

SELECTMEN'S MEETING AGENDA*

*Griffin Room, Town Hall
732 Main Street, Harwich, MA
Regular Meeting 6:30 P.M.
Monday, May 22, 2017*

I. CALL TO ORDER

II. PLEDGE OF ALLEGIANCE

III. SWEARING IN OF ELECTED OFFICIALS

IV. WEEKLY BRIEFING

V. PUBLIC COMMENT/ANNOUNCEMENTS

VI. CONSENT AGENDA

- A. Approve Minutes – May 8, 2017 Regular Session
- B. Accept resignation of Anne Leete as a member of the Harwich Cultural Council
- C. Accept the resignation of Donald Howell as a member of the By Law and Charter Review Committee effective May 22, 2017
- D. Approve 2017 Junk Dealer License renewal for Monahan & Co.
- E. Vote to sign letter of support to U.S. Army Corps of Engineers for Saquatucket project
- F. Approve Weekday and Sunday Entertainment Licenses for Perks and authorize Chair to sign
- G. Vote to approve and authorize the Chairman to sign for the new pumper for the Fire Department. The bid list price is \$420,000

VII. PUBLIC HEARINGS/PRESENTATIONS *(Not earlier than 6:30 P.M.)*

- A. Presentation – Pleasant Bay Composite Nitrogen Management Analysis – Carole Ridley

VIII. OLD BUSINESS

IX. NEW BUSINESS

- A. Role of the Liaison/Policy
- B. Liaison Assignments
- C. Action Item Register
- D. Goals and Objectives
- E. Committee Vacancy List
- F. Use of Town email address by Boards, Commissions and Committees

X. TOWN ADMINISTRATOR'S REPORT

- A. MassDOT Sidewalks to Saquatucket Harbor
- B. Marini Property Purchase and Sales
- C. Town Administrator reimbursement and buy-back
- D. Town Administrator proposed Contract Agreement

XI. SELECTMEN'S REPORT

- A. Selectmen's Summer Schedule

XII. ADJOURNMENT

**Per the Attorney General's Office: The Board of Selectmen may hold an open session for topics not reasonably anticipated by the Chair 48 hours in advance of the meeting following "New Business." If you are deaf or hard of hearing or a person with a disability who requires an accommodation contact the Selectmen's Office at 508-430-7513.*

Authorized Posting Officer:

Posted by: _____
Town Clerk

Sandra Robinson, Admin. Secretary

Date: _____
May 18, 2017

**MINUTES
SELECTMEN'S MEETING
GRIFFIN ROOM, TOWN HALL
MONDAY, MAY 8, 2017
6:30 P.M.**

SELECTMEN PRESENT: Brown, Hughes, Kavanagh, LaMantia, MacAskill

OTHERS PRESENT: Town Administrator Christopher Clark, Lincoln Hooper, Anita Doucette, Cyndi Williams, Atty. Matt Kelley, Judd Brackett, Aly Sabatino, Fran Salewski, Andrew Docken, Arthur Bodin, and others.

Chairman MacAskill called the meeting to order at 6:30 p.m.

WEEKLY BRIEFING

Mr. Hooper reported that there will be an entire new planting at the roundabout due to a weed that had taken over.

PUBLIC COMMENT/ANNOUNCEMENTS

Ms. Williams reported on the success of the Chamber of Commerce's Toast of Harwich event.

Ms. Doucette reported that there will be two ballots this year, one for the ballot questions and one for the candidates.

CONSENT AGENDA

- A. Approve Minutes
 - 1. April 10, 2017 – Regular Session
 - 2. February 16, 2017 – Joint IMA Meeting with Chatham
- B. Approve request by Eversource and Verizon to place a new pole on the northwesterly side of Chase Street across from an existing pole to support the line along Chase Street
- C. Accept the resignations of Adrienne and Joseph Johnson as members of the Council on Aging
- D. Accept the resignation of Michael Smith as a member of the Council on Aging
- E. Approve the nomination of Arthur Watson to the Harwich Hall of Fame
- F. Approve 2017 Junk Dealer License renewal for Marceline Salvage

Ms. Kavanagh moved approval of the Consent Agenda. Mr. LaMantia seconded the motion and the motion carried by a unanimous vote.

PUBLIC HEARINGS/PRESENTATIONS *(Not earlier than 6:30 P.M.)*

- A. Public Hearing – Proposed Disposal Fee Recommendations

Ms. Kavanagh read the hearing notice into record. Mr. Hooper reported that Michael Kiernan will be retiring and thanked him for his service to the town. Mr. Hooper noted that he had conducted an analysis of expenses and a survey of disposal fees in the towns of Barnstable, Chatham, Orleans, Dennis and Yarmouth. He said his analysis indicates that the residential fee should remain the same at \$160 and recommended that the Board consider taking the following action based on market conditions:

Increase the C&D tip rate by \$10 to \$140 per ton
Increase MSW tip rate by \$5 to \$90 per ton

Mr. Clark agreed with Mr. Hooper's recommendation. No one from the public appeared before the Board. Ms. Kavanagh moved to close the public hearing in regard to proposed disposal fee recommendations. Mr. LaMantia seconded the motion and the motion carried by a unanimous vote. Mr. Hughes moved, based on the recommendation of the Director of DPW, to authorize the increase in C&D tip rate by \$10 to \$140 per ton and increase MSW tip rate by \$5 to \$90 per ton effective July 1, 2017. Ms. Kavanagh seconded the motion and the motion carried by a unanimous vote.

Mr. Hooper updated the Board on the License Plate Recognition project noting that they have installed a ground loop that initiates the cameras and he is very impressed with the system. He estimated the read rates at 98-99%.

He further reported that the Town entered into a long-term contract with ABC Disposal on January 1, 2015 but the ABC facility was not constructed and they had ended up in Chapter 11 last fall. He informed the Board that as of May 11, ABC Disposal is officially out of Chapter 11 and working with Mass Development to construct the facility.

OLD BUSINESS

A. Approve new application for Weekday Entertainment by the Port Restaurant

Attorney Matt Kelley and Mr. Brackett appeared before the Board to answer questions regarding their request for entertainment. Mr. Clark said he met with the Building Inspector who had concern about expansion of the number of seats and would like to see an updated site plan with seating indicated. Mr. Clark stressed that the ramp must maintain a three foot corridor for egress and questioned how they would deal with the crowd to maintain that egress. Mr. Brackett stated that there is no increase to the seating. He explained that they are requesting this license due to the competition in Harwich Port and they want to keep people entertained while they wait for tables. He explained that they have removed their air conditioning unit and therefore cleared some passage. He stated that the area does not impede any egress. Mr. LaMantia cautioned that any time there has been entertainment in that area there has been a host of complaints and he referred to the noise by-law requirement of staying within the 150 feet. Mr. Hughes noted that the times of entertainment are 5:00 p.m. to 10:00 p.m. inside and outside. Ms. Kavanagh moved to approve the new application for Weekday Entertainment by the Port Restaurant to abide by the by-laws and the times that we previously noted. Ms. Brown seconded the motion and the motion carried by a unanimous vote.

B. Response to the RFI for the West Harwich School

Ms. Sabatino reported that the response deadline for the West Harwich School RFI was April 10. She noted that she received a few inquiries and one response which was more of an informative response and not a proposal. Mr. Hughes suggested installing signage at the building indicating that it is a Town building and to report any vandalism to a to be determined person and install motion sensing spotlights on four sides of the building by bringing electricity back to the building to make the site more secure. He suggested that he could get a group together to paint the building by the fall. He further suggested bringing water back. Ms. Brown suggested putting the RFI back out again as perhaps not everyone knew that it was out. Ms. Kavanagh suggested having Coastal Engineering update their study from 2007 before we put any work into it. Mr. LaMantia said its time to make a decision on this building and we need to set a target date for that. He said this is the same conversation that happens every time we put out an RFI and nothing comes back. Chairman MacAskill said he intends to put this back on the agenda to discuss a new RFI for the building. He said he doesn't want to spend any money on it until we decide what we are going to do with it. Mr. Clark pointed out that the Coastal Engineering report was specifically done for a housing project. He said he would like to try to find out what is the highest and best use for that site for different elements. He said the site lends itself very well to where we could do recharge and potentially a pump station. He added that if we are going to have an evaluation done we need to have a sense of what we should look at and come back with some suggestions for possible potential uses and solicit information from the neighborhood. Mr. LaMantia stressed the need to keep in mind the costs.

NEW BUSINESS

A. Committee topics:

1. Annual Re-appointments process and possible policy

Ms. Brown reported that we have over 60 re-appointments for this June and typically we send out a letter stating the term is up and if you don't wish to continue to please let us know. She said the Board is not required to re-appoint everyone who wants to continue. She said there have been many years of blindly rubber stamping and re-appointing because of the need for volunteers. She stated with much change happening and the need for new committees, such as an Economic Development Committee, we are looking at these charges and the people that are volunteering and trying to figure out ways to get new people involved and streamline the committees so that we can move forward. She said she doesn't see the need to change the process. Chairman MacAskill suggested limiting appointments to 2 terms. Mr. LaMantia stressed that we don't have a lot of people who want to be on committees and we shouldn't make things harder or we will have less people. He said we need to be thankful for the people that are on those committees and look at things they want to do. He said he doesn't see changing the number of years they serve. Ms. Kavanagh indicated that we shouldn't limit how long they are going to be on a committee as we are in a precarious position with getting volunteers. She suggested having another committee fair to find out the interest. Chairman MacAskill noted that the last fair netted out one volunteer. Mr. Hughes suggested rotating the Chair to get other people to step up and not always having the same people driving the bus. He said if someone has served 2 terms and someone else wants a chance that person should step aside. Ms. Brown said she would support a 2 term limit and said it is always good to have a fresh set of eyes looking at things. She added that after 2 terms they should

re-interview people. Mr. Waystack, Chair of the Board of Assessors, pointed out that they are a regulatory board and all members have to be certified to sit on the board. He recommended that the reappointment letter require the volunteer to state that they are interested in serving which would allow the Board to see if someone is serious. Mr. Clark responded that he did that in another town and there was a lot of backlash. He suggested that interested people should sit in on the committees and observe prior to appointment. He suggested that Channel 18 interview the Chairs of the different boards and committees. Ms. Brown suggested training for committee Chairs. Mr. Clark pointed out that our Town Counsel provided that type of training and it was taped and televised. He suggested adding that information into the renewal letter. Mr. Mador suggested giving people of the organization a landfill sticker, beach pass, rounds for the golf course or gym membership to serve on committees. There was consensus of the Board to include Mr. Waystack's suggestion in the re-appointment letter. Chairman MacAskill asked Ms. Brown to separate the general committees from the regulatory boards. He said he would bring this conversation back when they have a new Board.

PUBLIC HEARINGS/PRESENTATIONS *(Continued)*

- B. Presentation on the science of eel grass as it relates to nitrogen levels in the environment – Scott Carpenter, Superintendent MRSD

Mr. Carpenter provided the attached Power Point presentation on the science of eel grass as it relates to nitrogen levels in the environment.

NEW BUSINESS

- A. Committee topics *(Continued)*:

2. Review charges and possible merger of Bikeways Committee and Trails Committee

Ms. Brown noted that the Bikeways Committee charge dates back to April 1983 and she outlined the charge which included investigating the feasibility of constructing a bike path. She commented that we now have network of bike paths. She noted that Mr. Hooper has informed her that the Bikeways Committee focuses on the Old Colony Rail Trail because DOT governs the Cape Cod Rail Trail. Mr. Salewski, Chair of the Bikeways Committee, said he was taken aback when he heard from Ms. Brown that the Board wanted to combine the Bikeways and Trails Committees. He said it should have been clarified that they were going to be looking at all the committees. Ms. Brown noted that the email did say they are going to be looking at all committees. She noted that she also asked for minutes and Mr. Salewski informed her that they do not take minutes. Mr. Salewski stated that the committee primarily works with DPW in maintaining the bike trail and look for ways to improve safety. He noted that they currently have 7 members. He agreed that the charge needs to be updated. Ms. Brown stated that in order to create a charge they need to have minutes in order to know what you are doing and Mr. Salewski responded that there aren't any minutes. Ms. Brown said there needs to be a concerted effort by the Board of Selectmen and the Committee to create a new charge that involves actual maintenance and observation of the bike path. She stressed the need to move forward and noted that their duties have lessened. She suggested combining Bikeways with the Trails Committee

with increased membership. She noted that the Trails charge indicates that the trails are used by hikers and bicyclists. Mr. Salewski said he polled the Bikeways Committee and nobody has any objections to combining them. Mr. Hughes commented that Trails Committee deals with dirt and gravel trails and Bikeways deals with the bike path which is asphalt. He said it is the responsibility of the liaisons to work with the Chairs to update charges and teach them how to run a meeting. He said he believed these 2 committees have different functions and Bikeways is active and has enough members. He agreed the charge needs to be updated and keeping minutes is essential. He encouraged them to keep going but tighten things up. Ms. Kavanagh said if they are amenable to merging its worth a shot to see if that could work out as it might streamline efforts and might allow for volunteers to other Boards. She suggested having a trial period. Mr. Salewski said the people coming on the Bikeways Committee were mainly interested in biking. Ms. Brown said you could always have subcommittees within a committee and it would be one less liaison for the Board. Mr. Salewski said Mr. MacAskill is the only liaison they've ever seen. Mr. LaMantia agreed with Mr. Hughes and didn't see a benefit of putting the 2 committees together. Chairman MacAskill said Ms. Brown should work with Mr. Salewski and the committee on an updated charge. He noted that we have 55 committees and where it is possible to merge he would like to encourage that. Mr. Docken of the Bikeways Committee stated that there were protocols not being followed they can get that squared away. He said there is nothing in their minutes that leads him to believe that the Trails Committee would be interested in their committee. Mr. Hughes reiterated that they are totally different.

Ms. Brown said the Trails Committee charge is more current and outlined the membership. She said that on the town website it indicates there are 7 members rather than 5. She noted that in 2005 the Board of Selectmen added 2 more members from the general public. She stated that there are currently 9 members and she can't find anything to indicate that the charge changed to 9 with 7 from the general public as it is currently. She noted that Mr. Cushing is not seeking reappointment and that he indicated that all of their members did not support merging the 2 committees. Mr. Hughes said the newer format for charges should indicate that they need a Chairman, to have minutes, etc.

Chairman MacAskill questioned how cumbersome it would be to find everything on every committee, e.g. how many members, if there have been amendments to the charge, or new people added. Mr. Clark responded that this is a great project for a college intern. Ms. Kavanagh noted that the high school is doing internships. Mr. LaMantia said there was a goal of putting most of the charges into the Committee Handbook and he doesn't know if that was completed. Ms. Brown stated that UMass Dartmouth might be interested if we wanted to reach out there. Chairman MacAskill said whoever is going to be the liaison will have to work with the Trails committee on their charge. Ms. Brown said she doesn't mind being liaison to the Trails Committee next year.

3. Review charge of Housing Committee

Ms. Brown said she believed the charge was outdated and had some racial undertones. She noted that we need to narrow it down and not point out anyone's racial background. She added that when we write the new charge we need to be clear if we are addressing only affordable housing or housing in general. Mr. Bodin said you have to keep advertising and suggested holding two volunteer fairs a year. He said he would start working on the charge. Ms. Brown said the charge should have some finance verbiage in it and Mr. Clark responded that this would fall under the

financial departments of the town. Mr. Clark agreed to help with the charge. Mr. Bodin said that in most towns this committee is referred to as the Affordable Housing Committee and in our town it is just the Housing Committee. Mr. LaMantia responded that it used to be the Affordable Housing Committee and he doesn't know when that changed. Chairman MacAskill said that we should find out. Ms. Kavanagh agreed to be liaison to the Trails Committee and work with Mr. Bodin on the charge as she has experience in that area.

Chairman MacAskill reported that the Town of Chatham approved the wastewater article tonight.

B. Town Meeting review and discussion

Mr. Clark said he will be meeting with department heads and will assign the articles to the departments that are the most applicable for handling them. He noted that we will have to wait for the election. He stated that the moderator indicated that there is no requirement to have the Special Town Meeting on the second night of Town Meeting and one thought would be to have the Special Town Meeting at the beginning. He commented that having Special Town Meeting on the second night guarantees that there will always be a second night. Mr. Clark added that there has been discussion of salaries of Selectmen and if there is an action plan that is contemplated we should get that into the system for next year. Mr. LaMantia stated that Town Meeting went amazingly well. Mr. Clark reported that VisiGov 2.0 for Harwich is ready and we could put it on the agenda next week. Ms. Kavanagh thanked Mr. Clark for his efforts in creating a smooth Town Meeting. Mr. Hughes said we should look into having Town Meeting at the high school. Chairman MacAskill stated that the Wastewater article discussion went very well and he thanked Mr. Clark and his staff for their efforts.

C. Town Administrator Performance Evaluation

Chairman MacAskill said the individual performance evaluations didn't make it into the packet but will be in next week. He reported that every Board member recommended that Mr. Clark should get his merit increase and it was an above satisfactory performance evaluation. He reported that each Selectman offered suggestions for improvement but overall communication was very good and everyone complimented Mr. Clark on his wastewater negotiations with Chatham. He stated that Goals & Objectives started the year as a contentious issue because we didn't have a unanimous vote and Mr. Clark didn't agree on them but at Mr. Hughes suggestion an Action Item Register was created which has worked very well and Mr. Clark has completed at least 70% of it. The Board agreed with Chairman MacAskill's comments. Mr. Hughes encouraged the Board to extend Mr. Clark's contract. Mr. Clark thanked the Board for their constructive criticism and said he would like to stay in the organization. He said he has an interest in moving closer to Harwich and he would like to add an additional 2 years to his contract which currently has 1 year remaining. He noted that he has provided a self-evaluation and made suggested changes to the contract. He said he would like to see a decision made with the current Board. Chairman MacAskill said it would be better for the new Board to vote on the contract. Mr. LaMantia said new Board members aren't going to have a lot of background on this as they have not been involved and he suggested finishing up next week. Ms. Brown and Ms. Kavanagh said they could go either way on this. Mr. Hughes moved to recognize that Mr. Clark's performance is above satisfactory and recommended a 2% increase effective July 1, 2017. Ms. Kavanagh seconded the motion and the motion carried by a unanimous vote. Chairman MacAskill brought up the

consideration of a retroactive increase. Mr. Hughes said we had that conversation before and there was discussion about revisiting it mid-year and it wasn't going anyplace. He said Mr. Clark deserves the money going backward and it is certainly a consideration. Mr. LaMantia said that should be done next week.

TOWN ADMINISTRATOR'S REPORT

A. Approval of the Harwich Housing Production Plan

Mr. Clark reported that we submitted the Housing Production Plan and got a letter dated April 12 saying the plan has been certified and approved and is good for 5 years to expire May 22, 2022.

B. Planning Board – Application for Determination of Adequate Access/Improvements to a Town Way

Mr. Clark reported that Mr. Robert Fratus wants to make improvements at his own expense to Seth Whitefield Road which is a public way. He said he will present a letter of intent to the Board and noted that there is a Public Hearing on this on May 23.

ADJOURNMENT

Chairman MacAskill adjourned the meeting at 9:21 p.m.

