

## SELECT BOARD

Minutes of Meeting of February 10, 2021. The meeting took place via remote participation via Zoom Webinar pursuant to Governor Baker's March 12, 2020 Order regarding the Open Meeting Law (attached). Members of the Board present were Dawn Hill Holdgate, Jason Bridges, Matt Fee, Kristie Ferrantella and Melissa Murphy.

### I. CALL TO ORDER

Chair Holdgate called the meeting to order at 5:00 PM. She read a prepared statement as to how the meeting would be conducted via remote participation and the ground rules for any discussion and called roll for those present.

### II. SELECT BOARD ACCEPTANCE OF AGENDA

The agenda was accepted without change.

### III. ANNOUNCEMENTS

1. Chair Holdgate noted the meeting is being audio/video recorded.
2. Council for Human Services: "Parenting Through Covid" Virtual Zoom Forum to be held Friday, February 12, 2021, 6:30 – 8:00 PM; register at [https://zoom.us/webinar/register/WN\\_M2vRQgFTTPePiaDxTdwGyg](https://zoom.us/webinar/register/WN_M2vRQgFTTPePiaDxTdwGyg). The announcement was made in English, Spanish and Portuguese.
3. Affordable Housing Trust - Housing Production Plan Survey open until February 12, 2021; go to <https://www.nantucket-ma.gov/184/Affordable-Housing-Trust> to participate. The announcement was made in English, Spanish and Portuguese.
4. Town offices will be closed Monday, February 15, 2021 in observance of Presidents' Day.

### IV. COVID-19 WEEKLY UPDATE

1. Public Comment. Mr. Bill Grieder commended the Nantucket Cottage Hospital and Town for doing a great job out at the VFW vaccine site with vaccine distribution.

#### 2. Report(s) from Public Health Director and/or Nantucket Cottage Hospital President:

- COVID-19 Case Metrics, Including Massachusetts COVID-19 Community-Level Data Map. Public Health Director Roberto Santamaria reviewed current tests, cases, and hospitalizations, from today and to date. He reviewed trends, and other metrics state-wide and nation-wide. He noted that the Island's case positivity rate over the last seven days has dropped significantly and the curve has slowed although not levelled off. He noted that in early January there were many cases caused by lack of adherence to COVID safety measures. He reviewed the weekly sewer testing.

- Vaccine Distribution Plan Update. Mr. Santamaria reviewed the status of the active Phases of vaccine distribution – Phase II. He said that the Town is more than one week ahead of the state with distribution. He explained how eligible people can sign up. He reviewed how many people have been vaccinated in total, to date, on the Island (over 1,000 first dose vaccinations). He reviewed the status of other vaccines becoming on-line, nationwide.

- COVID-19 Testing. No updates.

- COVID-19 Task Force: Weekly Report. Human Services Director Jerico Mele provided an update on the Task Force's activity over the past week. He explained a revision to how the enforcement numbers are being

presented, as of this week, with respect to enforcement visits/inspections that have led to enforcement actions. He spoke as to how enforcement teams are conducting inspections.

Mr. Mele added that homebound individuals are also in the process of being vaccinated and spoke on progress, noting that it is going well. He said that people remaining from Phase I are also being registered and scheduled, as needed. He cautioned people to continue being very careful with safety measures due to the emergence of COVID variants. He said that there is the potential for a "Super Bowl Spike" over the next two weeks. He urged people not to travel right now for the upcoming February school vacation week. He said that if people do decide they must travel, they must follow the state's travel requirements and he reviewed those. He emphasized that the emerging variants are considered dangerous and that people must be careful. He reviewed resources for those who need them, while in quarantine and/or isolation, with food security or other types of support.

Ms. Murphy asked about double-masking. Mr. Santamaria said that double-masking is recommended and preferred; however, single masks must be properly secured. He demonstrated this with different types of masks. Ms. Ferrantella asked about the extension of vaccinations to caregivers, as announced by the Governor today. Mr. Santamaria explained that the timing of this announcement is difficult due to the need for caregivers to accompany their eligible party, many of whom have already received their first dose, and this will have to be sorted out. Ms. Ferrantella asked about the timing of the Town moving into other Groups once the prior Group is complete. Mr. Santamaria said that is subject to State approval. Some discussion followed on this. Mr. Mele said that the State has been very clear that proceeding to other Groups without State approval could jeopardize the status of vaccine distribution to a town. Some discussion followed as to ways the State could be requested to address this. Mr. Fee said that he believed there are extra allotments for "at risk" communities and that he thinks Nantucket could fit that category. There was general consensus from the Board to contact state officials to seek a way to acquire additional vaccine for "at risk" portions of the Nantucket population.

- Economic Task Force: Update. Ms. Ferrantella provided an overview of current status of the Task Force and said that the Town is going to be able to grant some funds to the Chamber of Commerce for small business assistance purposes, that the Chamber will administer and that the grant terms and agreement are being prepared through Town Administration. Ms. Ferrantella noted that part of these Town funds would most likely come from the cancellation of the fireworks contract. She reviewed a partnership with the Vineyard and Cape communities for a regional grant for business assistance. She said the Task Force is actively seeking local vendors to help businesses with websites, apps, etc. She said that Licensing Administrator Amy Baxter will be reviewing outdoor dining at the Board's meeting next week. Ms. Murphy spoke on outreach efforts of the Task Force to the business community. Mr. Bridges commended the Task Force for its efforts. Ms. Murphy noted some other sources of funds for business assistance that will be coming in to the Chamber for distribution through the grant conditions. Mr. Fee asked about the grant issuance criteria. Ms. Murphy reviewed the criteria. Mr. Fee suggested there be a demonstrated need. Some discussion followed on the grant criteria and business "mentors".

- Board of Health Orders. No updates.

- Select Board Comments/Questions. Nothing further from the Board.

#### V. PUBLIC COMMENT FOR ITEMS NOT RELATED TO COVID-19 OR OTHER AGENDA ITEMS.

Mr. Burton Balkind spoke on behalf of the Marine Mammal Alliance and a recent incident with a baby seal, as one example of the group's efforts. He said he would like an agenda item at some point for the Town to provide the group with a budget.

## VI. NEW BUSINESS.

There was no new business.

## VII. APPROVAL OF MINUTES AND WARRANTS

1. Approval of Minutes of February 3, 2021 at 5:00 PM. Ms. Ferrantella moved approval; seconded by Mr. Fee. So voted by roll call vote. Chair Holdgate – Yes; Mr. Bridges – Yes; Mr. Fee – Yes; Ms. Ferrantella – Yes; Ms. Murphy – Yes.

2. Approval of Payroll Warrant for February 7, 2021. Ms. Ferrantella moved approval; seconded by Mr. Fee. So voted by roll call vote. Chair Holdgate – Yes; Mr. Bridges – Yes; Mr. Fee – Yes; Ms. Ferrantella – Yes; Ms. Murphy – Yes.

3. Approval of Treasury Warrants for February 10, 2021. Ms. Ferrantella moved approval; seconded by Mr. Fee.. So voted by roll call vote. Chair Holdgate – Yes; Mr. Bridges – Yes; Mr. Fee – Yes; Ms. Ferrantella – Yes; Ms. Murphy – Yes.

