AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§1251 et seq.; the "CWA"),

New Hampshire Department of Resources and Economic Development

is authorized to discharge from the Wastewater Treatment Plant located at

Wallis Sands State Park
Ocean Boulevard (Route 1A)
Rye, New Hampshire 03870

to receiving water named

Atlantic Ocean (Hydrologic Basin Code 01060003)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on **the date of signature.**

This permit and the authorization to discharge expire at midnight, five (5) years from the effective date.

This permit supersedes the permit issued on February 19, 2002.

This permit consists of 9 pages in Part I including effluent limitations, monitoring requirements, etc., **Sludge Compliance Guidance** dated November 4, 1999 and Part II including General Conditions and Definitions.

Signed this 30th day of October, 2007

/S/ SIGNATURE ON FILE

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Stephen Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency
EPA-New England
Boston, Massachusetts

PART I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning **ON MAY 1ST and LASTING THROUGH TO OCTOBER 31ST OF EACH YEAR**, the permittee is authorized to discharge treated domestic (sanitary) wastewater from outfall serial number 001 into the Atlantic Ocean. Such discharges shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.

Effluent Characteristic	Discharge Limitations						Monitoring Requirements	
	Average Monthly	Average Weekly (lbs/day)	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow; MGD	-------	-------	-------	Report	-------	Report	Continuous	Recorder[1]
BOD_5	2.5	3.8	4.2	30 mg/l	45 mg/l	50 mg/l	2/Month[2]	Grab
TSS	2.5	3.8	4.2	30 mg/l	45 mg/l	50 mg/l	2/Month[2]	Grab
pH Range[3]	6.5 to 8.0 Standard Units (See **PART I.E.4**)						3/Week	Grab
Fecal Coliform Bacteria; Colonies per 100 ml				14[4]	-------	Report[5]	5/Week[6]	Grab
Enterococci Bacteria[7]; Colonies per 100 ml				35	-------	104	1/Day	Grab

See page 3 for footnotes

FOOTNOTES TO PART I.A.1.

(1) The effluent flow shall be continuously measured and recorded using a flow meter and totalizer.

(2) The influent concentrations of both BOD_5 and TSS shall also be monitored twice per month using a grab sample.

(3) State Certification Requirement.

(4) Compliance with the "average monthly" limit for Fecal Coliform shall be determined by calculating the geometric mean. Not more than 10 percent of the collected samples shall exceed a Most Probable Number (MPN) of 43 per 100 milliliters for a 5-tube decimal dilution test. Fecal Coliform shall be tested using an approved method as specified in 40 C.F.R. Part 136, List of Approved Biological Methods for Wastewater and Sewage Sludge. All Fecal Coliform data collected must be submitted with the monthly Discharge Monitoring Reports.

(5) The permittee is required to report two (2) statistics each month. One is the maximum daily Fecal Coliform value expressed in terms of "Colonies per 100 ml", and the other is the "percentage" of collected samples that exceeds a MPN of 43 per 100 milliliters for the 5-tube decimal dilution test. The latter statistic will be used to judge compliance with that part of the limit that reads "Not more than 10 percent of the collected samples shall exceed a MPN of 43 per 100 milliliters for a 5-tube decimal dilution test" referenced in footnote (4) immediately above.

(6) Fecal coliform samples shall be collected concurrently with the enterococci bacteria samples.

(7) The average monthly value for Enterococci shall be determined by calculating the geometric mean. Enterococci shall be tested using an approved method as specified in 40 C.F.R. Part 136, List of Approved Biological Methods for Wastewater and Sewage Sludge.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Continued)

2. The discharge shall not cause a violation of the water quality standards of the receiving water.

3. The discharge shall be adequately treated to ensure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. It shall be adequately treated to insure that the surface waters remain free from pollutants which produce odor, color, taste or turbidity in the receiving water which is not naturally occurring and would render it unsuitable for its designated uses.

4. The permittee's treatment facility shall maintain a minimum of 85 percent removal for both

BOD_5 and TSS. The percent removal shall be based on a comparison of average monthly influent versus effluent concentrations.

5. When the effluent discharged for a period of three consecutive months exceeds 80 percent of the 0.01 Million Gallons per Day (MGD) design flow (0.008 MGD), the permittee shall submit to the permitting authorities a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans. Before the design flow will be reached, or whenever treatment necessary to achieve permit limits cannot be assured, the permittee may be required to submit plans for facility improvements.

6. Any introduction of pollutants into the treatment works from either a non-domestic source (user) or a primary industrial category (See 40 CFR Part 122, Appendix A as amended) is prohibited. The term (user) is defined in 40 CFR Section 403.3.

7. All Publicly Owned Treatment Works (POTWs) must provide adequate notice to both EPA-New England and the NHDES-WD of the following:

   a. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

   b. For purposes of this paragraph, adequate notice shall include information on:

      (1) the quantity and quality of effluent introduced into the POTW; and

      (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

8. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.

B. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405(d) technical standards.

2. The permittee shall comply with the more stringent of either the state (Env-Wq 800) or federal (40 CFR Part 503) requirements.

3. The requirements and technical standards of 40 CFR Part 503 apply to facilities which

perform one or more of the following use or disposal practices.

a. Land application - the use of sewage sludge to condition or fertilize the soil.

b. Surface disposal - the placement of sewage sludge in a sludge only landfill.

c. Placement of sludge in a municipal solid waste landfill (See 40 CFR Section 503.4).

d. Sewage sludge incineration in a sludge only incinerator.

4. The 40 CFR Part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions do not apply to facilities which do not dispose of sewage sludge during the life of the permit, but rather treat the sludge (lagoons-reed beds), or are otherwise excluded under 40 CFR Section 503.6.

