**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**NEW ENGLAND - REGION I**
**5 POST OFFICE SQUARE, SUITE 100**
**BOSTON, MASSACHUSETTS 02109-3912**

# DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) NOTICE OF INTENT TO DENY A PERMIT RENEWAL APPLICATION

**AND**

# STATEMENT OF BASIS

**NPDES PERMIT NUMBER:** MA0100374

**PUBLIC NOTICE START AND END DATES: September 5, 2019 – October 4, 2019**

**NAME AND MAILING ADDRESS OF APPLICANT:**

Marblehead Water and Sewer Commission
P.O. Box 1108
Marblehead, MA 01945

**NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:**

Sargent Road Pump Station
Marblehead Neck
Marblehead, MA 01945

**RECEIVING WATER AND CLASSIFICATION:** Massachusetts Bay
Class SA, Shellfishing

## 1.0 Proposed Action and Type of Facility, and Discharge Location

The Marblehead Water and Sewer Commission ("Permittee" or "MWSC") has applied to Region 1 of the U.S. Environmental Protection Agency ("EPA") for the reissuance of its NPDES permit to discharge into the designated receiving water. Upon consideration, and based on the record before it, EPA has determined to deny the permit application, in accordance with the substantive and procedural requirements of 40 C.F.R. §§ 122.6(c), 122.64(a), and 124.6. The discharge is a Sanitary Sewer Overflow ("SSO"). As detailed below, the Region has determined that the permit should not be reissued, for three principal reasons:

(1) the Permittee, over the SSO permit term, has consistently failed to comply with existing permit requirements;
(2) the Permittee's repeated discharge of SSOs into the receiving waters (which have been afforded the Commonwealth's highest marine classification) endangers human health and environment, and the treatment of such discharges to legally-mandated technology and water quality-based levels is likely to be technologically and economically impracticable, counseling in EPA's view in favor of an alternative approach to addressing this discharge; and
(3) since issuance of the existing permit in 1994, the discharge has received coverage under a more comprehensive, efficient and effective permitting scheme. In 2016, the MWSC was included as a co-permittee on an NPDES permit issued to the South Essex Sewerage District ("SESD") publicly owned treatment works, of which the Town of Marblehead sewer system is a part. The SESD permit, which is designed to cover municipal satellite collection systems and reduce infiltration and inflow into the treatment works on a system-wide basis, prohibits the discharge of SSOs. This requirement is fully enforceable against the MWSC. Because the Permittee must comply with applicable portions of this permit, its SSO permit has been functionally superseded.

## 2.0 Description of Discharge

The 1994 Permit addressed an overflow from the Sargent Road Pump Station, located on Marblehead Neck in Marblehead, MA, that discharges into Massachusetts Bay, near Tinkers Island (See Figure 1). The pump station was part of the former Marblehead Wastewater Treatment System prior to the Town of Marblehead joining the South Essex Sewerage District. Under the Permit, the Permittee is prohibited from discharging "any wastewater from the Sargent Road Pump Station on an intermittent or continuous basis. Emergency, upset or bypass discharges are not authorized unless in accordance with the requirements of Part II of the Permit, General Conditions and 40 C.F.R. Part 122.41." The 1994 Permit, in addition, requires that the Permittee monitor flow, total residual chlorine and fecal coliform bacteria as follows:

| Parameter | Limitation | Sample Type and Frequency |
|---|---|---|
| Flow, MGD | Report | Continuous during emergency discharge |
| TRC, mg/L | Report | 4/day during emergency discharge |
| Fecal Coliform | Report | 2/day during emergency discharge |

The 1994 Permit also requires the Permittee to ensure that the discharge does not cause violations of State Water Quality Standards; that the Town notify EPA and MassDEP of any discharges from the facility; and that it provide screening and disinfection. EPA has not received any DMRs for this discharge, so it is unable to quantitatively evaluate the discharge.

## 3.0 Receiving Water Description

Massachusetts Bay in the vicinity of the discharge is a Class SA marine water designated for shellfishing pursuant to the Massachusetts Surface Water Quality Standards ("MA SWQS") found at 314 CMR 4.06, Table 23, North Coastal Drainage Area. Class SA "waters are designated as excellent habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration,

growth and other critical functions, and for primary and secondary recreation. In certain waters, excellent habitat for fish, other aquatic life and wildlife may include but is not limited to, seagrass. Where designated in the tables to 314 CMR 4.00 for shellfishing, these waters shall be suitable for shellfish harvesting without depuration (Approved and Conditionally Approved Shellfish Areas). These waters shall have excellent aesthetic qualities."

The waters immediately adjacent to the Marblehead discharge (N21.1) are currently classified as "prohibited" for shellfishing by the Massachusetts Division of Marine Fisheries Shellfish Sanitation and Management in accordance with the National Shellfish Sanitation Program. Shellfish growing area, N21.2, along Devereaux and Tuckers Beach has a "Conditionally Approved" classification (See Figure 2) and is seasonally (November 1 through April 30) opened to shellfishing.[1]

## 4.0 Basis for Denial

### 4.1 Statutory and Regulatory Authority

Congress enacted the Federal Water Pollution Control Act, codified at 33 U.S.C. § 1251-1387 and commonly known as 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 specific permitting sections of the CWA, one of which is § 402. *See* CWA §§ 301(a), 402(a). Section 402(a) established one of the CWA's principal permitting programs, the NPDES Permit Program. Under this section, EPA may "issue a permit for the discharge of any pollutant or combination of pollutants" in accordance with certain conditions. CWA § 402(a). NPDES permits generally contain discharge limitations and establish related monitoring and reporting requirements. *See* CWA § 402(a)(1) and (2). The regulations governing EPA's NPDES permit program are generally found in 40 C.F.R. §§ 122, 124, 125, and 136.