4. Approval of Pending Contracts for February 10, 2021 - as Set Forth on the Spreadsheet Identified as Exhibit 1, Which Exhibit is Incorporated Herein by Reference. Town Manager C. Elizabeth Gibson provided an overview of the proposed contract with Arcadis for the development of a long-term plan for Baxter Road. Ms. Gibson said that a concern has arisen from the public as to a particular Arcadis staff member who has done work for the Siasconset Bluff Preservation Fund (SBPF) in the past and that while staff does not see a conflict at all, if the Board shares the concern, that individual could be dropped from the team. Some discussion followed as to perception of a conflict and/or benefits of the knowledge of someone who has worked on the existing project. Mr. Fee and Ms. Murphy spoke in support of retaining the individual. Some discussion followed. Mr. Fee added that if the rest of the Board views this as a serious concern, he would not be opposed to dropping the individual from the Arcadis team for this project. Chair Holdgate said that another concern has arisen about putting “Sconset first” and reiterated that Baxter Road has been under review for years, there is substantial public infrastructure at risk and there are other areas being addressed as well, in other areas of the island. Mr. Rick Atherton commented that in his mind there is perception of a conflict with the engineer who did the prior work, and that individual is still listed on the SBPF website as their “expert”. He commented on the scope of the project. Executive Director of the Nantucket Land Council, Emily Molden spoke on the engineer in question and expressed concern about that person working on this project. Ms. Molden encouraged the Board to use a consultant to review retreat/relocation of Baxter Road. Mr. Bill Grieder of the Madaket Conservation Association, commented on the focus of Baxter Road vs other roads on the Island, such as in Madaket. Ms. D. Anne Atherton asked if Sconset is removed from the Coastal Resilience Plan scope of work, what happens to the cost of that contract. Ms. Gibson said that most likely, other areas would be focused on more. Ms. Atherton spoke on prior appropriations for Baxter Road; and, public review of the scope of work for this proposed project. Ms. Ferrantella spoke in favor of moving forward with the contract and said that she would be comfortable with taking the engineer in question off the team assigned to the project, so moved; seconded by Ms. Murphy. Mr. Bridges asked if removing the engineer in question would set back the project. Ms. Gibson said that most likely while the engineer would not be on the team working on it, his knowledge could still be accessed. So voted by roll call vote. Chair Holdgate – Yes; Mr. Bridges – Yes; Mr. Fee – Yes; Ms. Ferrantella – Yes; Ms. Murphy – Yes.

## VIII. TOWN MANAGER'S REPORT

1. Review of Final Per- and Polyfluoroalkyl Substances (PFAS) Town-wide Risk Assessment Report. Mr. Andy Miller of CDM Smith provided an overview of the scope of work for this report. He continued to review the findings as to the “PFAS Cycle” at the Town sites that are recommended for further review and testing, as identified in the report attached to these minutes. Mr. Miller reviewed the recommended action items for moving

forward. Ms. Ferrantella asked about testing private septic systems near ponds. Mr. Miller said that is not a recommendation, currently. He noted that sample data from private homeowners has been received and could be used to build a database with that information. Mr. Bruce Mandel stated that he has concern regarding PFAS as related to the landfill and he has received a notice that Nantucket is now included in a Mass Department of Environmental Protection program to have private wells sampled. Chair Holdgate asked if there were other questions from the Board or the public. No further questions from either.

2. Review of Proposed Request for Proposals and Term Sheet for Five-year Lease Agreement (2022 – 2026) for Jetties Beach Concession, Retail Shop, Bathhouse and Beach Event Area. Ms. Gibson introduced this item and Director of Finance Brian Turbitt reviewed the Term Sheet. Mr. Fee asked about the number of events. Ms. Baxter explained that number was approximately the same as in the current lease. Mr. Fee asked about the comparative criteria for reviewing the Request for Proposals (RFP). Mr. Turbitt answered. Mr. Fee asked about a mobile food unit at the site. Ms. Baxter answered. Mr. Fee said that he does not believe the awning should be the Town's responsibility. Ms. Murphy asked about the criteria again and whether it has changed from the prior RFP. Ms. Murphy asked about the mobile food unit as related to parking; and, whether or not the "mixing" of two business models is appropriate. Mr. Bridges asked what has changed from the previous RFP. Mr. Turbitt explained. Discussion continued as to the mobile food unit and whether or not the rent would increase as a result. Discussion followed as to the awning and who should be responsible. Ms. Ferrantella asked about increasing the rent due to the mobile food unit. Discussion followed as to the number of allowable events. Discussion returned to the awning vs a fixed roof. Chair Holdgate said that she would rather consider the mobile food unit as a potential option. Ms. Gibson noted the wording allows for that separate consideration and could be strengthened so as not to create any expectations. Discussion continued as to maintenance, the awning, and the base rent. Mr. Fee spoke in favor of putting a permanent roof on the building and ensuring that the concessionaire pays for it. He said he does not see the need for improving the concession buildings to make them "fancier". Ms. Gibson noted that often, it's not a matter of making them fancier, but maintenance or repairs can often trigger code requirements and in some cases, FEMA or other sea level rise requirements in addition to a local Coastal Resilience Advisory Committee recommendation for projects undertaken after August, 2020 that certain sea level rise standards be met, which is costly. Further discussion as to the awning and/or establishing a repair fund. Ms. Murphy spoke in favor of the Town maintaining the building properly. Some discussion followed as to establishing a revolving fund for maintenance into which rental payments could be deposited.

Chair Holdgate left the meeting at 7:30 PM and did not return.

Ms. Ferrantella moved approval of the RFP terms, with some modifications as discussed with regard to the mobile food unit. Mr. Fee spoke against the awning being part of the Town's responsibility. Ms. Murphy asked what would make Mr. Fee comfortable to support the RFP. Mr. Fee said, to make the responsibility that of the concessionaire. Discussion continued on the responsibility issue; and, potential wording to address concerns. Ms. Mary Longacre suggested that the awning be removed, at the end of the current lease and any future awning be made the responsibility of the lessee. Dr. Howard Dickler spoke on the transition of the Jetties concession from what it was 60 years ago, to today. Further discussion continued as to how to approach this issue with the awning. Mr. Bridges spoke in favor of keeping the awning and putting money into it because the Town is providing a service and it should be on the Town as a quality of life service. Ms. Murphy suggested that due to the length of the discussion, that the Board re-think the objective of the awning and its responsibility, or not, of the Town, and re-discuss this next week. Some discussion and there was general agreement to table this matter to the Board's March 3, 2021 meeting.

3. 2021 Annual Town Meeting: Warrant Development Update; Including Select Board Review/Discussion of Housing-related Articles. Ms. Gibson introduced this item and noted that Mr. Bruce Mandel is requesting that the

Board add an article that he originally submitted for the 2020 Annual Town Meeting (ATM), that he has now revised, to the 2021 Annual Town Meeting warrant as a Town-sponsored article. Mr. Mandel spoke on his proposal. Ms. Gibson noted that it would be somewhat unconventional to include a citizen article like this, but certainly it is a policy issue for the Board. She noted that if the Board were so inclined to include the article, it needs legal and other review and revision. Mr. Fee asked about some of the items proposed to be banned. Mr. Mandel responded. Ms. Ferrantella expressed concern for adding an article in this manner; and, that due to COVID requirements, some of the items may not be appropriate to be banned by 2022. Mr. Mandel said that date could be changed. Ms. Murphy said that she agrees this is unconventional, but it may be less confusing due to the format of Town Meeting this year, with no projection. Mr. Fee said he would prefer to understand what the Finance Committee might act on. Ms. Ferrantella moved not to include the article in the warrant; seconded by Ms. Murphy. Some discussion followed. By roll call vote so voted. Vice Chair Bridges – Yes; Mr. Fee – Yes; Ms. Ferrantella – Yes; Ms. Murphy – Yes.

The Board consensus was to include a citizen request to add a Sense of the Meeting request regarding a small mesh fishing gear closure.

Ms. Gibson reviewed a proposed amended noise bylaw and noted that due to further legal review, there are some changes that need to be made. Deputy Director of Planning Leslie Snell explained the specifics of the proposal as it was developed with a small informal workgroup of stakeholders, including from the Advisory Committee of Non-Voting Taxpayers (ACNVT). Mr. Gary Beller of the ACNVT spoke on the article and said that his committee does not support the article as is before the Board because it does not go far enough. He added that this past summer was very difficult with way too much construction noise in residential areas. Mr. Peter Halle, also of the ACNVT spoke in opposition to the proposed removal of the noise tables. Some discussion followed. Deputy Chief Charles Gibson spoke as to removal of the noise tables, saying that they are outdated, no longer valid and the districts referenced no longer exist. He spoke on how noise is measured. Some discussion followed as to how these changes might impact the average year-round citizen, such as mowing lawns. Ms. Snell stated that it is believed there would be little impact and that lawn mowing is allowed. Some discussion followed as to the proposed changes. Vice Chair Bridges said that he is fairly comfortable with what is being proposed. Ms. Murphy said that she would support putting the article as proposed, subject to the legal review, on the warrant. Mr. Halle stated that the proposal does not address noise during the day and said that all such excessive noise should be prohibited throughout the day. Mr. Beller said the objectionable noise is mostly construction-related and it would be nice not to have that noise on Sundays throughout the summer. Mr. Fee asked about one of the exemptions relating to issued permits. Deputy Chief Gibson explained. Ms. Murphy asked about emergency exemptions. Ms. Murphy moved to include the article in the warrant subject to legal revisions; seconded by Ms. Ferrantella. Mr. Fee commented on his concerns about the proposed article, saying he is not sure it is balanced enough. By roll call vote so voted. Vice Chair Bridges – Yes; Ms. Ferrantella – Yes; Ms. Murphy – Yes; Mr. Fee – No.