5. The permittee shall use and comply with the attached Sludge Compliance Guidance document to determine appropriate conditions. Appropriate conditions contain the following elements.

General requirements
Pollutant limitations
Operational standards (pathogen reduction requirements and vector attraction reduction requirements)
Management practices
Record keeping
Monitoring
Reporting

Depending upon the quality of material produced by a facility all conditions may not apply to the facility.

6. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction for the permittee's chosen sewage sludge use or disposal practices at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year.

less than 290	1/Year
290 to less than 1,500	1/Quarter
1,500 to less than 15,000	6/Year
15,000 plus	1/Month

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR Section

503.8.

8. The permittee shall submit an annual report containing the information specified in the attached Sludge Compliance Guidance document. Reports are **due annually by February 19th**. Reports shall be submitted to both addresses (EPA-New England and NHDES-WD) contained in the reporting section of the permit.

C. SPECIAL CONDITION

pH Limit Adjustment

The permittee may submit a written request to EPA-New England requesting a change in the permitted pH limit range to be not less restrictive than 6.0 to 9.0 Standard Units found in the applicable National Effluent Limitation Guideline (Secondary Treatment Regulations in 40 CFR Part 133) for this facility. The permittee's written request must include the State's approval letter containing an original signature (no copies). The State's letter shall state that the permittee has demonstrated to the State's satisfaction that as long as discharges to the receiving water from a specific outfall are within a specific numeric pH range the naturally occurring receiving water pH will be unaltered. That letter must specify for each outfall the associated numeric pH limit range. Until written notice is received by certified mail from the EPA-New England indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the respective permit.

D. MONITORING AND REPORTING CONDITIONS

Monitoring results shall be summarized for each calendar month and reported on separate Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period.

Signed and Dated original DMRs and all other reports required herein, shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114-8127

Duplicate signed copies of all reports required herein shall be submitted to the State at:

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
P.O. Box 95, 29 Hazen Drive
Concord, New Hampshire 03302-0095

E. STATE PERMIT CONDITIONS

1. The permittee shall not at any time, either alone or in conjunction with any person or persons, cause directly or indirectly the discharge of waste into the said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification or interfere with the uses assigned to said water by the New Hampshire Legislature (RSA 485-A:12).

2. This NPDES Discharge Permit is issued by EPA under Federal and State law. Upon final issuance by EPA, the New Hampshire Department of Environmental Services-Water Division (NHDES-WD) may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

3. EPA shall have the right to enforce the terms and conditions of this Permit pursuant to federal law and NHDES-WD shall have the right to enforce the Permit pursuant to state law, if the Permit is adopted. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of the Permit as issued by the other Agency.

4. The pH range of 6.5 to 8.0 Standard Units (S.U.) must be achieved in the final effluent unless the permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring receiving water pH is not significantly altered by the permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits outside the range of 6.0 – 9.0 S.U., which is the federal effluent limitation guideline regulation for pH for secondary treatment and is found in 40 CFR 133.102(c).

5. Pursuant to New Hampshire Code of Administrative Rules, Env-Wq 703.07(a):

   (a) Any person proposing to construct or modify any of the following shall submit an application for a sewer connection permit to the department:

(1) Any extension of a collector or interceptor, whether public or private, regardless of flow;

(2) Any wastewater connection or other discharge in excess of 5,000 gpd;

(3) Any wastewater connection or other discharge to a WWTP operating in excess of 80 percent design flow capacity based on actual average flow for 3 consecutive months;

(4) Any industrial wastewater connection or change in existing discharge of industrial wastewater, regardless of quality or quantity; and

(5) Any sewage pumping station greater than 50 gpm or serving more than one building.

6. The POTW shall immediately notify the Shellfish Section of NHDES-WD of possible high bacteria/virus loading events from the facility or its sewage collection infrastructure. Such events include:

    a. Any lapse or interruption of normal operation of the POTW disinfection system, or other event that results in discharge of sewage from the POTW or sewer infrastructure (pump stations, sewer lines, manholes, etc.) that has not undergone full disinfection as specified in the NPDES permit.
    b. Average Daily flows in excess of the POTW's average daily design flow of 10,000 gallons per day.
    c. Daily post-disinfection effluent sample result of either 43 fecal coliform/100ml or greater. Notification shall also be made for instances where NPDES-required bacteria sampling is not completed, or where the results of such sampling are invalid.
    d. Notification shall be made using the program's 24-hour pager. Upon initial notification of a possible high bacteria/virus loading event, Shellfish Program staff will determine the most suitable interval for continued notification and updates on an event-by-event basis.

7. In addition to submitting DMRs, monitoring results shall also be summarized for each calendar month and reported on separate Monthly Operating Report Form(s) (MORs) postmarked no later than the 15th day of the month following the completed reporting period. Signed and dated MORs shall be submitted to:

New Hampshire Department of Environmental Services (NHDES)
Water Division
Wastewater Engineering Bureau
P.O. Box 95, 29 Hazen Drive
Concord, New Hampshire 03302-0095

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND REGION
ONE CONGRESS STREET
BOSTON, MASSACHUSETTS 02114-2023

FACT SHEET

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

PUBLIC NOTICE DATE: July 26, 2007 – August 24, 2007

NPDES PERMIT NO.: NH0020966

NAME AND MAILING ADDRESS OF APPLICANT:

State of New Hampshire
Department of Resources and Economic Development
172 Pembroke Road
P.O. Box 1856
Concord, New Hampshire 03302-1856