"Congress has vested in the Administrator [of EPA] broad discretion to establish conditions for NPDES permits" in order to achieve the statutory mandates of Section 301 and 402. *Arkansas v. Oklahoma,* 503 U.S. 91, 105 (1992). *See also* 40 C.F.R. §§ 122.4(d), 122.44(d)(1), 122.44(d)(5). CWA § 301 provide for two types of effluent limitations to be included in NPDES permits: "technology-based" effluent limitations (TBELs) and "water quality-based" effluent limitations (WQBELs). *See* CWA §§ 301, 304(d); 40 C.F.R. Parts 122, 125, 131.Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 402 and 301 (b) of the Clean Water Act. 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 Clean Water Act (CWA) as defined in 40 CFR 133.102.

Under Section 301(b)(1)(C) of the CWA, discharges are in addition subject to effluent limitations based on water quality standards. EPA regulations require NPDES permits to contain effluent limits more stringent than technology-based limits where more stringent limits are necessary to maintain or achieve federal or state water quality standards. Federal regulations at 40 C.F.R. § 122.4(a) prohibit

[1] Massachusetts Division of Marine Fisheries, 2003, "Marblehead Conditional Management Plan N21.2, Devereux and Tuckers Beach"

the issuance of an NPDES permit when conditions of the permit do not provide for compliance with the applicable requirements of CWA, or regulations promulgated under CWA.

The Marblehead permit expired on September 27, 1999 and had been administratively continued pursuant to the Administrative Procedure Act, 5 U.S.C. § 558(c). *See* 40 C.F.R. § 122.6(a). Under federal regulations, if EPA tentatively decides to deny the permit application, he or she shall issue a notice of intent to deny. 40 C.F.R. § 122.6(c). A notice of intent to deny the permit application is a type of draft permit, which follows the same procedures as any draft permit prepared under applicable NPDES regulations.

## 4.2 Basis for Denial

### 4.2.1 Non-compliance with 1994 Permit

As described previously, the discharge is an SSO from the Sargent Road Pump Station into Massachusetts Bay. Since issuance of the permit in 1994, EPA has determined that the Town substantially failed to comply with the monitoring and reporting requirements of the existing permit and has determined that this is an appropriate basis for denial of permit reissuance.[2] Specifically, the current permit includes requirements regarding the conditions under which a discharge from the Sargent Road Pump Station is authorized and also includes specific reporting requirement for such discharges. EPA, however, has no record of the Town of Marblehead submitting any Discharge Monitoring Reports ("DMRs") to EPA or MassDEP as required by the 1994 Permit.

In a January 8, 2008 letter from the Town to MassDEP, the Town itself expressly conceded that it was not in compliance with its NPDES permit. Specifically, the Town's letter, which was in response to a November 20, 2007, letter from MassDEP, indicates that there was no flow meter at the station and that the amount of discharge was being estimated based on pump capacity and hours operated. Furthermore, the Town stated that "the disinfection pump is presently broken, disinfection has been supplied by a drip process" and then admitted that chlorination has been discontinued in response to reports from local lobster fisherman about the staining of lobster shells in the vicinity of the discharge. Per the Town's letter, an automatic sampler was being purchased and was anticipated to be in place by April 1, 2008 but EPA has no record of any DMRs being submitted. The letters are attached as Exhibits 1 and 2.

Since 2008, the Town of Marblehead has notified MassDEP and/or EPA of eight discharges from the Sargent Road Pump Station (the Town has had other overflows as well which are not subject of an individual NPDES permit). The Town also has requirements under a 2003 Memorandum of Understanding[3] and the Marblehead Conditional Area Management Plan[4] to notify Marine Fisheries upon the activation of the Sargent Road Pump Station overflow. Any activation of the Sargent Road

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[2] This reason for denial is in accordance with federal regulations at 40 C.F.R. § 122.6(c), for example, which provides that, "When the permittee is not in compliance with the conditions of the expiring or expired permit the Regional administrator may choose to…(2) Issue a notice of intent to deny the new permit under § 124.6. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement activity for operating without a permit[.]"

[3] Memorandum of Understanding between Massachusetts Division of Marine Fisheries and the Town of Marblehead

[4] Marine Fisheries, 2003, "Marblehead Conditional Area Management Plan, N21.2 Devereux & Tuckers Beach"

overflow causes Marine Fisheries to automatically reclassify the area as "Closed for Shellfishing." The closure continues for the duration of the discharge and a minimum of 3 days after the activation has stopped. Based on information received from Marine Fisheries and MassDEP and EPA's own records, the Town is not reporting all activations to all agencies. Furthermore, EPA has not received any DMRs since the permit was issued in 1994.

Fecal Coliform monitoring data was submitted in the SSO Notification of a March 2018 discharge. No data on flows (other than the estimated total discharge on the SSO report) or total residual chlorine as required by the 1994 Permit were received. EPA also notes the fecal coliform testing was not performed to a sufficient dilution to determine if bacteria counts were within WQSs as required by the 1994 Permit.

**Table 1: Fecal Coliform bacteria data submitted in an SSO Report to EPA and MassDEP**

| Sampling Date and Time | Fecal Coliform (coliform/100 ml) |
|---|---|
| March 3, 2018, 4:30 AM | <1000 |
| March 3, 2018, 5:00 AM | <1000 |
| March 3, 2018, 5:41 AM | <1000 |
| March 4, 2019, 11:42 AM | 600,000 |
| March 4, 2018, 6:30 AM | <1000 |

EPA has determined that such non-compliance constitutes one ground for denying the permit application.

### 4.2.2 Endangerment of Human Health and the Environment

SSOs are point source discharges of untreated or partially treated wastewater. The microbial pathogens and other pollutants present in SSOs can cause or contribute to water quality impairments, beach closures, shellfish bed closures and other environmental and human health problems. As a practical matter, untreated SSOs ordinarily cannot meet applicable technology-based requirements (and, in many cases, applicable water quality-based effluent limitations). In the case of the Sargent Road Pump Station SSO discharge point, the discharge is to a Class SA water, which as mentioned is the highest marine water classification in the Massachusetts SWQS (314 CMR 4.05(4)(a)). The SA waters in the vicinity of the discharge are assigned the following minimum criteria in the MA SWQS: dissolved oxygen not less than 6.0 mg/L; temperature shall not exceed 85° F nor a maximum daily mean of 80° F and the rise in temperature shall not exceed 1.5° F; pH in the range of 6.5-8.5 standard units; fecal coliform bacteria not exceeding a geometric mean Most Probable Number (MPN) of 14 organisms per 100 ml, nor shall more than 10% of sample exceed an MPN of 28 per 100 ml; no single sample of enterococci bacteria shall exceed 104 enterococci colonies per 100 ml, and the geometric mean shall not exceed a geometric mean of 35 enterococci colonies per 100 ml; these water shall be free from floating, suspended and settable solids in concentrations or combinations that would impair any use assigned to this class, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom; these waters shall be free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned this class; these waters shall be free from oil and grease and petrochemicals; there shall be no taste or odor other than of natural origin.

