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"), and the Massachusetts Clean Water Act, as amended, (M.G.L. Chap. 21, §§26-53),

United States Fish and Wildlife Service

is authorized to discharge from a facility located at

North Attleboro National Fish Hatchery
144 Bungay Road
North Attleboro, MA

to receiving water named

Bungay River
(Ten Mile River Watershed, MA52-06)

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 October 18, 2004.

This permit consists of 12 pages in Part I including effluent limitations, monitoring requirements, etc. and 25 pages in Part II including Standard Conditions.

Signed this 31st day of May, 2012

/S/SIGNATURE ON FILE

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

David Ferris, Director
Massachusetts Wastewater Management Program
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

Part I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge culture water from outfall Serial Number 001 into Bungay River. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic (units)	Discharge Limitations		Monitoring Requirements[1]	
	Maximum Daily	Average Monthly	Measurement Frequency	Sample Type
Flow (MGD)	1.7	1.7	Daily[2]	Instantaneous
BOD_5 (mg/l)	10	5	1/Quarter	Grab
TSS (mg/l)	10	5	1/Quarter	Grab
pH (standard units)	6.0 - 8.3 standard units[3]		1/Quarter	Grab
Total Phosphorus as P (mg/l)	Report	--	1/Quarter	Grab
Total Residual Chlorine (mg/l)	0.019	0.011	1/Day[4]	Grab
Hydrogen Peroxide (mg/l)	0.7	--	1/Day[5]	Grab

NOTE: See pages 3 for explanation of the various footnotes.

Footnotes Applicable To Part I.A.1. on page 2

(1) Samples taken in compliance with the monitoring requirements for flow, BOD_5, TSS, pH, and total phosphorus shall be taken at Outfall 001. Samples for total residual chlorine and hydrogen peroxide shall be taken prior to entering the settling ponds at the outfall pipe access point near the hatchery parking lot.

(2) The effluent flow shall be measured daily. Daily flows shall be recorded and the average monthly and maximum daily values shall be reported.

(3) The pH of the effluent shall not be less than 6.0 nor greater than 8.3 standard units (s.u.) and not more than 0.5 s.u. outside of the background range. There shall be no change from background conditions that would impair any use assigned to this class.

(4) The minimum level (ML) for total residual chlorine is defined as 0.02 mg/l. This value is the minimum level for chlorine using Method 330.5 found in EPA Manual of Methods of Analysis of Water and Wastes. For effluent limitations less than 0.02 mg/l, compliance/non-compliance will be determined based on the ML. Sample results of 0.02 mg/l or less shall be reported as zero on the discharge monitoring report. Monitoring for total residual chlorine is required once per day only when chlorine is used.

(5) Monitoring for hydrogen peroxide is required once per day only when external microbiocide containing hydrogen peroxide (e.g., PEROX-AID®) is used.

Part I.A. (Continued)

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

3. The discharge shall not cause objectionable discoloration of the receiving waters.

4. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.

5. Toxic Controls

   a. No components of the effluent shall result in any demonstrable harm to aquatic life or violate any water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards, with the permittee being so notified.

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

6. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe (40 CFR § 122.42):

   a. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

      i. One hundred micrograms per liter (100 µg/l)

      ii. Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

      iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or

      iv. Any other notification level established by the Director in accordance with 40 CFR § 122.44(f) and Massachusetts regulations.

   b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

      i. One hundred micrograms per liter (100 µg/l);

      ii. One milligram per liter (1 mg/l) for antimony;

      iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or

iv. Any other notification level established by the Director in accordance with 40 CFR § 122.44(f) and Massachusetts regulations.

c. That they have begun or expect to begin to use or manufacture as an intermediate product or byproduct any toxic pollutant which was not reported in the permit application.

7. No components of the effluent shall result in any demonstrable harm to aquatic life or violate any water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards, with the permittee being so notified.

8. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable standard or limitation promulgated or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the "CWA" if the effluent standard or limitation so issued or approved:

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

b. Controls any pollutants not limited in the permit. If the permit is modified or reissued, it shall be revised to reflect all currently applicable requirements of the "CWA".

9. The permittee shall notify EPA and the Massachusetts Department of Environmental Protection (MassDEP) within 24-hours upon the occurrence of any mortality of greater than 25 percent in any aquatic species under culture at the facility (excluding eggs and larval fish) during a single mortality event in accordance with reporting requirements in General Conditions Part II.D.1.e.

10. The permittee shall inform the EPA and MassDEP in writing at least ninety (90) days before any change in the fish species to be raised or development stage to be attained at this facility.

11. There shall be no direct discharge of hatchery effluent to Bungay River without prior treatment in the settling ponds.

12. There shall be no discharge of formaldehyde or formalin to the receiving water.

13. Any hypochlorite solution applied to the surface of any rearing equipment exposed to culture water must be neutralized prior to that equipment being exposed to culture water.

14. The permittee shall use only those Aquaculture Drugs and Chemicals approved by the U.S. Food and Drug Administration (USFDA) and in accordance with labeling instructions or as allowed in Part B. Drug Usage immediately below. EPA will defer to the USFDA regarding whether or not a particular drug and/or chemical is used in accordance with appropriate USFDA requirements.

In addition, each year with the December Discharge Monitoring Report (to be postmarked by January 15th) the permittee shall certify in writing that all Aquaculture Drugs and Chemicals

used at the hatchery during that calendar year were drugs approved by the USFDA and were used in accordance with FDA labeling or as allowed under Part B.1 “Drug Use.”

B. NARRATIVE EFFLUENT LIMITATION REQUIREMENTS

1. Drug Use

Except as noted below, the permittee must notify EPA and the MassDEP in accordance with the following procedures of any investigational new animal drug (INAD) or extra-label drug use which may lead to a discharge of the drug to waters of the United States as stipulated below. However, reporting is not required for any INAD or extra-label drug use that has been previously approved by the US Food and Drug Agency (USFDA) for a different species or disease if the INAD or extra-label use is at or below the approved dosage and involves similar conditions of use.

a. The permittee must provide to EPA and MassDEP a written report of INAD impending use within 7 days of agreeing or signing up to participate in an INAD study. The written report must identify the INAD to be used, method of use, the dosage, and the disease or condition the INAD is intended to treat.

b. For INAD’s and extra-label drug uses, the permittee must provide an oral report to EPA and MassDEP as soon as possible, preferably in advance of use, but no later than 7 days after initiating use of that drug. The oral report must identify the drugs used, method of application, and the reason for using that drug.

c. For INAD’s and extra-label drug uses, the permittee must provide a written report to EPA and MassDEP within 30 days after initiating use of that drug. The written report must identify the drug used and include: the reason for treatment, date(s) and time(s) of the addition (including duration), method of application; and the amount added.

2. Structural Failure and/or Damage to Culture Units

The permittee must notify EPA and MassDEP in accordance with the following procedures when there is a “reportable failure” in, or damage to, the structure of an aquatic animal containment system (i.e, culture unit) or its wastewater treatment system that results in an unanticipated material discharge of pollutants to waters of the United States.

a. For this facility, a “reportable failure” applies only to active culture units (ones that contain fish and flowing water) and their ancillary components and refers to the collapse or damage of a rearing unit or its wastewater treatment system; damage to pipes, valves, and other plumbing fixtures; and damage or malfunction to screens or physical barriers in the system, which would prevent the rearing unit from containing water, sediment (i.e. settled solids), and the aquatic animals being reared. Wastewater treatment systems include ponds or settling tanks to which cleaning water is directly discharged and culture units which are used for the temporary storage of settled solids removed from active culture units.

b. The permittee must provide an oral report to EPA and MassDEP within 24-hours of discovery of any reportable failure as defined in item 2.a. or damage that results in a material discharge of pollutants. The report shall describe the cause of the failure or damage in the containment system and identify materials that have been released to the environment as a result of that failure.

c. The permittee must provide a written report to EPA and MassDEP within 7 days of discovery of the failure or damage documenting the cause, an estimate of the material released as a result of the failure or damage, and steps being taken to prevent a recurrence.