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Facility Location

Wallis Sands State Park Wastewater Treatment Facility
Ocean Boulevard (Route 1A)
Rye, New Hampshire 03870

Mailing Address

Wallis Sands State Park
New Hampshire Division of Parks - Seacoast Region
P.O. Box 606
Rye Beach, New Hampshire 03871-0606

RECEIVING WATER: Atlantic Ocean (Hydrologic Basin Code: 01060003)

CLASSIFICATION: Class B

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

The above named applicant has applied to the U.S. Environmental Protection Agency, New England Office (EPA New England) for re-issuance of its NPDES permit to discharge treated effluent into the designated receiving water. The facility collects and treats domestic (sanitary) wastewater from public restrooms at Wallis Sands State Park (Park) and discharges that treated effluent into the Atlantic Ocean. Influent wastewater flows into two septic tanks in series (11,523 gallon tank draining to a 6,035 gallon tank), and effluent from the tanks drains into a small pumping station, which dosesan under-drained sand filter system. Effluent from the sand filter is collected and stored in a tank under an ultraviolet treatment system shed, from which it is pumped, approximately twice per week into the UV disinfection system at a rate of approximately 25 gallons per minute. Disinfected effluent from the UV treatment system discharges into a catch basin where it commingles with storm water from the surrounding area. Effluent monitoring occurs prior to this commingling. The commingled flow discharges from an outfall pipe beneath a jetty on the northern side of Wallis Sand Beach. This discharge occurs only when the Park is open to the public, from late May through late September or early October, depending on the weather.

The current permit is based on a treatment facility design flow of 10,000 gallons per day (gpd), which is equal to 0.010 million gallons per day (MGD). This design flow has been carried forward in the draft permit.

The previous permit was issued on February 19, 2002, and expired on April 30, 2007. The expired permit ("current permit") has been administratively extended because the applicant filed a complete application for permit re-issuance pursuant to 40 Code of Federal Regulations (CFR) Section 122.6.

The current permit authorizes discharge from Outfall 001 (Treatment Plant) from May through October each year. That discharge period will be continued into the draft permit. The locations of the treatment facility, Outfall 001, and the receiving water are shown in **Attachment A**.

II. Description of Discharge.

A quantitative description of significant effluent parameters, based on discharge monitoring data collected during the 2004 through 2006 operating seasons (May through October) is shown in **Attachment B**. The draft permit contains limitations for Five-Day Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS), Percent Removal of BOD_5 and TSS, pH, Fecal Coliform and Enterococci bacteria. The draft permit also contains reporting requirements for flow.

III. Limitations and Conditions.

Effluent limitations, monitoring requirements, and any implementation schedule (if required) are found in PART I of the draft NPDES permit. The basis for each limit and condition is discussed in Section IV of this Fact Sheet.

IV. Permit Basis and Explanation of Effluent Limitation Derivation.

A. General Regulatory Background

Congress enacted the Clean Water Act (CWA), "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." CWA § 101(a). To achieve this objective, the CWA makes it unlawful for any person to discharge any pollutant into the waters of the United States from any point source, except as authorized by specified permitting sections of the CWA, one of which is Section 402. See CWA §§ 301(a), 402(a). Section 402(a) establishes one of the CWA's principal permitting programs, the National Pollutant Discharge Elimination System (NPDES). Under this section of the CWA, EPA may "issue a permit for the discharge of any pollutant, or combination of pollutants" in accordance with certain conditions. See CWA § 402(a). NPDES permits generally contain discharge limitations and establish related monitoring and reporting requirements. See CWA § 402(a)(1)-(2).

Section 301 of the CWA provides for two types of effluent limitation to be included in NPDES permits: "technology-based" limitations and "water quality-based" limitations. See CWA §§ 301, 304(b); 40 C.F.R. 122, 125, 131. Technology-based limitations, generally developed on an industry-by-industry basis, reflect a specified level of pollutant reducing technology available and economically achievable for the type of facility being permitted. See CWA § 301(b). As a class, POTW's must meet performance-based requirements based on available wastewater treatment technology. CWA § 301(b)(1)(B). The performance level for POTWs is referred to as "secondary treatment". Secondary treatment is comprised of technology-based requirements expressed in terms of BOD_5, TSS, and pH. 40 C.F.R. Part 133.

Water quality-based effluent limits are designed to ensure that State water quality standards are met regardless of the decision made with respect to technology and economics in establishing technology-based limitations. In particular, Section 301(b)(1)(C) requires achievement of, "any more stringent limitation, including those necessary to meet water quality standards...established pursuant to any State law or regulation…" See 40 C.F.R. §§ 122.4(d), 122.44(d)(1) (providing that a permit must contain effluent limits as necessary to protect State water quality standards, "including State narrative criteria for water quality") (emphasis added) and 122.44(d)(5) (providing in part that a permit incorporate any more stringent limits required by Section 301(b)(1)(C) of the CWA).

The CWA requires that States develop water quality standards for all water bodies within the State. CWA § 303. These standards have three parts: (1) one or more "designated uses" for each water body or water body segment in the state; (2) water quality "criteria", consisting of numerical concentration levels and/or narrative statements specifying the amounts of various pollutants that may be present in each water body without impairing the designated uses of that water body; and (3) and antidegradation provision, focused on protecting high quality waters and protecting and maintaining water quality necessary to protect existing uses. CWA § 303(c)(2)(A), 40 C.F.R. § 131.12. The limits and conditions of the permit reflect the goal of the CWA and EPA to achieve and then to maintain water quality standards.

The applicable New Hampshire water quality standards can be found in Surface Water Quality Regulations, Chapter Env-Ws 1700 et seq. See generally, Title 50, Water Management and Protection, Chapter 485A, Water Pollution and Waste Disposal Section 485-A. Hereinafter, New Hampshire's Surface Water Quality Regulations are referred to as the NH Standards.