The SSO discharge point discharges to high use waters of Marblehead. The discharge is located off Tinker's Island, a seasonal residential island, which is just off-shore of Marblehead Neck and Devereux Beach. Devereux Beach is a public bathing beach[5] and Devereux Beach and Tuckers Beach (immediately adjacent to Devereux) are a conditionally approved shellfish growing area by Marine Fisheries and defined as "the waters and flats of Devereux and Tuckers Beaches in the town of Marblehead inside of a line drawn from Ocean Avenue and Harbor Avenue to the north extremity of Little Pig Rocks continuing to the end of Gallison Avenue at Tuckers Beach[6]." This area is immediately closed by Marine Fisheries, upon activation of the Sargent Road overflow.

In accordance with Section 301(b) of the CWA, any authorization of discharges from this structure would require secondary treatment limits and limits necessary to ensure achievement of water quality standards. The current permit requires that overflows be screened and disinfected but does not include appropriate technology- and water quality-based effluent limitations as required by Section 301 of the CWA. EPA concludes, accordingly, that the original authorization to discharge SSOs without the imposition of legally-mandated effluent limitations was erroneous.

If EPA were to reissue the permit to authorize the discharge, it would be obliged to include the appropriate technology-based and water quality-based limits. The specific limits that would be required include, at a minimum, technology-based (secondary) limits for BOD, TSS, and pH, and water quality-based limits for bacteria. If the disinfection system continues to use chlorine for disinfection, a water quality-based total residual chlorine limit would also be necessary. Failure to include such limits would violate the prohibition in 40 C.F.R. § 122.4(a). Based on the characteristics of untreated wastewater, any discharge from the Sargent Road Pumping Station would violate such limits, requiring construction of an entirely new treatment facility.

### 4.2.3 Coverage Under Alternative Permitting Scheme

Given the infrequency/intermittence of SSO discharges, EPA and MassDEP have determined that it would be more reasonable and effective to control the source of the overflows from the pump station by reducing extraneous flows entering the collection system and/or increasing conveyance capacity rather than construction of a new treatment facility. Therefore, EPA has determined that it was most appropriate to co-permit the Town under the SESD POTW permit to the extent required to ensure, among other things, proper operation and maintenance of the portions of the SESD POTW collection system owned and/or operated by the Town.

EPA issued the SESD permit on May 5, 2016. The permit names the South Essex Sewerage District as permittee and the SESD member communities of Beverly, Danvers, Marblehead, Peabody and Salem as co-permittees. The co-permittees are responsible for certain conditions relating to their respective portions of the satellite collection systems, which comprise a part of the wider SESD Publicly Owned Treatment Works (*i.e.*, beyond the SESD POTW Treatment Plant itself). These portions of the POTW are owned and/or operated by the SESD member communities. Each co-permittee is only obligated to comply with such conditions in connection with portions of the SESD POTW that such permittee owns and/or operates. Under these conditions, the Town of Marblehead is

5 https://ma-beaches.healthinspections.us/beaches.cfm?bID=12207&func=details
6 Marine Fisheries

responsible for properly operating and maintaining its own collection system. The specific requirements include, for example: a preventative maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure; an inspection program to identify all potential and actual unauthorized discharges; preparation and implementation of an infiltration/inflow control plan; annual reporting of all actions to minimize I/I, and notification to EPA and MassDEP of any unauthorized discharge including discharges from the Sargent Road Pump Station.

EPA has extensively outlined the reasons for adopting a co-permittee approach. These are reflected in the Environmental Appeals Board's decision affirming the Region's co-permittee approach. *See In re Charles River Pollution Control District*, 16 E.A.D. 623, 639-40 (EAD 2015).[7] The Region has also explained the relationship between the SSO permit and SESD permit; the MWSC's status and obligations as a permittee and co-permittee, respectively, under those two instruments; and its rationale for adopting a systemic approach to address I/I, SSOs and related wet weather events, as opposed to individually permitting SSOs.[8] These are outlined in the SESD permit Response to Comments, including at pp. 52-60. EPA reasserts and incorporates those rationales here.

Finally, the existence of two separate permits relating to the same discharge counsels in favor of terminating the SSO permit. Doing so will eliminate any potential for confusion relative to dual permit requirements and, as a result of only having to administer one permit rather than two, will advance EPA's policy objective of using its limited administrative resources as efficiently as possible.

For the reasons described above, EPA and MassDEP have determined that the permit renewal application should be denied and has proceeded to issue this notice of intent to deny the permit renewal application.

**5.0 Public Comments, Hearing Requests and Permit Appeals**

All persons, including applicants, who believe any condition of the Notice of Intent to Deny the Permit Renewal Application (NOI) 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:

Michele Barden
EPA Region 1
5 Post Office Square, Suite 100 (06-01)
Boston, MA 02109-3912
Telephone: (617) 918-1539
Email: barden.michele@epa.gov

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[7] https://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/CWA~Decisions/F89699D1A0710BCF85257DE200717A93/$File/Charles%20River%20Decision%20Vol%2016.pdf

[8] https://www3.epa.gov/region1/npdes/permits/2016/finalma0100501permit.pdf

Claire Golden
Massachusetts Department of Environmental Protection
Surface Water Discharge Permit Program
205B Lowell Street
Wilmington, MA 01867
Telephone: (978) 694-3244
Email: claire.golden@mass.gov

Prior to the close of the public comment period, any person, may submit a written request to EPA for a public hearing to consider the NOI. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held if the criteria stated in 40 C.F.R. § 124.12 are satisfied. In reaching a final decision, the EPA will respond to all significant comments in a Response to Comments document attached to its final permit decision and make these responses available to the public at EPA's Boston office and on EPA's website.