3. Spills

In the event a spill of drugs, pesticides or feed occurs that results in a discharge to water of the United States, the permittee must provide an oral report of the spill to EPA and MassDEP within 24 hours of its occurrence and a written report within 7 days to the above Agencies. The report shall include the identity and quantity of the material spilled.

4. Best Management Practices (BMP) Plan

The permittee must develop, implement and maintain a BMP Plan (PLAN) on site that describes how the following requirements will be achieved. The permittee will make the current version of that PLAN available to EPA and/or the MassDEP upon request. The permittee shall implement the intent of the BMP following requirements upon the permit's effective date. The permittee, however, has 90 days following the permit's effective date to certify in writing to EPA and MassDEP that a written PLAN has been developed in accordance with requirements listed in this part and must submit that certification with the appropriate DMR.

Further, the permittee shall amend the PLAN within 30 days following any change in facility design, construction, operation, or maintenance which affects the potential for the discharge of pollutants into surface waters or after the EPA and/or MassDEP determine certain changes are required following an event that results in non-compliance, a facility inspection, or review of the PLAN. The permittee shall place in the PLAN a written documentation of each amended change along with a brief description stating the reason for the amendment; include the date of the change that triggered the amendment. The permittee shall also document what date the amended PLAN was implemented.

The PLAN must address, at a minimum, the following requirements:

a. Solids control

i. Employ efficient feed management and feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth in order to minimize potential discharges of uneaten feed and waste products to waters of the United States.

ii. In order to minimize the discharge of accumulated solids from settling tanks, basins and production systems, identify and implement procedures for routine cleaning of rearing units and settling tanks, and procedures to minimize any discharge of accumulated solids during the inventorying, grading and harvesting of aquatic animals in the production system. Part I.A.11. prohibits the direct discharge of cleaning water absent some form of solids removal prior to discharge.

iii. If any material is removed from the rearing units and/or settling tanks, describe where it is to be placed and the techniques used to prevent it from re-entering the surface waters from any on-site storage. If the material is removed from the site, describe who received the material and its method of disposal and/or reuse.

iv. Remove and dispose of aquatic animal mortalities properly on a regular basis to prevent discharge to waters of the United States, except in cases where EPA and MassDEP authorizes such discharges in order to benefit the aquatic environment.

b. Biological control

i. Describe in detail the precautions that will be exercised by the facility to prevent aquatic organisms that are neither indigenous nor naturalized to Massachusetts waters from becoming established in the local surface waters.

ii. Provide a description of any storage and/or treatment strategies designed to prevent biological pollution (non-indigenous organisms including fish parasites and fish pathogens and dead or dying fish) from entering the receiving water when the cultured fish population or a portion thereof are showing signs of stress.

c. Materials Storage

i. Ensure proper storage of drugs, pesticides, and feed in a manner designed to prevent spills that may result in the discharge of drugs, pesticides or feed to water of the United States.

ii. Implement procedures for properly containing, cleaning, and disposing of any spilled material.

d. Structural Maintenance

i. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.

ii. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.

e. Recordkeeping

i. In order to show how representative feed conversion ratios were calculated, maintain records documenting the feed amounts and estimates of the number and weight of aquatic animals for each rearing unit.

ii. Keep records that document the frequency of cleaning, inspections, repairs and maintenance. In addition, records of all medicinal and chemical usage (i.e., for each occurrence) at the facility shall be recorded and filed in the PLAN to include the dosage concentration, frequency of application (hourly, daily, etc.) and the duration (hours, days) of treatment, and the method of application.

f. Training

i. In order to ensure the proper clean-up and disposal of material, adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill.

ii. Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment.

g. Aquaculture Drugs and Chemicals Used for Disease Control and/or Prevention

List in the PLAN all aquaculture drugs and chemicals including all INAD and extra-label drugs and for each, identify:

i. Product name and manufacturer.

ii. Chemical formulation.

iii. Purpose/reason for its use.

iv. Dosage concentration, frequency of application (hourly, daily, etc.) and the duration (hours, days) of application.

v. The method of application.

vi. Material Safety Data Sheets (MSDS), Chemical Abstracts Service Registry number for each active therapeutic ingredient.

vii. The method or methods, if any, used to detoxify the wastewater prior to its discharge.

viii. Information on the persistence and toxicity in the environment.

ix. Information on the USFDA approval for the use of said medication or chemical on

fish or fish related products used for human consumption.

x. Available aquatic toxicity data (vendor data, literature data, etc.); Lethal Concentration to 50 percent test organisms (LC_{50}) at 48 and/or 96 hours and No Effect Level (NOEL) concentrations for typical aquatic organisms (salmon, trout, daphnia, fathead minnow, etc.).

5. General definitions

a. Approved Dosage - the dose of a drug that has been found to be safe and effective under the conditions of a new animal drug application.

b. Aquatic Animal Containment System - a culture or rearing unit such as a raceway, pond, tank, net or other structure used to contain, hold or produce aquatic animals. The containment system includes structures designed to hold sediments and other materials that are part of a wastewater treatment system.

c. Drug - any substance defined as a drug in section 201(g)(2) of the Federal Food, Drug and Cosmetic Act (21 U.S.C. 321).

d. Extra-label Drug Use - a drug approved under the Federal Food, Drug and Cosmetic Act that is not used in accordance with the approved label direction, see 21 CFR Part 530.

e. Investigational New Animal Drug (INAD) - drug for which there is a valid exemption in effect under section 512(j) of the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. 360b(j), to conduct experiments.

f. New Animal Drug Application - defined in 512(b)(1) of the Federal Food, Drug, and Cosmetic Act [21 U.S.C. 360(b)(1)].

g. Pesticide - any substance defined as a “pesticide” in section 2(u)of the Federal Insecticide, Fungicide, and Rodenticide Act [7 U.S.C. 136(u)].

C. MONITORING AND REPORTING

1. **For a period of one year from the effective date of the permit**, the permittee may either submit monitoring data and other reports to EPA in hard copy form or report electronically using NetDMR, a web-based tool that allows permittees to electronically submit discharge monitoring reports (DMRs) and other required reports via a secure internet connection. **Beginning no later than one year after the effective date of the permit**, the permittee shall begin reporting using NetDMR, unless the facility is able to demonstrate a reasonable basis that precludes the use of NetDMR for submitting DMRs and reports. Specific requirements regarding submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

a. Submittal of Reports Using NetDMR

NetDMR is accessed from: http://www.epa.gov/netdmr. **Within one year of the effective date of this permit**, the permittee shall begin submitting DMRs and reports required under this permit electronically to EPA using NetDMR, unless the facility is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs and reports ("opt-out request").