Ms. Gibson reviewed a proposed article to amend fines for violations of the Animals bylaw, nothing that at the Board's meeting last week, there was discussion about a tiered fine schedule, which is presented in the Board's packet. Ms. Ferrantella said she supports to the proposed article. Mr. Fee said he is concerned about enforcement of the leash law and that "at some point" the message needs to get out that people need to leash their dogs. Ms. Murphy concurred and said perhaps new dog parks on the island might help with that. Ms. Murphy moved to include the article on the warrant; seconded by Ms. Ferrantella. By roll call vote so voted. Vice Chair Bridges – Yes; Mr. Fee – Yes; Ms. Ferrantella – Yes; Ms. Murphy – Yes.

Airport Manager Tom Rafter said that some changes have been discussed between Airport Counsel and Town Counsel regarding a proposed bylaw from the Airport regarding car rental agencies. He said that some complicating issues have been raised. Attorney Gregg Corbo from Town Counsel's office explained the issues

he has raised. Ms. Baxter also commented on the use, or non-use, of the Rental Vehicle Medallions. Mr. Corbo said that there is not a demonstrated urgency to getting this done, now; and, that this perhaps should be thought through more carefully to come up with a more appropriate, calculated approach. Mr. Rafter referenced a need to address a procurement issue with car rental agency counter space at the Airport. Mr. Corbo said that his recommendation is to revise the language to eliminate the perpetual right for agencies to hold Medallions and add a provision allowing the Select Board to adopt regulations as to how to allocate the Medallions. Mr. Fee stated opposition to this. Ms. Ferrantella said she is willing to consider revised language as explained by Mr. Corbo. Mr. Rafter expressed support for this idea and said the Airport Commission could review this next week. The Board generally agreed to consider a revised article at its meeting next week.

With regard to the housing articles, some discussion followed as to how the Board would like to handle this or discuss further tonight. Affordable Housing Trust (AHT) member Ms. Brooke Mohr expressed support for putting forward both Town-sponsored articles that are currently under consideration. Mr. Fee said he supports the proposed article to appropriate \$475,000 from the General Fund and he is not sure about the proposed \$7.5m debt exclusion. Ms. Ferrantella spoke in favor of the two proposed Town-sponsored articles. Ms. Murphy concurred. Housing Director Tucker Holland spoke in favor of the two articles as well. Ms. Mohr spoke on the AHT's short-term and long-term plans and noted how the two articles support them. Ms. Murphy expressed support for getting out messaging as to the status of the projects already funded by the existing appropriations for AHT projects; she moved approval to include the \$7.5m debt exclusion on the ATM warrant; seconded by Ms. Ferrantella. Some discussion followed. Mr. Fee said the Board should determine which citizen articles to support, commenting that he supports an article sponsored by Mr. Arthur Reade. Discussion continued. By roll call vote so voted. Vice Chair Bridges – Yes; Ms. Ferrantella – Yes; Ms. Murphy – Yes; Mr. Fee – No. Ms. Murphy said that she would like to hear more of what the AHT prepared for the meeting tonight, at a future Board meeting, since there was not sufficient time to present tonight.

#### IX. SELECT BOARD'S REPORTS/COMMENT

1. Committee Reports. Ms. Ferrantella commented on potential attendance at the June ATM.

#### X. ADJOURNMENT

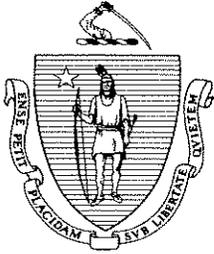
Ms. Murphy moved to adjourn at 9:56 PM; seconded by Ms. Ferrantella. So voted by roll call vote. Vice Chair Bridges – Yes; Mr. Fee – Yes; Ms. Ferrantella – Yes; Ms. Murphy – Yes.

Approved the 17<sup>th</sup> day of February 2021.

**SELECT BOARD  
FEBRUARY 10, 2021 – 5:00 PM  
REMOTE PARTICIPATION VIA ZOOM  
PURSUANT TO GOVERNOR BAKER'S MARCH 12, 2020  
ORDER REGARDING OPEN MEETING LAW  
NANTUCKET, MASSACHUSETTS**

List of documents used at the meeting:

- III. 2. Parenting through Covid flyer
- IV. 2. Covid-19 presentation
- VII. 1. Draft minutes of 2/3/2021
- VII. 4. Pending contracts; Arcadis scope of work; Nantucket Coastal Conservancy comments on Arcadis contract
- VIII. 1. AIS re: PFAS Risk Assessment Report; Executive Summary; Summary of Findings and Recommendations; CDM Smith presentation
- VIII. 2. AIS re: Jetties Beach Concession; Draft RFP for Jetties Beach Lease Agreement with Exhibits A – H; Concession Actuals 2017-2020
- VIII. 3. Outline # 7 for 2021 ATM Warrant; Mandel Article 73 2020 ATM; Mandel Proposed Revised Plastics Bylaw 2/2/2021; Small Mesh Fishing Gear Closure - Sense of the Meeting from 2019 ATM; Noise Bylaw Summary; Noise Bylaw final draft; ACNVT Noise Abatement Resolution; Dog fine article with proposed tiered fines; Proposed Airport Car Rental Bylaw with Town Counsel comments/ changes; Airport Rental Car White Paper; Airport car rental bylaw comment - Ray Conlon; Airport car rental bylaw comment - Dean Murphy; Special Legislation to Issue Pension Obligation Bonds; 2021 ATM Housing Articles Outline; Housing Articles - attachments



OFFICE OF THE GOVERNOR  
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**CHARLES D. BAKER**  
GOVERNOR

**KARYN E. POLITO**  
LIEUTENANT GOVERNOR

**ORDER SUSPENDING CERTAIN PROVISIONS  
OF THE OPEN MEETING LAW, G. L. c. 30A, § 20**

**WHEREAS**, on March 10, 2020, I, Charles D. Baker, Governor of the Commonwealth of Massachusetts, acting pursuant to the powers provided by Chapter 639 of the Acts of 1950 and Section 2A of Chapter 17 of the General Laws, declared that there now exists in the Commonwealth of Massachusetts a state of emergency due to the outbreak of the 2019 novel Coronavirus (“COVID-19”); and

**WHEREAS**, many important functions of State and Local Government are executed by “public bodies,” as that term is defined in G. L. c. 30A, § 18, in meetings that are open to the public, consistent with the requirements of law and sound public policy and in order to ensure active public engagement with, contribution to, and oversight of the functions of government; and

**WHEREAS**, both the Federal Centers for Disease Control and Prevention (“CDC”) and the Massachusetts Department of Public Health (“DPH”) have advised residents to take extra measures to put distance between themselves and other people to further reduce the risk of being exposed to COVID-19. Additionally, the CDC and DPH have advised high-risk individuals, including people over the age of 60, anyone with underlying health conditions or a weakened immune system, and pregnant women, to avoid large gatherings.

**WHEREAS**, sections 7, 8, and 8A of Chapter 639 of the Acts of 1950 authorize the Governor, during the effective period of a declared emergency, to exercise authority over public assemblages as necessary to protect the health and safety of persons; and

**WHEREAS**, low-cost telephone, social media, and other internet-based technologies are currently available that will permit the convening of a public body through virtual means and allow real-time public access to the activities of the public body; and

**WHEREAS** section 20 of chapter 30A and implementing regulations issued by the Attorney General currently authorize remote participation by members of a public body, subject to certain limitations;

**NOW THEREFORE**, I hereby order the following:

(1) A public body, as defined in section 18 of chapter 30A of the General Laws, is hereby relieved from the requirement of section 20 of chapter 30A that it conduct its meetings in a public place that is open and physically accessible to the public, provided that the public body makes provision to ensure public access to the deliberations of the public body for interested members of the public through adequate, alternative means.

Adequate, alternative means of public access shall mean measures that provide transparency and permit timely and effective public access to the deliberations of the public body. Such means may include, without limitation, providing public access through telephone, internet, or satellite enabled audio or video conferencing or any other technology that enables the public to clearly follow the proceedings of the public body while those activities are occurring. Where allowance for active, real-time participation by members of the public is a specific requirement of a general or special law or regulation, or a local ordinance or by-law, pursuant to which the proceeding is conducted, any alternative means of public access must provide for such participation.