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, forward a copy of the final decision to the applicant, and provide a copy or notice of availability of the final decision to each person who submitted written comments or requested notice. The final permit decision is jointly issued by EPA and MassDEP under federal and state law, respectively, and constitutes two separate and independent permit decisions: 1) a federal final permit decision issued by EPA pursuant to the Federal Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*; and 2) a state permit decision issued by MassDEP pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 25-53, and 314 C.M.R. 3.00. Within 30 days after EPA serves notice of the issuance of the final permit decision, an appeal of the final permit decision may be commenced by filing a petition for review of the permit decision with the Clerk of EPA's Environmental Appeals Board in accordance with the procedures at 40 C.F.R. § 124.19. An appeal of the state permit decision may be commenced by submitting a request for an adjudicatory hearing to MassDEP's Office of Appeals and Dispute Resolution consistent with 310 CMR 1.00.

**6.0 Administrative Record**

The administrative record on which this Draft Notice is based may be accessed at EPA's Boston office between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from Michele Barden, EPA Region1, 5 Post Office Square, Suite-100 (06-01), Boston, MA 02109-3912 or via email to barden.michele@epa.gov.

*September 3, 2019*

**Ken Moraff, Acting Director**
**Water Division**
**U.S. Environmental Protection Agency**

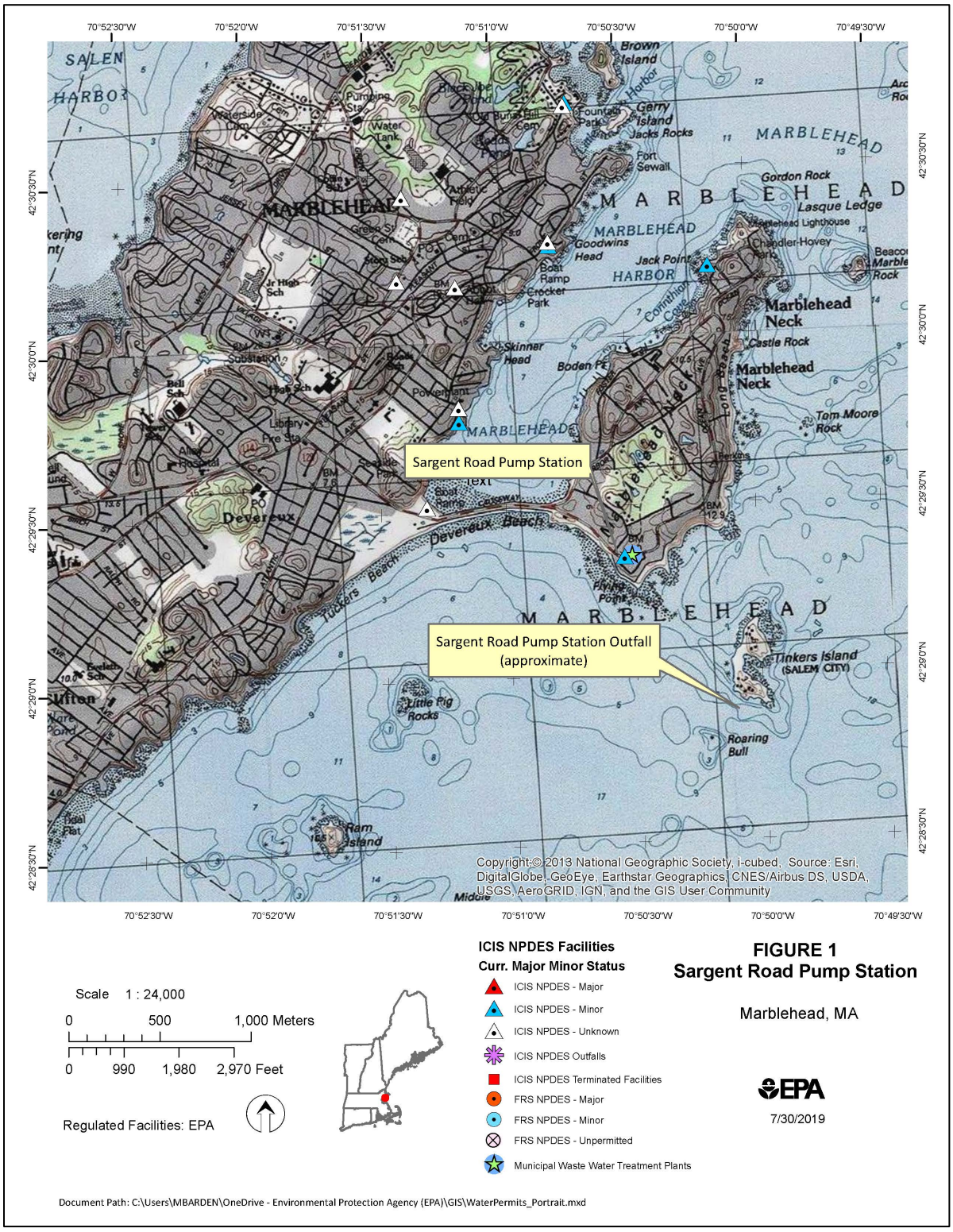


**Figure 1: Locus Map**

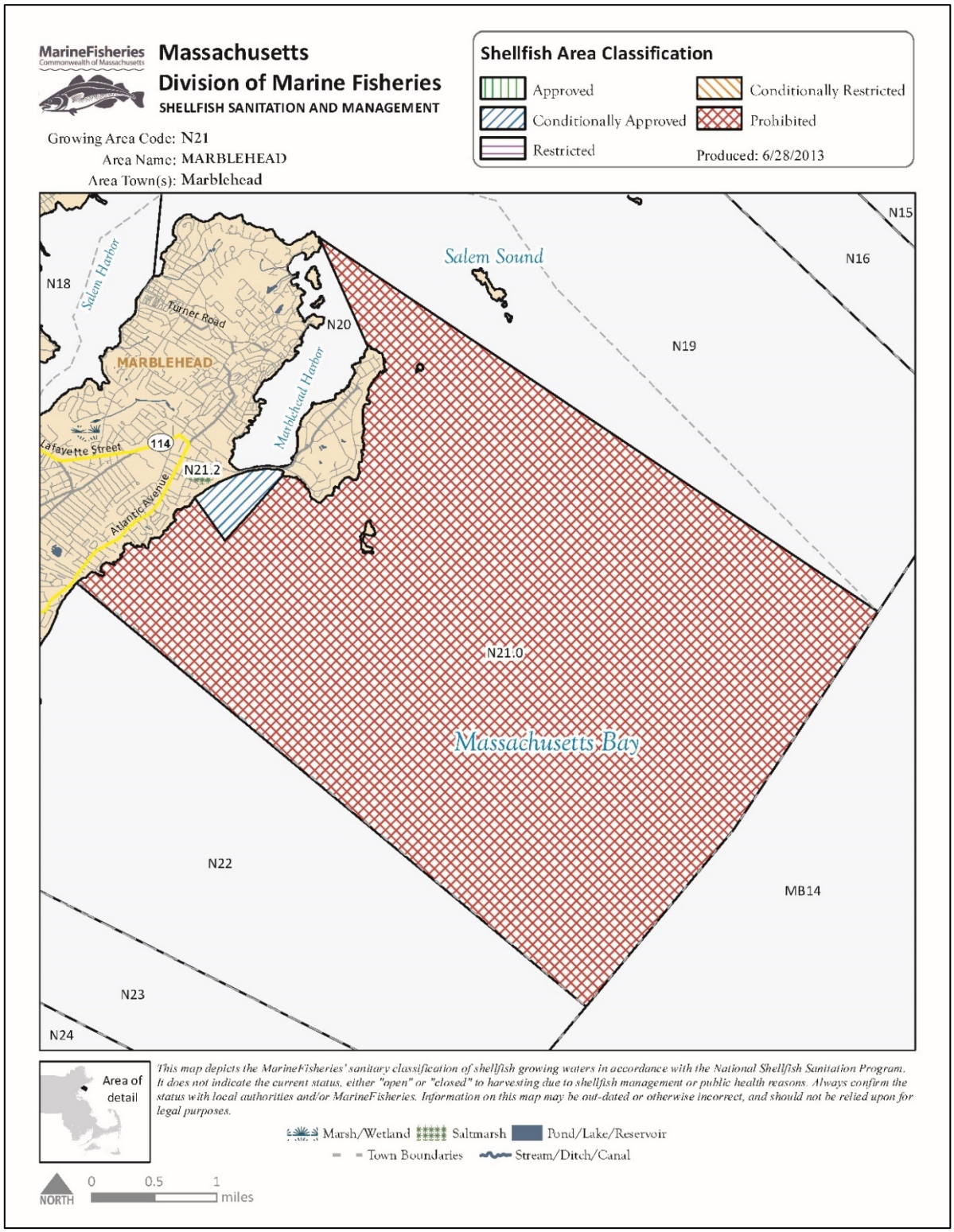


**Figure 2: Massachusetts Marine Fisheries Shellfish Classification Map**

**Exhibit 1**

Letter from Dana Snow, Superintendent, Town of Marblehead, Water and Sewer Commission, to Eric Worrall, Deputy Region Director, Bureau of Resource Protection, Northeast Regional Office, to, RE: Marblehead, NPDES Permit No. MA0100374 – Response to Request for Information, January 8, 2008

TOWN OF MARBLEHEAD

# Water and Sewer Commission

P.O. BOX 1108
Marblehead, Massachusetts 01945

Dana E. Snow
Superintendent

Office: Tower Way
631-2694 — 631-0102
SEWER WATER

January 8, 2007 ?



Eric Worrall
Deputy Regional Director
Bureau of Resource Protection
Northeast Regional Office
Department of Environmental Protection
205B Lowell Street
Wilmington MA 01887

RE: Marblehead NPDES Permit No. MA0101374 – Response to Request for Information

Dear Mr. Worrall;

