

Board of Sewer Commissioners Meeting Agenda



Date

January 25, 2022

Time

7:00 PM

Location

Zoom Remote

Public Access-See below

Note this Zoom videoconference meeting is being televised, streamed or recorded by Bourne TV. If anyone from the public wishes to provide public comment, they can access the Zoom meeting by calling:

1-929-205-6099 Meeting ID: 847 9052 4776 Passcode: 059436

If you already have the Zoom App downloaded to your device or computer, you may simply join the meeting by entering the Meeting ID and Password noted above, or go to <https://zoom.us/join> and look for the Join Meeting button. Please MUTE your phone/microphone upon entry.

RECEIVED
TOWN CLERK BOURNE
JAN 21 PM 2:49

Participants wishing to speak should click the "Reactions" icon on the lower toolbar and then click "Raise Hand" in the dialog box to notify the Chair. The Chair will recognize participants. The 'Chat' keyboard feature will not be utilized for discussion or recognition during this meeting.

For Participants who are calling into the meeting and wishing to speak should press *9 to notify the Chair. The Chair will recognize participants.

All items within the meeting agenda are subject to deliberation and vote(s) by the Board of Sewer Commissioners.

7:00 P.M. Call Public Session to Order in Open Session

1. Moment of Silence to recognize our Troops and our public safety personnel
2. Salute to the Flag
3. Vision: Bourne is a proud community that embraces change while respecting the rich heritage of the town and its villages. It is a municipality based on strong fiscal government with a durable economy that recognizes the rights of all citizens, respects the environment, especially the coastal areas of the community and the amenities that it affords. Bourne embraces excellent education, and offers to citizens a healthy, active lifestyle.
4. Mission: Bourne will maximize opportunities for social and economic development while retaining an attractive, sustainable and secure coastline and environment for the enjoyment of residents and visitors. Through responsible and professional leadership and in partnership with others, Bourne will strive to improve the quality of life for all residents living and working in the larger community.

5. Public Comment on Non-Agenda Items: Public comments are allowed for up to a total of 12 minutes at the beginning of each meeting. Each speaker is limited to 3 minutes for comment. Based on past practice, members of the Board are not allowed to comment or respond.
6. Minutes: No minutes to approve
7. Board of Sewer Commissioners Business
 - a) Update on the NEW Wastewater Treatment Facility - Corey Repucci from Weston & Sampson will address the Board of Sewer Commissioners (BOSC) relative to noise complaints, operation of the new treatment facility and transfer of operations to Sewer Department.
 - b) The Vice President of the Hideaway Village Association is requesting maintenance support for their sewer system in Hideaway Village.
 - c) Discussion and possible vote to appoint members to the Wastewater Advisory Committee.
 - d) Discussion and possible vote on 2021 Sewer Overage Rate.
 - e) Discussion and possible vote on the FY23 Sewer Department Operational Budget and the FY23 Sewer Capital Budget
 - f) Review allocation requests and discuss the use of allocation payments.
 - g) Barnstable County officials has requested comments on the use of American Rescue Plan Act (ARPA) Funds – The BOSC will discuss and possible vote to provide comments.
 - h) Massachusetts Maritime Academy outfall renewal permit – discussion and possible vote to provide comments on the outfall renewal permit.
 - i) Update on Cape and Islands Water Protection Fund Strategy.
 - j) Update on the proposal to divert a portion of the Community Preservation Act funding to a new Wastewater Infrastructure Investment Fund (WIIF) and strategy.
 - k) Update from the BOSC Policy Sub-committee.
8. Future Agenda Items
 - a) 6-month allocation reviews – 2/22/22 (notifications to be sent to owners)
 - b) Discussion of CWMP – next update 03/22/2022
 - c) Update from the Policy Sub-Committee – 2/22/22
 - d) WIIF (Wastewater Infrastructure Investment Fund) –tbd
 - e) Update Cape and Islands Water Protection Fund Strategy – tbd
9. Correspondence
10. Adjourn

PUMP OPERATIONS RECORDS FOR 2021

Main Street/Readings		Days	Daily Gallons	Hideaway/Readings		Days	Daily Gallons	Total Daily Gallons (Hideaway + Main St.)
January	2,736,492	31	88,273	January	227,725	31	7,345	95,618
February	2,905,335	28	103,761	February	220,003	28	7,857	111,618
March	2,744,022	31	88,516	March	234,188	31	7,554	96,070
April	2,747,345	30	91,578	April	238,611	30	7,953	99,531
May	2,792,704	31	90,087	May	278,812	31	8,994	99,081
June	3,034,197	30	101,139	June	332,062	30	11,068	112,207
July	3,266,394	30*	108,879	July	424,240	30	14,141	120,020
August	2,444,216	31**	78,845	August	399,324	31	12,881	91,726
September	2,993,657	30	99,788	September	331,312,	30	11,043	110,831
October	2,591,135	31	83,595	October	246,716	31	7,958	91,553
November	2,454,125	30	81,804	November	219,785	30	7,326	89,130
December	1,746,553	31	56,340	December	197,002	31	6,354	62,694
							Daily Average Gallons	98,339

*because of weekend there are only 30 days' worth of readings.

** dropped significantly due to WWTF coming online.

Cannon, Glenn

From: James Meeker <meek56@comcast.net>
Sent: Monday, December 13, 2021 2:20 PM
To: Cannon, Glenn
Cc: Thut, Kathleen
Subject: Hideaway Village Sewer Maintenance

Mr. Cannon,

I would like to be put on the agenda for the January 25th 2022 meeting.

I am the V. President of the Hideaway Village Board of Directors. I would like to present our request for maintenance support of our sewer system in Hideaway Village.

I look forward in hearing back from you with confirmation.

James Meeker

740 Wood of the Bay Rd.
[REDACTED]

Buzzards Bay, Ma. 02532
[REDACTED]
[REDACTED]

This email has been scanned for spam and viruses by Proofpoint Essentials. Click [here](#) to report this email as spam.

Examples

**AGREEMENT BY AND BETWEEN THE
TOWN OF BOURNE
AND
HIDEAWAY VILLAGE CONDOMINIUM ASSOCIATION**

This Agreement is made this 8 day of MARCH, 2016, by and between the Town of Bourne, a Massachusetts municipal corporation with an address of 24 Perry Avenue, Buzzards Bay, Massachusetts ("Town") and the Hideaway Village Condominium Association ("Hideaway"), with a mailing address of P.O. Box 790 Buzzards Bay, Massachusetts. This Agreement amends, and, in pertinent parts, supplants and supersedes an Operation and Maintenance Agreement, dated June 26, 1990, and an Agreement for Wastewater Collection Treatment and Disposal between the Town of Wareham, Massachusetts and Town of Bourne, Massachusetts, dated February 23, 2010.

RECITALS

Whereas, the Town and Hideaway have mutual interest in the Wastewater transmission infrastructure within Buzzards Bay;

Whereas, the Town and Hideaway have been involved with financing portions of the wastewater delivery system to Wareham;

Whereas, Hideaway Village comprises approximately 30% of the revenue derived from sewer use fees paid to the Town of Bourne;

Whereas, the Bourne Board of Sewer Commissioners have agreed to assist Hideaway with certain costs associated with the infrastructure repair and replacement at Hideaway for a period of five (5) years, subject to municipal appropriation;

Now therefore, in consideration of the mutual covenants herein contained, the parties agree as follows:

1. The Town is hereby authorized to reimburse Hideaway for certain equipment for the repair and replacement of equipment necessary for the safe operation of that portion of the wastewater transmission infrastructure owned and maintained by Hideaway, subject to the approval of the Director of the Department of Public Works, in an amount not to exceed Thirty Thousand Dollars (\$30,000) annually, subject to appropriation. The Town Administrator shall certify that the reimbursement is appropriate. All invoices submitted to the Town by Hideaway for each fiscal year must be received no later than June 1st of each year of this Agreement.

2. The execution of disbursement of any funds to Hideaway is by reimbursement only of invoices paid and approved by the Board of Directors of Hideaway. All requests for reimbursement shall be presented to the Town Administrator in writing.

3. The Town is prohibited from performing any work to repair or install on lines and property, etc., owned by Hideaway. The Town is prohibited from providing any warranty on items reimbursed and is not responsible for any problems associated with installation or operation of any equipment or materials that has been submitted for cost reimbursement.

4. Hideaway may not assign any rights under this Agreement and may not utilize these funds for non-equipment related purchases and/or purposes.

5. Hideaway hereby agrees to hold the Town harmless and indemnify the Town for all risk of loss, damage or injury, of any nature, to persons or property, by reason of individual actions or inactions under this Agreement by its' employees, residents, invitees, contractors, etc., and Hideaway releases the Town, and its successors and assigns, from any and all claims for loss, damage or injury sustained that may arise.

6. This term of this Agreement shall be for five (5) years, commencing on July 1, 2015.

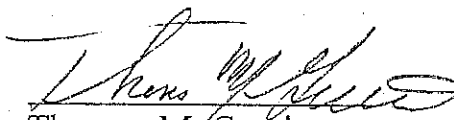
7. This Agreement may be renewed every five (5) years by a writing signed by the parties.

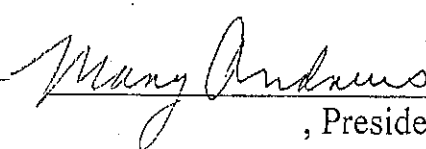
8. If any provision of this Agreement shall be held to be invalid or unenforceable as against any party, the Agreement shall be null and void in its entirety, with no further or continued obligations hereunder.

Witness the hands and seals of the Town of Bourne and the Hideaway Village Condominium Association as of the date set forth above.


The Town of Bourne,
By its Town Administrator,

Hideaway Village Condominium
Association,


Thomas M. Guerino


Mary Andrews, President

Approved as to Form:


Robert S. Troy
Bourne Town Counsel

OPERATION AND MAINTENANCE AGREEMENT

This Agreement is entered into this 26th day of JUNE, 1990 by and between the Town of Bourne (the "Town") and Hideaway Village Condominium Association, Inc. ("Hideaway Village").

WHEREAS, on September 27, 1988, the Commonwealth of Massachusetts Division of Water Pollution Control (the "Division") approved a facilities plan for the Town of Bourne ("Facilities Plan") which, inter alia, calls for the construction of sewage collection system servicing Hideaway Village (the "Collection System"), the conveyance of wastewater from said collection system to and along a force main on Head of the Bay Road (the "Force Main") and the treatment of said wastewater at the sewage treatment plant owned and operated by the Town of Wareham and located off Route 6 in Wareham, Massachusetts (the "Treatment Plant"); and

WHEREAS, on September 1, 1988, the Town and the Town of Wareham entered into a Memorandum of Intent by which the Town of Wareham will accept and treat wastewater from the Town, including wastewater from Hideaway Village; and

WHEREAS, pursuant to Chapter 557 of the Acts of 1979, G.L. c. 21, §30A ("Chapter 557"), the Town has applied to the Division for financial assistance to construct the Force Main and the Collection System (collectively, "the Project"); and

WHEREAS, the Division has determined that, subject to legislative appropriation, a Chapter 557 construction grant for the Project should be awarded, and pursuant to 314 CMR 10.02 has placed

the Project on the fundable priority list for fiscal year 1990; and

WHEREAS, pursuant to General Condition Number 8 of the Division's Standard Grant Agreement, the Town must demonstrate that it holds sufficient interest in the site of the Project to assure undisturbed use and possession of for purposes of construction, operation and maintenance of the Project; and

WHEREAS, Hideaway Village has this day executed a "Grant of Right to Install and Maintain Sewage Collection System in Condominium Common Areas" ("Grant of Right"), which grant is intended to bestow sufficient interest in the site of the Project to satisfy said General Condition Number 8; and

WHEREAS, the Town desires to have Hideaway Village operate and maintain that portion of the Collection System shown on Exhibit A (the "On-Site Collection System"); and

WHEREAS, Hideaway Village is willing to provide such services,

NOW, THEREFORE, in consideration of the undertakings set forth herein and the Town's application for financial assistance for the Project, the parties agree as follows:

ARTICLE I: THE PARTIES

The parties to this Agreement are as follows:

1.1 The Town of Bourne, a municipal corporation with its principal place of business at Town Hall, 24 Perry Avenue, Buzzards Bay, Massachusetts.

1.2 Hideaway Village Condominium Association, Inc., a Massachusetts corporation duly organized pursuant to G.L. c. 183A, with its principal place of business at 749 Head of the Bay Road,

Buzzards Bay, Massachusetts.

ARTICLE II: CONDITION PRECEDENT

2.1 Neither Hideaway Village nor the Town shall be obligated under the terms of this Agreement until the following events shall have occurred:

(A) a Project Grant Offer of not less than \$938,000 shall have been made by the Division and shall have been accepted by the Town; and

(B) Construction contract(s) for the Project shall have been awarded by the Town; and

(C) Work on the Project shall have been initiated by the Town's contractor(s).

ARTICLE III: OPERATION AND MAINTENANCE OF THE COLLECTION SYSTEM

* 3.1 The Town hereby engages Hideaway Village to operate and maintain the On-Site Collection System. Hideaway Village shall provide all necessary labor, materials, equipment and utilities, and its services hereunder shall be rendered in a workmanlike manner and in full compliance with relevant federal, state and local laws, ordinances and regulations. Hideaway's duties hereunder shall commence upon completion of construction of the On-Site Collection System.

* 3.2 Hideaway Village shall be solely responsible for the costs of the services required by this Agreement, including the repair or replacement of all equipment comprising the On-Site Collection System. Provided, however, that in the event that repair or

replacement of any of said equipment is required, the Town will use its best efforts to obtain such repair or replacement, or reimbursement therefor, from the contractors, vendors or manufacturers who installed, sold or manufactured said equipment. At Hideaway Village's request, and in lieu of its obligation under the preceding sentence, the Town shall assign to Hideaway Village all its rights to obtain such repair or replacement, or reimbursement therefor.

3.3 Hideaway Village shall take all reasonable steps to ensure that sewage from the individual condominium units complies with the discharge parameters adopted by the Town of Wareham, as set forth in Division V, Article V of the Town of Wareham By-Laws dated August 1, 1986, as said by-law may be amended from time to time.

3.4 At its option, Hideaway Village may subcontract for the provision of any of services required by this Agreement; provided, however, that no such subcontract shall relieve Hideaway Village of its responsibilities under this Agreement.

3.5 Each party agrees that it will, at its own expense, execute all certificates, applications and other instruments, and take such further actions, as may be reasonably necessary to give effect to the terms of this Agreement. In particular, the Town agrees to execute, as owner of the On-Site Collection System, those applications for federal, state and local permits and approvals necessary or appropriate for the operation and maintenance of said system.

ARTICLE IV: ACCESS BY TOWN

4.1 Representatives of the Town shall have the right to inspect the On-Site Collection System during the regular business hours of Hideaway Village, or at any time that emergency conditions threaten the public health and safety. Such inspections shall not unnecessarily interfere with Hideaway Village's performance of the services required by this Agreement.

ARTICLE V: FORCE MAJEURE

5.1 Hideaway shall not be deemed to have violated its obligations under this Agreement if a failure of or delay in performance results from an excusable reason, as defined in Section 5.2 hereof. In the event of a failure or delay of performance resulting from an excusable reason, Hideaway Village shall within ten days thereafter notify the Town in writing of the anticipated length of the delay or non-performance, the measures taken and to be taken to prevent or minimize the delay or non-performance and the schedule by which these measures will be implemented.

5.2 An excusable reason is an event which is beyond the reasonable control of Hideaway Village and which is of sufficient magnitude to cause a delay in or failure of performance, including without limitation the following events or occurrences: fire, floods, serious accidents, unusually severe weather conditions, acts of government or regulatory authorities, strikes, lockouts or other labor disputes, or defaults by subcontractors.

ARTICLE VI: INDEMNIFICATION

6.1 Hideaway Village shall protect, defend, indemnify and hold harmless the Town against any and all claims, suits, causes of action, proceedings, liabilities or demands by any person or damage to property or to the environment arising out of or resulting from the activities of Hideaway Village, its employees, contractors, subcontractors or agents pertaining to the operation and maintenance of the On-Site Collection System.

ARTICLE VII: MISCELLANEOUS PROVISIONS

7.1 This Agreement, the Conditional Gift Agreement executed contemporaneously herewith, and the Grant of Right constitute all of the agreements between the Town and Hideaway Village relating to the subject matter hereof, and all previous agreements, discussions, communications and correspondence with respect to such subject matter are superseded by the execution of said agreements and the Grant of Right.

7.2 This Agreement may not be modified or amended, except in writing signed by or on behalf of Hideaway Village and the Town.

7.3 This Agreement shall inure to the benefit and be binding upon the parties hereto and their respective successors and assigns.

7.4 Any notice to a party pursuant to this Agreement shall be given by certified or registered mail, or by private carrier providing evidence of receipt as a part of its services, and shall be addressed as follows:

if to Hideaway:

Hideaway Village Condominium
Association, Inc.
749 Head of the Bay Road
Suzzards Bay, MA 02532

if to the Town:

Board of Selectmen
Town of Bourne
Town Office Building
24 Perry Road
Buzzards Bay, MA 02532

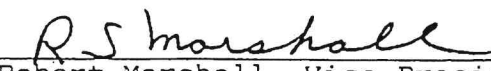
Provided that either party may give notice, in the aforesaid manner, of a different address for the receipt of notice under this Agreement.

7.5 If any provision of this Agreement is for any reason held invalid or unenforceable, the parties hereto shall negotiate an equitable adjustment of the provisions of this Agreement with a view toward effecting the purposes of this Agreement, and the validity and enforceability of the remaining provisions of this Agreement shall not be affected thereby.

EXECUTED as an instrument under seal this 20TH day of JUNE, 1990.

HIDEAWAY VILLAGE CONDOMINIUM
ASSOCIATION, INC.

By: 
Robert Merrill, President

By: 
Robert Marshall, Vice President

TOWN OF BOURNE

By: 

26 Thomas B. B. B.
By: Robert N. Prady
By: Nancy. O. O.

August 25, 2020

PROPERTIES ON TOWN SEWER THAT MAINTAIN THEIR OWN ON-SITE EQUIPMENT

All 10 properties are connected into the Town of Bourne Sewer System. Property owners maintain private pumps and not the Town of Bourne. Property owners are responsible to maintain equipment at their own expense.

1. 9R Main Street
2. CVS Pharmacy
3. Honora Court [16 units]
4. Bourne Oaks [4 buildings = 106 units]
5. Hideaway Village [266 units]
6. Hess Gas Station – Dunkin Donuts
7. Wayho Restaurant
8. 304 Main Street [Chu residential]
9. 2 Bourne Bridge Approach [Pet Smart/Starbucks]
10. 39 Buttermilk Way

TO: Board of Selectmen

FROM: Thomas M. Guerino – Town Administrator

RE: Issues regarding Hideaway Village

DATE: December 10, 2013

The following is the Town Administrator's determination as it relates to the concerns brought forward by residents of Hideaway Village. These relate to the costs of waste water disposal and transmission. This determination has been formulated after substantial consultation with Mr. George Tribou, Mr. Michael Leitzel, and discussions with USDA Rural Development. Consultation with USDA RD was limited to documentation on file with the Agency and those documents have apparently been purged due to the long time period elapsed since the original agreements were signed in the late 1980's and early 1990's.

As you are aware, residents at Hideaway have questioned why they are required to pay the same sewer use charge as other municipal users of the system when they take care of the sewer lines/pump replacements at their own cost and receive no assistance from the Town of Bourne. It is their belief that this is not equitable.

A brief history of the inception of the sewer system(s) is in order;

The Town of Bourne was required to commence treatment of some wastewater in areas of Buzzards Bay from both an environmental and economic development perspective. While the Town may have sought to have its' own treatment facility at the time, it was determined that that the Town would enter into joint collection system with the Town of Wareham. At the time there was up to 90% cost mitigation emanating from EPA (75%) and the then named D.E.Q.E (15%). At the same time, Hideaway was being pressured to take care of their own wastewater problems as it related to failed septic issues and pollution into the Buttermilk Bay area. The governmental agencies from the Federal and State Governments were strongly proposing that Hideaway construct a wastewater treatment system. This was separate from any proposed treatment options the Town of Bourne was being required to undertake with Wareham. As you can imagine, the costs were going to be prohibitive for the residents at Hideaway. Thus after some dialogue with the Town, Federal and State Agencies, Hideaway was allowed to connect into the town's collection and transmission system and have a reserved capacity of 60,000 gallons per day. In lieu of having the cost of the construction of its own treatment plant, Hideaway made a payment of \$300,000 to the Town toward the cost of the pump station on Head of the Bay Road. The DEQE directed that the Town shall maintain the pump station and lines outside the geographic boundaries of Hideaway. This is the only mention of Hideaway Village in town related documents that we could come across from either EPA or DEQE .

It is our position that Hideaway Village has no extraordinary right to reduced rates in regards to fees assessed for the collection/transmission of wastewater. The Town has no additional responsibility to maintain any lines, equipment, additional pumping capacity, or replace same in relation to Hideaway Village.

Hideaway is not treated or considered in any different light than any other private housing or condominium development connected to the wastewater collection system, nor should it be. Examples of other private housing entities include the Canal Crossing, and Bourne Oaks and the currently under construction assisted living development in Buzzards Bay. Additionally, any for profit entity is also responsible for all costs related to sewer treatment. Most recent examples of this on the retail commercial end include CVS and HESS Oil. Further, the Town of Bourne Sewer Commissioners have provided the owners of Hideaway consideration by billing each dwelling unit individually as opposed to the historic method of billing which was only one bill to the association. This saves on the "C" factor assessment (internal to Hideaway) to owners at the complex but adds an additional 266 accounts that the Town tracks and invoices.

In conclusion, after as thorough review as possible with staff and taking into consideration the totality of the waste water system in Buzzards Bay, no financial or fee reduction is warranted or recommended.

**Board of Sewer Commissioners
Minutes of March 19, 2013
Bourne Veterans' Memorial Community Building
Bourne, MA 02532**

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TA Guerino

Don Pickard, Chairman
John Ford, Vice Chairman
Peter Meier, Clerk
Earl Baldwin
Linda Zuern

System wide cast discussion including Hideaway for future planning

Ford – looking for a way to come up with a fair system for Hideaway to obtain new replacement pumps part through an enterprise fund; currently they are paying a fee that buys grinder pumps. He spoke with TA Guerino and came up with a policy for monies to go into a stabilization fund rather than decrease the fee to set money aside. Bourne needs a stabilization fund to give money for capital outlay. Pumping stations will need some overhaul per George Tribou at some point.

TA Guerino – take the shared costs, deduct the cost of Wareham, get the difference to calculate the number. He would like to start after town meeting to put on the BOSC agenda for discussion.

Meier MOVED and SECONDED by Baldwin that we adjourn the Board of Sewer Commissioners Meeting and to go back into Selectmen's meeting. Meeting adjourned at 6:45 pm. UNANIMOUS VOTE.

**Board of Sewer Commissioners/Board of Selectmen
Minutes of July 30, 2013
Bourne Community Building
Bourne, MA 02532**

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TA Guerino

Peter Meier, Chairman
Linda Zuern, Vice-Chairman
Don Ellis, Clerk
Don Pickard
Earl Baldwin

Discussion on Hideaway Village lifter pumps

TA Guerino and Mr. George Tribou reviewed the original Hideaway agreement between the State and the government. While they don't recommend going onto private property, he

recommended the town purchase and deliver pumps for when the pumps need to be replaced. Hideaway currently has seven (7) lifter pumps with backups.

Chm. Meier has no issue.

Ellis asked for a cost estimate of these pumps. TA Guerino said it is between \$2,800 - \$3,300 each.

Richard Gowell, Treasurer of Hideaway, is looking to be treated fairly. This is the first time the town has offered any assistance. It is a cottage community. He asked for clarification on why the town cannot go onto private property.

TA Guerino said you have to go back to the agreement signed with the State and the government. He explained there are legal issues with easements and pipes running under private property.

Pickard asked what the cost of installation for the units. TA Guerino guessed it would take several hours but didn't have a number for cost at this time. Pickard asked if there is any method by which the town and Hideaway could enter into a Hold Harmless agreement. TA Guerino will have to ask Atty. Troy.

TA Guerino suggested entering into an agreement with a third party installer to buy, install and back bill the town alleviating concern with maintenance with the system. This takes liability off the town with property crossings.

Zuern would like to hear from Mr. Tribou on how much it would cost.

Ms. Mary Andrews, President of Hideaway Association, explained they are facing huge costs in repairs for backup generators as well.

Chm. Meier said the first step would be to supply the pumps. Anything else that comes up the board can discuss when appropriate.

TA Guerino said he has to look at potential costs would be.

Mr. Gowell asked for copies of the original agreement between DEP and Hideaway Village. TA Guerino will look to see if his office has a copy of said agreement.

Zuern agrees that it seems fair to also at least cover the installation in some way.

**Board of Sewer Commissioner's
Minutes of October 15, 2013
Bourne Community Building
Bourne, MA 02532**

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TA Guerino

Peter Meier, Chairman
Linda Zuern, Vice Chairman
Don Ellis, Clerk
Don Pickard

Other Business

TA Guerino said while the Hideaway Village (HAV) discussion is not on the agenda, there was a question while Mr. Ford was on the board as to why there is the same sewer rate for HAV and the rest of the users in the village. Folks on the HAV piece of the system are required to maintain their own system, capital equipment, all costs for disposal from the HAV location to the pump station. When a system breaks on a homeowner or underground in HAV, they are bearing the full cost. With a user on the village side, the budget that is passed at Town Meeting covers the costs. We are looking to find the history and what the cost would be if the town would take over that piece. There are separate agreements (HAV and the village) and there is some difficulty in obtaining documentation from the government agencies.

TA Guerino said the town is in a position to beginning sitting down with the folks at HAV to come up with either an agreement or arrangement to bring forward, if any, to the Sewer Department, the Facilities Director and Town Counsel. TA Guerino believes a draft proposal will be ready by the first of December.

**Board of Sewer Commissioner's
Minutes of January 7, 2014
Bourne Community Building
Bourne, MA 02532**

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TA Guerino

Peter Meier, Chairman
Linda Zuern, Vice-Chairman
Don Pickard
Earl Baldwin
Jerry Ellis

Town Administrator's report of 12/10/13

TA Guerino's report was given to the Board of Selectmen's meeting at 12/17/13.

A member of the audience on the Hideaway Village Board of Directors believed the direction was going in a different way. TA Guerino said the documents available are what the Hideaway Village should have. The town found it not equitable and did not follow through with a sit down as proposed and the town was found it had no responsibility to private facilities. The option at Hideaway Village to join this system to offset the cost of the pump station. At that point, TA Guerino said the town was charged to maintain the pumps to and from Hideaway Village.

Meier said Mr. Ford wanted to obtain the report and that Meier wanted to honor the project started by Mr. Ford to the best way the board is legally able. TA Guerino said at this point, the town is discussing what the town can/cannot do.

Pickard explained based on the Bourne Rule Home Charter, the board doesn't get into the day-to-day goings on in Bourne and they rely on TA Guerino to do so. He feels TA Guerino is a fair person.

Mr. Leitzel said he could not find any documentation about Hideaway Village, but the town's responsibility ends at the property line. He contacted DEP and others and they didn't have documentation in their records.

**Sewer Commissioners Meeting
Minutes of Tuesday, March 31, 2015
Bourne Community Building
Bourne, MA 02532**

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2) Hideaway Village Assistance

Thomas Guerino brought the committee up to date on the issue with the long-standing agreement. Where the village association pays a percentage of the Sewer budget. They asked to see if there was a way to get help with the maintenance cost at Hideaway village. Tom Guerino spoke with the Director of Hideaway Village. Tom is purposing a five-year agreement with Hideaway that can be renewed upon a vote of the Board of Sewer Commissioner's where we would provide up to \$30,000 towards the pumps. We would reimburse them for up to 3 pumps or \$30,000 for a 5-year period. If the Sewer Commissioners were in agreement Mr. Guerino would go to counsel to have an agreement drafted.

Mary Andrews, President of Board of Directors of Hideaway. She presented the proposal to the board at Hideaway, and they are not opposed to this proposal.

Stephen Mealy questioned would it be an option to set a different rate for outflow for Hideaway Village.

Voted Stephen Mealy moved and seconded by Peter Meier to ask the Town Administrator to work with Town Counsel to draft up an agreement with Hideaway Village for reimbursement in amount not to exceed \$30,000 per year for repair or replace equipment associated with the sewer system at Hideaway Village for a period of 5 years with a renewable after 5 years. Vote 5-0.

**Sewer Commissioners Meeting
Minutes of Tuesday, March 8, 2016
Bourne Community Building
Bourne, MA 02532**

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TA Guerino

Selectmen

Don Pickard, Chairman
Stephen Mealy, Vice-Chairman
Michael Blanton - Excused
Don Ellis
Peter Meier

2) Review and possible vote on the final Hideaway Village agreement.

Don Pickard stated they have the letter reflecting the changes that were discussed.

Voted Stephen Mealy moved and seconded by Don Ellis that the board accept this and ask Mr. Guerino to sign the agreement between Bourne and Hideaway Village.

Tom Guerino stated Mrs. Andrews was present to sign on behalf of Hideaway village.
Vote 4-0.

Tom Guerino briefly went over the agreement between Hideaway Village and the Town of Bourne. The agreement is for a 5-year term that can be renewed upon agreement by both parties. It is effective July 1, 2015.

AGREEMENT
FOR
WASTEWATER COLLECTION, TREATMENT AND DISPOSAL
BETWEEN
TOWN OF WAREHAM, MASSACHUSETTS AND TOWN OF BOURNE, MASSACHUSETTS

This agreement, made and entered unto this 23rd day of February, 2010 by and between the Town of Wareham, a municipal corporation within the County of Plymouth and the Commonwealth of Massachusetts acting through its Board of Selectmen, hereinafter referred to as "Wareham" and the Town of Bourne, a municipal corporation within the County of Barnstable and the Commonwealth of Massachusetts acting through its Board of Selectmen, hereinafter referred to as "Bourne".

WITNESSETH

WHEREAS, The Division of Water Pollution Control of the Massachusetts Department of Environmental Protection endorses the recommendations of the 208 Areawide Wastewater management Plan for Southeastern Massachusetts, the Wareham 201 Wastewater Facilities Plan, the Bourne 201 Wastewater Facilities Plan, and

WHEREAS, the Division of Water Pollution Control has approved a plan whereby Bourne will discharge its wastewaters to Wareham's sewage works, and

WHEREAS, the communities deem it to be the most economical and in the public interest to enter into an Agreement whereby Wareham would receive, treat and dispose of Bourne's wastewaters through Wareham's sewage works.

WHEREAS, the communities are authorized by Chapter 40, Sections 4 and 4A of the General Laws of the Commonwealth of Massachusetts to enter into contracts and agreements for the purpose of aiding in the prevention or abatement of water pollution, and

WHEREAS, Wareham agrees to sell to Bourne an annual average daily wastewater flow capacity not to exceed 200,000 GPD. The source of the wastewater flow will be from the Village of Buzzards Bay (approximately

140,000 GPD) and Hideaway Village (approximately 60,000 GPD) and will be derived only for the services of the critical needs of Bourne, as identified in the "201 Facilities Plan and Environmental Information Document for the Town of Bourne, Massachusetts - Final Draft" dated May 1984 together with the Regionalization Supplement dated March 1988, prepared by the engineering firm of Anderson-Nichols. Said areas shall include the following: Phase I, Phase II, Phase III, and Phase IV all as shown in Exhibit 1, attached hereto, entitled, "Figure 6-1, Sewer Phasing" and Hideaway Village as shown in Exhibit 2, attached hereto, entitled "Figure V-2, Recommended Plan for Hideaway Village", all of which are hereinafter referred to as critical needs in Bourne, and

WHEREAS, Wareham and Bourne have been authorized to enter into this agreement by vote of their respective Town Meetings as evidenced by certified copies of the approved Articles, attached hereto as Exhibit 3.

NOW THEREFORE, in consideration of these premises and mutual benefits to be derived by the parties hereto, an Agreement is prepared in the following form:

Article 1	Definitions
Article 2	Wastewater Characteristics
Article 3	Terms of Agreement
Article 4	DELETED
Article 5	Payment - Capital Investment
Article 6	Payments - Operation and Maintenance
Article 7	Measurement of Flow
Article 8	Sampling of Wastewater
Article 9	Notice of Changes
Article 10	Pretreatment
Article 11	Septage
Article 12	Contract Administration
Article 13	Termination
Article 14	Approval By Emergency Finance Board
Article 15	Other Considerations

ARTICLE 1. DEFINITIONS

1.1 For the purpose of this Agreement, the following terms are defined:

- 1.1.1 "Average Daily Flow" shall mean the total flow as measured at a metering location, divided by the same number of days in the flow period.
- 1.1.2 "BOD (denoting Biochemical Oxygen Demand) shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at 20° C, expressed in milligrams per liter (or pounds per day).
- 1.1.3 "Bourne" is the Town of Bourne, a municipal corporation of the Commonwealth of Massachusetts.
- 1.1.4 "Bourne Board" shall be the Board of Selectmen acting as the sewer commissioners of the Town of Bourne.
- 1.1.5 "Bourne Wastewater" shall mean wastewater originating from only those sources defined in Exhibits 1 and 2, attached hereto, and otherwise known as Phases I, II, III, and IV within the Village of Buzzards Bay and Hideaway Village, herein referred to as critical needs.
- 1.1.6 "Building Drain" shall mean that part of the lowest horizontal piping of a drainage system which receives the discharge from soil, waste and other drainage pipes inside the walls of the building and conveys it to the building sewer, beginning ten (10) feet outside the inner face of the building wall.
- 1.1.7 "Building Sewer" shall mean the extension from the building drain to the public sewer.
- 1.1.8 DELETED
- 1.1.9 "Combined Sewer" shall mean a sewer receiving both surface runoff and sewage.
- 1.1.10 "Common Sewage Works" shall mean that portion of the Wareham sewage works all in Wareham that will be used by

Wareham and Bourne.

- 1.1.11 "Communities" shall mean the Towns of Wareham and Bourne.
- 1.1.12 "DEP" is the abbreviation for Massachusetts Department of Environmental Protection.
- 1.1.13 "GPD" is the abbreviation for gallons per day.
- 1.1.14 "Industrial Wastes" shall mean the liquid wastes from industrial manufacturing processes, trade or business and distinct from sanitary sewage.
- 1.1.15 "Memorandum of Intent" shall mean the nine (9) page document, including the addendum thereto, signed on September 1, 1988 by a majority of the members of the Wareham Board of Selectmen and the Bourne Board of Selectmen which outlines the general areas of mutual agreement setting the foundation for the agreement contained herein.
- 1.1.16 "MGD" is the abbreviation for million gallons per day.
- 1.1.17 "NPDES Permit" shall mean the National Pollutant Discharge Elimination System permit for the Wareham Sewage Treatment Plant.
- 1.1.18 "Operation and Maintenance Cost" means costs relating to the operation and maintenance of the sewage works, including but not limited to labor, power, chemicals, administration, supplies, equipment replacement, and incidental costs.
- 1.1.19 "Peak Hourly Flow" means the highest volume of wastewater, during a continuous sixty (60) minute period.
- 1.1.20 "Person" shall mean any individual, firm, company, association, society, corporation, group or other legal entity.

- 1.1.21 "pH" shall mean the logarithm of the reciprocal of weight of hydrogen ions in grams per liter of solution.
- 1.1.22 "Public Sewer" shall mean a sewer in which all owners of abutting properties have equal rights and is controlled by public authority.
- 1.1.23 "Sanitary Sewage" shall mean water-carried waste from the sanitary conveniences such as toilets, washrooms, urinals, sinks, showers, drinking fountains, small laundries and from kitchens, restaurants, cafeterias and floor drains essentially free of industrial wastes or toxic materials.
- 1.1.24 "Sanitary Sewer" shall mean a sewer which carries sanitary sewage and to which storm, surface and ground waters are not intentionally admitted.
- 1.1.25 "Septage" means the wastes from holding tanks, septic tanks, and cesspools.
- 1.1.26 "Sewage Treatment Plant" shall mean any arrangement of devices and structures used for treating sewage.
- 1.1.27 "Sewage Works" shall mean all facilities for collecting, pumping, treating, and disposing of sewage and sludge.
- 1.1.28 "Sewer" shall mean a pipe or conduit for carrying sewage.
- 1.1.29 "Shall" is mandatory; "May" is permissive.
- 1.1.30 DELETED
- 1.1.31 "Slug" shall mean any discharge of water, sewage, or industrial waste which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than fifteen (15) minutes, or more than five (5) times the average twenty-four (24) hour concentration or flows during normal operation.

- 1.1.32 "Storm Drain" (sometimes termed "Storm Sewer") shall mean a sewer, which carries storm and surface waters and drainage, but excludes sewage and industrial waste, other than unpolluted cooling water.
- 1.1.33 "Total Flow" includes the total amount of sewage flowing into the sewerage works and includes the sewage contributed to such system by the participating communities.
- 1.1.34 "Total Flow Capacity Allocation" shall refer to the amount of sewage treatment plant capacity set aside for use by each community. The Wareham total flow capacity allocation is 1.30 MGD average daily flow and the Bourne total flow capacity allocation is 0.20 MGD average daily flow.
- 1.1.35 "Total Suspended Solids" (abbreviated TSS) shall mean solids that either float on the surface of, or are in suspension in water, sewage or other liquids and which are removable by laboratory filtering, expressed in milligrams per liter by weight (or pounds per day).
- 1.1.36 "Wareham" is the Town of Wareham, a municipal corporation of the Commonwealth of Massachusetts.
- 1.1.37 "Wareham Board" shall be the Board of Selectmen acting as sewer commissioners of the Town of Wareham.
- 1.1.38 DELETED
- 1.1.39 "Wastewater" (sometimes termed "Sewage") shall mean the spent water of the communities and may be a combination of the liquid and water carried waste from residences, commercial buildings, industrial plants and institutions, together with any groundwater and surface water that may be present.
- 1.1.40 "User" shall mean any individual, firm, company, association, society, corporation or group having a

connection to and deriving a benefit (either actual or potential) from the sewage works.

- 1.1.41 "User Charges" shall mean a charge levied on all users of the sewage works for the cost of operation and maintenance.

ARTICLE 2. WASTEWATER CHARACTERISTICS

- 2.1 Prior to introducing wastewater into the common sewage works, Bourne shall adopt and conform to Sewer Use Bylaws, or regulations similar to Wareham's Bylaws, Division V, dated August 1, 1986 and any amendments thereto. Prior to adoption, Bourne shall provide a copy to Wareham for their review and approval.
- 2.2 Wareham shall receive and treat Bourne's wastewaters and septage in accordance with all State and Federal laws, regulations, water quality standards, orders or decrees of any State and/or Federal governmental authority having jurisdiction over the treatment and disposal of wastewaters, and Wareham shall make its best effort to be at all times in compliance with the NPDES Permit.
- 2.3 Bourne shall enforce its Sewer Use Bylaws to ensure that any storm drain or combined sewer will not directly or indirectly connect into the common sewage works or local sewage works, and to ensure that any drainage, substances, septage, or wastewater containing, but not limited to, the following characteristics in a volume determined to be excessive by DEP Division of Water Pollution Control will not discharge into the sewage works.
- 2.3.1 Any gasoline, benzene, naptha, lube oil, fuel oil, or other flammable, or explosive liquid, solid or gas.
- 2.3.2 Any waters or wastes containing toxic or poisonous solids, liquids, gases, or hazardous materials in sufficient quantity, either singly or by interaction with any sewage treatment process, which constitute a hazard to humans or animals, create a public nuisance, or create any hazard to humans or animals, create a public nuisance, or create any

hazard in the receiving waters of the sewage treatment plant.

- 2.3.3 Any waters or wastes having a pH lower than (5.5), or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works.
- 2.3.4 Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the sewer works such as, but not limited to, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, inground garbage, whole blood, paunch manure, hair and fleshings, entrails, and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.
- 2.3.5 Any liquid or vapor having a temperature higher than one hundred fifty (150)°F (65°C).
- 2.3.6 Any water or waste containing fats, wax, grease, or oils whether emulsified or not, in excess of one hundred (100) mg/l or containing substances which may solidify or become viscous at temperatures between thirty-two (32) and one hundred fifty (150)°F (0 and 65°C).
- 2.3.7 Any radioactive waste or isotopes of such half-life or concentration as may exceed limits established by applicable State or Federal regulations.
- 2.3.8 Any waters or wastes having a pH in excess of 9.5.
- 2.3.9 Materials which exert or cause:
- (1) Unusual concentrations of inert suspended solids (such as, but not limited to, Fullers Earth, lime slurries, and lime residues) or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate).

- (2) Excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions).
- (3) Unusual BOD, chemical oxygen demand, or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment plant.
- (4) Unusual volume of flow or concentration of wastes constituting "slugs" as defined herein.

2.3.10 Waters or wastes containing substances which are not amendable to treatment or reduction by the sewage treatment process employed, or are amenable to treatment only to such degree that the sewage treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.

ARTICLE 3. TERM OF AGREEMENT

3.1 The term of this agreement shall be for twenty (20) years commencing from the date of execution of this Agreement, subject to provisions of Articles 12 and 13.

