ___* *Modification X*

CATEGORIZATION *POINT (X)* *NON-POINT ( )* *GIS # ___*

NPDES (X) *PRETREAT ()* *GROUND WATER(UIC) ( )* *GROUND WATER (OTHER) ( )*

NPDES MAJOR (MA) _____
NPDES SIGNIFICANT MINOR or PRETREAT SIU (SI) _____
NPDES or PRETREATMENT MINOR (MI) X

PRETREAT SIGNIFICANT INDUS USER (SIU) _____
PRETREAT CATEGORICAL (CIU) _____
Note: If it's a CIU then check off SIU

POLLUTION PREVENTION MANDATE ___ ENVIRONMENTAL EQUITY ISSUE _____

COMPLIANCE ISSUES

COMPLIANCE SCHEDULE *YES* *NO X*

POLLUTION PREVENTION ___ *TREATMENT REQUIREMENT____WATER CONSERVATION*

WATER QUALITY REQUIREMENT ___ *REMEDIATION ___* *OTHER _____*

IS THE PERMITTEE SUBJECT TO A PENDING ENFORCEMENT ACTION? NO X YES ___

OWNERSHIP CODE

Private __ Federal _X_ State __ Municipal (town only) __ Other public ____

DEP STAFF ENGINEER *Ewa Wozniak*

PERMIT FEES

Discharge Code	*DSN*	*Annual Fee*
102000b	*001, 002*	*$2,290.00*

FOR NPDES DISCHARGES

Drainage basin Code: 5306 *Present/Future Water Quality Standard: SC/SB*

NATURE OF BUSINESS GENERATING DISCHARGE

Northeast Fisheries Science Center, Milford Laboratory, is an aquaculture research facility.

PROCESS AND TREATMENT DESCRIPTION (by DSN)

DSN 001-1: This discharge is made up of a maximum flow of 324,000 gallons per day of seawater from aquariums. The seawater is either re-circulated or passes once through the aquariums before it is discharged. In some cases water may be filtered using sand filters prior to being returned to the river.

DSN 002-1: This discharge is made up of a maximum flow of 2,736,000 gallons per day of seawater from aquariums, algae research and seawater bypass wastewater. In some cases water may be filtered using sand filters prior to being returned to the river.

RESOURCES USED TO DRAFT PERMIT

__ *Federal Effluent Limitation Guideline*_____
name of category

__ *Performance Standards*

__ *Federal Development Document*
name of category

__ *Treatability Manual*

_X_ *Department File Information*

_X_ *Connecticut Water Quality Standards*

_X_ *Anti-degradation Policy*

_X_ *Coastal Management Consistency Review Form*

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

X *Case-by-Case Determination using Best Professional Judgment (See Comments)*

X *In order to meet in-stream water quality (See General Comments)*

GENERAL COMMENTS

The need for inclusion of water quality based discharge limitations in this permit was evaluated consistent with Connecticut Water Quality Standards and criteria, pursuant to 40 CFR 122.44(d). Each parameter was evaluated for consistency with the available aquatic life criteria (acute and chronic) and human health (fish consumption only) criteria, considering the zone of influence allocated to the facility where appropriate. The statistical procedures outlined in the EPA Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) were employed to calculate the need for such limits. Comparison of monitoring data and its inherent variability with the calculated water quality based limits indicates a low statistical probability of exceeding such limits. Therefore, no water quality based limits were included in the permit at this time.

COMMENTS RELATED TO THE PERMIT ISSUED ON July 30, 2010

Oil petroleum (total recoverable) replaces the total oil and grease parameter from the previous permit.

Limitations for total ammonia nitrogen, oil petroleum (total recoverable) and surfactants (as MBAS) remain unchanged from the previous permit. Monitoring data provided by the Permittee show that the Permittee has been able to consistently meet the permit limits. In addition, the Permittee is required to maintain at the facility a record of the total daily flow once per week (for both discharge locations) and shall report the Total Daily Flow for each sampling month.

Total Suspended Solids' maximum daily and instantaneous limits were increased from 20.0 mg/L and 30.0 mg/L to 50.0 mg/L and 60.0 mg/L, respectively. The Permittee collected data for two years during which it was shown that the incoming water's TSS limits exceeded the permit's limits. Since the company uses the incoming water in its aquarium research tanks without adding any chemicals the Department increased the TSS limits to account for the fact that the incoming water has high levels of TSS. This change is consistent with Section 22a-430-4(l) of the Regulations of Connecticut State Agencies.