DMRs shall be submitted electronically to EPA no later than the 15th day of the month following the completed reporting period. All reports required under the permit shall be submitted to EPA, including the MassDEP Monthly Operations and Maintenance Report, as an electronic attachment to the DMR. Once a permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to EPA and will no longer be required to submit hard copies of DMRs to MassDEP. However, permittees shall continue to send hard copies of reports other than DMRs (including Monthly Operation and Maintenance Reports) to MassDEP until further notice from MassDEP.

b. Submittal of NetDMR Opt-Out Requests

Opt-out requests must be submitted in writing to EPA for written approval at least sixty (60) days prior to the date a facility would be required under this permit to begin using NetDMR. This demonstration shall be valid for twelve (12) months from the date of EPA approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to EPA unless the permittee submits a renewed opt-out request and such request is approved by EPA. All opt-out requests should be sent to the following addresses:

Attn: NetDMR Coordinator
U.S. Environmental Protection Agency, Water Technical Unit
5 Post Office Square, Suite 100 (OES04-1)
Boston, MA 02109-3912

And

Massachusetts Department of Environmental Protection
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

c. Submittal of Reports in Hard Copy Form

Monitoring results shall be summarized for each calendar month and reported on separate hard copy Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period. All reports required under this permit, including MassDEP Monthly Operation and Maintenance Reports, shall be submitted as an attachment to the DMRs. Signed and dated originals of the DMRs, and all other reports

or notifications required herein or in Part II shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (OES04-SMR)
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Duplicate signed copies of all reports or notifications required above shall be submitted to the State at the following address:

MassDEP – Southeast Region
Bureau of Waste Prevention (Industrial)
20 Riverside Drive
Lakeville, MA 02347

Any verbal reports, if required in **Parts I** and/or **II** of this permit, shall be made to both EPA-New England and to MassDEP.

D. STATE PERMIT CONDITIONS

1. This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are (i) a federal National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency (EPA) pursuant to the Federal Clean Water Act, 33 U.S.C. §§1251 et seq.; and (ii) an identical state surface water discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53, and 314 C.M.R. 3.00. All of the requirements contained in this authorization, as well as the standard conditions contained in 314 CMR 3.19, are hereby incorporated by reference into this state surface water discharge permit.

2. This authorization also incorporates the state water quality certification issued by MassDEP under § 401(a) of the Federal Clean Water Act, 40 C.F.R. 124.53, M.G.L. c. 21, § 27 and 314 CMR 3.07. All of the requirements (if any) contained in MassDEP's water quality certification for the permit are hereby incorporated by reference into this state surface water discharge permit as special conditions pursuant to 314 CMR 3.11.

3. Each agency shall have the independent right to enforce the terms and conditions of this permit. 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 this permit as issued by the other agency, unless and until each agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared invalid, illegal or otherwise issued in violation of state law such permit shall remain in full force and effect under federal law as a NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of federal law, this permit shall remain in full force and effect under state law as a permit issued by the Commonwealth of Massachusetts.

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

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: MA0005398

PUBLIC NOTICE START AND END DATES: March 7, 2012 – April 5, 2012

NAME AND MAILING ADDRESS OF APPLICANT:

United States Fish and Wildlife Service
North Attleboro National Fish Hatchery
144 Bungay Road
North Attleboro, MA 02760

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

North Attleboro National Fish Hatchery
144 Bungay Road
North Attleboro, MA 02760

RECEIVING WATER(S):

Bungay River (Ten Mile River Watershed MA52-06)

RECEIVING WATER CLASSIFICATION(S): Class B, Warm Water Fishery

SIC CODE: 0921

Table of Contents

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

North Attleboro National Fish Hatchery (NANFH or the permittee) operates a federal fish hatchery in North Attleboro, MA (see Attachment A for site location) primarily engaged in the production of Atlantic salmon eggs, fry, and smolts to support salmon restoration activities on the Merrimack, Connecticut, Pawcatuck and Saco Rivers. In addition, the facility holds adult American shad for spawning and produces fry for the Charles River American shad restoration program.

NANFH has applied to the U.S. Environmental Protection Agency (EPA) for reissuance of its NPDES permit to discharge into the Bungay River. The last permit was issued in October 18, 2004 and expired on October 18, 2009. EPA received a permit renewal application from NANFH dated April 28, 2009. Since the permit renewal application was deemed timely and complete by EPA, the permit has been administratively continued.

II. Description of Facility and Discharge

NANFH was established in 1952 by the United States Fish and Wildlife Service (USFWS). The hatchery's programs have changed several times from warm water fish production in ponds to cold water trout production to its current form focusing on production of early stage (eggs, fry, and smolts) for Atlantic salmon and American shad restoration programs. The discharge consists of culture water (see line flow diagram included as Attachment B to the Fact Sheet).

A concentrated aquatic animal production (CAAP) facility based on criteria found in 40 C.F.R. § 122.24(b) and 40 C.F.R. Part 122 Appendix C is defined as "a facility that contains, grows, or holds cold water fish species or other cold water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year but does not include facilities that produce less than 9,090 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year." According to NANFH, production in fiscal year 2011 consisted of approximately 5,470 pounds (lbs) of Atlantic salmon and 46 lbs of American shad. Several adult American shad are held for spawning at the facility but are not fed and are released after egg collection. Based on their production levels and monthly Discharge Monitoring Reports (DMRs), the facility will likely discharge more than 30 days per year but will not produce more than 20,000 lbs harvest weight of fish per year during the next permit cycle.

Under 40 C.F.R. § 122.24(c), a facility may be designated a CAAP facility on a case-by-case basis by the Director upon determining that it is a significant contributor of pollution to the waters of the United States. In making this case-by-case designation, the Director shall consider: (i) the location and quality of the receiving waters; (ii) the holding, feeding, and production capacities of the facility; (iii) the quantity and nature of the pollutants reaching the waters; and (iv) other relevant factors. In a letter dated November 9, 2001, EPA designated NANFH as CAAP subject to NPDES permitting because: 1) when flows in the Bungay River are low or absent, the effluent from the hatchery can dominate the flow; 2) the facility's use of formalin (a biocide toxic to aquatic life at low concentrations); and 3) the facility's use of chlorine for disinfection of tanks and equipment. In the draft permit, EPA has designated NANFH as a CAAP because of the low available dilution for hatchery effluent and the use of chlorine for disinfection. In addition, although the hatchery does not currently expect to exceed production thresholds under the CAAP regulation at 40 C.F.R. § 122.24(b) in the next permit cycle, the facility has exceeded these thresholds in the past and may again in the future if the current operation changes or production levels increase.

Discharges from CAAP operations, such as the NANFH, typically contain organic and inorganic solids, nutrients, and chemicals used in the prevention and treatment of various diseases. Any of these constituents could impair the water quality in the receiving water. Dissolved and particulate solids in the discharge result from fish feces and uneaten food particles. Nutrients, such as phosphorus and nitrogen, are associated with these solids. The presence of nutrients can result in excessive growth of any or all of the three main algae types: phytoplankton (floating freely in water column), periphyton (attached to aquatic vegetation or other structures) and benthic (attached to bottom sediments). The decay of organic solids resulting from excessive concentrations of solids and nutrients can cause low levels of dissolved oxygen in the receiving water. Currently the facility uses low levels of feed because adult American shad are not fed during spawning and the stages produced by the hatchery (fry and smolts) require little feed. Still, NANFH does use feed and may increase its use in the future if production levels increase or the focus of the hatchery changes.

EPA will continue to authorize a year-round discharge to the waters of the United States with limits, monitoring requirements and Best Management Practices as described in this Fact Sheet and shown in the accompanying draft permit.

III. Receiving Water Description

The Bungay River is a Class B waterbody and warm water fishery under the Massachusetts Surface Water Quality Standards (314 C.M.R. 4.06). Class B waters are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation.. These waters shall have consistently good aesthetic value. [314 C.M.R. 4.05(3)(b)].

Section 303(d) of the Federal Clean Water Act (CWA) requires states to identify those waterbodies that are not expected to meet surface water quality standards after the implementation of technology-based controls. The Bungay River is listed as impaired for fecal coliform in the current and draft 303(d) lists (Massachusetts Year 2008 and 2010 Integrated List of Waters). According to the Massachusetts Department of Environmental Protection's (MassDEP) 2002 Water Quality Assessment, the Bungay River supports aquatic life and aesthetics, is impaired for primary and secondary contact recreation in the lower 0.4 miles of the segment due to high fecal coliform counts (upper 4.7 miles not assessed), and was not assessed for fish consumption. MassDEP indicates that a large waterfowl population is the likely source of bacteria and recommended source tracking to identify potential sources of bacteria.