Respectfully submitted,

Ann Steidel
Recording Secretary

Sandy Robinson

From: anne c. leete <aleete24@gmail.com>
Sent: Thursday, May 11, 2017 4:57 PM
To: Sandy Robinson
Subject: Cultural council

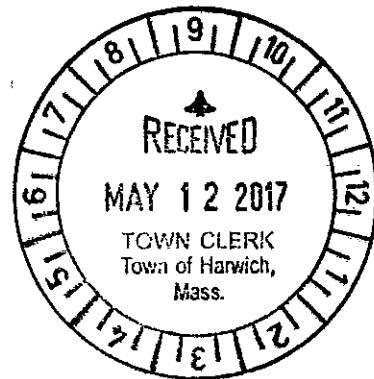
Hello Sandy -

Tina Games asked me to send a note to say I no longer will be part of the Harwich Cultural Council. I'm sure my time actually expired but I should have told you formally.

Hope all is well at Town Hall.

Thanks -

Anne Leete



Donald F Howell

14 Haskell Lane
Harwich, MA 02645

Town of Harwich
Hon Anita Doucette, Town Clerk
732 Main St.
Harwich, MA 02645

May 17, 2017

Dear Ms. Doucette,

I am writing you to tender my resignation from the By-Law/Charter Review Committee as I have been elected to the Harwich Board of Selectmen and our Home Rule Charter does not allow a Board member to serve on any committee over which the BOS has appointive power.

It has been an honor to serve on a committee so essential to the governance of the Town with so many talented and dedicated individuals. It was particularly gratifying to be trusted to serve as its chair and to be able to begin the process of thoroughly reviewing and revising the Charter and the Code of the Town of Harwich.

This resignation is effective on Monday, May 22, 2017

Again, it was a privilege to serve.

Sincerely,



Don Howell



NUMBER

17-6

THE COMMONWEALTH OF MASSACHUSETTS

TOWN OF HARWICH

JUNK DEALER'S LICENSE

FEE

\$35.00

This is to certify that a license is hereby granted to Dr. J.B. O'Neill d/b/a Monahan & Co.

540 Route 28, Harwich Port

TO BE A DEALER IN OR KEEPER OF A SHOP FOR THE PURCHASE, SALE OR BARTER IN

JUNK, OLD METALS AND SECOND HAND ARTICLES

in said **Harwich Port** in accordance with the laws of the Commonwealth of Massachusetts relating thereto, the ordinances and by-laws of **Harwich** and such rules and regulations provided for the supervision thereof.

This license shall continue in force until **May 1, 2017**, unless sooner revoked and is subject to sections two hundred and two to two hundred and five, inclusive, of the General Laws, Chapter 140, as amended.

By order of the licensing authorities this **23th** day of **May, 2017**.

TOWN CLERK

EXTRACTS FROM GENERAL LAWS, CHAPTER 140, AS AMENDED

Section 55. Whoever acts as a collector of, dealer in or keeper of a shop for the purchase, sale or barter of junk, old metals or second hand articles without a license, or in any other place or manner than that designated in his license or after notice to him that his license has been revoked, or violates any such rule, regulation or restriction, shall forfeit twenty dollars. The purchase, sale or barter of books, prints, coins or postage stamps shall not be deemed to be the purchase, sale or barter of second hand articles within the meaning of this and the preceding section.

Section 56. A junk collector shall be deemed to be any person who by going from place to place collects by purchase or otherwise junk, old metals or second hand articles, whether or not by previous contract or arrangement.

Section 202. Licenses granted to keepers of intelligence offices, dealers in junk, old metals and second hand articles, junk collectors, pawn brokers and keepers of billiard saloons, pool or sippio rooms or tables, bowling alleys, skating rinks and picnic grounds shall, except as hereinafter provided, be signed by the clerk of the town where they are granted. Every such license shall, before being delivered to the licensee, be recorded by the town clerk, in a book kept for that purpose. Such license shall set forth the name of the licensee, the nature of the business, and the building or place in such town in which it is to be carried on, and shall continue in force until May first following unless sooner revoked. The board or officer issuing such a license shall, except as provided in section seventy-seven, receive for the use of the town such amount, not less than dollars for each license, as the board or officer considers reasonable.***

Section 203. Such licenses may be granted in April, to take effect on May first following.

Section 204. A license issued as aforesaid shall not protect the holder thereof in a building or place other than that designated in the license unless consent to removal is granted by the licensing board or officer.

Section 205. Upon the revocation of such a license, such clerk shall note the revocation upon the face of the record thereof, and shall give written notice to the licensee by delivering it to him in person or by leaving it at the place of business designated in the license.



May 22, 2017

 **DRAFT**

Phillip Nimeskern
US Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

Dear Mr. Nimeskern,

As the applicant of the proposed project to reconstruct the existing Saquatucket Municipal Marina and dredge portions of the harbor, the Town of Harwich wishes to express our full support of the project in response to the Public Notice for Project File Number: NAE-2016-00019.

The existing docks at the marina are well beyond their useful life, and pose a safety concern for the large volume of people who walk the docks during the boating season. In addition, with a large island ferry and four other large passenger boats operating from the harbor it is critically important to bring the marina into compliance with the American with Disability Act and Massachusetts Architectural Access Board requirements by providing unrestricted access. This marina reconstruction project will not only address these important safety and public access concerns, it will also provide for an increased slip capacity for the diverse and mixed commercial and recreational user groups. From a regional perspective, the project will also provide for an expanded use by area commercial fishing fleets that rely upon the marina as a safe homeport during the winter months (Nov-May).

Saquatucket Municipal Marina is very important to the character and economy of the Town, and this marina reconstruction project is overwhelmingly supported by its citizens. It is with excitement and optimism that I recommend the approval of required permits to allow this town funded project to proceed as designed. Thank you for your consideration.

Sincerely,

Michael MacAskill, Chairman
Harwich Board of Selectmen



OFFICE OF THE SELECTMEN
732 MAIN STREET
HARWICH, MA 02645
508-430-7513

APPLICATION FOR ENTERTAINMENT LICENSE

☒ Weekday Entertainment (\$75) ☐ 1 day (\$25) New application ☐
☐ Batters Box (\$50) Renewal ☒
☐ Go Carts (\$50) Annual ☐
☐ Miniature Golf (\$50) Seasonal ☒
☐ Trampolines (\$25) Opening Date _____
☐ Theater (\$150 per cinema)
☐ Automatic Amusement:
☐ Juke Box (\$100 each)
☐ Video Games (\$100 each) Other _____

Business Name Go Industries Inc. Phone 305-546-8864

d/b/a Perks

Business Address 545 Route 28, Harwich Port, MA

Mailing Address 15345 SW 88 AVE Palmetto Bay, FL 33157

Email Address perkscoffeeandcafe@gmail.com

Managers Name & Address Taylor Powell



TIMES AND DAYS OF WEEK FOR ENTERTAINMENT (This application does not cover Sundays).

6:00 p.m. - 10:00 p.m.

ENTERTAINMENT TYPE: (Check all appropriate boxes)

☒ Dancing by Patrons ☒ Use of Amplification System
☐ Dancing by Entertainers or Performers ☐ Concert
☒ Recorded or Live Music ☒ Other (guitar player)

Pursuant to MGL Chapter 62C, Section 49A, I certify under the penalties of perjury that I, to the best of my knowledge and belief, have filed all State tax returns, and have paid all State taxes under the law.

Taylor Powell Owner & Manager 5/16/2017

Signature of applicant & title TAYLOR POWELL

Federal I.D. # _____

REGULATORY COMPLIANCE FORM

The premises to be licensed as described herein have been inspected and found to be in compliance with applicable local codes & regulations, including zoning ordinances, health regulations & building & fire codes.

[Signature]
Building Commissioner

[Signature]
Board of Health

[Signature]
Fire Department

Required signatures to be obtained by the applicant prior to submission of new applications.

THE COMMONWEALTH OF MASSACHUSETTS

State Fee, \$50 1pm-12am or \$100 prior to 1pm TOWN OF HARWICH

Municipal Fee, \$85 1pm-12am or \$175 prior to 1pm



LICENSE

For
PUBLIC ENTERTAINMENT ON SUNDAY

The Name of the Establishment is PERKS in or on the property at No. _____

The Licensee or Authorized representative, print name and sign here TAYLOR POWELL *Taylor Powell* in 5/16/2012 (address)

accordance with chapter 136 of the General Laws, as amended, hereby request a license for the following program or entertainment:

DATE	TIME	Proposed dancing or game, sport, fair, exposition, play, entertainment or public diversion
Sundays seasonally	6-10PM	LIVE MUSIC with use of Amplification

~~XXX~~ ~~XXXX~~ Chairman of Board of Selectman, _____ Harwich (City or Town)
signature

Fees per occurrence (Individual Sunday(s)): Regular Hours (Sunday 1:00pm - Midnight): \$2.00 Special Hours (Sunday 12:00 am- Midnight): \$5.00. Annual Fee (For Operating on every Sunday in calendar year): Regular Hours (Sunday 1:00pm - Midnight): \$50.00 Special Hours (Sunday 12:00 am- Midnight): \$100.00 Municipal fee per occurrence: Regular hours \$10 per Sunday, special hours \$20 per Sunday. Seasonal only.

This license is granted and accepted, and the entertainment approved, upon the understanding that such entertainment that the licensee shall comply with the laws of the Commonwealth applicable to licensed entertainments, and also to the following terms and conditions: The licensee shall at all times allow any person designated in writing by the Mayor, Board of Selectmen, or Commissioner of Public Safety, to enter and inspect his place of amusement and view the exhibitions and performances therein; shall permit regular police officers, detailed by the Commissioner of Public Safety or Chief of the local Police Department to enter and be about this place of amusement during performances therein; may employ to preserve order in his place of amusement only regular or special police officers designated therefore by the Chief of Police, and shall pay to said Chief of Police for the services of the regular police officers such amount as shall be fixed by him; shall permit at all times to enter and be about his place of amusement such members of the Fire Department as shall be detailed by the Chief of the Fire Department to guard against fire; shall keep in good condition, go as to be easily accessible, such standpipes, hose, axes, chemical extinguishers and other apparatus as the fire department may require; shall allow such members of the fire department in case of any fire in such place, to exercise exclusive control and direction of his employees and of the means and apparatus provided for extinguishing fire therein; shall permit no obstruction of any nature in any aisle, passageway or stairway of the licensed premises, nor allow any person therein to remain in any aisle passageway or stairway during an entertainment; and shall conform to any other rules and regulations at any time made by the Mayor or Board of Selectmen. This license shall be kept on the premise where the entertainment is to be held, and shall be surrendered to any regular police officer or authorized representative of the Department of Public Safety. This license is issued under the provisions of Chapter 136 of the General Laws, as amended, and is subject to revocation at any time by the Mayor, Board of Selectmen, or Commissioner of Public Safety.

Do not write in this box

This application and program must be signed by the licensee or authorized representative of entertainment to be held. No Change to be made in the program without permission of the authorities granting and approving the license.

THIS LICENSE MUST BE POSTED IN A CONSPICUOUS PLACE ON THE PREMISES



Harwich Fire Department



Fire Suppression

Prevention

Emergency Services

Norman M. Clarke Jr., **Chief of Department**

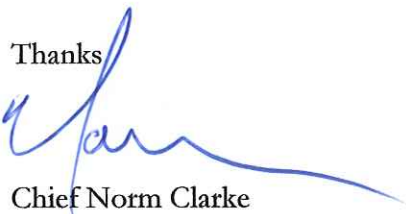
David J. LeBlanc, Deputy **Fire Chief**

May 17, 2017



Chris Clark
Administrator, Town of Harwich
732 Main Street
Harwich, Ma. 02645

Chris I am asking for a signature on the new pumper contract for the approved, bid list price, **\$420,000.00** I am requesting both copies get signed and one will be returned to us with a signature from SVI.

Thanks

Chief Norm Clarke

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EMERGENCY VEHICLE PROPOSAL

Buyer: Harwich Fire Department
175 Sisson Road
Harwich, MA 02645 U.S.A.

Date: May 22, 2017

We hereby propose and agree to manufacture and furnish to Buyer, after acceptance of this proposal and proper execution of this contract and/or a purchase order, the following vehicle and equipment;

Model: One (1) SVI 2018 Rescue on Freightliner M2 4-Door, 4-Wheel drive cab/chassis in accordance with the Department specifications **Price:** \$420,000.00

All of which will be built in accordance with the specifications, clarifications, and exceptions attached, in compliance with current National Fire Protection Association (NFPA) 1901 Guidelines which are made a part of this agreement and contract. If there is any conflict between Buyer specification and SVI Proposal, the SVI Proposal will prevail. The standard SVI warranty and that of the cab/chassis manufacturer will apply.

The amount in the proposal shall remain firm for a period of 30 days from the date of same. All state, federal and local taxes are not included above. Any applicable taxes are to be paid by Buyer upon registration and licensing of vehicle(s).

Delivery: Delivery is to be made to Buyer at 175 Sisson Road, Harwich, MA 02645. The estimated delivery time is 390 calendar days after receipt and approval of contract or purchase order, properly executed, (cab/chassis must be delivered in 200 days or delivery may be delayed), and subject to all causes beyond our control. This delivery estimate is based on the SVI receiving complete and accurate paperwork from the Buyer and that the Harwich Fire District does makes or directs that no changes take place during pre-construction, mid-inspection, or final inspections. Changes required or requested by the Buyer during the construction process may be cause for an increase in the number of days required.

Payment Terms: Final payment for the vehicle shall be made at time of delivery or pick up of the completed vehicle. It is the responsibility of the Buyer to have full payment ready when the vehicle is complete and ready to deliver. If payment is delayed or delivery is delayed pending payment, a daily finance and storage fee may apply. Upon delivery of the apparatus or upon pickup of the apparatus by the Buyer, Buyer agrees to provide all liability and physical damage insurance. It is further agreed that if on delivery and test, any defects should develop, SVI shall be given reasonable time to correct same and understand that any outstanding payments need not be made until any said defects are corrected. It is agreed that the Manufacturer's Statement of Origin (MSO) for the vehicle and equipment shall remain in the possession of SVI until the entire contract price has been paid.

Cancellation: If the contract is terminated by Buyer, SVI will be paid a fair payment as negotiated with Buyer for the work completed as of the date of termination.

Respectfully submitted,

We agree to accept the above proposal;

DEALER

Five Star Fire

BUYER

Harwich Fire Department

Patrick Martin

Authorized Signature

Title

Date: ____/____/2017

Date: ____/____/2017

After receipt of this document signed by the Buyer, it will be reviewed and upon approval, countersigned by SVI putting the document in force.

SUPER VACUUM MFG. CO., INC. – SVI TRUCKS

Robert Sorensen, Vice President

Date: ____/____/2015

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Cancellation: If the contract is terminated by Buyer, SVI will be paid a fair payment as negotiated with Buyer for the work completed as of the date of termination.

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Five Star Fire

BUYER

Harwich Fire Department

Patrick Martin

Authorized Signature

Title

Date: ____/____/2017

Date: ____/____/2017

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SUPER VACUUM MFG. CO., INC. – SVI TRUCKS

Robert Sorensen, Vice President

Date: ____/____/2015



Pleasant Bay Alliance



To: Harwich Board of Selectmen
Fr: Allin Thompson, Alliance Steering Committee and Watershed Work Group
Dolly Howell, Alliance Steering Committee and Watershed Work Group
Heinz Proft, Alliance Technical Resource Committee and Watershed Work Group
Carole Ridley, Alliance Coordinator
Date: March 31, 2017
Re: Request to Meet with Selectmen to present enclosed *Pleasant Bay Composite Nitrogen Management Analysis*

The Pleasant Bay Alliance (Alliance) was created by the Towns of Brewster, Chatham, Harwich, and Orleans to coordinate the management of resources within the Pleasant Bay Area of Critical Environmental Concern (ACEC) and its watershed. Alliance projects, programs and studies are intended to coordinate the Towns' efforts to promote and support healthy natural resources, and safe public access and use of Pleasant Bay. For close to two decades, the Alliance has been able to successfully address watershed issues and facilitate coordinated action among the four member towns. One primary issue of concern is management of nitrogen entering Pleasant Bay waters, which the Towns have individually addressed through their wastewater and nitrogen management planning efforts. Consistent with the Cape-wide 208 Plan and MassDEP guidance, the Alliance has developed a watershed-based overview of the four town efforts.

Accordingly, the Alliance is pleased to present the enclosed *Pleasant Bay Composite Nitrogen Management Analysis*. This analysis is submitted to the Board of Selectmen of each of the four member towns for consideration.

The purpose of this analysis is to show the combined effect of the four individual towns' wastewater/nitrogen management plans, when considered together, on nutrient management in Pleasant Bay and its watershed. The analysis shows that for the watershed as a whole, the town plans remove enough nitrogen to meet Total Maximum Daily Loads while achieving other wastewater-related town needs. However, on a sub-watershed basis, which is the scale at which nutrient management planning/implementation occurs, some gaps and overlaps have been identified. These gaps and overlaps in nitrogen management create opportunities for exploring cost efficiencies through nutrient trading and/or shared facilities or projects.

This analysis was prepared over the past fifteen months by the Alliance, with extensive input from each town's wastewater consultant, to ensure that information represented is

consistent with individual town plans. This analysis was also reviewed by the Cape Cod Commission and MassDEP. In the enclosed letter of comment, Cape Cod Commission Executive Director Paul Niedzwiecki has indicated that the analysis is a first step in meeting the requirements of a targeted watershed nutrient management plan called for under the Cape Cod 208 Plan, and for developing a watershed permit. Likewise, an enclosed letter from MassDEP Regional Director Millie Garcia-Serrano views the analysis as an appropriate way to optimize management of nitrogen and reduce overall costs, and invites the four towns to explore development of a watershed permit through a pilot project.

The analysis concludes with a series of recommended next steps to finalize the analysis and pursue opportunities to optimize nitrogen removal efforts across the watershed. At the discretion of each town, these next steps could lead to the development of a targeted watershed nutrient management plan and watershed permit. These steps should lead to streamlined regulatory review, and increased chances for enhanced project funding.

Over the coming months the Alliance, in concert with the Cape Cod Commission, MassDEP and Town Administrators and Managers from the Alliance towns will continue to pursue the next steps outlined in the analysis. These steps include: refining composite cost data, undertaking confirmatory estuary modeling, coordinating watershed-wide monitoring activities, exploring nitrogen trading in selected subwatersheds, and examining the potential for inter-municipal agreements that may be necessary for 208 plan compliance and possible watershed permitting. As each of these topics is explored and analyzed, additional information will be presented to the Board in greater detail to inform the Board's decisions about nitrogen management policies or projects.

We are requesting an opportunity to meet with you to discuss your comments and questions about the draft analysis and recommended next steps. Representatives from the Cape Cod Commission and MassDEP would also participate in the presentation. Carole Ridley, Alliance Coordinator, will follow up with your office regarding this request.