Receiving stream requirements are established according to numerical and narrative standards adopted under State law for each stream classification. When using chemical-specific numeric criteria from the State's water quality standards to develop permit limits, both the acute and chronic aquatic life criteria are used and expressed in terms of maximum allowable in stream pollutant concentrations. Acute aquatic life criteria are generally implemented through average monthly limits. Where a State has not established a numeric water quality criterion for a specific chemical pollutant that is present in the effluent in a concentration that causes or has a reasonable potential to cause a violation of narrative water quality standards, the permitting authority must establish effluent limits in one of three ways: based on a "calculated numeric criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and fully protect the designated use"; on a "case-by-case basis" using CWA Section 304(a) recommended water quality criteria, supplemented as necessary by other relevant information; or, in certain circumstances, based on an indicator parameter. 40 C.F.R. § 122.44(d)(1)(vi)(A-C).

All statutory deadlines for meeting various treatment technology-based effluent limitations established pursuant to the CWA have expired. When technology-based effluent limits are included in a permit, compliance with those limitations is from the date the issued permit becomes effective. See 40 C.F.R. § 125.3(a)(1). Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by an NPDES permit. The regulations governing EPA's NPDES permit program are generally found in 40 C.F.R. Parts 122, 124, 125, and 136.

B. Introduction

The permit must limit any pollutant parameter (conventional, non-conventional, toxic, and whole effluent toxicity) that is or may be discharged at a level that causes or has "reasonable potential" to cause or contribute to an excursion above any water-quality criterion, see 40 C.F.R. §122.44(d)(1)(i). An excursion occurs if the projected or actual in-stream concentration exceeds the applicable criterion.

Reasonable Potential

In determining reasonable potential, EPA considers: 1) existing controls on point and non-point sources of pollution; 2) pollutant concentration and variability in the effluent and receiving water as determined from the permit's reissuance application, DMRs, and State and Federal Water Quality Reports; 3) sensitivity of the species to toxicity testing; 4) the statistical approach outlined in *Technical Support Document for Water Quality-Based Toxics Control*, March 1991, EPA/502/2-90-001 in Section 3; and, where appropriate, 5) dilution of the effluent in the

receiving water. In accordance with the New Hampshire statutes and administrative rules [RSA 485-A:8, VI, Env-Ws 1705], available dilution is based on a known or estimated value of the lowest average annual flow which occurs for seven (7) consecutive days with a recurrence interval of once in ten (10) years (7Q10) for aquatic life or the mean annual flow for human health (carcinogens only) in the receiving water at the point just upstream of the outfall. Furthermore, 10 percent of the assimilative capacity of the receiving water is held in reserve for future needs in accordance with New Hampshire's Surface Water Quality Regulations, Env-Ws 1705.01.

Anti-Backsliding

Section 402(o) of the CWA generally provides that the effluent limitations of a renewed, reissued, or modified permit must be at least as stringent as the comparable effluent limitations in the previous permit. Unless certain limited exceptions are met, "backsliding" from effluent limitations contained in previously issued permits is prohibited. EPA has also promulgated anti-backsliding regulations which are found at 40 C.F.R. § 122.44(l). Unless applicable anti-backsliding requirements are met, the limits and conditions in the reissued permit must be at least as stringent as those in the previous permit.

State Certification

Section 401(a)(1) of the CWA requires all NPDES permit applicants to obtain a certification from the appropriate state agency stating that the permit will comply with all applicable federal effluent limitations and State water quality standards. See CWA § 4012(a)(1). The regulatory provisions pertaining to State certification provide that EPA may not issue a permit until a certification is granted or waived by the state in which the discharge originates. 40 C.F.R. § 124.53(a). The regulations further provide that, "when certification is required…no final permit shall be issued…unless the final permit incorporates the requirements specified in the certification under § 124.53(e)." 40 C.F.R. § 124.55(a)(2). Section 124.53(e) in turn provides that the State certification shall include "any conditions more stringent than those in the draft permit which the State finds necessary" to assure compliance with, among other things, State water quality standards, see 40 C.F.R. § 124.53(e)(2), and shall also include "[a] statement of the extent to which each conditions of the draft permit can be made less stringent without violating the requirements of State law, including water quality standards", see 40 C.F.R. § 124.53(e)(3).

However, when EPA reasonably believes that a State water quality standard requires a more stringent permit limitation than that reflected in a state certification, it has an independent duty under CWA § 301(b)(1)(C) to include more stringent permit limitations. See 40 C.F.R. §§ 122.44(d)(1) and (5). It should be noted that under CWA § 401, EPA's duty to defer to considerations of state law is intended to prevent EPA from relaxing any requirements, limitations, or conditions imposed by State law. Therefore, "[a] State may not condition or deny a certification on the grounds that State law allows a less stringent permit condition." 40 C.F.R. § 124.55(c). In such an instance, the regulation provides that, "The Regional Administrator shall disregard any such certification conditions or denials as waivers of certification." Id. EPA regulations pertaining to permit limits based upon water quality standards and state requirements

are contained in 40 C.F.R. § 122.4(d) and 40 C.F.R. § 122.44(d).