IV. Limitations and Conditions

The effluent limitations and monitoring requirements may be found in the draft NPDES permit.

V. 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 technology and water quality-based effluent limitations and other requirements including monitoring

and reporting. The draft NPDES permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and applicable State regulations. The regulations governing the EPA NPDES permit program are generally found at 40 C.F.R. Parts 122, 124, 125, and 136. In this permit EPA considered (a) technology-based requirements, (b) water quality-based requirements, and (c) all limitations and requirements in the current/existing permit, when developing the permit limits.

1. Technology-Based Requirements

Subpart A of the 40 C.F.R. § 125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under Section 301(b) of the CWA, including the application of EPA promulgated effluent limitations and case-by-case determinations of effluent limitations under Section 402(a)(1) of the CWA.

Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA (see 40 CFR §125 Subpart A) to meet best practicable control technology currently available (BPT) for conventional pollutants and some metals, best conventional control technology (BCT) for conventional pollutants, and best available technology economically available (BAT) for toxic and non-conventional pollutants. In general, technology-based effluent guidelines for non-POTW facilities must have been complied with as expeditiously as practicable but in no case later than three years after the date such limitations are established and in no case later than March 31, 1989 [See 40 CFR §125.3(a)(2)]. Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA can not be authorized by a NPDES permit.

On August 23, 2004, EPA promulgated technology-based effluent limitations guidelines (ELGs) for the Concentrated Aquatic Animal Production (CAAP) Point Source Category at 40 C.F.R. Part 451, Subpart A, Flow-through and Recirculating Systems Subcategory for facilities that contain, hold, or produce more than 100,000 pounds of aquatic animals per year (69 FR 51906). Compliance with the newly promulgated effluent limitations guidelines for fish hatcheries is, effectively, from date of permit issuance [See 69 Federal Register 162, August 23, 2004 Part I.E]. The promulgated ELGs contain narrative effluent limitations with specific provisions for solids control, materials storage, structural maintenance, recordkeeping, and training. The ELGs are not applicable at NHNFH because the facility produces less than 100,000 pounds of aquatic animals per year. Still, the draft permit applies requirements to implement best management practices (BMPs) informed by the ELGs and incorporates some of the requirements of the ELGs, particularly those related to requirements in the current permit in compliance with antibacksliding regulations at 40 C.F.R. § 122.44.

The effluent monitoring requirements have been established to yield data representative of the discharges under the authority of Section 308(a) of the CWA, according to regulations set forth at 40 C.F.R. §§ 122.41(j), 122.44(i) and 122.48. The approved analytical procedures are to be found in 40 C.F.R. § 136 unless other procedures are explicitly required in the permit.

2. Water Quality-Based Requirements

Section 301(b)(1)(C) of the CWA requires that effluent limitations based on water quality considerations be established for point source discharges when such limitations are necessary to meet state or federal water quality standards that are applicable to the designated receiving water. This is

necessary when technology-based limitations would interfere with the attainment or maintenance of water quality in the receiving water.

Under Section 301(b)(1)(C) of the CWA and EPA regulations, NPDES permits must contain effluent limits more stringent than technology-based limits where more stringent limits are necessary to maintain or achieve state or federal water quality standards. Water quality standards consist of three parts: (1) beneficial designated uses for a waterbody or a segment of a waterbody; (2) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s); and (3) antidegradation requirements to ensure that once a use is attained it will not be degraded. The Massachusetts Surface Water Quality Standards, found at 314 C.M.R. 4.00, include these elements. 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. These standards also include requirements for the regulation and control of toxic constituents and require that EPA criteria, established pursuant to Section 304(a) of the CWA, shall be used unless a site specific criteria is established.

The draft permit must limit any pollutant or pollutant parameter (conventional, non-conventional, and toxic) that is or may be discharged at a level that causes or has the "reasonable potential" to cause or contribute to an excursion above any water quality standard (40 C.F.R. § 122.44(d)). An excursion occurs if the projected or actual in-stream concentration exceeds an applicable water quality criterion. 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 re-issuance application, monthly discharge monitoring reports (DMRs), and State and Federal Water Quality Reports; (3) sensitivity of the indicator species used in toxicity testing; (4) known water quality impacts of processes on waste waters; and (5) where appropriate, dilution of the effluent in the receiving water.

3. Antibacksliding

Antibacksliding as defined in 40 C.F.R. § 122.44(l)(1) requires 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. As explained above, antibacksliding applies to limits contained in the existing permit and, effluent limits in the draft permit are as stringent as or more stringent than the current permit.

4. Antidegradation

The Commonwealth of Massachusetts' antidegradation provisions found in 314 C.M.R. 4.04 ensure that provisions in 40 C.F.R. § 131.12 are met. These provisions ensure that all existing uses in the receiving water, along with the level of water quality necessary to protect those existing uses, are maintained and protected. The effluent limits in the draft permit should ensure that provisions in 314 C.M.R. 4.04 are met. The State is also asked to certify that the antidegradation provisions in State law are met. EPA anticipates that the MassDEP shall make a determination that there shall be no significant adverse impacts to the receiving water and no loss of existing uses as a result of the discharge authorized by this permit.

5. State Certification

Under Section 401 of the CWA, EPA is required to obtain certification from the state in which the

discharge is located that all water quality standards or other applicable requirements of state law, in accordance with Section 301(b)(1)(C) of the CWA, are satisfied. EPA permits are to include any conditions required in the state's certification as being necessary to ensure compliance with state water quality standards or other applicable requirements of state law. See CWA Section 401(a) and 40 CFR §124.53(e). Regulations governing state certification are set out at 40 CFR §124.53 and §124.55. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR §122.44(d).

VI. Explanation of the Permit's Effluent Limitation(s)

1. Facility Information

The primary activities at the NANFH include year-round production of Atlantic salmon eggs, fry, and smolts for the Atlantic salmon restoration programs on the Merrimack, Connecticut, Pawcatuck, and Saco Rivers, and summer production of American shad fry for stocking in the Charles River.

The facility consists of a hatchery house, nineteen concrete pools, and eleven earthen ponds. Earthen ponds are not currently used for fish production but as settling ponds to remove solids prior to discharge of the effluent from Outfall 001. Eggs are incubated in the hatchery house, grown to fry or smolt size in the small raceways in the hatchery house, and delivered to other federal and private hatcheries for growing out to stockable size. The concrete pools, located in greenhouse-like enclosures behind the hatchery house, were used to hold salmon undergoing reconditioning and brood stock but NANFH does not currently engage in these activities.

Water is primarily supplied by on-site groundwater wells. Wells are pumped on a rotating basis with 2 wells operating at one time. Well 3 provides the primary supply with backup provided by wells 5 and 6. Well 4 is used sporadically due to high iron concentrations. Well 2 is used to supply the delivery trucks for distribution of fish. Water is supplied through pipes connected to fish production pools and can be diverted to any system, including production pools, display pool, hatchery tank room, and egg incubation room. Water entering production passes through a spray bar where oxygen saturation occurs. Effluent is aerated a second time before being discharged to drain lines or re-circulated. The hatchery building is a flow-through system. Water is processed through a water filtration system, ultraviolet sterilization, cooling system, and oxygen saturation system before being used for egg incubation of production of young fish. Well water is primarily used for egg incubation because of poor pond water quality. Approximately 70% of the chilled incubation water is reused to conserve the energy required for chilling, while the remaining water is discharged to drain lines. The hatchery is also equipped to use pond water as an emergency source of water or for specific fish culture needs.