A municipal public body that for reasons of economic hardship and despite best efforts is unable to provide alternative means of public access that will enable the public to follow the proceedings of the municipal public body as those activities are occurring in real time may instead post on its municipal website a full and complete transcript, recording, or other comprehensive record of the proceedings as soon as practicable upon conclusion of the proceedings. This paragraph shall not apply to proceedings that are conducted pursuant to a general or special law or regulation, or a local ordinance or by-law, that requires allowance for active participation by members of the public.

A public body must offer its selected alternative means of access to its proceedings without subscription, toll, or similar charge to the public.

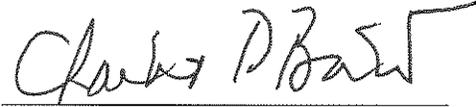
(2) Public bodies are hereby authorized to allow remote participation by all members in any meeting of the public body. The requirement that a quorum of the body and the chair be physically present at a specified meeting location, as provided in G. L. c. 30A, § 20(d) and in 940 CMR 29.10(4)(b), is hereby suspended.

(3) A public body that elects to conduct its proceedings under the relief provided in sections (1) or (2) above shall ensure that any party entitled or required to appear before it shall be able to do so through remote means, as if the party were a member of the public body and participating remotely as provided in section (2).

(4) All other provisions of sections 18 to 25 of chapter 30A and the Attorney General's implementing regulations shall otherwise remain unchanged and fully applicable to the activities of public bodies.

This Order is effective immediately and shall remain in effect until rescinded or until the State of Emergency is terminated, whichever happens first.

Given in Boston at 6:40 PM this 12th day of  
March, two thousand and twenty.

A handwritten signature in cursive script, reading "Charles D. Baker". The signature is written in dark ink and is positioned above a horizontal line.

CHARLES D. BAKER  
GOVERNOR  
Commonwealth of Massachusetts

## Section 6

# Summary of Findings and Recommendations

This section summarizes the findings detailed in previous sections of the report and provides recommended next steps for further assessment as the Town of Nantucket (the Town) continues efforts to develop and implement a unified town-wide management plan to address the use and presence of per- and polyfluoroalkyl substances (PFAS) on the Island. The overall objective remains to reduce risks to human health and the environment from PFAS particularly with regard to protection of drinking water sources.

### 6.1 Overview of PFAS

PFAS represent a class of anthropogenic emerging compounds considered “forever chemicals” due to their strong chemical bond, stability, and the fact that many PFAS cannot biodegrade in the environment. These man-made chemicals have been in use since the 1950s and are commonly present in many consumer products like cookware, food packaging, waterproof fabrics, stain repellants, and consumer care products. Once used, these PFAS-containing products enter municipal sewer waste streams, septic systems, municipal solid waste (MSW), and other types of direct waste discharge. Other uses of PFAS include PFAS-containing aqueous film forming foam (AFFF) to extinguish Class B fuel fires. Disposal of PFAS-containing consumer products and use of AFFF for Federal Aviation Administration (FAA) required testing or emergency response has resulted in PFAS entering the environment, causing contamination of groundwater, surface waters, soils, and sediment. Once in the environment, exposure pathways include groundwater and surface water transport to drinking water and other sensitive receptors, leaching from soil, and uptake by sediment, biota, plants, and animals. The uses, disposal, and transport mechanisms/migration pathways of PFAS contribute to the global, regional, and local “PFAS Cycle”, which refers to the movement of PFAS from sources to environmental and human receptors. Humans are exposed to PFAS through ingestion of contaminated drinking water and consumption of impacted food such as seafood, wild game, produce, dairy products, and agricultural products. Humans can also be exposed to PFAS via dermal contact if present at high enough concentrations. Based on a long history of using PFAS containing products, their unique chemical properties, persistence, and mobility, PFAS have become ubiquitous in the global environment.

Epidemiological studies have suggested that exposure to PFAS over certain levels may result in adverse health effects such as developmental defects to fetuses or breastfed infants, certain cancers, immunological effects, and thyroid conditions. For these reasons, the US Environmental Protection Agency (EPA) has established a lifetime drinking water Health Advisory Level (HAL) of 70 ng/L (nanograms per liter) or 70 ppt (parts per trillion) for the combined concentration of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), which are the two most well-known PFAS. Many states are moving forward with more stringent criteria, including Massachusetts which has established a Maximum Contaminant Level (MCL) in drinking water of 20 ppt for a combination of six PFAS compounds (referred to as PFAS6).

## 6.2 Summary of Findings

The PFAS Cycle is critical to understanding the movement of PFAS through the environment from sources to receptors. Only by understanding these transport mechanisms and migration pathways can efforts be undertaken to “break” the cycle in order to achieve PFAS source control and reduction.

A significant effort of this Phase 1 assessment has been to develop the Nantucket PFAS Cycle, unique to the Island. The Nantucket PFAS Cycle is presented in Figure 3-3 and conceptualizes the movement of PFAS on Nantucket from source to receptor. Sources are represented as the use of consumer products by residents and businesses, as well as application of AFFF at the Nantucket Memorial Airport and by the Town Fire Department. Consumer products once used enter the waste streams as Municipal Solid Waste (MSW) to the Landfill site or via wastewater to the Wastewater Treatment Facilities (WWTF) or septic systems. For the purpose of this study, the WWTFs and Landfill site are considered waste receivers/handlers, as they receive and handle waste containing PFAS as part of their regular waste management responsibilities. The Landfill site has a number of activities, inclusive of the Co-Compost Facility, which lends itself to development of a focused PFAS Cycle of the Madaket Road Solid Waste Management Site (see Figure 3-4).

As PFAS moves through the cycle, it enters groundwater, surface water, and the ocean, as well as soils and sediment. Potential receptors include humans, plant life and animals. Primary human exposure from PFAS on the Island can occur by ingestion of impacted drinking water, consumption of local produce that may have been grown using impacted soil, and consumption of fish and shellfish from impacted surface water.

Presented below is a summary of the potential sources, waste receivers/handlers and receptors identified through this study. **Table 6-1** provides a corresponding summary of the assessment findings relative to these PFAS Cycle categories as well as identification of the associated impacted media, migration pathways, and related investigation status.

### 6.2.1 Potential PFAS Sources

#### ***PFAS in Domestic and Commercial Products***

PFAS is present in many products used on a daily basis by the general population, as well as by commercial entities which in their natural course of business may be introducing PFAS to the environment. Examples of such commercial entities might be mariners (boat waxes), carwashes (car waxes), or other facilities that utilize products containing PFAS. This Phase 1 assessment has focused on municipal entities that may be sources or waste handlers/receivers of PFAS. If information is identified during future work that suggests that releases to the environment have occurred from other facilities that use PFAS containing materials as part of their regular business operations, additional review could be conducted to determine the presence of receptors and potential for risk.

#### ***Use of AFFF at Nantucket Memorial Airport***

As required by the FAA, there has been known use of AFFF at the Airport for FAA-mandated testing of ARFF (aircraft rescue and firefighting) vehicles and fire suppression operating systems, as well as fire fighter training.