Cc: Chris Clark
Millie Garcia-Serrano, MassDEP
Brian Dudley, MassDEP
Paul Niedzwiecki, Cape Cod Commission
Dave Young, CDM Smith

3225 MAIN STREET * P.O. BOX 226
BARNSTABLE, MASSACHUSETTS 02630



(508) 362-3828 * Fax (508) 362-3136 * www.capecodcommission.org

CAPE COD
COMMISSION

March 16, 2017

Carole Ridley
Coordinator, Pleasant Bay Alliance
P.O. Box 1584
Harwich, MA 02645

Re: Pleasant Bay Composite Nitrogen Management Analysis

Dear Ms. Ridley,

I am writing with regard to the Pleasant Bay Composite Nitrogen Management Analysis, which illustrates the combined effect of the wastewater management plans developed individually by Brewster, Chatham, Harwich and Orleans on nutrient removal within the Pleasant Bay watershed. The Commission has been engaged with the efforts of the Pleasant Bay Alliance and its member communities to address Total Maximum Daily Loads and improve water quality.

As you know, the Commission was charged with developing an update to the Cape Cod Area Wide Water Quality Management Plan, pursuant to Section 208 of the Clean Water Act. The 208 Plan Update was certified and approved by the Commonwealth of Massachusetts and the Environmental Protection Agency in September 2015 and encourages communities to work together in shared watersheds. It provides a regulatory pathway for more efficiently and effectively achieving water quality goals through the development of Targeted Watershed Management Plans (TWMPs) that address nutrient remediation through a variety of approaches within a single watershed, as well as the issuance of watershed permits.

The Commission sees the analysis as a first step in meeting the requirements of a TWMP and for developing a watershed permit. To ensure effective communication and cooperation between the four Pleasant Bay communities, the Commission encourages the development of an inter-town memorandum of understanding that specifically outlines nutrient removal responsibilities and sets the stage for coordinated nutrient removal projects in the future.

I look forward to working with the Alliance and its member communities, as well as the MA Department of Environmental Protection on appropriate next steps.

Sincerely,


Paul Niedzwiecki
Executive Director





Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

March 30, 2017

Ms. Carole Ridley, Executive Director
Pleasant Bay Alliance
P.O. Box 1584
Harwich, Massachusetts

RE: Watershed Management Planning

Dear Ms. Ridley:

Over the past several months MassDEP has been actively engaged with the Pleasant Bay Alliance's (the "Alliance") and its member communities' efforts at developing a watershed wide nutrient management plan for Pleasant Bay. MassDEP has encouraged this approach as it offers opportunities for multi-town cooperation, realizes potential economies of scale in implementation strategies and addresses regional planning which is a core element of Cape Cod's 208 plan.

During the development of the plan, discussions among the Alliance, the Cape Cod Commission and MassDEP have also broached the possibility of a watershed permit for Pleasant Bay. As you know, MassDEP is currently in the process of developing guidelines and criteria for a watershed permit and would like to invite the Alliance to engage with us in a pilot program to test the draft guidance. This pilot program is entirely voluntary and would be useful in evaluating the efficacy and practicality of the proposed structure as well as identifying benefits and costs of a watershed permit. It would also provide an excellent opportunity for effectively coordinating the wastewater planning efforts of the Towns of Brewster, Chatham, Harwich and Orleans on watershed basis.

MassDEP believes that this effort would complement nicely the admirable work that the Alliance and the member towns have performed in advancing the concept of watershed planning and looks forward to working together with you on this approach.

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.

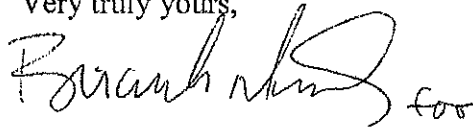
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MassDEP Website: www.mass.gov/dep

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If you have any questions, please feel free to contact Brian Dudley at (508)946-2814.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Millie Garcia-Serrano" followed by a small flourish.

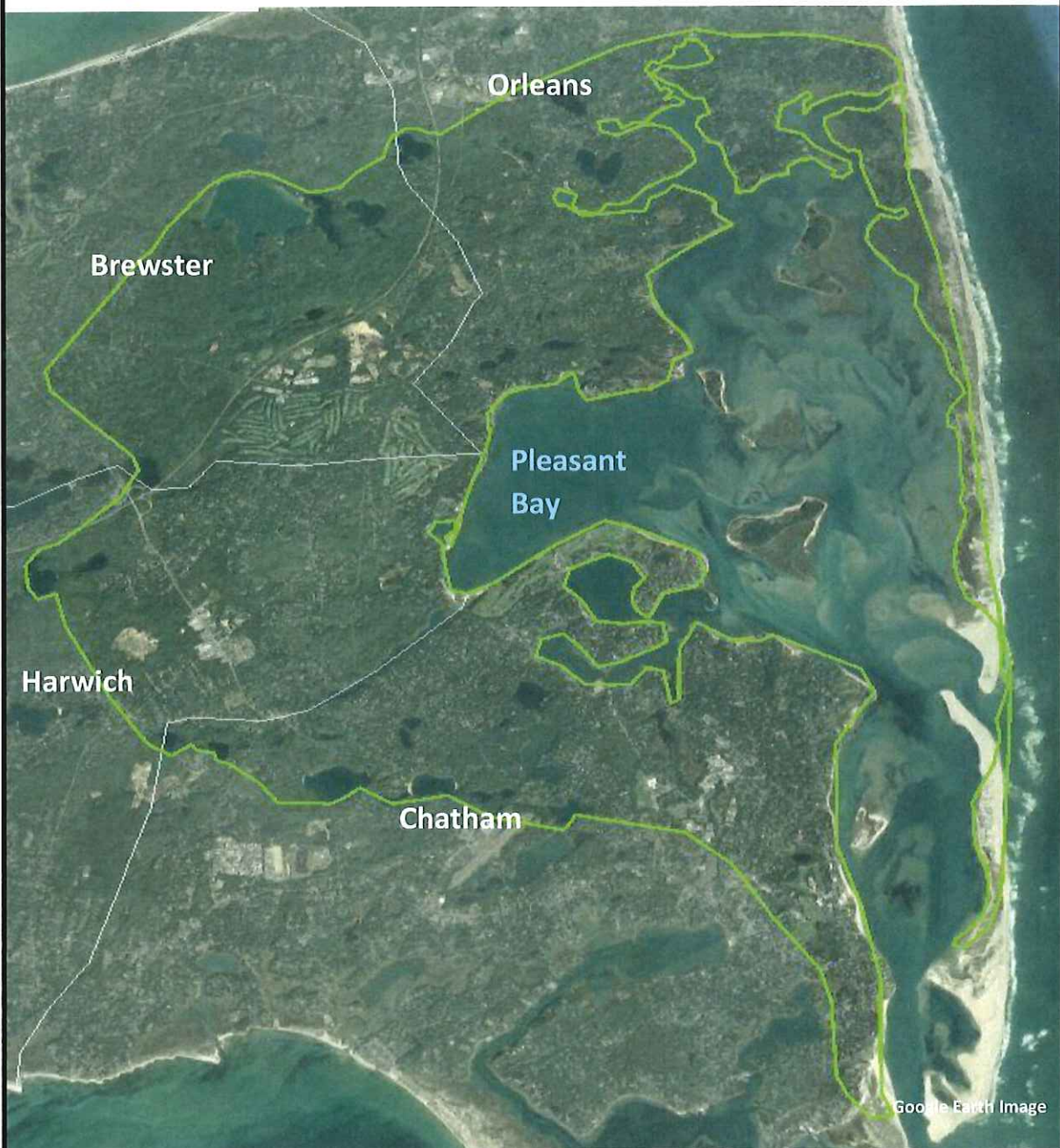
Millie Garcia-Serrano, Regional Director

ecc: DEP/Boston
Attn: Gary Moran

DEP/SERO
Attn: David Johnston
Brian Dudley



Pleasant Bay Alliance



PLEASANT BAY COMPOSITE NITROGEN MANAGEMENT ANALYSIS

An Assessment of the Wastewater and Nitrogen Management Plans
of Brewster, Chatham, Harwich and Orleans

March
2017

PLEASANT BAY COMPOSITE NITROGEN MANAGEMENT ANALYSIS

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EXECUTIVE SUMMARY

The primary threat to the health of Pleasant Bay is nitrogen enrichment from watershed sources. For close to two decades, the Pleasant Bay Alliance (Alliance) has coordinated action among the four towns sharing the watershed of Pleasant Bay to address this concern. The Alliance's contributions to understanding and managing nutrient loading include establishing and sustaining a water quality monitoring program, and coordinating the bay-wide approach to the MEP Technical Analysis and development of TMDLs. The Alliance also generated the analysis that led to Chatham's and Harwich's decision to construct the Muddy Creek bridge, which is the first nutrient management project implemented in the Pleasant Bay watershed, and will significantly reduce the amount of sewerage needed in the sub-watershed. The Alliance convenes a monthly Watershed Work Group that brings together town, state and county personnel involved in nutrient management. In addition, the Alliance monitors tide levels and conducts research on the geomorphology of the barrier beach and inlet system, which influence system-wide hydrodynamics and ecological conditions.

The *Pleasant Bay Resource Management Plan Update* approved by Town Meetings in each member town, and by the state, directs the Alliance to continue this work concerning watershed-based nutrient management. The Alliance has developed this composite nutrient management analysis in response to that charge.

The purpose of this composite analysis is to show the combined effect of four towns' wastewater management plans on nutrient removal within the Pleasant Bay watershed. With the benefit of this information, Brewster, Chatham, Harwich and Orleans may choose to modify their individual plans, pursue joint projects or enter into negotiations with each other to take advantage of efficiencies. This analysis has been vetted by Town staff and technical consultants, and submitted to the Cape Cod Commission and MassDEP for comment. This analysis is now presented to the four towns' Boards of Selectmen for consideration.

The town plans are designed to remove enough nitrogen to achieve published standards and address other wastewater-related town needs. Those published standards take the form of Total Maximum Daily Loads (TMDLs). (TMDLs have been set for several water quality parameters, the most significant of which is nitrogen. When the term TMDL is used in this report, it refers to nitrogen-based TMDLs.) System-wide, the amount of attenuated nitrogen load to be removed in order to meet TMDLs is 17,717 kg/yr, or 36% of the total load bay-wide. There are nineteen separate TMDLs in Pleasant Bay and the amount of removal needed varies in different subembayments, ranging from 0% removal in Crows Pond and Chatham Harbor, to 75% removal in Lower Muddy Creek and 83% removal in Meetinghouse Pond. These removals pertain to existing watershed load. It is understood that 100% of any future load from added development also needs to be removed.

Each town has agreed to remove nitrogen in proportion to its share of the current attenuated load. This approach is common to all four of the town plans and is the basis of this analysis. It should be formalized in an inter-town memorandum of understanding. There are seven subembayments where one town is solely responsible for load removal. In the remaining subembayments, two or more towns share load removal requirements.

Nearly three quarters of the required load removal is focused in six subembayments. There are six subembayments for which an individual town's load removal requirement exceeds 5% of the system-wide load reduction requirement. Combined, these subembayments account for 71% of the total load reduction requirement. These subembayments are Round Cove, Lower Muddy Creek, Ryder's Cove, Meetinghouse Pond, Pochet and Pleasant Bay/Little Pleasant Bay.

On a subwatershed basis, gaps and overages in nitrogen removal create opportunities for exploring cost efficiencies through nutrient trading and shared facilities. In eight subwatersheds, existing plan removals are slightly below the amount required to meet TMDLs. These differences are not significant enough to warrant plan modification, and could be met through adaptive management. In eight other subembayments, the amount of nitrogen removal exceeds the amount required to meet TMDLs. However, the performance of the town plans in meeting TMDLs could be affected by variable performance of non-traditional technologies, or additional wastewater flow from new development in the watershed.

Watershed wide, the four town plans provide a combination of traditional and non-traditional technologies (a so-called "hybrid approach"), with non-traditional technologies accounting for about 25% of the estimated removal system-wide. Individually, the plans differ in the degree to which they utilize traditional and non-traditional technologies. Non-traditional approaches make greater use of natural processes and their performance will vary due to environmental factors. For this reason, non-traditional approaches are subject to a regulatory requirement for a back-up traditional system in the event that the non-traditional approach does not function as predicted. Back-up is planned in some, but not all, subwatersheds in which non-traditional approaches are proposed.

In those subembayments where the nitrogen loads from more than one town must be reduced, costs savings may be realized through nitrogen trading. A watershed-wide approach may identify locations and technologies where one town removes more than its requirement and another town removes less, with payment of a negotiated amount to equal the costs. Such opportunities exist in the northerly headwaters subembayments shared by Brewster and Orleans, and in the Muddy Creek and Pleasant Bay subembayments shared by Chatham and Harwich.

The implementation of town plans will occur over several decades. Implementation has started with the Muddy Creek bridge and some non-traditional pilot projects. Sewering or further

measures are not scheduled to begin in the near future. In their implementation timelines, the towns have given relatively high priority to four of the six high-load sub-watersheds: Meetinghouse Pond, Muddy Creek Upper and Lower (Harwich) and Round Cove. The Pleasant Bay subembayment is designated as a high priority by Brewster and Harwich. It will be addressed in a later phases of the Chatham and the Orleans plans (although nitrogen removals in the headwaters embayments will have an indirect positive impact on Pleasant Bay). However, Pochet, which accounts for nearly 9% of the total load reduction requirement, is not scheduled for early implementation by Orleans.

Appropriate next steps are identified at the end of this report. They are aimed at taking advantage of cost efficiencies, ensuring enhanced funding, developing a Targeted Watershed Management Plan, undertaking confirmatory estuary modeling, preparing for inter-municipal agreements, ensuring consistency with the 208 Plan Update, and preparing for a possible Watershed Permit.

1.0 PURPOSE

Water quality in Pleasant Bay is impacted by watershed inputs from activities in four towns: Brewster, Chatham, Harwich and Orleans. Each town has formulated a plan for reducing the nitrogen loads that are the primary cause for water quality problems. Each town plan addresses multiple watersheds and accounts for a variety of town-wide needs and priorities. It is the purpose of this composite analysis to:

- compile the portions of the four town plans that deal specifically with the Pleasant Bay watershed,
- compare the proposed town-by-town nitrogen removals against the Total Maximum Daily Loads (TMDLs) for Pleasant Bay,
- identify gaps and overlaps in the collective plans for nitrogen removal,
- identify actions that may be helpful in improving the cost-effectiveness of the combined plans, and
- provide the foundation for developing a Targeted Watershed Management Plan for Pleasant Bay consistent with the 208 Plan Update and subsequent guidance prepared by the Cape Cod Commission, and for determining the applicability of watershed permitting.

This analysis is presented to the four towns' Boards of Selectmen for consideration. With the benefit of this information, each town may choose to modify its plan, pursue joint projects or enter into negotiations with one or more towns to take advantage of efficiencies. Such actions can easily be accommodated within the long implementation periods associated with each town plan.

2.0 DATA SOURCES AND METHODS

This analysis incorporates information from the Pleasant Bay portion of each town's wastewater management plan as of November 2016. The nutrient loading and load reduction information is based on the analyses generated by the Massachusetts Estuaries Project (MEP), as modified by engineering analyses provided in the individual town plans and vetted by each member community. Drafts of this report have been reviewed by each towns' representative on the Pleasant Bay Alliance's Watershed Work Group and by each town's wastewater consultant. Drafts of this report were also submitted to the Cape Cod Commission and MassDEP for comment.

As watershed-based analysis of the four town plans continues, use of watershed decision support tools available through the Cape Cod Commission may be advisable to facilitate consideration of updated land use information and nitrogen load estimates.

Numerous reports have been published related to the nature and extent of the nitrogen loading problem and proposals to reduce that loading. The most pertinent documents are listed in Table A-1 In Appendix A.

3.0 BACKGROUND

Pleasant Bay is the largest coastal embayment on Cape Cod. The Pleasant Bay system is state-designated as Outstanding Resource Waters and an Area of Critical Environmental Concern. According to the Cape Cod Commission, the water surface of the Bay covers nearly 6,200 acres and approximately 11,800 acres of land surface are within the watershed.

For modeling purposes, the system as a whole consists of 19 separate subembayments (e.g., Round Cove, Meetinghouse Pond, Crows Pond, etc.), each of which has a TMDL for total nitrogen. The land area contributing groundwater and, thus, nitrogen load to each subembayment is delineated as a separate subwatershed.

MEP studies have determined that the water quality in most Pleasant Bay subembayments is moderately or significantly impaired. Nitrogen has been identified as the principal contaminant, from the following controllable sources:

- | | |
|--------------------------------------|-----|
| • Septic systems | 75% |
| • Stormwater runoff | 9% |
| • Lawn and golf course fertilization | 16% |

The MEP has determined that 36% of the current attenuated watershed nitrogen load bay-wide must be removed to restore water quality. Individual subembayments have nitrogen removal needs

ranging from 0% to 83%. Each of the four towns in the Pleasant Bay watershed has developed plans for nitrogen removal, and those plans are in varying stages of implementation.

4.0 NITROGEN LOADS AND REMOVAL REQUIREMENTS

Groundwater modeling performed as part of the MEP studies allows the Pleasant Bay watershed and individual subwatersheds to be delineated. The TMDLs were set for 19 individual subembayments and for the system as a whole. The watersheds to those 19 subembayments have been aggregated to 18 for this report, as shown in Figure 1. (That aggregation was necessary because the 2007 town-by-town allocation of existing loads was conducted for all individual subembayments except for the Pleasant Bay and Little Pleasant Bay subembayments. For the purposes of this report, these two subembayments were combined into one subembayment called “Pleasant Bay.”)

The MEP Technical Report presents estimates of nitrogen loads originating both within the watershed, as well as within the embayment. The “watershed loads” generally include nitrogen from septic systems; lawn, golf course and cranberry bog fertilization; and stormwater runoff. The watershed loads are considered “locally controllable” and it is those loads that are addressed in town plans and reported here. Loads that occur in the embayment, including atmospheric deposition and benthic release, are not considered to be locally controllable and, therefore, are not addressed in town plans or in this analysis.