Water is routed from the various pools and buildings to a single outfall pipeline that travels underground past the hatchery, along Hatchery Road, and under Bungay Road to the earthen ponds across the street (see Attachment B). The primary outlet discharges hatchery effluent into Pond 5. The effluent flows from Pond 5 into Pond 4, then into Pond 3, which provides substantial time for settling of solids prior to discharge. In Pond 3, Outfall 001 discharges to a vegetated drainage canal which then discharges into the Bungay River near the southern boundary of the hatchery property. Monitoring currently occurs at Outfall 001, but the outfall pipeline can also be accessed upstream at a vented box near the hatchery parking lot.

Chemicals, Drugs, and Disinfectants Currently Used at NANFH

When needed, U.S. Food and Drug Administration (FDA)-approved chemicals/drugs are used as therapeutants to maintain fish health. Below is a list of all the chemicals/drugs currently used at the NANFH along with their intended use.

Tricaine Methanesulfonate – Intended for the temporary immobilization of fish, amphibians, and other cold-blooded animals.

PEROX-AID® (35%) – Hatchery has replaced formalin use with hydrogen peroxide as an external microbicide for the control of mortality in freshwater-reared finfish eggs due to saprolegniasis, in freshwater-reared salmonoids due to bacterial gill disease (*Flavobacterium branchiophilum*), and in freshwater-reared cool water finfish due to external columnaris disease (*Flavobacterium columnae*). FDA considers it a low regulatory priority. According to literature, hydrogen peroxide can be effective at a concentration of 250-500 mg/l. It decomposes into water and oxygen and the half-life in freshwater ranges from 8 hours to 20 days.

Both Tricaine methanosulfonate and PEROX-AID® are FDA-approved drugs. The draft permit contains effluent limitations for hydrogen peroxide when 35% PEROX-AID® is in use. See section entitled "Hydrogen Peroxide" later in this Fact Sheet. Disinfection of hatchery equipment is typically done with commercially available biodegradable cleaning products or vinegar mixed with peroxide. Chlorine use is rare and is neutralized with sodium thiosulfate prior to discharge. The draft permit includes effluent limitations for total residual chlorine in the event it is used as a cleaning agent. See section entitled "Total Residual Chlorine" later in this Fact Sheet. In addition, the draft permit prohibits the discharge of formaldehyde or formalin, which was used prior to issuance of the current permit to treat microbial infection in the fish.

2. Permitted Outfalls

The draft permit authorizes the discharge of culture water from Outfall 001 subject to the effluent limitations and best management practices described below. A brief summary of discharge data from the facility's discharge monitoring reports from November 2004 to June 2011 is included in Attachment C.

3. Derivation of Effluent Limits

Available Dilution

Water quality-based effluent limitations are established using available dilution. Title 314 C.M.R. 4.03(3)(a) requires that water quality criteria must be applied at the most severe hydrologic condition, which, for rivers and streams, is the lowest mean flow for seven consecutive days to be expected once in ten years (7Q10 flow). Available dilution is calculated based on the 7Q10 flow and the facility's design flow.

According to MassDEP's 2002 Water Quality Assessment Report for the Ten Mile River Basin, the Bungay River originates at the outlet of Greenwood Lake. Flow from Greenwood Lake is not consistent and is regulated via the water control structure by USFWS. When the lake level is low, the effluent from the hatchery dominates the flow in the Bungay River. Given the lack of dilution of

effluent flow from the hatchery, a dilution factor of 1 is used in the draft permit.

Flow

The current permit includes a maximum daily and average monthly flow limit of 1.7 MGD. According to DMR data submitted between November 2004 and June 2011, average monthly flow at NANFH ranged from 0.56 to 1.29 MGD with a long-term average of 0.87 MGD and maximum daily flow ranged from 0.68 to 1.58 MGD with a long-term average of 0.93 MGD (see Attachment C). The current permit limits were not exceeded. In accordance with antibacksliding regulations at 40 C.F.R. § 122.44(l), the average monthly and maximum daily flow limits have been carried forward in the draft permit.

Biochemical Oxygen Demand (BOD_5)

The current permit includes an average monthly limitation of 5 mg/l and maximum daily limitation of 10 mg/l, which were based on Best Professional Judgment (BPJ). According to quarterly DMR data between November 2004 and June 2011, the average monthly BOD_5 concentration ranged from 4.0 to 4.3 mg/l and did not exceed the current average monthly permit limit (see Attachment C). The maximum daily concentration generally ranged from 4.0 to 4.6 mg/l with an average of 4.6 mg/l. A single high maximum daily BOD_5 value (16.9 mg/l) was observed on one sampling date (September 2008). In accordance with antibacksliding regulations at 40 C.F.R. § 122.44(l), the average monthly and maximum daily BOD_5 limits and have been carried forward in the draft permit.

The current permit requires quarterly composite monitoring at Outfall 001 following a cleaning event. The NPDES Permit Writers Handbook recommends composite sampling when effluent characteristics are highly variable and indicates that grab samples are appropriate when the flow and characteristics of the wastestream being samples are relatively constant. In this case, NANFH's effluent flows through three settling ponds prior to being discharged from Outfall 001. For this reason, the discharge at Outfall 001 is not expected to vary over time, and a grab sample, rather than a composite, is appropriate. The draft permit requires a quarterly grab sample for BOD_5. The current permit requires that BOD_5 be sampled following a cleaning event. However, a sample at Outfall 001 following a cleaning event is unlikely to be representative of the concentration resulting from cleaning due to the dilution and retention of effluent in the settling ponds prior to discharge. In the past, BOD_5 values following cleaning have generally been low (see Attachment C for summary of DMR data). For this reason, the draft permit does not require that sampling follow a cleaning event.

Total Suspended Solids (TSS)

The current permit includes an average monthly limitation of 5 mg/l and maximum daily limitation of 10 mg/l, which were based on Best Professional Judgment (BPJ). According to quarterly DMR data between November 2004 and June 2011, the average monthly TSS concentration ranged from 4.0 to 7.3 mg/l and exceeded the current average monthly permit limit on 4 sampling dates (see Attachment C). The maximum daily concentration ranged from 4.0 to 11.5 mg/l with a long-term average of 5.7 mg/l. The maximum daily TSS limit was exceeded on one sampling event (June 2006). In accordance with antibacksliding regulations at 40 C.F.R. § 122.44(l), the average monthly and maximum daily TSS limits have been carried forward in the draft permit. The current permit requires quarterly composite monitoring at Outfall 001 following a cleaning event. Similar to sampling for BOD_5, the draft permit requires a quarterly grab sample for TSS because the concentration in the

discharge at Outfall 001 is not expected to vary over time given the settling time provided by the three ponds and sampling after a cleaning event under the current permit has consistently resulted in low TSS values (see Attachment C for summary of DMR data).

pH

Massachusetts Surface Water Quality Standards for Class B waters at 314 C.M.R. 4.05(3)(b)(3) require a pH in the range of 6.5 to 8.3 standard units (s.u.) Well water measurements taken by the permittee between Feburary 15, 2000 and May 30, 2000 indicated that the pH of the well water ranged from 5.69 to 5.9 with a mean of 5.78 s.u. In-stream readings during the same time period ranged from 6.05 to 6.86 with a mean of 6.47 s.u. Because the natural pH of the well water was lower than the water quality criterion, the current permit requires the pH to be within the range 6.0 to 8.3 standard units (s.u.) and not more than 0.5 s.u. outside of the background range unless due to natural causes.

According to DMR data from November 2004 through June 2011, the pH at NANFH ranged from 5.9 to 8.7 s.u. (see Attachment C). The current minimum pH limit was exceeded in June 2008 and the current maximum pH limit was exceeded in June 2007. In accordance with antibacksliding regulations at 40 C.F.R. § 122.44(l), the water quality-based pH limits have been carried forward in the draft permit.

