

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
ONE CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023**

FACT SHEET

**DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES PURSUANT TO
THE CLEAN WATER ACT (CWA)**

NPDES PERMIT NUMBER: MA0090590

PUBLIC NOTICE START AND END DATES: July 20, 2007 – August 18, 2007

NAME AND MAILING ADDRESS OF APPLICANT:

U.S. Department of Homeland Security
U.S. Coast Guard
Civil Engineering Unit Providence
300 Metro Center Blvd.
Warwick, RI 02886

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

U.S. Coast Guard Station Menemsha
Chilmark, MA 02535

RECEIVING WATER: RECEIVING WATER: Green Pond to Menemsha Creek and
Menemsha Bight (Islands Coastal Drainage Area, Martha's Vineyard, MA-97)

RECEIVING WATER CLASSIFICATION: Massachusetts Class SA

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Figure 1. Map of the Facility, including outfall location

1. Proposed Action

The above named applicant has applied to the U. S. Environmental Protection Agency (EPA) for re-issuance of a National Pollutant Discharge Elimination System Permit to discharge treated sewage into the designated receiving water. The previous permit was issued on May 31, 1979 and expired on May 31, 1984. EPA received an updated application for permit re-issuance on June 14, 2007. Since the application for permit re-issuance was considered timely and complete by EPA, the previous permit has been administratively continued until EPA takes action on the re-issuance.

2. Type of Facility

The facility is a multi-mission US Coast Guard station, consisting of an office building and several housing units. The wastewater consists of sanitary sewage from the toilets, showers, sinks, etc. in the offices and housing units at the USCG station. The design average sewage flow is 2,200 gallons per day.

3. Discharge Location and Description

The wastewater is treated in septic tanks and sand filters, with the effluent collected and chlorinated prior to discharge. However, there have been no observed discharges from the treatment facility since a new treatment system was constructed in 1994. If the discharge from the treatment facility is active, it would flow into Green Pond, a small pond next to the USCG station, and travel a short distance (approximately 20 feet) to an outlet pipe that leads to Menemsha Creek. Menemsha Creek flows into Menemsha Basin, and then into Menemsha Bight, which is part of Vineyard Sound.

A map of the facility and discharge location is shown in **Figure 1**.

4. Receiving Water Description

If a discharge enters Green Pond, it would flow into Menemsha Creek via the Pond outlet, essentially bypassing main portion of the Pond. Menemsha Creek is designated as a Class SA water body by the Massachusetts Surface Water Quality Standards (314 CMR 4.06). Class SA waters are designated as an excellent habitat for fish, other aquatic life, and wildlife, and for primary and secondary contact recreation. In approved areas they shall be suitable for shellfish harvesting without depuration (Open Shellfish Areas). These waters shall have excellent aesthetic value. [314 CMR 4.05(4)(a)]

Section 303(d) of the Federal Clean Water Act (CWA) requires states to identify those water-bodies that are not expected to meet surface water quality standards after the implementation of technology-based controls and, as such require the development of total maximum daily loads (TMDLs). Neither Green Pond nor Menemsha Creek is included in the most recently EPA approved Massachusetts list of waters requiring the development of TMDLs (i.e., 303(d) list or Category 5 of the Massachusetts Year 2004 Integrated List of Waters) or on the Proposed 2006 CWA 303(d) List.

5. Permit Basis: Statutory and Regulatory Authority

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit unless such a discharge is otherwise authorized by the CWA. The NPDES permit is the mechanism used to implement effluent limitations and other requirements, including monitoring and reporting, in accordance with various statutory and regulatory requirements established pursuant to the CWA and applicable State statutes and regulations. The regulations governing the EPA NPDES permit program are generally found at 40 CFR Parts 122, 124, 125, and 136.

When establishing NPDES permit requirements, EPA is required to consider, and include limitations in the permit, based on the most stringent of the following concepts: (a) technology-based requirements, (b) water quality-based requirements, (c) anti-backsliding from the limitations and requirements in the current/existing permit, and (d) antidegradation requirements.