The Wareham Board of Sewer Commissioners and the Bourne Board of Sewer Commissioners shall jointly review this agreement every five (5) years within the twenty-year agreement. The staffs of the Wareham Sewer Department and Bourne Sewer Department shall jointly review this agreement every two (2) years within the twenty-year agreement.

At the termination of the twenty (20) year term, both communities may renew the Agreement as appropriate.

ARTICLE 4. DELETED

4.1 DELETED

4.2 DELETED

4.3 DELETED

ARTICLE 5. PAYMENT - CAPITAL INVESTMENT

5.1 Bourne shall pay Wareham a proportionate share for Wareham's capital investment in various common sewage works described hereinafter in Paragraphs 5.2 and 5.3, including, but not limited to, costs, such as easements, land takings, construction, engineering, legal, administrative, interest, bond fees, and all other costs incurred or incidental to the projects, less the full amount of all grants made to Wareham by State and Federal agencies.

5.2 The existing sewage works within Wareham to be shared with Bourne are described as follows:

5.2.1 The 18-inch force main from Onset and Minot Avenue, beginning from the point of connection with the proposed Cranberry Highway force main at the intersection with Depot Street, and extending to its terminus at the Wareham Sewage Treatment Plant.

5.2.2 DELETED

5.2.3 The Wareham Sewage Treatment Plant as initially constructed in 1972 and the additions thereto constructed in 1983 and the 2005 upgrade.

5.3 Bourne's estimated proportionate share shall be adjusted after exact costs are determined by audit and shall be based on the allocated capacity for the proposed common sewage works as presented in Exhibit 4 attached hereto.

5.3.1 Portions of the Cranberry Highway project consisting of intercepting sewers, force mains, and pump stations, as defined in Exhibit 4, for the purpose of conveying wastewater flows generated in Bourne within the Village of Buzzards Bay and Hideaway Village.

5.3.2 Portions of the Indian Mound Beach project consisting of an intercepting sewer, as defined in Exhibit 4, for the purpose of conveying wastewater flows generated within Hideaway Village in Bourne.

5.3.3 Additions and modifications to the existing Sewage Treatment Plant, as defined in Exhibit 4.

5.4 DELETED

5.5 In the event Wareham undertakes major repairs, replacement, or improvements to the common sewage works, or is directed or ordered to provide higher degree of treatment in the future, then, the capital cost, less any State and/or Federal grant(s), related thereto shall be apportioned between the parties on the basis of 82.09%, representing Wareham's share, and 17.91%, representing Bourne's share. Percentages shown are based on the wastewater flows and characteristics presented in Exhibit 4 attached hereto.

5.6 Non-compliance fines levied against Wareham by a regulatory agency shall be apportioned between the parties. The apportionment shall be based on 82.09%, representing Wareham's share, and 17.91, representing Bourne's share. Percentages shown are based on the wastewater flows and characteristics presented in Exhibit 4 attached hereto. If Wareham is found to be grossly negligent in its operation of the common sewage works, the non-compliance fines apportioned to Bourne will be waived.

5.7 Bourne will pay for all costs, both capital and extraordinary operating and maintenance, incurred by Wareham for restoring the Wareham sewage works should damage occur due to sewage and/or septage from Bourne.

5.8 In the event Wareham undertakes an expansion of the common sewage works to address its own needs, then the capital cost, less any State and/or Federal grants(s), related thereto shall be paid by Wareham.

- 5.9 Requests for connections beyond the critical needs areas shall be submitted by Bourne to the Wareham Board. Bourne shall be notified of Wareham's decision within forty-five (45) calendar days. It is understood that Wareham is under no obligation to accept additional wastewater flow beyond the annual average of 200,000 gpd resulting from Bourne's sewerage beyond its critical needs areas. For flows in excess of 200,000 gpd, Bourne acknowledges that Wareham must give priority to its own needs.
- 5.10 In the event Bourne must undertake and request Wareham for an expansion of the common sewage works or request connections beyond the critical needs to which Wareham agrees, as hereinbefore defined as Phases I, II, III, and IV within the Village of Buzzards Bay as shown in Exhibit 1 and within Hideaway Village as shown in Exhibit 2, then the capital cost, less any State and/or Federal grants(s), related thereto shall be paid by Bourne.
- 5.11 In the event that Wareham and Bourne jointly undertake an expansion of the common sewage works then, the capital cost, less any State and/or Federal grant(s), related thereto shall be apportioned between the parties based on wastewater flow and its characteristics.
- 5.12 When any of the capacities allocated to Bourne under Exhibit 4 are equaled or exceeded, Bourne shall impose an immediate ban on all further connections to its system which are tributary to the Wareham sewage works.
- 5.13 DELETED
- 5.14 In the event payment is not received by Wareham from Bourne on the dates referred to herein under Paragraphs 5.2 and 5.3, interest on overdue payments shall be assessed at the current prime rate of the Chase Manhattan Bank plus one percent, per annum, on the unpaid balance from said day, subject to State limitations on maximum interest rates.

ARTICLE 6. PAYMENTS - OPERATION AND MAINTENANCE

6.1 Wareham shall maintain an adequate and separate cost accounting system which shall be the basis for the determination and allocation of costs for the operation, maintenance and repair of the common sewage works. The accounting system shall be available for inspection by Bourne during normal business hours. The operation, maintenance, and repair costs will be grouped into the following three (3) categories:

6.1.1 Costs associated with the sewage treatment plant.

6.1.2 Costs associated with the common pump stations, interceptor sewers, force mains, and collector sewers.

6.1.3 Costs associated with the Wareham sewer collection system not shared by Bourne.

6.2 Bourne agrees to pay to Wareham, quarterly for costs relevant to operation, maintenance, and repair of the common sewage works. Bourne will participate in the following items:

6.2.1 Common Collection Facilities: The term "Common Collection Facilities" shall mean the interceptor sewers, pump stations, force mains, and any other sewers utilized to convey Bourne's wastewater through the common sewage works to the sewage treatment plant. The costs of operating, maintaining and repairing these common collection facilities shall be apportioned on the basis of the actual total quarterly flows through the common collection facilities from each of the communities as defined in Exhibit 5, attached hereto.

6.2.2 Sewage Treatment Plant: The cost of operating, maintaining and repairing the sewage treatment plant shall be understood to be the net cost after subtracting revenues received from the septage haulers.

6.3 In the event that financial assistance from State and/or Federal agencies not otherwise provided for herein becomes available

toward the annual operating costs of the common sewage works, then such assistance shall be used to reduce the total operation, maintenance and repair costs.

- 6.4 The various parameters of flow and strength shall be determined for Bourne on the basis of the records obtained from the metering and sampling equipment referred to in Articles 7 and 8.
- 6.5 BOD and Total Suspended Solids for each of the participants shall be determined from proportional, composite, 24-hour samples obtained from sampling equipment referred to in Paragraph 6.4. Samples shall be collected at intervals of not more than thirty (30) days taken coincidentally at each measuring location on different weekdays to monitor the strength of wastewater from Wareham and Bourne.
- 6.6 User charges may be payable in advance and due on July 1, October 1, January 1 and April 1. Payments shall become overdue after the dates herein provided. Interest on overdue payments shall be assessed at the current prime rate of the Chase Manhattan Bank plus one percent, per annum, on the unpaid balance from said day, subject to State limitations on maximum interest rates.
- 6.7 Wareham shall submit to Bourne its estimated operating and maintenance cost of the common sewage works for the next fiscal year, in writing, by January 30th of each year so that Bourne can budget accordingly. The final appropriation, as approved by the Wareham Town Meeting, shall be submitted to Bourne within thirty (30) days after approval.
- 6.8 Bourne's user charge for any quarter shall be estimated from flow records of the previous quarter and from the budget for that quarter.
- 6.9 Within sixty (60) days of the end of each fiscal year Wareham shall determine the actual operating costs of the common sewage works for the previous fiscal year. In the event that the total amount of the quarterly payments exceeds the annual costs due from Bourne, any excess shall be credited on the subsequent payments. In the event that the total amount of quarterly

payments is less than the actual annual cost, the difference will be payable by Bourne within thirty (30) days of notice from Wareham.

6.10 Operating and maintenance costs for the use of the sewage treatment plant shall be comprised of semi-fixed costs and flow variable costs. Bourne's user charge shall include its share of semi-fixed costs based on total flow capacity allocation and its share of flow variable costs based on actual use according to the formula defined in Exhibit 5, attached hereto. The total flow capacity allocation for Wareham shall be 1.30 mgd or 86.67% of the total flow and Bourne's total flow capacity allocation shall be 0.20 mgd or 13.33% of the total flow.

6.11 For the purpose of this agreement, the various elements or components of the cost of operation, maintenance and repair shall be defined and categorized as to "semi-fixed" or "flow variable" as follows:

6.11.1 Sewer Enterprise Salaries, which are overall administrative salaries and include, but are not limited to, a portion of the Director of Municipal Maintenance, Town Administrator, Purchasing Agent/Business Manager, Town Accountant, Town Treasurer salaries, are semi-fixed costs. These costs shall be considered as an overhead charge and shall equal 11.0 percent of the total operation and maintenance costs of the sewage treatment plant and the common collection facilities.

6.11.2 Common collection facilities salaries and operating, maintenance and repair expenses are flow variable costs. The total of these costs shall also include an overhead charge as defined herein under Paragraph 6.11.1.

6.11.3 Sewage treatment plant salaries, including overtime, are all semi-fixed costs.

6.11.4 Sewage treatment plant expenses such as telephone, building heat, water, supplies, uniforms, and insurance are semi-fixed costs.

- 6.11.5 Sewage treatment plant expenses such as equipment maintenance costs, gas and oil (for vehicles), electricity and chemicals, are flow variable costs.
- 6.12 Any costs that have not been considered under this article but that may arise in the future, will be designated as semi-fixed or flow variable by the Wareham Board. Bourne shall be notified in writing thirty (30) days prior to being charged.
- 6.13 In the event that Bourne's total average daily wastewater flow entering the common sewage works within any two consecutive quarters exceeds 180,000 gpd, then Bourne shall notify Wareham and define measures that will be taken to manage the quarterly flow increase to keep the total within the total flow capacity allocated to Bourne.
- 6.14 Bourne may reasonable inspect and audit Wareham cost records, at its own expense, relevant to the operation and maintenance of the common sewage works.

ARTICLE 7. MEASUREMENT OF FLOW

- 7.1 Wareham and Bourne both agree that measurement of flow shall be as follows:
- 7.1.1 The volume of flow used in computing the operation and maintenance costs shall be based upon readings obtained by metering equipment approved by Wareham. Metering equipment shall consist of a flow measuring device, continuous flow recorder, and flow totalizer. Such metering equipment shall be installed by Bourne, at no cost to Wareham, within their town boundary. The collection of flow meter readings for the purpose of computing and distributing charges shall be the responsibility of Wareham and/or its authorized agent, and all costs related to the collection of the data and the calculation of the charges shall be a part of the operating costs of the sewage treatment plant. Once a month Bourne will provide Wareham with the wastewater

volume for the preceding month, based upon the meter readings. Wareham shall have access to Bourne's metering equipment at all times.

- 7.1.2 Bourne shall provide metering equipment at its own expense to monitor all wastewater flows from Bourne, which cross town lines and enter the common sewage works. The general arrangement, equipment and physical location of the flow meters shall be subject to Wareham's review and approval prior to any construction. The cost of installing and maintaining the metering equipment shall be at Bourne's expense.
- 7.1.3 Bourne shall acquired a maintenance agreement, subject to Wareham's approval, at its own expense for the purpose of checking the accuracy and reliability of the flow metering equipment twice a year and agrees to keep such equipment functional, operational and accurate. Wareham shall be furnished two (2) certified copies of the results of any test on the equipment and the methods employed.
- 7.1.4 Volume of wastewater from Wareham and Bourne shall be obtained as follows:
- (a) Bourne's total wastewater volume shall be determined by directly summing the meter readings conducted at each of its pumping stations delivering flow into Wareham.
 - (b) Wareham's wastewater volume at each of the common pump stations (Cohasset Narrows, Dicks Pond, Depot Street shall be determined indirectly by subtracting Bourne's total wastewater volume from the total volume of wastewater measured at each common pump station.
 - (c) Wareham's wastewater volume at the sewage treatment plant shall be determined indirectly by subtracting Bourne's total wastewater volume from the total volume of wastewater measured at the sewage treatment plant.

7.1.5 In the event the metering equipment is temporarily out of order or service for any reason, the volume of wastewater will be estimated by Wareham on the basis of past experience or available records.

ARTICLE 8. SAMPLING OF WASTEWATER

- 8.1 Both Wareham and Bourne agree that the determination of character and concentration of wastewater will be in accordance with the latest edition of "Standard Methods for the Examination of Water and Sewage" as proposed, approved and published jointly by the American Public Health Association, the American Water Works Association and the Water Pollution Control Federation, unless any other method is mutually agreed upon.
- 8.2 Bourne shall furnish, install, and operate suitable automatic flow proportional (24-hour composite) wastewater samplers as approved by Wareham. A sampler shall be located in each of the pumping stations delivering flow into Wareham.
- 8.3 Wareham shall collect and transport the samples to the Wareham Sewage Treatment Plant. The cost incurred by Wareham in collecting the samples, making the analyses, and calculating and distributing charges shall be a part of the operating costs of the sewage treatment plant.
- 8.4 The sampling and determination of the character and concentration of Bourne's wastewater for the purpose of computing the charges shall be the responsibility of Wareham or its authorized agent. Bourne shall give Wareham full and free access to Bourne's sampling equipment for this purpose. Wareham shall provide a schedule to Bourne detailing said sampling dates. Wareham shall furnish Bourne with copies of all such determinations.
- 8.5 Samples shall be collected by Wareham in such a manner as to be representative of the actual quality of the wastewater. Representative twenty-four (24) hour flow weighted composite samples shall be provided by Bourne at intervals of not more than thirty (30) days. Wareham shall have access to said locations as

required to conduct intermittent or continuous wastewater sampling.

- 8.6 Bourne may, however, conduct its own sampling and analytical program and submit the results relating to the character and concentration of the wastewaters to Wareham. Portions of wastewater samples collected by Bourne as part of a sampling and analytical program shall be made available to Wareham at no cost and in adequate quantities for analysis by Wareham for characteristics and concentrations.
- 8.7 In the event that the sampling equipment is temporarily out of order or service, for any reason, the equipment shall be repaired at Bourne's expense and placed back in operation within a period not to exceed 60 calendar days. Until such time that the permanent equipment is placed back into operation, Bourne shall either substitute portable equipment or manually collect the samples, all at its own cost.
- 8.8 Bourne shall acquire a maintenance agreement, subject to Wareham's approval, at its own expense, for the purpose of checking the accuracy and reliability of the sampling equipment twice a year and agrees to keep such equipment functional, operational and accurate. Wareham shall be furnished two (2) certified copies of the results of any test on the equipment and methods employed.

ARTICLE 9. NOTICE OF CHANGES

- 9.1 Bourne agrees to notify Wareham as far in advance as possible of any anticipated or planned significant increases or decreases in both the quantity and quality of the wastewater to be discharged into the common sewage works. In no case shall Bourne discharge into the common sewage works wastewater exceeding parameters stated in this Agreement without prior written Agreement.

- 9.2 DELETED

ARTICLE 10. PRETREATMENT

10.1 Each town reserves the right at any time to pretreat or improve the quality of the wastewater or to otherwise give preliminary treatment to its wastewater prior to discharge to the common sewage works.

10.2 In accordance with the Wareham Sewer Use Bylaws, Division V, Wareham may require pretreatment of wastes by individual users. Bourne recognizes and agrees to Wareham's authority to require such pretreatment and agrees to apply it's fully authority or acquire the necessary authority by amending its Sewer Use Ordinance to enforce such requirements. The parties agree that the failure of Bourne to do so shall be considered a material breach of this Agreement.

ARTICLE 11. SEPTAGE

11.1 Wareham agrees to accept and treat, at its sewage treatment plant, septage originating from sources within Bourne excluding Otis Air Force Base. All persons operating vacuum or "cesspool" pump trucks desiring to discharge septage to the sewage treatment plant shall first acquire a trucker's discharge permit from Wareham, make payment to Wareham for treatment costs at the rates fixed from time to time by Wareham for such wastes, and shall be subject to the conditions of Wareham's sewer use policy regulating trucker's discharges.

11.1.1 Bourne shall not allow the discharge of sanitary and/or industrial wastes containing heavy metals, cyanide and/or toxicity. All wastes to be discharged must be in accordance with the industrial pretreatment guidelines presently in effect or any, other which may take effect in the future.

11.1.2 Bourne hereby agrees that at no time will it intentionally allow the discharge of any wastewaters which are economically and/or technically more burdensome to treat than those described in this Article 2.

11.2 Wareham shall maintain record for such receive septage and make same available to Bourne.

11.3 Wareham agrees to accept septage from licensed haulers at a minimum rate of 2,500 gallons per business day except as hereinafter provided in Paragraph 11.4.

11.4 Wareham shall have the right to limit the total septage delivered to the sewage treatment plant, allocate capacity for septage handling, or modify or change the allocation as operating conditions require.

11.5 Bourne shall require that all septage haulers discharging septage at the Wareham Sewage Treatment Plant originating from sources within Bourne, excluding sources as hereinbefore stated in Paragraph 11.1, obtain a septage handler's permit from the Bourne Board of Health pursuant to G.L. Chapter 111, Section 31A and 310 CMR 15.02(3). Wareham shall have the authority pursuant to 310 CMR 15.19(5) to approve the septage haulers authorized to dispose of septage at the Wareham Sewage Treatment Plant. Bourne shall adopt septage handler regulations, acceptable to Wareham, pursuant to G.L. Chapter 111, Section 31B.

ARTICLE 12. CONTRACT ADMINISTRATION

12.1 The responsibility for enforcement and administration of this Agreement for the Town of Wareham shall be assigned to the Wareham Town Administrator. All reports, requests for extensions, permit applications, questions, etc. shall be addressed to the Town Administrator or his designee. Any requests by Bourne concerning the need for additional flow capacity in excess of 200,000 gpd shall be addressed to the Wareham Board.

12.2 In the event that a dispute arises regarding the Town Administrator's enforcement of the terms of this Agreement, Bourne may petition the Wareham Board of Selectmen. The petition shall be addressed to the attention of the Wareham Town Administrator, who shall present it to the Wareham Board of Selectmen at its next regularly scheduled meeting. The Wareham and Bourne Boards of Selectmen will attempt to resolve the dispute, however if the matter cannot be resolved, then the

matter shall be resolved as set forth herein under Paragraph 12.3.

12.3 In the event that a controversy or claim exists which arises out of or relates to this Agreement, either party may file a declaratory judgment action in the Superior Court to resolve the dispute.

12.4 No failure or delay in performance shall be deemed to be a breach of this Agreement when such failure or delay is occasioned by or due to any Act of God, strike, lockout, war, riot, epidemic, explosion, sabotage, breakage or accident to machinery or lines or pipe, the binding order of any court or governmental authority, or any other cause whether of the kind herein enumerated or otherwise not within the control of the Party against whom a breach is alleged.

ARTICLE 13. TERMINATION

13.1 For any material breach of this Agreement continued for four (4) months after notice thereof in writing by the other party, either party may terminate this Agreement by giving written notice thereof to the other party with an effective date ninety (90) days after receipt of the notice to terminate.

13.2 The parties have agreed that each of the circumstances set forth in Articles 10.2 and 15.1 shall constitute a material breach of this Agreement. However, the parties acknowledge that no attempt has been made to identify in advance all circumstances constituting a material breach, and each party expressly reserves the right to assert in the future that any other violation of this Agreement may constitute a material breach.

13.3 Upon termination of this Agreement for any material breach caused by Bourne, Bourne shall forfeit its capital contribution as paid in accordance with Article 5.0, and shall be responsible for payment of user charges up to the date that said termination becomes effective.

- 13.4 This Agreement may also be terminated in accordance with the procedures set forth in G.L. Chapter 40, Section 4A. In the event that Bourne is the terminating party, the provisions of Paragraph 13.3 shall apply.

ARTICLE 14. APPROVAL OF EMERGENCY FINANCE BOARD

- 14.1 Before this Agreement becomes effective and binding upon the parties, the terms must be approved by the Commonwealth of Massachusetts Emergency Finance Board pursuant to G.L. Chapter 40, Section 4.

ARTICLE 15. OTHER CONSIDERATIONS

- 15.1 Wareham shall have the right to require Bourne, at Bourne's expense, to take appropriate legal action against any system user to enforce Bourne's Sewer Use Bylaws or to comply otherwise with the terms of the Agreement. However, in the event that Bourne fails to enforce its Sewer Use Bylaws in the manner prescribed in Article 2.3 or fails to require system users in Bourne to comply with this Agreement, Bourne agrees to indemnify Wareham for all costs, including legal fees, which Wareham incurs in requiring users located in Bourne to comply with the terms of this Agreement. The parties agree that the failure of Bourne to enforce its Sewer Use Bylaws or to require system users located in Bourne to comply with the Agreement shall be considered a material breach of this Agreement.
- 15.2 Bourne is to receive advance notice of all meetings of the Wareham Board and Wareham is to receive advance notice of all meetings of the Bourne Board relevant to matters concerning the sewage works.
- 15.3 Bourne will submit to Wareham, for review and approval, the design documents (plans and specifications) for any proposed wastewater facilities to be constructed, which will be used to convey Bourne's wastewater to the common sewage works in Wareham. During the construction phase, Wareham reserves the right to inspect such facilities prior to backfilling.

15.4 Wastewater flows and septage from Massachusetts Maritime Academy and Otis Air Force Base are considered excluded from this Agreement.

15.5 In accordance with this agreement, the Town of Bourne, subject to written approval from DEP Division of Solid Waste, agrees to allow the disposal of up to 200 tons of inorganic grit and screenings from Wareham at the Bourne sanitary landfill site. There shall be no charge to Wareham for this disposal. Wareham shall be responsible, at its cost, for trucking the material to the Bourne landfill.



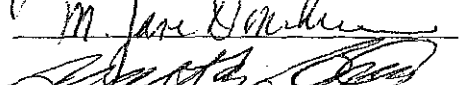
15.6 DELETED

15.7 DELETED

15.8 This Agreement may be amended from time to time with the written consent of both participating parties.

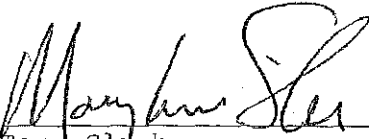
IN WITNESS WHEREOF, the TOWN OF WAREHAM, acting through it's BOARD OF SELECTMEN, and the TOWN OF BOURNE, acting through its BOARD OF SELECTMEN, has each caused this Agreement, and three others of like nature, to be executed, after authorization by their respective Town Meetings, and said Towns have caused their respective seals to be hereto fixed by their respective Town Clerks, and this Agreement shall be construed as an Agreement under seal.

FOR THE TOWN OF
WAREHAM
MASSACHUSETTS
BOARD OF SELECTMEN




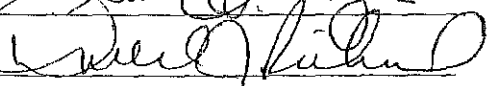

Brenda Elstrom

M. Jane Donahue

John P. Curran

February 23, 2010
DATE

A TRUE COPY ATTEST:



Mary Ann Sles
Town Clerk
Town of Wareham

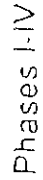
FOR THE TOWN OF
BOURNE
MASSACHUSETTS
BOARD OF SELECTMEN


John A. Fodor

James J. Stonecker

Mary M. Phipps

Linda D. Phipps

January 19, 2010
DATE

A TRUE COPY ATTEST:


Ray E. Stonecker
Town Clerk
Town of Bourne



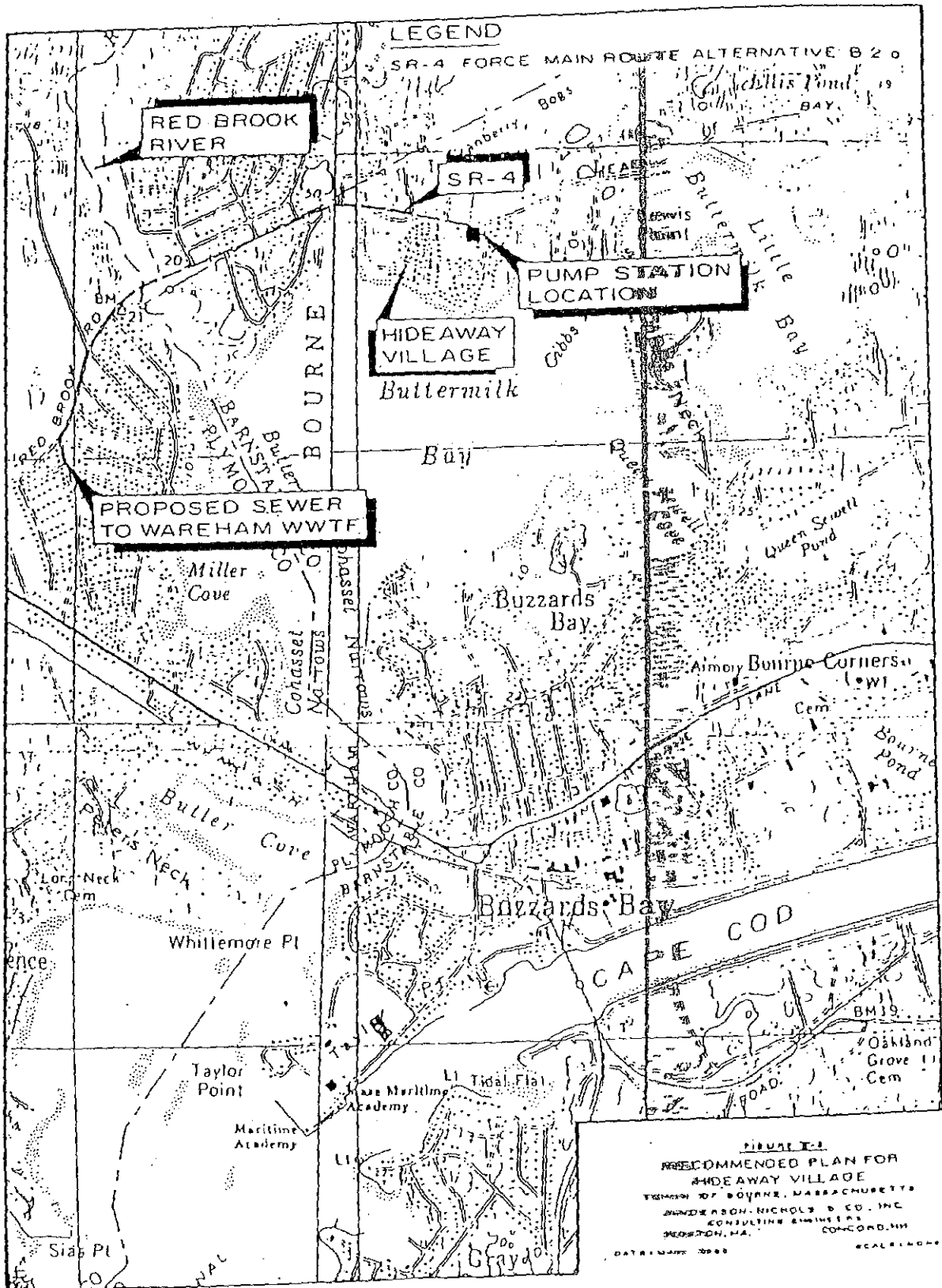


EXHIBIT 2

EXHIBIT 3

Office of the

TOWN CLERK and TREASURER
WAREHAM, MASS.



Jay K. Montague
TOWN CLERK AND TREASURER

October 22, 1987

To Whom It May Concern:

I hereby certify the following vote of the
Town of Wareham Fall Town Meeting held on October
19, 20, and 21, 1987:

Article 41: Voted that the Town authorize
the Board of Selectmen, acting as the Board of
Sewer Commissioners, to enter into an Intermunicipal
Agreement with the Town of Bourne, pursuant to M.G.L.
c.60, s.4 and 4A, with respect to the use by the Town
of Bourne of a portion of the Town of Wareham's
Wastewater Pollution Control Facility, and further that a
public hearing be held and advertised in a local
newspaper; that the whole agreement be advertised in
2020, before the actual signing of the agreement.

(Majority)



Jay K. Montague
Town Clerk



EXHIBIT 3
TOWN OF BOURNE

Town Clerk and Treasurer

Lucia Fulco

The following is a copy of the final vote taken under Article 9:

At a legal meeting of the qualified voters of the Town of Bourne held September 19, 1988, the following business was transacted under Article 9:

ARTICLE 9: To see if the Town will vote to raise and appropriate, borrow or transfer from available funds a sum of money in addition to sums previously appropriated for the same purpose for the purpose of constructing a sewerage system or systems for portions of the Village of Buzzards Bay, for payments to the Town of Wareham for the cost of tie-in of this system to Wareham's existing wastewater treatment facilities, and for costs incidental and related to the project, or take any other action relative thereto.

NOTION: We move that the sum of \$5,208,500.00 is hereby appropriated in addition to sums previously appropriated for the same purpose for constructing a sewerage system for the Buzzards Bay area, for a lump sum payment to the Town of Wareham of the cost of a tie-in of this system to Wareham's sewerage treatment facilities and for costs incidental and related thereto; that to raise this appropriation the Treasurer with the approval of the Selectmen is authorized to borrow the sum of \$5,208,500.00 under and pursuant to Chapter 44, Section 6(15), of the General Laws, or any other enabling authority, and to issue bonds or notes therefor; that the Selectmen are hereby authorized to enter into such agreements with the Town of Wareham as may be appropriate in connection with the project, and that the Selectmen are further authorized to apply for, accept and expend any Federal, State or other grants that may be available for the foregoing purposes, provided that the amount of any bonds or notes issued hereunder shall be reduced by the amount of any such grants that are received prior to the sale of such bonds or notes.

VOTED. Approved by two-thirds vote. 516 Ayes, 11 Nays.

A true copy,
Attest:

Lucia Fulco, Clerk

24 Perry Avenue

Buzzards Bay, Massachusetts 02532

EXHIBIT 4**WAREHAM, REGIONAL
WATER POLLUTION CONTROL FACILITY**

	Treatment Facility <u>Capacity</u>	Capacity Allocated <u>To Bourne</u>
<u>Flow (Million gal/day)</u>		
Average Wastewater	1.50	0.20
Peak hourly wastewater	4.00	0.62
<u>Biochemical Oxygen Demand (Lbs/day)</u>		
Average wastewater (@250 mg/l)	3,128	417
Average septage (@3000 mg/l)	876	375
Total Average	4,004	792
<u>Suspended Solids (Lbs/day)</u>		
Average wastewater (@ 250 mg/l)	3,128	417
Average septage (@ 10,000 mg/l)	2,919	1,250
Total Average	6,047	1,667

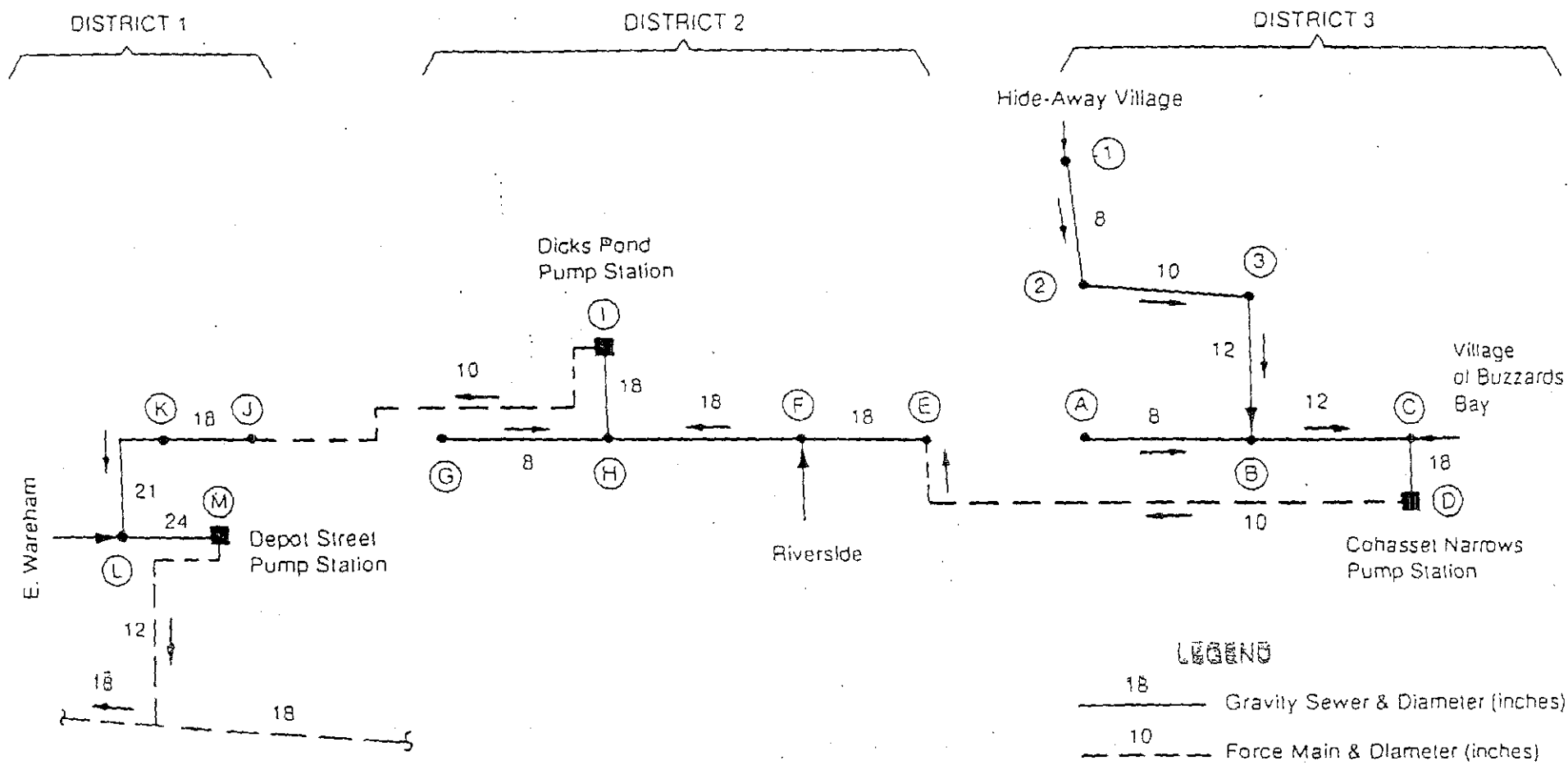


FIGURE 1. SCHEMATIC OF CRANBERRY HIGHWAY SEWER PROJECT

EXHIBIT 5
COMPUTATION OF PROPORTIONATE SHARE
FOR
TOTAL OPERATION, MAINTENANCE, AND REPAIR COST
FOR
COMMON COLLECTION SYSTEM FACILITIES

Q1 = Cohasset Narrows Pump Station Flow

Q2 = Dicks Pond Pump Station Flow

Q3 = Depot Street Pump Station Flow

QBT = Total Bourne Flow = Monitoring Station 1 – Monitoring Station 2

E1 = Electrical Cost for Cohasset Narrows Pump Station

E2 = Electrical Cost for Dicks Pond Pump Station

E3 = Electrical Cost for Depot Street Pump Station

ET = E1 + E2 + E3 = Total Electrical Cost for Common Pump Stations

OMNE = Total operation, maintenance, repair, and administrative cost for the common collection system facilities excluding total electrical cost for common pump stations.

TOM = Total operation, maintenance, repair, and administrative cost for the common collection system facilities.

Electrical Cost – Proportionate Shares:

Electrical Bourne Share =

$$E1 \left(\frac{Q_{BT}}{Q_1} \right) + E2 \left(\frac{Q_{BT}}{Q_2} \right) + E3 \left(\frac{Q_{BT}}{Q_3} \right)$$

Electrical Wareham Share =

$$E1 \left(\frac{Q_1 - Q_{BT}}{Q_1} \right) + E2 \left(\frac{Q_2 - Q_{BT}}{Q_2} \right) + E3 \left(\frac{Q_3 - Q_{BT}}{Q_3} \right)$$

EXHIBIT 5 (Continued)

Operation, Maintenance, and Repair Cost for Common Collection System Facilities
Excluding Total Electrical Cost – Proportionate Shares:

$$\text{OMNE Bourne Share} = \frac{\text{Electrical Bourne Share}}{\text{ET}} \times \text{OMNE}$$

$$\text{OMNE Wareham Share} = \frac{\text{Electrical Wareham Share}}{\text{ET}} \times \text{OMNE}$$

Total Operation, Maintenance, and Repair Cost for Common Collection System
Facilities – Proportionate Shares:

$$\text{TOM Bourne Share} = \text{Electrical Bourne Share} + \text{OMNE Bourne Share}$$

$$\text{TOM Wareham Share} = \text{Electrical Wareham Share} + \text{OMNE Wareham Share}$$

SAMPLE CALCULATION

Assume the following:

$$Q1 = 0.415 \text{ MGD} \quad E1 = \$8,000/\text{yr}$$

$$Q2 = 0.629 \text{ MGD} \quad E2 = \$7,500/\text{yr}$$

$$Q3 = 0.798 \text{ MGD} \quad E3 = \$13,000/\text{yr}$$

$$QBT = 0.181 \text{ MGD} \quad ET = \$28,500/\text{yr}$$

$$\text{O\&M Cost Subtotal} = \$120,000/\text{yr}$$

$$\text{Administrative Cost} = \$13,200/\text{yr}$$

@ 11%

$$\text{TOM} = \$133,200/\text{yr}$$

$$\text{OMNE} = \$133,200/\text{yr} - \$28,500/\text{yr} = \$104,700/\text{yr}$$

EXHIBIT 5 (Continued)

Electrical Cost - Proportionate Shares:

Electrical Bourne Share =

$$\begin{aligned} & \$ 8,000 \left(\frac{0.181 \text{ MGD}}{0.415 \text{ MGD}} \right) + \$ 7,500 \left(\frac{0.181 \text{ MGD}}{0.629 \text{ MGD}} \right) \\ & + \$ 13,000 \left(\frac{0.181 \text{ MGD}}{0.798 \text{ MGD}} \right) \end{aligned}$$

$$\$ 3,489 + \$ 2,158 + \$ 2,949 = \$ 8,596$$

Electrical Wareham Share =

$$\begin{aligned} & \$ 8,000 \left(\frac{0.415 \text{ MGD} - 0.181 \text{ MGD}}{0.415 \text{ MGD}} \right) + \$ 7,500 \left(\frac{0.629 \text{ MGD} - 0.181 \text{ MGD}}{0.629 \text{ MGD}} \right) \\ & + \$ 13,000 \left(\frac{0.798 \text{ MGD} - 0.181 \text{ MGD}}{0.798 \text{ MGD}} \right) \end{aligned}$$

$$\$ 4,511 + \$ 5,342 + \$ 10,051 = \$ 19,904$$

Operation, Maintenance and Repair Cost for Common Collection Systems Facilities
Excluding Total Electrical Cost-Proportionate Shares:

$$\text{OMNE Bourne Share} = \left(\frac{\$ 8,596}{\$ 28,500} \right) \times \$ 104,700 = \$ \underline{31,579}$$

$$\text{OMNE Wareham Share} = \left(\frac{\$ 19,904}{28,500} \right) \times \$ 104,700 = \$ \underline{73,121}$$

Total Operation, Maintenance and Repair Cost for Common Collection Systems
Facilities - Proportionate Shares:

TOM Bourne Share = Electrical Bourne Share + OMNE Bourne Share

$$\$ 8,596 + \$ 31,579 = \$ \underline{40,175}$$

TOM Wareham Share = Electrical Wareham Share + OMNE Wareham Share

$$\$ 19,904 + \$ 73,121 = \$ \underline{93,025}$$

EXHIBIT 6
 Computations of Proportionate Share
 For
 Total Operations, Maintenance, and Repair Cost
 For
 Sewage Treatment Plant

1. Each community shall pay a share of semi-fixed sewage treatment plant operating costs and overall administrative costs based on its total dedicated allocation compared to the total dedicated allocation of the plant for all users. The following formula applies:

$$\text{Bourne User Cost} = 0.1333 \times \text{Total Semi-Fixed Costs} \\ (\text{Semi-Fixed Costs})$$

$$\text{Wareham User Cost} = 0.8667 \times \text{Total Semi-Fixed Costs} \\ (\text{Semi-Fixed Costs})$$

2. Each community shall pay a share of flow variable sewage treatment plant operation costs based on its share of total actual use compared to the total actual use of all users. The following formula applies:

$$\text{Bourne User Cost} = \frac{\text{Bourne Actual Use}}{\text{Total Actual Use}} \times \text{Flow Variable Costs} \\ (\text{Flow Variable Cost})$$

$$\text{Wareham User Cost} = \frac{\text{Wareham Actual Use}}{\text{Total Actual Use}} \times \text{Flow Variable Costs} \\ (\text{Flow Variable Cost})$$

3. Each community shall pay its share of the total operation, maintenance and repair costs for the sewage treatment plant based on the following formula:

$$\text{Bourne Total User Cost} = \text{Bourne Semi-Fixed} + \text{Bourne Flow Variable}$$

$$\text{Wareham Total User Cost} = \text{Wareham Semi-Fixed} + \text{Wareham Flow Variable}$$

4. The communities hereto agree that the proportionate shares for the operation, maintenance, and repair costs for the sewage treatment plant are based on wastewater flows and do not consider, at this time, the strength of the wastewater. However, it shall be agreed by Bourne, That if its wastewater strength in BOD and TSS exceeds its allocated portion shown in Exhibit 4 by more than 10% in any annual average, the formulas shown above in items 1,2, & 3 shall be revised as mutually agreed to account for both wastewater flow and wastewater strength in BOD and TSS.