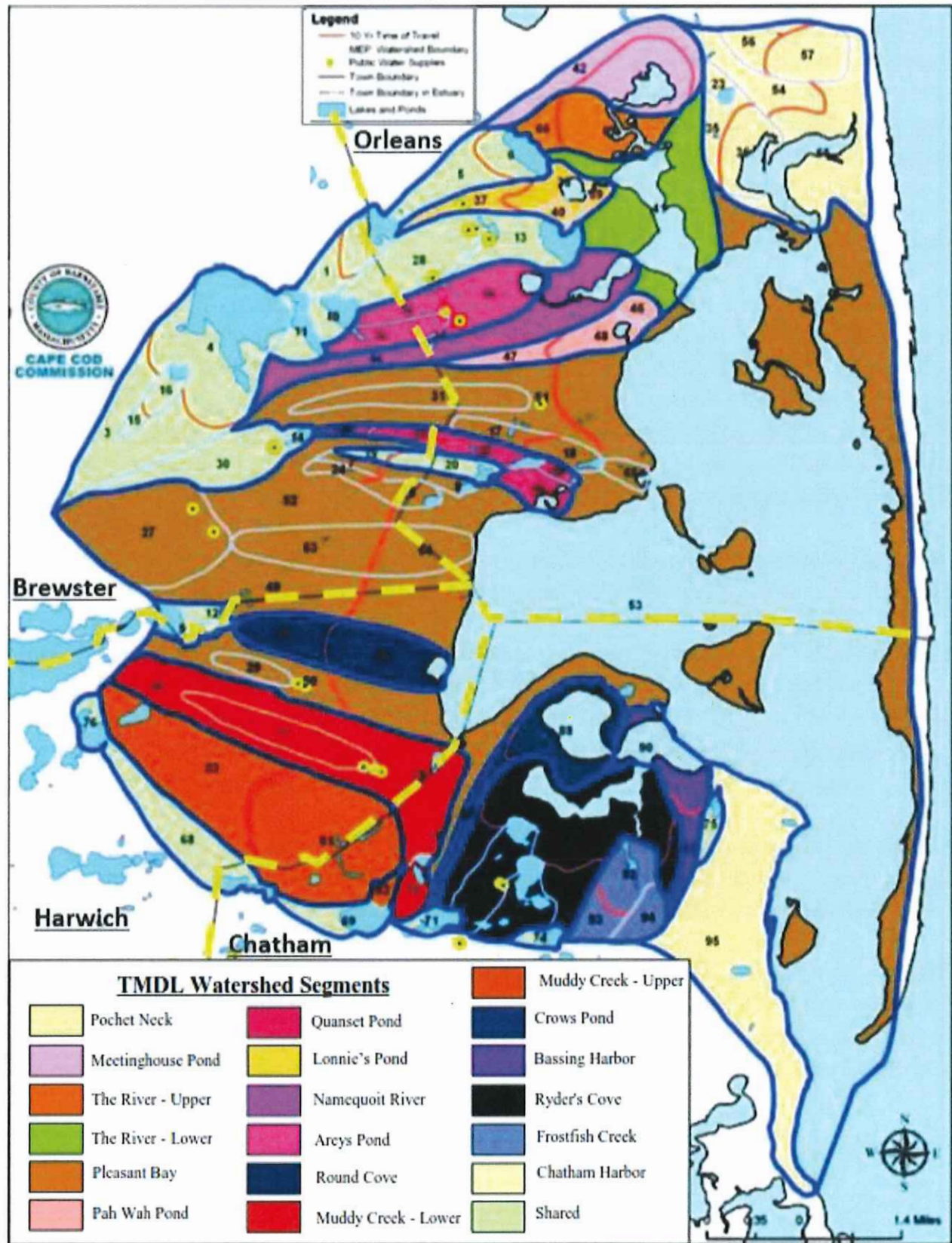
The MEP studies also quantify the natural attenuation that reduces watershed loads once they reach the groundwater and flow toward the embayment. When nitrogen loads pass through multiple attenuation sites (bogs, streams, ponds), significant natural nitrogen removal can occur that must be accounted for. Over the entire Pleasant Bay system, natural processes reduce the unattenuated load by about 11%:

Overall unattenuated watershed load	54,500 kg/yr
Less natural attenuation	<u>-6,000 kg/yr</u>
Attenuated load	48,500 kg/yr

Table A-2 summarizes the unattenuated and attenuated loads coming from each town to each of the 18 subembayments in the Pleasant Bay system. On a percent-of-unattenuated-load basis, the greatest natural attenuation occurs in Brewster in the watersheds it shares with Orleans, and in the Muddy Creek watershed shared by Chatham and Harwich.

Pleasant Bay Composite Nitrogen Management Analysis

Figure 1. Location of Pleasant Bay Subembayments



Based on the ecological health of each subembayment, specifically the degree of water quality impairment, the MEP estimated the threshold loads (TMDLs) of nitrogen above which ecological impairment occurs. The difference between the actual load and the threshold load or TMDL is the amount of nitrogen that must be removed to restore water quality. Table A-3 summarizes the amount of nitrogen that must be removed in each of the 18 subembayments. The aggregate attenuated nitrogen load to be removed in order to meet TMDLs is 17,717 kg/yr.

5.0 ALLOCATION OF RESPONSIBILITY FOR NITROGEN LOAD REMOVALS

There needs to be some equitable assignment of responsibility for removal of the excess nitrogen loads in the watershed. Each of the four towns has developed its nitrogen management plan on the premise that its responsibility for nitrogen removal is proportional to its current attenuated nitrogen load. For example, 79% of the current attenuated nitrogen load to the Areys Pond subembayment comes from Orleans, so Orleans has assumed that it should remove 79% of the nitrogen over the threshold load. This approach is the one now recommended by the Cape Cod Commission in the 208 Plan Update and this approach is endorsed by DEP.

Table A-3 applies that approach to load removal to the 18 Pleasant Bay subembayments. In the aggregate, the town responsibilities for removal of attenuated nitrogen load are:

Brewster	2,262 kg/yr (13% of total removal responsibility)
Chatham	4,076 kg/yr (23% of total removal responsibility)
Harwich	4,399 kg/yr (25% of total removal responsibility)
Orleans	<u>6,980 kg/yr</u> (39% of total removal responsibility)
Total	17,717 kg/yr (100% of total removal responsibility)

Orleans has the largest load removal responsibility because the subembayments it impacts are the most impaired, overall. Chatham has the largest attenuated nitrogen load, but significant portions of that load are tributary to subembayments with no impairment (such as Chatham Harbor).

Table 1 presents the annual nitrogen load removals allocated to each town and to each subembayment. The blue-shaded cells in Table 1 are those where the nitrogen removal requirement exceeds 5% of the overall 17,717 kg/yr (886 kg/yr). Those eight shaded cells cover six subembayments and represent 71% of the total removal requirement Bay-wide. They are:

Meetinghouse Pond—Orleans
Round Cove—Harwich
Lower Muddy Creek—Harwich
Ryder's Cove—Chatham

Pleasant Bay Composite Nitrogen Management Analysis

Table 1. Nitrogen Removal Requirements by Town and by Subembayment (kg/yr)

Subembayment	Brewster	Chatham	Harwich	Orleans	Total
Meetinghouse Pond <i>Town Percent of Total Removal</i>				1,876 100%	1,876 100%
Lonnies Pond <i>Town Percent of Total Removal</i>	14 5%			284 95%	298 100%
Areys Pond <i>Town Percent of Total Removal</i>	29 20%			113 80%	142 100%
The River - Upper <i>Town Percent of Total Removal</i>	3 1%			375 99%	378 100%
The River - Lower <i>Town Percent of Total Removal</i>	6 1%			518 99%	524 100%
Namequoit River <i>Town Percent of Total Removal</i>	19 5%			348 95%	367 100%
Paw Wah Pond <i>Town Percent of Total Removal</i>				413 100%	413 100%
Quanset Pond <i>Town Percent of Total Removal</i>	29 11%			227 89%	256 100%
Round Cove <i>Town Percent of Total Removal</i>	1 0.1%		1,209 99.9%		1,210 100%
Muddy Creek Upper <i>Town Percent of Total Removal</i>		193 25%	584 75%		777 100%
Muddy Creek Lower <i>Town Percent of Total Removal</i>		584 37%	986 63%		1,570 100%
Ryder's Cove <i>Town Percent of Total Removal</i>		1,954 100%			1,954 100%
Crows Pond <i>Town Percent of Total Removal</i>		0 -			0 -
Bassing Harbor <i>Town Percent of Total Removal</i>		0 -			0 -
Frost Fish Creek <i>Town Percent of Total Removal</i>		803 100%			803 100%
Pochet <i>Town Percent of Total Removal</i>				1,569 100%	1,569 100%
Pleasant Bay (including Little Pleasant Bay) <i>Town Percent of Total Removal</i>	2,161 39%	542 10%	1,620 29%	1,257 22%	5,580 100%
Chatham Harbor <i>Town Percent of Total Removal</i>		0 -			0 -
Total (All Subembayments) <i>Town Percent of Total Removal</i>	2,262 13%	4,076 23%	4,399 25%	6,980 39%	17,717 100%

Notes:

1. Blue shading denotes entries that are greater than 5% of total (more than 886 kg/yr).
2. Blue shaded entries account for 71% of overall requirement.
3. See Table A-2 and A-3 in Appendix A for derivation of load removal requirements.

Pochet—Orleans

Pleasant Bay (Main and Little Pleasant Bay)—Brewster, Harwich and Orleans

These high-load areas represent 48% (Chatham) to 96% (Brewster) of the individual town's overall responsibility.

6.0 DESCRIPTION OF TOWN PLANS FOR PLEASANT BAY

The town plans all provide significant details on the planning approaches taken and related findings and recommendations. Town-provided summaries of each plan, as they relate to Pleasant Bay, are presented in Appendix B.

7.0 COMPARISON OF TOWN PLANS WITH REMOVAL REQUIREMENTS

The four town plans were analyzed to determine the nitrogen load removals that should occur once those plans are implemented. Tables A-4 and A-5 compare the town-planned removals with the removal requirements derived from the TMDLs for each subembayment. Table 2 summarizes those tables for the entire Pleasant Bay system. The orange-shaded cells are those locations where the planned nitrogen removal is less than the TMDL requirements. The green-shaded cells are those locations where the town plans will remove more nitrogen than required by the TMDLs. Figure 2 graphically compares the planned removals with the TMDL requirements. Table 2 leads to the following key findings:

- In 10 subembayments, the town plans collectively achieve removals that are very close to those dictated by the TMDLs. In these places, all planned removals are within 5% of the removal need. Such minor differences are easily addressed through adaptive management.
- In six subembayments impacted by Chatham, the removals will be significantly in excess of the need. This reflects the fact that Chatham plans to install sewers town-wide, for multiple reasons beyond just nitrogen removal. Chatham will remove significant nitrogen loads in the watersheds of Crows Pond, Bassing Harbor and Chatham Harbor, where no removal is needed, and removals will exceed the TMDL requirements in Muddy Creek, Ryder's Cove and the Pleasant Bay subembayment.

Although no nitrogen removal is required in the Crows Pond, Bassing Harbor and Chatham Harbor subembayments, the proposed removals will have a positive impact on the system as a whole.

Table 2. Comparison of Town Plans with Watershed Load Removal Requirements

	Brewster	Chatham	Harwich	Orleans	TOTAL
Nitrogen Load Removal Requirement, kg/yr	2,262	4,076	4,399	6,980	17,717
Nitrogen Removal Included in Town Plan, kg/yr	1,871	13,058	4,540	6,974	26,442
Load Removal in Excess of TMDL, kg/yr	-	8,982	141	-	9,123
Load Removal Below TMDL, kg/yr	390	-	-	7	397
Load Removal Compared with TMDL	-17%	220%	3%	-0.1%	49%

Figure 2. Comparison of Nitrogen Removal Requirements and Town Plans

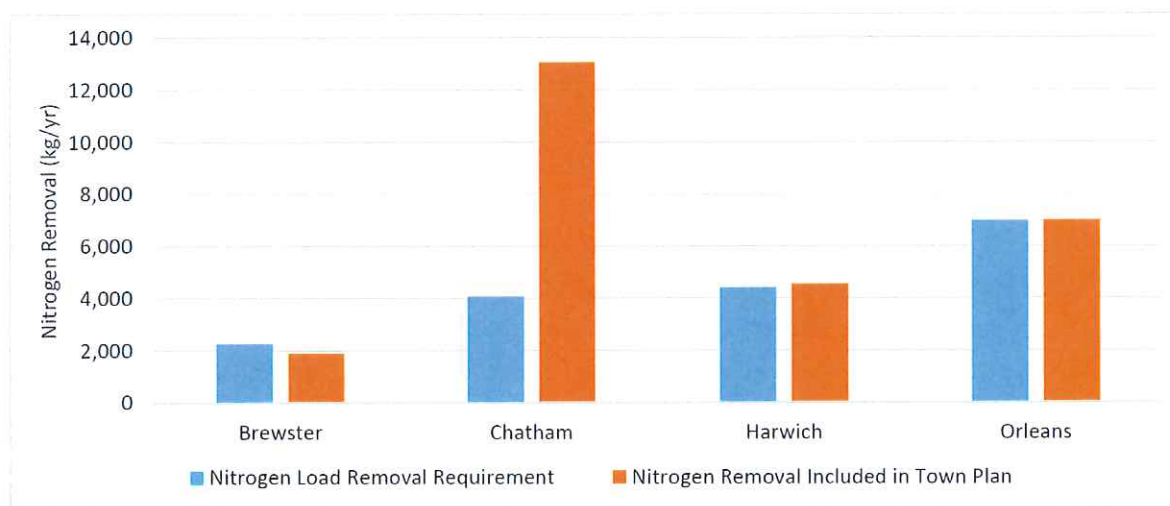


Table 2 shows that Brewster’s plan will remove 390 kg/yr less than required by the TMDLs. A significant portion of that “shortfall” is a result of the construction of the Muddy Creek bridge which has shifted nitrogen load downstream into the main Pleasant Bay subembayment, where Brewster is responsible for a certain share of its removal. This anomaly could be addressed in future discussions on allocation of responsibilities among the towns.

This analysis of the town plans reveals a difference in how fertilizer loads are handled. Orleans is basing its plan on a 25% reduction in residential fertilizer nitrogen loads, consistent with direction provided by the Cape Cod Commission. Brewster is including 50% residential fertilizer reduction

as part of its plan. Chatham and Harwich intend to implement fertilizer control programs, but their nitrogen management plans do not explicitly take credit for that removal. Further, there has been differing interpretation of the fertilizer nitrogen loads determined from the MEP technical reports. Tables presented in this analysis include a uniform 25% reduction in residential fertilizer load for all towns, based on a consistent interpretation of the unattenuated fertilizer loads reported in the MEP documents. Brewster's plan also includes 100% of the documented reduction in fertilizer use at the Captains Golf Course.

8.0 USE OF NON-TRADITIONAL TECHNOLOGIES

Table 3 summarizes each town's choice of technology for load reduction and the associated load to be removed under existing conditions. Individually, the plans differ in the degree to which they utilize traditional and non-traditional technologies. However, the combination of the four town plans provides a hybrid approach watershed wide, with non-traditional technologies accounting for about 25% of the estimated removal system-wide. The system-wide removal is comprised of 72% sewerage, 7% fertilizer reductions, and 21% other non-traditional methods.

In developing their respective nitrogen management plans, each of the four towns has gone through a thorough assessment of alternative approaches to meeting nutrient reduction targets through an extensive public engagement process. The resulting plans represent community consensus on nitrogen management approaches, in view of competing municipal needs.

Table 3 shows two types of nitrogen removal strategies: "source control" and "remediation". Source control approaches, such as traditional sewerage, prevent the nitrogen from reaching the environment. In contrast, remediation approaches address the nitrogen once it is in the groundwater or in the embayment to be protected. Remediation techniques, also referred to as non-traditional approaches, rely on natural processes and their performance will vary due to environmental factors. For this reason, non-traditional approaches are subject to a regulatory requirement for traditional back-up in the event that the non-traditional measures do not function as predicted. Table 3 includes fertilizer reduction strategies as source control measures; those strategies have not been historically used to meet TMDLs and their efficacy is more difficult to document than sewerage.

Remediation or non-traditional approaches will be piloted and monitored by the towns to determine the effectiveness and the appropriate degree of application of these approaches Within an adaptive management program. Table 3 shows how the load reduction expected through remediation is somewhat different from that associated with non-traditional technologies

Table 3. Summary of Towns' Nitrogen Removal Plans by Technology

	Brewster	Chatham	Harwich	Orleans	Total
Town-Planned Removal of Attenuated Nitrogen Load, Kg/yr					
Source Control					
Sewering	0	12,812	4,340	2,014	19,166
Residential Fertilizer Reduction	121	247	200	241	809
Golf Course Fertilizer Reduction	930	0	0	0	930
On-site Denitrifying Systems	590	0	0	1,709	2,299
Remediation					
Coastal Habitat Restoration	0	0	0	1,805	1,805
Permeable Reactive Barriers	0	0	0	322	322
Fertigation at Golf Courses	230	0	0	0	230
Shellfish Propagation	0	0	0	883	883
Total	1,871	13,059	4,540	6,974	26,444
Source Control vs. Remediation					
Source Control Subtotal, kg/yr	1,641	13,059	4,540	3,964	23,204
Remediation Subtotal, kg/yr	230	0	0	3,010	3,240
Percent Remediation Technologies	12%	0%	0%	43%	12%
Traditional vs. Non-Traditional					
Traditional Subtotal, kg/yr	930	12,812	4,340	2,014	20,096
Non-traditional Subtotal, kg/yr	941	247	200	4,960	6,348
Percent Non-traditional Tech.	50%	2%	4%	71%	24%

Notes:

1. Traditional technologies include sewerage and golf course fertilizer reductions. All other technologies and approaches are considered non-traditional.
2. Brewster is currently evaluating on-site denitrifying systems, and small shellfish propagation options for meeting the town's nitrogen reduction requirement. If the use of denitrifying systems is adopted by Brewster, they will be developed in sufficient numbers to meet the TMDLs under current and build-out conditions and to provide an appropriate margin of safety.
3. Orleans' load removal plan is evolving as its Amended CWMP is being prepared.

9.0 MANAGING GROWTH

This analysis focuses on the existing nitrogen loads to Pleasant Bay, without regard to potential future growth in the watershed. Nonetheless, it is important to remember the two-part requirement for nitrogen control when existing loads exceed thresholds:

- Reduce current bay-wide nitrogen loads by 36% to bring those loads below the thresholds.
- Control 100% of all future loads to ensure that loads always stay below the thresholds.

Failure to control nitrogen load increases in sensitive watersheds can negate actions to reduce current loads. The longer the implementation period for initial nitrogen removal activities, the more likely that growth will negate that progress.

A review of the towns' plans has identified the increases in wastewater flow or nitrogen load assumed to occur through build-out or other planning horizon. These growth percentages range from 22% in the Orleans CWMP to 40% in the Harwich CWMP. In the aggregate, the towns' plans include growth allowances that are about 30% of the existing loads. Since 100% of "new" nitrogen loads must be controlled in nitrogen-sensitive watersheds, a 30% growth in loads translates to an 80% increase in the loads that must be removed. Therefore, the long-term viability of a town's nitrogen removal plan is very dependent on that town's ability to implement future phases in a timely fashion to keep pace with growth.

There is no accepted uniform method of conducting build-out analyses, and a great deal of judgement is involved. This makes it difficult to compare projections developed by the towns, or for the towns in the MEP evaluations.

It is difficult to predict the extent and location of growth within the Pleasant Bay watershed. Each town should set a reasonable planning horizon, estimate the associated growth in watershed nitrogen load, and have a well-thought-out adaptive management plan to deal with that growth or with differing circumstances that actually play out.

Tools are available to control nitrogen loads from new development and redevelopment. Some of those tools can assist in addressing existing loads. Each town should adopt the appropriate nitrogen load management tools to specifically address new nitrogen loads from growth within the watershed.

Zero-percent State Revolving Loan Fund (SRF) funding is available from MassDEP for nutrient management projects that include plans to manage nitrogen load increases, including flow-neutral regulations. To the extent that zero-percent funding is crucial to the implementation of costly projects, the towns should be taking whatever actions are necessary to secure that funding. Chatham has a flow-neutral regulation and the Orleans CWMP includes an early draft. Harwich, which has the highest growth allowance in its plan, should be particularly aggressive in ensuring that growth does not negate early nitrogen removals or jeopardize enhanced funding.