**Table 6-1**  
**Summary of Assessment Findings**  
Preliminary Assessment of PFAS - Town-wide Planning Approach  
Nantucket, Massachusetts

Area of Assessment	Potentially Impacted Media	Potential PFAS Source(s)	Pathway to Receptor(s)	Potential Receptor(s)	Status of Sampling/ Investigations
<b>Potential PFAS Sources</b>					
<b>Use of AFFF at Nantucket Memorial Airport</b>	- Drinking Water - Groundwater (drinking water source) - Soil	- AFFF used as part of airport fire fighting (confirmed via Airport MCP work)	- Runoff, infiltration and groundwater flow to domestic wells	- Domestic wells - Wannacomet Wells	Ongoing. PFAS impacts confirmed via sampling.
<b>Use of AFFF by Nantucket Municipal Fire Department and Fuel Storage Facility Fire Suppression Systems</b>	- Groundwater - Surface water - Drinking water - Soils	- Class B Foams	- Runoff, infiltration and groundwater flow	- Drinking water wells	- No assessments to date
<b>PFAS Waste Receivers/Handlers</b>					
<b>Wastewater Treatment Facilities (WWTF)</b>					
WWTF Residuals (Sludge)	- Co-compost	- Sewer collection - Septage haulers - Landfill leachate	- Refer to "Co-Compost Facility"	- Refer to "Co-Compost Facility"	No PFAS sampling
WWTF (Effluent)	- Groundwater	- Sewer collection system - Septage haulers	- Infiltration and groundwater flow to ocean	- Ocean - Privat public supply wells near the Surfside WWTF	- No PFAS sampling - Consider confirmation sampling/analysis of
<b>Private Septic Systems</b>	- Groundwater	- PFAS containing consumer products into septic waste	- Groundwater flow to potential domestic wells and surface water	- Drinking water wells - Fish & shellfish in Long Pond, Hummock Pond & Miacomet Pond	None
<b>Madaket Road Solid Waste Management</b>					
<b>Co-Compost Facility <sup>(1),(2)</sup></b>					
Co-Compost Windrows (stockpiles at Madaket Road site)	- Groundwater - Soil	- WWTF residuals and MSW	- Stormwater, infiltration and groundwater flow	- Domestic wells - Fish & shellfish in Long Pond - Wetlands biological species	Ongoing. Sampling of Co-Compost product initiated October 2020
Co-Compost Available to Residents/Businesses	- Soil - Groundwater	- WWTF residuals and MSW	- Plant uptake - Co-Compost leaching to soil and groundwater	- Gardening and human consumption - Drinking water wells	
<b>Nantucket Landfill</b>					
Unlined Landfill and Site Operations	- Groundwater - Surface water - Drinking water	- MSW (disposal of PFAS containing consumer products)	- Infiltration and groundwater flow to potential domestic wells and surface water	- Domestic wells - Fish & shellfish in Long Pond - Wetlands biological species	No PFAS sampling to date
Lined Landfill and Leachate Collection System	- Leachate	- MSW (disposal of PFAS containing consumer products)	- Landfill leachate to WWTF for processing	- Refer to "Co-Compost Facility" and "Wastewater Treatment Facilities"	
Reclaimed Soil Stockpiles (from unlined landfill mining)	- Groundwater - Soil	- MSW from the unlined landfill	- Stormwater flow, infiltration and groundwater flow	- Domestic wells - Fish & shellfish in Long Pond - Wetlands biological species	
<b>Receptors</b>					
<b>Drinking Water Wells (Identified Receptors)</b>					
Municipal Water (Wannacomet and Siasconset)					- Ongoing sampling of Wannacomet Wells, no PFAS exceedances detected to date. <sup>(3)</sup> - Assess PFAS plume extent from Airport, and monitor its relationship to the Wannacomet Zone II - Pending sampling of Siasconset Water Department Wells
Municipal Water Zone II Wellhead Protection Areas (Wannacomet and Siasconset)					- Potential PFAS source unknown - Potentially impacted media may include groundwater and drinking water - Potential receptors are the associated municipal wells within Zone II.
Domestic Wells and Private PWS (excluding Airport investigation)					- Domestic wells - no requirements, private homeowners may elect to sample - Private PWS - future sampling required per MassDEP

Notes:

- (1) Co-Compost product comprised of MSW organics, residuals, and leaf & yard waste  
(2) WON collected preliminary "For Information Only" samples in 2019, prior to approved laboratory methods and protocol. See Section 4. MassDEP required sampling initiated 10/2020.  
(3) First round of sampling the five Wannacomet Water wells less than MassDEP MCL of 20 ng/L for all wells. Second round of sampling two wells with detections also < 20 ng/L. Sampling ongoing.

Abbreviations:

- AFFF: Aqueous Film Forming Foam  
MCL: Maximum Contaminant Level  
MCP: Massachusetts Contingency Plan  
MassDEP: Massachusetts Department of Environmental Protection  
MSW: Municipal Solid Waste  
PFAS: per- and polyfluoroalkyl substances  
ppt: parts per trillion. MassDEP MCL is 20 ppt.  
PWS: Public Water Supply  
WWTF: Wastewater Treatment Facility

These testing and training locations have resulted in nine documented discharge locations contributing to the presence of PFAS in on-site groundwater and detections in downgradient private domestic wells. (Note that this testing is now performed using FAA-approved AFFF testing equipment which does not require AFFF to be discharged externally from the vehicle.) Assessment as to the extent of the AFFF PFAS impacts from Airport operations continues in accordance with the Massachusetts Contingency Plan (MCP). While known discharges of AFFF at the airport are well documented, other sources of PFAS at locations in the vicinity of the Airport may be present and may be incorporated into future updates of the Town-wide PFAS Assessment.

#### ***Use of AFFF by Nantucket Municipal Fire Department***

The Nantucket Fire Department must be prepared to respond to several different classes of fires, and as such store both Class A fire fighting foam to extinguish ordinary combustibles such as wood, and Class B AFFF to combat flammable liquids such as petroleum. Based on available information, the Nantucket Fire Department applied AFFF as part of their response to two emergencies: a 500-gallon release of fuel at the downtown tank farm, and a plane crash in the vicinity of 54 Low Beach Road. Both of these sites are located on the coast and any PFAS release would likely have infiltrated to groundwater and ultimately discharged to the ocean in the direction of groundwater flow. Although there are no immediate or identifiable receptors, additional review could be conducted to confirm that the exposure pathway is incomplete.

Additionally, there have been several fires at the Nantucket Landfill site and associated facilities over the years including a 2005 landfill fire at which the Nantucket Fire Department may have sprayed foam. Recommended assessment activities for the landfill site are presented in Section 6.3.2.1.

#### ***Use of AFFF at Fuel Storage Locations on Nantucket***

Several fuel storage facilities are located on the Island with foam fire suppression systems. Of the identified facilities, the downtown tank farm (near Commercial Wharf), bulk fuel storage at Sun Island Fuel, and the boat basin fuel dock are known to utilize a PFAS containing foam. Madaket Marine fueling does not have a fixed fire suppression system, but reportedly maintains two, 5-gallon buckets of AFFF in the event of an emergency. The new tank farm on Industrial Road, reportedly utilizes a fluorine-free (F3) foam that does not contain PFAS. CDM Smith has not reviewed any documented information of releases from any fuel storage fire suppression systems; however, if information is identified during future work that suggests releases to the environment have occurred from fuel storage facilities, additional review would be suggested to assess the presence of receptors.

### **6.2.2 PFAS Waste Receivers/Handlers**

#### ***Wastewater Treatment Facility Effluent***

There are two municipal WWTFs on the Island, Surfside and Siasconset. Wastewater is typically known to contain PFAS from disposal of household goods, personal care products, and any manufactured products that enter the sewer collection system. In addition, Surfside receives septage from haulers including both residential and commercial/business waste, as well as leachate generated in the lined landfill cells at the Nantucket Landfill. Each of the Surfside and Siasconset WWTFs have groundwater discharge permits. Treated effluent is discharged to infiltration beds at each site, which flow to groundwater. At both WWTF locations, the infiltration

beds are located along the coast. Therefore, it is expected that any effluent entering the groundwater flows directly into the ocean via the subsurface. There does not appear to be any nearby domestic wells which could be impacted; however, there are two private public water system (PWS) wells near the Surfside infiltration bed. There is no history of effluent sampling for PFAS at the WWTFs, as there is no such requirement. Such sampling will be required by the Massachusetts Department of Environmental Protection (MassDEP) when the groundwater discharge permits come up for renewal.

### ***Wastewater Treatment Facility Residuals***

Each of the WWTFs produce residuals. The Siasconset residuals are hauled to the Surfside WWTF, from which all residuals are transported to the Co-Compost Facility for generation of the co-compost product. The residuals may be a contributor of PFAS to the co-compost product. Sampling would be required to assess the contribution and any associated impacts. Depending on sample results, there may be need or interest in working to reduce the PFAS concentrations in wastewater residuals. This may require a greater effort to assess sources delivered by various haulers and determine the appropriateness/need for any controls such as pretreatment.

### ***Private Septic Systems***

Not all of Nantucket is connected to Town sewer and there are a number of areas with private septic systems. Sewage discharged to such systems would be expected to include PFAS. As such systems release to groundwater, a concern may be nearby or area domestic wells. An understanding of well depth, well construction, water elevation, and geologic stratigraphy would be necessary to assess local impacts from individual septic systems, coupled with groundwater sampling. There are also known septic systems surrounding Long Pond, Hummock Pond and Miacomet Pond, all of which have known recreational fishing and shell fishing activities.