B. Conventional Pollutants

The average monthly and the average weekly concentration-based limitations for BOD_5 and TSS are based on secondary treatment requirements as put forth in Section 301(b)(1)(B) of the CWA and defined in 40 CFR Section 133.102. The effluent limitations in the draft permit for BOD_5 and TSS concentrations (average monthly, average weekly and maximum daily) and mass loadings (average monthly, average weekly and maximum daily) are the same as the limits in the current permit and so are consistent with the antibacksliding requirements found in Section 402(o) of the CWA and 40 CFR Section 122.44(1). The permittee has consistently achieved these limitations.. See **Attachment C** for the calculations of each of the mass-based limits. As an example, the Average Monthly BOD_5 load of 2.5 lbs/day is based on the average monthly BOD_5 concentration of 30 mg/l, the facility's average daily design flow of 0.01 MGD, and a conversion factor of 8.345 to convert mg/l and MGD to lbs/day.

Percent removal limits for BOD_5 and of TSS are based on secondary treatment requirements found at 40 CFR Section 133.102 (a) (3) and (b)(3), respectively. The limits are the same as those in the current permit and so are consistent with the antibacksliding requirements found in Section 402(o) of the CWA and 40 CFR Section 122.44(l).

The pH limits and the language in the State Permit Conditions portion of the draft permit allowing for a change in pH limit(s) under certain conditions remain unchanged from the current permit. In addition, these pH limits are the same as the limitations in the current permit and so are consistent with the antibacksliding requirements found in Section 402(o) of the CWA and 40 CFR §122.44(1). The permittee has consistently complied with the effluent limits. The applicant, or NHDES-WD, may request (in writing) a modification of the pH permit limit by EPA-New England if the applicant can demonstrate, to the satisfaction of NHDES-WD, that the in-stream pH standard will be protected when the discharge is outside the permitted range.

In anticipation of the situation where NHDES-WD grants a formal approval changing the pH limit(s) to outside the 6.5 to 8.0 Standard Units (S.U.), EPA-New England has added a provision to this draft permit (See SPECIAL CONDITIONS section in the draft permit). That provision will allow EPA-New England to modify the pH limit(s) using a certified letter approach. See STATE PERMIT CONDITIONS in the draft permit. However, the pH limit range cannot be less restrictive than 6.0 - 9.0 S.U. found in the applicable National Effluent Limitation Guideline (Secondary Treatment Regulations in 40 CFR Part 133) for the facility.

If the State approves results from a pH demonstration study, this permit's pH limit range can be relaxed in accordance with 40 CFR 122.44(l)(2)(i)(B) because it will be based on new information not available at the time of this permit's issuance. This new information includes results from the pH demonstration study that justifies the application of a less stringent effluent limitation. EPA-New England anticipates that the limit determined from the demonstration study as approved by the NHDES-WD will satisfy all effluent requirements for this discharge category and will comply with NH Standards.

The effluent limitation for Fecal Coliform bacteria in the draft permit remains unchanged from the current permit. The permittee has been able to achieve consistent compliance with this limit (See **Attachment B**). The previous permit which was issued on February 12, 1996 included effluent limits for total coliform instead of fecal coliform. Effluent limitations for Enterococci bacteria in the draft permit are the same as those in the current permit. New Hampshire's State statutes (N.H. RSA 485-A:8,V.) require Enterococci bacteria limits for discharges to "tidal waters utilized for swimming purposes" in addition to those for Fecal Coliform bacteria limits which, as stated previously, are required for discharges to "tidal waters used for growing or taking of shellfish for human consumption." Accordingly, the draft permit includes average monthly and maximum daily limits for Enterococci bacteria to protect bathers/swimmers using the Park's bathing beach, which is in close proximity to this discharge.

The original basis for the pH, Fecal Coliform and Enterococci bacteria limits is found in N.H. RSA 485-A:8. Historically, the NHDES-WD has required pH and all bacterial limits to be satisfied at end-of-pipe with no allowance for dilution. Therefore, in addition to the antibacksliding requirement for pH, all these limitations are also based on State Certification Requirements for POTWs under section 401(d) of the CWA, 40 CFR §§124.53 and 124.55.

C. Nonconventional and Toxic Pollutants

Water-quality based limits for specific toxic pollutants such as chlorine, ammonia, metals, etc. are determined from chemical-specific numeric criteria derived from extensive scientific studies. The specific toxic pollutants and their associated toxicity criteria are popularly known as the "Gold Book Criteria" which EPA summarized and published in Quality Criteria for Water, 1986, EPA 440/5-86-001 (as amended). The State of New Hampshire adopted these "Gold Book Criteria", with certain exceptions, and included them as part of the State's Surface Water Quality Regulations, adopted on December 3, 1999. EPA uses these pollutant-specific criteria along with available dilution in the receiving water to determine a specific pollutant's draft permit limit, such as the fast acting toxicant chlorine, ammonia, metals, etc. For the record, available dilution for this facility is discussed below under a separate subheading in case that dilution is ever needed for a water-quality based limit.

The Park's Wastewater Treatment Plant has used ultraviolet light for disinfection in its wastewater treatment process for the last several years. Ultraviolet light is an alternative disinfection process that does not utilize chlorine.

Available Dilution

When the permit was last reissued, the predicted available dilution (also referred to as dilution factor) within the receiving water was set at the default value of one (i.e. no dilution). When a facility is assigned a dilution factor of one it must meet all applicable water quality standards at the end of discharge pipe before mixing with the receiving water. The outfall is located about 315 feet out from the shoreline and is normally submerged under 4 to 6 feet of water. However, during some low tides, the discharge is exposed, and does not mix with the receiving water. . Given that the discharge is exposed during some low tides, a dilution factor of one will be used

in evaluating and calculating any water quality-based effluent limits for the draft permit.