10.0 COSTS

This analysis includes an assessment of town-provided cost estimates for Pleasant-Bay-related infrastructure and programs. That assessment is under development. Estimates prepared by the towns show comparable costs per pound of nitrogen removed for traditional technologies. Costs

for non-traditional approaches are still being developed and potential savings may not be clearly identified until extensive demonstration projects are complete. Once costs are more fully established, a composite cost analysis will be provided.

11.0 IMPLEMENTATION SCHEDULES

The four towns are in varying stages of implementation of their nitrogen management plans; see Figure 3.

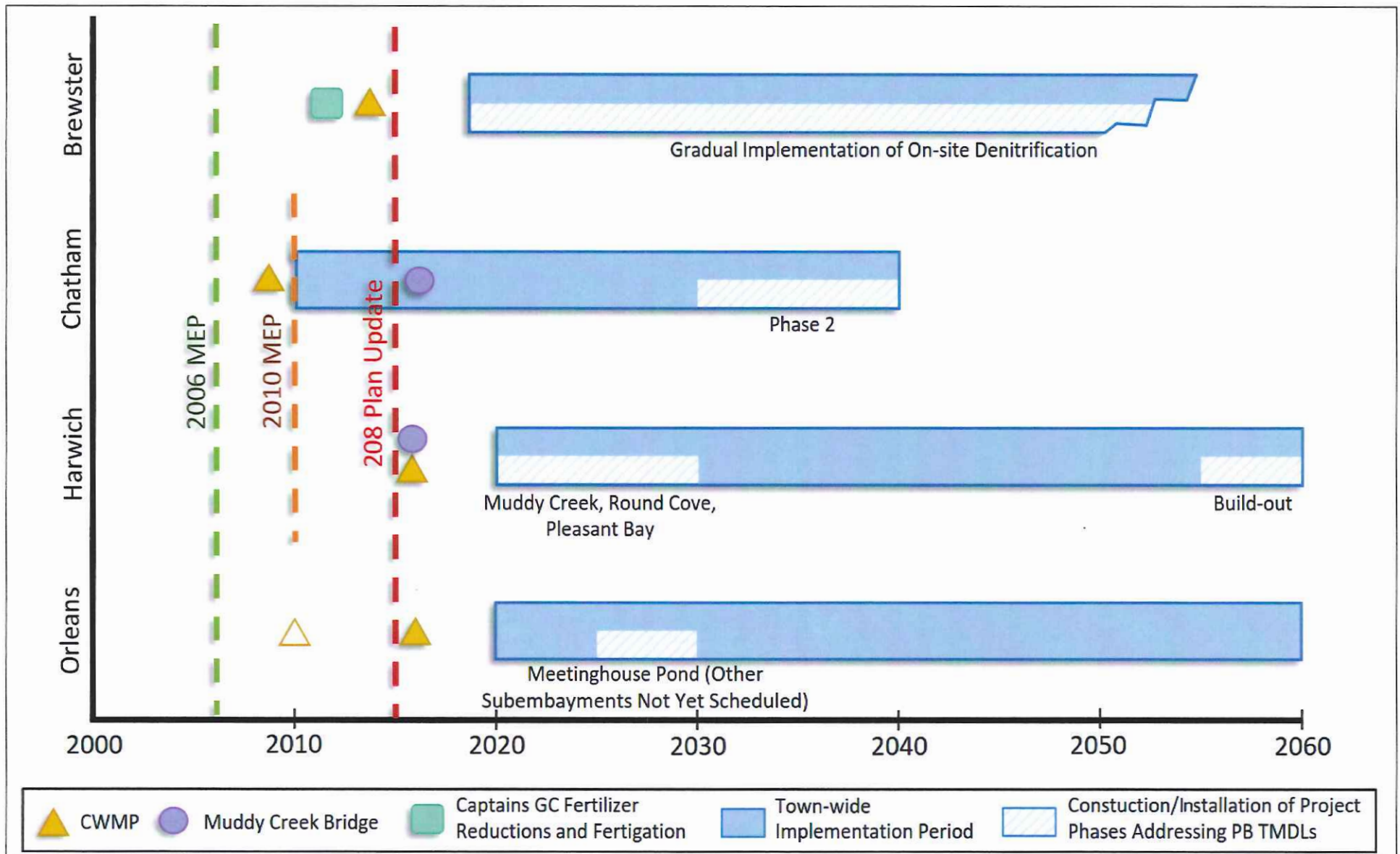
The fertilizer reductions that are a major part Brewster's plan have been implemented. Chatham and Harwich have jointly completed the Muddy Creek Restoration Bridge Project. Chatham has constructed a new, expanded state-of-the-art wastewater treatment plant and begun expansion of its collection system, and is in a position to begin sewerage Pleasant Bay sub-watersheds. Orleans has embarked on a pilot project for nitrogen removal from Lonnie's Pond (shellfish propagation) and is developing one for Quanset Pond (shellfish).

Figure 3 shows the plan implementation periods set forth in each town's plans. Chatham's plan is expected to cover 30 years (with the first 20 years focusing on subembayments with TMDLs), and Harwich's plan will take 40 years. The original 18-year program contained in the Orleans CWMP will be extended to 30 to 40 years in the Amended CWMP. Brewster's plan is open-ended. Figure 3 shows the expected periods of construction/installation of nitrogen removal measures. Actual reductions in nitrogen concentrations within the embayments will occur sometime after implementation of the control measures, particularly for source control measures implemented far from the shoreline.

The towns have designated the Pleasant Bay subembayments that will be addressed first in their plans. Table 1 highlights the six subembayments where 71% of the load removal is required. Figure 3 shows that the towns have given relatively high priority to five of those sub-watersheds including Meetinghouse Pond, Muddy Creek Upper and Lower (Harwich) and Round Cove. The Pleasant Bay subembayment is designated as a high priority by Brewster and Harwich. It will be addressed in later phases of the Chatham plan and the Orleans plan (although nitrogen removals in the headwaters embayments will have an indirect positive impact on Pleasant Bay.) Pochet, which accounts for nearly 9% of the total load reduction requirement, is not scheduled for early implementation by Orleans.

The implementation periods shown in Figure 3 for Chatham and Harwich are essentially as published in each town's CWMP. The plans of Brewster and Orleans are still being developed and Figure 3 shows the current thinking of each town's wastewater planning representatives. Many factors will influence actual implementation steps; Figure 3 represents the best available information as of November 2016.

Pleasant Bay Composite Nitrogen Management Analysis
Figure 3. Town Implementation Schedules



12.0 OPPORTUNITIES FOR NITROGEN TRADING

Looking at the Pleasant Bay watershed in its entirety, one can identify the most cost-effective locations for nitrogen load removal. The nitrogen removed at those optimum locations will not necessarily match the towns' responsibilities for TMDL compliance. That is, without a watershed-wide approach, one or more of the towns in a shared subwatershed may implement projects that are not as cost-effective as projects in other towns. That problem can be overcome through nitrogen trading, in which the town with the low-cost options removes more nitrogen than it is responsible for and another town removes less. The second town pays the first town for the "extra" nitrogen load that is removed on its behalf.

While the cost of nitrogen removal is a key factor in determining the "optimal" approach, other considerations are important as well. One must also consider the location of the removal in the watershed, because options that remove nitrogen along the shore or in the water body are preferred over those that remove nitrogen high in the watershed. Nitrogen removals upgradient of natural attenuation locations are not as favored as those downgradient of those locations.

Nitrogen trading should be considered between Brewster and Orleans in the headwaters subembayments at the north end of Pleasant Bay. In six shared subembayments (Lonnie's Pond, Areys Pond, the Upper and Lower River, Namequoit River and Quanset Pond), Brewster is responsible for 5% of the nitrogen removal and Orleans for 95%. Brewster's raw loads are attenuated by 71% before reaching receiving waters, so removing 100 kg in Brewster reduces the load to the receiving waters by only 29 kg. It is likely that the most cost-effective solution is for Orleans to remove all of the load necessary for TMDL compliance, with Brewster paying Orleans 5% of Orleans' cost.

Nitrogen trading should also be considered between Chatham and Harwich in the Muddy Creek and Pleasant Bay subwatersheds. Chatham intends to remove all of its septic load in the Pleasant Bay watershed as part of a town-wide sewerage program that is aimed at more than just nitrogen removal. In these three subembayments, Chatham's plan would remove 1,240 kg/yr more than required to meet the TMDL. This "over removal" is equivalent to about 40% of Harwich's responsibility in these subembayments. By nitrogen trading, Harwich could pay Chatham and avoid significant infrastructure.

An important consideration in nitrogen trading is the location of the nitrogen to be removed. Once specific trading scenarios are identified, it will be necessary to run the MEP model to be sure that relocation of the removal still allows water quality goals to be met.

The actual cost paid for nitrogen trading would be determined through negotiations between the participating towns, and would likely fall somewhere between the cost avoided by the “buyer” and the incremental cost incurred by the “seller”.

13.0 MONITORING AND ADAPTIVE MANAGEMENT

Pleasant Bay has an extensive database and ongoing monitoring to assess changes in ecological conditions resulting from implementation measures. Per MEP guidance, the focus of monitoring efforts is on water column nitrogen and dissolved oxygen concentrations, eelgrass coverage and vitality, and benthic infauna health and diversity.

Water column concentrations – The Alliance’s Water Quality Monitoring Program recently completed its 17th monitoring season. Monitoring occurs at 24 station locations selected to track TMDL compliance. A MassDEP-approved Quality Assurance Project Plan (QAPP) is in place and includes the following parameters: nitrogen (DON, PON, DIN, TON, TN), oxygen, temperature, salinity, and phytoplankton pigments. Sample collection occurs five times annually from July through September. Data are analyzed by the UMASS Dartmouth School for Marine Science and Technology (SMAST) and reported to the Alliance. The Alliance issues periodic reports with basic statistics, and conducts in-depth statistical trend assessments on a five-year basis. The statistical trend assessments were further evaluated by SMAST to discern the ecological implications of any statistically significant trends. The Alliance monitoring program is funded annually by the towns and will continue.

Eelgrass coverage – The MEP relied on eelgrass coverage reported by the MassDEP Eelgrass Mapping Project. The project conducted mapping using aerial imagery and field verification methods. Data are available for the following years: 1994, 2001, 2006, 2010 and 2012. The schedule and extent of future mapping to be conducted by the program needs to be identified, to determine whether additional data collection will be necessary to monitor future changes in Pleasant Bay eelgrass beds.

Benthic infauna – The MEP conducted quantitative sediment sampling in 2000 for benthic animals at 34 locations throughout the Bay. Species number and individual counts were assessed for diversity and evenness and compared to findings developed by SMAST over the past 30 years based on measurements in other Cape Cod estuaries. In 2008 MEP conducted a more detailed estimate of Muddy Creek that included collection of benthic infauna at six locations. In 2014, the Provincetown Center for Coastal Studies (PCCS) collected benthic infauna samples at all MEP locations except Muddy Creek. This effort was undertaken in concert with a benthic mapping project for the Cape Cod National Seashore. The results of this PCCS study are not yet available.

Recently the Alliance asked SMAST to assess the water quality, eelgrass, and benthic infauna data needed for assessing ecological health in Pleasant Bay through updated MEP modeling. The Alliance proposes to review the data needs for modeling with its member towns through the Watershed Work Group. Based on this review, the Alliance may recommend that the towns pursue joint actions to update data on a cost-effective watershed basis.

In addition, it should be noted that individual towns are developing monitoring programs tailored to pilot projects for non-traditional technologies. For example:

- Orleans worked with SMAST to develop a monitoring program for an oyster growing pilot project in Lonnie's Pond;
- Brewster has installed groundwater test wells at several locations (mostly around Captains Golf Course) to track impacts of fertilizer reductions;
- Chatham and Harwich are undertaking bacterial and nitrogen-related water quality monitoring to evaluate changes in water quality resulting from the Muddy Creek Restoration Bridge Project.

Each town's plan incorporates adaptive management to allow monitoring results to direct or redirect implementation measures.

14.0 ANNUAL PROGRESS REPORTING

The ultimate TMDL compliance point is the restoration of habitat (eelgrass or benthic infauna); a town is not in compliance with the federal Clean Water Act until watershed nitrogen loads have been reduced to the point where that habitat is restored. A difficult regulatory issue is the travel time of nitrogen in the groundwater and the uncertainties associated with estimating how a reduction in watershed load will impact water-column nitrogen concentrations and how that reduction will lead to habitat restoration. Complicating the issue is the fact that the watersheds of most impacted embayments span multiple towns which may be proceeding with nitrogen control on different schedules and at different paces. Achievement of the nitrogen load reductions implicit in the TMDLs is the only substantive mechanism for compliance over the short term.

Towns will be well served to document implementation steps annually to provide assurances to regulatory agencies, inform the public and allow coordination with other towns. Such documentation would give each town the assurance that other towns are acting toward the common goals and help inform each town's adaptive management plan.

The Alliance's Watershed Work Group could develop a standardized reporting form that each town would complete by the end of each January documenting key information from the previous year. The Watershed Work Group would then compile the data to produce a composite report by

the end of each February. One important component of the proposed annual report would be an update of towns' water use by sub-embayment as a tool to judge changes in watershed nitrogen loads. Other information could include:

- The status of all of its activities called for in the CWMP;
- A spreadsheet-based estimate of the nitrogen load removals accomplished to date;
- The results of the water quality monitoring program conducted during the year;
- The results of habitat assessments (may not be done every year);
- Documentation of the capital expenditures that have been made and that are expected over the upcoming five years, from the town's Capital Improvement Plan;
- Progress made on non-structural elements of the CWMP; and
- Proposed changes in implementation (such as acceleration or delay of upcoming segments).

All of this information is critical input to the towns' adaptive management plans.

15.0 CONSISTENCY WITH 208 PLAN UPDATE

Pleasant Bay has been identified by the Cape Cod Commission as a priority watershed for the development of a Targeted Watershed Nutrient Management Plan (TWMP) by mid 2017. Among the purposes of the TWMP is to demonstrate consistency with the 208 Plan Update and provide a basis for future watershed permitting of non-traditional technologies.

Specific guidance on the requirements for 208 Plan consistency is anticipated from the Cape Cod Commission. The consistency requirements initially described at the June 2016 One Cape Conference are listed below, with notation of how the four Pleasant Bay towns are meeting this requirement:

- **Towns accept responsibility for their controllable loads** – As noted above, town plans assume responsibility for removing their proportional share of attenuated nitrogen load reduction necessary to achieve the TMDL based on the town's contribution of attenuated load.
- **Plans meet targets (TMDLs)** – The composite analysis shows that TMDLs will be met.
- **Towns plan a hybrid approach at a watershed level** – The composite analysis shows that the individual town plans vary in the degree to which they employ non-traditional technologies. The composite of plans demonstrates a hybrid approach on a watershed basis, with 71% reduction coming from traditional technologies, 23% non-traditional technologies, and 6% fertilizer reduction.

- **Public engagement has occurred**– Each town plan has undergone extensive community review and vetting, as detailed in the respective plans.
- **Growth management strategy** – Each town plan includes assumptions about growth in watershed nitrogen loads; however, greater detail is needed to ensure that future phases are implemented in a timely fashion to keep pace with growth.
- **Monitoring programs are planned** – The Alliance has extensive baseline data on water quality, eelgrass and benthic infauna, and an ongoing water quality monitoring program. Each town has instituted monitoring protocols for specific pilot projects and initial efforts, and each town plan incorporates adaptive management to adjust implementation based on monitoring results.
- **Plans include adaptive management and 5-yr consistency check-ins** – All town plans incorporate adaptive management programs.
- **Plans include evidence of collaboration and propose shared solutions** – The four towns have collaborated in addressing nutrient management issues in Pleasant Bay through the Pleasant Bay Alliance. Initial collaboration led to the watershed-wide MEP analysis. Coordination continues in the implementation stage. Chatham and Harwich have coordinated in constructing the Muddy Creek Restoration Bridge Project and are negotiating an IMA for shared treatment and effluent disposal. This composite analysis identifies other areas where joint action among the towns could be pursued such as nitrogen trading.

This composite analysis is intended to help demonstrate the four towns' progress in meeting the requirements for 208 consistency, and lays the foundation for a future TWMP.

16.0 PREPARING FOR A POSSIBLE FUTURE WATERSHED PERMIT

Massachusetts DEP is formulating a watershed permitting program to accomplish multiple goals including the facilitation of non-traditional nitrogen management technologies. Application for a watershed permit will require submission of a TWMP that demonstrates 208 compliance. Additional guidance on watershed permitting will be forthcoming from DEP.

17.0 NEXT STEPS

This analysis of the four town plans has identified several issues that should be addressed to optimize the overall nitrogen removal program and to prepare for a TWMP and watershed permit(s):

1. The Boards of Selectmen in each town should establish a process to develop and execute memoranda of understanding (MOUs) that address watershed-wide issues. The

Pleasant Bay Composite Nitrogen Management Analysis

first such MOU could be an agreement that each town is responsible for the load removals summarized in Table 1.

2. Once specific guidance is obtained from the Cape Cod Commission on TWMPs and consistency with the 208 Plan Update, steps should be taken to address any issues not addressed by the individual plans or by this composite analysis.
3. A bay-wide compilation of nitrogen management costs should be completed to identify aggregate needs and to serve as a basis for funding requests. Efforts by Brewster and Orleans should continue to identify costs of non-traditional technologies and the requisite traditional back-up plans.
4. Efforts should be made to synchronize the plans so that expenditures lead to improved water quality at the earliest possible time in as many subembayments as possible. Table 1 identifies six subembayments where 71% of the load removal is needed; other prioritization options should also be considered, such as focusing initial expenditures on the smaller removal requirements in the headwaters embayments to demonstrate early progress to the public.
5. Harwich and Chatham should consider nitrogen trading, so that Chatham's nitrogen control measures that will exceed TMDLs can be used by Harwich to address its requirements without duplication of capital expenditures. Such trading might result in capital savings of tens of millions of dollars.
6. Brewster should consider nitrogen trading with Harwich, Chatham and Orleans, respectively, to augment its load reduction in watersheds.
7. Where non-traditional approaches are proposed, town plans should be made more robust by identification of the nature and timing of traditional technologies that will be put in place if non-traditional means are insufficient, as required by DEP.
8. The four town plans should be made more specific as to how future increases in nitrogen load will be accommodated. Flow-neutral approaches should be adopted as tools to manage future growth in nitrogen-sensitive watersheds and to ensure zero-interest DEP funding.
9. Figure 3 illustrates the long-term nature of the planned nitrogen removal program, and highlights important steps that have already been taken. An annual reporting mechanism should be developed to track additional progress, document evolving estimates of nitrogen loading, and facilitate public involvement.
10. MEP modeling should be undertaken to ensure that the amount and location of load removal will achieve the desired water quality. This is best done after the towns have fully explored and further defined scenarios for joint action such as nitrogen trading.

