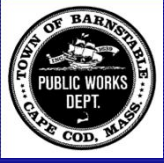


Barnstable Town Council

Water Resources Management Update

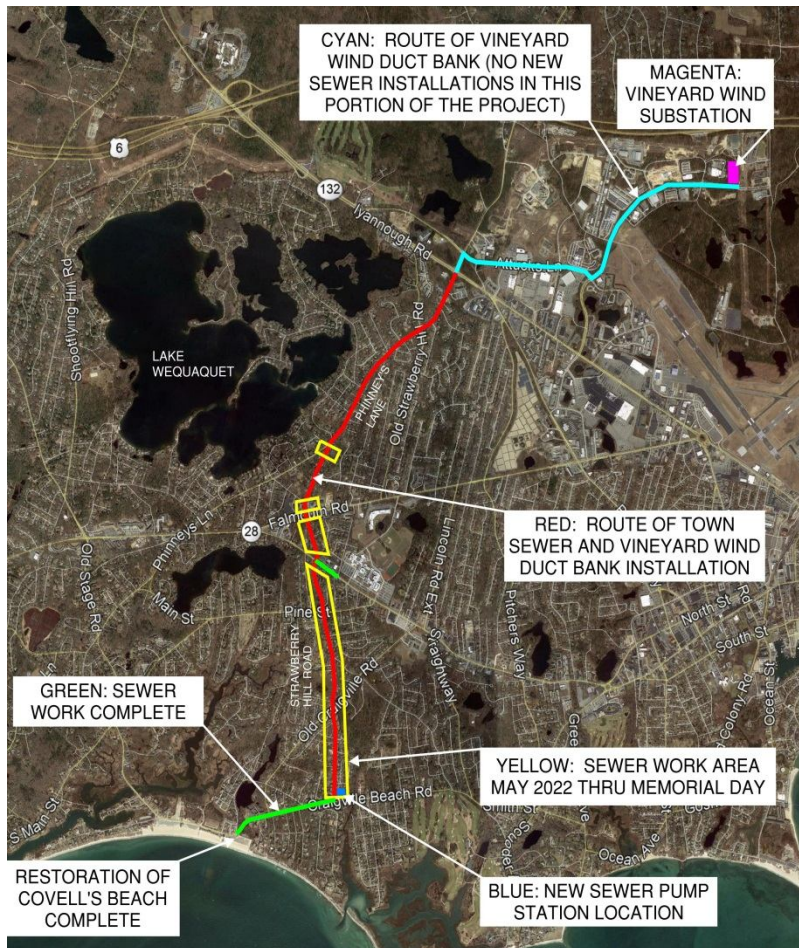
Department of Public Works
May 19, 2022



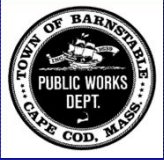
CWMP Project Updates



• Strawberry Hill Road Sewer Expansion Project



- $\pm 12,000$ LF ($\pm 52\%$) of gravity sewer main installed to date
- Three sewer crews and one testing crew
 - Crew 1: Gravity main on SHR
 - Crew 2: Force Main on SHR
 - Crew 3: Services on SHR
 - Crew 4: Pipe Testing on SHR
- Sewer work on Craigville Beach Road completed.
 - VW duct bank installation on CBR completed before Memorial Day.
- Restoration of Covell's Beach Parking Lot completed.
 - VW will be re-mobilizing after Labor Day.
- Work to extend past Memorial Day (next slide)
- On schedule for completion in Spring, 2023.