Reference is made to the above captioned matter and your letter of November 20, 2007. In that connection, I have set forth below the Town of Marblehead's response to your request. Please know we take very seriously the requirements of the NPDES permit as well as our actions in the time of an emergency. We look forward to discussing this matter further should you require any other information following your review of this material.

I have set forth below the answers to the questions and request for information in the same order as requested.

**a. A detailed written report and operational accounting of how the Town initiates and activates an emergency by-lass discharge to the ocean outfall, including but not limited to:**

**i. Describe in detail the protocols for determining when a by-pass must be initiated, the responsible staff, and the steps and processes needed to activate an emergency by-pass.**

In accordance with the regulations, the Town never initiates a by-pass unless a by-pass is unavoidable to prevent loss of life, personal injury, or severe property damage and where there is no feasible alternative. The Town has notified the Department on each occasion that a by-pass has occurred. Specifically, for your ease of reference I have attached the protocol for determining when a by pass must be initiated, the responsible staff and the steps which we go through to activate an emergency by-pass. (See **Exhibit A-1**) This document is available to Department personnel. (Also attached is **Exhibit A-2** the proposed protocol which will go into effect once the new automatic sample is put in place.)

During major storm events, the Superintendent or his designee monitors flows provided to them from the South Essex Sewer District (SESD) at the South Essex Sewerage District pump station on Beach Street in Marblehead. The peak flow through the gravity side of the discharge main has a maximum capacity of approximately 10 mgd. When flows reach 7 mgd from the Beach Street station, the Town is notified by SESD. SESD monitors the flows with telemetering and SCADA equipment. The peak capacity of approximately 10 mgd.

The reason for the differential between the notification at 7 mgd and the capacity at 10 mgd is because the west side of Town also pumps into this same main, and the additional 3 mgd capacity is necessary for the west side stations. Any surcharging of the pressure line results in a raw sewage discharge on Village Street near the Village Middle School in Marblehead. This area of Town is largely residential and includes a middle school of approximately 400 students.