### ***Co-Compost Operations***

The Madaket Road Solid Waste Management site includes a Co-Composting Facility that generates co-compost from a mix of MSW organics and WWTF residuals delivered from the Surfside WWTF. That resulting product is then mixed with leaf and yard waste to prepare a co-compost material that was previously available to residents and businesses for land application. The final co-compost product has reportedly been land applied voluntarily by property owners at a number of locations around the Island as a soil enhancement. According to Waste Operations Nantucket (WON) (operator of the Landfill site and Co-Compost Facility for the Town), as of August 2019 co-compost has not been available to the public and has been used entirely on-site. Currently only leaf and yard waste compost is available to the public. MSW is typically known to contain PFAS, as are residuals generated from WWTF, and as a result there remains a concern that the co-compost distributed prior to August 2019 may have had PFAS present. Per MassDEP requirements, sampling was completed in October 2020 to assess the PFAS concentrations of the final co-compost product. Results are presented and discussed in Section 4. Sampling of the individual co-compost components may be appropriate to perform a mass balance analysis of the co-compost and understand which material(s) is contributing PFAS to the co-compost and what to focus on for a reduction strategy. Human health may be of concern from consumption of produce in contact or grown using the co-compost previously distributed, if impacted. PFAS tends to bind to soils and research suggests it may only be minimally leachable in soils once land applied, thus

having limited impact to the underlying groundwater. However, this would have to be assessed further specific to the co-compost material produced.

### ***Unlined Landfill and Site Operations***

The original unlined Nantucket Landfill (Phase 1 Landfill) is located at the 188 Madaket Road Site along with other Nantucket solid waste management operations. The presence of PFAS in municipal MSW has been studied in recent years. The nature and extent of PFAS impact can vary depending on the sources of MSW, the design, age and operation of the landfill, and the landfill's status as active or closed. The PFAS sources in MSW depends on manufacturing history and use of consumer products that have been disposed in the landfill. Although no PFAS sampling of groundwater or surface water has been performed in the Nantucket Landfill vicinity, based on the long-term uses of PFAS containing products, there is a potential for PFAS to be present in the landfill and its leachate. Infiltration of precipitation through the unlined landfill may generate leachate which would then be mobilized in the subsurface. Similarly, the unlined/uncovered reclaimed soil stockpiles (mined from the landfill) and co-compost windrows present on the site, may also be a PFAS contributing source via infiltration. Stormwater runoff to basins and surrounding wetlands may also be a contributing factor. Potential receptors of concern would be adjacent wetlands, Long Pond, and nearby Jeremy Cove all of which are in the direction of downgradient groundwater flow from the landfill. These surface water bodies are known locations for fishing and shell fishing, thus having potential for human consumption. Similarly, any downgradient domestic wells from the landfill may be impacted. Groundwater and surface water at the landfill would require sampling for PFAS to assess its presence and impacts to the environment. Note that the unlined landfill is no longer used for landfilling, however, it does still require installation of a standard solid waste cap to eliminate future infiltration.

### ***Lined Landfill Cells and Leachate Collection System***

The Nantucket Landfill includes several lined landfill cells at the Madaket Road site, which prevents the migration of contaminants in groundwater, as the lined cells are equipped with a leachate collection system. Collected leachate is hauled and treated at the Surfside Wastewater Treatment Facility (as mentioned above). Essentially the lined landfill operation is a contained system, thus itself is not a PFAS source to the surrounding environment. It is of course critical to maintain the leachate collection system, so it remains in good working order.

### ***Siasconset Dumps***

Siasconset Dump 1 and Dump 2 located on the eastern portion of Nantucket reportedly accepted MSW from local Siasconset residents during the period 1938 to 1971. These informal dumping grounds were reported to commonly conduct occasional controlled burns to reduce household trash. Further information on these sites was not readily available but could be researched and assessed in the future.

## **6.2.3 Potential Receptors**

### ***Municipal Public Water Supply Wells***

Municipal public water supply on the Island is provided by groundwater supply wells serviced by two distribution systems, operated by the Wannacomet Water Company and the Siasconset Water Department, respectively. The MassDEP approved Zone II wellhead protection areas (see Figure 3-1) identify the area of groundwater contribution to these wells. The outer edge of the

Wannacomet Wells Zone II extends onto the Airport property, including some areas where PFAS exceedances in private domestic wells have been detected. Efforts to minimize PFAS contributions to groundwater within the Zone II is critical. Sampling to date at the Wannacomet Wells has indicated PFAS concentrations below MCLs; the Siasconset Wells have yet to be sampled.

### ***Private Water Supply Wells***

There are two types of private water wells on Nantucket: Private PWS Wells (or non-community water systems that serve a specific business or property), and private domestic drinking water wells serving individual homes or properties. Several private PWS wells were identified through MassDEP records and are shown on Figure 3-1. Properties outside the two municipal PWS distribution systems are assumed to have their own private domestic wells. In addition, property owners with access to municipal water can opt for a private domestic well, further increasing the number of private domestic drinking water wells on the Island.

### ***Local Agriculture Products and Food Consumption***

Plant uptake of PFAS from contaminated soils, sediments, or irrigation water may be an exposure pathway to humans if local or home grown produce is consumed. If impacted by PFAS, fish and shellfish consumed from local surface water bodies may also contribute to the PFAS exposure to humans. There is no current data to suggest PFAS has impacted food products or aquatic life on Nantucket, however as part of the continuing work to understand the PFAS Cycle, these potential exposure pathways and receptors should be considered.

## **6.3 Recommendations**

Given the health concerns associated with PFAS, there is a significant interest in achieving source control and/or reductions, with the goals being to protect drinking water sources and to reduce risks to human health and the environment. The PFAS Cycle is critical in understanding where and how this may be accomplished. There are two sets of recommendations presented below. The first focuses on establishing a strategy for PFAS reduction and control, the second is a detailed list of Action Items directed at moving the strategy implementation forward.

### **6.3.1 Building a PFAS Reduction and Control Strategy**

The Town's ultimate objective in undertaking this island-wide PFAS assessment is to develop a planning approach to managing the presence of PFAS in Nantucket. Central to this effort is building a PFAS reduction and control strategy by "breaking" the PFAS Cycle. **Table 6-2** outlines the beginning of such a strategy to be further developed over time as additional information becomes available from further assessment. The strategy consists of three components:

- Protection of Receptors – Short-term Strategy
- Source Reduction – Interim Strategy
- Breaking the PFAS Cycle – Long-term Strategy

**Table 6-2**  
**Strategy Approach - PFAS Reduction & Control**  
 Preliminary Assessment of PFAS -Town-wide Planning Approach  
 Nantucket, Massachusetts