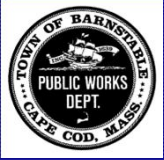
CWMP Project Updates



• *Post-Memorial Day Construction*



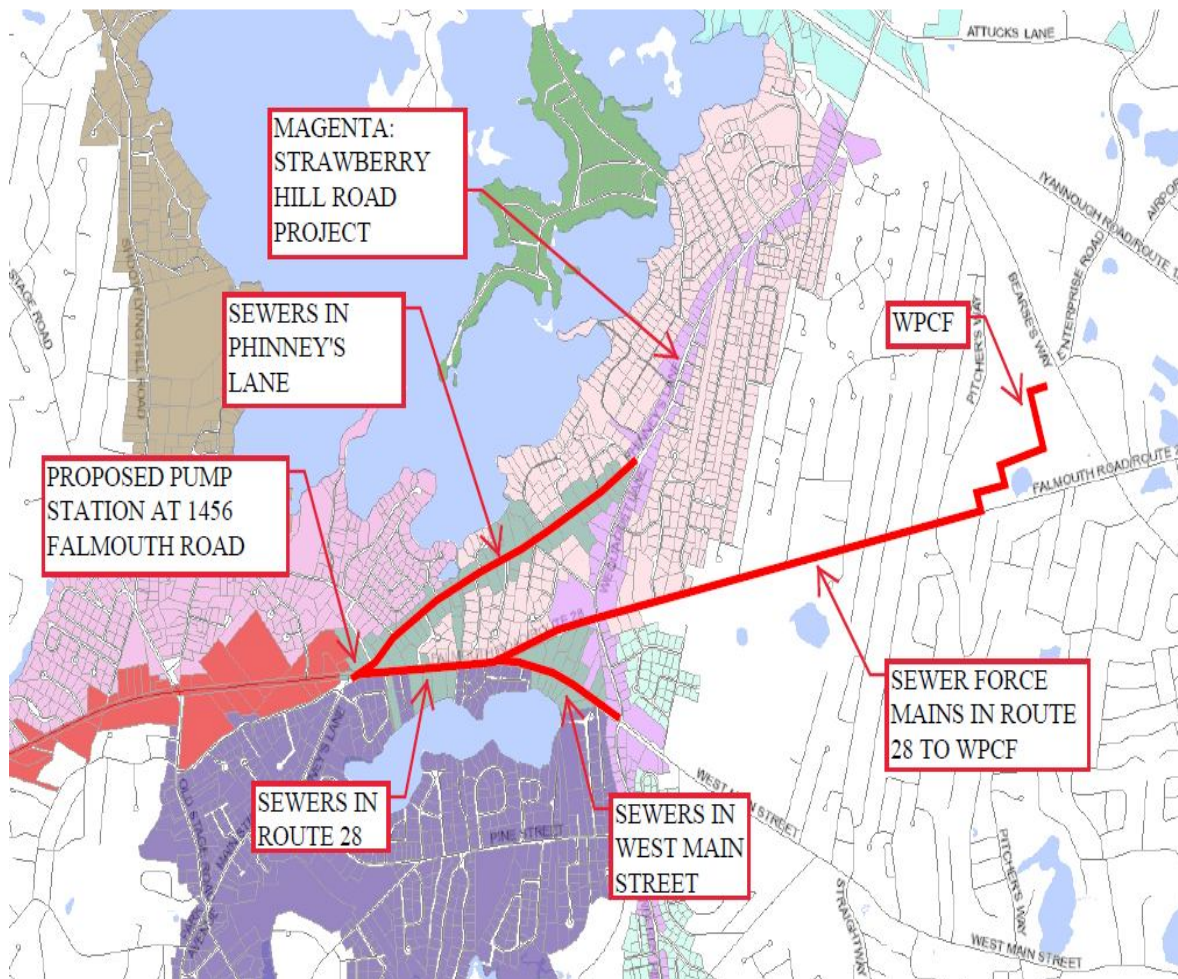
- *In order to maintain/expedite schedule and minimize construction coordination challenges in the fall, Post-Memorial Day construction is anticipated, including targeted work during July and August.*
- *Memorial Day to June 24:*
 - *Continued construction on Strawberry Hill Road (sewer and VW duct bank)*
 - *Sewer construction on Wequaquet Lane*
 - *Pump Station construction*
- *July 11 to Labor Day*
 - *Sewer construction on Wequaquet Lane*
 - *Pump Station construction*
 - *VW duct bank construction across Route 132 (at night only, pending MassDOT approval).*
- *After Labor Day*
 - *Construction on Phinney's Lane*