APPENDIX A
Data Tables

Table A-1. Information Sources

Report	Author	Date
MEP Linked Watershed-Embayment Model to Determine Critical Nitrogen Loading Thresholds for the Pleasant Bay System, Orleans, Chatham, Brewster and Harwich, Massachusetts	MassDEP, University of Massachusetts Dartmouth School of Marine Science and Technology	May-06
Final Pleasant Bay System Total Maximum Daily Loads for Total Nitrogen	Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs, MassDEP, Bureau of Resource Protection	May-07
CCC Technical Memorandum - RE: Individual Town Nitrogen Loads by TMDL Watershed/Segments to Pleasant Bay	Cape Cod Commission (Ed Eichner)	28-Nov-07
Town of Chatham: Final Comprehensive Wastewater Management Plan and Final Environmental Impact Report	Stearns & Wheeler, LLC	May-09
MEP Technical Memorandum - RE: MEP Scenarios to Evaluate Water Quality Impacts of the Addition of a 24-ft Culvert in Muddy Creek Inlet	MassDEP, University of Massachusetts Dartmouth School of Marine Science and Technology	5-Oct-10
Town of Orleans: Comprehensive Wastewater Management Plan and Single Environmental Impact Report	Wright-Pierce	Dec-10
Town of Brewster, Massachusetts: Integrated Water Resource Management Plan Phase II Final Report	Horsley Witten Group, Inc.	28-Jan-13
Town of Brewster, Massachusetts: Pleasant Bay Nitrogen Management Alternatives Analysis Report	Horsley Witten Group, Inc.	20-Mar-13
208 Plan: Cape Code Area Wide Water Quality Management Plan Update	Cape Cod Commission	Jun-15
Final Comprehensive Wastewater Management Plan/Single Environmental Impact Report Town of Harwich, Massachusetts	CDM Smith	Mar-16
Amended Comprehensive Wastewater Management Plan - Preliminary Draft (Prepared for the Town of Orleans, MA)	AECOM Technical Services, Inc.	Jun-16

Table A-2. Unattenuated and Attenuated Watershed Loads

Subembayment, kg/yr	Brewster	Chatham	Harwich	Orleans	TOTAL
Meetinghouse Pond					
<i>Unattenuated Watershed Load</i>				2,256	2,256
<i>Attenuated Watershed Load</i>				2,256	2,256
<i>% Attenuation</i>				0%	0%
Lonnies Pond (Kescayo Gansett Pond)					
<i>Unattenuated Watershed Load</i>	248			1,139	1,387
<i>Attenuated Watershed Load</i>	40			838	878
<i>% Attenuation</i>	84%			26%	37%
Areys Pond					
<i>Unattenuated Watershed Load</i>	282			367	649
<i>Attenuated Watershed Load</i>	95			367	462
<i>% Attenuation</i>	66%			0%	29%
The River - Upper					
<i>Unattenuated Watershed Load</i>	61			1,174	1,235
<i>Attenuated Watershed Load</i>	7			998	1,005
<i>% Attenuation</i>	89%			15%	19%
The River - Lower					
<i>Unattenuated Watershed Load</i>	107			1,549	1,656
<i>Attenuated Watershed Load</i>	16			1,390	1,406
<i>% Attenuation</i>	85%			10%	15%
Namequoit River					
<i>Unattenuated Watershed Load</i>	117			1,034	1,151
<i>Attenuated Watershed Load</i>	51			935	986
<i>% Attenuation</i>	56%			10%	14%
Paw Wah Pond					
<i>Unattenuated Watershed Load</i>				679	679
<i>Attenuated Watershed Load</i>				679	679
<i>% Attenuation</i>				0%	0%
Quanset Pond					
<i>Unattenuated Watershed Load</i>	142			723	865
<i>Attenuated Watershed Load</i>	72			569	641
<i>% Attenuation</i>	49%			21%	26%
Round Cove					
<i>Unattenuated Watershed Load</i>	2		2,291		2,293
<i>Attenuated Watershed Load</i>	1		2,277		2,278
<i>% Attenuation</i>	50%		1%		1%
Muddy Creek Upper					
<i>Unattenuated Watershed Load</i>		1,234	3,808		5,042
<i>Attenuated Watershed Load</i>		531	1,637		2,168
<i>% Attenuation</i>		57%	57%		57%

Subembayment, kg/yr	Brewster	Chatham	Harwich	Orleans	TOTAL
Muddy Creek Lower					
<i>Unattenuated Watershed Load</i>		1,488	2,512		4,000
<i>Attenuated Watershed Load</i>		1,458	2,462		3,920
<i>% Attenuation</i>		2%	2%		2%
Ryder's Cove					
<i>Unattenuated Watershed Load</i>		4,054			4,054
<i>Attenuated Watershed Load</i>		3,613			3,613
<i>% Attenuation</i>		11%			11%
Crows Pond					
<i>Unattenuated Watershed Load</i>		1,542			1,542
<i>Attenuated Watershed Load</i>		1,537			1,537
<i>% Attenuation</i>		0.3%			0.3%
Bassing Harbor					
<i>Unattenuated Watershed Load</i>		620			620
<i>Attenuated Watershed Load</i>		607			607
<i>% Attenuation</i>		2%			2%
Frost Fish Creek					
<i>Unattenuated Watershed Load</i>		1,059			1,059
<i>Attenuated Watershed Load</i>		1,059			1,059
<i>% Attenuation</i>		0%			0%
Pochet					
<i>Unattenuated Watershed Load</i>				3,135	3,135
<i>Attenuated Watershed Load</i>				3,073	3,073
<i>% Attenuation</i>				2%	2%
Pleasant Bay (including Little Pleasant Bay)					
<i>Unattenuated Watershed Load</i>	6,212	1,526	4,743	4,055	16,536
<i>Attenuated Watershed Load</i>	6,077	1,526	4,553	3,538	15,694
<i>% Attenuation</i>	2%	0%	4%	13%	5%
Chatham Harbor					
<i>Unattenuated Watershed Load</i>		6,308			6,308
<i>Attenuated Watershed Load</i>		6,241			6,241
<i>% Attenuation</i>		1%			1%
ALL SUBEMBAYMENTS					
<i>Unattenuated Watershed Load</i>	7,171	17,831	13,354	16,111	54,468
<i>Attenuated Watershed Load</i>	6,359	16,572	10,929	14,643	48,503
<i>% Attenuation</i>	11%	7%	18%	9%	11%

Notes:

1. Unattenuated and attenuated loads are as reported by the Cape Cod Commission (Eichner, November 28, 2007) and by the MEP (MEP Technical Memorandum, October 5, 2010) for Round Cove, Muddy Creek (Upper and Lower), and Pleasant Bay.

Table A-3. Attenuated Watershed Load Removals

Subembayment, kg/yr	Brewster	Chatham	Harwich	Orleans	TOTAL
Meetinghouse Pond					
<i>Attenuated Watershed Load</i>				2,256	2,256
<i>Threshold Watershed Load</i>				386	386
<i>Removal Required</i>				1,870	1,870
Lonnie's Pond (Kescayo Gansett Pond)					
<i>Attenuated Watershed Load</i>	41			838	879
<i>Threshold Watershed Load</i>	27			566	593
<i>Removal Required</i>	14			272	286
Areys Pond					
<i>Attenuated Watershed Load</i>	95			367	462
<i>Threshold Watershed Load</i>	69			265	334
<i>Removal Required</i>	26			102	128
The River - Upper					
<i>Attenuated Watershed Load</i>	7			998	1,005
<i>Threshold Watershed Load</i>	4			630	634
<i>Removal Required</i>	3			368	371
The River - Lower					
<i>Attenuated Watershed Load</i>	16			1,390	1,406
<i>Threshold Watershed Load</i>	10			882	892
<i>Removal Required</i>	6			508	514
Namequoit River					
<i>Attenuated Watershed Load</i>	51			935	986
<i>Threshold Watershed Load</i>	33			599	632
<i>Removal Required</i>	18			336	354
Paw Wah Pond					
<i>Attenuated Watershed Load</i>				679	679
<i>Threshold Watershed Load</i>				266	266
<i>Removal Required</i>				413	413
Quanset Pond					
<i>Attenuated Watershed Load</i>	72			569	641
<i>Threshold Watershed Load</i>	44			350	394
<i>Removal Required</i>	28			219	247
Round Cove					
<i>Attenuated Watershed Load</i>	1		2,277		2,278
<i>Threshold Watershed Load</i>	1		1,068		1,069
<i>Removal Required</i>	0.3		1,209		1,209
Muddy Creek Upper					
<i>Attenuated Watershed Load</i>		531	1,637		2,168
<i>Threshold Watershed Load</i>		346	1,046		1,392
<i>Removal Required</i>		185	591		776

Subembayment, kg/yr	Brewster	Chatham	Harwich	Orleans	TOTAL
Muddy Creek Lower					
<i>Attenuated Watershed Load</i>		1,458	2,462		3,920
<i>Threshold Watershed Load</i>		874	1,476		2,350
<i>Removal Required</i>		584	986		1,570
Ryder's Cove					
<i>Attenuated Watershed Load</i>		3,613			3,613
<i>Threshold Watershed Load</i>		1,630			1,630
<i>Removal Required</i>		1,983			1,983
Crows Pond					
<i>Attenuated Watershed Load</i>		1,537			1,537
<i>Threshold Watershed Load</i>		1,540			1,540
<i>Removal Required</i>		0			0
Bassing Harbor					
<i>Attenuated Watershed Load</i>		607			607
<i>Threshold Watershed Load</i>		609			609
<i>Removal Required</i>		0			0
Frost Fish Creek					
<i>Attenuated Watershed Load</i>		1,059			1,059
<i>Threshold Watershed Load</i>		257			257
<i>Removal Required</i>		802			802
Pochet					
<i>Attenuated Watershed Load</i>				3,073	3,073
<i>Threshold Watershed Load</i>				1,505	1,505
<i>Removal Required</i>				1,568	1,568
Pleasant Bay (including Little Pleasant Bay)					
<i>Attenuated Watershed Load</i>	6,077	1,526	4,553	3,538	15,694
<i>Threshold Watershed Load</i>	3,913	981	2,932	2,275	10,101
<i>Removal Required</i>	2,164	545	1,621	1,263	5,593
Chatham Harbor					
<i>Attenuated Watershed Load</i>		6,241			6,241
<i>Threshold Watershed Load</i>		6,241			6,241
<i>Removal Required</i>		0			0
ALL SUBEMBAYMENTS					
<i>Attenuated Watershed Load</i>	6,360	16,572	10,929	14,643	48,504
<i>Threshold Watershed Load</i>	4,101	12,478	6,522	7,724	30,825
<i>Removal Required</i>	2,259	4,099	4,407	6,919	17,684

Notes:

1. Attenuated watershed loads are taken from Table A-2. Total threshold watershed loads are taken from Table VIII-4 of the 2006 MEP report and Table 2 of the 2010 MEP Technical Memo. Town shares of thresholds are proportional to their attenuated loads.

Table A-4. Town Plan Removals (kg/yr) and Reliance on Non-Traditional Technologies

Subembayment	Brewster	Chatham	Harwich	Orleans	Total
Meetinghouse Pond <i>Non-Traditional Technologies Share</i>				1,876 2%	1,876 10%
Lonnies Pond <i>Non-Traditional Technologies Share</i>	0.5 100%			284 100%	285 100%
Areys Pond <i>Non-Traditional Technologies Share</i>	1.0 100%			113 100%	114 100%
The River - Upper <i>Non-Traditional Technologies Share</i>	0.1 100%			374 54%	374 47%
The River - Lower <i>Non-Traditional Technologies Share</i>	0.3 100%			517 100%	517 100%
Namequoit River <i>Non-Traditional Technologies Share</i>	0.8 100%			348 100%	349 100%
Paw Wah Pond <i>Non-Traditional Technologies Share</i>				413 100%	413 100%
Quanset Pond <i>Non-Traditional Technologies Share</i>	1.0 100%			228 100%	229 100%
Round Cove <i>Non-Traditional Technologies Share</i>	0.0 100%		1,251 3%		1,251 3%
Muddy Creek Upper <i>Non-Traditional Technologies Share</i>		438 2%	805 3%		1,243 3%
Muddy Creek Lower <i>Non-Traditional Technologies Share</i>		1,192 2%	1,073 4%		2,265 3%
Ryder's Cove <i>Non-Traditional Technologies Share</i>		2,674 3%			2,674 3%
Crows Pond <i>Non-Traditional Technologies Share</i>		1,248 3%			1,248 3%
Bassing Harbor <i>Non-Traditional Technologies Share</i>		514 1%			514 1%
Frost Fish Creek <i>Non-Traditional Technologies Share</i>		832 3%			832 3%
Pochet <i>Non-Traditional Technologies Share</i>				1,564 100%	1,564 100%
Pleasant Bay (including Little Pleasant Bay) <i>Non-Traditional Technologies Share</i>	1,867 50%	930 3%	1,411 6%	1,257 100%	5,465 48%
Chatham Harbor <i>Non-Traditional Technologies Share</i>		5,229 1%			5,229 1%
Total (All Subembayments) <i>Non-Traditional Technologies Share</i>	1,871 50%	13,058 2%	4,540 4%	6,974 71%	26,442 24%

Notes:

1. Non-traditional technologies are considered to be remediation technologies, residential fertilizer reductions, and on-site denitrification systems.
2. All town plans have been adjusted for a uniform 25% residential fertilizer reduction.
3. Yellow shaded cells identify subembayments where town plans rely on non-traditional technologies for >25% of their planned removals.

Table A-5. Town Plan Nitrogen Removals Compared to TMDL (kg/yr)

Subembayment	Brewster	Chatham	Harwich	Orleans	Total
Meetinghouse Pond <i>Amount Town Plans Over / Under</i>				0	0
Lonnie's Pond <i>Amount Town Plans Over / Under</i>	13			0	13
Areys Pond <i>Amount Town Plans Over / Under</i>	28			0	28
The River - Upper <i>Amount Town Plans Over / Under</i>	2.5			1	4
The River - Lower <i>Amount Town Plans Over / Under</i>	5.8			1	7
Namequoit River <i>Amount Town Plans Over / Under</i>	18			0	18
Paw Wah Pond <i>Amount Town Plans Over / Under</i>				0	0
Quanset Pond <i>Amount Town Plans Over / Under</i>	28			1	27
Round Cove <i>Amount Town Plans Over / Under</i>	0.8		42		42
Muddy Creek Upper <i>Amount Town Plans Over / Under</i>		245	221		466
Muddy Creek Lower <i>Amount Town Plans Over / Under</i>		608	87		696
Ryder's Cove <i>Amount Town Plans Over / Under</i>		720			720
Crows Pond <i>Amount Town Plans Over / Under</i>		1,248			1,248
Bassing Harbor <i>Amount Town Plans Over / Under</i>		514			514
Frost Fish Creek <i>Amount Town Plans Over / Under</i>		29			29
Pochet <i>Amount Town Plans Over / Under</i>				5	5
Pleasant Bay (including Little Pleasant Bay) <i>Amount Town Plans Over / Under</i>	294	388	209	0	115
Chatham Harbor <i>Amount Town Plans Over / Under</i>		5,229			5,229
Total (All Subembayments) <i>Amount Town Plans Over / Under</i>	390	8,982	141	7	8,726

Notes:

1. Orange font and shading indicate the amount a town plan is under the TMDL.
2. Green font and shading indicate the amount a town plan is over the TMDL.
3. All town plans have been adjusted for a uniform 25% residential fertilizer reduction.

APPENDIX B

**Summary of Town Plans for
Pleasant Bay**

APPENDIX B

SUMMARY OF TOWN PLANS FOR PLEASANT BAY

Brewster

The Town of Brewster contributes approximately 13% of the attenuated wastewater nitrogen load to the Pleasant Bay watershed and is responsible for 13% of the aggregate removal. The Town has developed an Integrated Water Resources Management Plan (IWRMP). The IWRMP Phase II report was issued in final form in January 2013 with assessments and recommendations addressing nitrogen loading to Pleasant Bay, existing and future drinking water, and stormwater and freshwater pond needs. Nitrogen management alternatives are further discussed in a March 2015 report. The Brewster Plan includes significant fertilizer reductions that have already taken place at the Captain's Golf Course, fertigation at the golf course, and reductions in residential fertilizer loads. Brewster considered shellfish propagation or aquaculture to meet the remaining nitrogen reduction for the Town. The Town is currently looking at new septic leachfield technologies for nitrogen reduction (since the shellfish management option may not be feasible) and is investigating potential pilot projects to test this option. Sewering of a residential neighborhood has been identified as a backup option, but the proposed location is at the upper end of the watershed, meaning it would take decades for there to be water quality improvement in the Bay.

Chatham

The Town of Chatham contributes approximately 34% of the attenuated wastewater nitrogen load to the Pleasant Bay watershed and is responsible for 23% of the overall removal. The Town began implementing its Comprehensive Wastewater Management Plan (CWMP) in 2010. The CWMP includes the sewerage of the entire town, with the implementation of later sewerage phases being contingent upon results of on-going monitoring under the adaptive management plan. The Town of Chatham, in cooperation with the Town of Harwich, recently completed the construction of a new bridge to replace inadequate culverts that will provide increased tidal flushing and improved water quality in Muddy Creek.

Harwich

The Town of Harwich contributes approximately 22% of the attenuated wastewater nitrogen load to the Pleasant Bay watershed and is responsible for 25% of the overall removal. The Town developed a recommended program to address nitrogen removal and meet other town needs. That program, described in a draft CWMP, was submitted for review to MEPA and the CCC in February 2013. Upon further refinement of infrastructure and non-infrastructure program components and review of the 208 Water Quality Plan, the Town filed the final CWMP in March 2016 with MEPA and the CCC. MEPA issued a Certificate of Approval on May 13, 2016. The Commission gave Development of Regional Impact Individual (DRI) approval in August 2016.

The CWMP proposes wastewater collection in the Pleasant Bay watershed and recommends a community partnership with Chatham to treat wastewater generated and collected in the Pleasant Bay watershed at the existing Chatham treatment facility. Treated effluent would initially be

recharged at the Chatham facility but may in the future be conveyed back to East Harwich for recharge, depending on water quality results. The Harwich CWMP also includes several nontraditional components such as the Muddy Creek inlet widening, and inclusion of stormwater best management practices (BMPs) throughout town. Several non-infrastructure components are included, such as review of potential open space acquisition parcels to minimize buildout, and fertilizer education programs (instead of a fertilizer control ordinance).

Orleans

The Town of Orleans contributes 30% of the attenuated wastewater nitrogen load to the Pleasant Bay watershed and is responsible for 39% of the overall removal. The Town's CWMP was completed in 2010 and received MEPA and DRI approvals with conditions in 2011. The CWMP characterizes nitrogen reduction needs pursuant to the MEP and TMDL reports for Pleasant Bay. The Needs Assessment completed in 2009 identifies other wastewater needs to address Title 5 compliance and economic development. The Town's CWMP is a phased sewerage plan supplemented with non-traditional solutions that may reduce the scale of later sewerage requirements.

The Town has embarked on supplemental planning aimed at accelerating the use of non-traditional solutions to minimize sewerage. The Orleans Water Quality Advisory Panel developed a "Consensus Agreement" in 2015 that recommends a strong emphasis on evaluation of the ability of non-traditional technologies to meet the TMDL requirements for Pleasant Bay. In 2016, the Town has installed a demonstration oyster-growing project in Lonnie's Pond and is planning another shellfish project in Quanset Pond. The Town is also seeking funds to install a pilot project of four on-site septic systems with nitrogen removing biofilters.