D. Whole Effluent Toxicity

EPA's **Technical Support Document for Water Quality-based Toxics Control**, **EPA/505/2-90-001, March 1991**, recommends using an "integrated strategy" containing both pollutant (chemical) specific approaches and whole effluent (biological) toxicity approaches to control toxic pollutants in effluent discharges from entering the nation's waterways. EPA-New England adopted this "integrated strategy" on July 1, 1991, for use in permit development and issuance. These approaches are designed to protect aquatic life and human health. Pollutant-specific approaches such as those in the Gold Book and State regulations address individual chemicals, whereas, Whole Effluent Toxicity (WET) approaches evaluate interactions between pollutants, thus rendering an "overall" or "aggregate" toxicity assessment of the effluent. Furthermore, WET measures the "Additivity" and/or "Antagonistic" effects of individual chemical pollutants which pollutant specific approaches do not, thus the need for both approaches. In addition, the presence of an unknown toxic pollutant can be discovered and addressed through this process.

New Hampshire law states that, "all surface waters shall be free from toxic substances or chemical constituents in concentrations or combination that injure or are inimical to plants, animals, humans, or aquatic life;...." (N.H. RSA 485-A:8, VI and the N.H. Code of Administrative Rules, PART Env-Ws 1730.21(a)(1)). The federal NPDES regulations at 40 CFR §122.44(d)(1)(v) require whole effluent toxicity limits in a permit when a discharge has a "reasonable potential" to cause or contribute to an excursion above the State's narrative criterion for toxicity.

Prior to issuing the February 12, 1996 permit, EPA required the permittee to perform a whole effluent toxicity test to determine whether the discharge has the reasonable potential for the discharge to violate the “no toxics” provision in the State’s water quality regulations. In a letter dated February 6, 1995, and pursuant to Section 308 of the CWA, EPA-New England required the Park conduct a chronic (modified acute) toxicity test using the saltwater indicator species Inland Silverside (Menidia beryllina). Results of that test were provided to EPA-New England in a report titled “Toxicological Evaluation of a Treated Effluent - Biomonitoring Support for an NPDES Permit: July 1995, Wallis Sands State Beach, Rye, New Hampshire”. The results were LC50 >78 % for the modified acute test, and were C-NOEC = 78 % for the both survival and reproduction portions of the chronic test. Since the 78 % effluent concentration used in the test was a salinity adjusted nominal 100 % effluent concentration (i.e. the 100 percent sample was diluted to a 78 percent effluent concentration with salt water to provide sufficient salinity for the survival of the marine test organisms) the results indicate that the Park’s discharge exhibited neither acute nor chronic toxicity to Inland Silverside during the seven-day exposure period. Therefore, EPA-New England concluded that there was no “reasonable potential” for the State’s narrative toxicity criterion to be violated in the current permit.

That conclusion was further supported by the fact that the facility has a seasonal and non-continuous discharge of low volume, highly treated sanitary waste, that the discharge is disinfected with ultraviolet light, not chlorine, so the discharge does not contain any residual

toxic material, and unlike most POTWs, this treatment system does not receive any industrial wastes. Therefore, given all the facts present above, EPA-New England and the NHDES-WD concluded that there was no need for additional toxicity monitoring or limits in the current permit.

In subsequent permit reissuances, nothing has changed relative to the treatment plant or the quantity or quality of the wastewater being treated to alter the original conclusion that this discharge does not have the reasonable potential to violate the State's narrative toxicity criterion. Therefore, EPA New England and the NHDES-WD have concluded that there is no need to include WET testing limits or monitoring requirements in the draft permit.

E. Sludge

Section 405(d) of the Clean Water Act (CWA) requires that EPA develop technical standards regulating the use and disposal of sewage sludge. These regulations were signed on November 25, 1992, published in the Federal Register on February 19, 1993, and became effective on March 22, 1993. Domestic sludge which is land applied, disposed of in a surface disposal unit, or fired in a sewage sludge incinerator is subject to 40 CFR Part 503 technical and to State Env-Wq 800 standards. Part 503 regulations have a self-implementing provision, however, the CWA requires implementation through permits. Domestic sludge which is disposed of in municipal solid waste landfills are in compliance with Part 503 regulations provided the sludge meets the quality criteria of the landfill and the landfill meets the requirements of 40 CFR Part 258.

The draft permit has been conditioned to ensure that sewage sludge use and disposal practices meet the CWA Section 405(d) Technical Standards. In addition, EPA-New England has included with the draft permit a 72-page document entitled "EPA Region I NPDES Permit Sludge Compliance Guidance, November 1999" for use by the permittee in determining the appropriate sludge conditions for the chosen method of sewage sludge use or disposal practices.

The permittee is required to submit an annual report to EPA-New England and NHDES- WD, by February 19th each year, containing the information specified in the Sludge Compliance Guidance document for their chosen method of sewage sludge use or disposal practices. Accumulated sludge in the Park's septic tanks is removed at the end of each operating season as part of the Park's annual shut-down procedures and is transported by truck to the headworks of Hampton, New Hampshire's POTW for treatment and disposal. According to the Park's recent NPDES permit application, the Park generates somewhere between 3 and 5 dry metric tons per year of sludge.

F. Industrial Users

The facility does not accept industrial discharges and does not anticipate any future scenarios under which it would accept such discharges. The current permit included a condition preventing this wastewater treatment facility from accepting discharges from any industrial source. This condition has been retained in the draft permit. Should this facility request that this condition be modified, it would require a reevaluation of the need for water quality-based limits

on toxics, including whole effluent toxicity.