Total Residual Chlorine (TRC)

The 1998 EPA National Recommended Water Quality Criteria for chlorine include a freshwater, acute limit of 19 µg/l and a freshwater, chronic limit of 11 µg/l. Based on an available dilution of 1 at NANFH, the maximum daily limit for TRC is 0.019 mg/l and average monthly is 0.011 mg/l. The DMRs indicate that chlorine was not used at the facility in the last permit cycle.

The current permit includes a monthly average limit of 0.11 mg/l and maximum daily limit of 0.19 mg/l; however, the average monthly and maximum daily limits were derived and presented in the accompanying fact sheet as 0.011 mg/l and 0.019 mg/l, respectively. EPA determined that a typographical error was made in the current permit and the limits as derived and presented in the fact sheet (average monthly limit of 0.011 mg/l and maximum daily limit of 0.019 mg/l consistent with the water quality-based criteria) are included in the draft permit. The draft permit requires daily grab samples following a cleaning event only when chlorine is used during that event. Typically, water quality-based permit limits are applied at the outfall (end-of-pipe). The effluent from NANFH has a long residence time because it flows through multiple settling ponds prior to discharge at Outfall 001. For this reason, a grab sample at Outfall 001 is unlikely to be representative of the TRC concentration in the effluent following a cleaning event unless the permittee accounts for residence time. EPA proposes an alternative sampling location prior to mixing with the settling ponds because residence time is not known. In the event that chlorine is used for cleaning, the draft permit requires monitoring TRC at an alternative sampling site at the upstream access point in the outfall pipe near the hatchery parking lot, prior to the effluent entering the settling ponds (see Attachment B).

Hydrogen Peroxide

The facility uses 35% PEROX-AID® (hydrogen peroxide solution) as an external microbiocide for the control of mortality in freshwater-reared finfish eggs due to saprolegniasis, in freshwater-reared

salmonoids due to bacterial gill disease (*Flavobacterium branchiophilum*), and in freshwater-reared cool water finfish due to external columnaris disease (*Flavobacterium columnae*). PEROX-AID® is an FDA-approved drug for freshwater-reared finfish, and its use must adhere to FDA label instructions. The facility has indicated that the use of PEROX-AID® has replaced its use of formalin.

The Massachusetts Water Quality Standards do not include criteria for hydrogen peroxide, but the FDA has derived hydrogen peroxide water quality benchmarks for use by NPDES permitting authorities (See "Environmental Assessment for the Use of Hydrogen Peroxide in Aquaculture for Treating External Fungal and Bacterial Diseases of Culture Fish and Fish Eggs", United State Geological Survey, 2006, p.72). For freshwater aquatic life, the acute benchmark (criteria maximum concentration) is 0.7 mg/l. The FDA determined that a corresponding chronic benchmark was unnecessary.

The draft permit includes a maximum daily effluent limit of 0.7 mg/l, and requires daily monitoring when hydrogen peroxide is used at the facility. The draft permit requires daily grab samples only following a PEROX-AID® (or other external microbiocide containing hydrogen peroxide) treatment event. Similar to sampling for TRC (another water quality-based effluent limitation), EPA proposes an alternative sampling location because the effluent at Outfall 001 is not likely to be representative of the concentration following a cleaning event without accounting for residence time. In the event that PEROX-AID® is used, the draft permit requires monitoring at an alternative sampling site at the upstream access point in the outfall pipe near the hatchery parking lot (see Attachment B).

Total Phosphorus

Fish hatcheries, such as NANFH, have the potential to contribute substantial amounts of nutrients (primarily nitrogen and phosphorus) to the receiving water. The permit issued in 2002 included a requirement to report Total Phosphorus. The current permit eliminated this requirement based on a determination that DMR data demonstrate "very low" concentration. According to quarterly DMR data from March 2003 to September 2004, total phosphorus concentrations at NANFH ranged from 0.01 to 0.08 with an average of 0.05 mg/l (see Attachment C). Recent permits for fish hatcheries in New Hampshire and Massachusetts have included a reporting requirement for phosphorus at levels similar to that of NANFH's current discharge. In addition, the Bungay River flows into Ten Mile River, which, according to the 2008 303(d) list, is impaired for total phosphorus and excessive algal growth. Due to the lack of available dilution in the receiving water and phosphorus-related impairments in a downstream waterbody, the draft permit requires that the facility monitor and report maximum daily total phosphorus on a quarterly basis to provide sufficient data to determine if the facility has a reasonable potential to cause or contribute to an exceedance of water quality standards in the next permit cycle.

Best Management Practices

The ELGs contained in 40 C.F.R. § 451.11 are narrative limitations that describe BMPs to which the facility must adhere. These practices require the permittee to develop and employ methods for feed management, removal of accumulated solids, storage of drugs and pesticides, spill prevention, management of the wastewater treatment system, maintaining accurate records, and ensuring that all personnel receive proper training. NANFH is not subject to ELGs for CAAP facilities because they do not produce more than 100,000 pounds of fish annually. However, the current permit requires BMPs consistent with the ELGs, and those requirements have been carried forward and updated

consistent with the ELGs in Part I.B. of the draft permit.

VII. 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. EPA's review of available EFH information indicates that the Bungay River is not designated EFH for any federally managed species. As such, EFH consultation with NMFS is not required.

VIII. 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. According to the Massachusetts Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program, there are no federally threatened or endangered species in the vicinity of NANFH. Furthermore, effluent limitations and best management practices included in this draft permit should preclude any adverse effects should there be any incidental contact with listed species in the Bungay River.

Given that no species of concern are known to occur in the vicinity of NANFH or the Bungay River, consultation under Section 7 of the ESA with NMFS and USFWS is not required. During the public comment period, EPA has provided a copy of the Draft Permit and Fact Sheet to both NMFS and USFWS.

IX. Monitoring

The effluent monitoring requirements have been established to yield data representative of the discharge under authority of Section 308 (a) of the CWA in accordance with 40 CFR §§122.41 (j), 122.44 (l), and 122.48.

The Draft Permit includes new provisions related to Discharge Monitoring Report (DMR) submittals to EPA and the State. The Draft Permit requires that, no later than one year after the effective date of the permit, the permittee submit all monitoring data and other reports required by the permit to EPA using NetDMR, unless the permittee is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs and reports ("opt out request").

In the interim (until one year from the effective date of the permit), the permittee may either submit monitoring data and other reports to EPA in hard copy form, or report electronically using NetDMR.

NetDMR is a national web-based tool for regulated Clean Water Act permittees to submit discharge monitoring reports (DMRs) electronically via a secure Internet application to U.S. EPA through the Environmental Information Exchange Network. NetDMR allows participants to discontinue mailing in hard copy forms under 40 CFR § 122.41 and § 403.12. NetDMR is accessed from the following url: http://www.epa.gov/netdmr Further information about NetDMR, including contacts for EPA Region 1, is provided on this website.

EPA currently conducts free training on the use of NetDMR, and anticipates that the availability of this training will continue to assist permittees with the transition to use of NetDMR. To participate in upcoming trainings, visit http://www.epa.gov/netdmr for contact information for Massachusetts.

The Draft Permit requires the permittee to report monitoring results obtained during each calendar month using NetDMR, no later than the 15th day of the month following the completed reporting period. All reports required under the permit shall be submitted to EPA as an electronic attachment to the DMR. Once a permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to EPA and will no longer be required to submit hard copies of DMRs to MassDEP. However, permittees must continue to send hard copies of reports other than DMRs to MassDEP until further notice from MassDEP.