Strategy	Use of AFFF at Nantucket Memorial Airport	Use of AFFF by Town Fire Department and Private Fire Suppression Systems	Wastewater Treatment Facilities Surfside and Siasconset		Domestic Septic Systems	Co-Compost Facility Compost including WWTF Residuals	Nantucket Landfill (Unlined Landfill and Lined Cells) and Onsite Stockpiles	Municipal Water Public Water Supply Wells	Domestic Wells and Private PWS (excluding Airport MCP site domestic wells)	Other Potential Sources	
			Wastewater	Wastewater Residuals							
Protection of Receptors Short-Term Strategy	Regulatory Compliance Value(s)	MCL for Drinking Water MCL: 20 ng/L (sum of PFAS6)  MCP Criteria for Groundwater and Soil: - MCP Groundwater, GW-1: 20 ng/L (sum of PFAS6)  - MCP Groundwater, GW-1: 20 ng/L (sum of PFAS6)  - MCP Soil, GW-1/S-1: PFDA (0.30 ng/g), PFHpA (0.50 ng/g), PFHxS (0.30 ng/g), PFNA (0.32 ng/g), PFOS (2.0 ng/g), and PFOA (0.72 ng/g)	MCP Criteria for Groundwater and Soil: - MCP Groundwater, GW-1: 20 ng/L (sum of PFAS6)  - MCP Soil, GW-1/S-1: PFDA (0.30 ng/g), PFHpA (0.50 ng/g), PFHxS (0.30 ng/g), PFNA (0.32 ng/g), PFOS (2.0 ng/g), and PFOA (0.72 ng/g)	NA	NA	NA	NA	MCL: 20 ng/L (sum of PFAS6)  MCP Criteria for Groundwater and Soil: - MCP Groundwater, GW-1: 20 ng/L (sum of PFAS6)  - MCP Soil, GW-1/S-1: PFDA (0.30 ng/g), PFHpA (0.50 ng/g), PFHxS (0.30 ng/g), PFNA (0.32 ng/g), PFOS (2.0 ng/g), and PFOA (0.72 ng/g)	MCL: 20 ng/L (sum of PFAS6)  Domestic Wells MCP GW-1: 20 ng/L (sum of PFAS6)  Private PWS MCL: 20 ng/L (sum of PFAS6)	NA	
	Regulatory Monitoring	Ongoing Airport PFAS monitoring program under the MCP	None	Future requirement of groundwater discharge permit renewals	None. Dependent on AOS co-compost sample results.	None	Sampling of co-compost in support of AOS permit for Land Application	No current PFAS sampling. See Mitigation Measures	Sampling in accordance with MassDEP monitoring requirements.	-Domestic well sampling not required -Private PWS sampled per MassDEP	To be determined
	Communication	- Notification of assessment progress and exceedances - Public communications via webpage updates, public meetings, and MCP report releases	- Communicate with private properties regarding presence, use and volume of AFFF	Educate public regarding PFAS containing products in sewage and septage	Educate public regarding PFAS containing products in sewer waste	Educate public regarding PFAS containing products in sewer waste	Develop message about land application of co-compost; dependent on sample results and future MassDEP requirements.	Educate public regarding PFAS containing consumer products in MSW.	- Keep public informed, consistent with pending Public Outreach Plan - Notify MassDEP in accordance with regulations, regarding PFAS6 greater than 10 ppt and 20 ng/L (see note 1)	- Public education regarding PFAS and sampling protocol - Communications consistent with pending Public Outreach Plan	Keep public informed
	Mitigation Measures	Water Supply Options for Impacted Domestic Well Users: - Bottled water (temporary solution) - POET system (current method), effectiveness may vary - Future connection to distribution system	- Assess potential impacts from past application of AFFF (tank farm release, plane crash, etc.) - Inventory location, presence, use, volume of AFFF at both Town and private facilities - Develop a AFFF management approach for storage and handling of AFFF (BMPs, recordkeeping, training)	- No effluent sampling proposed at this time. - Sample influent to determine if there is PFAS coming into the WWTFs. Based on results, additional steps including an influent source identification program and selective sampling of influent sources and/or effluent could be conducted.	If residuals analysis is necessary based on AOS co-compost sample results: 1. Develop residual sampling program (# samples, frequency, duration, representativeness; timing of septage deliveries) 2. Implement sample program 3. Determine need for PFAS source reduction program 4. Calculate mass distribution	- Proper disposal of household materials - Increase hazardous waste collection days - Consider impacts to nearby drinking water sources	- Site visit to review co-compost facility operations and recommend actions. - Temporarily cease distribution of co-compost product to public, until MassDEP Land Application standard is available for comparison - at that time a decision would be made regarding future product distribution. - Consider signage regarding potential concern of PFAS in co-compost; avoid direct contact.	- Site visit to assess solid waste management operations relative to potential leachate sources. - Develop sampling program. - Implement GW/ SW monitoring program. - Sample reclaimed soil stockpiles. - If exceedances, assess impacts to receptors and pathways. - Develop strategy for landfill cap and reclaimed soil management.	- Perform MassDEP compliance monitoring at wellheads. - Assess of PFAS plume extent within Wannacommet Well Zone II relative to wellhead protection.	1. Consider sample collection with proper PFAS protocols 2. If exceedance: - Remove any Teflon and pipe dope in domestic plumbing - Consider bottled water - Consider POET systems - Evaluate potential for distribution system connection 3. Build a database of available PFAS data in wells 4. Consider connection to public water if available	- Assess/investigate other potential sources including such as historic Siasconset Dumps. - As needed assess facilities handling PFAS containing products in their business - Identify other potential sources
Source Reduction Interim Strategy	- Implement cleanup action to remediate soil and groundwater at the Airport site under the MCP - Reduce AFFF use if possible - Ensure proper storage / containment of AFFF	- Implement management strategies to better control use and release of AFFF - Consider reductions in AFFF storage if possible	If necessary, - Develop influent source reduction program - Perform mass balance calculations - Consider additional treatment needs	If necessary, - Develop influent source reduction program - Perform mass balance calculations - Consider alternate residuals treatment/management	- Assess impacts by groundwater monitoring; if concerns consider sewer collection extension	Dependent on AOS sampling results, - Consider sampling of upstream components of co-compost (i.e. wastewater residuals, MSW) to identify potential material(s) to target for PFAS reduction, if determined necessary - Leachability study.	- Implement landfill cap and reclaimed soil management plan to reduce groundwater infiltration, leachate generation/migration - If needed, implement a pretreatment program for leachate prior to WWTF - Perform post-cap monitoring to confirm effectiveness	- Implementation of MassDEP regulatory monitoring program	If exceedance, work with MassDEP on source identification	To be determined	
Breaking the PFAS Cycle Long-term Strategy	- Use alternatives to AFFF; depends on regulatory and FAA approval - Connections to public water supply	- Consider AFFF replacement with fluorine free foams	- Long term outreach and education to reduce the use of PFAS containing products to reduce PFAS mass loading into WWTF and subsequently reduce PFAS in the effluent - Implement and monitor effectiveness of treatment approach	Implement and monitor effectiveness of residuals management approach	Tie-in to the sewer collection system	- Reduce or eliminate PFAS impacted materials entering composting process through long-term education and public outreach	- Continue use of lined landfill cells with leachate collection systems - Work to reduce PFAS containing consumer products in MSW	- Prevent PFAS migration into public water supply wells through source reduction and regular monitoring	- Elimination of source, if possible - Connection to public water if available	To be determined	

**Notes:**

(1) PFAS6 detection above 10 ppt has to be notified to MassDEP within 7 days of receipt of the results. If a result exceeds 20 ppt and a confirmatory sample also comes back above 20 ppt, PWS must provide "public education" materials that includes the notice of the exceedance within 30 days after receipt of confirmatory samples.

**Abbreviations:**

AFFF: Aqueous Film Forming Foam  
 AOS: Approval of Suitability  
 BMP: Best Management Practice  
 FAA: Federal Aviation Administration

**Abbreviations (Continued):**

GW: Groundwater  
 GW-1: MCP Groundwater Criteria, GW-1  
 MCL: Maximum Contaminant Level  
 MCP: Massachusetts Contingency Plan  
 MassDEP: MA Department of Environmental Protection  
 MSW: Municipal Solid Waste  
 NA: Not applicable  
 ng/L: nanograms per liter, also "parts per trillion", ppt

PFAS: per- and polyfluoroalkyl substances  
 PFAS6: MassDEP's six PFAS compounds: perfluorooctane sulfonic acid (PFOS), perfluorooctanoic acid (PFOA), perfluorohexanesulfonic acid (PFHxS), perfluorononanoic acid (PFNA), perfluoroheptanoic acid (PFHpA), and perfluorodecanoic acid (PFDA).  
 POET: Point of Entry Treatment, water treatment  
 ppt: parts per trillion. MassDEP MCL is 20 ppt.  
 PWS: Public Water Supply  
 S-1: MassDEP MCP Soil Criteria, S-1 Soil  
 SW: Surface Water  
 WWTF: Wastewater Treatment Facility

The approach is to implement certain actions immediately (short-term) that can work to enhance the protection of receptors, while building toward source reduction (interim-term). Long-term efforts would be directed at implementing a town-wide source elimination program which would “break” the PFAS Cycle while offering protection of the Island and reducing PFAS management costs. This would be supplemented with performance effectiveness monitoring to confirm success.

Recommended strategies are provided in Table 6-2 to address each of the primary areas of assessment: AFFF use by the Airport, Town Fire Department, and private fuel storage facilities; WWTF effluent and residuals; septic systems; generation and use of the Co-Compost product; lined and unlined landfill operations; municipal water and Zone II protection; impacts to domestic and private public water supplies; and other potential PFAS sources such as businesses. For the Short-Term Strategy, public communication and mitigation measures are identified that may be considered for immediate action. Many of these are subsequently addressed in the specific list of Action Items presented in Section 6.3.2.