Technology-based requirements represent the minimum level of control that must be imposed under Sections 402 and 301 (b) of the CWA and implementing regulations at 40 CFR 125, 133, and 405 through 471. For publicly-owned treatment works (POTWs), technology-based requirements are effluent limitations based on secondary treatment requirements of Section 301(b)(1)(B) of the CWA as defined in 40 CFR 133.102. In situations where promulgated technology-based requirements are not applicable, Section 402(a)(1)(B) of the CWA provides that such limits be based on EPA's judgment. Such limits are referred to as "best professional judgment" (BPJ) limits, and are referenced in 40 CFR 125.3.

Water quality-based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality standards. Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on federal or state water quality standards. The Massachusetts Surface Water Quality Standards (314 CMR 4.00) contain requirements for conventional and toxic pollutants in order to provide protection for designated uses in the receiving waters. Included in these Standards are provisions that EPA criteria for toxic pollutants, established pursuant to Section 304 (a) of the CWA, shall be used unless site-specific criteria are established. The state will limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the receiving waters are protected and maintained, or attained.

Anti-backsliding as defined in Section 402(o) of the CWA and implementing regulations at 40 CFR §122.44(l) require reissued permits to contain limitations as stringent or more stringent than those of the previous permit unless the circumstances allow application of one of the defined exceptions to this regulation.

In accordance with regulations found at 40 CFR Section 131.12, each state must adopt a statewide antidegradation policy to maintain and protect existing in-stream water quality. The Massachusetts Antidegradation Policy is found at Title 314 CMR 4.04. No lowering of water quality is allowed, except in accordance with the antidegradation policy. This applies in situations where a lowering of water quality is being proposed, such as a new discharge or an

increased discharge of pollutants at a facility with an existing permit.

6. Effluent Limitations and Monitoring Requirements in the Permit

This facility is federally owned and is considered a POTW, and the wastewater being treated is domestic sewage. Therefore, the secondary treatment standards in 40 CFR 133.102 were used as the basis for effluent limitations on conventional pollutants (BOD₅ and TSS). The state water quality standards for Class SA Waters were used as the basis for the other effluent limitations in the permit. No dilution is assumed in applying these standards. The rationale for the permit limits is as follows:

Flow -- The limitation of 2,200 gallons per day is based on the design capacity of the treatment plant. If there is any discharge flow, it is required to be reported each day.

BOD₅ and TSS -- The proposed concentration limits of 30 mg/l, as a monthly average, and 45 mg/l, as a weekly average, are technology-based, using the secondary treatment standards in 40 CFR 133.102. These limits are carried forward from the current permit.

Total Phosphorus -- Monthly reporting (no limit) is required in order to obtain information as to the amount of this nutrient being added to Green Pond. This information will help determine total nutrient loadings to the Pond, and possible corrective measures if nutrient enrichment is a problem under the state water quality standards. If such corrective measures are needed, a future permit limit for phosphorus may be necessary.

pH -- The limits, within the range of 6.5 through 8.5 std units, are based on the state water quality standards.

Dissolved Oxygen (DO) -- The draft permit includes a limit for DO based on state water quality standards. A minimum concentration of DO is needed for fish and other aquatic life. The facility discharges to Class SA waters, as classified by the Massachusetts Surface Water Quality Standards, and as such it shall have DO levels not less than 6.0 mg/l.

Fecal Coliform Bacteria -- The draft permit includes fecal coliform bacteria limitations which are in accordance with the Massachusetts Surface Water Quality Standards 314 CMR 4.05(1)(d)(4) for approved shellfish harvesting areas. The proposed limits in the draft permit are a geometric mean of 14 colony forming units (cfu)/100 ml for the average monthly limit and 28 colony forming units (cfu)/100 ml for the maximum daily limit. Colonies forming units (cfu) or most probable number (MPN) units are determined by the method of analysis used for bacteria analysis. Both units are acceptable. The frequency of sampling shall be maintained at 1/week if the discharge is active.