EXHIBIT 6 (Continued)
Sample Calculation

Assume the following:

Bourne Actual Flow	=	0.176 MGD
Wareham Actual Flow	=	1.266 MGD
Total Actual Plant Flow	=	1.442 MGD

Revenues from Septage	=	\$100,000
Reimbursement for Chemicals	=	\$ 19,350

Operating and Maintenance Cost for Plant = \$ 432,000 as
Broken down in the following table:

<u>Cost Type</u>	<u>Item Description</u>	<u>Cost</u>
Semi-Fixed	Labor	\$206,000
Semi-Fixed	Utilities (Heating Fuel, Water, Telephone)	12,600
Flow-Variable	Electricity	\$122,000
Semi-Fixed	Materials and Supplies	\$ 17,000
Flow-Variable	Chemicals	\$ 38,000
Flow-Variable	Repair and Maintenance And Vehicle Fuel	\$ 33,200
Semi-Fixed	Miscellaneous (Includes Telemetry and Alarms Contracted Services, Advertising, And Medical Services)	\$ 2,500
<hr/>		<hr/>
	O&M Cost Subtotal	\$ 432,000
Semi-Fixed	Administrative Cost @ 11%	<u>47,520</u>
	Total O&M Cost	\$ 479,520
	Revenues from Septage	<\$100,000>
	Reimbursement – Chemicals	<u><\$ 19,350></u>
	Net O&M Cost	\$ 360, 170
Total Semi-Fixed Costs	=	\$285,620
Total Flow-Variable Costs	=	\$193,900
Net Semi-Fixed Costs =		
$285,620 - \left(\frac{\$285,620}{\$479,520} \times \$100,000 \right) = \underline{\$ 226,056}$		
Net Flow-Variable Costs =		
$193,900 - \$19,350 - \left(\frac{\$193,900}{\$479,520} \times \$100,000 \right) = \underline{\$ 134,114}$		

EXHIBIT 6 (Continued)

Semi-Fixed Cost Shares:

$$\text{Bourne User Cost} = 0.1333 \times \$226,056 = \underline{\$ 30,133}$$

$$\text{Wareham User Cost} = 0.8667 \times \$226,056 = \underline{\$ 195,923}$$

Flow-Variable Cost Shares:

$$\text{Bourne User Cost} = \left(\frac{0.176 \text{ MGD}}{1.442 \text{ MGD}} \right) \times \$134,114 = \underline{\$ 16,369}$$

$$\text{Wareham User Cost} = \left(\frac{1.266 \text{ MGD}}{1.442 \text{ MGD}} \right) \times \$134,114 = \underline{\$ 117,745}$$

Total Cost Shares:

$$\text{Bourne Total User Cost} = \$ 30,133 + \$ 16,369 = \underline{\$ 46,502}$$

$$\text{Wareham Total User Cost} = \$ 195,923 + \$ 117,745 = \underline{\$ 313,668}$$

Bourne/Wareham IMA Billing Worksheet

Instructions for preparing the Fiscal Year (FY) Billings

General

- 1 Only cells that are highlighted in yellow should have information entered into. All other cells have been **locked** to prohibit any changes to necessary formulas.
- 2 If any locked information needs to be edited, the sheets must be unlocked. To unlock any of the sheets, first click on the sheet tab to be unlocked, then go to "Tools—Protection—Unprotect Sheet" on the top toolbar and enter password. This will have to be done to each sheet that needs editing to locked cells.
- 3 It is recommended that after unlocking a spreadsheet tab and making any changes, the spreadsheet be re-locked to prohibit any changes to necessary formulas. To re-lock the spreadsheet, first click on the sheet tab to be locked, then go to "Tools—Protection—Protect Sheet" on the top toolbar and enter the password. Again this will have to be done to each sheet that was unlocked and edited.

WPCF Budget Tab

- 1 Enter the fiscal year for the billings in the top left cell C4.
- 2 Enter whether the billings are the "Actual" or "Estimated" for this worksheet iteration in cell E6.
- 3 Enter budget information into the appropriate cells in column E. This sheet has been formatted to match previous Wareham WPCF Budget form. If no like items have been removed or added, data can be copied from the WPCF budget form directly into this sheet.

Cost Allocations Tab

- 1 Enter any revenues from septage as a **negative number** or as zero in cell G159.
- 2 Enter any reimbursements from chemicals as a **negative number** or as zero in cell G161.

Flow Calculations Tab

(for Actual Billings)

- 1 Enter **actual** monthly flows (gallons per month) for the total Wareham Share and Bourne Share of the flows to the WPCF in cells E11:F22.
- 2 Enter **actual** monthly flows (gallons per month) for each of the Wareham and Bourne PS's in cells C35:H46.
- 3 Enter **actual** amount of septage received (gallons per month) at the WPCF from Wareham, Bourne and other communities in cells D57:F68.

(for Estimated Billings)

- 1 Enter **estimated** yearly flow (gallons) for the total Wareham Share and Bourne Share of the flows to the WPCF in cells E11 and F11 respectively.
- 2 Enter **estimated** yearly flows (gallons) for each of the Wareham and Bourne PS's in cells C35 to H35 respectively.
- 3 Enter the **estimated** amount of septage received (gallons) at the WPCF from Wareham, Bourne and other communities in cells D57 to F57 respectively.

OM & Repair for Collection System Tab

- 1 Enter monthly electrical cost for the Wareham and Bourne PS's associated with the IMA. NOTE: if monthly electrical cost are not available, leave cells blank and spreadsheet will use total IMA Electrical Costs from budget value entered in "Cost Allocations" sheet divided by the total number of PS's with shared inter-municipal flow (four PS's).

OM & Repair for WPCF Tab

- 1 This spreadsheet tab automatically calculates. No need to enter any information on this sheet.
- 2 If the semi-fixed cost share percent should change in future IMA agreements, these values may be changed accordingly.

Bourne Memo Invoice Tab (Common for Both)

Please note that these tabs were only provided for use in creating billing memos and are not necessary for calculations. All values required for billing are provided on both the "OM & Repair for Collection System" tab and the "OM & Repair for the WPCF" tab. The user may choose to use these values in the billing format used prior to the creation of this spreadsheet if the Invoice Tabs in this spreadsheet are not sufficient for the user.

- 1 Enter appropriate items in the "TO:", "FROM:" and "DATE:" cells.
- 2 Enter any future changes to the amount of agreed upon credit Bourne receives for septage in cell C43.

(for Estimated Billings)

- 3 Insert current quarter (as **Text**) that the estimated billing period is for in cell G19 (i.e. enter either 'First' for first quarter, 'Second' for second quarter, 'Third' for third quarter, or 'Fourth' for fourth quarter)
- 4 The Quarterly Billings will be calculated automatically ("Total Estimated Amount Due" divided by 4) in cells H49.

(for Estimated Billings in Second Quarter only)

- 5 Insert amount owed (as positive) or any credits (as negative) for the Town of Bourne based upon the previous FY actual billing calculations in cell H51.
- 6 The Second Quarter Billing will be calculated automatically ("Total Estimated Amount Due" divided by 4, minus/plus any money owned/credits) in cells H53.

(for Actual Billings)

- 3 Insert the Total Amount Paid from the FY Total Estimated Billings in cell H49.
- 4 "Actual Amount Due" in cell H51 will be calculated automatically by subtracting the "Total Paid from Estimated Billing" cell from the "Total Amount Due" cell. A negative number in this cell will denote a credit due the Town of Bourne.

060-2405-631-21-11	Electricity
060-2405-631-21-19	Elect. IMA Pump Stations
060-2405-631-21-20	Elect. Non-IMA Stations
060-2405-631-21-21	Elect. Dewatering Plant
060-2405-631-21-22	Pro. Gas Dewatering Plant
060-2405-631-21-25	Natural Gas - IMA
060-2405-631-21-26	Pro. Gas Main Plant
060-2405-631-21-27	Pro. Gas Non IMA
060-2405-631-21-28	Natural-Gas-Non-IMA
060-2405-631-21-41	Natural Gas - MP
060-2405-631-21-42	Natural Gas - Dewater
060-2405-631-23-01	Water
060-2405-631-23-06	Water-IMA Pump Station
060-2405-631-23-07	Water-Non IMA Pump Sta.
060-2405-631-23-08	Water-Dewatering Plant
060-2405-631-24-02	Vehicles
060-2405-631-24-10	Office Equipment
060-2405-631-24-11	Buildings
060-2405-631-24-12	IMA Pump Station
060-2405-631-24-13	Non IMA Pump Station
060-2405-631-24-14	Building Dewatering
060-2405-631-24-15	Equipment
060-2405-631-24-16	Equip. IMA Pump Station
060-2405-631-24-17	Equip. Non-IMA Pump Sta.
060-2405-631-24-18	Equip. Dewatering
060-2405-631-27-06	Equip. Rental Dewatering
060-2405-631-27-07	Equip. Rental Main Plant
060-2405-631-28-01	Main Plant
060-2405-631-28-06	Dewatering Plant
060-2405-631-30-03	Other Professional
060-2405-631-30-04	Contract Services Admin.
060-2405-631-30-08	Contracted Serv. Dewater.
060-2405-631-30-09	NPDES Testing
060-2405-631-30-10	NPDES Testing Dewatering
060-2405-631-32-01	Reimbursement
060-2405-631-32-02	Tuition Other
060-2405-631-34-01	Telephone

[illegible]

[illegible][illegible]

Bourne/Wareham IMA Cost Allocations

Water Pollution Control Facility

Fiscal Year 0

	FY 0 0	WPCF Cost		PS Cost
		Semi-Fixed	Flow Variable	Flow Variable
060-2405-631-11-01 Regular	\$0	\$0		
060-2405-631-11-04 Overtime	\$0	\$0		
060-2405-631-11-07 Longevity	\$0	\$0		
060-2405-631-11-24 Regular Pay Dewatering	\$0	\$0		
060-2405-631-11-25 Overtime Dewatering	\$0	\$0		
060-2405-631-11-27 On-Call Wages	\$0	\$0		
TOTAL SALARIES	\$0	\$0		
Fringes & Benefits (40% of total wages)		\$0		
Grand Total Labor		\$0		
LABOR FOR COMMON FACILITIES (80% of Grand Total Labor)		\$0		
060-2405-631-21-11 Electricity	\$0		\$0	
060-2405-631-21-19 Elect. IMA Pump Stations	\$0			\$0
060-2405-631-21-20 Elect. Non-IMA Stations				
060-2405-631-21-21 Elect. Dewatering Plant	\$0		\$0	
060-2405-631-21-22 Pro. Gas Dewatering Plant	\$0	\$0		
060-2405-631-21-25 Natural Gas - IMA	\$0			\$0
060-2405-631-21-26 Pro. Gas Main Plant	\$0	\$0		
060-2405-631-21-27 Pro. Gas Non-IMA				
060-2405-631-21-28 Natural Gas Non-IMA				
060-2405-631-21-41 Natural Gas - MP	\$0	\$0		
060-2405-631-21-42 Natural Gas - Dewater	\$0	\$0		
060-2405-631-23-01 Water	\$0	\$0		
060-2405-631-23-06 Water-IMA Pump Station	\$0			\$0
060-2405-631-23-07 Water-Non-IMA Pump Sta.				
060-2405-631-23-08 Water-Dewatering Plant	\$0	\$0		
060-2405-631-24-02 Vehicles	\$0		\$0	
060-2405-631-24-10 Office Equipment	\$0	\$0		
060-2405-631-24-11 Buildings	\$0		\$0	
060-2405-631-24-12 IMA Pump Station	\$0			\$0
060-2405-631-24-13 Non-IMA Pump Station				
060-2405-631-24-14 Building Dewatering	\$0		\$0	
060-2405-631-24-15 Equipment	\$0		\$0	
060-2405-631-24-16 Equip. IMA Pump Station	\$0			\$0
060-2405-631-24-17 Equip. Non-IMA Pump Sta.				
060-2405-631-24-18 Equip. Dewatering	\$0		\$0	
060-2405-631-27-06 Equip. Rental Dewatering	\$0		\$0	
060-2405-631-27-07 Equip. Rental Main Plant	\$0		\$0	
060-2405-631-28-01 Main Plant	\$0	\$0		
060-2405-631-28-06 Dewatering Plant	\$0	\$0		
060-2405-631-30-03 Other Professional				
060-2405-631-30-04 Contract Services Admin.	\$0	\$0		
060-2405-631-30-08 Contracted Serv. Dewater.	\$0	\$0		
060-2405-631-30-09 NPDES Testing	\$0	\$0		
060-2405-631-30-10 NPDES Testing Dewatering	\$0	\$0		
060-2405-631-32-04 Reimbursement				
060-2405-631-32-02 Tuition Other	\$0	\$0		
060-2405-631-34-01 Telephone	\$0	\$0		
060-2405-631-34-02 Printing & Mailing	\$0	\$0		
060-2405-631-34-03 Postage	\$0	\$0		
060-2405-631-34-04 Advertising	\$0	\$0		
060-2405-631-34-06 Advertising Dewatering	\$0	\$0		
060-2405-631-34-07 Postage Dewatering	\$0	\$0		
060-2405-631-34-08 Telemetry & Alarms	\$0	\$0		

Bourne/Wareham IMA Cost Allocations

Water Pollution Control Facility

Fiscal Year 0

	FY 0 0	WPCF Cost		PS Cost
		Semi-Fixed	Flow Variable	Flow Variable
060-2405-631-34-09 Telemetry IMA Pump Station	\$0			\$0
060-2405-631-34-10 Non-IMA Stations				
060-2405-631-34-13 Cellular	\$0	\$0		
060-2405-631-38-01 Other Purchased Services	\$0	\$0		
060-2405-631-38-03 Medical Services	\$0	\$0		
060-2405-631-38-04 Medical Serv. Dewatering	\$0	\$0		
060-2405-631-38-05 Administrative Expense				
060-2405-631-38-15 Sludge Disposal	\$0		\$0	
060-2405-631-38-16 Grit and Screenings	\$0	\$0		
060-2405-631-42-01 All Office Supplies	\$0	\$0		
060-2405-631-42-02 Dewatering	\$0	\$0		
060-2405-631-42-03 Pre-Printed Forms	\$0	\$0		
060-2405-631-42-04 Pre-Printed Forms Dewater	\$0	\$0		
060-2405-631-42-05 Copy Machine-MP	\$0	\$0		
060-2405-631-42-06 Copy Machine-Dewater	\$0	\$0		
060-2405-631-46-07 Gasoline	\$0		\$0	
060-2405-631-46-08 Gasoline Dewatering	\$0		\$0	
060-2405-631-46-09 Diesel IMA	\$0			\$0
060-2405-631-46-10 Diesel Non-IMA				
060-2405-631-46-11 Diesel	\$0		\$0	
060-2405-631-46-12 Diesel Dewatering	\$0		\$0	
060-2405-631-47-01 Chemicals	\$0		\$0	
060-2405-631-47-02 Chemicals Dewatering	\$0		\$0	
060-2405-631-47-04 Reimbursement Protec.Itm	\$0	\$0		
060-2405-631-47-05 Operating Supplies	\$0	\$0		
060-2405-631-47-06 Operating Supp.Dewater	\$0	\$0		
060-2405-631-47-07 Laboratory Supplies	\$0	\$0		
060-2405-631-47-08 Laboratory Supp. Dewater	\$0	\$0		
060-2405-631-47-09 Protective Clothing	\$0	\$0		
060-2405-631-47-10 Protec. Cloth. Dewatering	\$0	\$0		
060-2405-631-47-11 Chemicals-IMA	\$0			\$0
060-2405-631-47-12 Chemicals-Non-IMA				
060-2405-631-47-13 Operating Supplies-IMA	\$0			\$0
060-2405-631-47-14 Operat-Supplies-Non-IMA				
060-2405-631-58-09 Books & Subscriptions	\$0	\$0		
060-2405-631-61-01 Travel/Conferences	\$0	\$0		
060-2405-631-61-02 Conferences-DELETED FY09				
060-2405-631-65-01 Dues	\$0	\$0		
060-2405-631-65-02 Dues/Prof. Organ Dewater.	\$0	\$0		
060-2405-631-85-07 WPCF Equipment	\$0	\$0		
060-2405-631-85-08 Data Processing	\$0	\$0		
060-2405-631-85-09 Spare Parts	\$0	\$0		
060-2405-631-85-10 Spare Parts Dewatering	\$0	\$0		
060-2405-631-85-11 Lease / Purchase	\$0	\$0		
060-2405-631-85-12 Equipment Replacement	\$0	\$0		
060-2405-631-85-13 Equip Replace. Dewatering	\$0	\$0		
060-2405-631-85-14 Equip. Replacement IMA	\$0			\$0
060-2405-631-85-15 Equip-Replace-Non-IMA				
060-2405-631-85-17 Equipment Dewatering	\$0	\$0		
060-2405-631-85-18 Equipment New-IMA	\$0			\$0
060-2405-631-85-19 Equipment-New-Non-IMA				
060-2405-631-85-20 Equip. Spare Parts-IMA	\$0			\$0
060-2405-631-85-22 Equip-Spare Parts-Non-IMA				
060-2405-631-86-00 Reserve Account	\$0	\$0		
060-2405-631-89-01 WPCF Capital Additions	\$0	\$0		
060-2405-631-91-01 Principle on Debt				
060-2405-631-92-01 Long-Term Interest				

Bourne/Wareham IMA Cost Allocations

Water Pollution Control Facility

Fiscal Year 0

	FY 0 0	WPCF Cost		PS Cost
		Semi-Fixed	Flow Variable	Flow Variable
-060-2405-631-92-02 Short-Term-Interest				
TOTAL EXPENSES	\$0	\$0	\$0	\$0
-060-2405-631-93-23 capital-outlay-ftm03-art4				
-060-2405-631-93-24 capital-outlay-ftm-art3				
-060-2405-631-93-25 pumping-station-des/const				
-060-2405-631-93-26 Infiltration/inflow-study				
-060-2405-631-93-27 Flow-Meters				
-060-2405-631-93-28 capital-outlay-stm-10/00				
-060-2405-631-93-29 Sewer-88-1-4-2-6				
-060-2405-631-93-30 Sewer-88-5				
-060-2405-631-93-31 Sewer-Feas. MWPAT-95-31				
-060-2405-631-93-32 O.H. Riverside-construct.				
-060-2405-631-93-33 Rep.Pump-Stat.at31-atm4/3				
-060-2405-631-93-34 Rose-Pl-design-10-10/03				
-060-2405-631-93-60 Remove-Storage-Tanks				
-060-2405-631-93-65 Sewer-Capital-Projects				
-060-2405-631-93-68 design-engineer-(272,000)				
-060-2405-631-93-69 Construction-Webanit-Shr				
-060-2405-631-93-72 upgrade-facil-Art-16-stm				
-060-2405-631-93-75 upgrade-facility-construct				
-060-2405-631-93-76 Rose-pl/Bria-beh/Bver-dam				
-060-2405-631-93-77 Design-Webanit-Sh-4/27/92				
-060-2405-631-93-78 Design-Sunset-Is-4/27/92				
-060-2405-631-93-80 art24-4/87-Generators				
-060-2405-631-93-83 River-Testing-Program				
-060-2405-631-93-84 Inflow-&-Infiltration-sty				
-060-2405-631-93-86 paving-&-Var.-Frqu-Pumps				
-060-2405-631-93-88 Thatcher-Lane/Cranberry-h				
-060-2405-631-93-89 Construct-Sunset-Island-				
-060-2405-631-93-92 Bobcat-/Flowmeter				
SPECIAL ARTICLES TOTAL	\$0			
TOTAL	\$0	\$0	\$0	\$0
O&M Cost Subtotal		\$0		\$0
Administrative Salaries (11% of WPCF O&M Subtotal)		\$0		
Revenues from Septage				
Reimbursement- Chemicals				
Net Total O&M Cost (Semi-fixed & Flow Variable)		\$0.00		

Common Collection System Flows

Fiscal Year 0

Water Pollution Control Facility

0.00 Wastewater Flow

(based on previous FY total)

(NOTE: for estimated flows just enter est. yearly total flow in July cell)

Month	Year	Total WPCF	Wareham Share	Bourne Share	
July	-1	0			gallons per month
August	-1	0			gallons per month
September	-1	0			gallons per month
October	-1	0			gallons per month
November	-1	0			gallons per month
December	-1	0			gallons per month
January	0	0			gallons per month
February	0	0			gallons per month
March	0	0			gallons per month
April	0	0			gallons per month
May	0	0			gallons per month
June	0	0			gallons per month
Total		0	0	0	gallons per month

Wastewater Pump Stations

0.00 Wastewater Pump Station Flows

(based on previous FY total)

(NOTE: for estimated flows just enter est. yearly total flow in July cell)

Month	Year	Wareham Pump Stations				Bourne Pump Stations		
		Cohasset Narrows PS	Dick's Pond PS	Depot Street PS	Hynes Field PS	Main Street PS	Hideaway Village PS	
July	-1							gallons per month
August	-1							gallons per month
September	-1							gallons per month
October	-1							gallons per month
November	-1							gallons per month
December	-1							gallons per month
January	0							gallons per month
February	0							gallons per month
March	0							gallons per month
April	0							gallons per month
May	0							gallons per month
June	0							gallons per month
Total		0	0	0	0	0	0	0 gallons per year

Septage Received at WPCF

0.00 Septage Received at WPCF

(based on previous FY total)

(NOTE: for estimated septage just enter est. yearly total septage received in July cell)

Month	Year	Total Septage at WPCF	Septage from Wareham	Septage from Bourne	Septage from Other Towns	
July	-1	0				gallons per month
August	-1	0				gallons per month
September	-1	0				gallons per month
October	-1	0				gallons per month
November	-1	0				gallons per month
December	-1	0				gallons per month
January	0	0				gallons per month
February	0	0				gallons per month
March	0	0				gallons per month
April	0	0				gallons per month
May	0	0				gallons per month
June	0	0				gallons per month
Total		0	0	0	0	0 gallons per month

Fiscal Year 0

Q ₁	=	Cohasset Narrows Pump Station Flow	=	0	gallons per year
Q ₂	=	Dicks Pond Pump Station Flow	=	0	gallons per year
Q ₃	=	Depot Street Pump Station Flow	=	0	gallons per year
Q ₄	=	Hynes Field Pump Station Flow	=	0	gallons per year
Q _{ST}	=	Total Bourne Flow (Monitoring Station 1 + Monitoring Station 2)	=	0	gallons per year
E1	=	Electrical Cost for Cohasset Narrows Pump Station	=	\$0	per year
E2	=	Electrical Cost for Dicks Pond Pump Station	=	\$0	per year
E3	=	Electrical Cost for Depot Street Pump Station	=	\$0	per year
E4	=	Electrical Cost for Hynes Field Pump Station	=	\$0	per year
E1	=	E1+E2+E3+E4 = Total Elec. Cost for Common Pump Stations	=	\$0.00	per year

060-2405-631-21-19 Elect. IMA Pump Stations						
Calculation of Actual Cost Breakdowns						
Electrical Costs for IMA Pump Stations						
Month	Year	Cohasset Narrows PS	Dick's Pond PS	Depot Street PS		Hynes Field PS
		E1	E2	E3		E4
		NSTAR	NSTAR	NSTAR	ConEd	
July	-1					
August	-1					
September	-1					
October	-1					
November	-1					
December	-1					
January	0					
February	0					
March	0					
April	0					
May	0					
June	0					
Total	FY 0	\$0.00	\$0.00	\$0.00		\$0.00

OM _{nc}	=	Total operation, maintenance, repair and administrative cost for the common collection system facilities excluding total electrical cost for common pump stations.	=	\$0.00
TOM	=	Total operation, maintenance, repair and administrative cost for the common collection system facilities.	=	\$0.00

Electrical Cost - Proportionate Shares

Electrical Bourne Share =

$$\begin{array}{ccccccc}
 E1 & \left[\frac{Q_{ST}}{Q_1} \right] & + & E2 & \left[\frac{Q_{ST}}{Q_2} \right] & + & E3 & \left[\frac{Q_{ST}}{Q_3} \right] & + & E4 & \left[\frac{Q_{ST}}{Q_3 + Q_4} \right] \\
 \$0 & \left[\frac{0}{0} \right] & + & \$0 & \left[\frac{0}{0} \right] & + & \$0 & \left[\frac{0}{0} \right] & + & \$0 & \left[\frac{0}{0 + 0} \right] \\
 \#DIV/0! & & + & \#DIV/0! & & + & \#DIV/0! & & + & \#DIV/0! & \\
 \text{Electrical Bourne Share} & & = & & \#DIV/0! & & & & & &
 \end{array}$$

Electrical Wareham Share =

$$\begin{array}{ccccccc}
 E1 & \left[\frac{Q_1 - Q_{ST}}{Q_1} \right] & + & E2 & \left[\frac{Q_2 - Q_{ST}}{Q_2} \right] & + & E3 & \left[\frac{Q_3 - Q_{ST}}{Q_3} \right] & + & E4 & \left[\frac{Q_4 + Q_3 - Q_{ST}}{Q_3 + Q_4} \right] \\
 \$0 & \left[\frac{0 - 0}{0} \right] & + & \$0 & \left[\frac{0 - 0}{0} \right] & + & \$0 & \left[\frac{0 - 0}{0} \right] & + & \$0 & \left[\frac{0 + 0 - 0}{0 + 0} \right] \\
 \#DIV/0! & & + & \#DIV/0! & & + & \#DIV/0! & & + & \#DIV/0! & \\
 \text{Electrical Wareham Share} & & = & & \#DIV/0! & & & & & &
 \end{array}$$

Operation, Maintenance and Repair of Common Collection System Facilities - Proportionate Shares

Operation, maintenance, repair and administrative cost for the common collection system facilities excluding total electrical cost for common pump stations

$$\begin{array}{llll}
 OM_{NE} & (\text{Bourne Share}) & = & \left[\frac{\text{Electrical Bourne Share}}{E_T} \right] OM_{NE}(\text{Total}) \\
 OM_{NE} & (\text{Bourne Share}) & = & \left[\frac{\#DIV/0!}{\$0.00} \right] \$0.00 \\
 OM_{NE} & (\text{Bourne Share}) & = & \#DIV/0!
 \end{array}$$

Total operation, maintenance, repair and administrative cost for the common collection system facilities.

$$\begin{array}{llll}
 TOM (\text{Bourne Share}) & = & \text{Electrical Bourne Share} & + OM_{NE} (\text{Bourne Share}) \\
 TOM (\text{Bourne Share}) & = & \#DIV/0! & + \#DIV/0! \\
 TOM (\text{Bourne Share}) & = & \#DIV/0! & \\
 TOM (\text{Wareham Share}) & = & \text{Electrical Wareham Share} & + \left[OM_{NE}(\text{Total}) - OM_{NE} (\text{Bourne Share}) \right] \\
 TOM (\text{Wareham Share}) & = & \#DIV/0! & + \left[\$0.00 - \#DIV/0! \right] \\
 TOM (\text{Wareham Share}) & = & \#DIV/0! &
 \end{array}$$

Fiscal Year 0

Total of WPCF Semi-Fixed Cost	\$0.00	Ref #	Note
Total of WPCF Flow Variable Cost	\$0.00	A	(from 'Cost Allocation' spreadsheet)
		B	(from 'Cost Allocation' spreadsheet)
WPCF O&M Cost Subtotal	\$0.00	C	(A + B)
Administrative Salaries (11% of WPCF O&M Subtotal)	\$0.00	D	(0.11 x C)
Total O&M Cost	\$0.00	E	(C + D)
Revenues from Septage	\$0.00	F	(From Wareham WWTF)
Reimbursement- Chemicals	\$0.00	G	(From Wareham WWTF)
Net Total O&M Cost (Semi-fixed & Flow Variable)	\$0.00	H	(E + F + G)
Total Semi-fixed Costs (No revenue deductions)	\$0.00	I	(A + D)
Total Flow Variable Costs (No revenue deductions)	\$0.00	J	(E - I)
Net Semi-fixed Costs (deduct proportion of revenues)	#DIV/0!	K	(I + {(I / E) x F})
Net Flow Variable Costs (deduct proportion of revenues)	#DIV/0!	L	(J + G + {(J / E) x F})
<u>Semi-fixed Cost Allocations</u>			
Bourne User Cost Share Percent	13.33%	M	(From IMA)
Bourne User Cost Share (Bourne % of WPCF Net Semi-fixed Costs)	#DIV/0!	N	(K x M)
Wareham User Cost Share Percent	86.67%	O	(From IMA)
Wareham User Cost Share (Wareham % of WPCF Net Semi-fixed Costs)	#DIV/0!	P	(K x O)
<u>Flow Variable Cost Allocations</u>			
Bourne Flow	0 mgd	Q	(From 'Flow Calculation' spreadsheet)
Wareham Flow	0 mgd	R	(From 'Flow Calculation' spreadsheet)
Total Flow	0 mgd	S	(Q + R)
Bourne User Cost	#DIV/0!	T	(L x Q / S)
Wareham User Cost	#DIV/0!	U	(L x R / S)
<u>Total Cost Allocation</u>			
Bourne	#DIV/0!	V	(N + T)
Wareham	#DIV/0!	W	(P + U)



WAREHAM WATER POLLUTION CONTROL FACILITY
6 TONY'S LANE
WAREHAM, MASSACHUSETTS 02571
TELEPHONE (508) 295-6144
FAX (508) 291-0155

Memorandum

TO:

FROM:

DATE:

CC:

RE: FY 0 0 Bourne Sewer Usage Billing - IMA

Please accept the following information as the final cost allocation for FY 0 for Bourne usage for this period.

The costs breakdown is as follows:

FY 0 0 Total Sewer Usage Billing -

Total Cost - Treatment Plant \$0.00

Total Cost - IMA Pumping Stations & Collection System + \$0.00

Total Cost \$0.00

FY 0 0 Bourne Sewer Usage Billing -

Bourne Total Cost Share - Treatment Plant #DIV/0!

Bourne Total Cost Share - Pumping Stations/Collection System + #DIV/0!

Bourne Total Cost Share #DIV/0!

FY 0 0 Septage Credit

0 gallons of Bourne septage received at
\$0.01 per gallon of septage - \$0.00

ESTIMATED AMOUNT DUE #DIV/0!

0 Quarter Due

Please forward payment to the attention of the Town Treasurer/Collector,
54 Marion Road, Wareham, MA 02571



WAREHAM WATER POLLUTION CONTROL FACILITY

6 TONY'S LANE
WAREHAM, MASSACHUSETTS 02571
TELEPHONE (508) 295-6144
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Total Cost - Treatment Plant \$0.00

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Total Cost \$0.00

FY 0 0 Bourne Sewer Usage Billing -

Bourne Total Cost Share - Treatment Plant #DIV/0!

Bourne Total Cost Share - Pumping Stations/Collection System + #DIV/0!

Bourne Total Cost Share #DIV/0!

FY 0 0 Septage Credit

0 gallons of Bourne septage received at
\$0.01 per gallon of septage - \$0.00

TOTAL AMOUNT DUE #DIV/0!

TOTAL PAID FROM FY ESTIMATED BILLINGS

ACTUAL AMOUNT DUE (Negative means credit)

Please forward payment to the attention of the Town Treasurer/Collector,
54 Marion Road, Wareham, MA 02571

**Sewer Commissioners Meeting
Minutes of Tuesday, August 25, 2020
Zoom Remote – Public Access**

.....

TA Tony Schiavi
ATA Glenn Cannon

Sewer Commissioners

James Potter, Chairman
Jared MacDonald, Vice-Chairman
Judy Froman, Clerk
Peter Meier
George Slade

Others: Halim Choubah, Greg Wirsen - Green Seal Environmental, May Andrews, Mike Rausch, Tim Lydon, Mary Jane Mastrangelo

Note this Zoom videoconference meeting is NOT being televised. The meeting is being recorded and will be provided to Bourne TV for playback.

If anyone from the public wishes to provide public comment, they can access the conference line by calling:

1-929-205-6099 Meeting ID: 829 0241 9447 Password: 304005.

<https://us02web.zoom.us/j/82902419447?pwd=bXRrdUM5cFdVSgczdUoxV05zdWFFQT09>

Please MUTE your phone until the Chair asks if anyone wishes to speak.

All items within the meeting agenda are subject to deliberation and vote(s) by the Board of Selectmen/Sewer Commissioners.

Note this meeting is being recorded.

Documents: [340 Main Street Sewer Application](#), [Sewer Rate Study Report](#), [Sewer Rate Allocation Policy](#)

Meeting Called to Order

Chm. Potter called the meeting to order at 7:00 pm.

1) Salute to the Flag

2) Consent Agenda

a. Approval of Open Session meeting minutes: 07.28.2020

Voted: Peter Meier moved and seconded by Jared McDonald to continue until the next available meeting.

Roll Call Vote: George Slade - Yes, Judy Froman – Yes, Jared MacDonald – Yes, Peter Meier – Yes, James Potter - Yes

Vote: 5-0-0.

3) Sewer Rate Vote Amendment

Add the following language to the July 28, 2020 Sewer Rate Motion: "in excess of 45,000 gallons per calendar year" such that the Amended Motion would read: "Motion to approve the FY21 sewer rate at \$1,051.00 per unit and \$0.01 per gallon for sewer overages in excess of 45,000 gallons per calendar year and to re-address the sewer rate after the Fall Town Meeting.

Suggested to Rescind the previous vote from July 28th and revote the new motion with the new language included.

Voted: Jared MacDonald moved and seconded by George Slade to rescind the last vote on the rates from July 28, 2020.

Roll Call Vote: Judy Froman – Yes, George Slade – Yes, Peter Meier – Yes, Jared MacDonald – Yes, James Potter Yes.
Vote: 5-0-0.

Voted: Judy Froman moved and seconded by Jared MacDonald to approve the FY21 sewer rate at \$1,051.00 per unit and \$0.01 per gallon for sewer overages in excess of 45,000 gallons per calendar year, and to re-address the sewer rate after the 2020 Fall Town Meeting.

Roll Call Vote: George Slade – Yes, Judy Froman – Yes, Jared MacDonald – Yes, Peter Meier – Yes, James Potter Yes.
Vote: 5-0-0.

4) Sewer Allocation

Choubah Engineering — 340 Main Street

Hal Choubah, consulting engineer, representing the applicant 340 Main Street LLC, Proposal is to demolish the existing building on 340 Main Street and to construct a 6000 sq. ft. building for a gas station and 2000 sq. ft convenient store, 2 other units would be restaurants (coffee shop) total capacity with 60 seats, and 6 residential units on the second floor. Went through site plan approval. Filed with Conservation – have order of conditions from Conservation. Asking for sewer allocation of 3,095 gpd.

[340 Main Street Sewer Application](#)

Comments:

- Planning Board report is missing the underground fuel storage tank permit process with the Board of Selectmen, in their list.
- When starting construction? – Mr. Choubah is working with the Buzzards Bay Water District as well - Starting construction in Spring of 2021
- Communicate with affordable housing trust.
- Making improvements to the infrastructure with a new pump chamber, piping and other improvements. – making sure they meet the standards of the regulations we have and the regulations that are being discussed in draft form. Mr. Choubah said he will work with sewer department on the installation.

- Second phase, may be down the road – will that be an amendment to the application or will they need to file separately. – Mr. Potter said that would be a separate project if there is a second phase.

Voted: Jared MacDonald moved and seconded by Peter Meier to approve as it has been placed on the application for 3,095 gallon per day at 340 Main Street LLC.

Judy Froman would like more of a discussion about what types of businesses are accepted, we have a saturation of gas stations. This area has a lot more potential than just as a gas station.

Roll Call Vote: Judy Froman – Yes, George Slade – Yes, Jared MacDonald – Yes, Peter Meier – Yes, James Potter - Yes
Vote: 5-0-0.

5) Sewer Allocation Updates

- A. Vincent Michienzi 85 — 93 Main Street**
- B. Vincent Michienzi — 100 Main Street Block**
- C. Gencon/Bob Gendron — 12 Wagner Way**
- D. Calamar**
- E. Oak Bay Brewery**

This is the 6-month review of those that have been given allocation

5.A. Vincent Michienzi 85-93 Main street

No owner's representation present at the meeting, but Town Staff gave an update. The Town is expecting to get a written update from Bracken Engineering, did not receive that yet. Tim Lydon received an email from Bracken Engineering.

Comments:

- 3 of the 4 tenants are up and running – Buzzards Bay Brewing, Vela Juice Bar, and Krua Thai.
- 4th tenant is outfitted to be a full-size restaurant – almost complete with the renovations.

100 Main Street Block (old movie theater site) is different from 100 Main St (future ice cream shop). Essentially, the BOSCC can talk about 100 Block, but hasn't had interaction with 100 Main St (ice cream shop).

5.B. Vincent Michienzi - 100 Main Street Block

Provided an update for mixed use.

Tim Lydon read the update he was sent. This is a block of parcels adjacent to 85 and 93 Main Street and directly behind Secrets Consignment Shop to the North. Applicant is currently working with a potential developer for the property. Negotiations on the project are currently ongoing, while the developer evaluates the development potentials for the lot, as well as availability of water to the site. Buzzards Bay Water District is working with the state to

increase their allowable daily water withdrawal. Until this is vetted out any future development on Main Street is currently in holding pattern until an update is provided by the Buzzards Bay Water District.

Comments:

- 100 Main Street doesn't have allocations from the Board because it was an existing use - not under the allocation policy.
- It is well engineered, because it is in a FEMA Flood Zone
- Anticipating that being up by the end of the year
- Send a letter to Vinny Michienzi for 100 Main Street Block, and explain the sewer allocation situation, request he reach out to staff, and put him on the agenda. We need to receive payment for the allocation or state there isn't an allocation. We are tying up wastewater capacity that hasn't been paid for. It isn't following the policy.

Voted: Jared MacDonald moved and seconded by Judy Froman to have the owner of 100 Main Street Block contacted via mail by staff to start the process to rectify this situation.

Judy Froman suggested to have a time frame in the letter of when we would like to have a response. Invite Mr. Michienzi to the next meeting.

Roll Call Vote: Judy Froman - Yes, Jared MacDonald – Yes, Peter Meier – Yes, George Slade – Yes, James Potter - Yes

Vote: 5-0-0.

5.C. 12 Wagner Way

Greg Wirsen, Green Seal Environmental – Owner's Representative,

- Sent a letter to Debbie Judge.
- Still working on the project, need water allocation.

Tim Lydon will send an email to Greg Wirsen requesting the information he would like – Mr. Wirsen will have Bob Gendron send Tim Lydon a project narrative with the information that is requested.

5.D Calamar - No owner's representation present at the meeting, but Town Staff gave an update.

- Under construction.
- Trying to get an idea for when they will start pumping sewerage
- Building Inspector said they are on schedule
- Don't have a completion date yet.

5.E Oak Bay Brewery - No owner's representation present at the meeting, but Town Staff gave an update.