Northeast Fisheries Science Center, Milford Laboratory, is a research facility that emphasizes aquaculture and habitat related work. The Laboratory's aquaculture program includes studies of fish/shellfish culture to develop methods for commercial adaptation. Because the Laboratory is not adding any chemicals to the seawater and because the facility is designed to provide water quality sufficient for the successful establishment and maintenance of healthy aquatic populations within the laboratory, both treatment and toxicity testing are not necessary.

Since the date of the last permit application (September 2000), the Permittee conducted several construction projects. The Permittee eliminated all floor drains in Building 1 ensuring that no floor wash wastewater, cleaning products and residue enter the Wepawaug River through DSN 001-1. In addition, the Permittee installed a sediment separator, holding tank system and valve system to eliminate the discharge of laboratory sink and floor drains, and other incidental cleaning and maintenance wastewaters to the Wepawaug River. This wastewater is discharged to the sanitary sewer and is exempt from general permit registration for the General Permit for Miscellaneous Discharges of Sewer Compatible Wastewater because the quantity of wastewater allows for automatic coverage. In addition, any boiler blowdown generated at the facility will be directed to the sanitary sewer and automatically covered under the General Permit for Miscellaneous Discharge of Minor Boiler Blowdown because the quantity of wastewater allows for automatic coverage.

The Permittee has a Scallop hatchery that is currently not operational and does not generate wastewater. Although this building has not been operational since 2003, the Permittee has plans that are being explored to use this facility

in the future. The Permittee also has a Greenhouse that has not been operational since 2003. At this time a research experiment is being explored. This research experiment would not contribute wastewater to DSN 002-1 because it is self contained. However, future experiments generating wastewater from both the Scallop hatchery and the Greenhouse will contribute to DSN 002-1. At the time of this permit reissuance, the Permittee did not specify which future experiments will be performed and the types of wastewaters these experiments will generate. Therefore, the Permittee is not allowed to discharge any wastewater from the Scallop hatchery or the Greenhouse at this time. In the future, the Permittee would have to get a permit modification from the Department to discharge any wastewaters generated from the Scallop hatchery or the Greenhouse.

Section 316 (b) of the Clean Water Act was reviewed to determine whether it is applicable to the facility's intake structure. However, since the facility does not use the water it withdraws from the Wepawaug River for cooling purposes, Section 316 (b) is not applicable. The intake structure, made from PVC pipes which have horizontal slits cut out, is located approximately 25 feet from shore and is suspended approximately 2 feet from the bottom sediment and approximately 10 feet under the high water surface. There are six inlet PVC pipes, each with its own pump, however usually 2-4 pumps will operate. The Department staff is not requiring the Permittee to study impingement and entrainment issues at this time based on recommendations from the DEEP-Fisheries Section. Adverse environmental impacts from impingement mortality and entrainment are not deemed by the DEEP at this time to be a significant concern.

Anti-degradation does not apply to this permit reissuance because there has been no change in the discharge volumes or constituent concentrations.

This permit modification deals with the administrative change of the parameter name from Phosphorous, Total to Phosphorus, Total (as P) and units for Temperature from mg/l to °F for both Tables A and B in Section 4 of the permit. The processing time and effort for this application is equal to that of a Non Contact Cooling Water application. Therefore, the permit fee discharge code is changed from Fish Hatchery & Farms (101024Z) to Non Contact Cooling (102000b).

COMMENTS RELATED TO THE 2014 PERMIT MODIFICATION

On May 29, 2013, US Department of Commerce, NOAA Fisheries, Northeast Fisheries Science Center, Milford Laboratory ('NOAA') submitted to the Department an application to modify its existing NPDES Permit No. CT0090182. Specifically, NOAA requested to have its maximum daily flows, associated with DSN 001-1 and DSN 002-1, be increased from 120,000 gpd to 324,000 gpd and from 1,500,000 gpd to 2,736,000 gpd, respectively. The request for flow increases is due to the fact that NOAA's recent flow data indicates that the flow rates calculated in 2002 were incorrect.

In addition, NOAA requested the following modifications:

DSN 001-1:

- *Eliminate the maximum daily limit for total suspended solids*
- *Replace and upgrade a finfish re-circulating system by installing a drum filter and a protein skimmer*

DSN 002-1:

- *Eliminate the maximum daily limit for total suspended solids*
- *Utilize the Greenhouse (Building 12) to conduct algae research activities*

The Department evaluated NOAA's request to increase its maximum daily flows for both DSN 001-1 and DSN 002-1 and determined that the potential of increased entrainment is unlikely to have significant biological impacts, and impingement is not expected to be of concern due to the cylindrical shape and relatively small total surface are of the intake pipes. The Department based its decision after consultation with staff from DEEP-Fisheries Section (Attachment 1: e-mail dated May 22, 2013).