Enterococci Bacteria -- Seasonal weekly sampling for Enterococci is required if discharges occur to ascertain compliance with the water quality criteria promulgated by EPA on November 16, 2004, for Massachusetts Coastal Waters. Massachusetts has since adopted water quality criteria for Enterococci, which have not yet been approved by EPA. Upon approval of the State criteria, the federal criteria will no longer apply.

Total Residual Chlorine – The draft permit proposes total residual chlorine limits of 7.5µg/l, as a monthly average, and 13 µg/l, as a daily maximum. Residuals from chlorination can be extremely toxic to aquatic biota if discharged into surface waters at high levels. To minimize the potential for toxicity in the receiving waters, the permit limits were calculated assuming there is no available dilution during critical conditions. Thus, ambient criteria are applied directly to the discharge. Because the potential discharge passes through fresh water (Green Pond) and marine water, both fresh water and salt water criteria were considered. However, the more stringent of the criteria (salt water) were applied.

Based on the EPA National Criteria for salt water and assuming zero dilution, the total residual chlorine limitations are:

$$\begin{aligned} &(\text{acute criterion} * \text{dilution factor}) = \text{Acute (Maximum Daily)} \\ &(13 \mu\text{g/l} * 1) = 13 \mu\text{g/l} \end{aligned}$$

$$\begin{aligned} &(\text{chronic criterion} * \text{dilution factor}) = \text{Chronic (Monthly Average)} \\ &(7.5 \mu\text{g/l} * 1) = 7.5 \mu\text{g/l} \end{aligned}$$

Other Permit Requirements -- In addition to these specific numerical effluent limitations, the permit contains general limitations to comply with state water quality standards on such things as color, oil sheen, foam, floating or settleable solids, and non-specific toxic chemicals. Also, the permit contains the secondary treatment requirement of 85% removal of BOD₅ and TSS, along with other general monitoring conditions.

Special conditions are included in the permit to insure proper operation and maintenance of the treatment facility and proper handling and disposal of any sludge which may need to be removed from the treatment facility.

7. 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 Services (NMFS) if EPA's action or proposed actions that it funds, permits, or undertakes, may adversely impact any essential fish habitat 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 C.F.R. § 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.

Essential fish habitat is only designated for 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.

The USCG treatment facility has a long history of no discharge. However, if the facility's surface discharge were to become active, it would discharge into a tributary of Vineyard Sound

which is designated by NMFS as EFH for the following species and applicable life stages:

Species	Eggs	Larvae	Juveniles	Adults
Atlantic cod (<i>Gadus morhua</i>)		X	X	X
haddock (<i>Melanogrammus aeglefinus</i>)	X	X		
pollock (<i>Pollachius virens</i>)			X	
red hake (<i>Urophycis chuss</i>)		X	X	X
winter flounder (<i>Pleuronectes americanus</i>)	X	X	X	X
windowpane flounder (<i>Scopthalmus aquosus</i>)	X	X	X	X
American plaice (<i>Hippoglossoides platessoides</i>)			X	X
ocean pout (<i>Macrozoarces americanus</i>)	X	X	X	X
Atlantic sea herring (<i>Clupea harengus</i>)				X
bluefish (<i>Pomatomus saltatrix</i>)			X	X
long finned squid (<i>Loligo pealei</i>)	n/a	n/a	X	X
short finned squid (<i>Illex illecebrosus</i>)	n/a	n/a		
Atlantic butterfish (<i>Peprilus triacanthus</i>)	X	X	X	X
Atlantic mackerel (<i>Scomber scombrus</i>)	X	X	X	X
summer flounder (<i>Paralichthys dentatus</i>)	X	X	X	X
scup (<i>Stenotomus chrysops</i>)	n/a	n/a	X	X
black sea bass (<i>Centropristus striata</i>)	n/a	X	X	X