- We haven't gotten a response from them
- Did pay for their allocation
- Will reach out to them again to get an update

6) Sewer Business

- A. Savary Avenue Update**
- B. Hideaway Village Sewer Agreement**
- C. Sewer Rate Study — Final Report**

6.A Savary Avenue Update

- All the residents are capped at the street
- All are off the community system
- Final inspection on 50 Savary Ave
- System is off line, now need to have discussion on the next step
- Make an application to BOH regarding the decommissioning & removal

Suggestions:

- Last pumping of the system, the residual – Have the Town pay for the last pump
- Jim Potter suggested to have staff/or consultant look at the tanks to verify we will not have infiltration after we pump, so we will not have to pump again.
- Mr. Schiavi suggested that once it is pumped out, maybe fill with sand
- Funding for decommissioning the system – talk about at Fall Town Meeting

6.C Sewer Rate Study — Final Report

[Sewer Rate Study Report](#)

Received the final report for the Sewer Rate Study from Tighe and Bond

Jim Potter suggested looking at the following:

- Page 10 (2-5) used 45% reduction factor for Title V
- Not all drinking water ends in sewerage
- Page 16&17 (4-1 & 4-2)
Noted the 2006 Development fee and the 2007 Allocation Policy
In the past these weren't handled in tandem
- 5 projects – 2006 Development Fee and 2007 Allocation Policy would have generated 1.295 million dollars in fees. We collected \$135,000 instead.
By the suggested 'ERU' method - Gallons – 91,499 total gallons x \$366 per ERU = \$3029.00. We collected \$135,000
- We have adopted the new rate for the coming year
- Because we haven't collected the fees for the rate study, the rate payers will be affected

Service Development Charge**1. Determine number of Equivalent Residential units**

Divide total plant capacity by
average residential usage

Total Capacity	100,000	gpd
Residential usage	150	gpd
Equals	667	ERU's

2. Determine ERU cost

Cost to be recovered	<u>\$2,400,000</u>	
Total ERU's	667	
Equals	\$3,600	Per ERU

We should evaluate because we have already given out ERU, so we don't have 667 to give out. We may have to adjust the \$3,600 per ERU

- Page 45 - Our current fees were never intended to cover capital expenditures like the new wastewater facility.
- Page 54 - the five recommendations:
 1. Meet with Buzzards Bay Water District to discuss options for balancing development needs with water conservation. Continue to negotiate IMA with Wareham, revisit cost sharing methodology
 2. Retained earnings appears to be sufficient to allow selection of rate Alternative A or B for FY21, confirm projections against FY19 actual and FY20 estimated revenues.
 3. Based upon resolution of development issue migrate to new fee structure, discuss timing and administration of fees with town counsel. Incorporate fee structure, timing and requirements into Sewer Regulations, separate out fees for easy adjustment. Reduce Title 5 allocations by 50% to better approximate expected flows, refine as uncommitted reserve capacity diminishes (obtain more accurate information, etc.)
 4. Revisit staff roles relative to Wastewater management, adjust responsibilities to meet new requirements
 5. Continue to monitor usage, expenses and revenue on annual basis

Suggestions

- We should talk about implementing the ERU, because it takes into account the new plant.
- Need to move forward quickly to get the system in place so we can capture the monies for the new allocation projects.
- Have a smaller working group work on some of the issues, policy

- Start to build a Regulation book
Have one system/formula for fees
- Use the Wastewater Advisory Committee – give them a new Charge. Have a user rate payer/citizen on the Committee
- Have Wastewater Advisory Committee advise on the Sewer Rate if we choose to go in the ERU direction
- BOSC will work on Capital System Sewer Development Charges

Comments:

- 100 Main Street Block was before the allocation policy while the Gendron project was put on the new allocation policy, and originated at the same time
- Sewer Commissioners need to talk about differentiating projects that need infrastructure for the project vs. projects that are on the current sewer infrastructure.
- Change back to a variable flow fee for Wareham instead of a fixed rate fee because our allocation is going to go to the new plant. Or some of what would have gone into the new system, does it still go to Wareham since we do pay a fixed rate.
- It is important that we put these fees into the capital fund, which was designated for that purpose.
- We should be collecting what the rate study states we should be collecting.
- Keep conversations with Wareham ongoing
- Look at the some of the newer projects – adapt the new fee structure

6.B Hideaway Village Sewer Agreement

They had sent a letter to BOSC last year, attended a meeting in the Fall, and another email sent by Board of Directors requesting consideration of an agreement with Hideaway village that they had, it has expired on June 30th

**AGREEMENT BY AND BETWEEN THE
TOWN OF BOURNE
AND
HIDEAWAY VILLAGE CONDOMINIUM ASSOCIATION**

This Agreement is made this 8 day of March, 2016, by and between the Town of Bourne, a Massachusetts municipal corporation with an address of 24 Perry Avenue, Buzzards Bay, Massachusetts ("Town") and the Hideaway Village Condominium Association ("Hideaway"), with a mailing address of P.O. Box 790 Buzzards Bay, Massachusetts. This Agreement amends, and, in pertinent parts, supplants and supersedes an Operation and Maintenance Agreement, dated June 26, 1990, and an Agreement for Wastewater Collection Treatment and Disposal between the Town of Wareham, Massachusetts and Town of Bourne, Massachusetts, dated February 23, 2010.

RECITALS

Whereas, the Town and Hideaway have mutual interest in the Wastewater transmission infrastructure within Buzzards Bay;

Whereas, the Town and Hideaway have been involved with financing portions of the wastewater delivery system to Wareham;

Whereas, Hideaway Village comprises approximately 30% of the revenue derived from sewer use fees paid to the Town of Bourne;

Whereas, the Bourne Board of Sewer Commissioners have agreed to assist Hideaway with certain costs associated with the infrastructure repair and replacement at Hideaway for a period of five (5) years, subject to municipal appropriation;

Now therefore, in consideration of the mutual covenants herein contained, the parties agree as follows:

1. The Town is hereby authorized to reimburse Hideaway for certain equipment for the repair and replacement of equipment necessary for the safe operation of that portion of the wastewater transmission infrastructure owned and maintained by Hideaway, subject to the approval of the Director of the Department of Public Works, in an amount not to exceed Thirty Thousand Dollars (\$30,000) annually, subject to appropriation. The Town Administrator shall certify that the reimbursement is appropriate. All invoices submitted to the Town by Hideaway for each fiscal year must be received no later than June 1st of each year of this Agreement.

2. The execution of disbursement of any funds to Hideaway is by reimbursement only of invoices paid and approved by the Board of Directors of Hideaway. All requests for reimbursement shall be presented to the Town Administrator in writing.

3. The Town is prohibited from performing any work to repair or install on lines and property, etc., owned by Hideaway. The Town is prohibited from providing any warranty on items reimbursed and is not responsible for any problems associated with installation or operation of any equipment or materials that has been submitted for cost reimbursement.

4. Hideaway may not assign any rights under this Agreement and may not utilize these funds for non-equipment related purchases and/or purposes.

5. Hideaway hereby agrees to hold the Town harmless and indemnify the Town for all risk of loss, damage or injury, of any nature, to persons or property, by reason of individual actions or inactions under this Agreement by its' employees, residents, invitees, contractors, etc., and Hideaway releases the Town, and its successors and assigns, from any and all claims for loss, damage or injury sustained that may arise.

6. This term of this Agreement shall be for five (5) years, commencing on July 1, 2015.

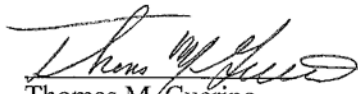
7. This Agreement may be renewed every five (5) years by a writing signed by the parties.

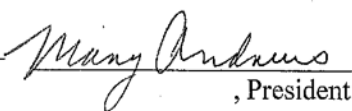
8. If any provision of this Agreement shall be held to be invalid or unenforceable as against any party, the Agreement shall be null and void in its entirety, with no further or continued obligations hereunder.

Witness the hands and seals of the Town of Bourne and the Hideaway Village Condominium Association as of the date set forth above.


The Town of Bourne,
By its Town Administrator,

Hideaway Village Condominium
Association,


Thomas M. Guerino


Mary Andrews, President

Approved as to Form:


Robert S. Troy
Bourne Town Counsel

Mary Andrews

- They came on line as a condominium
- Paid our infrastructure, paid betterments to be connected, pay the same rate residentially as everyone else, but we got no service in return.
- The hike increase is impacting our residents
- Residents requested to pursue the agreement
- Have 90-100 units living in the village year-round; 266 units paying fees
- Our infrastructure is being maintained by condominium fees,
- Unfair that we have no service
- Provide us something towards maintenance or replacement for some of our infrastructure. Requesting the BOSC to subsidize \$15,000 a year to replace parts.
- Hideaway Village is 266 individual users

Comments:

- Hideaway Village is a condo complex which is a commercial entity, commercial developments maintain their own equipment. All other condo properties maintain their own equipment on their property.
- In the past Sewer Commissioners used retained earnings to subsidize the rate for 5 years – we are not going to do that anymore – we don't have the funds/resources.

- Jim Potter said if we switch to the ERU system, which is water-use based, people that use less water will be paying less.
- Suggested to look at grants/funding that could help an entity like Hideaway

Voted: Judy Froman moved and seconded by Jared MacDonald to not renew the sewer agreement for Hideaway Village.

Roll Call Vote: Judy Froman – Yes, George Slade – Yes, Peter Meier – Yes, Jared MacDonald – Yes, James Potter - Yes

Vote: 5-0-0.

7) Sewer Visioning Agenda

A. Comprehensive Wastewater Management Plan Update

B. Board of Sewer Commissioners Goals

- We have confirmation all 4 interested parties are available on Wednesday, September 9th
- Meeting scheduled for Wednesday September 9th at 7:00.
- Meet in the Community Center, not open to the public. Just the Commissioners, Mr. Schiavi, Mr. Cannon and one applicant at a time.
- Broadcasting on Bourne TV for public to follow along
- Commissioners can ask questions of each of the applicants
- Each applicant has 30 minutes to give a brief overview

7.B Board of Sewer Commissioners Goals

Jim Potter suggested that the Sewer Commissioners have annual Goals

Examples of some potential Short-range & long-range goals:

- Comprehensive Wastewater Plan
- Developing the Sewer Regulations and Policy Book
- Fund the I&I study
- Adjust the current sewer development charge and the usage billing – have ERU Discussion
- Award and begin the CWMP Process
- Fund removal of Savary Community Septic system
- Assuming Control of the new wastewater treatment plant operations and determine the future operational costs
- Maximizing and taking ownership of the Wastewater Treatment Plant
- Infrastructure/Environment – to protect our environment
- Have a good layout of what our sewer system should be

Goals can be published on the website – for public information, and put in reports for updates.

Will put this on another agenda

8) New Business**A. Correspondence****B. Any new sewer business (not foreseen 48 hours ahead of this meeting)****C. Public Comment**

Jim Potter said he received an email regarding water district information vs the sewer meeting.

Tim Lydon updated the Board regarding the meeting they had.

Creating long term, medium term, short term goals, physical sustainability – look for action items and have a physical sustainability model to pay for those action items. Sewer system is an enterprise fund that can fund projects that can be resilient and sustainable.

Jim Potter said there are still a few businesses that are falling outside of the scope of the existing Allocation Policy. We should adjust our Allocation Policy – instead of Change of Use, we should adjust the policy to be triggered by Change of Flow.

IMA Sub Committee on September 10th with Wareham

Maybe meet on September 14th with Wareham

We will discuss with full board to full board on the Capital projects that were listed in the letter from the Wareham Sewer Superintendent.

Discussion about meeting with Wareham Sewer Commissioners and Board of Selectmen, because Sewer Commissioners in Wareham can only make recommendations to the Selectmen. Jim Potter explained that there are a few items that might make sense to meet with the Wareham Board of Selectmen on, such as the IMA, but many of the sewer budget items are within the purview of the Wareham Board of Sewer Commissioners to handle.

Discuss with the Sewer Commissioners and the Selectmen what they are trying to expand at the plant.

Future Agenda Items**A. Sewer Commissioner Regulations & Policies Guidebook and implementation****B. Bourne/Wareham Inter-municipal Agreement subcommittee update****C. New Wastewater Treatment Plant — Annory Rd.****D. Joint Base Cape Cod Sewer Meeting Update****E. Upper Bay Project (Bourne-Wareham-Marion-South Plymouth) Regional Sewer Update****9) Adjourn**

Voted: Peter Meier moved and seconded by Jared MacDonald to adjourn at 9:33 P.M.

Roll Call Vote: Judy Froman - Yes, Jared MacDonald - Yes, George Slade - Yes, Peter Meier - Yes, James Potter - Yes

Vote: 5-0-0.

Respectfully submitted – Carole Ellis, secretary.

Alfano

Thut, Kathleen

From: Kathy Fox Alfano [REDACTED]
Sent: Wednesday, January 12, 2022 14:52
To: Thut, Kathleen
Subject: Talent Bank for Wastewater Advisory Committee
Attachments: Talent Bank KFA20220112_14370577.pdf

Hello All

I am very interested in participating in and being appointed to the Wastewater Advisory Committee.

I have attended the input meetings of the CWMP with Environmental partners and the Bourne Sewer Commissioners. These meetings have been very informative about the needs for clean waters in Bourne, not just on the Canal but throughout our town. I have read the materials and attended meetings with Environmental Partners, the Buzzards Bay Coalition and the Save the Canal Committee as well as the Pocasset Water Quality Commission and the Barnstable Water Quality Commission.

It's no secret that I oppose the expansion of the outfall at MMA, as I live on the Canal and represent Gray Gables as President of the Association. However I understand the needs of Bourne in the bigger picture and want to help in anyway I can.

I would so appreciate the opportunity to represent the South of the Canal on the Wastewater Advisory Committee.

Thank you
Sincerely,

--
Kathy Fox Alfano

This email has been scanned for spam and viruses by Proofpoint Essentials. Click [here](#) to report this email as spam.

TALENT BANK FORM

ACT NOW- SERVE YOUR COMMUNITY

Town government needs citizens who are willing to give time in the service of their community. The Talent Bank was adopted by the Selectmen, Moderator and Town Administrator as a means of compiling names of interested citizens to serve on a voluntary basis, on boards and committees and working groups. This file is available for use by the public as well as the Moderator, Selectmen and Town Administrator. Talent bank forms are being updated to include categories consistent with the changing needs of the Town. Indicate your preference and return the form to:

TOWN GOVERNMENT TALENT BANK

c/o Town Administrator,
24 Perry Avenue
Buzzards Bay, MA 02532

NAME: Kathy Fox Alfano

DATE: 1/12/22

ADDRESS: [REDACTED]

PRECINCT: 4

OCCUPATION: Rec'dor

TELEPHONE # [REDACTED]

EMAIL: [REDACTED]

BACKGROUND: Creative Director, Production Mgr, Bus owner

Check	AREAS OF INTEREST (LIST ORDER OF PREFERENCE)
	AFFORDABLE HOUSING TRUST - provides the Town with many tools to create and preserve affordable housing, including the ability to option, lease, purchase, renovate, and lease out or sell real estate.
	ZONING BOARD OF APPEALS - The Board of Appeals shall have and exercise all the powers granted to it by Chapters 40A, 40B, and 41 of the General Laws, and by this Bylaw, those powers being to hear and decide applications for Special Permits upon which the Board is empowered to act under this Bylaw; to hear and decide petitions for variances, excluding variances for use; to hear and decide other appeals from any aggrieved person, officer, or board, or the Cape Cod Planning and Economic Development Commission, to issue comprehensive permits as provided by Sections 20-23, Ch.40B, G.L., and in special cases to issue withheld building permits, as provided by Section 81Y, Ch.41, G.L.
	BOARD OF ASSESSORS
	BARNSTABLE COUNTY COASTAL RESOURCES - is the County's coastal advisory committee, serves as a liaison between towns and the County on coastal issues and is the local governance committee for the Cape Cod region of the Massachusetts Bays Program.
	BARNSTABLE COUNTY HOME CONSORTIUM - is comprised of 15 communities on Cape Cod. Jurisdiction to receive and disburse HOME funds.
	BARNSTABLE COUNTY HUMAN RIGHTS COMMISSION - To promote and protect the basic human rights of all persons in Barnstable County
	BUZZARDS BAY ACTION - The mission of the Buzzards Bay Action Committee is to improve collaboration among watershed municipalities.
	BY-LAW COMMITTEE - Reviews and also recommends updates or changes to the Town By-laws
	CABLE ADVISORY COMMITTEE- performs research/makes recommendations for cable license renewal
	CAPE & VINEYARD ELECTRIC COOPERATIVE - was organized on September 12, 2007. Provides for the establishment of energy cooperatives.
✓	CAPE COD COMMISSION - is an agency within Barnstable County regional government, but with its own separate and unique funding source, the Cape Cod Environmental Protection Fund.
✓	CAPE COD WATER PROTECTION COLLABORATIVE - to help Cape Cod and Islands towns pay for necessary wastewater infrastructure and water quality remediation projects.

	OPEN SPACE COMMITTEE - was formed in 1999 for the purpose of recommending acquisitions of interest in real property to be owned or managed by the Conservation Commission or other designated nonprofit organization or in the case of interests to acquire sites for future wellhead development for a Water Resource District.
	TASK FORCE ON LOCAL POLLUTION/PHASE II STORMWATER MANAGEMENT COMMUNITY OVERSIGHT PROGRAM - membership shall consist of seven (7) members of the general public, at least two of whom, if possible, shall have a professional background in science, law or engineering.
	PRIVATE ROADS ACCEPTANCE - On an annual basis we will have to establish a prioritization process to see what roads will be brought before the town for consideration.
	RECREATION COMMITTEE – Works with the Director of Recreation on long term planning for the recreational needs of the Town
	RECYCLING - Provide advice and assistance to the Board of Selectmen, the ISWM General Manager and Town residents concerning recycling requirements and procedures. Assist the Board of Selectmen with public education concerning recycling, composting and source reduction.
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	STREET AND TRAFFIC – Look into the current street lighting.
	TOWN ADMINISTRATORS ADVISORY COMMITTEE ON PEDESTRIAN BICYCLE PATHWAY - to assist in the creation of a pedestrian and bicycle pathway within the geographic boundaries of the Town of Bourne, connecting with the Shining Sea pathway in Falmouth
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✓	WASTEWATER ADVISORY COMMITTEE - To serve as advisors to the Town Administrator and Bourne Board of Sewer Commissioners in the areas of public policy and long-range planning as it relates to the implementation of the Comprehensive Wastewater Management Plan.
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	VETERANS GRAVES OFFICER
	OTHER (please list)

Andrews

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TOWN GOVERNMENT TALENT BANK
c/o Town Administrator,
24 Perry Avenue
Buzzards Bay, MA 02532

BOURNE BD OF SELECTMEN
RCUD 2022 JAN 20 PM12:51

NAME: Mary Andrews DATE: 1/20/22
ADDRESS: [REDACTED] ECINCT: [REDACTED]
OCCUPATION: Retired TELEPHONE # [REDACTED]
BACKGROUND: former volunteer on WWA committee

Check	AREAS OF INTEREST (LIST ORDER OF PREFERENCE)
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	VETERANS GRAVES OFFICER
	OTHER (please list)

Please consider appointing me to the WWA Committee. I served prior for almost 5 years. I am a resident and very interested in the WWA direction in town.

Mary Andrews

Bourne Sewer Commissioners
Bourne Town Hall
24 Perry Avenue
Buzzards Bay, MA 02532-3441

Commissioners.

My name is Keith Barber. I'm offering to be part of the Wastewater Advisory Committee. Here is some background:

I worked in sales and product development with 2 partners in our own business for 25 years before retiring in 2015.

Was a founding member, Secretary/Treasurer and a member of the Board of Directors of the Fashion Jewelry & Accessories Trade Association from 2006 through retirement in 2015.

We bought our first home in Pocasset in 2004

Relocated to 93 Bellavista Drive in 2013. Retired here as fulltime resident in 2015.

Joined with Frank Gasson and others as founding members of the Pocasset Water Quality Coalition (PWQC) August 2019.

Attended Selectman's Meeting September 2019 with 140 of my friends and neighbors to call attention to the deterioration of saltwater in Hen Cove.

PWQC was Incorporated in December 2019. I was elected the PWQC first Secretary/Clerk.

Elected President of PWQC in the spring of 2021. I currently hold that position. PWQC currently has over 250 members

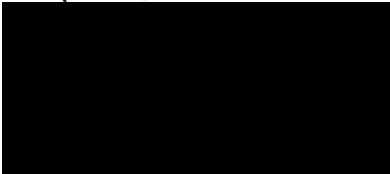
Baywatcher and member of the Buzzards Bay Coalition

Member Barnstable Cleanwater Coalition

Sincerely,



Keith Barber



Barber

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TOWN GOVERNMENT TALENT BANK
c/o Town Administrator,
24 Perry Avenue
Buzzards Bay, MA 02532

NAME: Keith Barber DATE: 1-10-22
ADDRESS: [REDACTED] PRECINCT: 6
OCCUPATION: Retired TELEPHONE # [REDACTED]
BACKGROUND: See attached

Check	AREAS OF INTEREST (LIST ORDER OF PREFERENCE)
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	CABLE ADVISORY COMMITTEE- performs research/makes recommendations for cable license renewal
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	VETERANS GRAVES OFFICER
	OTHER (please list)

Hyldborg

TALENT BANK FORM

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TOWN GOVERNMENT TALENT BANK

c/o Town Administrator,

24 Perry Avenue

Buzzards Bay, MA 02532

NAME: Christopher Hyldborg

DATE: 01/20/2022

ADDRESS:

PRECINCT: 1

OCCUPATION: Pilot

TELEPHONE #

BACKGROUND: School Committee, TA Screening committee

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	VETERANS GRAVES OFFICER
	OTHER (please list)

Langille

January 20, 2022

Town of Bourne
Sewer Commissioners
Board of Selectman
Mary Jane Mastrangelo
24 Perry Avenue
Buzzards Bay, MA 02532

Subject: Appointment to the Wastewater Advisory Committee

I am requesting to be appointed to the Wastewater Advisory Committee looking at options in how the Sewer Department will be restructured in the future. I am a rate payer and have concerns regarding developing plan of action with regard to wastewater issues within the Town of Bourne, MA.

I have a strong business and financial background. I have been involved in the Town of Bourne through various committees such as Bourne Historical Commission (current voting member) where I served as Chair, current CPC Committee member, a past Charter Review Committee member, past Treasurer of the Bourne Historical Society and am very concerned about wastewater issues as well as water issues and I am concerned about the environmental aspects as well as the financial aspects of these issues.

Neil F. Langille

Neil F. Langille

Buzzards Bay, MA 02532

CC: Kathleen Thut
kthut@townofbourne.com

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TOWN GOVERNMENT TALENT BANK

c/o Town Administrator,
24 Perry Avenue
Buzzards Bay, MA 02532

NAME: Neil F. Lonsdale

DATE: 1/20/22

ADDRESS: [REDACTED]

PRECINCT: 3

OCCUPATION: Accountant

TELEPHONE # [REDACTED]

BACKGROUND: Financial Management Positions, Bourne Hist Comm Fest Chair
Bourne Historical Society, Treasurer of Organizations
BS Northeastern Univ MBA Babson College

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	CAPE LIGHT COMPACT - mission is to serve our 205,000 customers through the delivery of proven energy efficiency programs, effective consumer advocacy, and renewable competitive electricity supply.
	CAPITAL OUTLAY COMMITTEE – Reviews requests and makes recommendations to the Town Administrator on large equipment or building projects
	CHARTER COMPLIANCE COMMITTEE – Hears and adjudicates complaints filed alleging Charter Violations
	CHARTER REVIEW COMMITTEE –Reviews Charter every five years
	COMMISSION ON DISABILITIES - cause the integration and participation of people with disabilities; assists municipal officials in ensuring compliance with the ADA and other state/federal laws
	COMMUNITY ACTION COMMITTEE OF CAPE COD & ISLANDS, INC. - is a private, non-profit organization that provides a variety of services to low-income individuals and families to help them improve the quality of their lives and achieve self-sufficiency.
	COMMUNITY ENGAGEMENTS - mission is to sponsor and encourage community events, projects, activities, services, programs, and public improvements which are of mutual interest to the visitors and residents of the Town of Bourne, and, which strengthen the Town by fostering community involvement and spirit. The Committee shall create an application for funding and invite organizations or individuals to submit on events or activities that will benefit the Town of Bourne and its citizens. In no event may a Member present a project before the Committee. The committee shall provide quarterly reporting to the Board of Selectmen and Town Administrator.
	COMMUNITY PRESERVATION COMMITTEE will give preference to proposals Are eligible for Community Preservation Act (CPA) funding according to the requirements described in the CPA legislation; specifically, The acquisition, creation, and preservation of open space. The acquisition, preservation, rehabilitation, and restoration of historic resources. The acquisition, creation, and preservation of land for recreational use. The creation, preservation, and support of community housing (including items such as annual payments to the housing authority to preserve or expand the affordable housing supply). The rehabilitation and restoration of open space, land for recreational use, and community housing that is acquired or created using monies from the fund.
	CONSERVATION COMMISSION- administers the Wetlands Protection Act, Local Wetlands bylaws
	COUNCIL ON AGING- coordinates programs designed for the needs of aging in coordination with the MA Executive Office of Elder Affairs
	CULTURAL COUNCIL - reviews applications for local arts and cultural events and awards grant funds received from the MA Cultural Council.
	DESIGN REVIEW BOARD (DRB)- reviews alterations, including demolitions of properties located within the demarked areas, adopts design guidelines, rules/regulations
	EDUCATION/SCHOLARSHIP
	FINANCE COMMITTEE- reports to town meeting on the proposed budget of town manager and any warrant articles having a fiscal impact on the Town.
✓	HISTORICAL COMMISSION - caretakers of the Town history.
	HOUSING PARTNERSHIP - addresses local housing needs through a collaborative effort between local govt., community organizations, banks and the private sector.
	HUMAN SERVICES - The Committee is charged with recommending policies and potential programs to the Town Administrator related to the delivery of human services to the citizens of Bourne.
	LANDFILL BUSINESS PROJECT MODEL WORKING GROUP-Make recommendations on long term viability of the Integrated Solid Waste Management Department to the Town Administrator and Selectmen
	LOCAL EMERGENCY PLANNING COMMITTEE - mission is to provide residents with an emergency response program for hazardous materials incidents, extreme weather, and other high impact events.

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	VETERANS GRAVES OFFICER
	OTHER (please list)

Mealy

Stephen F. Mealy



January 18, 2022

Mr. Glenn Cannon, Town Administrator, Acting
Town Administrator
Town of Bourne
24 Perry Avenue
Buzzards Bay, MA 02532

Re: Wastewater Advisory Committee Membership

Dear Mr. Cannon:

I would like to submit my name and credentials to the Board of Selectmen for consideration for the town's representative to the Wastewater Advisory Committee at large member.

My background, including my recent service to the Board of Selectmen and membership to the Wastewater Advisory Committee, includes the committee or board membership on the Planning Board, Finance Committee, Shore and Harbor Committee, Capital Outlay Committee and work done within the Financial Project Working Group all demonstrate both my experience and commitment to our town.

Please extend my thanks to the Board members for their consideration. I would make myself available to the Board should they have any questions. A summary of my community services is attached.

Sincerely,

Stephen F. Mealy

Stephen F. Mealy



October, 2020

Local Government Experience

Association to Preserve Cape Cod, 2019-
Member, Board of Directors

Cape Cod Selectmen Councilors Association, Executive Board Member

Bourne's Representative to the Cape Cod Commission, 2019-

Bourne Wastewater Advisory Committee, 2017-2019

Bourne Charter Review Committee, 2019-

Bourne Charter Compliance Committee, 2017-

Bourne Board of Selectmen, 2014 – 2017
Chairman 2015, Clerk 2014

Barnstable County Water Protection Collaborative, 2014-2017

Bourne Board of Selectmen, 2006-2012
Clerk 2013, Vice Chairman 2007, Chairman 2008

Board of Selectmen Liaison to:
Massachusetts Maritime Academy
Main Street Steering Committee
Community Building Trustee
Wastewater Advisory Committee
Cape Cod Water Protection Collaborative
Financial Project Working Group
Recycling Committee

Bourne Transportation Advisory Committee, 2018-

Town Administrator Search Committee, 2019

Bourne Finance Community, 1979 – 1986
Chairman, 1984 – 1986

Bourne Planning Board, 1986 – 1990
Chairman, 1989

Bourne Shore and Harbor Committee, 1992 – 2006
Chairman, 1996 – 2006

Bourne Computer Advisory Committee
1988 – 1990

Bourne Capital Outlay Committee

Worcester Polytechnic Alumni Association, Cape Cod Region

Falmouth Hospital Upper Cape Regional Advisory Board

James Potter

Bourne, MA 02532

1/19/22

I am interested to serve on the newly-formed Wastewater Advisory Committee, please see my resume below:

Education: 5 year Professional Bachelor's Degree in Architecture from Roger Williams University

Boards/Committees:

Bourne Sewer Commissioners, Chair 3 years
Bourne Board of Selectmen, Vice Chair 2 years
School Building Committee, Chair 2015 – present
Community Engagement Committee, BOS representative
Cape & Islands Water Protection Fund Board, Bourne representative
Wareham Board of Selectmen/Sewer Commissioners 3 years

Experience/accomplishment qualifications:

- Served the Town on the BOS/BOSC for 3 years and provided transparency, professionalism, leadership and accountability to the position. Always came prepared with extensive research and willing to go the extra mile for the community.
- I have worked as an Architect Project Manager here in Bourne for the last 16 years, and bring master planning, design, construction, and attention to detail.
- I have knowledge of the Wareham sewer system, having previously served as a Commissioner there, am familiar with the Wareham-Bourne IMA, and understand Bourne sewer needs.
- Familiar with Sewer Expansion, and completed 3 major sewer expansion projects during my time in Wareham.
- Reformed 'Sewer Allocation', no moratorium or waiting list, every business seeking wastewater gallonage was approved in the last 3 years.
- Worked with the homeowners on Savary Ave, the Army Corp, and Board of Health to install private systems to replace the twice-failed community system.
- Drafted 50 pages of revised Sewer policies and procedure regulations that is the model, from which the Board of Sewer Commissioners has, under review for edit, consultation, and adoption.
- Served as the single voting representative from Bourne to the Cape & Islands Water Protection Fund Board, and proposed a Home Rule Petition to amend the language of the enabling legislation, that will include capital-costs reimbursement for the Bourne-Wareham sewer agreement.
- Pursued the Comprehensive Wastewater idea for Bourne, and voted to hire Environmental Partners.
- Previously proposed splitting Community Preservation Funds and creating a Town Sewer Fund.
- Bring a team-oriented & collaborative approach, implementing real solutions, to everything that lies ahead.

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c/o Town Administrator,
24 Perry Avenue
Buzzards Bay, MA 02532

NAME: James Potter

DATE: 1/19/22

ADDRESS: [REDACTED] PRECINCT: 1

OCCUPATION: Architect

TELEPHONE # [REDACTED]

BACKGROUND: Former Selectman/Sewer Commissioner in both Bourne & Wareham

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	TOWN ADMINISTRATORS ADVISORY COMMITTEE ON PEDESTRIAN BICYCLE PATHWAY - to assist in the creation of a pedestrian and bicycle pathway within the geographic boundaries of the Town of Bourne, connecting with the Shining Sea pathway in Falmouth
	TRANSPORTATION ADVISORY COMMITTEE - shall have the following responsibilities on transportation-related projects proposed by the town and others and shall include, but not limited to, highways and other roadways, rail services, bus services, shuttle services and transportation facilities.
X	WASTEWATER ADVISORY COMMITTEE - To serve as advisors to the Town Administrator and Bourne Board of Sewer Commissioners in the areas of public policy and long-range planning as it relates to the implementation of the Comprehensive Wastewater Management Plan.
	WASTEWATER FACILITY DESIGN AND BUILDING - To serve as advisors to the Town Administrator and Bourne Board of Sewer Commissioners as it prepares the final design, siting and construction of a 100,000 gpd facility within Buzzards Bay.
	UPPER CAPE REGIONAL TRANSFER STATION - is the body that oversees all operations for the municipally-owned regional solid waste transfer station located on Joint Base Cape Cod (JBCC) in Sandwich.
	VETERANS GRAVES OFFICER
	OTHER (please list)

From: [Mastrangelo, Mary Jane](#)
To: [All Selectmen](#)
Cc: [Cannon, Glenn](#)
Subject: Wastewater Advisory Committee
Date: Thursday, January 20, 2022 11:19:34 AM

THIS EMAIL IS TO A QUORUM OF A PUBLIC BODY. PLEASE DO NOT REPLY ALL

If you are interested in serving as the Board's representative on the Wastewater Advisory Committee please let Glenn know.

MJ

MJ Mastrangelo
Member Bourne Board of Selectmen
Chair Bourne Sewer Commissioners
508-563-9415
Cell 508-265-4636

From: [Mastrangelo, Mary Jane](#)
To: [Cannon, Glenn](#)
Subject: Wastewater Advisory Committee
Date: Thursday, January 20, 2022 11:26:09 AM

I am interested in serving as the Board's representative on the Wastewater Advisory Committee.

MJ

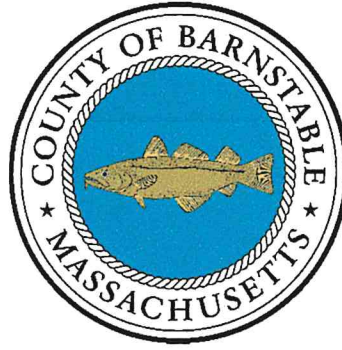
MJ Mastrangelo
Member Bourne Board of Selectmen
Chair Bourne Sewer Commissioners
508-563-9415
Cell 508-265-4636

Buzzards Bay Commercial Wastewater Summary Sheet (January 21, 2022)

OWNER	LOCATION	GPD Req'd	GPD Exist'g	\$1500 App Paid Date	Planning Board Approval Date	Preliminary Allocation Approval Date	Prelim Alloc Fee (2017) ¹	Prelim Allocation Date Paid	Sewer Develop Charge (2006) ²	Operational Allocation	Comments	Previous 6 Month Review Dates
	2020 GPD Downtown Act. Us	112496										
	2% Residential Reserve	6000										
Operational Allocations												
Vincent Michienzi	85-93 Main Street	13000	931	10/24/2018		10/15/2018	\$18,000.00	10/24/2019			Temporary Certificate of Occupancy	11/25/19, 5/25/2020, 9/8/2020, 4/27/21
HAMPTON INN	12 Kendall Rae Place	15243	4614			9/30/2014		11/11/2019	\$48,533.12		Certificate of Occupancy issued in January 2020 - We need to review the Reserve Capacity in January 2023 per Policy (V. Managing Unused/Underused Allocations)	
	<i>Total Operational GPD</i>	146739										
Preliminary Allocations												
Maritime Holdings LLC/Rob	12 Wagner Way	17750		1/5/2018		6/18/2019	\$22,750.00	11/20/2019				11/25/2019, 5/25/2020, 2/1/2021, 4/27/21
CALAMAR	13 Kendall Rae Place	16800			1/29/2018	9/19/2017	\$21,800.00	1/6/2020			Calamar representatives appeared at the Board of Selectmen on April 6, 2021	11/25/19, 5/25/20, 4/6/21
Vincent Michienzi	100 Block	26080				10/13/2015					-1000 gpd 11/25/2019 (originally 27080)	11/25/19, 5/25/2020, 9/8/2020, 4/27/21
MMA Cadet Housing	11 Buttermilk Way	7070	310	12/27/2019	N/A	1/28/2020	\$12,070.00	2/20/2020			11 Buttermilk Way was reviewed by the BOSC on Feb 23, 2021	
James McLaughlin	227 Main Street	79	40	12/31/2019	10/10/2019	1/28/2020	\$5,079.00	2/7/2020			Operational	
Bay Motor Inn	223 Main Street	11985	640	5/20/2020		7/28/2020	\$16,335.00	9/1/2020			Approval after BBWD moratorium sent letter 08.03.2020	2/1/2021, 4/27/21
CMP Development LLC	2 Kendall Rae Place	46475		2/25/2020		7/28/2020	\$0.00				Approval after BBWD moratorium sent letter 08.03.2020	10/28/2020, 4/27/21
340 Main St LLC	340 Main St	3095		8/19/2020	2/27/2020	8/25/2020	\$8,095.00	11/2/2020			Potential 2nd phase to include 18-24 residential units / sent letter 09.01.2020	2/1/2021, 4/27/21
Domino's/Wareham Pizza Co	2 Bourne Bridge Appr	500	0 (unit)	9/15/2021								
	<i>Total Approved GPD</i>	276073										
	<i>Total Available GPD</i>	23927										
Pending Applications		Requested:										
140 Main St LLC	140 Main St	1,160	33								Mixed use retail and residential	

¹ Preliminary Allocation Fee is based on the Commercial Wastewater Management Allocation Policy approved in 2017

² Sewer Development Charge based on the Sewer Use Charges Certificate of Vote dated January 17, 2006



FOR IMMEDIATE RELEASE

**Information from:
Barnstable County Commissioners' Office**



Barnstable County Commissioners Announce Launch of Public Comment Period for Expenditure of American Rescue Plan Act (ARPA) Grant Funds

Barnstable County was allocated \$41.3 million in the ARPA legislation, efforts are now underway to determine regional priorities for disbursement of those funds

December 22, 2021 (Barnstable, MA) – The Barnstable County Board of Commissioners announced that a public comment period on the distribution of ARPA grant funds received from the US Department of the Treasury will begin next week.

The Commissioners want input from citizens, sector stakeholders, town elected and appointed officials, members of the Assembly of Delegates, and members of Cape Cod's legislative delegation on priorities for eligible uses of these funds.

"This is a great one-time opportunity for Cape Cod to address regional needs and the Commissioners look forward to engaging in this public comment process" said Barnstable County Commission Chairman Ron Bergstrom. Barnstable County Commissioners Mark Forest and Sheila Lyons added "we need to hear about the priorities that the towns and citizens have for the use of these grant funds and their views will factor into fund distribution decisions to come."

The public comment period will be from 12/27/21 to 2/3/22. Further details will be released on Monday 12/27/21.

Barnstable County, and other municipal and county governments, have until December 31, 2024, to determine the use of American Rescue Plan Act funds and until December 31, 2026, to spend all funds.

ABOUT BARNSTABLE COUNTY REGIONAL GOVERNMENT OF CAPE COD:

Barnstable County provides exemplary government functions and services to keep our community healthy and safe, promote sustainable growth, and offers a proactive, open government that enhances the quality of life for the citizens of Barnstable County. Learn more at www.barnstablecounty.org

MEDIA CONTACT

Sonja Sheasley, Communications Manager
Sonja.sheasley@barnstablecounty.org
(508) 375-6896

###

From: [Cannon, Glenn](#)
To: [Mark Forest](#); sheila.lyons@barnstablecounty.org; ronald.bergstrom@barnstablecounty.org
Cc: [Beth Albert](#) (balbert@barnstablecounty.org); vharik@barnstablecounty.org
Subject: Public Comment on ARPA Funding
Date: Thursday, January 6, 2022 4:42:00 PM

Hello,

The Bourne of Bourne Administrative Staff would respectfully request that the Barnstable County Commissioners appropriate American Rescue Plan Act (ARPA) funding for the improvements of water quality in Bourne.

The Town of Bourne has numerous Sewer/Water Quality projects currently underway and additional funding would enable the Town of Bourne to complete or expand these projects.

Currently, the Town of Bourne is appropriating American Rescue Plan Act funds to initiate Inflow and Infiltration (I&I) repairs to our existing sewer system in Buzzards Bay. We are contracted to begin Phase 1 of a three (3) phase project this spring. Additional funding could be used to complete Phase 2 and Phase 3.

We have recently completed construction of our own Waste Water Treatment Facility in Buzzards Bay. The new treatment facility allows the Town of Bourne to increase our flow to Wareham. The opportunity to send additional flow to Wareham would expand our existing sewered area and improve the water quality in Buzzards Bay.

We are currently studying the ability to enter into a private/public partnership on the south side of the canal with the chance to acquire a private sewer plant. The sewer plant may have the ability for additional capacity allowing for more sewered areas in a current unsewered area. The acquisition of the private sewer plant and any potential expansion of the sewered area would require additional funding.

This is a sample of the numerous projects we are actively pursuing in Bourne, additional financing assistance would allow for our success in improving the water quality on Cape Cod.

Please let me know if you have any questions or need any additional information.

Glenn

Glenn Cannon, P.E.
Town of Bourne
Acting Town Administrator
24 Perry Avenue
Buzzards Bay, MA 02532
(508) 759-0600 Ext 1348
gcannon@townofbourne.com

From: [Papadopoulos, George](#)
To: [Mary Jane Mastrangelo](#); Petersen@savebuzzardsbay.org; [Cannon, Glenn](#)
Subject: Draft NPDES Permit for the Massachusetts Maritime Academy - MA0024368
Date: Monday, January 10, 2022 11:25:52 AM

January 10, 2022

Dear Mary Jane, Korrin, and Glenn,

Attached is the Draft Permit, Fact Sheet, and Public Notice for the draft NPDES Permit for Massachusetts Maritime Academy (permit number MA0024368). These documents will also be posted on EPA Region 1's NPDES website at <https://www.epa.gov/npdes-permits/massachusetts-draft-individual-npdes-permits> and the public comment period is from January 10, 2022 through February 8, 2022.

<https://www.epa.gov/system/files/documents/2022-01/draftma0024368permit.pdf>

Please let me know if you have any questions.

Thank you

George Papadopoulos
Environmental Engineer
USEPA- 5 P.O. Square, Suite 100
Boston, MA 02109-3912
Phone: (617) 918-1579
Papadopoulos.george@epa.gov

This email has been scanned for spam and viruses by Proofpoint Essentials. Click [here](#) to report this email as spam.

**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”),

**Massachusetts Maritime Academy
101 Academy Drive
Buzzards Bay, MA 02532**

is authorized to discharge from the facility located at

**Massachusetts Maritime Academy
101 Academy Drive
Buzzards Bay, MA 02532**

to receiving water named

**Cape Cod Canal
Buzzards Bay Watershed
USGS Hydrologic code: 01090002**

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

This permit shall become effective on the first day of the calendar month immediately following 60 days after signature. ¹

This permit expires at midnight, five years from the last day of the month preceding the effective date.

This permit supersedes the permit issued on February 25, 2011.

This permit consists of **Part I** including the cover page(s), **Attachment A** (Marine Acute Toxicity Test Protocol, July 2012, 10 pages) and **Part II** (NPDES Part II Standard Conditions, April 2018, 21 pages).

Signed this day of

Ken Moraff, Director
Water Division
Environmental Protection Agency
Region 1
Boston, MA

¹ Pursuant to 40 Code of Federal Regulations (C.F.R.) § 124.15(b)(3), if no comments requesting a change to the Draft Permit are received, the permit will become effective upon the date of signature. Procedures for appealing EPA’s Final Permit decision may be found at 40 C.F.R. § 124.19.