The Department also evaluated NOAA's influent total suspended solids data and determined that removing the maximum daily and instantaneous limits will be protective of the waters of the state since the total suspended solids influent concentrations exceed the permit limits. In addition, pursuant to 22a-430-4(l)(4)(xxiii), anti-backsliding is not an issue because the circumstances on which the previous permit was based have changed. However, the Department is requiring that NOAA continue to monitor the influent water for total suspended solids on a semi-annual basis (in the months of April and October).

Pursuant to the federal regulations (40 CFR 131.12) and Connecticut Water Quality Standards (CTWQS), the Department also evaluated the need to implement the Antidegradation Policy. Although this is not a new permit, due to an increase in the effluent flow, a Tier 1 analysis was conducted to ensure that existing and designated uses of surface waters and the water quality necessary for their protection are maintained and preserved, consistent with CTWQS. The Department has determined that the discharge or activity is consistent with the maintenance, restoration, and protection of existing and designated uses assigned to the receiving water body by considering all relevant available data.

The Department also evaluated NOAA's request to utilize the Greenhouse for algae research purposes. More specifically, NOAA requested to use the Greenhouse to grow algae using the Algal Mass Production System (GRAMPS). A total of 4,050 liters of sea water is diverted from the Covered Tank Pad (Building 4) to the Greenhouse to be utilized in the algae research. The seawater passes through a sand filter before filling the GRAMPS culture vessels. The sand filter is equipped with a fresh water backwash that uses less than 150 gallons of fresh water per backwash 6 times/year. NOAA will utilize settling tanks, filter de-watering or centrifuging and evaporation to remove the grown algal biomass from seawater contained in the GRAMPS culture vessels. The algae biomass will be taken off-site by a third party. Wastewater from the GRAMPS culture vessels will be discharged through the DSN 002-1 outfall.

Due to the fact that NOAA will be adding nutrients to help the algae grow, the Department evaluated the possible concentrations of nutrients (more specifically total phosphorus and ammonia nitrogen) in the discharge. Since NOAA discharges to the Wepawaug River, which flows to the Long Island Sound, the Department also reviewed the Long Island Sound Nitrogen TMDL to determine whether the additional algae wastewater discharge will have an adverse effect on the concentration of nutrients in the Long Island Sound. Based on the concentration projections of total phosphorus, nitrates, nitrites and ammonia nitrogen, supplied by NOAA, the concentration of these nutrients in the algae wastewater will not have an adverse effect on the Long Island Sound.

Notice of Tentative Decision was published in the New Haven Register on July 31, 2014. The comment period ended on August 30, 2014. The Department has received no written comments on the proposed action. Section 1(A) of the final permit was edited to correct an administrative error made in citations and program reference.

Attachment 1

Wozniak, Ewa

From: Johnson, Mark
Sent: Wednesday, May 22, 2013 10:40 AM
To: Wozniak, Ewa
Subject: RE: Northeast Fisheries Science Center - Milford Harbor

Ewa-

Doubling the water withdrawal does seem to be a significant increase in quantity, but perhaps not in the biological sense. Theoretically, the potential to entrain eggs and larvae would double, but 3 mgd is still a relatively low water withdrawal in an estuarine environment and unlikely to have significant biological impacts.

After we discussed this on the phone, it is also my understanding that it is likely NMFS will continue to operate near the current water withdrawal levels. NMFS has requested limit increases for the two discharges because better monitoring of flow has shown that DSN 001-1 has frequently been near 200,000 gpd rather than the permitted 120,000 gpd and occasionally DSN 002-1 exceeded the limit of 1.5 mgd. Therefore NMFS would like to modify the limits to allow these withdrawals, and are requesting limits that reflect full operation capability rather than current need.

If the lab did increase flow to the requested permitted levels, it is not clear to me whether it would result in higher through-slot velocities, which could then result in more impingement. However, I still would not expect impingement to be of concern due to the cylindrical shape and relatively small total surface area of the intake pipes.

If you would like to discuss this further, please do not hesitate to contact me.

Thanks,

Mark Johnson
Senior Fisheries Biologist
Habitat Conservation and Enhancement Program
Bureau of Natural Resources, Inland Fisheries Division
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From: Wozniak, Ewa
Sent: Monday, May 20, 2013 1:28 PM