The Draft Permit also includes an "opt out" requests process. Permittees who believe they can not use NetDMR due to technical or administrative infeasibilities, or other logical reasons, must demonstrate the reasonable basis that precludes the use of NetDMR. These permittees must submit the justification, in writing, to EPA at least sixty (60) days prior to the date the facility would otherwise be required to begin using NetDMR. Opt outs become effective upon the date of written approval by EPA and are valid for twelve (12) months from the date of EPA approval. The opt-outs expire at the end of this twelve (12) month period. Upon expiration, the permittee must submit DMRs and reports to EPA using NetDMR, unless the permittee submits a renewed opt out request sixty (60) days prior to expiration of its opt out, and such a request is approved by EPA.

Until electronic reporting using NetDMR begins, or for those permittees that receive written approval from EPA to continue to submit hard copies of DMRs, the Draft Permit requires that submittal of DMRs and other reports required by the permit continue in hard copy format. Hard copies of DMRs

and other reports must be postmarked no later than the 15th day of the month following the completed reporting period.

X. State Certification Requirements

EPA may not issue a permit in the Commonwealth of Massachusetts unless MassDEP 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. 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.

XI. 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 the U.S. EPA, Office of Ecosystem Protection Attn: Danielle Gaito, 5 Post Office Square, Suite 100 (OEP06-4), Boston, Massachusetts 02109-3912 or via email to gaito.danielle@epa.gov. 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.

XII. EPA and MassDEP 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:

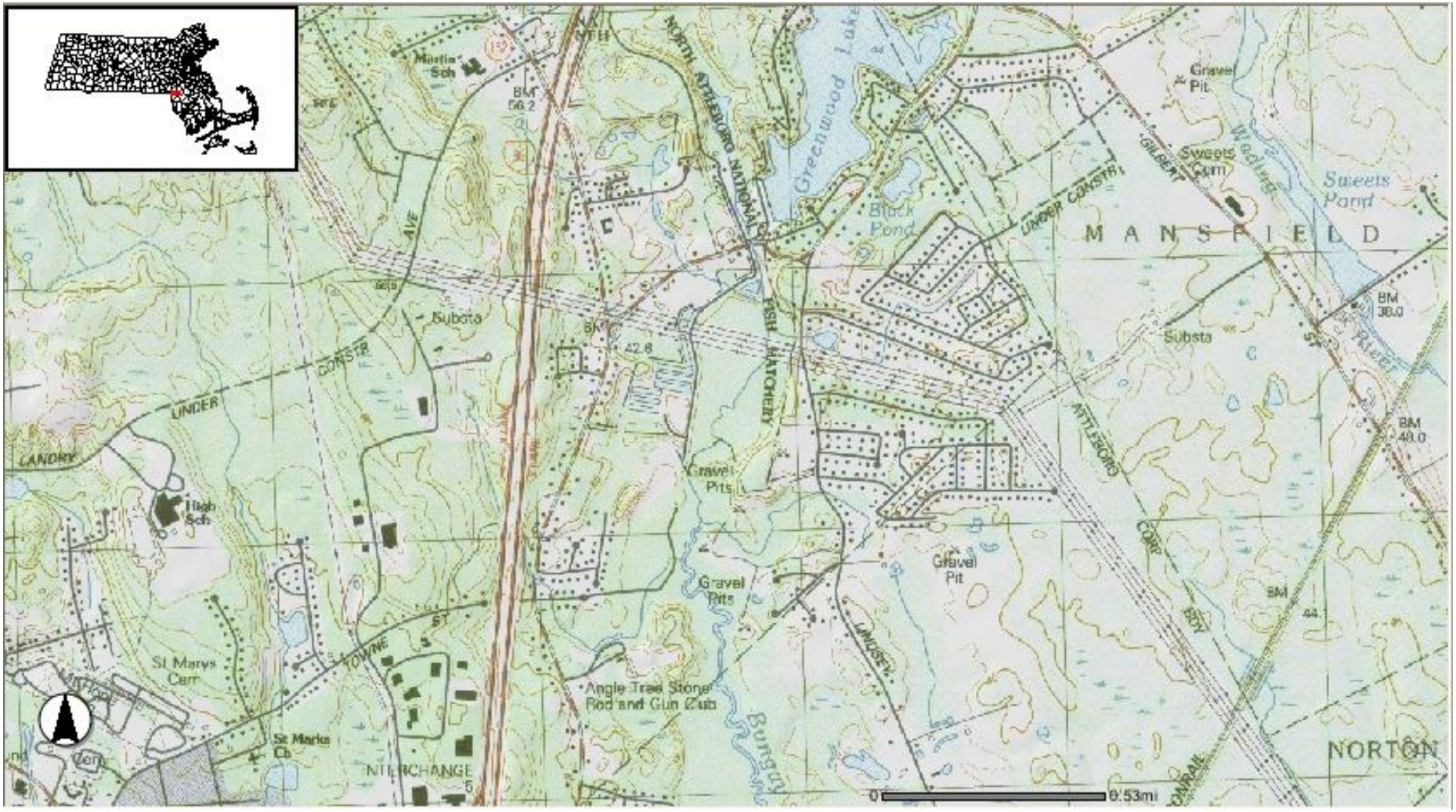
Danielle Gaito
EPA Office of Ecosystem Protection
5 Post Office Square, Suite 100 (OEP06-4)
Boston, MA 02109-3912
Tel: (617) 918-1297 Fax: (617)918 -0297
email: gaito.danielle@epa.gov

Kathleen Keohane
MassDEP Division of Watershed Management
627 Main Street, 2nd Floor
Worcester, MA 01608
Tel: (508) 767-2856 Fax: (508) 791-4131
kathleen.keohane@state.ma.us