If the SESD station begins to back up and flood the lower level of the station, the Sargent Road outfall must be activated to prevent back flooding of the Atlantic Avenue gravity system, and a further back up of the Fort Beach pump station system and Clifton pump station. The areas of Atlantic Avenue, Fort Beach and Clifton all include residential and commercial properties. The back up of the sewer system in the area of Atlantic Avenue cause back up into the gravity system and into the basements of approximately ten restaurants and forty to fifty business resulting in loss of personal property as well as commercial property. The total value of which is estimated to be over thirty million dollars ($30,000,000.00). The back up of the Ocean Avenue gravity system in the immediate area of Beach Street SESD pump station will cause back up into residential neighborhood effecting residential real estate as well as life and limb of the residents. The back up into the Village Street area results in a flow into catch basins and open ditches causing outflows into the atmosphere near the above noted middle school and residential neighborhood, thereby risking life and limb as well as property damage.

I have attached a map showing the areas of impacts should a back-up occur and no by-pass take place. (Please see attached **Effected Area Map**) In total, in the event of a back-up over 220 properties would be affected with a total value of over one hundred one million dollars ($101,000,000.00) not including the value of the loss of personal property which at this point is an undetermined amount. In addition, the danger to life and limb due to sewerage being spilled on the street is incalculable.

The decision to operate the Sargent Road. Outfall and allow a by-pass is made by the Superintendent or in his absence, the Assistant Superintendent. In order to activate the by-pass there are multiple steps in place which must be followed. Gate valves at the Sargent Road pump station must be unlocked, and opened to allow for the discharge of wastewater through the outfall. The gate valves are secured by lock and key.

Once the by-pass is activated then wastewater from Marblehead Neck plus the overflow that could not be accommodated at the SESD station is pumped from the Sargent Road pump station to the by-pass outfall near Tinker's Island. There is a sodium

hypochlorite tank on site for treatment, as well as a pump system. There is also screening on site located in the wet well to assist in removing debris and large material.

When the flow to the SESD pump station drops below 7 mgd, the Sargent Road by-pass is discontinued. Notification of by-pass is made to the Marblehead Board of Health and to the Department of Environmental Protection (DEP).

**ii. Describe the methods used to track when a by-pass occurs and to quantify the amount of flow discharged.**

While there is no flow monitoring meter at the station an estimate of the amount discharge can be calculated by using pump capacity and hours operated. There is no flow monitor.

**iii. Provide details on the operation and maintenance of the treatment and pumping facilities, including:**

**1. Staff operating the facility.**

Dana Snow, Superintendent: Grade 5 Wastewater Treatment Plant Operator and (if and when) Grade 4 Collection System License.
Charles McCollum, Assistant Superintendent: Grade 4 Collection System License.
Three additional employees hold Grade 4 – Grade 1 Collection System Licenses.

**2. Application, monitoring and control of the disinfection process;**

While the disinfection pump is presently broken, disinfection has been supplied by a drip process from drums of sodium hypochlorite. We are in the process of analyzing a new automatic chlorination system. However, the quality and quantity of the by-passed waste water flow is highly variable as it consists primarily of clean water from inflow sources. Proper dosing of chlorine for disinfection is difficult as the waste flow chlorine demand is unknown during a storm event. Anecdotal reports from lobster fishermen working in the area of the ocean outfall have noted staining of the shells from harvested lobsters following chlorination of the by-pass stream prior to discharge. Chlorination had been suspended as a standard practice following these reports. Storage of the liquid chlorine in anticipation of a by-pass event has also been problematic. Liquid sodium hypochlorite purchased and stored at the SESD pump station degrades over time and further complicates appropriate dose development.

Regardless of the determination on the use of chlorine, we are purchasing an automatic sampler system (See attached **Exhibit B**) which will be in place on or about April 1, 2008.

**3. Quantification of overflow volume;**

Overflows are estimated by using pump capacity and hours operated.

**4. NPDES compliance sampling and analysis procedures.**

No sampling has been done. However, we are purchasing an automatic sampler system (See attached **Exhibit B**) which will be in place on or about April 1, 2008. We report a by-pass to the Marblehead Board of Health (BOH) immediately. The BOH then immediately posts warnings on the potentially effected areas.

**5. Notification procedures upon activation of by-pass;**

Immediately the BOH is notified by Nextel or phone. DEP is notified by FAX as soon as possible. (See **Exhibit C,** Notifications to DEP for the three events in the past three years.)

**6. Follow-up reporting and record keeping;**

We keep all records of by-pass events following the reporting of same. Additionally, there is always follow up with the BOH. To date there has been no reason for follow-up reporting. Our reports to DEP include all required information including the following: by-pass, description of non-compliance, exact dates and times, location of overflow, receiving water, incident duration, treatment provided, cause of incident. (See **Exhibit C**)

**iv. Provide a detailed listing of all by-pass events occurring over the last three years. Include dates and times of each by-pass event, total duration, total flow discharged (mgd), TRC (mg/1) and Fecal Coli form bacteria counts.**

Please see attached **Exhibit C** which are the reports provided to DEP. Additionally, I have attached the rainfall amounts as recorded at the Marblehead Water Department for the Taunton WFO for periods covering the by-pass events as **Exhibit D**. Finally I have attached the readings off of the pumps from the by-pass station on the same dates as the events as well as the dialing inspection sheets covering the same time period. **Exhibit E**.

The three events were as follows:

- June 7, 2006 from 8:30 p.m. / on June 7 through 10:00 a.m. on June 8.
- May 13, 2006 – May 17, 2006 / 11:59 a.m. on May 13 through 9:00 p.m. on May 17.
- October 15, 2005 / from 11 a.m. on October 15 through 11 a.m. on October 16, 2005.

All events were caused by inordinate amounts of precipitation and ground saturation.

The Town of Marblehead Water and Sewer Department experiences significant wastewater flow increases immediately following major precipitation events. The impact of these inflows are particularly dramatic when the ground is saturated leading up to the precipitation event. The Department conducted a town wide study to locate the source of the wastewater inflow beginning in 1996. The source and extent of wastewater inflow sources were evaluated through manhole inspections, dye testing, smoke testing and house to house inspections.