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 treated effluent and chiller water through Outfall Serial Number 001 to the Cape Cod Canal. The discharge shall be limited and monitored as specified below; the receiving water and the influent shall be monitored as specified below.

Effluent Characteristic	Effluent Limitation			Monitoring Requirements ^{1,2,3}	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type ⁴
Rolling Average Effluent Flow ⁵	77,000 GPD	---	---	Continuous	Recorder
Effluent Flow ⁵	Report GPD	---	Report GPD	Continuous	Recorder
BOD ₅	30 mg/L	45 mg/L	Report mg/L	1/week	Composite
BOD ₅ Removal	≥ 85 %	---	---	1/month	Calculation
TSS	30 mg/L	45 mg/L	Report mg/L	1/week	Composite
TSS Removal	≥ 85 %	---	---	1/month	Calculation
pH Range ⁶	6.5 - 8.5 S.U.			1/day	Grab
Fecal Coliform ⁷	14 cfu/100 mL	---	43 cfu/100 mL	1/week	Grab
<i>Enterococcus</i> ⁷	35 cfu/100 mL	---	276 cfu/100 mL	1/week	Grab
Total Residual Chlorine ⁸	---	---	1.0 mg/L	3/Day	Grab
Ammonia Nitrogen	---	---	Report mg/L	1/quarter	Composite

Effluent Characteristic	Effluent Limitation			Monitoring Requirements ^{1,2,3}	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type ⁴
Total Kjeldahl Nitrogen ⁹	---	---	Report mg/L	1/quarter	Composite
Nitrate + Nitrite ⁹	---	---	Report mg/L	1/quarter	Composite
Total Nitrogen ⁹	---	---	Report mg/L	1/quarter	Calculation
Perfluorohexanesulfonic acid (PFHxS) ¹⁰	---	---	Report ng/L	1/quarter	Composite
Perfluorononanoic acid (PFNA) ¹⁰	---	---	Report ng/L	1/quarter	Composite
Perfluorooctanesulfonic acid (PFOS) ¹⁰	---	---	Report ng/L	1/quarter	Composite
Perfluorooctanoic acid (PFOA) ¹⁰	---	---	Report ng/L	1/quarter	Composite
Perfluoroheptanoic acid (PFHpA) ¹⁰	---	---	Report ng/L	1/quarter	Composite
Perfluorodecanoic acid (PFDA) ¹⁰	---	---	Report ng/L	1/quarter	Composite
Whole Effluent Toxicity (WET) Testing^{11,12}					
LC ₅₀	---	---	≥ 50 %	1/year	Composite
Salinity	---	---	Report ppt	1/year	Composite
Ammonia Nitrogen	---	---	Report mg/L	1/year	Composite
Total Cadmium	---	---	Report mg/L	1/year	Composite
Total Copper	---	---	Report mg/L	1/year	Composite
Total Nickel	---	---	Report mg/L	1/year	Composite
Total Lead	---	---	Report mg/L	1/year	Composite
Total Zinc	---	---	Report mg/L	1/year	Composite
Total Organic Carbon	---	---	Report mg/L	1/year	Composite

Ambient Characteristic ¹³	Reporting Requirements			Monitoring Requirements ^{1,2,3}	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type ⁴
Salinity	---	---	Report ppt	1/year	Grab
Ammonia Nitrogen	---	---	Report mg/L	1/year	Grab
Total Cadmium	---	---	Report mg/L	1/year	Grab

Total Copper	---	---	Report mg/L	1/year	Grab
Total Nickel	---	---	Report mg/L	1/year	Grab
Total Lead	---	---	Report mg/L	1/year	Grab
Total Zinc	---	---	Report mg/L	1/year	Grab
Total Organic Carbon	---	---	Report mg/L	1/year	Grab
pH ¹⁴	---	---	Report S.U.	1/year	Grab
Temperature ¹⁴	---	---	Report °C	1/year	Grab

Influent Characteristic	Reporting Requirements			Monitoring Requirements ^{1,2,3}	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type ⁴
BOD ₅	Report mg/L	---	---	1/week	Composite
TSS	Report mg/L	---	---	1/week	Composite
Perfluorohexanesulfonic acid (PFHxS) ¹⁰	---	---	Report ng/L	1/quarter	Composite
Perfluorononanoic acid (PFNA) ¹⁰	---	---	Report ng/L	1/quarter	Composite
Perfluorooctanesulfonic acid (PFOS) ¹⁰	---	---	Report ng/L	1/quarter	Composite
Perfluorooctanoic acid (PFOA) ¹⁰	---	---	Report ng/L	1/quarter	Composite
Perfluoroheptanoic acid (PFHpA) ¹⁰	---	---	Report ng/L	1/quarter	Composite
Perfluorodecanoic acid (PFDA) ¹⁰	---	---	Report ng/L	1/quarter	Composite

Sludge Characteristic	Reporting Requirements			Monitoring Requirements ^{1,2,3}	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type ⁴
Perfluorohexanesulfonic acid (PFHxS) ¹⁵	---	---	Report ng/g	1/quarter	Composite ¹⁶
Perfluorononanoic acid (PFNA) ¹⁵	---	---	Report ng/g	1/quarter	Composite ¹⁶
Perfluorooctanesulfonic acid (PFOS) ¹⁵	---	---	Report ng/g	1/quarter	Composite ¹⁶
Perfluorooctanoic acid (PFOA) ¹⁵	---	---	Report ng/g	1/quarter	Composite ¹⁶
Perfluoroheptanoic acid (PFHpA) ¹⁵	---	---	Report ng/g	1/quarter	Composite ¹⁶
Perfluorodecanoic acid (PFDA) ¹⁵	---	---	Report ng/g	1/quarter	Composite ¹⁶

2. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge treated swimming pool water through Outfall Serial Number 002 to the Cape Cod Canal. The discharge shall be limited and monitored as specified below.

Effluent Characteristic	Effluent Limitation			Monitoring Requirements ^{1,2,3}	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type ⁴
Effluent Flow ¹⁷	---	---	10,000 GPD ¹⁷	1/discharge	Estimate
pH Range ⁶	6.5 - 8.5 S.U.			1/hour	Grab
Total Residual Chlorine ⁸	---	---	1.0 mg/L	1/hour	Grab
Total Copper	---	---	0.5 mg/L	1/hour	Grab

Footnotes begin on Page 6

Footnotes:

1. All samples shall be collected in a manner to yield representative data. A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of the week each month at the locations specified below:

Parameter	Sampling Location
BOD ₅ and TSS	Influent; 24 hour composite samples shall be taken by the sampler line in the outlet pipe of the Screening Unit Effluent; 24 hour composite samples shall be taken from the line drawn from the bottom of outlet trough of the UV system
Fecal Coliform and <i>Enterococcus</i>	Grab samples shall be taken at the UV system overflow weir
TRC (when chlorinating)	Effluent TRC shall be taken as grab sample from the accessible downstream manhole (outside the plant).
Whole Effluent Toxicity	Effluent 24 hour composite samples shall be taken from the line drawn from the bottom of outlet trough of the UV system
Total Nitrogen as N, TKN Total Nitrate and Nitrite as N Total Ammonia as N	Effluent 24 hour composite samples shall be taken from the line drawn from the bottom of outlet trough of the UV system

Occasional deviations from the routine sampling program are allowed, but the reason for the deviation shall be documented as an electronic attachment to the applicable discharge monitoring report (DMR). The Permittee shall report the results to the Environmental Protection Agency Region 1 (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) of any additional testing above that required herein, if testing is in accordance with 40 CFR Part 136.

2. In accordance with 40 CFR § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is “sufficiently sensitive” when: 1) The

method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) The method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term “minimum level” refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor.

3. When a parameter is not detected above the ML, the Permittee must report the data qualifier signifying less than the ML for that parameter (e.g., $< 50 \mu\text{g/L}$, if the ML for a parameter is $50 \mu\text{g/L}$). For reporting an average based on a mix of values detected and not detected, assign a value of “0” to all non-detects for that reporting period and report the average of all the results.
4. A “grab” sample is an individual sample collected in a period of less than 15 minutes.

A “composite” sample is a composite of at least twenty-four (24) grab samples taken during one consecutive 24-hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportional to flow.

5. Report the annual average, monthly average, and the maximum daily flow in gallons per day (GPD). The limit of 77,000 GPD is an annual average, which shall be reported as a rolling average. The value will be calculated as the arithmetic mean of the monthly average flow for the reporting month and the monthly average flows of the previous eleven months.
6. The pH shall be within the specified range at all times. The minimum and maximum pH sample measurement values for the month shall be reported in standard units (S.U.).
7. The monthly average limits for *Enterococcus* and Fecal coliform are expressed as geometric means.
8. For Outfall 001, TRC monitoring is required 3 times per day only for those days that the Permittee chlorinates its effluent in the event of the ultraviolet (UV) disinfection system being inoperable or inadequate to achieve bacterial control, or when any sand filters are being repaired. The permittee shall notify EPA and MassDEP within 24 hours of when emergency chlorination is initiated. Under such circumstances, the Permittee shall operate a flow pacing pump to feed chlorine solution to the sand filter inlet and dechlorinate the effluent prior to discharge, if necessary, to meet the TRC limit of 1.0 mg/l. For those months when there is no effluent chlorination, the Permittee must report a

No Data Indicator (NODI) Code on the DMR. In Attachment E of *NPDES Permit Program Instructions for the DMRs*, a list of NODI codes is included at <https://echo.epa.gov/tools/data-downloads/icis-npdes-dmr-summary>.

For Outfall 002, TRC monitoring is required once per hour while discharging, including for the duration of any complete swimming pool discharge, after dechlorination. For those months that there is no discharge from this outfall, the Permittee must report a No Data Indicator (NODI) Code on the DMR.

Chlorination and dechlorination systems shall include an alarm system for indicating system interruptions or malfunctions. Any interruption or malfunction of the chlorine dosing system that may have resulted in levels of chlorine that were inadequate for achieving effective disinfection, or interruptions or malfunctions of the dechlorination system that may have resulted in excessive levels of chlorine in the final effluent shall be reported with the monthly DMRs. The report shall include the date and time of the interruption or malfunction, the nature of the problem, and the estimated amount of time and that the reduced levels of chlorine or dechlorination chemicals occurred.

9. Total Kjeldahl nitrogen and nitrate + nitrite samples shall be collected concurrently. The results of these analyses shall be used to calculate both the concentration and mass loadings of total nitrogen, as follows.

Total Nitrogen (mg/L) = Total Kjeldahl Nitrogen (mg/L) + Nitrate + Nitrite (mg/L)

Total Nitrogen (lb/day) = [(average monthly Total Nitrogen (mg/L) * total monthly effluent flow (Millions of Gallons (MG)) / # of days in the month] * 8.34

See Part I.F.1 for special conditions related to nitrogen.

10. Report in nanograms per liter (ng/L). This reporting requirement for the listed per- and polyfluoroalkyl substances (PFAS) parameters takes effect the first full calendar quarter following 6 months after EPA notifies the Permittee that an EPA multi-lab validated method for wastewater is available.
11. The Permittee shall conduct an annual acute toxicity test (LC50) in accordance with test procedures and protocols specified in Attachment A of this permit. LC50 is defined in Part II.E. of this permit. The Permittee shall test the Mysid Shrimp, *Americamysis bahia*. Toxicity test samples shall be collected and tests completed during the month of June. The complete report for each toxicity test shall be submitted as an attachment to the DMR submittal which includes the results for that toxicity test.
12. For Part I.A.1., Whole Effluent Toxicity Testing, the Permittee shall conduct the analyses specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS for the effluent sample. If toxicity test(s) using the receiving water as diluent show the receiving water to be toxic

or unreliable, the Permittee shall follow procedures outlined in **Attachment A**, Section IV, DILUTION WATER. Minimum levels and test methods are specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS.

13. For Part I.A.1., Ambient Characteristic, the Permittee shall conduct the analyses specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS for the receiving water sample collected as part of the WET testing requirements. Such samples shall be taken from the receiving water at a point immediately outside of the permitted discharge's zone of influence at a reasonably accessible location, as specified in **Attachment A**. Minimum levels and test methods are specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS.
14. A pH and temperature measurement shall be taken of each receiving water sample at the time of collection and the results reported on the appropriate DMR. These pH and temperature measurements are independent from any pH and temperature measurements required by the WET testing protocols.
15. Report in nanograms per gram (ng/g). This reporting requirement for the listed PFAS parameters takes effect the first full calendar quarter following 6 months after EPA notifies the permittee that an EPA multi-lab validated method for sludge is available.
16. Sludge sampling shall be as representative as possible based on guidance found at <https://www.epa.gov/sites/production/files/2018-11/documents/potw-sludge-sampling-guidance-document.pdf>.
17. Periodic discharges of up to 10,000 gallons from the campus swimming pool are authorized to adjust pool water chemistry. The Permittee must notify EPA and MassDEP prior to the complete discharge of the swimming pool as specified in Part I.G.7 of this permit. The Permittee must sample once every hour for the parameters listed for both the periodic and complete pool discharges.

Part I.A., continued.

3. The discharge shall not cause a violation of the water quality standards of the receiving water.
4. The discharge shall be free from pollutants in concentrations or combinations that, in the receiving water, settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life.
5. The discharge shall be free from pollutants in concentrations or combinations that adversely affect the physical, chemical, or biological nature of the bottom of the water course.
6. The discharge shall not result in pollutants in concentrations or combinations in the receiving water that are toxic to humans, aquatic life or wildlife.
7. The discharge shall be free from floating, suspended and settleable solids in concentrations or combinations that would impair any use assigned to the receiving water.
8. The discharge shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life.

B. UNAUTHORIZED DISCHARGES

1. This permit authorizes discharges only from the outfall listed in Part I.A.1 and I.A.2, in accordance with the terms and conditions of this permit. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs), are not authorized by this permit. The Permittee must provide notification to EPA within 24 hours of becoming aware of any unauthorized discharge, in accordance with Part II.D.1.e.(1) (24-hour reporting). See Part I.G below for reporting requirements.
2. The Permittee must provide notification to the public within 24 hours of becoming aware of any unauthorized discharge, except SSOs that do not impact a surface water or the public, on a publicly available website, and it shall remain on the website for a minimum of 12 months. Such notification shall include the location and description of the discharge; estimated volume; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue.
3. Notification of SSOs to MassDEP shall be made on its SSO Reporting Form (which includes MassDEP Regional Office telephone numbers). The reporting form and instruction for its completion may be found on-line at <https://www.mass.gov/how-to/sanitary-sewer-overflowbypassbackup-notification>.

C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance (O&M) of the sewer system shall be in compliance with the Standard Conditions of Part II and the following terms and conditions. The Permittee shall complete the following activities for the collection system which it owns:

1. Maintenance Staff

The Permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit. Provisions to meet this requirement shall be described in the Collection System O&M Plan required pursuant to Section C.5. below.

2. Preventive Maintenance Program

The Permittee shall maintain an ongoing preventive maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure. The program shall include an inspection program designed to identify all potential and actual unauthorized discharges. Plans and programs to meet this requirement shall be described in the Collection System O&M Plan required pursuant to Section C.5. below.

3. Infiltration/Inflow

The Permittee shall control infiltration and inflow (I/I) into the sewer system as necessary to prevent high flow related unauthorized discharges from their collection systems and high flow related violations of the wastewater treatment plant's effluent limitations. Plans and programs to control I/I shall be described in the Collection System O&M Plan required pursuant to Section C.5. below.

4. Collection System Mapping

Within 18 months of the effective date of this permit, the Permittee shall prepare a map of the sewer collection system that it owns. The map shall be on a street map of the campus, with sufficient detail and at a scale to allow easy interpretation. The collection system information shown on the map shall be based on current conditions and shall be kept up-to-date and available for review by federal, state, or local agencies. Such map(s) shall include, but not be limited to the following:

- a. All sanitary sewer lines and related manholes;
- b. All combined sewer lines, related manholes, and catch basins;
- c. All combined sewer regulators and any known or suspected connections between the sanitary sewer and storm drain systems (e.g. combination manholes);

- d. All outfalls, including the treatment plant outfall(s), CSOs, and any known or suspected SSOs, including stormwater outfalls that are connected to combination manholes;
- e. All pump stations and force mains;
- f. The wastewater treatment facility;
- g. All surface waters (labeled);
- h. Other major appurtenances such as inverted siphons and air release valves;
- i. A numbering system which uniquely identifies manholes, catch basins, overflow points, regulators and outfalls;
- j. The scale and a north arrow; and
- k. The pipe diameter, date of installation, type of material, distance between manholes, and the direction of flow.

5. Collection System O&M Plan

The Permittee shall develop and implement a Collection System O&M Plan.

- a. Within six (6) months of the effective date of the permit, the Permittee shall submit to EPA and the State:
 - (1) A description of the collection system management goals, staffing, information management, and legal authorities;
 - (2) A description of the collection system and the overall condition of the collection system including a list of all pump stations and a description of recent studies and construction activities; and
 - (3) A schedule for the development and implementation of the full Collection System O&M Plan including the elements in paragraphs b.1. through b.8. below.
- b. The full Collection System O&M Plan shall be completed, implemented and submitted to EPA and the State within twenty-four (24) months from the effective date of this permit. The Plan shall include:
 - (1) The required submittal from paragraph 5.a. above, updated to reflect current information;
 - (2) A preventive maintenance and monitoring program for the collection system;

- (3) Description of sufficient staffing necessary to properly operate and maintain the sanitary sewer collection system and how the operation and maintenance program is staffed;
- (4) Description of funding, the source(s) of funding and provisions for funding sufficient for implementing the plan;
- (5) Identification of known and suspected overflows and back-ups, including manholes. A description of the cause of the identified overflows and back-ups, corrective actions taken, and a plan for addressing the overflows and back-ups consistent with the requirements of this permit;
- (6) A description of the Permittee's programs for preventing I/I related effluent violations and all unauthorized discharges of wastewater, including overflows and by-passes and the ongoing program to identify and remove sources of I/I. The program shall include an inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof downspouts;
- (7) An educational public outreach program for all aspects of I/I control, particularly private inflow; and
- (8) An Overflow Emergency Response Plan to protect public health from overflows and unanticipated bypasses or upsets that exceed any effluent limitation in the permit.

6. Annual Reporting Requirement

The Permittee shall submit a summary report of activities related to the implementation of its Collection System O&M Plan during the previous calendar year. The report shall be submitted to EPA and the State annually by March 31. The summary report shall, at a minimum, include:

- a. A description of the staffing levels maintained during the year;
- b. A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year;
- c. Expenditures for any collection system maintenance activities and corrective actions taken during the previous year;
- d. A map with areas identified for investigation/action in the coming year;
- e. A summary of unauthorized discharges during the past year and their causes and a report of any corrective actions taken as a result of the unauthorized discharges reported

pursuant to the Unauthorized Discharges section of this permit; and

- f. If the average annual flow in the previous calendar year exceeded 80 percent of the facility's 0.077 MGD design flow (0.0616 MGD), or there have been capacity related overflows, the report shall include:
 - (1) Plans for further potential flow increases describing how the Permittee will maintain compliance with the flow limit and all other effluent limitations and conditions; and
 - (2) A calculation of the maximum daily, weekly, and monthly infiltration and the maximum daily, weekly, and monthly inflow for the reporting year.

D. ALTERNATE POWER SOURCE

In order to maintain compliance with the terms and conditions of this permit, the Permittee shall provide an alternative power source(s) sufficient to operate the portion of the publicly owned treatment works it owns and operates, as defined in Part II.E.1 of this permit.

E. SLUDGE CONDITIONS

1. The Permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices, including EPA regulations promulgated at 40 CFR § 503, which prescribe "Standards for the Use or Disposal of Sewage Sludge" pursuant to § 405(d) of the CWA, 33 U.S.C. § 1345(d).
2. If both state and federal requirements apply to the Permittee's sludge use and/or disposal practices, the Permittee shall comply with the more stringent of the applicable requirements.
3. The requirements and technical standards of 40 CFR Part 503 apply to the following sludge use or disposal practices:
 - a. Land application - the use of sewage sludge to condition or fertilize the soil
 - b. Surface disposal - the placement of sewage sludge in a sludge only landfill
 - c. Sewage sludge incineration in a sludge only incinerator
4. The requirements of 40 CFR Part 503 do not apply to facilities which dispose of sludge in a municipal solid waste landfill. 40 CFR § 503.4. These requirements also do not apply to facilities which do not use or dispose of sewage sludge during the life of the permit but rather treat the sludge (e.g., lagoons, reed beds), or are otherwise excluded under 40 CFR § 503.6.

5. The 40 CFR Part 503 requirements include the following elements:

- a. General requirements
- b. Pollutant limitations
- c. Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
- d. Management practices
- e. Record keeping
- f. Monitoring
- g. Reporting

Which of the 40 CFR Part 503 requirements apply to the Permittee will depend upon the use or disposal practice followed and upon the quality of material produced by a facility. The EPA Region 1 guidance document, “EPA Region 1 - NPDES Permit Sludge Compliance Guidance” (November 4, 1999), may be used by the Permittee to assist it in determining the applicable requirements.

6. The sludge shall be monitored for pollutant concentrations (all Part 503 methods) and pathogen reduction and vector attraction reduction (land application and surface disposal) at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year, as follows:

less than 290	1/ year
290 to less than 1,500	1 /quarter
1,500 to less than 15,000	6 /year
15,000 +	1 /month

Sampling of the sewage sludge shall use the procedures detailed in 40 CFR § 503.8.

7. Under 40 CFR § 503.9(r), the Permittee is a “person who prepares sewage sludge” because it “is ... the person who generates sewage sludge during the treatment of domestic sewage in a treatment works” If the Permittee contracts with another “person who prepares sewage sludge” under 40 CFR § 503.9(r) – i.e., with “a person who derives a material from sewage sludge” – for use or disposal of the sludge, then compliance with Part 503 requirements is the responsibility of the contractor engaged for that purpose. If the Permittee does not engage a “person who prepares sewage sludge,” as defined in 40 CFR § 503.9(r), for use or disposal, then the Permittee remains responsible to ensure that the applicable requirements in Part 503 are met. 40 CFR § 503.7. If the ultimate use or disposal method is land application, the Permittee is responsible for providing the person receiving the sludge with notice and necessary information to comply with the requirements of 40 CFR § 503 Subpart B.

F. SPECIAL CONDITIONS

1. Nitrogen Optimization

- a. The Permittee shall continue to optimize the treatment facility operations relative to total nitrogen (“TN”) removal through measures such as continued ammonia removal, maximization of solids retention time while maintaining compliance with BOD₅ and TSS limits, and/or other operational changes designed to enhance the removal of nitrogen in order to minimize the annual average mass discharge of total nitrogen.
- b. The permittee shall submit an annual report to EPA and the MassDEP by **February 1st** of each year that summarizes activities related to optimizing nitrogen removal efficiencies, documents the annual nitrogen discharge load from the facility, and tracks trends relative to the previous calendar year. If, in any year, the treatment facility discharges of TN on an average annual basis have increased, the annual report shall include a detailed explanation of the reasons why TN discharges have increased, including any changes in influent flows/loads and any operational changes. The report shall also include all supporting data.

G. REPORTING REQUIREMENTS

Unless otherwise specified in this permit, the Permittee shall submit reports, requests, and information and provide notices in the manner described in this section.

1. Submittal of DMRs Using NetDMR

The Permittee shall continue to submit its monthly monitoring data in discharge monitoring reports (DMRs) to EPA and the State electronically using NetDMR no later than the 15th day of the month. When the Permittee submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to EPA or the State. NetDMR is accessible through EPA’s Central Data Exchange at <https://cdx.epa.gov/>.

2. Submittal of Reports as NetDMR Attachments

Unless otherwise specified in this permit, the Permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies. See Part I.G.6 for more information on State reporting. Because the due dates for reports described in this permit may not coincide with the due date for submitting DMRs (which is no later than the 15th day of the month), a report submitted electronically as a NetDMR attachment shall be considered timely if it is electronically submitted to EPA using NetDMR with the next DMR due following the report due date specified in this permit.

3. Submittal of Biosolids/Sewage Sludge Reports

By February 19 of each year, the Permittee must electronically report their annual Biosolids/Sewage Sludge Report for the previous calendar year using EPA's NPDES Electronic Reporting Tool ("NeT"), or another approved EPA system, which is accessible through EPA's Central Data Exchange at <https://cdx.epa.gov/>.

4. Submittal of Requests and Reports to EPA Water Division (WD)

- a. The following requests, reports, and information described in this permit shall be submitted to the NPDES Applications Coordinator in EPA Water Division (WD):

- (1) Transfer of permit notice;
- (2) Request for changes in sampling location;
- (3) Request for reduction in testing frequency;
- (4) Report on unacceptable dilution water / request for alternative dilution water for WET testing.

- b. These reports, information, and requests shall be submitted to EPA WD electronically at R1NPDESReporting@epa.gov.

5. Submittal of Reports to EPA Enforcement and Compliance Assurance Division (ECAD) in Hard Copy Form

- a. The following notifications and reports shall be signed and dated originals, submitted as hard copy, with a cover letter describing the submission:

- (1) Written notifications required under Part II.B.4.c, for bypasses, and Part II.D.1.e, for sanitary sewer overflows (SSOs). Starting on 21 December 2025, such notifications must be done electronically using EPA's NPDES Electronic Reporting Tool ("NeT"), or another approved EPA system, which will be accessible through EPA's Central Data Exchange at <https://cdx.epa.gov/>.

- b. This information shall be submitted to EPA ECAD at the following address:

**U.S. Environmental Protection Agency
Enforcement and Compliance Assurance Division
Water Compliance Section
5 Post Office Square, Suite 100 (04-SMR)
Boston, MA 02109-3912
Fax: 617-918-0598**

6. State Reporting

Duplicate signed copies of all WET test reports shall be submitted to the Massachusetts Department of Environmental Protection, Division of Watershed Management, at the following address:

**Massachusetts Department of Environmental Protection
Bureau of Water Resources
Division of Watershed Management
8 New Bond Street
Worcester, Massachusetts 01606**

7. Verbal Reports and Verbal Notifications

- a. Any verbal reports or verbal notifications, if required in Parts I and/or II of this permit, shall be made to both EPA and to the State. This includes verbal reports and notifications which require reporting within 24 hours (e.g., Part II.B.4.c.(2), Part II.B.5.c.(3), and Part II.D.1.e).
- b. Verbal reports and verbal notifications shall be made to:

**EPA ECAD at 617-918-1510
and
MassDEP Emergency Response at 888-304-1133**

H. STATE 401 CERTIFICATION CONDITIONS

1. This Permit is in the process of receiving state water quality certification issued by the State under § 401(a) of the CWA and 40 CFR § 124.53. EPA will incorporate appropriate state water quality certification requirements (if any) into the Final Permit.

MARINE ACUTE TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable acute toxicity tests in accordance with the appropriate test protocols described below:

- **2007.0 - Mysid Shrimp (Americamysis bahia) definitive 48 hour test.**
- **2006.0 - Inland Silverside (Menidia beryllina) definitive 48 hour test.**

Acute toxicity data shall be reported as outlined in Section VIII.

II. METHODS

The permittee shall use the most recent 40 CFR Part 136 methods. Whole Effluent Toxicity (WET) Test Methods and guidance may be found at:

<http://water.epa.gov/scitech/methods/cwa/wet/index.cfm#methods>

The permittee shall also meet the sampling, analysis and reporting requirements included in this protocol. This protocol defines more specific requirements while still being consistent with the Part 136 methods. If, due to modifications of Part 136, there are conflicting requirements between the Part 136 method and this protocol, the permittee shall comply with the requirements of the Part 136 method.

III. SAMPLE COLLECTION

A discharge and receiving water sample shall be collected. The receiving water control sample must be collected immediately upstream of the permitted discharge's zone of influence. The acceptable holding times until initial use of a sample are 24 and 36 hours for on-site and off-site testing, respectively. A written waiver is required from the regulating authority for any holding time extension. Sampling guidance dictates that, where appropriate, aliquots for the analysis required in this protocol shall be split from the samples, containerized and immediately preserved, or analyzed as per 40 CFR Part 136. EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection. Testing for the presence of total residual chlorine¹ (TRC) must be analyzed immediately or as soon as possible, for all effluent samples, prior to WET testing. TRC analysis may be performed on-site or by the toxicity testing laboratory and the samples must be dechlorinated, as necessary, using sodium thiosulfate

¹ For this protocol, total residual chlorine is synonymous with total residual oxidants.
(July 2012)

prior to sample use for toxicity testing. If performed on site the results should be included on the chain of custody (COC) presented to WET laboratory.

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1 mg/L chlorine. If dechlorination is necessary, a thiosulfate control consisting of the maximum concentration of thiosulfate used to dechlorinate the sample in the toxicity test control water must also be run in the WET test.

All samples submitted for chemical and physical analyses will be analyzed according to Section VI of this protocol. Grab samples must be used for pH, temperature, and total residual chlorine (as per 40 CFR Part 122.21).

All samples held for use beyond the day of sampling shall be refrigerated and maintained at a temperature range of 0-6° C.

IV. DILUTION WATER

Samples of receiving water must be collected from a reasonably accessible location in the receiving water body immediately upstream of the permitted discharge's zone of influence. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. EPA strongly urges that screening for toxicity be performed prior to the set up of a full, definitive toxicity test any time there is a question about the test dilution water's ability to achieve test acceptability criteria (TAC) as indicated in Section V of this protocol. The test dilution water control response will be used in the statistical analysis of the toxicity test data. All other control(s) required to be run in the test will be reported as specified in the Discharge Monitoring Report (DMR) Instructions, Attachment F, page 2, Test Results & Permit Limits.

The test dilution water must be used to determine whether the test met the applicable TAC. When receiving water is used for test dilution, an additional control made up of standard laboratory water (0% effluent) is required. This control will be used to verify the health of the test organisms and evaluate to what extent, if any, the receiving water itself is responsible for any toxic response observed.

If dechlorination of a sample by the toxicity testing laboratory is necessary a "sodium thiosulfate" control, representing the concentration of sodium thiosulfate used to adequately dechlorinate the sample prior to toxicity testing, must be included in the test.

If the use of alternate dilution water (ADW) is authorized, in addition to the ADW test control, the testing laboratory must, for the purpose of monitoring the receiving water, also run a receiving water control.

If the receiving water is found to be, or suspected to be toxic or unreliable, ADW of known quality with hardness similar to that of the receiving water may be substituted. Substitution is

species specific meaning that the decision to use ADW is made for each species and is based on the toxic response of that particular species. Substitution to an ADW is authorized in two cases. The first case is when repeating a test due to toxicity in the site dilution water requires an **immediate decision** for ADW use by the permittee and toxicity testing laboratory. The second is when two of the most recent documented incidents of unacceptable site dilution water toxicity require ADW use in future WET testing.

For the second case, written notification from the permittee requesting ADW use **and** written authorization from the permit issuing agency(s) is required **prior to** switching to a long-term use of ADW for the duration of the permit.

Written requests for use of ADW must be mailed with supporting documentation to the following addresses:

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency, Region 1
Five Post Office Square, Suite 100
Mail Code OEP06-5
Boston, MA 02109-3912

and

Manager
Water Technical Unit (SEW)
U.S. Environmental Protection Agency
Five Post Office Square, Suite 100
Mail Code OES04-4
Boston, MA 02109-3912

Note: USEPA Region 1 retains the right to modify any part of the alternate dilution water policy stated in this protocol at any time. Any changes to this policy will be documented in the annual DMR posting.

See the most current annual DMR instructions which can be found on the EPA Region 1 website at <http://www.epa.gov/region1/enforcementandassistance/dmr.html> for further important details on alternate dilution water substitution requests.

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

EPA Region 1 requires tests be performed using four replicates of each control and effluent concentration because the non-parametric statistical tests cannot be used with data from fewer replicates. The following tables summarize the accepted Americamysis and Menidia toxicity test conditions and test acceptability criteria:

EPA NEW ENGLAND EFFLUENT TOXICITY TEST CONDITIONS FOR THE MYSID, AMERICAMYSIS BAHIA 48 HOUR TEST¹

1. Test type	48hr Static, non-renewal
2. Salinity	25ppt \pm 10 percent for all dilutions by adding dry ocean salts
3. Temperature (°C)	20°C \pm 1°C or 25°C \pm 1°C, temperature must not deviate by more than 3°C during test
4. Light quality	Ambient laboratory illumination
5. Photoperiod	16 hour light, 8 hour dark
6. Test chamber size	250 ml (minimum)
7. Test solution volume	200 ml/replicate (minimum)
8. Age of test organisms	1-5 days, <u>\leq 24 hours age range</u>
9. No. Mysids per test chamber	10
10. No. of replicate test chambers per treatment	4
11. Total no. Mysids per test concentration	40
12. Feeding regime	Light feeding using concentrated <u>Artemia</u> naupli while holding prior to initiating the test
13. Aeration ²	None
14. Dilution water	5-30 ppt, +/- 10%; Natural seawater, or deionized water mixed with artificial sea salts
15. Dilution factor	\geq 0.5
16. Number of dilutions ³	5 plus a control. An additional dilution at the permitted effluent concentration (%)

	effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality - no movement of body appendages on gentle prodding
18. Test acceptability	90% or greater survival of test organisms in control solution
19. Sampling requirements	For on-site tests, samples are used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must be first used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters

Footnotes:

- ¹ Adapted from EPA 821-R-02-012.
- ² If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks are recommended.
- ³ When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

EPA NEW ENGLAND TOXICITY TEST CONDITIONS FOR THE INLAND SILVERSIDE, MENIDIA BERYLLINA 48 HOUR TEST¹

1. Test Type	48 hr Static, non-renewal
2. Salinity	25 ppt \pm 10 % by adding dry ocean salts
3. Temperature	20°C \pm 1°C or 25°C \pm 1°C, temperature must not deviate by more than 3°C during test
4. Light Quality	Ambient laboratory illumination
5. Photoperiod	16 hr light, 8 hr dark
6. Size of test vessel	250 mL (minimum)
7. Volume of test solution	200 mL/replicate (minimum)
8. Age of fish	9-14 days; 24 hr age range
9. No. fish per chamber	10 (not to exceed loading limits)
10. No. of replicate test vessels per treatment	4
11. Total no. organisms per concentration	40
12. Feeding regime	Light feeding using concentrated <u>Artemia</u> nauplii while holding prior to initiating the test
13. Aeration ²	None
14. Dilution water	5-32 ppt, +/- 10% ; Natural seawater, or deionized water mixed with artificial sea salts.
15. Dilution factor	≥ 0.5
16. Number of dilutions ³	5 plus a control. An additional dilution at the permitted concentration (% effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality-no movement on gentle prodding.

18. Test acceptability	90% or greater survival of test organisms in control solution.
19. Sampling requirements	For on-site tests, samples must be used within 24 hours of the time they are removed from the sampling device. Off-site test samples must be used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters.

Footnotes:

- ¹ Adapted from EPA 821-R-02-012.
- ² If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks recommended.
- ³ When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

V.1. Test Acceptability Criteria

If a test does not meet TAC the test must be repeated with fresh samples within 30 days of the initial test completion date.

V.2. Use of Reference Toxicity Testing

Reference toxicity test results and applicable control charts must be included in the toxicity testing report.

In general, if reference toxicity test results fall outside the control limits established by the laboratory for a specific test endpoint, a reason or reasons for this excursion must be evaluated, correction made and reference toxicity tests rerun as necessary as prescribed below.

If a test endpoint value exceeds the control limits at a frequency of more than one out of twenty then causes for the reference toxicity test failure must be examined and if problems are identified corrective action taken. The reference toxicity test must be repeated during the same month in which the exceedance occurred.

If two consecutive reference toxicity tests fall outside control limits, the possible cause(s) for the exceedance must be examined, corrective actions taken and a repeat of the reference toxicity test must take place immediately. Actions taken to resolve the problem must be reported.

V.2.a. Use of Concurrent Reference Toxicity Testing

In the case where concurrent reference toxicity testing is required due to a low frequency of testing with a particular method, if the reference toxicity test results fall slightly outside of laboratory established control limits, but the primary test met the TAC, the results of the primary test will be considered acceptable. However, if the results of the concurrent test fall well outside the established **upper** control limits i.e. ≥ 3 standard deviations for IC25s and LC50 values and \geq two concentration intervals for NOECs or NOAECs, and even though the primary test meets TAC, the primary test will be considered unacceptable and must be repeated.

VI. CHEMICAL ANALYSIS

At the beginning of the static acute test, pH, salinity, and temperature must be measured at the beginning and end of each 24 hour period in each dilution and in the controls. The following chemical analyses shall be performed for each sampling event.

<u>Parameter</u>	<u>Effluent</u>	<u>Diluent</u>	<u>Minimum Level for effluent^{*1} (mg/L)</u>
pH	x	x	---
Salinity	x	x	ppt(o/oo)
Total Residual Chlorine ^{*2}	x	x	0.02
Total Solids and Suspended Solids	x	x	---
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
<u>Total Metals</u>			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005

Superscript:

^{*1} These are the minimum levels for effluent (fresh water) samples. Tests on diluents (marine waters) shall be conducted using the Part 136 methods that yield the lowest MLs.

^{*2} Either of the following methods from the 18th Edition of the APHA Standard Methods for the Examination of Water and Wastewater must be used for these analyses:

- Method 4500-Cl E Low Level Amperometric Titration (the preferred method);
- Method 4500-CL G DPD Photometric Method.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration

An estimate of the concentration of effluent or toxicant that is lethal to 50% of the test organisms during the time prescribed by the test method.

Methods of Estimation:

- Probit Method
- Spearman-Kärber
- Trimmed Spearman-Kärber
- Graphical

See flow chart in Figure 6 on page 73 of EPA 821-R-02-012 for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See flow chart in Figure 13 on page 87 of EPA 821-R-02-012.

VIII. TOXICITY TEST REPORTING

A report of results must include the following:

- Toxicity Test summary sheet(s) (Attachment F to the DMR Instructions) which includes:
 - Facility name
 - NPDES permit number
 - Outfall number
 - Sample type
 - Sampling method
 - Effluent TRC concentration
 - Dilution water used
 - Receiving water name and sampling location
 - Test type and species
 - Test start date
 - Effluent concentrations tested (%) and permit limit concentration
 - Applicable reference toxicity test date and whether acceptable or not
 - Age, age range and source of test organisms used for testing
 - Results of TAC review for all applicable controls
 - Permit limit and toxicity test results
 - Summary of any test sensitivity and concentration response evaluation that was conducted

Please note: The NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs) are available on EPA's website at

<http://www.epa.gov/NE/enforcementandassistance/dmr.html>

In addition to the summary sheets the report must include:

- A brief description of sample collection procedures;
- Chain of custody documentation including names of individuals collecting samples, times and dates of sample collection, sample locations, requested analysis and lab receipt with time and date received, lab receipt personnel and condition of samples upon receipt at the lab(s);
- Reference toxicity test control charts;
- All sample chemical/physical data generated, including minimum levels (MLs) and analytical methods used;
- All toxicity test raw data including daily ambient test conditions, toxicity test chemistry, sample dechlorination details as necessary, bench sheets and statistical analysis;
- A discussion of any deviations from test conditions; and
- Any further discussion of reported test results, statistical analysis and concentration-response relationship and test sensitivity review per species per endpoint.

NPDES PART II STANDARD CONDITIONS
(April 26, 2018)

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A. GENERAL REQUIREMENTS

1. Duty to Comply

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA or Act) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

- a. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
- b. Penalties for Violations of Permit Conditions: The Director will adjust the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (83 Fed. Reg. 1190-1194 (January 10, 2018) and the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note. See Pub. L. 114-74, Section 701 (Nov. 2, 2015)). These requirements help ensure that EPA penalties keep pace with inflation. Under the above-cited 2015 amendments to inflationary adjustment law, EPA must review its statutory civil penalties each year and adjust them as necessary.

(1) Criminal Penalties

- (a) *Negligent Violations.* The CWA provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than \$2,500 nor more than \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation or by imprisonment of not more than 2 years, or both.
- (b) *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both.
- (c) *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury shall upon conviction be subject to a fine of not more than \$250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing

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endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

- (d) *False Statement.* The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.
- (2) *Civil Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).
- (3) *Administrative Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty as follows:
 - (a) *Class I Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).
 - (b) *Class II Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit

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condition.

3. Duty to Provide Information

The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

4. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from responsibilities, liabilities or penalties to which the Permittee is or may be subject under Section 311 of the CWA, or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

5. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

6. Confidentiality of Information

a. In accordance with 40 C.F.R. Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 C.F.R. Part 2 (Public Information).

b. Claims of confidentiality for the following information will be denied:

- (1) The name and address of any permit applicant or Permittee;
- (2) Permit applications, permits, and effluent data.

c. Information required by NPDES application forms provided by the Director under 40 C.F.R. § 122.21 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

7. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. The Permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

8. State Authorities

Nothing in Parts 122, 123, or 124 precludes more stringent State regulation of any activity

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covered by the regulations in 40 C.F.R. Parts 122, 123, and 124, whether or not under an approved State program.

9. Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Bypass

a. Definitions

- (1) *Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.
- (2) *Severe property damage* means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

- b. *Bypass not exceeding limitations.* The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this Section.

c. Notice

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- (1) *Anticipated bypass.* If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass. As of December 21, 2020 all notices submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or if required to do so by state law.
- (2) *Unanticipated bypass.* The Permittee shall submit notice of an unanticipated bypass as required in paragraph D.1.e. of this part (24-hour notice). As of December 21, 2020 all notices submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or required to do so by law.

d. *Prohibition of bypass.*

- (1) Bypass is prohibited, and the Director may take enforcement action against a Permittee for bypass, unless:
 - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
 - (c) The Permittee submitted notices as required under paragraph 4.c of this Section.
- (2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 4.d of this Section.

5. Upset

- a. *Definition.* *Upset* means an exceptional incident in which there is an unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or

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improper operation.

- b. *Effect of an upset.* An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph B.5.c. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- c. *Conditions necessary for a demonstration of upset.* A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated; and
 - (3) The permittee submitted notice of the upset as required in paragraph D.12.b.e (24-hour notice).
 - (4) The permittee complied with any remedial measures required under B.3. above.
- d. *Burden of proof.* In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

C. MONITORING REQUIREMENTS

1. Monitoring and Records

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b. Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least 5 years (or longer as required by 40 C.F.R. § 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.
- c. Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
- d. Monitoring must be conducted according to test procedures approved under 40 C.F.R. § 136 unless another method is required under 40 C.F.R. Subchapters N or O.
- e. The Clean Water Act provides that any person who falsifies, tampers with, or

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knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

2. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

D. REPORTING REQUIREMENTS

1. Reporting Requirements

- a. *Planned Changes.* The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
 - (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. § 122.29(b); or
 - (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements at 40 C.F.R. § 122.42(a)(1).
 - (3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. *Anticipated noncompliance.* The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

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- c. *Transfers.* This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act. *See* 40 C.F.R. § 122.61; in some cases, modification or revocation and reissuance is mandatory.
- d. *Monitoring reports.* Monitoring results shall be reported at the intervals specified elsewhere in this permit.
 - (1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices. As of December 21, 2016 all reports and forms submitted in compliance with this section must be submitted electronically by the permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, permittees may be required to report electronically if specified by a particular permit or if required to do so by State law.
 - (2) If the Permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 C.F.R. § 136, or another method required for an industry-specific waste stream under 40 C.F.R. Subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.
 - (3) Calculations for all limitations which require averaging or measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
- e. *Twenty-four hour reporting.*
 - (1) The Permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written report shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather. As of December 21, 2020 all

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reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section.

- (2) The following shall be included as information which must be reported within 24 hours under this paragraph.
 - (a) Any unanticipated bypass which exceeds any effluent limitation in the permit. *See* 40 C.F.R. § 122.41(g).
 - (b) Any upset which exceeds any effluent limitation in the permit.
 - (c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. *See* 40 C.F.R. § 122.44(g).
 - (3) The Director may waive the written report on a case-by-case basis for reports under paragraph D.1.e. of this Section if the oral report has been received within 24 hours.
- f. *Compliance Schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- g. *Other noncompliance.* The Permittee shall report all instances of noncompliance not reported under paragraphs D.1.d., D.1.e., and D.1.f. of this Section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph D.1.e. of this Section. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in paragraph D.1.e. and the applicable required data in Appendix A to 40 C.F.R. Part 127. As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this Section.
- h. *Other information.* Where the Permittee becomes aware that it failed to submit any

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relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

- i. *Identification of the initial recipient for NPDES electronic reporting data.* The owner, operator, or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in Appendix A to 40 C.F.R. Part 127) to the appropriate initial recipient, as determined by EPA, and as defined in 40 C.F.R. § 127.2(b). EPA will identify and publish the list of initial recipients on its Web site and in the FEDERAL REGISTER, by state and by NPDES data group (see 40 C.F.R. § 127.2(c) of this Chapter). EPA will update and maintain this listing.

2. Signatory Requirement

- a. All applications, reports, or information submitted to the Director shall be signed and certified. *See* 40 C.F.R. §122.22.
- b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

3. Availability of Reports.

Except for data determined to be confidential under paragraph A.8. above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Director. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA.

E. DEFINITIONS AND ABBREVIATIONS

1. General Definitions

For more definitions related to sludge use and disposal requirements, see EPA Region 1's NPDES Permit Sludge Compliance Guidance document (4 November 1999, modified to add regulatory definitions, April 2018).

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all, State, interstate, and federal standards and limitations to which a "discharge," a "sewage sludge use or disposal practice," or a related activity is subject under the CWA, including "effluent limitations," water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," pretreatment standards, and "standards for sewage sludge use or disposal" under Sections 301, 302, 303, 304, 306, 307, 308, 403 and 405 of the CWA.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in

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“approved States,” including any approved modifications or revisions.

Approved program or *approved State* means a State or interstate program which has been approved or authorized by EPA under Part 123.

Average monthly discharge limitation means the highest allowable average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month.

Average weekly discharge limitation means the highest allowable average of “daily discharges” over a calendar week, calculated as the sum of all “daily discharges” measured during a calendar week divided by the number of “daily discharges” measured during that week.

Best Management Practices (“BMPs”) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of “waters of the United States.” BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Bypass see B.4.a.1 above.

C-NOEC or “*Chronic (Long-term Exposure Test) – No Observed Effect Concentration*” means the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specified time of observation.

Class I sludge management facility is any publicly owned treatment works (POTW), as defined in 40 C.F.R. § 501.2, required to have an approved pretreatment program under 40 C.F.R. § 403.8 (a) (including any POTW located in a State that has elected to assume local program responsibilities pursuant to 40 C.F.R. § 403.10 (e)) and any treatment works treating domestic sewage, as defined in 40 C.F.R. § 122.2, classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director, because of the potential for its sewage sludge use or disposal practice to affect public health and the environment adversely.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a “discharge” which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483 and Public Law 97-117, 33 U.S.C. 1251 *et seq.*

CWA and regulations means the Clean Water Act (CWA) and applicable regulations promulgated thereunder. In the case of an approved State program, it includes State program requirements.

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

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pollutants with limitations expressed in units of mass, the “daily discharge” is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the “daily discharge” is calculated as the average measurement of the pollutant over the day.

Direct Discharge means the “discharge of a pollutant.”

Director means the Regional Administrator or an authorized representative. In the case of a permit also issued under Massachusetts’ authority, it also refers to the Director of the Division of Watershed Management, Department of Environmental Protection, Commonwealth of Massachusetts.

Discharge

- (a) When used without qualification, *discharge* means the “discharge of a pollutant.”
- (b) As used in the definitions for “interference” and “pass through,” *discharge* means the introduction of pollutants into a POTW from any non-domestic source regulated under Section 307(b), (c) or (d) of the Act.

Discharge Monitoring Report (“DMR”) means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by “approved States” as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA’s.

Discharge of a pollutant means:

- (a) Any addition of any “pollutant” or combination of pollutants to “waters of the United States” from any “point source,” or
- (b) Any addition of any pollutant or combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any “indirect discharger.”

Effluent limitation means any restriction imposed by the Director on quantities, discharge rates, and concentrations of “pollutants” which are “discharged” from “point sources” into “waters of the United States,” the waters of the “contiguous zone,” or the ocean.

Effluent limitation guidelines means a regulation published by the Administrator under section 304(b) of CWA to adopt or revise “effluent limitations.”

Environmental Protection Agency (“EPA”) means the United States Environmental Protection Agency.

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Grab Sample means an individual sample collected in a period of less than 15 minutes.

Hazardous substance means any substance designated under 40 C.F.R. Part 116 pursuant to Section 311 of CWA.

Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Indirect discharger means a nondomestic discharger introducing “pollutants” to a “publicly owned treatment works.”

Interference means a discharge (see definition above) which, alone or in conjunction with a discharge or discharges from other sources, both:

- (a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- (b) Therefore is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resources Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SDWA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for agricultural purposes or for treatment and disposal.

LC₅₀ means the concentration of a sample that causes mortality of 50% of the test population at a specific time of observation. The LC₅₀ = 100% is defined as a sample of undiluted effluent.

Maximum daily discharge limitation means the highest allowable “daily discharge.”

Municipal solid waste landfill (MSWLF) unit means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 C.F.R. § 257.2. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, very small quantity generator waste and industrial solid waste. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF

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unit or a lateral expansion. A construction and demolition landfill that receives residential lead-based paint waste and does not receive any other household waste is not a MSWLF unit.

Municipality

- (a) When used without qualification *municipality* means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of CWA.
- (b) As related to sludge use and disposal, *municipality* means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal Agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management Agency under Section 208 of the CWA, as amended. The definition includes a special district created under State law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in Section 201 (e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use or disposal of sewage sludge.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA. The term includes an “approved program.”

New Discharger means any building, structure, facility, or installation:

- (a) From which there is or may be a “discharge of pollutants:”
- (b) That did not commence the “discharge of pollutants” at a particular “site” prior to August 13, 1979;
- (c) Which is not a “new source:” and
- (d) Which has never received a finally effective NPDES permit for discharges at that “site.”

This definition includes an “indirect discharger” which commences discharging into “waters of the United States” after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a “site” for which it does not have a permit; and any offshore or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a “site” under EPA’s permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Director in the issuance of a final permit to be in an area of biological concern. In determining whether an area is an area of biological concern, the Director shall consider the factors specified in 40 C.F.R. §§ 125.122 (a) (1) through (10).

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling

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rig will be considered a “new discharger” only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a “discharge of pollutants,” the construction of which commenced:

- (a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source, or
- (b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means “National Pollutant Discharge Elimination System.”

Owner or operator means the owner or operator of any “facility or activity” subject to regulation under the NPDES programs.

Pass through means a Discharge (see definition above) which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation).

Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Permit means an authorization, license, or equivalent control document issued by EPA or an “approved State” to implement the requirements of Parts 122, 123, and 124. “Permit” includes an NPDES “general permit” (40 C.F.R. § 122.28). Permit does not include any permit which has not yet been the subject of final agency action, such as a “draft permit” or “proposed permit.”

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Person who prepares sewage sludge is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

pH means the logarithm of the reciprocal of the hydrogen ion concentration measured at 25° Centigrade or measured at another temperature and then converted to an equivalent value at 25° Centigrade.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff (see 40 C.F.R. § 122.3).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq.*)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal,

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and agricultural waste discharged into water. It does not mean:

- (a) Sewage from vessels; or
- (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by the authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Primary industry category means any industry category listed in the NRDC settlement agreement (*Natural Resources Defense Council et al. v. Train*, 8 E.R.C. 2120 (D.D.C. 1976), *modified* 12 E.R.C. 1833 (D. D.C. 1979)); also listed in Appendix A of 40 C.F.R. Part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operator is not the operator of the treatment works and (b) not a "POTW."

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works (POTW) means a treatment works as defined by Section 212 of the Act, which is owned by a State or municipality (as defined by Section 504(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in Section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

Regional Administrator means the Regional Administrator, EPA, Region I, Boston, Massachusetts.

Secondary industry category means any industry which is not a "primary industry category."

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage Sludge means any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced waste water treatment, scum, septage, portable toilet pumpings, type III marine sanitation device pumpings (33 C.F.R. Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

Sewage sludge incinerator is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

Sewage sludge unit is land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 C.F.R. § 122.2.

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Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Significant materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substance designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

Significant spills includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 C.F.R. §§ 110.10 and 117.21) or Section 102 of CERCLA (see 40 C.F.R. § 302.4).

Sludge-only facility means any “treatment works treating domestic sewage” whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to section 405(d) of the CWA, and is required to obtain a permit under 40 C.F.R. § 122.1(b)(2).

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, or an Indian Tribe as defined in the regulations which meets the requirements of 40 C.F.R. § 123.31.

Store or storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water discharge associated with industrial activity means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant.

Surface disposal site is an area of land that contains one or more active sewage sludge units

Toxic pollutant means any pollutant listed as toxic under Section 307(a)(1) or, in the case of “sludge use or disposal practices,” any pollutant identified in regulations implementing Section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or waste water treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices.

For purposes of this definition, “domestic sewage” includes waste and waste water from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under Section 405(f) of the CWA, the Director may designate any person subject to the standards for sewage sludge use and disposal in 40 C.F.R. Part 503 as a “treatment works treating domestic sewage,” where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that

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such designation is necessary to ensure that such person is in compliance with 40 C.F.R. Part 503.

Upset see B.5.a. above.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Waste pile or *pile* means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

Waters of the United States or *waters of the U.S.* means:

- (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (b) All interstate waters, including interstate “wetlands;”
- (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, “wetlands”, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purpose;
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (d) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;
- (f) The territorial sea; and
- (g) “Wetlands” adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 C.F.R. § 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area’s status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

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Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole Effluent Toxicity (WET) means the aggregate toxic effect of an effluent measured directly by a toxicity test.

Zone of Initial Dilution (ZID) means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports, provided that the ZID may not be larger than allowed by mixing zone restrictions in applicable water quality standards.

2. Commonly Used Abbreviations

BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonaceous BOD
CFS	Cubic feet per second
COD	Chemical oxygen demand
Chlorine	
Cl ₂	Total residual chlorine
TRC	Total residual chlorine which is a combination of free available chlorine (FAC, see below) and combined chlorine (chloramines, etc.)
TRO	Total residual chlorine in marine waters where halogen compounds are present
FAC	Free available chlorine (aqueous molecular chlorine, hypochlorous acid, and hypochlorite ion)
Coliform	
Coliform, Fecal	Total fecal coliform bacteria
Coliform, Total	Total coliform bacteria
Cont.	Continuous recording of the parameter being monitored, i.e. flow, temperature, pH, etc.
Cu. M/day or M ³ /day	Cubic meters per day
DO	Dissolved oxygen
kg/day	Kilograms per day
lbs/day	Pounds per day

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mg/L	Milligram(s) per liter
mL/L	Milliliters per liter
MGD	Million gallons per day
Nitrogen	
Total N	Total nitrogen
NH ₃ -N	Ammonia nitrogen as nitrogen
NO ₃ -N	Nitrate as nitrogen
NO ₂ -N	Nitrite as nitrogen
NO ₃ -NO ₂	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
Surfactant	Surface-active agent
Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. or Turbidity	Turbidity measured by the Nephelometric Method (NTU)
µg/L	Microgram(s) per liter
WET	“Whole effluent toxicity”
ZID	Zone of Initial Dilution

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION 1
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: MA0024368

PUBLIC NOTICE START AND END DATES: January 10, 2022 - February 8, 2022

NAME AND MAILING ADDRESS OF APPLICANT:

**Massachusetts Maritime Academy
101 Academy Drive
Buzzards Bay, MA 02532**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Massachusetts Maritime Academy
101 Academy Drive
Buzzards Bay, MA 02532**

RECEIVING WATER AND CLASSIFICATION:

Cape Cod Canal (MA 95-14)
Buzzards Bay Watershed
Class SB – restricted shellfishing

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1.0 Proposed Action

The above-named applicant (the Permittee) has applied to the U.S. Environmental Protection Agency (EPA) for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit to discharge from the Massachusetts Maritime Academy (MMA) Wastewater Treatment Plant (the Facility) into Cape Cod Canal, in close proximity to Buzzards Bay.

The permit currently in effect was issued on February 25, 2011 with an effective date of May 1, 2011 and expired on April 30, 2016 (the 2011 Permit). The Permittee filed an application for permit reissuance with EPA dated January 15, 2016, as required by 40 Code of Federal Regulations (CFR) § 122.6. Since the permit application was deemed timely and complete by EPA on September 23, 2016, the Facility's 2011 Permit has been administratively continued pursuant to 40 CFR § 122.6 and § 122.21(d). EPA conducted a site visit on June 15, 2021.

2.0 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 CFR §§ 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 CFR §§ 122.4(d), 122.44(d)(1), and 122.44(d)(5). CWA §§ 301 and 306 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, and 304(d); 40 CFR Parts 122, 125, 131.

2.1 Technology-Based Requirements

Technology-based limitations, generally developed on an industry-by-industry basis, reflect a specified level of pollutant reducing technology available and economically achievable for the type of facility being permitted. *See* CWA § 301(b). As a class, publicly owned treatment works (POTWs) must meet performance-based requirements based on available wastewater treatment technology. *See* CWA § 301(b)(1)(B). The performance level for POTWs is referred to as “secondary treatment.” Secondary treatment is comprised of technology-based requirements expressed in terms of biochemical oxygen demand (BOD₅), total suspended solids (TSS) and pH. *See* 40 CFR Part 133.

Under CWA § 301(b)(1), POTWs must have achieved effluent limits based upon secondary treatment technology by July 1, 1977. Since all statutory deadlines for meeting various treatment technology-based effluent limitations established pursuant to the CWA have expired, when technology-based effluent limits are included in a permit, compliance with those limitations is from the date the issued permit becomes effective. *See* 40 CFR § 125.3(a)(1).

2.2 Water Quality-Based Requirements

The CWA and federal regulations also require that permit effluent limits 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 less stringent TBELs would interfere with the attainment or maintenance of water quality criteria in the receiving water. *See* CWA § 301(b)(1)(C) and 40 CFR §§ 122.44(d)(1), 122.44(d)(5).

2.2.1 Water Quality Standards

The CWA requires that each state develop water quality standards (WQSs) for all water bodies within the State. *See* CWA § 303 and 40 CFR § 131.10-12. Generally, WQSs consist of three parts: 1) the designated use or uses assigned for a water body or a segment of a water body; 2) numeric 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 and to protect high quality and National Resource Waters. *See* CWA § 303(c)(2)(A) and 40 CFR § 131.12. The applicable State WQSs can be found in 314 of the Code of Massachusetts Regulations, Chapter 4 (314 CMR 4.00).

As a matter of state law, state WQSs specify different water body classifications, each of which is associated with certain designated uses and numeric and narrative water quality criteria. When using chemical-specific numeric criteria to develop permit limitations, acute and chronic aquatic life criteria and human health criteria are used and expressed in terms of maximum allowable in-stream pollutant concentrations. In general, aquatic-life acute criteria are considered applicable to daily time periods (maximum daily limit) and aquatic-life chronic criteria are considered applicable to monthly time periods (average monthly limit). Chemical-specific human health criteria are typically based on lifetime chronic exposure and, therefore, are typically applicable to average monthly limits.

When permit effluent limitation(s) are necessary to ensure that the receiving water meets narrative water quality criteria, the permitting authority must establish effluent limits in one of the following three ways: 1) based on a “calculated numeric criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and fully protect the designated use,” 2) based on a “case-by-case basis” using CWA § 304(a) recommended water quality criteria, supplemented as necessary by other relevant information; or, 3) in certain circumstances, based on use of an indicator parameter. *See* 40 CFR § 122.44(d)(1)(vi)(A-C).

2.2.2 Antidegradation

Federal regulations found at 40 CFR § 131.12 require states to develop and adopt a statewide antidegradation policy that maintains and protects existing in-stream water uses and the level of water quality necessary to protect these existing uses. In addition, the antidegradation policy ensures maintenance of high quality waters which exceed levels necessary to support propagation of fish, shellfish, and wildlife and to support recreation in and on the water, unless the State finds that allowing degradation is necessary to accommodate important economic or social development in the area in which the waters are located.

Massachusetts' statewide antidegradation policy, entitled "Antidegradation Provisions" is found in the State's WQSs at 314 CMR 4.04. Massachusetts guidance for the implementation of this policy is in an associated document entitled "Implementation Procedure for the Anti-Degradation Provisions of the State Water Quality Standards," dated October 21, 2009. According to the policy, no lowering of water quality is allowed, except in accordance with the antidegradation policy, and all existing in-stream uses, and the level of water quality necessary to protect the existing uses of a receiving water body must be maintained and protected.

This permit is being reissued with effluent limitations sufficiently stringent to satisfy the State's antidegradation requirements, including the protection of the existing uses of the receiving water.

2.2.3 Assessment and Listing of Waters and Total Maximum Daily Loads.

The objective of the CWA is to restore and maintain the chemical, physical and biological integrity of the Nation's waters. To meet this goal, the CWA requires states to develop information on the quality of their water resources and report this information to EPA, the U.S. Congress, and the public. To this end, EPA released guidance on November 19, 2001, for the preparation of an integrated "List of Waters" that could combine reporting elements of both § 305(b) and § 303(d) of the CWA. The integrated list format allows states to provide the status of all their assessed waters in one list. States choosing this option must list each water body or segment in one of the following five categories: 1) unimpaired and not threatened for all designated uses; 2) unimpaired waters for some uses and not assessed for others; 3) insufficient information to make assessments for any uses; 4) impaired or threatened for one or more uses but not requiring the calculation of a Total Maximum Daily Load (TMDL); and 5) impaired or threatened for one or more uses and requiring a TMDL.

A TMDL is a planning tool and potential starting point for restoration activities with the ultimate goal of attaining water quality standards. A TMDL essentially provides a pollution budget designed to restore the health of an impaired water body. A TMDL typically identifies the source(s) of the pollutant from point sources and non-point sources, determines the maximum load of the pollutant that the water body can tolerate while still attaining WQSs for the designated uses, and allocates that load among to the various sources, including point source discharges, subject to NPDES permits. *See* 40 CFR § 130.7.

For impaired waters where a TMDL has been developed for a particular pollutant and the TMDL includes a waste load allocation (WLA) for a NPDES permitted discharge, the effluent limitation in the permit must be “consistent with the assumptions and requirements of any available WLA”. 40 CFR § 122.44(d)(1)(vii)(B).

2.2.4 Reasonable Potential

Pursuant to CWA § 301(b)(1)(C) and 40 CFR § 122.44(d)(1), NPDES permits must contain any requirements in addition to TBELs that are necessary to achieve water quality standards established under § 303 of the CWA. *See also* 33 U.S.C. § 1311(b)(1)(C). In addition, limitations “must control any pollutant or pollutant parameter (conventional, non-conventional, or toxic) which the permitting authority determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard, including State narrative criteria for water quality.” 40 CFR § 122.44(d)(1)(i). To determine if the discharge causes, or has the reasonable potential to cause, or contribute to an excursion above any WQS, EPA considers: 1) existing controls on point and non-point sources of pollution; 2) the variability of the pollutant or pollutant parameter in the effluent; 3) the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity); and 4) where appropriate, the dilution of the effluent by the receiving water. *See* 40 CFR § 122.44(d)(1)(ii).

If the permitting authority determines that the discharge of a pollutant will cause, has the reasonable potential to cause, or contribute to an excursion above WQSs, the permit must contain WQBELs for that pollutant. *See* 40 CFR § 122.44(d)(1)(i).

For any pollutants with an existing WQBEL, EPA notes that the analysis described in 40 CFR § 122.44(d)(1)(i) has already been conducted in a previous permitting action demonstrating reasonable potential to cause or contribute to an excursion above WQSs. Therefore, those limits will be carried forward unless it is determined that a more stringent WQBEL is necessary to continue to protect WQS.

From a technical standpoint, when a pollutant is already being controlled as a result of a previously established WQBEL, EPA has determined that it is not appropriate to use new effluent data to reevaluate the need for the existing limit because the reasonable potential to cause or contribute to an excursion of WQS for the uncontrolled discharge was already established in the previous permit. If EPA were to conduct such an evaluation and find no reasonable potential for the controlled discharge to cause or contribute to an excursion of WQS, that finding could be interpreted to suggest that the effluent limit should be removed. However, the new permit without the effluent limit would imply that existing controls are unnecessary, that controls could be removed and then the pollutant concentration would rise to a level where there is, once again, reasonable potential for the discharge to cause or contribute to an excursion of WQS. This could result in an illogical cycle of applying and removing pollutant controls with each permit reissuance. EPA’s technical approach on this issue is in keeping with the Act generally and the NPDES regulations specifically, which reflect a precautionary approach to controlling pollutant discharges.

2.2.5 State Certification

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving water(s) either certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate the State WQSs, the State waives, or is deemed to have waived, its right to certify. *See* 33 U.S.C. § 1341(a)(1). Regulations governing state certification are set forth in 40 CFR § 124.53 and § 124.55. EPA has requested permit certification by the State pursuant to 40 CFR § 124.53 and expects that the Draft Permit will be certified.

If the State believes that conditions more stringent than those contained in the Draft Permit are necessary to meet the requirements of either CWA §§ 208(e), 301, 302, 303, 306 and 307, or applicable requirements of State law, the State should include such conditions in its certification and, in each case, cite the CWA or State law provisions upon which that condition is based. Failure to provide such a citation waives the right to certify as to that condition. EPA includes properly supported State certification conditions in the NPDES permit. The only exception to this is that the permit conditions/requirements regulating sewage sludge management and implementing CWA § 405(d) are not subject to the State certification requirements. Reviews and appeals of limitations and conditions attributable to State certification shall be made through the applicable procedures of the State and may not be made through EPA's permit appeal procedures of 40 CFR Part 124.

In addition, the State should provide a statement of the extent to which any condition of the Draft Permit can be made less stringent without violating the requirements of State law. Since the State's certification is provided prior to final permit issuance, any failure by the State to provide this statement waives the State's right to certify or object to any less stringent condition.

It should be noted that under CWA § 401, EPA's duty to defer to considerations of State law is intended to prevent EPA from relaxing any requirements, limitations or conditions imposed by State law. Therefore, "[a] State may not condition or deny a certification on the grounds that State law allows a less stringent permit condition." 40 CFR § 124.55(c). In such an instance, the regulation provides that, "The Regional Administrator shall disregard any such certification conditions or denials as waivers of certification." *Id.* EPA regulations pertaining to permit limitations based upon WQSs and State requirements are contained in 40 CFR §§ 122.4(d) and 122.44(d).

2.3 Effluent Flow Requirements

Sewage treatment plant discharge is encompassed within the definition of "pollutant" and is subject to regulation under the CWA. The CWA defines "pollutant" to mean, *inter alia*, "municipal...waste" and "sewage...discharged into water." 33 U.S.C. § 1362(6).

Generally, EPA uses effluent flow both to determine whether an NPDES permit needs certain effluent limitations and to calculate the limitations themselves. EPA practice is to use effluent flow as a reasonable and important worst-case condition in EPA's reasonable potential and WQBEL calculations to ensure compliance with WQSs under § 301(b)(1)(C). Should the

effluent flow exceed the flow assumed in these calculations, the in-stream dilution would be reduced, and the calculated effluent limitations may not be sufficiently protective (i.e. might not meet WQSs). Further, pollutants that do not have the reasonable potential to exceed WQSs at the lower discharge flow may have reasonable potential at a higher flow due to the decreased dilution. In order to ensure that the assumptions underlying EPA's reasonable potential analyses and permit effluent limitation derivations remain sound for the duration of the permit, EPA may ensure the validity of its "worst-case" wastewater effluent flow assumptions through imposition of permit conditions for effluent flow.¹ In this regard, the effluent flow limitation is a component of WQBELs because the WQBELs are premised on a maximum level flow. The effluent flow limit is also necessary to ensure that other pollutants remain at levels that do not have a reasonable potential to exceed WQSs.

The limitation on wastewater effluent flow is within EPA's authority to condition a permit to carry out the objectives of the Act. *See* CWA §§ 402(a)(2) and 301(b)(1)(C); 40 CFR §§ 122.4(a) and (d), 122.43 and 122.44(d). A condition on the discharge designed to ensure the WQBEL and reasonable potential calculations account for "worst case" conditions is encompassed by the references to "condition" and "limitations" in CWA §§ 402 and 301 and implementing regulations, as they are designed to assure compliance with applicable water quality regulations, including antidegradation. Regulating the quantity of pollutants in the discharge through a restriction on the quantity of wastewater effluent is consistent with the overall structure and purposes of the CWA.

In addition, as provided in Part II.B.1 of this permit and 40 CFR § 122.41(e), the Permittee is required to properly operate and maintain all facilities and systems of treatment and control. Operating the facilities wastewater treatment systems as designed includes operating within the facility's design wastewater effluent flow.

EPA has also included the effluent flow limit in the permit to minimize or prevent infiltration and inflow (I/I) that may result in unauthorized discharges and compromise proper operation and maintenance of the facility. Improper operation and maintenance may result in non-compliance with permit effluent limitations. Infiltration is groundwater that enters the collection system through physical defects such as cracked pipes or deteriorated joints. Inflow is extraneous flow added to the collection system that enters the collection system through point sources such as roof leaders, yard and area drains, sump pumps, manhole covers, tide gates, and cross connections from storm water systems. Significant I/I in a collection system may displace sanitary flow, reducing the capacity available for treatment and the operating efficiency of the treatment works and to properly operate and maintain the treatment works.

Furthermore, the extraneous flow due to significant I/I greatly increases the potential for sanitary sewer overflows (SSOs) in separate and in combined systems. Consequently, the effluent flow

¹ EPA's regulations regarding "reasonable potential" require EPA to consider "where appropriate, the dilution of the effluent in the receiving water," *id* 40 CFR §122.44(d)(1)(ii). Both the effluent flow and receiving water flow may be considered when assessing reasonable potential. *In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 599 (EAB 2010). EPA guidance directs that this "reasonable potential" analysis be based on "worst-case" conditions. *See In re Washington Aquaduct Water Supply Sys.* 11 E.A.D. 565, 584 (EAB 2004)

limit is a permit condition that relates to the permittee's duty to mitigate (*i.e.*, minimize or prevent any discharge in violation of the permit that has a reasonable likelihood of adversely affecting human health or the environment) and to properly operate and maintain the treatment works. *See* 40 CFR §§ 122.41(d), (e).

2.4 Monitoring and Reporting Requirements

2.4.1 Monitoring Requirements

Sections 308(a) and 402(a)(2) of the CWA and the implementing regulations at 40 CFR Parts 122, 124, 125, and 136 authorize EPA to include monitoring and reporting requirements in NPDES permits.

The monitoring requirements included in this permit have been established to yield data representative of the Facility's discharges in accordance with CWA §§ 308(a) and 402(a)(2), and consistent with 40 CFR §§ 122.41(j), 122.43(a), 122.44(i) and 122.48. The Draft Permit specifies routine sampling and analysis requirements to provide ongoing, representative information on the levels of regulated constituents in the discharges. The monitoring program is needed to enable EPA and the State to assess the characteristics of the Facility's effluent, whether Facility discharges are complying with permit limits, and whether different permit conditions may be necessary in the future to ensure compliance with technology-based and water quality-based standards under the CWA. EPA and/or the State may use the results of the chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to CWA § 304(a)(1), State water quality criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including, but not limited to, those pollutants listed in Appendix D of 40 CFR Part 122.

NPDES permits require that the approved analytical procedures found in 40 CFR Part 136 be used for sampling and analysis unless other procedures are explicitly specified. Permits also include requirements necessary to comply with the *National Pollutant Discharge Elimination System (NPDES): Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting Rule*.² This Rule requires that where EPA-approved methods exist, NPDES applicants must use sufficiently sensitive EPA-approved analytical methods when quantifying the presence of pollutants in a discharge. Further, the permitting authority must prescribe that only sufficiently sensitive EPA-approved methods be used for analyses of pollutants or pollutant parameters under the permit. The NPDES regulations at 40 CFR § 122.21(e)(3) (completeness), 40 CFR § 122.44(i)(1)(iv) (monitoring requirements) and/or as cross referenced at 40 CFR § 136.1(c) (applicability) indicate that an EPA-approved method is sufficiently sensitive where:

- In the case of permit applications, the ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or parameter in the discharge; or

² Fed. Reg. 49,001 (Aug 19, 2014).

- The method minimum level³ (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or
- The method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter.

2.4.2 Reporting Requirements

The Draft Permit requires the Permittee to report monitoring results obtained during each calendar month to EPA and the Massachusetts Department of Environmental Protection (MassDEP) electronically using NetDMR. The Permittee must submit a Discharge Monitoring Report (DMR) for each calendar month no later than the 15th day of the month following the completed reporting period.

NetDMR is a national web-based tool enabling regulated CWA permittees to submit DMRs electronically via a secure internet application to EPA through the Environmental Information Exchange Network. NetDMR has eliminated the need for participants to mail in paper forms to EPA under 40 CFR §§ 122.41 and 403.12. NetDMR is accessible through EPA's Central Data Exchange at <https://cdx.epa.gov/>. Further information about NetDMR can be found on EPA's NetDMR support portal webpage.⁴

With the use of NetDMR, the Permittee is no longer required to submit hard copies of DMRs and reports to EPA and the MassDEP unless otherwise specified in the Draft Permit. In most cases, reports required under the permit shall be submitted to EPA as an electronic attachment through NetDMR. Certain exceptions are provided in the permit, such as for providing written notifications required under the Part II Standard Conditions.

2.5 Standard Conditions

The standard conditions, included as Part II of the Draft Permit, are based on applicable regulations found in the Code of Federal Regulations. *See generally* 40 CFR Part 122.

2.6 Anti-backsliding

The CWA's anti-backsliding requirements prohibit a permit from being renewed, reissued or modified to include with less stringent limitations or conditions than those contained in a

³ The term "minimum level" refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL). Minimum levels may be obtained in several ways: They may be published in a method; they may be sample concentrations equivalent to the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a lab, by a factor. EPA is considering the following terms related to analytical method sensitivity to be synonymous: "quantitation limit," "reporting limit," "level of quantitation," and "minimum level." *See* Fed. Reg. 49,001 (Aug. 19, 2014).

⁴ <https://netdmr.zendesk.com/hc/en-us/articles/209616266-EPA-Region-1-NetDMR-Information>

previous permit except in compliance with one of the specified exceptions to those requirements. *See* CWA §§ 402(o) and 303(d)(4) and 40 CFR § 122.44(l). Anti-backsliding provisions apply to effluent limits based on technology, water quality and/or state certification requirements.

All proposed limitations in the Draft Permit are at least as stringent as limitations included in the 2011 Permit unless specific conditions exist to justify relaxation in accordance with CWA § 402(o) or § 303(d)(4). Discussion of any less stringent limitations and corresponding exceptions to anti-backsliding provisions is provided in the sections that follow.

3.0 Description of Facility and Discharge

3.1 Location and Type of Facility

The locations of the treatment plant and Outfalls 001 and 002 to Cape Cod Canal are shown in Figure 1. The latitude and longitude of both outfalls is Latitude 41° 44' 23" and Longitude -70° 37' 18". Outfall 001, which discharges treated sanitary wastewater, consists of an eight inch diameter pipe with the invert at discharge, located approximately 12 feet below Mean Low Water. The Cape Cod Canal contains a federal navigation channel which is currently maintained at a depth of approximately 25 to 32 feet. Outfall 002 discharges onto the riprap of the Cape Cod Canal. Swimming pool discharges at Outfall 002 are conducted at an accessible manhole prior to the outfall since the outfall is often submerged.

Massachusetts Maritime Academy (MMA) is a public, state university that offers degree programs in the maritime industry. The campus serves about 1700 students during the academic year which runs from September to June, except for January and February when most of the students are out at sea. During the summer months, MMA provides programs for up to 500 students who reside on campus. The MMA Wastewater Treatment Facility (WWTF) is an advanced wastewater treatment facility that is engaged in the collection and treatment of sanitary wastewater from the MMA campus and associated buildings and is similar to a municipal wastewater treatment plant.

The Facility has a design flow of 77,000 gallons per day (GPD) and the median flow for the last 5 years has been 25,000 GPD. The system is a separate system with no combined sewers. Wastewater is comprised of domestic (sanitary) sewage from campus facilities and a once per year discharge of chiller water (condensate) from the facility HVAC system. In addition to the sanitary wastewater discharge, the 2011 Permit also authorized the discharge of boiler blowdown to Outfall 001. However, the Permittee notified EPA by email of April 28, 2021 that it no longer discharges any boiler blowdown to the receiving water. Therefore, the Draft Permit does not authorize the discharge of boiler blowdown to the receiving water.

In addition, MMA has a swimming pool on campus from which a once per month discharge of about 10,000 gallons is necessary to adjust for proper water chemistry. These discharges are treated with chlorine and are dechlorinated and pH adjusted as necessary to stay within the permitted pH range as they are discharged to Outfall 002. On occasion, typically less than annually, the Permittee needs to discharge the swimming pool completely, which is a total of about 200,000 gallons.

The permittee does not have any major industries contributing industrial wastewater to the WWTP, and thus is not required to have a pretreatment program.

A quantitative description of the discharge in terms of effluent parameters, based on monitoring data submitted by the permittee from May 2016 through March 2021 is provided in Appendix A of this Fact Sheet.

3.1.1 Treatment Process Description

The MMA WWTF is an activated sludge wastewater treatment facility providing secondary wastewater treatment using a sequencing batch reactor. A schematic of the MMA WWTF is shown in Figure 2.

The MMA WWTF receives sanitary wastewater from dormitories, classrooms, labs, laundry, gymnasium, and kitchen. The facility also receives sanitary wastewater from the training ship *Enterprise* when it is docked at the campus that is pumped from a lift station at the pier. In addition, there is about 400 gallons of chiller water from the HVAC system that is discharged to the WWTF once during the summer. The collection system includes 2 lift stations. At the treatment facility, wastewater is either pumped to a 15,000 gallon equalization tank and subsequently pumped to the treatment plant building, or pumped directly to the treatment plant building. In the treatment plant building, wastewater first flows through screening and grit removal facilities. Magnesium hydroxide is then added to increase alkalinity by a metering pump, followed by activated sludge treatment and clarification in sequencing batch reactors. Treated effluent is then discharged to a post equalization tank and pumped to rapid sand filters and a recently installed disk filter, followed by disinfection with ultraviolet (UV) light. The Facility has maintained a chlorine disinfection and dechlorination system for use in the event of failure of the UV system. Finally, effluent is discharged to the Cape Cod Canal through Outfall 001. Sludge is decanted to an aerated storage/digester tank. About 300,000 gallons of thickened sludge is removed each year and hauled away by Wind River Environmental for disposal at the Plymouth, MA Wastewater Treatment Plant.

MMA's swimming pool has a capacity of 200,000 gallons. Approximately once per month, up to 10,000 gallons of pool water is discharged to Outfall 002 for chemical balancing, with the discharge duration of an hour or two. The concentration of total residual chlorine (TRC) is tested prior to release of pool water through Outfall 002. The pool water is treated with calcium thiosulfate and when the residual chlorine is not detected, the pool water is discharged.

There may be rare occasions when the pool will need to be completely emptied for maintenance. The Draft Permit requires the permittee to notify both EPA and MassDEP in advance of any full swimming pool discharges and to adequately dechlorinate these discharges for their duration. The complete discharge of the pool takes place over approximately a full calendar day and testing of the pool water is conducted throughout the discharge.

3.1.2 Collection System Description

The MMA WWTF is served by a separate sewer system. A separate sanitary sewer conveys domestic, industrial, and commercial sewage, but not stormwater. It is part of a “two pipe system” consisting of separate sanitary sewers and storm sewers. The two systems have no interconnections; the sanitary sewer leads to the wastewater treatment plant and the storm sewers discharge to the Cape Cod Canal.

4.0 Description of Receiving Water and Dilution

4.1 Receiving Water

The Permittee discharges through Outfalls 001 and 002 into the Cape Cod Canal, within Segment MA95-14. This segment is 11.3 miles in length and encompasses the connection between Cape Cod Bay and Buzzards Bay in Sandwich and Bourne, respectively. The discharges are in close proximity to the end of Cape Cod Canal that empties into Buzzards Bay.

Cape Cod Canal is classified as a Class SB water. The Massachusetts Surface Water Quality Standards (MAWQSs) at 314 CMR 4.05(4)(b) describes Class SB waters as follows: *“These 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. In certain waters, habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass... These waters shall have consistently good aesthetic value.”*

Cape Cod Canal/Buzzards Bay is listed in the final *Massachusetts Year 2016 Integrated List of Waters* (“303(d) List”) as a Category 4A “TMDL is completed.”⁵ The Final Pathogen TMDL for the Buzzards Bay Watershed was published by MassDEP in March 2009.⁶ According to the *Buzzards Bay Watershed 2000 Water Quality Assessment Report*⁷, for those portions that have been assessed, this water body segment is attaining uses designated for shellfish harvesting and primary and secondary contact recreation, while designated uses for aquatic life, aesthetics, and fish consumption have not been assessed. The status of each designated use is shown in Table 1.

Table 1 – Summary of Designated Uses and Listing Status

Designated Use	Status
Aquatic Life	Not Assessed
Aesthetics	Not Assessed
Primary Contact Recreation	0.67 mi ² – support; 0.46 mi ² - Not Assessed
Secondary Contact Recreation	0.67 mi ² – support; 0.46 mi ² - Not Assessed
Shellfish Harvesting	0.67 mi ² – support; 0.46 mi ² - Not Assessed Fecal coliform – unknown source
Fish Consumption	Not Assessed

⁵ *Massachusetts Year 2016 Integrated List of Waters*, MassDEP Division of Watershed Management Watershed Planning Program, Worcester, Massachusetts, December 2019.