CWMP Project Updates



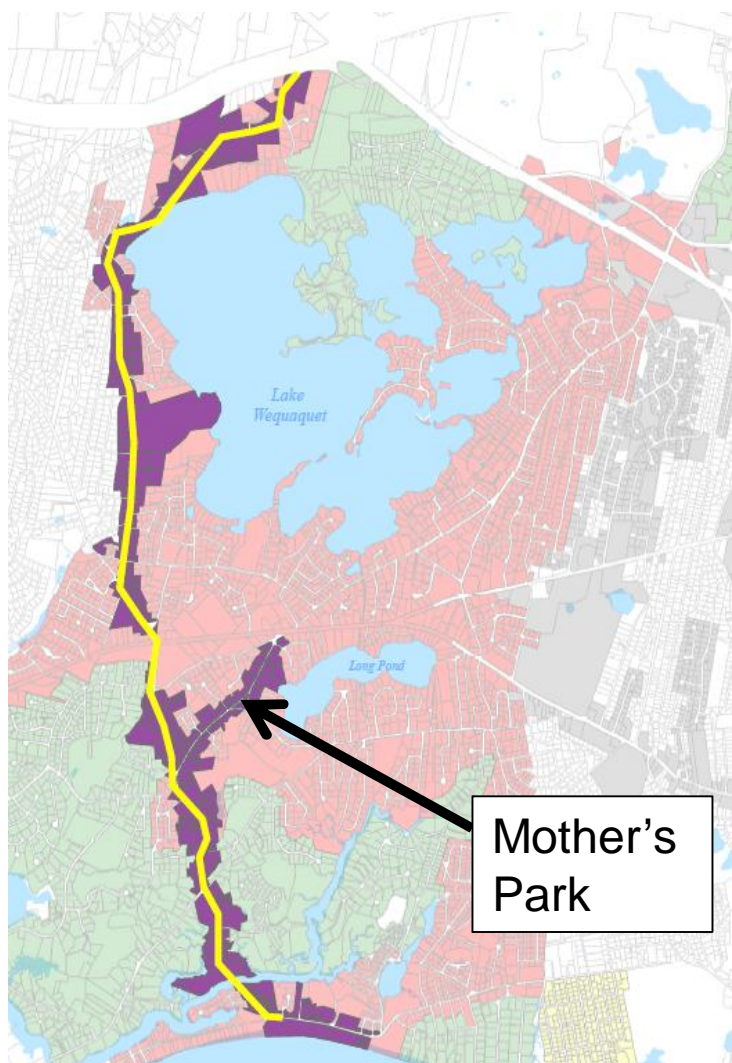
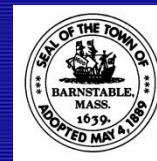
• *Route 28 East Sewer Expansion Project*



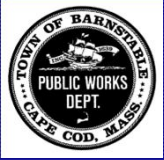
- *Notice of Intent to award has been sent to low bidder: Robert B. Our*
 - *Pump Station Bid = \$7,951,423.88*
 - *Sewer/Force Main Bid = \$9,105,662.10*
 - *Water Work = \$1,085,404.55*
- *Construction expected to commence summer/fall*
 - *Detailed schedule pending contract execution / receipt from contractor.*
- *Project completion anticipated Winter 2023.*