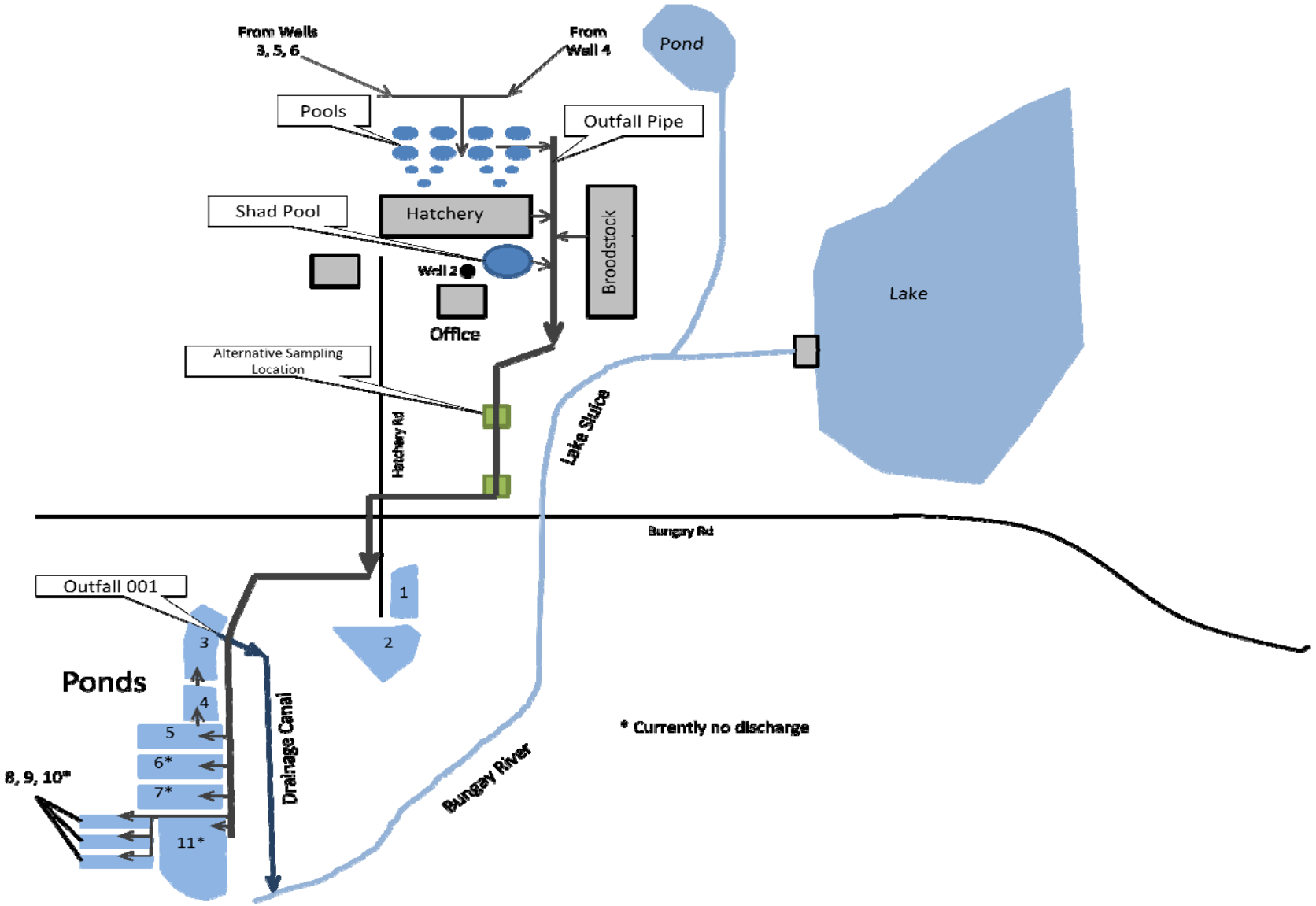
_____

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

Attachment A
Site Location



Attachment B
Flow Diagram



Attachment C
Discharge Monitoring Report Summary

Flow (MGD)								
DATE	MO AVG	DAILY MAX	DATE	MO AVG	DAILY MAX	DATE	MO AVG	DAILY MAX
2004 Permit Limit	1.7	1.7	2004 Permit Limit	1.7	1.7	2004 Permit Limit	1.7	1.7
11/30/2004	0.80	0.80	03/31/2007	1.00	1.00	07/31/2009	0.80	0.82
12/31/2004	0.80	0.80	04/30/2007			08/31/2009	0.81	0.82
01/31/2005	0.92	1.00	05/31/2007			09/30/2009	0.88	0.91
02/28/2005	0.95	0.95	06/30/2007	1.10	1.10	10/31/2009	0.91	0.91
03/31/2005	0.95	0.99	07/31/2007	1.00	1.10	11/30/2009	0.91	0.91
04/30/2005	0.98	0.99	08/31/2007	0.93	1.10	12/31/2009	0.79	0.79
05/31/2005	0.97	0.98	09/30/2007	0.88	1.10	01/31/2010	0.79	0.80
06/30/2005	0.97	0.98	10/31/2007	0.90	0.94	02/28/2010	0.82	0.84
07/31/2005	0.85	0.97	11/30/2007	0.87	0.95	03/31/2010	0.82	0.93
08/31/2005	0.92	1.14	12/31/2007	0.74	0.95	04/30/2010	0.97	1.04
09/30/2005	0.96	1.02	01/31/2008	0.62	0.75	05/31/2010	0.82	0.83
10/31/2005	1.00	1.10	02/29/2008	0.56	0.75	06/30/2010	0.88	0.89
11/30/2005			03/31/2008	0.62	0.79	07/31/2010	0.80	0.88
12/31/2005			04/30/2008	0.62	0.79	08/31/2010	0.80	0.99
01/31/2006	0.95	1.03	05/31/2008	0.62	0.83	09/30/2010	0.84	1.06
02/28/2006	0.88	0.91	06/30/2008	0.69	0.88	10/31/2010	1.15	1.25
03/31/2006	0.89	0.94	07/31/2008	0.83	0.89	11/30/2010	1.22	1.25
04/30/2006			08/31/2008	0.83	0.83	12/31/2010	1.29	1.58
05/31/2006	0.91	0.92	09/30/2008	0.83	0.83	01/31/2011	0.79	0.79
06/30/2006	0.93	0.94	10/31/2008	0.81	1.00	02/28/2011	0.79	0.83
07/31/2006	0.93	0.93	11/30/2008	0.97	1.00	03/31/2011	0.82	0.84
08/31/2006	0.93	0.93	12/31/2008	0.92	1.00	04/30/2011	0.75	0.84
09/30/2006	0.93	0.93	01/31/2009	0.87	0.87	05/31/2011	0.82	0.85
10/31/2006	0.80	0.80	02/28/2009	0.91	1.00	06/30/2011	0.75	0.94
11/30/2006	0.80	0.80	03/31/2009	0.92	0.94	**Min**	**0.56**	**0.68**
12/31/2006	0.80	0.80	04/30/2009	0.82	0.95	**Max**	**1.29**	**1.58**
01/31/2007	1.00	1.10	05/31/2009	0.67	0.68	**Average**	**0.87**	**0.93**
02/28/2007	0.90	1.00	06/30/2009	0.67	0.68			

	BOD (mg/L)		pH (s.u.)		TSS (mg/L)		P (mg/L)	
Date	MO AVG	DAILY MAX	DAILY MIN	DAILY MAX	MO AVG	DAILY MAX	Date	DAILY MAX
2004 Permit Limit	5	10	6.0	8.3	5	10	2004 Permit Limit	n/a
12/31/2004	4.0	4.2	6.1	6.5	5.0	8.7	03/31/2003	0.07
03/31/2005	4.1	4.3	6.3	6.5	4.7	6.3	06/30/2003	0.04
06/30/2005	4.0	4.0	6.2	6.5	5.4	9.0	09/30/2003	0.08
09/30/2005	4.0	4.0	6.3	7.7	4.4	6.0	12/31/2003	0.01
12/31/2005							03/31/2004	0.08
03/31/2006	4.0	4.0	6.5	6.8	4.0	4.0	06/30/2004	0.03
06/30/2006	4.0	4.0	6.5	7.9	5.5	11.5	09/30/2004	0.01
09/30/2006	4.0	4.0	6.1	7.7	4.0	4.0		
12/31/2006	4.0	4.0	6.4	6.8	4.0	4.0		
03/31/2007	4.0	4.0	6.1	7.0	4.0	4.0		
06/30/2007	4.0	4.0	6.7	8.7	4.0	4.0		
09/30/2007	4.0	4.0	6.4	7.0	4.2	5.0		
12/31/2007	4.0	4.0	6.5	7.0	4.0	4.0		
03/31/2008	4.0	4.0	6.2	6.9	4.0	4.0		
06/30/2008	4.3	4.6	5.9	7.0	7.3	9.5		
09/30/2008	4.0	16.9	8.0	8.0	6.0	10.0		
12/31/2008	4.0	4.0	6.6	6.7	4.0	4.0		
03/31/2009	4.0	4.0	6.0	6.8	4.0	4.0		
06/30/2009	4.0	4.0	6.1	6.7	5.3	8.0		
09/30/2009	4.0	4.0	6.2	7.1	4.5	6.0		
12/31/2009	4.0	4.0	6.3	6.8	4.0	4.0		
03/31/2010	4.0	4.0	6.3	7.6	4.0	4.0		
06/30/2010	4.0	4.0	6.4	6.6	4.0	4.5		
09/30/2010	4.0	4.0	6.3	6.5	4.0	5.5		
12/31/2010	4.0	4.0	6.2	6.7	4.0	4.0		
03/31/2011	4.1	4.5	6.4	6.7	4.1	5.0		
06/30/2011	4.0	4.0	6.3	6.7	4.0	4.0		
Min	**4.0**	**4.0**	**5.9**	**6.5**	**4.0**	**4.0**		
Max	**4.3**	**16.9**	**8.0**	**8.7**	**7.3**	**11.5**		
Average	**4.0**	**4.6**	**6.4**	**7.0**	**4.5**	**5.7**		