⁶ <https://www.mass.gov/doc/final-pathogen-tmdl-for-the-buzzards-bay-watershed-0/download>

⁷ <https://www.mass.gov/doc/buzzards-bay-2000-water-quality-assessment-report-s-i/download>

The 2009 Pathogen TMDL specifies wasteload allocations (WLA) for indicator bacteria depending on the waterbody classification. For Class SB waters that are designated for shellfishing with depuration, the indicator bacteria is fecal coliform and the WLA required for point source discharges are a geometric mean or median of 88 organisms per 100 mL nor shall 10% of the samples exceed 260 organisms per 100 mL. As noted in 5.1.7, below, more stringent limitations from the 2011 Permit will be maintained due to anti-backsliding requirements.

4.2 Ambient Data

A summary of the ambient data collected in the receiving water in the vicinity of the outfall that is referenced in this Fact Sheet can be found in Appendix A of this Fact Sheet.

4.3 Available Dilution

To ensure that discharges do not cause or contribute to violations of WQS under all expected conditions, QBELs are derived assuming critical conditions for the receiving water⁸. The critical flow in rivers and streams is some measure of the low flow of that river or stream. State WQSs require that for rivers and streams, the lowest condition is the lowest mean flow for seven consecutive days, recorded once in 10 years, or 7-day 10-year low flow (7Q10). *See* 314 CMR 4.03(3)(a).

The 2011 permit relied on a dilution study conducted as part of a Draft Environmental Impact Report for a project at Otis Air National Guard Base (1989), citing a dilution of 6400:1. In 2016, Woods Hole Oceanographic Institute (WHOI) conducted hydrodynamic modeling in the vicinity of MMA for the purpose of considering the redirection of the Town of Wareham's WWTF discharge to the Cape Cod Canal.⁹ This modeling determined that a 1000:1 dilution contour around the vicinity of MMA Outfall 001 was roughly 45 meters by 300 meters and encompassed an area of approximately 0.13 square kilometers. A more conservative dilution contour of 500:1 around a smaller area of the outfall was also graphed and could be used for the purposes of this permit to represent a worst case condition such as occurs during slack tide. Therefore, the dilution ratio of 500:1, representing a small area around Outfalls 001 and 002, will be used for reasonable potential analyses, as applicable, in this Draft Permit.

5.0 Proposed Effluent Limitations and Conditions

The proposed effluent limitations and conditions derived under the CWA and State WQSs are described below. These proposed effluent limitations and conditions, the basis of which are discussed throughout this Fact Sheet, may be found in Part I of the Draft Permit.

⁸ EPA Permit Writer's Manual, Section 6.

⁹ Assessing the Impact of Increased Effluent Discharge into Cape Cod Canal, Churchill, J, Cowles, G., Rheuban, J. WHOI, 2016

5.1 Effluent Limitations and Monitoring Requirements

In addition to the State and Federal regulations described in Section 2, data submitted by the Permittee in its permit application, in monthly discharge monitoring reports (DMRs) and in WET test reports from May 2016 to March 2021 (the “review period”) were used to identify the pollutants of concern and to evaluate the discharge during the effluent limitations development process (*See Appendix A*). The reasonable potential analysis is included in Appendix B and results are discussed in the sections below.

5.1.1 Effluent Flow

Outfall 001

The effluent flow limit in the 2011 Permit is 77,000 GPD, as a rolling annual average flow, based on the Facility’s design flow. The DMR data during the review period shows that there have been no violations of the flow limit. During the review period, the monthly average effluent flow ranged from 3000 GPD to 42,000 GPD with a median of 25,000 GPD.

The Draft Permit continues the 77,000 GPD flow limit from the 2011 Permit. The Draft Permit requires that flow be measured continuously and that the rolling annual average flow, as well as the average monthly and maximum daily flow for each month be reported. The rolling annual average flow is calculated as the average of the flow for the reporting month and 11 previous months.

Outfall 002

The 2011 Permit authorized the discharge of a daily maximum of 10,000 GPD from the facility swimming pool. This discharge occurs about once per month to adjust pool water chemistry. This daily maximum flow limit is maintained in the Draft Permit and the Permittee is required to dechlorinate this water prior to discharge. This discharge has occurred monthly and has ranged from 6,500 to 10,000 gallons. Once every several years, the Permittee empties its swimming pool entirely, which is a discharge of about 200,000 gallons. During the review period, the Permittee discharged the pool entirely one time, in September 2016, with a reported discharge of 187,000 gallons. The Permittee is required to notify EPA and MassDEP prior to any complete discharge of the pool. Although the 2011 Permit did not require sampling of an entire pool discharge, the Draft Permit requires sampling every hour for the same parameters and with the same limits as the monthly swimming pool discharge.

5.1.2 Biochemical Oxygen Demand (BOD₅)

5.1.2.1 BOD₅ Concentration Limits

The BOD₅ limits in the 2011 Permit were established at an average monthly value of 30 mg/L and a weekly average weekly value of 45 mg/L. The daily maximum concentration was required to be monitored only. These limits are based on the secondary treatment standards in 40 CFR

§ 133.102. The DMR data during the review period shows that there have been no exceedances of BOD₅ concentration limits with a median value of 6.85 mg/L and a high value of 10.1 mg/L.

The Draft Permit proposes the same BOD₅ concentration limits as in the 2011 Permit as no new WLAs have been established and there have been no changes to the secondary treatment standards. The monitoring frequency remains once per week.

5.1.3 Total Suspended Solids (TSS)

5.1.3.1 TSS Concentration Limits

The TSS limits in the 2011 Permit were established at an average monthly value of 30 mg/L and a weekly average weekly value of 45 mg/L. The daily maximum concentration was required to be monitored only. These limits were based on the secondary treatment standards in 40 CFR § 133.102. The DMR data during the review period shows that there was one exceedance of the 30 mg/ monthly average limit, a value of 34 mg/L, with a median value of 8.3 mg/L.

The Draft Permit proposes the same TSS concentration limits as in the 2011 Permit as no new WLAs have been established and there have been no changes to the secondary treatment standards. The monitoring frequency remains once per week.

5.1.4 Eighty-Five Percent (85%) BOD₅ and TSS Removal Requirement

In accordance with the provisions of 40 CFR § 133.102(a)(3) and (b)(3), the 2011 Permit requires that the 30-day average percent removal for BOD₅ and TSS greater than or equal to 85%. The DMR data during the review period shows that the median BOD₅ and TSS removal percentages were 95% and 96%, respectively. There were no exceedances of the 85% removal requirement for BOD₅ or TSS during that period.

The requirement to achieve a minimum of 85% BOD₅ and TSS removal has been carried forward into the Draft Permit.

5.1.5 Settleable Solids (SS)

Daily monitoring for SS was required in the 2011 Permit. During the review period, SS was not detected. Since solids are adequately controlled by the permit's TSS limits and SS is not specifically required by the regulations at 40 CFR § 133.102, the SS monitoring requirement has been eliminated from the permit. This change is allowed as an exception to the anti-backsliding regulations at 40 CFR § 122.44(l)(2)(i)(B)(1) regarding new information.

5.1.6 pH

Consistent with the requirements of MA WQS at 314 CMR 4.05(3)(b)(3), the Permit requires that the pH of the effluent is not less than 6.5 or greater than 8.5 standard units at any time. The monitoring frequency is once per day for Outfall 001 and once per hour for any swimming pool

discharge through Outfall 002. The DMR data during the review period show that there have been no violations of the pH limitations for either outfall.

The pH requirements in the 2011 Permit are carried forward into the Draft Permit as there has been no change in the WQSs with regards to pH. The limitations are based on CWA 301(b)(1)(C) and 40 CFR § 122.44(d).

5.1.7 Bacteria

The 2011 Permit includes effluent limitations for fecal coliform bacteria as the indicator bacteria to protect shellfishing uses in the receiving water. In accordance with the MAWQS at 314 CMR 4.05(4)(b) 4.a., a monthly geometric mean of 14 colony forming units (cfu) and a maximum daily limit of 43 cfu/100 ml were established. Although the receiving water is classified as Class SB, the 2011 Permit carried over more stringent fecal coliform limits that were based on the Class SA water criteria. These limits will be maintained due to anti-backsliding requirements. During the review period, there were no exceedances of these limits and all the samples were non-detect.

The 2011 Permit also includes effluent limits for bacteria using *Enterococci* bacteria as the indicator bacteria to protect recreational uses. The MA WQS at 314 CMR 4.05(4)(b) 4.b., require a monthly geometric mean of 35 cfu/100 ml and a maximum daily limit of 104 cfu/100 ml. The daily maximum limit of 276 cfu/100 ml in the 2011 Permit represents the 90% confidence level (distribution) of the geometric mean of 104 cfu/100 ml. The MassDEP has determined that the 90% confidence level is appropriate for setting the maximum daily bacteria limit. The DMR data during the review period shows very few detections of this parameter with no exceedances of the permit limits.

5.1.8 Total Residual Chlorine

Chlorine compounds produced by the chlorination of wastewater can be extremely toxic to aquatic life. For Outfall 001, the Permittee uses a UV disinfection system for bacteria and the 2011 Permit did not include effluent limitations for total residual chlorine (TRC). For Outfall 002, a daily maximum TRC limit of 1.0 mg/L was established in the 2011 Permit, due to the presence of residual chlorine in the swimming pool.

Effluent limits for TRC are based on the instream chlorine criteria defined in *National Recommended Water Quality Criteria: 2002*, EPA 822R-02-047 (November 2002), as adopted by the MassDEP into the state water quality standards at 314 CMR 4.05(5)(e). The marine saltwater criteria for chlorine are 7.5 ug/L (chronic) and 13 ug/L (acute). Given an estimated dilution factor of 500, the water quality based total residual chlorine limitations would be calculated as follows:

Chronic criteria * dilution factor = Chronic limit
 $7.5 \text{ ug/L} * 500 = 3750 \text{ ug/L} = 3.75 \text{ mg/L}$ (average monthly)

Acute criteria * dilution factor = Acute limit
 $13 \text{ ug/L} * 500 = 6500 \text{ ug/L} = 6.5 \text{ mg/L}$ (maximum daily)

However, the MassDEP *Implementation Policy for the Control of Toxic Pollutants in Surface Waters* (February 23, 1990) requires that to protect waters from unnecessary discharge of chlorine, effluent limits for discharges with dilution factors greater 100 shall not exceed 1 mg/l. Therefore, the 2011 Permit included a maximum daily total residual chlorine limitation of 1 mg/l for Outfall 002, based on the MassDEP policy. This Draft Permit carries over this limit for Outfall 002 for all discharges of swimming pool water, including those less frequent and complete discharge events of approximately 200,000 gallons. The sampling frequency has been increased to once per hour to assure that adequate dechlorination is occurring throughout the discharge.

For Outfall 001, the limit of 1.0 mg/L is established and would apply only during periods that the Permittee uses a backup chlorination system for disinfection, such as when the facility's UV system is inoperable or any sand filters are being repaired. During such periods, TRC is required to be monitored three times per day whenever chlorination is occurring.

5.1.9 Ammonia

The 2011 Permit does not include ammonia limits, but the Permittee was required to monitor and report effluent ammonia concentrations on a quarterly basis and annually as part of the Whole Effluent Toxicity (WET) testing. Ambient data, taken upstream of the MMA outfall in the Cape Cod Canal, is presented in Appendix A and shows all results for the warm weather period (April 1 through October 31) were non-detect, or zero. Since annual WET tests were conducted only during June, there are no cold weather period data for ammonia.

The ammonia criteria in EPA's *National Recommended Water Quality Criteria*, 2002 (EPA 822-R-02-047) document are included by reference in the Massachusetts WQS (*See* 314 CMR 4.05(5)(e)). The marine water quality criteria are dependent on pH and temperature. In determining whether the discharge has the reasonable potential to cause or contribute to excursions above the instream water quality criteria for ammonia, EPA used the mass balance equation presented in Appendix B for both warm and cold weather conditions to project the ammonia concentration downstream of the discharge. If there is reasonable potential, this mass balance equation is also used to determine the limit that is required in the permit.

To determine the applicable ammonia criteria, EPA assumes a warm weather temperature of 25° C and a cold weather temperature of 5° C. EPA used the ambient pH monitoring shown in Appendix A, which indicates that the median pH is 7.82 S.U.

Based on the information and assumptions described above, Appendix B presents the applicable ammonia criteria, the details of the mass balance equation, the reasonable potential determination, and, if necessary, the limits required in the Draft Permit. As shown, there is no reasonable potential to cause or contribute to an excursion of WQS, so the Draft Permit does not propose ammonia limits.

Effluent and ambient monitoring for ammonia will continue to be required in the quarterly WET tests.

5.1.10 Nutrients

Nutrients are compounds containing nitrogen and phosphorus. Although nitrogen and phosphorus are essential for plant growth, high concentrations of these nutrients can cause eutrophication, a condition in which aquatic plant and algal growth is excessive. Plant and algae respiration and decomposition reduces dissolved oxygen in the water, creating poor habitat for fish and other aquatic animals. Recent studies provide evidence that both phosphorus and nitrogen can play a role in the eutrophication of certain ecosystems. However, typically phosphorus is the limiting nutrient triggering eutrophication in freshwater ecosystems and nitrogen in marine or estuarine ecosystems. Thus, for this receiving water and this permit, nitrogen is the nutrient of concern evaluated for effluent limitations in the discussion below.

5.1.10.1 Total Nitrogen

Nitrogen is an essential nutrient for plant growth. However, elevated concentrations of nitrogen can result in eutrophication, where nutrient concentrations lead to excessive plant and algal growth. Respiration and decomposition of plants and algae under eutrophic conditions reduce dissolved oxygen in the water and can create poor habitat for aquatic organisms. Total Nitrogen is the sum of Total Kjeldahl Nitrogen (TKN) (ammonium, organic and reduced nitrogen) and nitrate-nitrite. It is derived by individually monitoring for organic nitrogen compounds, ammonia, nitrate, and nitrite and adding the components together.

The MMA WWTP discharges to the Cape Cod Canal in the Buzzards Bay Watershed. The 2011 Permit required quarterly monitoring for total Kjeldahl nitrogen, nitrate and nitrite, the sum of which provides the total nitrogen (TN) concentration. Using the TN concentration data and average monthly flow data, the calculated annual average total nitrogen loading from the MMA facility ranged from 0 lb/day to 110 lb/day and averaged 69 lb/day during the review period.

The Facility discharges to the Cape Cod Canal which empties to the Buzzards Bay watershed. The 2011 permit noted that MMA loading is a very small percentage (0.000017%) of the overall nitrogen loading to the watershed. The 2011 Permit required the Permittee to evaluate alternatives for operating the treatment plant to optimize the removal of nitrogen. In a report dated April 20, 2012, the Permittee determined that a third treatment train with increased detention times and aeration with chemical addition in the equalization tank would be required to meet a target effluent nitrogen concentration of 10 mg/L.

Although there are no impairments associated with nitrogen in Cape Cod Canal, there are some impairments in certain coves of Buzzards Bay. Therefore, EPA has determined that the facility must continue to optimize its treatment plant for the removal of total nitrogen.

Specifically, the Draft Permit requires the continued evaluation of treatment facility operations to minimize nitrogen discharges, along with annual reports to summarize progress and activities related to optimizing nitrogen removal efficiencies and track trends relative to previous years. In

addition to the optimization requirements, the Draft Permit continues monthly monitoring for total nitrogen (TN). For compliance reporting on monthly DMRs, the Draft Permit requires the reporting of monthly average TN load and concentration along with its components: total kjeldahl nitrogen, nitrite and nitrate.

5.1.11 Metals

5.1.11.1 Applicable Metals Criteria

State water quality criteria for cadmium, copper, lead, nickel and zinc are established in terms of dissolved metals. However, many inorganic components of domestic wastewater, including metals, are in particulate form, and differences in the chemical composition between the effluent and the receiving water affects the partitioning of metals between the particulate and dissolved fractions as the effluent mixes with the receiving water, often resulting in a transition from the particulate to dissolved form (*The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion* (USEPA 1996 [EPA-823-B96-007])). Consequently, quantifying only the dissolved fraction of metals in the effluent prior to discharge may not accurately reflect the biologically available portion of metals in the receiving water. Regulations at 40 CFR § 122.45(c) require, with limited exceptions, that effluent limits for metals in NPDES permits be expressed as total recoverable metals.

The criteria for cadmium, copper, lead, nickel and zinc are presented in Appendix B, based on EPA's National Recommended Water Quality Criteria: 2002, which are incorporated into the Massachusetts WQS by reference.

5.1.11.2 Reasonable Potential Analysis and Limit Derivation

To determine whether the effluent has the reasonable potential to cause or contribute to an exceedance above the in-stream water quality criteria for each metal, EPA uses the mass balance equation presented in Appendix B to project the concentration downstream of the discharge and, if applicable, to determine the limit required in the permit.

For any metal with an existing limit in the 2011 Permit, the same mass balance equation is used to determine if a more stringent limit would be required to continue to meet WQS under current conditions. The limit is determined to be the more stringent of either (1) the existing limit or (2) the calculated effluent concentration (C_d) allowable to meet WQS based on current conditions.

Based on the information described above, the results of this analysis for each metal are presented in Appendix B. As shown, there is no reasonable potential determined for any of the metals considered. For Outfall 002, the 2011 Permit carried over a daily maximum limit of 0.5 mg/L for total copper. The Permittee has discontinued the use of a copper/silver ionization process in the swimming pool to reduce the formation of chlorination byproducts. (phone conversation between Kathy Driscoll of MMA and G. Papadopoulos of EPA on 8/4/21). However, since potable water is used for the swimming pool and copper is still being detected at low levels in the Outfall 002 effluent, the copper limit will remain due to anti-backsliding.

Effluent and ambient monitoring for each of these metals will continue to be required in the WET tests.

5.1.12 Whole Effluent Toxicity

CWA §§ 402(a)(2) and 308(a) provide EPA and States with the authority to require toxicity testing. Section 308 specifically describes biological monitoring methods as techniques that may be used to carry out objectives of the CWA. Whole effluent toxicity (WET) testing is conducted to ensure that the additivity, antagonism, synergism and persistence of the pollutants in the discharge do not cause toxicity, even when the pollutants are present at low concentrations in the effluent. The inclusion of WET requirements in the Draft Permit will assure that the Facility does not discharge combinations of pollutants into the receiving water in amounts that would be toxic to aquatic life or human health.

In addition, under CWA § 301(b)(1)(C), discharges are subject to effluent limitations based on WQSs. Under CWA §§ 301, 303 and 402, EPA and the States may establish toxicity-based limitations to implement the narrative water quality criteria calling for “no toxics in toxic amounts”. *See also* 40 CFR § 122.44(d)(1). The Massachusetts WQSs at 314 CMR 4.05(5)(e) state, “All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.”

National studies conducted by EPA have demonstrated that domestic sources, as well as industrial sources, contribute toxic constituents to POTWs. These constituents include metals, chlorinated solvents, aromatic hydrocarbons and others. Some of these constituents may cause synergistic effects, even if they are present in low concentrations. Because of the source variability and contribution of toxic constituents in domestic and industrial sources, reasonable potential may exist for this discharge to cause or contribute to an exceedance of the “no toxics in toxic amounts” narrative water quality standard.

In accordance with current EPA guidance and State policy¹⁰, whole effluent chronic effects are regulated by limiting the highest measured continuous concentration of an effluent that causes no observed chronic effect on a representative standard test organism, known as the chronic No Observed Effect Concentration (C-NOEC). Whole effluent acute effects are regulated by limiting the concentration that is lethal to 50% of the test organisms, known as the LC₅₀. This policy recommends that permits for discharges having a dilution factor less than 10 require acute and chronic toxicity testing four times per year for two species. Additionally, for discharges with dilution factors less than 10, the C-NOEC effluent limit should be greater than or equal to the receiving water concentration and the LC₅₀ limit should be greater than or equal to 100%.

Due to the high dilution available to this discharge at Outfall 001, the acute WET limit in the 2011 Permit is an LC₅₀ greater than or equal to 50%, using Mysid shrimp (*Mysidopsis bahia*) as

¹⁰ *Massachusetts Water Quality Standards Implementation Policy for the Control of Toxic Pollutants in Surface Waters*. February 23, 1990.

the test species. The Facility has consistently met this limit with results of 100% for each of the last 5 years (Appendix A).

Based on the potential for toxicity from domestic contributions, the state narrative water quality criterion, an estimated dilution factor of 500:1 and in accordance with EPA national and regional policy and 40 CFR § 122.44(d), the Draft Permit continues the effluent limit from the 2011 Permit including the test organism and the annual testing frequency. Toxicity testing must be performed in accordance with the updated EPA Region 1 WET test procedure and protocol specified in Attachment A, *Marine Acute Toxicity Test Procedure and Protocol* (July 2012) of the Draft Permit.

5.1.13 Per- and polyfluoroalkyl substances (PFAS)

As explained at <https://www.epa.gov/pfas>, PFAS are a group of synthetic chemicals that have been in use since the 1940s. PFAS are found in a wide array of consumer and industrial products. PFAS manufacturing and processing facilities, facilities using PFAS in production of other products, airports, and military installations can be contributors of PFAS releases into the air, soil, and water. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. Exposure to some PFAS above certain levels may increase risk of adverse health effects.¹¹ EPA is collecting information to evaluate the potential impacts that discharges of PFAS from wastewater treatment plants may have on downstream drinking water, recreational and aquatic life uses.

Background Information for Massachusetts

On October 20, 2020, MassDEP published final regulations establishing a drinking water standard, or a Maximum Contaminant Level (MCL) of 20 parts per trillion (ppt) for the sum of the following six PFAS: [See 310 CMR 22.00]

- Perfluorohexanesulfonic acid (PFHxS)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorononanoic acid (PFNA)
- Perfluorooctanesulfonic acid (PFOS)
- Perfluorooctanoic acid (PFOA)
- Perfluorodecanoic acid (PFDA)

Although the Massachusetts water quality standards do not include numeric criteria for PFAS, the Massachusetts narrative criterion for toxic substances at 314 CMR 4.05(5)(e) states:

All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.

¹¹ EPA, *EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan*, EPA 823R18004, February 2019. Available at: https://www.epa.gov/sites/production/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf

The narrative criterion is further elaborated at 314 CMR 4.05(5)(e)2 which states:

Human Health Risk Levels. Where EPA has not set human health risk levels for a toxic pollutant, the human health-based regulation of the toxic pollutant shall be in accordance with guidance issued by the Department of Environmental Protection's Office of Research and Standards. The Department's goal is to prevent all adverse health effects which may result from the ingestion, inhalation or dermal absorption of toxins attributable to waters during their reasonable use as designated in 314 CMR 4.00.

Since PFAS chemicals are persistent in the environment and may lead to adverse human health and environmental effects, the Draft Permit requires that the Facility conduct quarterly influent, effluent and sludge sampling for PFAS chemicals and annual sampling of certain industrial users, the first full calendar quarter beginning six months after EPA has notified the Permittee that appropriate, multi-lab validated test methods are made available by EPA to the public.

The purpose of this monitoring and reporting requirement is to better understand potential discharges of PFAS from this facility and to inform future permitting decisions, including the potential development of water quality-based effluent limits on a facility specific basis. EPA is authorized to require this monitoring and reporting by CWA § 308(a), which states:

“SEC. 308. (a) Whenever required to carry out the objective of this Act, including but not limited to (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this Act; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, or standard of performance; (3) any requirement established under this section; or (4) carrying out sections 305, 311, 402, 404 (relating to State permit programs), 405, and 504 of this Act—

(A) the Administrator shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require;”.

Since an EPA method for sampling and analyzing PFAS in wastewater and sludge is not currently available, the PFAS sampling requirement in the Draft Permit includes a compliance schedule which delays the effective date of this requirement until the first full calendar quarter beginning 6 months after EPA has notified the Permittee that a multi-lab validated method for wastewater and biosolids is made available to the public on EPA's CWA methods program websites. For wastewater see <https://www.epa.gov/cwa-methods/other-clean-water-act-test-methods-chemical> and <https://www.epa.gov/cwa-methods>. For biosolids, see <https://www.epa.gov/cwa-methods/other-clean-water-act-test-methods-biosolids>. EPA expects these methods will be available by the end of 2022. This approach is consistent with 40 CFR §

122.44(i)(1)(iv)(B) which states that in the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR Part 136 or methods are not otherwise required under 40 CFR chapter I, subchapter N or O, monitoring shall be conducted according to a test procedure specified in the permit for such pollutants or pollutant parameters.

5.2 Sludge Conditions

Section 405(d) of the Clean Water Act requires that EPA develop technical standards regarding the use and disposal of sewage sludge. On February 19, 1993, EPA promulgated technical standards. These standards are required to be implemented through permits. The conditions in the permit satisfy this requirement.

5.3 Infiltration/Inflow (I/I)

Infiltration is groundwater that enters the collection system through physical defects such as cracked pipes, or deteriorated joints. Inflow is extraneous flow entering the collection system through point sources such as roof leaders, yard and area drains, sump pumps, manhole covers, tide gates, and cross connections from storm water systems. Significant I/I in a collection system may displace sanitary flow, reducing the capacity and the efficiency of the treatment works and may cause bypasses to secondary treatment. It greatly increases the potential for sanitary sewer overflows (SSOs) in separate systems, and combined sewer overflows (CSOs) in combined systems.

The Draft Permit includes a requirement for the permittee to control infiltration and inflow (I/I) within the sewer collection system it owns and operates. The permittee shall continue to implement an I/I removal program commensurate with the severity of I/I in the collection system. This program may be scaled down in sections of the collection system that have minimal I/I.

5.4 Operation and Maintenance of the Sewer System

The standard permit conditions for ‘Proper Operation and Maintenance’, found at 40 CFR § 122.41(e), require the proper operation and maintenance of permitted wastewater systems and related facilities to achieve compliance with permit conditions. The requirements at 40 CFR § 122.41(d) impose a ‘duty to mitigate,’ which requires the permittee to “take all reasonable steps to minimize or prevent any discharge in violation of the permit that has a reasonable likelihood of adversely affecting human health or the environment. EPA maintains that an I/I removal program is an integral component of ensuring permit compliance with the requirements of the permit under the provisions at 40 CFR § 122.41(d) and (e).

General requirements for proper operation and maintenance, and mitigation have been included in Part II of the permit. Specific permit conditions have also been included in Part I.C. and I.D. of the Draft Permit. These requirements include mapping of the wastewater collection system, preparing and implementing a collection system operation and maintenance plan, reporting of

unauthorized discharges including SSOs, maintaining an adequate maintenance staff¹², performing preventative maintenance, controlling inflow and infiltration to separate sewer collection systems (combined systems are not subject to I/I requirements) to the extent necessary to prevent SSOs and I/I related effluent violations at the Facility, and maintaining alternate power where necessary. These requirements are included to minimize the occurrence of permit violations that have a reasonable likelihood of adversely affecting human health or the environment.

Several of the requirements in the Draft Permit are not included in the 2011 Permit, including collection system mapping, and preparation of a collection system operation and maintenance plan. EPA has determined that these additional requirements are necessary to ensure the proper operation and maintenance of the collection system and has included schedules in the Draft Permit for completing these requirements.

5.5 Standard Conditions

The standard conditions of the permit are based on 40 CFR §122, Subparts A, C, and D and 40 CFR § 124, Subparts A, D, E, and F and are consistent with management requirements common to other permits.

Federal Permitting Requirements

5.6 Endangered Species Act

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA), grants authority and imposes requirements on 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”).

Section 7(a)(2) of the ESA requires every Federal agency, in consultation with and with the assistance of the Secretary of Interior, to ensure 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. The National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) administers Section 7 consultations for marine and anadromous species.

The Federal action being considered in this case is EPA’s proposed NPDES permit for the Massachusetts Maritime Academy. The Draft Permit is intended to replace the 2011 Permit in governing the Facility. As the federal agency charged with authorizing the discharge from this Facility, EPA determines potential impacts to federally listed species, and initiates consultation, when required under Section 7(a)(2) of the ESA.

¹² See 314 CMR 12.04(3) and (4) for guidance on proper staffing to assure proper operation and maintenance of wastewater treatment facilities

EPA has reviewed the federal endangered or threatened species of fish, wildlife, and plants in the expected action area of the outfall to determine if EPA's proposed NPDES permit could potentially impact any such listed species in this section of the Cape Cod Canal within Segment MA95-14.

Regarding protected species under the jurisdiction of NOAA Fisheries, a number of anadromous and marine species and life stages are present in Massachusetts waters. Various life stages of protected fish, sea turtles and whales have been documented in Massachusetts coastal and inland waters, either seasonally or year-round. In general, adult and subadult life stages of Atlantic sturgeon (*Acipenser oxyrinchus*) and adult shortnose sturgeon (*Acipenser brevirostrom*) are present in coastal waters. These sturgeon life stages are also found in some river systems in Massachusetts, along with early life stages of protected sturgeon and juvenile shortnose sturgeon. Protected marine species, including adult and juvenile life stages of leatherback sea turtles (*Dermochelys coriacea*), loggerhead sea turtles (*Caretta caretta*), Kemp's ridley sea turtles (*Lepidochelys kempii*) and green sea turtles (*Chelonia mydas*) are found in coastal waters and bays. Adult and juvenile life stages of North Atlantic right whales (*Eubalaena glacialis*) and fin whales (*Balaenoptera physalus*) have also been documented in coastal waters and bays. Those coastal areas have been designated as critical habitat for North Atlantic right whale feeding.

In this case, the Facility's outfall and action area overlap with coastal waters where protected marine species are found. The Facility's discharges are directly into the Cape Cod Canal, which is a portion of the larger Buzzard's Bay, which drains into the Atlantic Ocean. Two species of anadromous fish, the shortnose sturgeon (*Acipenser brevirostrom*) and the Atlantic sturgeon (*Acipenser oxyrinchus*), are potentially present in the vicinity of the discharge. In general, adult shortnose sturgeon (SNS) and adult Atlantic sturgeon (ATS) are present in coastal waters. The Cape Cod Canal is possibly home for multiple lifestages, including adult and juvenile sturgeon that are expected to migrate, forage and overwinter in the area, young of year sturgeon that are expected to migrate and forage in the area and post yolk-sac larvae sturgeon that are expected to migrate and forage in the area. Also present in the action area are four species of sea turtle, including: the leatherback sea turtle (*Dermochelys coriacea*), green sea turtle (*Chelonia mydas*), kemp's ridley sea turtle (*Lepidochelys kempii*), and the loggerhead sea turtle (*Caretta caretta*). This section of Buzzards Bay is known to be active migrating and foraging habitat for both adult and juvenile sea turtles, likely passing through the area as part of their larger annual migration route. The action area also overlaps with habitat for two Atlantic large whale species, the North Atlantic right whale (*Eubalaena glacialis*) and the fin whale (*Balaenoptera physalus*). Adult and juvenile whales are known to migrate, forage, and overwinter in and around the action area of the discharge.

Because these species may be affected by the discharges authorized by the proposed permit, EPA has thoroughly evaluated the potential impacts of the permit action on these protected species through the preparation of a Biological Assessment (BA). EPA is in the process of finalizing the BA. On the basis of the evaluation, EPA's preliminary determination is that this action may affect, but is not likely to adversely affect, the life stages of the protected species which are expected to inhabit the Cape Cod Canal in the vicinity of the action area of the discharge. Therefore, EPA has judged that a formal consultation pursuant to section 7 of the ESA is not required. EPA is seeking concurrence from NOAA Fisheries regarding this determination

through the information in the Draft Permit, this Fact Sheet, as well as the detailed BA that will be sent to NOAA Fisheries Protected Resources Division during the Draft Permit's public comment period.

For protected species under the jurisdiction of the USFWS, three listed species, the northern long-eared bat (*Myotis septentrionalis*), the roseate tern (*Sterna dougallii dougallii*), and the Plymouth redbelly turtle (*Pseudemys rubriventris bangsi*) were identified as potentially occurring in the action area of the Facility's discharge.

According to the USFWS, the threatened northern long-eared bat is found in the following habitats based on seasons, "winter – mines and caves; summer – wide variety of forested habitats." This species is not considered aquatic. However, because the Facility's projected action area in the Cape Cod Canal near Buzzards Bay, MA overlaps with the general statewide range of the northern long-eared bat, EPA prepared an Effects Determination Letter for the Massachusetts Maritime Academy NPDES Permit Reissuance and submitted it to USFWS. Based on the information submitted by EPA, the USFWS notified EPA by letter, dated December 7, 2021, that the permit reissuance is consistent with activities analyzed in the USFWS January 5, 2016, Programmatic Biological Opinion (PBO).¹³ The PBO outlines activities that are excepted from "take" prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.). The USFWS consistency letter concluded EPA's consultation responsibilities for the Massachusetts Maritime Academy NPDES permitting action under ESA section 7(a)(2) with respect to the northern long-eared bat. No further ESA section 7 consultation is required with USFWS.

The roseate tern has a historical range down the Atlantic Coast ranging from Maine to North Carolina, with additional habitat in Florida, Puerto Rico, and the U.S. Virgin Islands. The roseate tern is classified as endangered throughout the Northeast and Mid-Atlantic and classified as threatened in Florida, Puerto Rico, and the U.S. Virgin Islands. While not an aquatic species, the tern relies on the consumption of small fish and engages in a plunge-dive behavior where it is completely submerged to retrieve fish. Because the near shore canal action area of the Facility is not expected to overlap with the feeding behavior and habitat of the roseate tern, no ESA consultation with USFWS for this federal action is necessary regarding this species.

The Plymouth redbelly turtle is an endangered reptile whose range stretches from the Western bank of the Cape Cod Bay to the Eastern edge of the city of Providence, Rhode Island. The range extends as far north as Brockton, MA, and as far south as New Bedford, MA. Critical habitat for the Plymouth redbelly turtle has been established by the USFWS but is not yet available for analysis. The turtle is an aquatic freshwater species commonly occurring in lakes, ponds, rivers, streams, and marshes. The permitted facility has an outfall directly discharging into the Cape Cod Canal and does not directly interact with freshwater bodies in or around the Facility. Subsequently, the permitted Facility's action does not overlap with the Plymouth redbelly turtle or its habitat. No ESA consultation with USFWS for this federal action is necessary regarding this species.

¹³ USFWS Event Code: 05E1NE00-2021-E-14173, September 2, 2021.

At the beginning of the public comment period, EPA notified NOAA Fisheries Protected Resources Division and USFWS that the Draft Permit and Fact Sheet were available for review and provided a link to the EPA NPDES Permit website to allow direct access to the documents.

ESA consultation with NOAA Fisheries is required as a result of this permitting action. Once completed, re-initiation of consultation is required and shall be requested by the EPA or by USFWS/NOAA Fisheries where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in the analysis; (b) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this analysis; or (c) If a new species is listed or critical habitat designated that may be affected by the identified action. No take is anticipated or exempted. If there is any incidental take of a listed species, initiation of consultation would be required.

5.7 Essential Fish Habitat

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (*see* 16 U.S.C. § 1801 *et seq.*, 1998), EPA is required to consult with the NOAA Fisheries if EPA's action or proposed actions that it funds, permits, or undertakes, "may adversely impact any essential fish habitat". *See* 16 U.S.C. § 1855(b).

The Amendments broadly define "essential fish habitat" (EFH) as: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity". *See* 16 U.S.C. § 1802(10). "Adverse impact" means any impact that reduces the quality and/or quantity of EFH. 50 CFR § 600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

EFH is only designated for fish species for which federal Fisheries Management Plans exist. *See* 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. A New England Fishery Management Council's Omnibus Essential Fish Habitat Amendment in 2017 updated the descriptions.

The Federal action being considered in this case is EPA's proposed NPDES permit for the Massachusetts Maritime Academy, which discharges through Outfall 001 and Outfall 002, to the Cape Cod Canal segment MA 95-14, in Buzzards Bay, MA. The Cape Cod Canal is covered by EFH designation for ocean systems at Latitude 41° 44' 23" N, and Longitude 71° 22' 42" W, as determined by the NOAA EFH Mapper.¹⁴ EPA's review of available EFH information indicated that this water body is designated EFH for 21 fish species and two habitat areas of particular concern. Therefore, consultation with NOAA Fisheries under the Magnuson-Stevens Fishery Conservation and Management Act is required. The following is a list of the EFH species and applicable life stage(s) for the Cape Cod Canal including waters in Buzzards Bay, MA:

¹⁴ NOAA EFH Mapper available at <https://www.habitat.noaa.gov/apps/efhmapper/>

Species/Management Unit	Lifestage(s) Found at Location
Atlantic Wolffish	ALL
Winter Flounder	ALL
Little Skate	Juvenile, Adult
Atlantic Herring	Juvenile, Adult
Atlantic Cod	ALL
Red Hake	ALL
Yellowtail Flounder	Juvenile, Adult
Windowpane Flounder	Juvenile, Adult
Winter Skate	Juvenile, Adult
Ocean Pout	Eggs
White Shark	Larvae
Black Sea Bass	ALL
Scup	ALL
Northern Shortfin Squid	Adult
Longfin Inshore Squid	Eggs, Juvenile, Adult
Atlantic Mackerel	Eggs, Juvenile, Adult
Bluefish	Juvenile, Adult
Atlantic Butterfish	Eggs, Juvenile, Adult
Spiny Dogfish	Juvenile, Adult
Atlantic Surfclam	Juvenile, Adult
Summer Flounder	Larvae, Juvenile, Adult
HAPC Name	
Inshore 20m Juvenile Cod	
Summer Flounder	

EPA has determined that the operation of this Facility, as governed by this permit action, may adversely affect the EFH in the Cape Cod Canal. The Draft Permit has been conditioned in the following way to minimize any impacts that reduce the quality and/or quantity of EFH:

5.7.1 EPA's Finding of all Potential Impacts to EFH Species

- This Draft Permit action does not constitute a new source of pollutants. It is the reissuance of an existing NPDES permit;
- The Facility withdraws no water from the Cape Cod Canal, so the EFH will not be reduced in quality and/or quantity through impingement or entrainment of EFH designated species or their prey;
- Acute toxicity tests will be conducted once a year to ensure that the discharge does not exhibit toxicity;

- Total suspended solids, biochemical oxygen demand, pH, *Enterococcus*, fecal coliform, total residual chlorine and acute toxicity are regulated by the Draft Permit to meet water quality standards;
- The Draft Permit prohibits the discharge of pollutants or combination of pollutants in toxic amounts;
- The effluent limitations and conditions in the Draft Permit were developed to be protective of all aquatic life;
- The Draft Permit prohibits violations of the state water quality standards; and
- The proposed Draft Permit requirements minimize any reduction in quality and/or quantity of EFH, either directly or indirectly.

EPA believes that the conditions and limitations contained in the Draft Permit adequately protect all aquatic life, as well as the essential fish habitat in the Cape Cod Canal. Further mitigation is not warranted. Should adverse impacts to EFH be detected as a result of this permit action, or if new information is received that changes the basis for EPA's conclusions, NOAA Fisheries Habitat and Ecosystem Services Division will be contacted and an EFH consultation will be re-initiated.

At the beginning of the public comment period, EPA notified NOAA Fisheries Habitat and Ecosystem Services Division that the Draft Permit and Fact Sheet were available for review and provided a link to the EPA NPDES Permit website to allow direct access to the documents. In addition to this Fact Sheet and the Draft Permit, information to support EPA's finding was included in a letter under separate cover that will be sent to the NOAA Fisheries Habitat and Ecosystem Services Division during the public comment period.

5.8 Coastal Zone Management (CZM) Consistency Review

The regulation at 40 CFR § 122.49(d) states "The Coastal Zone Management Act, 16 U.S.C. 1451 et seq. section 307(c) of the Act and implementing regulations (15 CFR part 930) prohibit EPA from issuing a permit for an activity affecting land or water in the coastal zone until the applicant certifies that the proposed activity complies with the State Coastal Zone Management program, and the State or its designated agency concurs with the certification (or the Secretary of Commerce) overrides the State's nonconcurrence.

The discharge is within the defined CZM boundaries. The Permittee submitted a letter dated November 8, 2021 to the Massachusetts CZM Program stating their intention to abide by the CZM water quality and habitat policies. EPA expects that CZM will find the discharge consistent with its policies.

6.0 Public Comments, Hearing Requests and Permit Appeals

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:

George Papadopoulos
EPA Region 1
5 Post Office Square, Suite 100 (06-1)
Boston, MA 02109-3912; Telephone: (617) 918-1579
Email: papadopoulos.george@epa.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 Draft Permit. 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 CFR § 124.12 are satisfied. In reaching a final decision on the Draft Permit, EPA will respond to all significant comments in a Response to Comments document attached to the Final Permit 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, 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. Within 30 days after EPA serves notice of the issuance of the Final Permit decision, an appeal of the federal NPDES permit may be commenced by filing a petition for review of the permit with the Clerk of EPA's Environmental Appeals Board in accordance with the procedures at 40 CFR § 124.19.

7.0 Administrative Record

Following U.S. Centers for Disease Control and Prevention (CDC) and U.S. Office of Personnel Management (OPM) guidance and specific state guidelines impacting our regional offices, EPA's workforce has been directed to telework to help prevent transmission of the coronavirus. While in this telework status, there are practical limitations on the ability of Agency personnel to allow the public to review the administrative record in person at EPA's Boston office. However, any documents relating to this draft can be requested from the individual listed above.