APPENDIX C
Acknowledgements

ACKNOWLEDGEMENTS

This composite nitrogen management analysis has been prepared by the Pleasant Bay Alliance with technical assistance from Wright-Pierce. Substantive input was obtained by the members of the Alliance's Watershed Work Group:

Brewster	Mr. Chris Miller, Director, Natural Resources Dept.
Chatham	Dr. Robert Duncanson, Director, Natural Resources Dept.
Harwich	Mr. Heinz Proft, Natural Resource Director
Orleans	Mr. George Meservey, Planning Director
Coordinator	Ms. Carole Ridley

Technical consultants of the four towns have reviewed this document, and their comments have been addressed. Comments by Brian Dudley of MassDEP and the staff of the Cape Cod Commission have also been incorporated.

This report was approved by the Pleasant Bay Alliance Steering Committee:

Brewster	Mr. Chris Miller, Director, Natural Resources Dept. Ms. Ryan Bennett, Town Planner
Chatham	Ms. Jane Harris Mr. Chuck Bartlett
Harwich	Mr. Allin P. Thompson, Jr. Ms. Dolly Howell
Orleans	Ms. Judith Bruce Ms. Fran McClennen

March 24, 2017
WP Project No. 13351A,B

Ms. Carole Ridley
Pleasant Bay Alliance
115 Kendrick Road
Harwich, MA 02645

Subject: Pleasant Bay Composite Nitrogen Management Analysis
Final Report

Dear Carole:

Enclosed is the final report entitled "Pleasant Bay Composite Nitrogen Management Analysis: An Assessment of the Wastewater and Nitrogen Management Plans of Brewster, Chatham, Harwich and Orleans".

We have enjoyed collaborating with you on the analysis of the four towns plans and the development of this report, and we are pleased by the active involvement of the Alliance's Watershed Work Group. All technical aspects of this report have been prepared by me or under my direction.

We look forward to assisting in the presentation of this report to each of the four towns.

Please contact me with any questions you may have.

Very truly yours,
WRIGHT PIERCE



Michael D. Giggey, PE
Senior Vice President





Pleasant Bay Alliance

To: Harwich Board of Selectmen
Fr: Carole Ridley, Alliance Coordinator
Date: May 16, 2017
Re: Pleasant Bay Watershed Nitrogen Management

The Pleasant Bay Alliance (Alliance) is scheduled to meet with the Board of Selectmen on May 22nd to discuss the *Pleasant Bay Composite Nitrogen Management Analysis*. This analysis was initially submitted to the Board in early April. A copy of the analysis and our original explanatory memo is attached.

We will be joined in this presentation by Paul Niedzwiecki, of the Cape Cod Commission, and Brian Dudley of MassDEP. Mr. Niedzwiecki and Mr. Dudley will discuss how the composite analysis addresses compliance with the 208 Plan Update and watershed permitting, respectively. A copy of our joint PowerPoint presentation is enclosed.

Also enclosed is a proposed resolution to endorse the composite analysis and agree to continue working with the other watershed towns to explore next steps identified in the analysis. We look forward to discussing your comments on the proposed resolution on May 22nd.

The Alliance is submitting the composite analysis and proposed resolution to the Boards of Selectmen of each of the four Alliance towns sharing the watershed of Pleasant Bay. We will be meeting with each Board individually to discuss this information. We are proposing to follow up on these individual meetings with a joint meeting of the four Boards on June 22, at which time we would ask you to consider taking action on the resolution.

Cc: Brian Dudley, MassDEP
Paul Niedzwiecki, Cape Cod Commission
Allin Thompson
Dolly Howell
Heinz Proft
Dave Young

Resolution of the Towns Sharing the Watershed of Pleasant Bay

Whereas, The Towns of Brewster, Chatham, Harwich and Orleans share the watershed of Pleasant Bay and, by intermunicipal agreement, have formed a Pleasant Bay Alliance to coordinate resource management of Pleasant Bay among the member towns;

Whereas, Pleasant Bay is a state-designated Area of Critical Environmental Concern;

Whereas, A Resource Management Plan for Pleasant Bay developed by the Alliance and approved by Town Meetings of the four member towns identifies excessive nitrogen loading from watershed land uses as a primary threat to the health and sustainability of Pleasant Bay;

Whereas, The Massachusetts Department of Environmental Protection, in conformance with the Federal Clean Water Act, established 19 Total Maximum Daily Loads (TMDLs) for Nitrogen in Pleasant Bay, which require substantial reductions in the amount of nitrogen flowing into Pleasant Bay from watershed sources;

Whereas, the Cape Cod Commission has developed an approved Section 208 Areawide Water Quality Management Plan Update, which designates the Towns as Waste Management Agencies (WMAs) responsible for meeting TMDLs, and which sets forth resources and assistance available to WMAs to facilitate compliance on a watershed basis;

Whereas, Each of the member towns of the Pleasant Bay Alliance has developed a plan to address its share of responsibility for reducing the amount of nitrogen flowing into Pleasant Bay from watershed sources;

Whereas, the Pleasant Bay Alliance has analyzed the combined effect of the four town plans on a watershed basis; and

Whereas, the composite analysis presents in a uniform way the attenuated nitrogen loads and load removal requirements already contained in individual town plans;

Therefore, Be it resolved that the Board of Selectmen of _____, pursuant to its authority under the Town Charter, hereby vote to take the following actions:

1. Endorse the **PLEASANT BAY COMPOSITE NITROGEN MANAGEMENT ANALYSIS** (March 2017) as an accurate representation of (a) the Town's share of current attenuated nitrogen load and of (b) the Town's responsibility to remove nitrogen in each subwatershed of Pleasant Bay.

2. Agree to work with other member towns through the Alliance and with the Cape Cod Commission and Massachusetts Department of Environmental Protection to:
 - A. Fully explore the opportunities for efficiency and cost savings identified in the **PLEASANT BAY COMPOSITE NITROGEN MANAGEMENT ANALYSIS**.
 - B. Support development of a Targeted Watershed Management Plan consistent with the requirements of the approved Section 208 Areawide Water Quality Management Plan Update.
 - C. Participate in a watershed permit pilot project in order to explore additional potential costs savings and efficiencies and determine the advantages and disadvantages to the Town.
 - D. Support other projects, studies or agreements as may be necessary to advance the foregoing activities.

Signed

Date

Selectmen's Policy: The Role of the Liaison

On an annual basis, individual members of the Board of Selectmen will be assigned as liaisons to the various Boards and Committees appointed by the Board of Selectmen. The primary function of the liaison is to improve communications and understanding between the Board of Selectmen and the relevant committee. The liaison is not a member of the committee and should not participate in the work of the committee.

The Selectmen's liaison to any committee should become familiar with: matters with which the appointed committees are dealing; the public input, if any, at committee meetings; the need for interaction with other committees; the need for support from town departments; the manner in which meetings are conducted; committee members' attendance issues. The liaison can and will convey pertinent information about committee activities to the Board of Selectmen and/or Town administrator as appropriate.

The liaison should establish a working relationship with the Chairperson of the committee such that the Chairperson feels free to communicate specific requests for support and/or information from the Board of Selectmen

Further, the liaison can convey information about Board of Selectmen discussions or actions taken that pertain to topics under consideration by committees that have to do with procedures or Town policies. However, the liaison should not become involved in committee deliberations or try to channel a committee's work product toward or away from a particular conclusion unless, for example, the liaison is aware of a pertinent Town Counsel opinion.

Moreover, it needs to be understood that the liaison as well as the entire Board of Selectmen must refrain from taking positions on matters pending before some appointed committees when they are performing their regulatory function and operating primarily under State law: Board of Health, Conservation Commission, Planning Board, and Zoning Board of Appeals. In that specific capacity, such committees are autonomous after having been appointed by the Board of Selectmen.

First Reading June 11, 2013

Second Reading — June 24, 2013

Third Reading — July 1, 2013

APPROVED by the Board of Selectmen
July 1, 2013

Last year's List

**2015 - 2016 BOARD OF SELECTMEN
Liaisons to Town Committees**

Michael D. MacAskill, Chairman 22 Moss Hill Harwich, MA 02645 508-237-2372 (cell) Michaelmac12@hotmail.com mmacaskill@townofharwich.us	Agricultural Commission Water Commission Historic District/Historical Commission Community Preservation Capital Outlay Ambulance Waiver Administrator Recreation and Youth Town Forest Committee	May 2019
	Chamber of Commerce Council on Aging Wastewater Implementation Committee Board of Assessors Finance Committee Saquatucket Harbor Development Committee Real Estate and Open Space Station #2 renovation/rehabilitation Real Estate and Open Space	May, 2020
Julie E. Kavanagh, Clerk 5 Old Carriage Drive Harwich, MA 02645 (774) 722-2212 jgkavanagh@comcast.net	Voter Information Committee Conservation Commission Library Trustees Planning Board Utility & Energy Conservation Brooks Academy Museum Commission Traffic Safety Committee Youth Services Committee	May, 2019
	Board of Appeals By-Law and Charter Review Disability Rights Committee Golf Committee Waterways Committees Treasure Chest Volunteer Committee Trails Committee Community Center Facilities Committee	May, 2020
Jannell M. Brown 24 Mabel Canto Way Harwich, MA 02645 508-237-9798 (cell)	Cultural Council Housing Committee Monomoy Regional School District Architectural Advisory Committee Bikeways Committee Housing Authority Board of Health Cemetery Commission	May, 2018

HARWICH BOS/TA ACTION ITEMS REPORT 05/10/17 New Updates highlighted in YELLOW

Item Number	Action Item	Criticality (1, 2 or 3)	Lead Responsibility	Date Assigned	Due Date	Status	Comments	
16-001	Disability Access to Brook Park Bandstand			7/11/2016		Referred to Recreation for inclusion in the next phase of Brooks Park Improvements.	No funding available at this time to cover cost of ramp.	
16-002	Lighting at Brook Park Bandstand/Parking		TA, ATA, Town Eng., Rec. Dir.	7/11/2016		Spoke with Town Engineer. Came up with concept for 2 lights in keeping with the Historic Dist. Cost \$2500/ea. Status Complete	No funding available at this time to cover costs of lights. Path behind ballfield fence is not formal to make more accessible & add lighting would require a fence along the bank, t-base walkway 5' wide, electricity, etc.	
16-003	West Harwich Plume		TA, ATA, Health Dir.	7/11/2016		Paula completed review week of August 15; meeting with Chair, TA and Asst. TA on 8/24/16. Paula made presentation to the BoS on 9/26/16 - Status Complete	Paula Champagne asked to research all applicable reports and to report back her findings/recommendations/plan.	
16-004	Committees: Vacancies; Charge Updates: Members being Sworn-in.		Selectmen	7/25/2016		On-going		
16-005	Track Additional Costs at Middle School		Selectman LaMantia, TA	7/25/2016		On-going	Set-up special tracking accountant.	
16-006	Embers: Outside Bar Status		ATA	8/8/2016		Completed 8/10/16- Status Complete	Consulted Licensing Secretary; Building Comm; Health Agent. Mr. Nickerson contacted.	
16-007	Dedicated Turn Signal North on Rte 124 at Queen Anne Road		DPW Director	8/8/2016		Completed 8/10/16- Status Complete	DPW Director contacted consulting Engineer. The trip counts do not warrant a dedicated signal. Mr. Nickerson Contacted.	
16-008	Perk - Public Hearing for Entertainment License potential violation(s)		TA; Licensing Secretary	8/22/2016		Hearing to be scheduled for 9/19/16 - Status Complete		
16-009	Waterways - Slip Regulations		TA; Harbormaster; Waterways Committee	10/17/2016		Status Complete	TA discussed with Harbormaster, no changes recommended.	
16-010	Entertainment Licenses (Rte 28 HP) - Public Hearing for uniform hours		TA	10/17/2016		Public Hearing Schedule for November 14, 2016 - Status Complete -- Licensees (Rte 28 HP) to be notified	Advertising and posting on Website completed. Licensees to be notified.	
Goal 1. Financial Leadership and Stability - Provide financial leadership and stability to all Town departments and Town sanctioned boards and committees. (Primary responsibility is with TA although the Finance Team, Capital Outlay Committee and the Finance Committee provide significant input)								
Objective A: Develop FY2018 budget within the limits of Proposition 2 1/2 that minimizes the use of capital exclusions.								
16-011	G1-A(1) Provide Seven Year Capital Plan, 2018-2024		TA	7/25/2016		Status Complete		
16-012	G1-A(2) Report: Estimated Free Cash		Town Accountant	7/25/2016		Status Complete		
16-013	G1-A(3) Report: FY2018 TA Budget Message		TA	7/25/2016		Status Complete		
16-014	G1-A(4) Provide Initial Budget & additional updates as needed		TA	7/25/2016		Status Complete	Initial Budget presented 2/13/17. Budget hearing held Sat. March 4th. Updates will be made as needed.	
Objective B: Provide transparency in town finances.								
16-015	G1-B(1) Provide quarterly expense & revenue reports for each Town department.		Town Accountant & TA	7/25/2016		Status Complete - Provided Monthly		
16-016	G1-B(2) Provide revenue sources & expenses for each department.		Town Accountant & TA	7/25/2016		Status Complete - Provided Monthly		
16-017	G1-B(3) Further implement the visual software package to better inform the taxpayers where their tax dollar is being spent.		Town Accountant & TA & Selectmen	7/25/2016		To be launched shortly.	Waiting for update of software	
16-018	Examine 1-3 years of auditors' reports & document how Finance Dept. has resolved auditor's suggestions/recommendations.		Town Accountant & TA	7/25/2016		Pending		

HARWICH BOS/TA ACTION ITEMS REPORT 05/10/17 New Updates highlighted in YELLOW

Item Number	Action Item	Criticality (1, 2 or 3)	Lead Responsibility	Date Assigned	Due Date	Status	Comments	
16-019	G1-B(5) Evaluate the need to form an insurance advisory committee to work with the TA to identify, develop options & implement town insurance matters		LaMantia, Finance, TA	7/25/2016		Health Insurance High-deductible plan presented to the BoS. Sent to Unions for acceptance		
	Objective C: Develop specific financial strategies to increase S&P Bond rating							
16-020	G1-C(1) Provide memo identifying potential savings that could result over the next 5-10 years of planned borrowing if Harwich rating was increased.		MacAskill, TA, Finance	7/25/2016		AAA Rated - See TA Budget Message.		
16-021	G1-C(2) Identify specific, sustainable revenue sources to fund annual contributions to Other Post Employment Benefits (OPEB).		MacAskill, TA, Finance	7/25/2016		On-going	Active plan exists.	
Goal 2. Governance - Communicate and conduct Town government business in an efficient, effective, transparent and responsive manner.								
	Objective A: Conduct Town government business in an efficient and effective manner							
16-022	G2-A(1) Implement Accela		TA	7/25/2016		Status Complete		
16-023	G2-A(2) Request Charter Review Committee to assess Charter to identify needed changes/improvement.		LaMantia & MacAskill	7/25/2016		Status Complete		
16-024	G2-A(3) Direct Town boards & committees to review Charges for appropriateness or modifications.		LaMantia & MacAskill	7/25/2016		On-going. Committee charge review is underway.		
16-025	G2-A(4) Ensure Town boards & committees conduct meetings/public hearings in accordance with Charter, Regulations & MGL.		LaMantia & MacAskill	7/25/2016				
16-026	G2-A(5) Assess document storage needs.		TA	7/25/2016		Funding Deny by CPC	Staff is seeking other options for funding.	
16-027	G2-A(6) Review & reevaluate BOS policies.		LaMantia & MacAskill	7/25/2016				
	Objective B: Conduct Town government business in a transparent manner							
16-028	G2-B(1) Develop & implement informational meetings ("pre-annual town meetings) to improve understanding & assess potential impacts of the Harwich budget & selected warrant articles.		BoS	7/25/2016		Voter Information Committee held work shops: 4/11: Finance, 4/25: Warrants Articles, 5/9: Candidates		
16-029	G2-B(2) Public Awareness & Outreach: improve awareness & understanding of the BOS, other Town-sanctioned groups, & Town departments.		TA w/Voter Info Comm., BoS	7/25/2016		Voter Information Committee held Town Committee Volunteer Recruitment Fair 1/28/17. WIC meetings now taped and televised on Ch.18. Various Brochures completed; website updates; tax calculator for Wastewater completed.	Fair held 1/28/17	
16-030	G2-B(2)(a) Two memos, co-authored by Administration & Dept. Head selected to participate in outreach activity describing activities planned, resources & schedules required to achieve this objective.		LaMantia, MacAskill, TA, Finance	7/25/2016				
16-031	G2-B(2)(b) Periodic status reports on media projects, site visits, & initial feedback from residents/visitors.		LaMantia, MacAskill, TA, Finance	7/25/2016				
16-032	G2-B(3)(c) End-of-year report on lessons learned.		LaMantia, MacAskill, TA, Finance	7/25/2016				
	Objective C: Conduct Town government business in a responsive manner							
16-033	G2-C(1) Establish Harwich-specific email addresses (4 memos).		Brown, IT, TA	7/25/2016		Status Complete	IT provides Harwich specific email addresses to those who request one.	
16-034	G2-C(2) Reevaluate Town Hall hours: 8 PM on Monday & noon on Friday.		Brown, BoS, TA	7/25/2016				

HARWICH BOS/TA ACTION ITEMS REPORT 05/10/17 New Updates highlighted in YELLOW

Item Number	Action Item	Criticality (1, 2 or 3)	Lead Responsibility	Date Assigned	Due Date	Status	Comments	
16-035	G2-C(3) Evaluate improvements to Griffin Room audio reception, recording & broadcasting.		Brown, IT, TA, Cable	7/25/2016		On-going; Ms. Goodwin has made many updates to the system; improvements continue.	Studio changes underway. Griffin Room video/audio pending.	
16-036	G2-C(4) Develop agreement for classroom use at MRHS & Harwich Elementary (fee/no fee) for Town-sanctioned groups meetings.		Brown, BoS	7/25/2016		On-going		
Goal 3: Infrastructure - Work with and support the design, construction and renovation activities of the Harbormaster, Department of Public Works, Board of Water Commissioners, Library and other departments conducting major projects								
16-037	G3 Objective A: Support and report periodically on the water side rebuilding project at Saquatucket Harbor.		MacAskill, TA, Harbor	7/25/2016		Status Complete	Mr. Rendon has provided updates. Awaiting ACOE Review/Sign-off.	
16-038	G3 Objective B: Support and report on the land side design project		Harbor & Conservation	7/25/2016		Status Complete	Mr. Rendon has provided updates.	
16-039	G3 Objective C: Investigate renovation project proposed for Lower County Road.		Hughes, TA, DPW, Highway & Engineering	7/25/2016		Pending	Staff will be asked to provide update.	
16-040	G3 Objective D: Determine appropriate distribution of CVEC energy savings		MacAskill, TA, BoS	7/25/2016		Status Complete	Agreement reached.	
Goal 4: Natural Resources - Continue to implement the Comprehensive Wastewater Management Plan								
Objective A: Wastewater planning and implementation								
16-041	G4-A(1) Attempt to finalize IMA negotiations with Chatham BOS		Hughes, LaMantia, TA	7/25/2016		Staff has completed in responsibilities.		
16-042	G4-A(2) Convene preliminary discussions with Dennis & Yarmouth		Hughes, LaMantia, TA	7/25/2016		Status Complete	Initial Meeting held, discussions continuing; meeting scheduled for March 8th.	
16-043	G4-A(3) Document results of Muddy Creek projects & support Cold Brook mitigation planning & implementation		Hughes, LaMantia, TA	7/25/2016		On-going	Muddy Creek; results pending.	
16-044	G4-A(4) Continue ongoing pollution mitigation efforts & implementation of new technologies.		Hughes, LaMantia, TA	7/25/2016		On-going	Cold Brook and Muddy Creek.	
Objective B: Wastewater Education and Outreach								
16-045	G4-B(1) Using available information develop guidelines for environmentally-appropriate fertilization of lawns & gardens		BoS, TA, WIC, IT, Nat'l Resources, Health/Conservation	7/25/2016		On-going	Assigned to Health & Conservation. State regulations may take precedents.	
16-046	G4-B(2) Plan & implement wastewater education program for residents & nonresidents to explain the need for the project, the process & next activities planned		BoS, TA, WIC, IT, Nat'l Resources, CDM Smith	7/25/2016		Status Complete	12-page brochure completed.	
Goal 5: Planning and Economic Development - Actively participate in development of housing, business, transportation and historic and cultural enhancements. Establish working relationships with officials of nearby towns, Barnstable County, State and Federal agencies, as appropriate.								
Objective A: Investigate improved utilization, sale or lease of several properties in Town.								
16-047	G5-A(1) Develop plans on how to use, sell or lease: • Albro House • Bank Street Fire Station • Old Recreation Building • West Harwich Schoolhouse • Harwich Middle School.		TA	7/25/2016		• Albro House - Funding denied by CPC for Bldg Assessment; Looking at other options • Bank Street Fire Station - Appraisal, Pre-21E and Risk Assessment Completed. Draft RFP to BoS upon approval at Ballot (conservation preference). • Old Recreation Building - Lease with Theater Co; Building Maintenance Manager is review building status. • West Harwich Schoolhouse - RFP Completed - No viable response received; staff to meet to discuss/review other options. • Harwich Middle School - 2 year plan implemented		