An evaluation of this investigation determined that the primary source of the inflow is residential sump pumps directly connected to the sanitary sewer system. The densely developed nature of the community combined with the shallow depth to bedrock leads to the infiltration of surface runoff and ground water in to the basements of homes. Many homes are fitted with sump pumps to eject the water from the basement. If the pumps are piped to discharge in to the side or rear yard, the water will frequently cycle back in to the basement or in to a neighboring home's basement. Pumps piped to discharge in to the front yard, toward the street, will create icing conditions across the sidewalk and within the street gutter. Many homeowners have chosen to connect the sump pumps directly to the sanitary sewer connection within the home. While this approach is in violation of the sanitary sewer use regulations, it provides a convenient means of discharging the water while being substantially undetectable from the building exterior.

The inflow study conducted by the Department identified the buildings within the service area that had sump pumps. The locations were mapped and keyed as to the ultimate discharge of the pump. The map shows areas where pumps discharging to the sanitary sewer system are located in densely populated areas or in close proximity to the municipal drain system. These areas were targeted by the Department for the most cost effective removal of inflow from the sanitary sewer system.

In 2000, the Department began a storm drainage improvement plan that would provide alternative discharge options for homes and businesses with sump pumps. As drainage systems were improved in these areas, storm drain laterals were placed to the front property lines of homes along the improvement route. The owners were then encouraged to extend the lateral to the front of the home as a discharge point for sump pumps and other potential inflow sources. The major construction projects completed by the Department are included here.

| Contract No. | Title | Year | Value |
|---|---|---|---|
| 134 | Central Street Storm Drain Collection System | 2000 | 485,837.73 |

| | | | |
|---|---|---|---|
| 135A | Chestnut Street Area Storm Drain Collection System | 2001 | 1,441,211.13 |
| 128 | Commercial Street Interceptor | 2002 | 388,910.25 |
| CM03-3 | Infiltration Inflow Reduction Drains for Sump Pump Removal within the Town of Marblehead | 2005 | 340,424.00 |
| | Total Construction Cost | | 2,656,383.11 |

Additionally, the Department has expended over $380,000 in sanitary sewer video inspections to identify additional sources of inflow in specific districts within the system. Inflow sources that are identified through this process are added to the information obtained in the original inflow report. Inflow sources directly within the control of the Department are repaired or eliminated immediately.

As new development projects are reviewed by the Board of Water and Sewer Commissioners, the applicants are required to remove wastewater inflow from the sanitary sewer system at a ratio of 4 gallons of inflow for every gallon of estimated wastewater flow to be added. The applicants are encouraged to remove the inflow sources identified by the Department by redirecting sump pumps from the sanitary sewer system to available municipal storm drains. The Board of Water and Sewer Commissioners manages a revolving fund that receives contributions from private developers based upon the expected wastewater flow from their project. These funds are then expended by the Board to remove pumps connected to the sanitary sewer system and to provide additional sump pump laterals on the municipal drain system.

Since the Department began sump pump removal process, 85 pumps have been removed from the sanitary sewer system. This represents an estimated peak inflow rate of 17 MGD. The Department continues focus on sump pump removal as a means of reducing the rapid peaking of sanitary wastewater flows. This approach will allow the Department to significantly reduce or eliminate the need to bypass wastewater flows during extreme precipitation events.

**b. Provide detailed plan of the pump station to include the overall site and floor plans.**

**i. Plans should denote major operational components and any parts needed to clarify means and methods requested in Part a. above.**

**ii. The site plan should clearly indicate the sewer mains flowing into and out of the pump station.**

Please see attached **Exhibit F**.

c. **A locus map must also be provided indicating the pump station location relative to the collection system tributary to the pump station and the sewerage receiving components owned by SESD.**
    i. **The locus should delineate areas impacted by sewer system back-ups, in the event that the pump station emergency by-pass is not activated.**
    ii. **Sewer interceptors, force mains and outfalls related to the pump station should be shown.**
    iii. **Include street names, water bodies, building footprints and any major features that would assist in identifying the sewerage facilities noted above.**

Please see attached **Exhibit G**.

I hope this addresses the concerns that you may have had. Should you care to discuss this further I am happy to meet with you at your convenience.

Sincerely,

Dana Snow
Superintendent

cc: Marblehead Water and Sewer Commission
Anthony Sasso, Town Administrator

**Attachment B**

**DECLARATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on 1-14-07
**[Date]**

Dana E Snow
**[Signature]**

Dana E. Snow, Superintendent
**[Type Name and Title]**

Linda J Matthews

**Exhibit 2**

Letter from Eric Worrall, Deputy Region Director, Bureau of Resource Protection, Northeast Regional Office, to Dana Snow, Superintendent, Town of Marblehead, Water and Sewer Commission, RE: Informational Request, Sargent Road Pump Station, Marblehead, NPDES Permit No. MA0100374; November 20, 2007

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NORTHEAST REGIONAL OFFICE
205B Lowell Street, Wilmington, MA 01887 • (978) 694-3200

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

IAN A. BOWLES
Secretary

LAURIE BURT
Commissioner



November 20, 2007

Mr. Dana Snow
Water & Sewer Commission Superintendent
100 Tower Way, Building 11
P.O. Box 1108
Marblehead, MA 01945

Re: Informational Request - Sargent Road Pump Station, Marblehead
NPDES Permit No. MA0100374

Dear Mr. Snow:

On September 18, 2007, staff from the Northeast Regional Office of the Massachusetts Department of Environmental Protection ("MassDEP") observed conditions at the Sargent Road Pump Station during an annual NPDES inspection of the facility. As a result of the inspection MassDEP has concerns regarding the Town's compliance with the EFFLUENT LIMMITATIONS AND MONITORING REQUIREMENTS of its permit, and the frequency, volume, and treatment of discharges from the Sargent Road Pump Station.