Species	Eggs	Larvae	Juveniles	Adults
surf clam (<i>Spisula solidissima</i>)	n/a	n/a	X	X
king mackerel (<i>Scomberomorus cavalla</i>)	X	X	X	X
Spanish mackerel (<i>Scomberomorus maculatus</i>)	X	X	X	X
cobia (<i>Rachycentron canadum</i>)	X	X	X	X
blue shark (<i>Prionace glauca</i>)				X
shortfin mako shark (<i>Isurus oxyrinchus</i>)			X	
sandbar shark (<i>Charcharinus plumbeus</i>)			X	X
bluefin tuna (<i>Thunnus thynnus</i>)				X

EPA has concluded that the limits and conditions contained in this draft permit minimize adverse effects to EFH for the following reasons:

This is a re-issuance of an existing permit. The proposed permitted discharge of treated sanitary sewage is very small compared to the abundant dilution that is available where EFH exists.

The discharge must be treated to meet secondary treatment standards, as well as state water quality standards.

Water quality based total residual chlorine limits have been included in the draft permit assuming that zero dilution is available in order to protect aquatic life in the direct vicinity of the outfall. Considerable dilution will be available as the discharge travels downstream into Menemsha Bight

The permit will prohibit violations of the state water quality standards.

EPA believes that the draft permit limits and requirements adequately protect EFH for the managed species, and therefore additional mitigation is not warranted. If adverse impacts to EFH are detected as a result of this permit action, or if new information is received that changes the basis for our conclusion, NMFS will be notified and an EFH consultation will be reinitiated.

8. Endangered Species Act

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA) grants authority to and imposes requirements upon Federal agencies regarding endangered or threatened species of fish, wildlife, or plants (“listed species”) and habitat of such species that has been designated as critical (a “critical habitat”). The ESA requires every Federal agency, in consultation with and with the assistance of the Secretary of Interior, to insure that any action it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) administers Section 7 consultations for freshwater species, where as the National Marine Fisheries Service (NMFS) administers Section 7 consultations for marine species and anadromous fish.

As the federal agency charged with authorizing the discharge from this facility, EPA has reviewed available habitat information developed by the Services to see if one or more of the federal endangered or threatened species of fish, wildlife, or plants may be present within the influence of the discharge. Listed species in this general area are likely to include sea turtles and whales for NMFS.

EPA believes the authorized discharge from this facility is not likely to adversely affect any federally-listed species or their habitats. This preliminary determination is based on the location of the outfall, and the reasons provided in the EFH discussion (Section 7 of this Fact Sheet). EPA is seeking concurrence with this opinion from NOAA Fisheries through the informal consultation process.

9. Coastal Zone Management

Section 307(c) of the Coastal Zone Management Act, 16 U.S.C. 1451 et seq. and implementing regulations (15 CFR part 930) prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State Coastal Zone Management (CZM) program, and the State or its designated agency concurs with the certification (or the Secretary of Commerce overrides the State's nonconcurrence).

The discharge is within the defined coastal zone. The permittee has submitted a letter dated January 23, 2007, to the Massachusetts Coastal Zone Management Program stating its intention to abide by the CZM water quality and habitat policies. The CZM Program shall review the draft permit, and it will only be issued after CZM concurrence with the applicant's certification.

10. State Certification Requirements

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving waters certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards. The staff of the Massachusetts Department of Environmental

Protection (MassDEP) has reviewed the draft permit. EPA has requested permit certification by the State pursuant to 40 CFR 124.53 and expects that the draft permit will be certified.

11. 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 Mark Voorhees, U.S. EPA, Office of Ecosystem Protection, 1 Congress Street, Suite 1100, 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 issues proposed to be raised in the hearing. A public meeting may be held if the criteria stated in 40 C.F.R. § 124.12 are satisfied. In reaching a final decision on the Draft Permit, the EPA will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after any public hearings, if such hearings are held, the EPA 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. Within 30 days following the notice of the Final Permit decision, any interested person may submit a petition for review of the permit to EPA's Environmental Appeals Board consistent with 40 C.F.R. § 124.19.

12. EPA and State Contacts

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:

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

Date: _____

FIGURE 1



0.5 0 0.5 1 Miles

U.S. Coast Guard Station at Menemsha
Chilmark, MA
MA0090590