HARWICH BOS/TA ACTION ITEMS REPORT 05/10/17 New Updates highlighted in YELLOW

Item Number	Action Item	Criticality (1, 2 or 3)	Lead Responsibility	Date Assigned	Due Date	Status	Comments	
	Objective B: Create and maintain a strong business and job growth environment							
16-050	G5-B(1) Explore creation of an economic development committee		Brown, MacAskill, BoS	7/25/2016		Initial discussions with chamber have happened. Will further this discussion.		
16-051	G5-B(2) Create & maintain positive Town & business relationships		Brown, MacAskill, BoS	7/25/2016			TA meets monthly with Chamber Director.	
16-052	G5-B(3) Assist Town departments & Town sanctioned groups with grants & pursue funding opportunities in support of town priorities & policy goals		Brown, MacAskill, BoS	7/25/2016				
16-053	G5-B(4) Develop educational program agreements with MRSD & CCTech whereby special projects can be conducted coincident with major capital projects in Town		Brown, MacAskill, BoS	7/25/2016		Ongoing. Started with Wastewater with Monomoy		
16-054	G5-B(5) Investigate novel ideas to promote Harwich & attract tourists, such as painting/decorating fire hydrants		Brown, MacAskill, BoS, TA, Chamber	7/25/2016				
16-055	G5-B(6) Explore affordable & senior housing options where the Town may retain the property		Brown, MacAskill, BoS	7/25/2016				
16-056	G5-B(6)(a) Memorandum #1: TA shall outline a plan to identify proven & novel approaches to develop Affordable housing in Harwich.		Brown, MacAskill, BoS	7/25/2016		Status Complete The Housing production plan as noted is a document to help the town but we need to think beyond this and be creative with land.	Although no memo, the Housing Production Plan is completed, which includes various options/recommendations for creating affordable housing.	
Goal 6: Quality of Life and Public Safety - Develop and support programs that improve quality of life for Harwich residents and visitors. (Public Safety Departments have the primary responsibility for progress and accomplishments. TA has coordination, support and reporting responsibility)								
	Objective A: Provide high quality, cost-effective public safety services to residents and visitors.							
16-057	G6-A(1) Assess public safety signage throughout the Town for adequacy & consistency		Kavanagh, TA, Highway	7/25/2016		On-going	See #16-060	
16-058	G6-A(2) Investigate options, including increased police surveillance, low cost, automatic speed detection systems, raised crosswalks or speed bumps to lower vehicle speed on town streets.		Kavanagh, TA, Highway, CCC	7/25/2016		On-going	See #16-060	
16-059	G6-A(2)(a) Memorandum #1: Define near-term options that could be implemented in 30 days or less		Kavanagh, TA, Highway, CCC	7/25/2016		On-going	See #16-060	
16-060	G6-A(2)(b) Memorandum #2: Identify steps & resources needed to develop a comprehensive safety improvement plan for Harwich		Kavanagh, TA	7/25/2016				
	Objective B: Support the Fire Station #2 Renovation Project.							
16-061	G6-B(1) Apply Town resources (Planning, Engineering, etc.) to support conduct & documentation of needs assessment, preliminary design & alternatives development, cost estimation & preparation of periodic presentations & open meetings & final recommendations to the Selectmen & Town voters		Brown, TA, Station 2 Comm.	7/25/2016		Status Complete: Station 2 Committee made presentation to BoS on 1/17/17.		

HARWICH BOS/TA ACTION ITEMS REPORT 05/10/17 New Updates highlighted in YELLOW

Item Number	Action Item	Criticality (1, 2 or 3)	Lead Responsibility	Date Assigned	Due Date	Status	Comments	
16-062	G6-B(1)(a) Station Needs Assessment - provide operational requirements that drive the need and design of enhancements and expansions		Brown, TA, Station 2 Comm.	7/25/2016		Status Complete: Station 2 Committee made presentation to BoS on 1/17/17.		
16-063	G6-B(1)(b) Alternatives analysis and preliminary design		Brown, TA, Station 2 Comm.	7/25/2016		Status Complete: Station 2 Committee made presentation to BoS on 1/17/17.	Design portion on ATM Warrant and Ballot for Funding.	
16-064	G6-B(1)(c) Cost Estimates		Brown, TA, Station 2 Comm.	7/25/2016		Status Complete: Station 2 Committee made presentation to BoS on 1/17/17.		
16-065	G6-B(1)(d) Final Recommendations		Brown, TA, Station 2 Comm.	7/25/2016		Status Complete: Station 2 Committee made presentation to BoS on 1/17/17.	On ATM Warrant and Ballot for funding of design.	

**Harwich Board of Selectmen
FY17 Goals and Objectives
Adopted by the BOS on July 25, 2016**

(For complete description of Action Items/Deliverable please refer to the detailed list)

GOAL 1. FINANCIAL LEADERSHIP AND STABILITY			
Provide financial leadership and stability to all Town departments and Town sanctioned boards and committees. (Primary responsibility is with TA although the Finance Team, Capital Outlay Committee and the Finance Committee provide significant input)			
Objective	Action Items/Deliverables	Time Frame	Responsible BOS Member
Objective A: Develop FY2018 budget within the limits of Proposition 2 1/2 that minimizes the use of capital exclusions.	<ul style="list-style-type: none"> • Provide Seven Year Capital Plan, 2018-2024 • Report: Estimated Free Cash • Report: FY2018 TA Budget Message • Provide Initial Budget & additional updates as needed 	<ul style="list-style-type: none"> • January 2017 • Nov. 2016 • TBD • TBD 	TA/Finance with BoS Support
Objective B: Provide transparency in town finances.	<ul style="list-style-type: none"> • Provide quarterly expense & revenue reports for each Town department. • Provide revenue sources & expenses for each department. • Further implement the visual software package to better inform the taxpayers where their tax dollar is being spent. • Examine 1-3 years of auditors' reports & document how Finance Dept. has resolved auditor's suggestions/recommendations. • Evaluate the need to form an insurance advisory committee to work with the TA to identify, develop options & implement town insurance matters 	<ul style="list-style-type: none"> • TBD • TBD • TBD • TBD 	LaMantia Finance TA
Objective C: Develop specific financial strategies to increase S&P Bond rating.	<ul style="list-style-type: none"> • Provide memo identifying potential savings that could result over the next 5-10 years of planned borrowing if Harwich rating was increased. • Identify specific, sustainable revenue sources to fund annual contributions to Other Post Employment Benefits (OPEB). 	<ul style="list-style-type: none"> • TBD • TBD 	MacAskill TA Finance

GOAL 2. GOVERNANCE

Communicate and conduct Town government business in an efficient, effective, transparent and responsive manner.

Objective	Action Items/Deliverables	Time Frame	Responsible BOS Member
Objective A: Conduct Town government business in an efficient and effective manner	<ul style="list-style-type: none">• Implement Accela.• Request Charter Review Committee to assess Charter to identify needed changes/improvement.• Direct Town boards & committees to review Charges for appropriateness or modifications.• Ensure Town boards & committees conduct meetings/public hearings in accordance with Charter, Regulations & MGL.• Assess document storage needs.• Review & reevaluate BOS policies.	<ul style="list-style-type: none">• Negotiable• TBD• TBD• TBD• TBD•	LaMantia MacAskill
Objective B: Conduct Town government business in a transparent manner	<ul style="list-style-type: none">• Develop & implement informational meetings ("pre-annual town meetings) to improve understanding & assess potential impacts of the Harwich budget & selected warrant articles.• Public Awareness & Outreach: improve awareness & understanding of the BOS, other Town-sanctioned groups, & Town departments.<ul style="list-style-type: none">○ Two memos, co-authored by Administration & Dept. Head selected to participate in outreach activity describing activities planned, resources & schedules required to achieve this objective.○ Periodic status reports on media projects, site visits, & initial feedback from residents/visitors.○ End-of-year report on lessons learned.	<ul style="list-style-type: none">• TBD• TBD	LaMantia MacAskill TA Finance
Objective C: Conduct Town government business in a responsive manner	<ul style="list-style-type: none">• Establish Harwich-specific email addresses (4 memos).• Reevaluate Town Hall hours: 8 PM on Monday & noon on Friday.• Evaluate improvements to Griffin Room audio reception, recording & broadcasting.• Develop agreement for classroom use at MRHS & Harwich Elementary (fee/no fee) for Town-sanctioned groups meetings.	<ul style="list-style-type: none">• TBD• TBD• TBD• TBD	Brown IT TA

GOAL 3: INFRASTRUCTURE			
Work with and support the design, construction and renovation activities of the Harbormaster, Department of Public Works, Board of Water Commissioners, Library and other departments conducting major projects.			
Objective	Action Items/Deliverables	Time Frame	Responsible BOS Member
Objective A: Support and report periodically on the water side rebuilding project at Saquatucket Harbor.	•	•	MacAskill TA
Objective B: Support and report on the land side design project	•	•	
Objective C: Investigate renovation project proposed for Lower County Road.	•	•	Hughes TA DPW
Objective D: Determine appropriate distribution of CVEC energy savings.	•	•	MacAskill TA

GOAL 4: NATURAL RESOURCES			
Continue to implement the Comprehensive Wastewater Management Plan			
Objective	Action Items/Deliverables	Time Frame	Responsible BOS Member
Objective A: Wastewater planning and implementation	<ul style="list-style-type: none"> • Attempt to finalize IMA negotiations with Chatham BOS. • Convene preliminary discussions with Dennis & Yarmouth. • Document results of Muddy Creek projects & support Cold Brook mitigation planning & implementation. • Continue ongoing pollution mitigation efforts & implementation of new technologies. 	<ul style="list-style-type: none"> • For 2017 ATM • • • 	Hughes LaMantia TA
Objective B: Wastewater Education and Outreach	<ul style="list-style-type: none"> • Using available information develop guidelines for environmentally-appropriate fertilization of lawns & gardens. • Plan & implement wastewater education program for residents & nonresidents to explain the need for the project, the process & next activities planned. 	<ul style="list-style-type: none"> • • 	BoS TA WIC IT Nat'l Resources

GOAL 5: PLANNING AND ECONOMIC DEVELOPMENT

Actively participate in development of housing, business, transportation and historic and cultural enhancements. Establish working relationships with officials of nearby towns, Barnstable County, State and Federal agencies, as appropriate.

Objective	Action Items/Deliverables	Time Frame	Responsible BOS Member
Objective A: Investigate improved utilization, sale or lease of several properties in Town.	<ul style="list-style-type: none">• Develop plans on how to use, sell or lease the Albro House, Bank Street Fire Station, Old Recreation Building, West Harwich Schoolhouse & Harwich Middle School.• Support community involvement, State compliance, planning, & public information activities in the Rt. 28 reconstruction project from Herring River to the Dennis line.• Support community involvement in the HECH/Chase House historic preservation & Chapter 40B development at 93 & 97 Rt. 28.	<ul style="list-style-type: none">•••	TA
Objective B: Create and maintain a strong business and job growth environment	<ul style="list-style-type: none">• Explore creation of an economic development committee.• Create & maintain positive Town & business relationships.• Assist Town departments & Town sanctioned groups with grants & pursue funding opportunities in support of town priorities & policy goals.• Develop educational program agreements with MRSD & CCTech whereby special projects can be conducted coincident with major capital projects in Town.• Investigate novel ideas to promote Harwich & attract tourists, such as painting/decorating fire hydrants.• Explore affordable & senior housing options where the Town may retain the property.<ul style="list-style-type: none">◦ Memorandum #1: TA shall outline a plan to identify proven & novel approaches to develop Affordable housing in Harwich.	<ul style="list-style-type: none">••••••	Brown MacAskill

GOAL 6: QUALITY OF LIFE AND PUBLIC SAFETY

Develop and support programs that improve quality of life for Harwich residents and visitors. (Public Safety Departments have the primary responsibility for progress and accomplishments. TA has coordination, support and reporting responsibility)

Objective	Action Items/Deliverables	Time Frame	Responsible BOS Member
Objective A: Provide high quality, cost-effective public safety services to residents and visitors.	<ul style="list-style-type: none">• Assess public safety signage throughout the Town for adequacy & consistency.• Investigate options, including increased police surveillance, low cost, automatic speed detection systems, raised crosswalks or speed bumps to lower vehicle speed on town streets.<ul style="list-style-type: none">○ Memorandum #1: Define near-term options that could be implemented in 30 days or less.○ Memorandum #2: Identify steps & resources needed to develop a comprehensive safety improvement plan for Harwich	<ul style="list-style-type: none">••	Kavanagh TA
Objective B: Support the Fire Station #2 Renovation Project.	<ul style="list-style-type: none">• Apply Town resources (Planning, Engineering, etc.) to support conduct & documentation of needs assessment, preliminary design & alternatives development, cost estimation & preparation of periodic presentations & open meetings & final recommendations to the Selectmen & Town voters. Deliverables:<ul style="list-style-type: none">○ Station Needs Assessment - provide operational requirements that drive the need and design of enhancements and expansions;○ Alternatives analysis and preliminary design;○ Cost estimates;○ Final recommendations.	<ul style="list-style-type: none">•	Brown TA

TOWN OF HARWICH
NOTICE OF VACANCIES ON VARIOUS TOWN BOARDS, COMMISSIONS
AND COMMITTEES

The Board of Selectmen will give consideration to the appointment of members to the following Boards, Commissions and Committees:

Appeals Board (alternate)	1
Board of Health.....	1
Brooks Academy Museum.....	1
Building Code Board of Appeals.....	5
By Law and Charter Review.....	1
Conservation Commission (2 alternate).....	2
Council on Aging.....	2
Cultural Council.....	1
Disability Rights Committee.....	5
Forest Committee.....	1
Historic District/Historical Commission (alternate)	1
Traffic Safety Committee	2
Treasure Chest Committee (1 full – 1 alternate).....	2
Utility and Energy Conservation	2

A description of Committee duties and **Citizens Activity Record Forms** are available at
the Selectmen's Office, 732 Main Street, Harwich

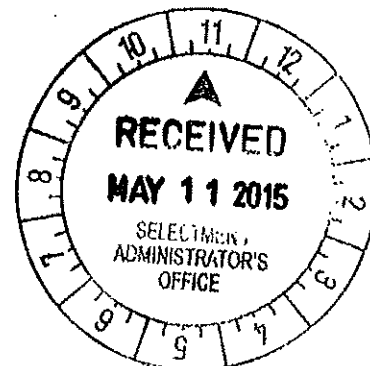


Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Stephanie Pollack, Secretary & CEO
Thomas Tirlin, Acting Administrator



May 11, 2015

Harwich Board of Selectmen
Town of Harwich
732 Main Street
Harwich, MA 02645



Subject: Harwich – Route 28 – Sidewalk Construction

Dear Members of the Board:

This is in response to your letter dated April 28, 2015, regarding the construction of approximately 3,300 feet of sidewalk on the south side of Route 28 beginning at the intersection of Bank Street and ending at Harwich Point.

Engineers from MassDOT-Highway Division, District Five have conducted a preliminary review of the location and have determined that installation of a sidewalk in the area to be viable. Therefore, a sidewalk will be included in any future reconstruction/resurfacing project of this roadway, subject to available funds.

Currently, the maintenance of sidewalks is generally the responsibility of the municipality (Town of Harwich), where the sidewalk is located. The municipalities who request and support the installation of sidewalks are asked to provide a statement in writing agreeing to take responsibility for future maintenance of the sidewalk.

Thank you for bringing this matter to MassDOT's attention. If you have additional questions regarding this matter, please contact George Ayoub, District Highway Maintenance Operations Engineer, at (508) 884-4220.

Sincerely,

Mary-Joe Perry
District Highway Director

GTA/gta

Cc: MJP, MEB, PRH, FILE

File: Harwich Rte 28 SW

District 5, 1000 County Street, Taunton, MA 02780
Tel: 508-824-6633, TTY: 508-880-6102
www.mass.gov/massdot

OFFICE OF THE TOWN ADMINISTRATOR

Christopher Clark, Town Administrator

Phone (508) 430-7513

Fax (508) 432-5039

732 MAIN STREET, HARWICH, MA 02645



May 18, 2015

Mary-Joe Perry, District Highway Director
Massachusetts Department of Transportation
District 5, 1000 County St.
Taunton, MA 02780

Re: Harwich – Route 28 – Sidewalk Construction Future Maintenance

Dear Ms. Perry,

The Board of Selectmen is exceptionally pleased with your letter of May 11, 2015 regarding Mass DOT – Highway Division District 5 Agreement to install approximately 3,300 feet of sidewalk on the south side of Route 28 beginning at the intersection of Bank Street and ending at Saquatucket Harbor pursuant to our request.

The Board does seek to confirm that your letter indicates ending at Harwich Point when our request was to end at Saquatucket Harbor.

The Board of Selectmen is in agreement with your request that the Town of Harwich agrees to take responsibility for future maintenance once this newly installed or renovated sidewalk is complete. This letter acknowledges the Town's acceptance and if the State requires any additional materials please forward those for execution.

The Board appreciates the cooperative manner in which we been able to work on this issue and appreciate the State's support.

Sincerely,

Larry G. Ballantine, Chair

Peter S. Hughes

Edward J. McManus

Angelo S. LaMantia

Linda A. Cebula

cc: Lincoln Hooper, Department of Public Works Director