The administrative record on which this Draft Permit is based may be accessed at EPA's Boston office by appointment, Monday through Friday, excluding holidays from George Papadopoulos, EPA Region 1, 5 Post Office Square, Suite 100 (06-1), Boston, MA 02109-3912 or via email to papadopoulos.george@epa.gov.

January 2022

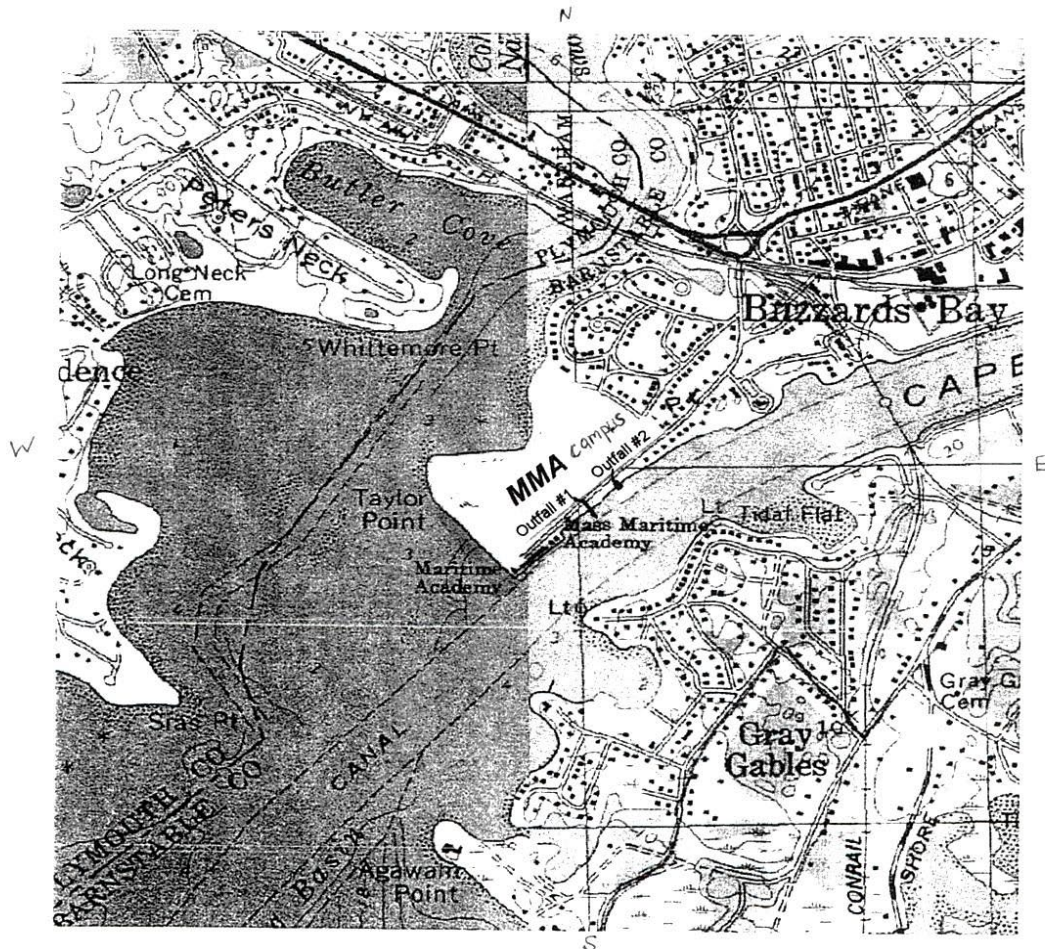
Date

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

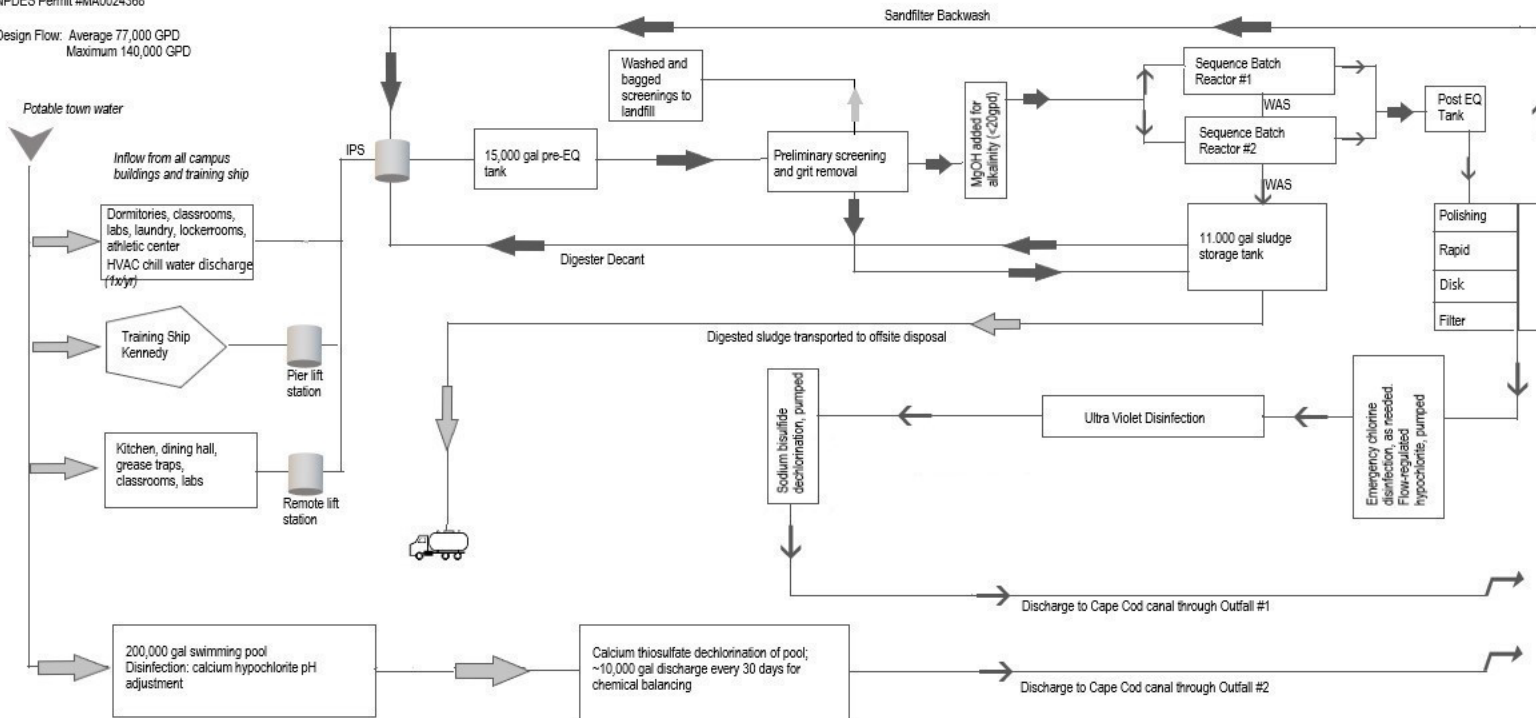
Figure 1: Location Map - Mass Maritime Academy WWTF

Permit No. MA0024368

OUTFALL #1- Latitude 41° - 44min W
Longitude 70° 37min W
#2 - same

Masachusetts Maritime Academy***Location of permitted Outfalls #1 and #2***

Tide in Cape Cod Canal changes every 6 hours:
WEST -Outgoing tide EAST - Incoming tide

Figure 2 – Schematic of Wastewater Treatment PlantMMA Process & Flow Schematic v2.0
NPDES Permit #MA0024368Design Flow: Average 77,000 GPD
Maximum 140,000 GPD

Appendix A – Discharge Monitoring Data

MASS MARITIME ACADEMY - Outfall Serial Number 001 Effluent Monitoring											
Parameter	Flow	Flow	Flow	BOD5	BOD5	BOD5	BOD5	BOD5	TSS	TSS	TSS
	Annual Rolling AVG	Monthly Avg	Daily Max	Monthly Avg	Monthly Avg	Weekly Average	Daily Max	Daily Max	Monthly Avg	Weekly Average	Daily Max
Units	MGD	gal/d	MGD	lb/d	mg/L	mg/L	lb/d	mg/L	Mg/L	Mg/L	Mg/L
Effluent Limit	0.077	Report	Report	35	30	45	Report	Report	30	45	Report
Minimum	0.003	3000	0.007	0	0	0	0	0	2	2	3.9
Maximum	0.042	42000	0.072	5	10.1	10.1	9	14	34	34	44
Median	0.025	25000	0.0505	1.4	6.85	6.55	2.9	9	8.3	8.3	12.1
No. of Violations	0	N/A	N/A	0	0	0	N/A	N/A	1	0	N/A
Monitoring Period End Date											
5/31/2016	0.035	35000	0.05	2.7	8.1	8.2	3.6	9.5	5.2	3.1	3.9
6/30/2016	0.02	20000	0.05	1.7	8.5	9	4.2	10.9	10.2	13.3	26
7/31/2016	0.012	12000	0.032	1.1	7.3	7.3	1.6	8.7	7	7	11.4
8/31/2016	0.017	17000	0.05	1.4	9.1	9.1	1.9	9.9	9	9	15.8
9/30/2016	0.035	35000	0.054	2.6	8.1	8.1	3.6	9.5	8.6	8.6	12.2
10/31/2016	0.036	36000	0.062	4.4	10	10	5.6	14	14	14	17
11/30/2016	0.033	33000	0.057	2.1	5.3	5.3	2.9	6	12.8	12.8	22
12/31/2016	0.029	29000	0.071	1.8	6.3	6.3	3.7	9.6	8.8	8.8	15
1/31/2017	0.01	10000	0.03	0.4	3.9	3.9	0.8	5.5	6.1	6.1	10
2/28/2017	0.008	8000	0.023	0.3	4.6	4.6	0.4	5.3	7.5	7.5	11
3/31/2017	0.036	36000	0.055	2.9	7.9	7.9	3.8	11	16.7	16.7	36
4/30/2017	0.03	30000	0.062	3.1	10	10	4.6	10	20	20	24

Parameter	Flow	Flow	Flow	BOD5	BOD5	BOD5	BOD5	BOD5	TSS	TSS	TSS
	Annual Rolling AVG	Monthly Avg	Daily Max	Monthly Avg	Monthly Avg	Weekly Average	Daily Max	Daily Max	Monthly Avg	Weekly Average	Daily Max
Units	MGD	gal/d	MGD	lb/d	mg/L	mg/L	lb/d	mg/L	Mg/L	Mg/L	Mg/L
5/31/2017	0.032	32000	0.048	3.3	9.1	9.1	3.7	10	22	22	38
6/30/2017	0.021	21000	0.051	2	9.1	9.1	4.3	10	12.8	12.8	20
7/31/2017	0.011	11000	0.045	0.7	7.3	7.3	0.9	9	7.3	7.3	9
8/31/2017	0.016	16000	0.054	0.8	6.9	6.9	1.7	9	18	18	29
9/30/2017	0.032	32000	0.047	3.2	8.5	8.5	3.8	10	15	15	23
10/31/2017	0.036	36000	0.05	3.5	8.8	8.8	4.2	10	12	12	16
11/30/2017	0.032	32000	0.052	2.6	6.8	6.8	4.1	10	7.2	7.2	9
12/31/2017	0.026	26000	0.058	1.1	5	5	2.1	8	6.3	6.3	10
1/31/2018	0.01	10000	0.032	0.05	4	4	2	6	5	5	8
2/28/2018	0.008	8000	0.02	0	3	3	0	3	2	2	4
3/31/2018	0.031	31000	0.051	1	4	4	3	9	6	6	7
4/30/2018	0.039	39000	0.067	1	3	3	2	4	4	4	5
5/31/2018	0.034	34000	0.053	1.4	3.5	3.5	1.9	5	4.8	4.8	6
6/30/2018	0.024	24000	0.057	1.1	5.8	5.8	2.4	8	5.5	5.5	7
7/31/2018	0.017	17000	0.045	1.3	7.3	7.3	2.3	8	10.5	10.5	22
8/31/2018	0.022	22000	0.059	0.6	5	5	0.5	3	5	5	6
9/30/2018	0.037	37000	0.053	3.3	7.8	7.8	4	9	10	10	17
10/31/2018	0.038	38000	0.058	3	8	8	4	9	15	15	18
11/30/2018	0.032	32000	0.032	3	8	8	4	10	10	10	12
12/31/2018	0.025	25000	0.051	2	7	7	3	10	12	12	20
1/31/2019	0.01	10000	0.026	0.06	6	6	1.7	8	10	10	13
2/28/2019	0.009	9000	0.02	0.3	3.3	3.3	0.5	5	7	7	14
3/31/2019	0.034	34000	0.053	3	9	9	4	10	34	34	44
4/30/2019	0.033	33000	0.052	3	9	9	4	10	14	14	24

Parameter	Flow	Flow	Flow	BOD5	BOD5	BOD5	BOD5	BOD5	TSS	TSS	TSS
	Annual Rolling AVG	Monthly Avg	Daily Max	Monthly Avg	Monthly Avg	Weekly Average	Daily Max	Daily Max	Monthly Avg	Weekly Average	Daily Max
Units	MGD	gal/d	MGD	lb/d	mg/L	mg/L	lb/d	mg/L	Mg/L	Mg/L	Mg/L
5/31/2019	0.039	39000	0.06	4	9	9	5	10	15	15	22
6/30/2019	0.025	25000	0.057	2	8	8	4	9	7	7	10
7/31/2019	0.016	16000	0.037	1	7	7	1	9	13	13	27
8/31/2019	0.021	21000	0.065	1	7	7	2	9	8	8	15
9/30/2019	0.039	39000	0.068	3	6	6	3	8	8	8	10
10/31/2019	0.042	42000	0.063	2	6	6	4	9	7	7	10
11/30/2019	0.035	35000	0.061	2.1	4.5	4.5	4.1	8	4	4	5
12/31/2019	0.026	26000	0.072	1	4	4	2	5	5	5	7
1/31/2020	0.013	13000	0.032	1	5	5	1	7	5	5	8
2/29/2020	0.009	9000	0.02	0	5	5	0	8	7	6	12
3/31/2020	0.039	39000	0.062	4.1	10.1	10.1	5	12.6	11.4	11.4	17
4/30/2020	0.037	37000	0.063	4	9.6	9.6	4.8	11.6	8.8	8.8	15
5/31/2020	0.003	3000	0.008	5	0	0	9	0	9	9	11
6/30/2020	0.004	4000	0.007	0	4	4	0	7	5.8	5.8	6.5
7/31/2020	0.004	4000	0.01	0	4	4	0	6	6.6	6.6	8.5
8/31/2020	0.011	11000	0.025	0	2	2	0	3	3	3	4.3
9/30/2020	0.019	19000	0.034	0.7	5	5	1.1	6.3	5	5	6
10/31/2020	0.018	18000	0.033	1	7	5	1	7	4	4	5
11/30/2020	0.017	17000	0.019	1	4	4	4	8	6	6	6.3
12/31/2020	0.007	7000	0.024	0.2	4.8	4.8	0.5	6.5	10	10	16
1/31/2021	0.004	4000	0.008	0.2	5.9	5.9	0.3	9.2	20	20	29
2/28/2021	0.027	27000	0.046	2.1	8.2	8.2	3.2	9.7	13	13	16
3/31/2021	0.028	28000	0.043	1.7	8.6	8.6	2.9	9.5	11	11	19

Notes: 0 = parameter not detected; N/A = not applicable

MASS MARITIME ACADEMY - Outfall Serial Number 001 Effluent Monitoring – Continued									
Parameter	pH	pH	BOD5 % Removal	TSS % Removal	Settleable Solids	Entero- coccus	Entero- coccus	Fecal Coliform	Fecal Coliform
	Min	Max	Monthly Average	Monthly Average	Daily Max	Monthly Geometric Mean	Daily Max	Monthly Geometric Mean	Daily Max
Units	SU	SU	%	%	mL/L	CFU/100 mL	CFU/100 mL	CFU/100 mL	CFU/100 mL
Effluent Limit	6.5	8.5	85	85	Report	35	276	14	43
Minimum	6.5	7.5	85	86	0	0	0	0	0
Maximum	7.5	8.5	99	99	0	5	48	0	0
Median	6.7	8.1	95	96	0	0	0	0	0
No. of Violations	0	0	0	0	N/A	0	0	0	0
Monitoring Period End Date									
5/31/2016	6.5	7.6	97	99	0	0	0	0	0
6/30/2016	6.8	8	96	99	0	0	0	0	0
7/31/2016	6.9	8.2	92	99	0	0	0	0	0
8/31/2016	6.9	8.3	96	99	0	0	0	0	0
9/30/2016	6.7	8.2	93	99	0	0	0	0	0
10/31/2016	7.2	8.3	98	99	0	0	1	0	0
11/30/2016	6.5	8.5	99	99	0	1	4	0	0
12/31/2016	6.5	8.5	98	99	0	0	0	0	0
1/31/2017	6.8	8.5	94	99	0	0	0	0	0
2/28/2017	7.5	8.5	95	99	0	0	0	0	0
3/31/2017	6.5	8.4	97	99	0	0	0	0	0
4/30/2017	6.5	8.3	95	99	0	0	43	0	0
5/31/2017	6.5	7.5	98	99	0	0	0	0	0

Parameter	pH	pH	BOD5 % Removal	TSS % Removal	Settleable Solids	Entero- coccus	Entero- coccus	Fecal Coliform	Fecal Coliform
	Min	Max	Monthly Average	Monthly Average	Daily Max	Monthly Geometric Mean	Daily Max	Monthly Geometric Mean	Daily Max
Units	SU	SU	%	%	mL/L	CFU/100 mL	CFU/100 mL	CFU/100 mL	CFU/100 mL
6/30/2017	6.5	8.5	96	99	0	0	3	0	0
7/31/2017	6.6	8.5	96	99	0	0	0	0	0
8/31/2017	6.7	8.5	97	99	0	0	0	0	0
9/30/2017	6.5	8.5	96	93	0	0	6	0	0
10/31/2017	6.5	8.4	97	95	0	0	8	0	0
11/30/2017	6.5	7.7	96	92	0	0	0	0	0
12/31/2017	6.7	7.8	95	95	0	0	0	0	0
1/31/2018	6.8	7.8	92	94	0	0	0	0	0
2/28/2018	7.2	7.7	85	95	0	0	0	0	0
3/31/2018	6.5	7.7	95	93	0	0	0	0	0
4/30/2018	6.5	7.8	98	92	0	5	17	0	0
5/31/2018	6.5	7.7	98	97	0	0	0	0	0
6/30/2018	6.8	8.1	97	96	0	0	0	0	0
7/31/2018	6.8	8.1	93	87	0	0	0	0	0
8/31/2018	6.5	8.2	96	96	0	0	0	0	0
9/30/2018	6.7	8.1	94	94	0	0	0	0	0
10/31/2018	6.5	8.3	96	93	0	4	48	0	0
11/30/2018	6.5	8.4	96	94	0	0	0	0	0
12/31/2018	6.9	8.2	95	92	0	0	0	0	0
1/31/2019	6.5	8.4	95	93	0	4	37	0	0
2/28/2019	6.5	8.5	95	93	0	0	0	0	0
3/31/2019	6.5	8.4	85	96	0	0	0	0	0

Parameter	pH	pH	BOD5 % Removal	TSS % Removal	Settleable Solids	Entero- coccus	Entero- coccus	Fecal Coliform	Fecal Coliform
	Min	Max	Monthly Average	Monthly Average	Daily Max	Monthly Geometric Mean	Daily Max	Monthly Geometric Mean	Daily Max
Units	SU	SU	%	%	mL/L	CFU/100 mL	CFU/100 mL	CFU/100 mL	CFU/100 mL
4/30/2019	6.6	8.3	92	88	0	0	0	0	0
5/31/2019	6.6	8.3	92	89	0	0	0	0	0
6/30/2019	6.7	8.5	86	94	0	0	0	0	0
7/31/2019	6.7	8.5	85	94	0	0	0	0	0
8/31/2019	6.5	8.4	93	95	0	0	0	0	0
9/30/2019	6.7	8.4	95	97	0	0	0	0	0
10/31/2019	6.5	7.7	95	96	0	4	48	0	0
11/30/2019	6.7	7.6	94	96	0	0	0	0	0
12/31/2019	6.6	7.8	98	98	0	0	0	0	0
1/31/2020	6.8	7.9	94	97	0	0	0	0	0
2/29/2020	6.6	7.8	91	96	0	0	0	0	0
3/31/2020	7.1	7.5	97	99	0	0	0	0	0
4/30/2020	6.5	7.8	97	99	0	0	0	0	0
5/31/2020	6.8	7.5	98	86	0	0	0	0	0
6/30/2020	6.9	7.6	88	96	0	0	0	0	0
7/31/2020	6.6	7.8	86	92	0	0	0	0	0
8/31/2020	7	7.6	87	98	0	0	0	0	0
9/30/2020	6.8	7.7	98	98	0	0	0	0	0
10/31/2020	6.9	7.6	97	98	0	0	0	0	0
11/30/2020	6.9	7.7	93	98	0	0	0	0	0
12/31/2020	7.1	7.9	93	90	0	0	0	0	0

Parameter	pH	pH	BOD5 % Removal	TSS % Removal	Settleable Solids	Entero- coccus	Entero- coccus	Fecal Coliform	Fecal Coliform
	Min	Max	Monthly Average	Monthly Average	Daily Max	Monthly Geometric Mean	Daily Max	Monthly Geometric Mean	Daily Max
Units	SU	SU	%	%	mL/L	CFU/100 mL	CFU/100 mL	CFU/100 mL	CFU/100 mL
1/31/2021	7	7.7	85	89	0	0	0	0	0
2/28/2021	6.8	7.6	91	96	0	0	0	0	0
3/31/2021	6.6	7.5	96	90	0	0	0	0	0

Notes: 0 = parameter not detected; N/A = not applicable

MASS MARITIME ACADEMY - Outfall Serial Number 001				
Effluent Monitoring – Continued				
Parameter	Ammonia	TKN	TN	Nitrite+Nitrate
	Daily Max	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	mg/L	mg/L
Effluent Limit	Report	Report	Report	Report
Minimum	0	0	0	0
Maximum	86	45	110	100
Median	0.76	3.95	69	58.65
No. of Violations	N/A	N/A	N/A	N/A
Monitoring Period End Date				
5/31/2016	0.5	0.9	95.8	92.4
6/30/2016	0	2.4	62.8	60.4
7/31/2016	0	0	0	0
8/31/2016	0	2.7	58.5	56
9/30/2016	86	0.6	91	86
10/31/2016	0.52	33.3	68.7	35.4
11/30/2016	0	2.7	91.8	89.1
12/31/2016	3	6.6	83	77
1/31/2017	0	1.9	60.3	58
2/28/2017	0	1.7	45.6	44
3/31/2017	2.7	6.7	81.5	75
4/30/2017	13.5	22.6	82.5	59.9
5/31/2017	22	32	99	67
6/30/2017	2.3	8.5	61	52

Parameter	Ammonia	TKN	TN	Nitrite+Nitrate
	Daily Max	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	mg/L	mg/L
7/31/2017	0	2	32	29.6
8/31/2017	6.2	11	52	41
9/30/2017	27	34	110	73
10/31/2017	21	26	99	73
11/30/2017	0	3.4	104	100
12/31/2017	0	6.1	85	78
1/31/2018	0.61	4.3	72	68
2/28/2018	0	1.1	28	27
3/31/2018	1.4	7.5	74	66
4/30/2018	0	1.9	102	100
5/31/2018	0	2.4	90	88
6/30/2018	0	1.8	69	67
7/31/2018	1.1	2.5	39	36.5
8/31/2018	6.2	10	55	45.3
9/30/2018	3.5	9.8	86	75.8
10/31/2018	0.72	1.6	80	78.1
11/30/2018	0	3.6	81	77.8
12/31/2018	11	12	69	57
1/31/2019	0	1.3	37	37
2/28/2019	0.99	6.7	47	40.1
3/31/2019	39	45	96	51.5
4/30/2019	30	38	109	71
5/31/2019	20	29	95	65.5
6/30/2019	26	31	104	73

Parameter	Ammonia	TKN	TN	Nitrite+Nitrate
	Daily Max	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	mg/L	mg/L
7/31/2019	4.2	12	57	44.2
8/31/2019	11	17	58	41.2
9/30/2019	12	20	80	59.1
10/31/2019	4.3	7.8	76	68.6
11/30/2019	0	1.8	57	55.5
12/31/2019	2.7	4.5	76	71.6
1/31/2020	1.7	4.9	62	57.5
2/29/2020	0	1.3	37	35.9
3/31/2020	26.9	33.3	91.5	58.2
4/30/2020	8.4	13.4	30.2	17
5/31/2020	0	0.9	17	16.2
6/30/2020	0	1.1	25	23.7
7/31/2020	0	1.3	30	16
8/31/2020	0	2	24	21.8
9/30/2020	78	1.6	0	76.6
10/31/2020	0	0	35	36
11/30/2020	0	0	87	86.5
12/31/2020	0	1.1	31	30.3
1/31/2021	0	1.2	4.8	3.6
2/28/2021	22	26	100	76
3/31/2021	0.8	6.2	75	68.9

Notes: 0 = parameter not detected; N/A = not applicable

MASS MARITIME ACADEMY - Outfall Serial Number 002 Effluent Monitoring					
Parameter	Flow	pH	pH	TRC	Copper
	Daily Max	Minimum	Maximum	Daily Max	Daily Max
Units	gal/d	SU	SU	mg/L	mg/L
Effluent Limit	10000	6.5	8.5	1	0.5
Minimum	6000	7	7	0	0
Maximum	187000	7.8	7.8	0.5	0.2
Median	9500	7.6	7.6	0	0.01
No. of Violations	1	0	0	0	0
Monitoring Period End Date					
5/31/2016	8500	7.6	7.6	0	0
6/30/2016	8250	7.6	7.6	0	0
7/31/2016	8500	7.6	7.6	0	0
8/31/2016	6000	7.5	7.5	0	0
9/30/2016	187000#	7.6	7.6	0	0
10/31/2016	9500	7.6	7.6	0	0
11/30/2016	8000	7.6	7.6	0	0.1
12/31/2016	6200	7.7	7.7	0	0.2
1/31/2017	9500	7.6	7.6	0	0.2
2/28/2017	9500	7.7	7.7	0	0.2
3/31/2017	8800	7.7	7.7	0.5	0.2
4/30/2017	10000	7.6	7.6	0.01	0.2
5/31/2017	8750	7.7	7.7	0.02	0.1
6/30/2017	8000	7.5	7.5	0	0.01

Parameter	Flow	pH	pH	TRC	Copper
	Daily Max	Minimum	Maximum	Daily Max	Daily Max
Units	gal/d	SU	SU	mg/L	mg/L
7/31/2017	8200	7.7	7.7	0.5	0.1
8/31/2017	7750	7.7	7.7	0	0
9/30/2017	9200	7.7	7.7	0	0.2
10/31/2017	9200	7.6	7.6	0	0.01
11/30/2017	9450	7.8	7.8	0	0.01
12/31/2017	7800	7.8	7.8	0	0.01
1/31/2018	8100	7.8	7.8	0	0.02
2/28/2018	9800	7.8	7.8	0	0.003
3/31/2018	9100	7.8	7.8	0	0.01
4/30/2018	6500	7.7	7.7	0	0.01
5/31/2018	9200	7.6	7.6	0	0.02
6/30/2018	9310	7.5	7.5	0	0.01
7/31/2018	8500	7.7	7.7	0	0.02
8/31/2018	9000	7.6	7.6	0	0.01
9/30/2018	10000	7.7	7.7	0	0.01
10/31/2018	10000	7.7	7.7	0	0.01
11/30/2018	7500	7.7	7.7	0	0.01
12/31/2018	9500	7.7	7.7	0	0.02
1/31/2019	9890	7.5	7.5	0	0.01
2/28/2019	9500	7.6	7.6	0	0.02
3/31/2019	7000	7	7	0	0.01
4/30/2019	9400	7.7	7.7	0	0.02
5/31/2019	9500	7.8	7.8	0	0.01
6/30/2019	9000	7.6	7.6	0	0.01

Parameter	Flow	pH	pH	TRC	Copper
	Daily Max	Minimum	Maximum	Daily Max	Daily Max
Units	gal/d	SU	SU	mg/L	mg/L
7/31/2019	9860	7.8	7.8	0	0.02
8/31/2019	10000	7.6	7.6	0	0.01
9/30/2019	10000	7.7	7.7	0	0.01
10/31/2019	9000	7.8	7.8	0	0.02
11/30/2019	10000	7.6	7.6	0	0.01
12/31/2019	9000	7.6	7.6	0	0.01
1/31/2020	10000	7.7	7.7	0	0.01
2/29/2020	10000	7.7	7.7	0	0.02
3/31/2020	9800	7.7	7.7	0	0.01
4/30/2020	7800	7.6	7.6	0	0.02
5/31/2020	10000	7.6	7.6	0	0.01
6/30/2020	10000	7.6	7.6	0	0.01
7/31/2020	10000	7.5	7.5	0	0.02
8/31/2020	10000	7.6	7.6	0	0.01
9/30/2020	10000	7.6	7.6	0	0.02
10/31/2020	10000	7.6	7.6	0	0.02
11/30/2020	10000	7.7	7.7	0	0.01
12/31/2020	10000	7.6	7.6	0	0.01
1/31/2021	10000	7.5	7.5	0	0.01
2/28/2021	10000	7.6	7.6	0	0.01
3/31/2021	10000	7.6	7.6	0	0.01

Swimming pool completely discharged

Mass Maritime Academy Outfall 001 - Whole Effluent Toxicity Testing - Effluent								
Parameter	LC50 - Acute Mysidopsis Bahia	Aluminum	Cadmium	Copper	Lead	Nickel	Zinc	Ammonia
	Daily Min							
Units	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Effluent Limit	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Minimum	100	0	0	0.027	0	0.007	0.019	0
Maximum	100	0.915	0	0.222	0	0.135	0.555	0.076
Median	100	0.127	0	0.057	0	0.010	0.187	0.007
No. of Violations	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monitoring Period End Date								
6/30/2016	100	0.	0	0.035	0	0.014	0.187	0.007
6/30/2017	100	0.337	0	0.057	0	0.008	0.19	0.015
6/30/2018	100	0.127	0	0.064	0	0.135	0.112	0.076
6/30/2019	100	0.915	0	0.222	0	0.007	0.555	0.
6/30/2020	100	0.065	0	0.027	0	0.010	0.019	0

Mass Maritime Academy Outfall 001 - Whole Effluent Toxicity Testing – Receiving Water								
Parameter	Aluminum	Cadmium	Copper	Lead	Nickel	Zinc	Ammonia	pH
	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Effluent Limit	Report	Report	Report	Report	Report	Report	Report	Report
Minimum	0	0	0	0	0	0	0	6.59
Maximum	0.11	0	0.004	0	0.031	0.076	0	7.9
Median	0.024	0	0	0	0	0.007	0	7.82
No. of Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Monitoring Period End Date								
6/30/2016	0.01	0	0	0	0.031	0.007	0	7.9
6/30/2017	0.08	0	0	0	0	0.015	0	7.82
6/30/2018	0.11	0	0	0	0	0.076	0	7.89
6/30/2019	0.024	0	0	0	0	0	0	6.7
6/30/2020	0	0	0.004	0	0	0	0	6.59

Notes: 0 = parameter not detected; N/A = not applicable

Appendix B: Reasonable Potential Analysis**Methodology**

A reasonable potential analysis is completed using a single set of critical conditions for flow and pollutant concentration that will ensure the protection of water quality standards. To determine the critical condition of the effluent, EPA projects an upper bound of the effluent concentration based on the observed monitoring data and a selected probability basis. EPA generally applies the quantitative approach found in Appendix E of the *Technical Support Document for Water Quality-based Toxics Control* (TSD)¹⁵ to determine the upper bound of the effluent data. This methodology accounts for effluent variability based on the size of the dataset and the occurrence of non-detects (i.e., samples results in which a parameter is not detected above laboratory minimum levels). EPA used this methodology to calculate the 95th percentile.

EPA uses the calculated upper bound of the effluent data, along with a concentration representative of the parameter in the receiving water, the critical effluent flow, and the critical upstream flow to project the downstream concentration after complete mixing using the following simple mass-balance equation:

$$Q_s C_s + Q_e C_e = Q_d C_d$$

Where:

C_d = downstream concentration

C_s = upstream concentration (median value of available ambient data)

C_e = effluent concentration (95th percentile of effluent concentrations)

Q_s = upstream flow (7Q10 flow upstream of the outfall)

Q_e = effluent flow of the Facility (permitted maximum daily flow)

Q_d = downstream flow ($Q_s + Q_e$)

¹⁵ USEPA, *Technical Support Document for Water Quality-Based Toxics Control*, Office of Water, Washington, D.C., March 1991.

Solving for the receiving water concentration downstream of the discharge (C_d) yields:

$$C_d = \frac{C_s Q_s + C_e Q_e}{Q_d}$$

EPA uses the calculated upper bound of the effluent data and a concentration representative of the parameter in the receiving water outside of the zone of influence of the discharge to project the downstream concentration after complete mixing using the following simple mass-balance equation:

$$C_s(DF - 1) + C_e = C_d(DF)$$

Where:

C_d = downstream concentration

C_e = effluent concentration (95th percentile of effluent concentrations)

DF = dilution factor (See Available Dilution section of the Fact Sheet)

Solving for the receiving water concentration downstream of the discharge (C_d) yields:

$$C_d = \frac{C_s(DF - 1) + C_e}{DF}$$

When the downstream concentration exceeds the applicable criterion, there is reasonable potential for the discharge to cause, or contribute to an excursion above WQSs. *See* 40 CFR § 122.44(d). When EPA determines that a discharge causes, has the reasonable potential to cause, or contribute to such an excursion, the permit must contain WQBELs for the parameter. The limitation is calculated by rearranging the above mass balance equation to solve for the effluent concentration using the applicable criterion as the downstream concentration. *See* 40 CFR § 122.44(d)(1)(iii).

Determination of Applicable Criteria

State water quality criteria are derived from EPA's *National Recommended Water Quality Criteria: 2002*, which are incorporated into the state WQSs by reference at 314 CMR 4.05(5). For dissolved to total recoverable metal conversion, see *Appendix A - Conversion Factors for Dissolved Metals*: <http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#appendxa> required by 314 CMR 4.05(5)(e). The criteria are presented in the following table:

Summary of Applicable Criteria

Parameter	Applicable Criteria ¹	
	Acute Criterion (CMC)	Chronic Criterion (CCC)
Units	µg/L	µg/L
Aluminum	-----	-----
Cadmium	40.2	8.9
Copper	5.8	3.7
Lead	220.8	8.5
Nickel	74.7	8.3
Zinc	95.1	85.6
Ammonia (warm) ²	44.0	6.6
Ammonia (cold) ²	200	30

¹ For dissolved to total recoverable metal conversion, see *Appendix A - Conversion Factors for Dissolved Metals*:

<http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#appendxa>; Required by 314 CMR 4.05(5)(e).

² Ammonia data was divided between warm weather months (April 1 – October 31) and cold weather months (November 1 – March 30). Ammonia criteria are calculated based on the temperature and pH of the receiving water. A temperature of 25°C was assumed for calculating warm weather criteria and a temperature of 5°C for cold weather criteria. A receiving water pH of 7.82 S.U. was calculated based on pH data from quarterly WET tests.

Calculation of Reasonable Potential

EPA first calculated the upper bound of expected effluent concentrations for each parameter. EPA then used the calculated upper bound of expected effluent concentrations, the median value of the available ambient data, the permitted daily maximum effluent flow and the upstream 7Q10 flow to project the in-stream concentration downstream from the discharge. When this resultant in-stream concentration (C) exceeds the applicable criterion, there is reasonable potential for the discharge to cause, or contribute to an excursion above water quality standards. The table below presents the reasonable potential calculations and, if applicable, the calculation of the limits required in the permit.

Summary of Reasonable Potential Results

Parameter	Ambient Concentration ¹	Effluent Concentration ²	Downstream Acute Concentration ³	Downstream Chronic Concentration ³	Acute Criterion	Chronic Criterion	Acute Reasonable Potential ⁴	Chronic Reasonable Potential ⁴
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	—	—
Aluminum	24	2104	28.2	28.2	----	----	N/A	N/A
Cadmium	0	0	0	0	40.2	8.9	N	N
Copper	0	510.6	1.0	1.0	1.0	3.7	N	N
Lead	0	0	0	0	220.8	8.5	N	N
Nickel	0	310.5	0.6	0.6	74.7	8.3	N	N
Zinc	7	1267.5	9.5	9.5	95.1	85.6	N	N
Ammonia (cold)	0	22.7	0	0	200.0	30.0	N	N
Ammonia (warm)	0	63.4	0.1	0.1	44.0	6.6	N	N

¹ Values represent the median receiving water concentration from Whole Effluent Toxicity testing. For certain parameters, the value of “0” represents a median value of non-detect.

² Values represent the 95th percentile concentration calculated using the monitoring data reported by the Facility (*See Appendix A*).

³ Values are calculated as described above, using the dilution factor of 500:1

⁴ ‘Y’ indicates there is a reasonable potential, ‘N’ indicates there is no reasonable potential

UNITED STATES ENVIRONMENTAL
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WATER DIVISION
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MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION (MASSDEP)
COMMONWEALTH OF MASSACHUSETTS
1 WINTER STREET
BOSTON, MASSACHUSETTS 02108

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

PUBLIC NOTICE PERIOD: **January 10, 2022 to February 8, 2022**

PERMIT NUMBER: **MA0024368**

NAME AND MAILING ADDRESS OF APPLICANT:

Massachusetts Maritime Academy
101 Academy Drive
Buzzards Bay, MA 02532

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

Massachusetts Maritime Academy
101 Academy Drive
Buzzards Bay, MA 02532

RECEIVING WATER AND CLASSIFICATION:

Cape Cod Canal (MA 95-14); Buzzards Bay Watershed
Class SB – restricted shellfishing

PREPARATION OF THE DRAFT PERMIT AND EPA REQUEST FOR CWA § 401 CERTIFICATION:

EPA is issuing for public notice and comment the Draft NPDES Permit for the Massachusetts Maritime Academy Facility, which discharges treated sanitary wastewater, chiller water and treated swimming pool water. The effluent limits and permit conditions have been drafted pursuant to, and assure compliance with, the CWA, including EPA-approved State Surface Water Quality Standards at 314 CMR 4.00. MassDEP cooperated with EPA in the development of the Draft NPDES Permit. MassDEP retains independent authority under State law to publish for public notice and issue a separate Surface Water Discharge Permit for the discharge, not the subject of this notice, under the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53.

In addition, EPA has requested that MassDEP grant or deny certification of this Draft Permit pursuant to Section 401 of the CWA and implementing regulations. Under federal regulations governing the NPDES program at 40 Code of Federal Regulations (CFR) § 124.53(e), state certification shall contain conditions that are necessary to assure compliance with the applicable provisions of CWA sections 208(e), 301, 302, 303, 306, and 307 and with appropriate requirements of State law, including any conditions more stringent

than those in the Draft Permit that MassDEP finds necessary to meet these requirements. Furthermore, MassDEP may provide a statement of the extent to which each condition of the Draft Permit can be made less stringent without violating the requirements of State law.

INFORMATION ABOUT THE DRAFT PERMIT:

The Draft Permit and explanatory Fact Sheet may be obtained at no cost at <https://www.epa.gov/npdes-permits/massachusetts-draft-individual-npdes-permits> or by contacting:

George Papadopoulos
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1579
Email: Papadopoulos.George@epa.gov

Following U.S. Centers for Disease Control and Prevention (CDC) and U.S. Office of Personnel Management (OPM) guidance and specific state guidelines impacting our regional offices, EPA's workforce has been directed to telework to help prevent transmission of the coronavirus. While in this workforce telework status, there are practical limitations on the ability of Agency personnel to allow the public to review the administrative record in person at the EPA Boston office. However, any electronically available documents that are part of the administrative record can be requested from the EPA contact above.

PUBLIC COMMENT AND REQUESTS FOR PUBLIC HEARINGS:

All persons, including applicants, who believe any condition of this Draft Permit is inappropriate must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by February 8, 2022, which is the close of the public comment period. Comments, including those pertaining to EPA's request for CWA § 401 certification, should be submitted to the EPA contact at the address or email listed above. Upon the close of the public comment period, EPA will make all comments available to MassDEP. All commenters who want MassDEP to consider their comments in the state decision-making processes (i.e., the separate state permit and the CWA § 401 certification) must submit such comments to MassDEP during the state comment period for the state Draft Permit and CWA § 401 certification. For information on submitting such comments to MassDEP, please follow the instructions found in the state public notice at: <https://www.mass.gov/service-details/massdep-public-hearings-comment-opportunities>.

Any person, prior to the close of the EPA public comment period, may submit a request in writing to EPA for a public hearing on the Draft Permit under 40 CFR § 124.10. 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 if the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on this Draft Permit, the Regional Administrator will respond to all significant comments and make the responses available to the public.

Due to the COVID-19 National Emergency, if comments are submitted in hard copy form, please also email a copy to the EPA contact above.

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 notify the applicant and each person who has submitted written comments or requested notice.

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

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