Pursuant to its authority under 314 CMR 3.03(1), *the Department may require any person to provide information as the Department may reasonably require to determine whether that person is subject to M.G.L. c. 21, §§ 26 through 53 or to 314 CMR 3.00 or has violated the M.G.L. c. 21, §§ through 53 or 314 CMR 3.00."* MassDEP hereby requires that within sixty (60) days of receipt of this letter, the Town provide the information set forth in Attachment A and submit the certification set forth in Attachment B signed by the responsible Town official. The purpose of this MassDEP information request is to assess the Town's compliance with the requirements of its existing permit.

Failure of the Town to provide the required information is a violation of the Surface Water Discharge Permit Regulations and may result in enforcement action by MassDEP. Information submitted in response to this information request shall be addressed to:

Eric Worrall
Deputy Regional Director
Bureau of Resource Protection
Northeast Regional Office
Department of Environmental Protection
205B Lowell Street
Wilmington, MA 01887.

If you have any questions regarding this letter, please contact me at (978) 694-3225 or Joseph Nerden at (978) 694-3239.

Sincerely,

Eric Worrall
Deputy Regional Director
Bureau of Resource Protection

Attachments

Certified Mail No. 7006 0100 0006 3819 9994

Cc: George Harding, US EPA Region One
Brian Pitt, US EPA Region One
Michele Cobban Barden, US EPA Region One
Paul Hogan, DEP Program Manager, DEP/CERO

**Attachment A**

The Town of Marblehead ("the Town") shall provide the following information relative to the Sargent Road Pump Station, NPDES Permit No. MA0100374 requirements.

a. A detailed written report and operational accounting of how the Town initiates and activates an emergency by-pass discharge to the ocean outfall, including but not limited to:
    i. Describe in detail the protocols for determining when a bypass must be initiated, the responsible staff, and the steps and processes needed to activate an emergency by-pass.
    ii. Describe the methods used to track when a by-pass occurs and to quantify the amount of flow discharged.
    iii. Provide details on the operation and maintenance of the treatment and pumping facilities, including:
        1. Staff operating the facilities, noting any training or operator certification for the staff;
        2. Application, monitoring, and control of the disinfection process;
        3. Quantification of overflow volume;
        4. NPDES compliance sampling and analysis procedures;
        5. Notification procedures upon activation of bypass operations;
        6. Follow-up reporting and recording keeping
    iv. Provide a detailed listing of all by-pass events occurring over the last three years. Include dates and times of each by-pass event, total duration, total flow discharged (mgd), TRC (mg/l) and Fecal Coliform bacteria counts.
b. Provide detailed plan of the pump station to include the overall site and floor plans.
    i. Plans should denote major operational components and any parts needed to clarify means and methods requested in Part a. above.
    ii. The site plan should clearly indicate the sewer mains flowing into and out of the pump station.
c. A locus map must also be provided indicating the pump station location relative to the collection system tributary to the pump station and the sewerage receiving components owned by SESD.
    i. The locus should delineate areas impacted by sewer system back-ups, in the event that the pump station emergency by-pass is not activated.
    ii. Sewer interceptors, force mains and outfalls related to the pump station should be shown.
    iii. Include street names, water bodies, building footprints and any major features that would assist in identifying the sewerage facilities noted above.

**Attachment B**

## DECLARATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on _____
**[Date]**

_____
**[Signature]**

_____
**[Type Name and Title]**

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
COMMONWEALTH OF MASSACHUSETTS
1 WINTER STREET
BOSTON, MASSACHUSETTS 02108

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY – REGION 1
WATER DIVISION
5 POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109

JOINT PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO WATERS OF THE UNITED STATES UNDER SECTIONS 301 AND 402 OF THE CLEAN WATER ACT, AS AMENDED, AND SECTIONS 27 AND 43 OF THE MASSACHUSETTS CLEAN WATERS ACT, AS AMENDED, AND REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE CLEAN WATER ACT.

PUBLIC NOTICE PERIOD: **September 5, 2019 – October 4, 2019**

PERMIT NUMBER: **MA0100374**

PUBLIC NOTICE NUMBER: **MA-022-19**

NAME AND MAILING ADDRESS OF APPLICANT:

Marblehead Water and Sewer Commission
P.O. Box 1108
Marblehead, MA 01945

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

Sargent Road Pump Station
Marblehead Neck
Marblehead, MA 01945

RECEIVING WATER: Massachusetts Bay (Class SA)

The U.S. Environmental Protection Agency ("EPA") and the Massachusetts Department of Environmental Protection ("MassDEP") have cooperated in the development of a draft Notice of Intent to Deny a Permit Renewal Application ("NOI") and Statement of Basis for the Sargent Road Pump Station, which is a Sanitary Sewer Overflow (SSO) discharge point. EPA has determined to deny the permit application in accordance with respective federal and state authorities.

INFORMATION ABOUT THE DRAFT PERMIT:

The draft NOI and Statement of Basis (describing the type of facility; type and quantities of wastes; a brief summary of the basis for the denial; and significant factual, legal and policy questions considered in preparing this NOI) may be obtained at no cost at http://www.epa.gov/region1/npdes/draft_permits_listing_ma.html or by contacting:

Michele Barden
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1539
barden.michele@epa.gov

The administrative record containing all documents relating to this draft permit including all data submitted by the applicant may be inspected at the EPA Boston office mentioned above between 9:00 a.m. and 5:00 p.m., Monday through Friday, except holidays.

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

All persons, including applicants, who believe any condition of this draft notice of intent to deny is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by **October 4, 2019**, to the address or email address listed above. Any person, prior to such date, may submit a request in writing to EPA and MassDEP for a public hearing to consider this draft notice of intent to deny. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on this draft notice of intent, the Regional Administrator will respond to all significant comments and make the responses available to the public at EPA's Boston office.

FINAL PERMIT DECISION:

Following the close of the comment 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.

LEALDON LANGLEY, DIRECTOR
DIVISION OF WATERSHED MGMT
MASSACHUSETTS DEPARTMENT
OF ENVIRONMENTAL PROTECTION

KEN MORAFF, DIRECTOR
WATER DIVISION
ENVIRONMENTAL PROTECTION
AGENCY – REGION 1