G. Ocean Discharge Criteria Evaluation

During development of the Park's previous NPDES permit in 1995/1996, EPA-New England performed an Ocean Discharge Criteria Evaluation for the Park's Wastewater Treatment Facility and made a determination of no unreasonable degradation to the marine environment for the current permitted level of discharge. This determination was made following regulations described in 40 CFR Part 125, Subpart M–Ocean Discharge Criteria and in 45 Federal Register, 65942. The determination's summary finding, which follows, has been excerpted from the original evaluation which is stored in the permit file located at the New England Regional Office in Boston, Massachusetts. *"This treatment plant discharges a small volume of high quality effluent for almost half of the year. The effluent is of a quality that easily exceeds that of secondary effluent. Disinfection is accomplished by ultraviolet light, thus chlorine residual is not a concern. The fecal coliform numbers indicate that the disinfection system is very effective. The discharge is to the Atlantic Ocean, so discharge is rapid and farfield dilution is significant. Based on these factors, EPA believes that this discharge is not unreasonably degrading the marine environment."*

EPA-New England believes that its determination of "no unreasonable degradation to the marine environment for the current permitted level of discharge" is still valid, as limits in this draft permit are same as those in the current permit. In addition, there have been no changes at the treatment facility with respect to either the quality or the quantity of the effluent since the original determination was made. As previously stated, the facility has a seasonal and non-continuous discharge of low volume, highly treated sanitary waste, the discharge is disinfected with ultraviolet light, not chlorine, so the discharge does not contain any residual toxic material, and unlike most POTWs, this treatment system does not receive any industrial wastes. Therefore, no further review is warranted at this time.

V. Essential Fish Habitat and Endangered Species

Essential Fish Habitat

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq.(1998)), EPA is required to consult with the National Marine Fisheries Service (NMFS) if EPA's action or proposed actions that it funds, permits, or undertakes, "may adversely impact any essential fish habitat." 16 U.S.C. § 1855(b). The Amendments broadly define "essential fish habitat" (EFH) as: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. 16 U.S.C. § 1802(10). Adversely impact means any impact which reduces the quality and/or quantity of EFH. 50 CFR § 600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. Id.

EFH is only designated for fish species for which federal Fisheries Management Plans exist. 16

U.S.C. § 1855(b)(1)(A). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999.

Description of Proposed Action

The facility collects and treats domestic (sanitary) wastewater from public restrooms at Wallis Sands State Park (Park) and discharges treated effluent into the Atlantic Ocean. The Park's wastewater treatment facility consists of a holding tank which pumps in batches into two septic tanks in series (11,523 gallon tank draining to a 6,035 gallon tank) and discharges to an underdrained leaching field, followed by ultraviolet disinfection. This discharge occurs only when the Park is open to the public, from late May through to late September or early October, depending on the weather. The current permit is based on a treatment facility design flow of 10,000 gallons per day (gpd), which is equal to 0.010 million gallons per day (MGD).

EFH Species

The following list of 17 managed species are believed present during one or more life stages within EFH Area 1 which encompasses the existing discharge site.

Common Name	**Scientific Name**
Atlantic Salmon	Salmo salar
American plaice	Hippoglossoides platessoides
Atlantic cod	Gadus morhua
Atlantic halibut	Hippoglossus hippoglossus
Atlantic sea herring	Clupea harengus
Atlantic mackerel	Scomber scombrus
Atlantic sea scallop	Placopecten magellanicus
Bluefin tuna	Thunnus thynnus
Haddock	Melanogrammus aeglefinus
Pollock	Pollachius virens
Red hake	Urophycis chuss
Whiting	Merluccius bilinearis
Windowpane flounder	Scophthalmus aquosus
Winter flounder	Pseudopleuronectes americanus
Yellowtail flounder	Pleuronectes ferruginea
Bluefish	Pomatomus saltatrix
White hake	Urophycis tenuis

Analysis of Effects and EPA-New England's Opinion of Probable Impacts

No "habitat areas of particular concern", as defined under §600.815(a)(9) of the Magnuson-Stevens Act, have been designated for this site. Although EFH has been designated for this general location, EPA-New England has concluded that impacts to EFH from this discharge have been minimized for the following reasons:

This is a reissuance of an existing permit with no increase in the authorized discharge of pollutants as compared to the existing permit;
The permit will prohibit violations of State water quality standards in the receiving water;
The facility has a seasonal (non-continuous) discharge of low volume, high quality, treated domestic wastewater from beach users that occurs only from late May through to late September/early October. For example, on an average monthly basis, 2093 gpd of treated effluent with a five-day BOD concentration of 2.82 mg/l is discharged. See Fact Sheet's Attachment B for tabulation of effluent data;
The permit prohibits this wastewater treatment facility from accepting discharges from any industrial user;
The discharge is disinfected with ultraviolet light and so will not contain any chlorinated organics; and
A chronic (modified acute) toxicity test using the saltwater indicator species Inland Silverside (Menidia beryllina) indicated that the Park's discharge exhibited neither acute nor chronic toxicity.

As reflected in the discussion of the permit requirements in this Fact Sheet, it is the opinion of EPA-New England that the draft permit is designed to protect the State's water quality standards and all marine species, including EFH species and their forage. However, if adverse impacts to EFH are detected in the future as a result of this permit action, NMFS will be notified and an EFH consultation will be promptly initiated.

Mitigation

The EPA-New England considers the conditions in this draft permit to be adequately protective of EFH, and, therefore, does not consider further mitigation to be warranted.

Endangered Species

The Endangered Species Act (16 U.S.C. 1451 et seq), Section 7, requires the EPA to ensure, in consultation with the U.S. Fish and Wildlife Service (USFWS) and/or NMFS, as appropriate, that any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species, or adversely affect its critical habitat**.**

USFWS and NMFS were both contacted to determine whether or not threatened or endangered species are present in the Atlantic Ocean in the vicinity of the discharge. Both agencies stated that there are not species of concern.