CWMP Project Updates



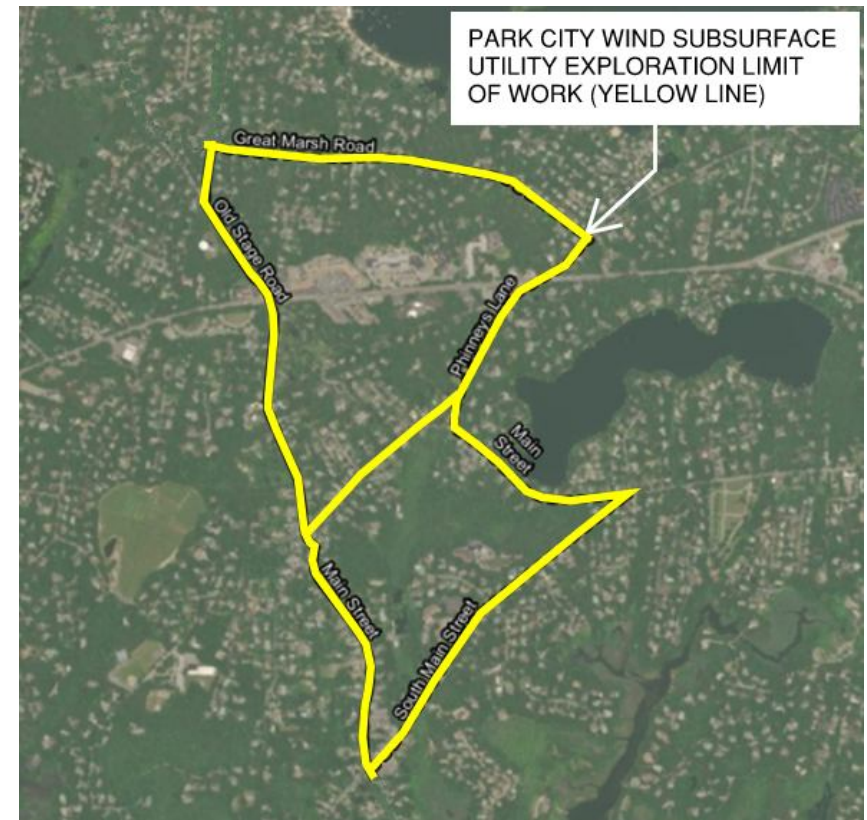
- **Park City Wind Coordination**
 - DPW proceeding w/ retaining designer(s) for sewer construction along proposed PCW on-shore route.
 - DPW continues to meet w/ PCW staff weekly to coordinate design efforts.
 - Evaluating potential construction impacts along Main Street, Centerville and associated improvements.
 - Zoom Meeting hosted by Councilor Atsalis was held on May 3rd.
 - DPW continues to coordinate w/ legal team re: pump station at Mother's Park Road and associated intersection improvements.
 - Sewer project anticipated to include 6 sewer pump stations (including Mother's Park Road).
 - Land acquisition anticipated to be necessary for 1-3 sites.
 - Construction start anticipated Fall/Winter 2023.



CWMP Project Updates

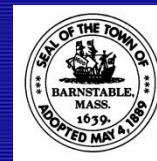


- *Park City Wind SUE Work*
 - *PCW undertaking non-destructive subsurface utility exploration (SUE) along the middle portion of the route between 5/18/22 and 6/17/22.*
 - *The SUE work will consist of the use of ground penetrating radar, utility tracing and field survey equipment within the roadways depicted in the figure.*
 - *Necessary for design of duct bank and sewers in area to determine horizontal and vertical locations of proposed infrastructure, potential need for utility relocations, potential other impacts (trees, sidewalks, etc), and minimize change orders during construction.*