### 6.3.2 Action Items

Outlined below are recommended Action Items for the Town as the island-wide PFAS assessment efforts move forward. Those Action Items considered a *priority* item relative to the assessment process are so identified. In general, all the Action Items listed aim to help provide protection of receptors, manage information and data, inform the public, and build towards source reduction strategies.

#### 6.3.2.1 Sampling and Assessment

- **PFAS Screening at Nantucket Landfill (*Priority*):** Develop and implement a screening level PFAS sampling program at the Nantucket Landfill site at Madaket Road to assess for the potential presence and migration of PFAS into the environment. This effort should include a site visit to review operations and select appropriate sample locations. The following onsite media are prioritized for sampling: groundwater, surface water, stormwater, soils/sediment, reclaimed soil stockpiles, and any active leachate seeps observed. Based on results, further sampling and modifications to site operations may be recommended.
- **Sampling and Protection of Municipal Water Supply Wells (*Priority*):** The Wannacomet Water Company has already initiated drinking water sampling for PFAS from the Wannacomet Wells. Such PFAS sampling must continue in accordance with MassDEP Drinking Water Regulations (310 CMR 22.00). In addition, initiate sampling of the Siasconset Water Department wells in accordance with MassDEP regulations. As new data and information become available, continue to evaluate the potential for impacts to the Wannacomet Water Company and Siasconset Water Department Zone II MassDEP Approved Wellhead Protection Areas. As a Zone II serves as a protective boundary around a water supply well, continuous assessment and consideration will provide early screening as to the potential for PFAS to impact the PWS wells, and identify the need for further investigation if warranted, and treatment in the unlikely event it is necessary.

- **Sample Private Public Water Supply Wells near Surfside WWTF (*Priority*):** Two privately owned PWS wells have been identified near the effluent discharge/infiltration bed at the Surfside WWTP (see Figure 3-1). Collect information regarding these wells including ownership, operations/usage, condition, well construction logs, sampling taps, etc. On the basis of the information gathered, and with the cooperation of the owner, sampling of these two wells is recommended.
- **Co-Compost and Compost (*Priority*):** Continue to meet quarterly sampling requirements in accordance with the Approval of Suitability (AOS) Permit for the co-compost material being produced by WON at the Madaket Road landfill site. Continue to prevent off-site distribution of the co-compost product until MassDEP establishes a land application standard for comparison or further research supports use of the co-compost product by the public. Given the Town's desire to proactively address the community's concerns, it remains an option to sample the leaf and yard waste compost that is currently still available to residents. Such sampling would be for information purposes only, as there is no regulatory standard to compare to; it is assumed that off-site distribution of this material can continue. Given the absence of standards, it is recommended that MassDEP be consulted in advance of any media sampling beyond that required by the AOS Permit. The advantage of sampling is that it may help inform town objectives of achieving source reduction and receptor protection.
- **Ongoing MCP Process at the Nantucket Memorial Airport (*Priority*):** The Airport has completed the Phase I Initial Site Assessment and Tier Classification phase of the MCP process and submitted its report to MassDEP in December 2020. As a result, the Airport site will be proceeding into the Phase II Comprehensive Site Assessment (CSA) phase which focuses on nature and extent, risk characterization, and identification of the need for remedial actions. Remedial work may then be performed under the Immediate Response Action (IRA) Plan or an Updated IRA Plan, or the project may progress to a Phase III Remedial Action Plan (RAP) summarizing remedial action alternatives, followed by the Phase IV Remedy Implementation Plan (RIP) detailing how the work will be implemented. Plans for a watermain extension to serve residents on Madequecham Valley Road are in process.

### 6.3.2.2 Management Approaches to Facilitate Understanding of PFAS Presence

- **Build Database of Domestic Well Water Quality:** To facilitate an understanding of island-wide PFAS concentrations in groundwater, build a database of available data. Such a database could be developed in Geographic Information Systems (GIS) to map sample location, along with the associated PFAS sample results. The initial focus would be incorporation of domestic well data received from residents, as well as data provided by the Airport, Wannacomet Water Company, and groundwater sampling at the landfill. The intent would be to grow this database overtime, with opportunity to include other media such as soils and surface water. The result will be a comprehensive data management tool to support future assessment and development of an understanding of island-wide background concentrations.

- **Develop Town-wide AFFF Management Approach:** Develop a Town management approach for the storage and handling of AFFF on the Island, including Best Management Practices (BMPs), recordkeeping, and training. Such a program would be led by the Town Fire Department and take into consideration fuel storage areas with fire suppression systems. Consider AFFF use reduction or replacement with fluorine free foams if and when possible. Additionally, at known or suspected AFFF release areas not already being investigated as part of the Airport MCP work, research these areas to determine if they warrant further investigations. If yes, determine if there are any sensitive receptors in the area and provide a recommendation if sampling should be conducted.
- **WWTF Influent Sampling and Management:** Evaluate the influent to the WWTFs; their respective sewer collection systems, septage haulers, leachate from the landfill and any other significant sources to each WWTF. The first step will be to sample the influent to each plant. If PFAS is present, implement a comprehensive influent source identification program to look upstream and identify those sources to the WWTFs and primary potential users of PFAS containing materials. These sources can be prioritized for further sampling as part of the influent source identification program. The influent source identification program would also include creation of a simple database to record the qualitative characteristics of all hauled waste sources, leachate, significant contributors to the collection system, and any influent source with its own pre-treatment system. This database will help determine potential source reduction strategies if they are determined necessary.

### 6.3.2.3 Public Outreach Implementation

- **Public Outreach Planning & Communication (Priority):** As described in Section 5 of this report, continue efforts at developing a comprehensive strategy for communications with the public and prepare the recommended Public Outreach Plan. Public education of PFAS, sampling protocols, and actions that residents and businesses can take on their own to help “break” the PFAS Cycle will be critical to success.
- **Maintain Regulatory Awareness (Priority):** Continue to monitor available MassDEP programs and support for residents (see Section 2.3.4). Inform residents of available MassDEP programs and regulations. Keep open channels of communication between MassDEP, the Town and the residents. Of particular interest may be future programs like the MassDEP funded domestic well sampling program and source identification assistance.
- **Public Education (Priority):** Provide public education on the presence of PFAS in consumer products. This can lead to a long-term mitigation plan to reduce the purchase of such products by residents and business on the Island. The goal of this effort is to reduce future PFAS contributions to waste streams such as septic systems, WWTFs, and the landfill.

#### 6.3.2.4 Efforts Directed toward Source Reduction and Control

- **Continued Evaluation of the Nantucket PFAS Cycle (*Priority*):** As new data and information regarding PFAS is received, regularly update and revise the Town-wide PFAS Cycle.
- **PFAS Mass Balance Assessment of Co-Compost:** Perform a mass balance of co-compost components for future source reduction analysis. To understand the potential PFAS contributing components of the co-compost, this would entail sampling of the MSW organics and residuals used in the co-compost process, as well as collecting a corresponding sample of the final co-compost product. The results would then be used to perform a mass balance analysis of the co-compost, to understand which material(s) is contributing PFAS to the co-compost and what to focus on for a reduction strategy. Sample collection and analysis of the WWTF influent to both Surfside and Siasconset would help support the mass balance calculations relative to the residuals, and further support future development of management/control strategies.
- **Bench-scale Leachability Analysis of Co-Compost:** The co-compost product generated at the landfill site has been available in the past to residents and businesses for use on their properties. As a means of preliminarily assessing potential impacts to soil and groundwater, perform a bench-scale leachability study of the co-compost material to evaluate its leachability. Such a study is a recommended first step to understand any impacts resulting from land application of this product.
- **Inventory and Assessment of Other Potential Sources:** Perform an island-wide inventory of business and commercial users of PFAS containing products (e.g., car washes, marinas, etc.) to begin identifying other potential sources or receivers/handlers of PFAS or PFAS containing waste. This investigation of other potential sources may include the inactive Siasconset Dumps (see Figure 3-1).
- **Develop Source Reduction Strategies:** As additional information becomes available, identification and development of PFAS source reduction strategies may proceed. This could be applicable to such items as: capping of the unlined landfill; alternative management options for the Solid Waste Management Site to reduce infiltration; AFFF management and planning; and improved record keeping and information management as discussed above to support the development of additional source reduction strategies.