VI. Anti-degradation

This draft permit is being reissued with an allowable waste-load the same as the existing permit, with identical parameter coverage and no change in the outflow location. Since the State of New Hampshire has indicated there will be no lowering of water quality and no loss of existing uses, no additional anti-degradation review is warranted.

VII. State Certification Requirements.

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving water(s) either certifies that the effluent limitations and/or conditions contained in the permit are stringent enough to assure, among other things, that the discharge will not cause the receiving water to violate the State's Surface Water Quality Regulations or waives its right to certify as set forth in 40 CFR §124.53.

Upon public notice of the draft permit, EPA is formally requesting that the State's certifying authority make a written determination concerning certification. The State will be deemed to have waived its right to certify unless certification is received within 60 days of receipt of this request.

The NHDES-WD, Wastewater Engineering Bureau is the certifying authority. EPA has discussed this draft permit with the staff of the Wastewater Engineering Bureau and expects that the draft permit will be certified. Regulations governing state certification are set forth in 40 CFR §§124.53 and 124.55.

The State's certification should include the specific conditions necessary to assure compliance with applicable provisions of the Clean Water Act, §§208(e), 301, 302, 303, 306 and 307 and with appropriate requirements of State law. In addition, the State should provide a statement of the extent to which each condition of the draft permit can be made less stringent without violating the requirements of State law. Since certification is provided prior to permit issuance, failure to provide this statement for any condition waives the right to certify or object to any less stringent condition which may be established by EPA during the permit issuance process following public noticing as a result of information received during that noticing. If the State believes that any conditions more stringent than those contained in the draft permit are necessary to meet the requirements of either the CWA or State law, the State should include such conditions and, in each case, cite the CWA or State law reference upon which that condition is based. Failure to provide such a citation waives the right to certify as to that condition. **The sludge conditions implementing §405(d) of the CWA are not subject to the 401 certification requirements.**

Reviews and appeals of limitations and conditions attributable to State certification shall be made through the applicable procedures of the State and may not be made through the applicable procedures of 40 CFR Part 124.

VIII. Comment Period, Hearing Requests, and Procedures for Final Decisions.

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to: Mr. Suprokash Sarker, Municipal Permits Branch, U.S. Environmental Protection Agency, One Congress Street, Suite 1100 (Mail Code: CMP), Boston, Massachusetts 02114-2023. Any person, prior to such date, may submit a

request in writing for a public hearing to consider the draft permit to EPA and the State Agency. Such requests shall state the nature of the issue proposed to be raised in the hearing. A public hearing may be held after at least thirty (30) days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft, the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston Office.

Following the close of the comments period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice.

IX. EPA Contact.

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

Mr. Suprokash Sarker, P.E.
U.S. Environmental Protection Agency
Suite 1100 (Mail Code: CMP)
One Congress Street
Boston, Massachusetts 02114-2023
Telephone: (617) 918-1693
E-mail : sarker.soupy@epa.gov

_____
Date

Stephen Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

Note : Attachments A (USGA Topographic Map) and D (Toxicity Trategy) are not electronically available.

ATTACHMENT B

CONCENTRATIONS OF SELECTED EFFLUENT CHARACTERISTICS AT OUTFALL 001

The following selected effluent characteristics were derived from analysis of discharge-monitoring data collected for Outfall 001 during the 2004, 2005, and 2006 operating seasons (May 2004 through May 2006). These values were extracted from monthly Discharge Monitoring submitted by the Park's Wastewater Treatment Facility. They represent an effluent composed entirely of treated domestic (sanitary) wastewater, and give an indication of this treatment works ability to meet its current permitted limits. To fully understand the statistics presented in the table below, the reader should be thoroughly familiar with the definitions of average monthly, average weekly and maximum daily in Part II, General Conditions and Definitions, on pages 13, 14 and 18, respectively. In the table, some range values were rounded for ease of presentation.

Effluent Characteristic	Average of Average Monthly[1]	Range of Average Monthly	Average of Average Weekly[1]	Range of Average Weekly	Average of Maximum Daily[1]	Range of Maximum Daily
Flow (gpd)	2,093	400-3,600	--	--	2,736	600-4,900
BOD_5 (lbs/day)	0.06	0-0.37	0.1	0-0.74	0.1	0-0.74
BOD_5 (mg/l)	2.82	0-17	4.27	0-32	4.36	0-.37
BOD_5 (Percent Removal)	97.9	91.2-100	--	--	--	--
TSS (lbs/day)	0.083	0-0.26	0.123	0-0.37	0.123	0-0.37
TSS (mg/l)	4.1	0-10	5.73	0-12	6.36	0-13
TSS (Percent Removal)	95.8	92.9-100	--	--	--	--
pH (Standard Units)	6.98	6.73-7.09	--	--	7.01	7.33-8.21
Fecal Coliform (Organisms/100 ml)	0	0	--	--	1.3	0-14
Enterococci (Organisms/100ml)	0.57	0–3	--	--	4.86	0-27

1. Any value qualified with a less than sign was halved prior to computation.

ATTACHMENT C

MAXIMUM ALLOWABLE LOADS

Equation used to calculate mass limits for BOD_5 and TSS :

$$L = C * Q_{PDF} * 8.345 \quad \textit{where,}$$

L = Maximum allowable load, in lbs/day.

C = Maximum allowable effluent concentration for reporting period, in mg/l. Reporting periods are average monthly, average weekly and maximum daily

Q_{PDF} = Treatment plant's design flow, in MGD.

8.345 = Factor to convert effluent concentration, in mg/l, and plant's design flow, in MGD to lbs/day.