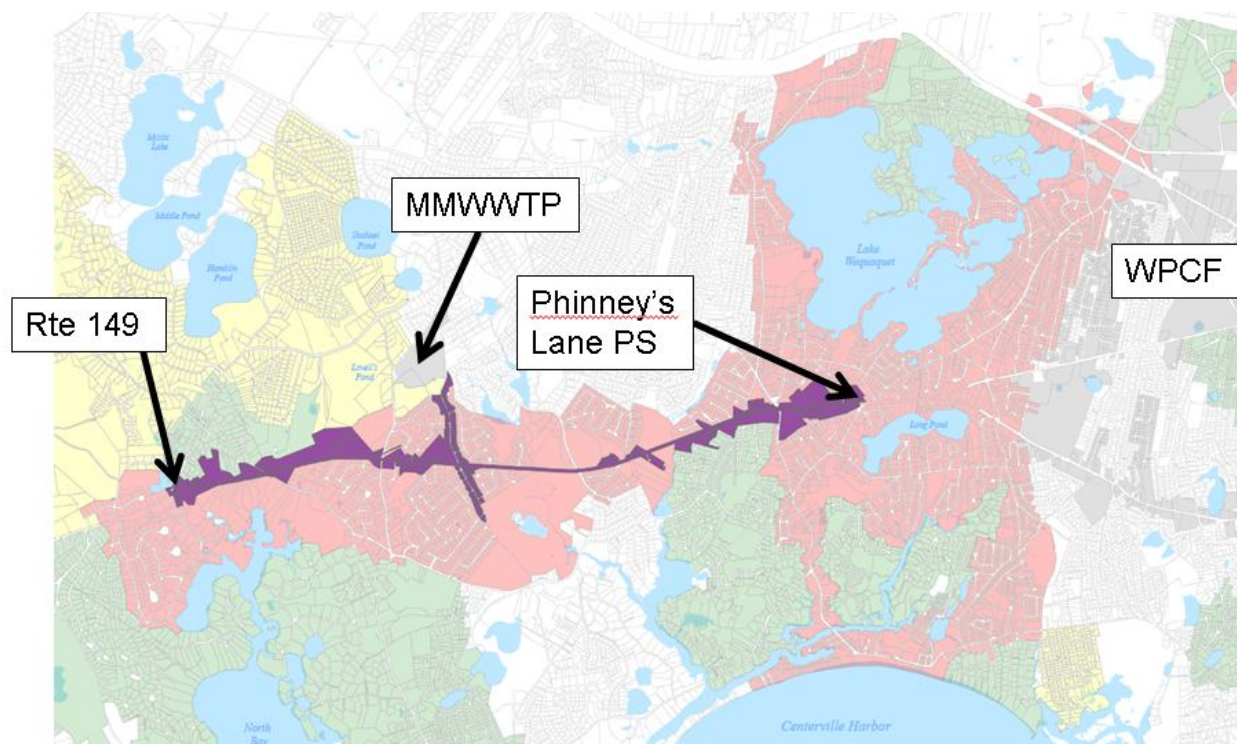




CWMP Project Updates

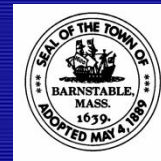


- *Route 28 “West” Sewer Expansion*
 - *Project extends sewers westerly within Route 28 from Phinney’s Lane into the Three Bay’s Watershed to Route 149. Infrastructure is the backbone for necessary sewer expansion in the westerly portion of Town, particularly the Three Bays Watershed.*
 - *DPW has prepared RFP for final design services which is anticipated to be issued in coming weeks.*
 - *DPW working to identify necessary pump station sites (at least 4 anticipated).*
 - *Portion of project involves work on a **private road** (Old East Osterville Road).*
 - *Project scheduled to commence in FY2025 and be completed by FY2027*





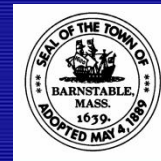
CWMP Project Updates



- *Route 28 / Yarmouth Road – MassDOT*
 - *Sewer work likely in the fall*
- *Planning on-going for other Sewer Expansion Projects*
 - *Phinney's Lane and Long Pond Sewer Projects*
 - *Surveys complete, preliminary design (in-house) advancing for both*
 - *Phinney's Lane: Construction start FY25*
 - *Neighborhoods on east and west side of Phinney's Lane*
 - ***Large number of private roads***
 - *Long Pond: Construction start FY27*
 - *Neighborhoods around Long Pond, Centerville*
 - ***Large number of private roads***
 - *Old Craigville Road, Old Yarmouth Road and Shootflying Hill Road Projects*
 - *On 4/28/22 Town Council appropriated funds for survey and preliminary design for these three projects. RFPs to be issued for survey later this year.*



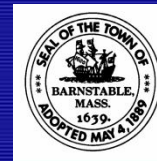
CWMP Project Updates



- *WPCF Updates*
 - *Evaluation of Nitrogen Removal Improvements*
 - *Evaluation on-going and draft report anticipated end of June.*
 - *On 4/28/22, Town Council appropriated funds for design, which will begin upon satisfactory completion of evaluation.*
 - *Effluent Disposal Evaluation*
 - *CDM Smith conducting refined modeling evaluation of identified options*
 - *Solids Processing Facility Upgrades*
 - *Construction on-going*
 - *WPCF Engineering Facility Study*
 - *Study on-going*



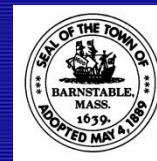
Other On-Going Sewer Projects



- *720 Main Street Pump Station Replacement*
 - *Project listed on 2022 CWSRF Intended Use Plan*
 - *Design on-going.*
 - *Public presentation anticipated in Fall.*
- *Pump Station Rehabilitation Program*
 - *FY21: Various Improvements at 5 Pump Stations*
 - *4 new generators to be installed as part of project.*
 - *Lead time on generators up to 15 months.*
 - *Project completion likely delayed to Spring 2023*
 - *FY22: Freezer Road PS Improvements*
 - *Contracting underway w/ low bidder (Robert B Our).*
 - *FY23: Old Colony PS Improvements*
 - *Evaluation on-going.*



Drinking Water New Source Study Update



- Hyannis Water System continues efforts to identify new sources of drinking water.
- A public informational meeting was held on Wednesday, April 13, 2022 to discuss the potential development of a test well and further sampling at Site C (Bridge St Conservation Area).
- Site B is also anticipated to be further tested.
- DPW in contracting phase for additional sampling efforts at Sites B and C.
 - Sampling likely in the fall.

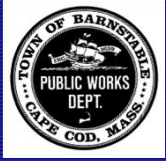
Table 4: Highest Ranked Sites by Yield

Site ID / Location	Well ID	Potential Yield (gpm)
Bridge St. Conservation Area (Site C)	TW-1C-20	5,087
Hathaway's Pond (Site E)	TW-1E-20	565
West Barnstable Conservation Area (Site D)	TW-2D-20	529
North of Rt. 6 (Site B)	TW-2B-20	519

Table 5: Water Quality Results Summary

Analyte	TW-2B-20 3/3/20	TW-1C-20 5/19/20	TW-2D-20 2/19/20	TW-1E-20 1/27/20	TW-1F-20 2/26/20 ⁷	TW-1G-20 3/12/20 ⁷	Max. Contaminant Level (MCL)
Total Fe (mg/L)	0.078	0.131	0.054	ND ¹	0.194	ND	0.3 mg/L
Total Mn (mg/L)	ND	ND	0.041	ND	0.028	ND	0.05 mg/L
pH	6	5.8	6.2	5.7	5.6	6	6.5 - 8.5
Total Pb (mg/L)	ND	ND	0.0078	ND	ND	ND	TT ² 0.015 mg/L
Perchlorate (mg/L)	0.000088	0.000082	0.000077	0.000054	0.000084	ND	0.002 mg/L
Chloroform (mg/L)	0.00053	0.00077	0.0016	0.001	0.0059	0.0022	0.07
PFAS 6 ³ (ng/L)	ND	11.23 ⁴	ND	ND	ND	ND	20 ppt
Other PFAS (NEIFOSAA ⁵) (ng/L)	1.86	ND	ND	ND	ND	ND	N/L ⁶

Notes: 1) ND = Not Detected
 2) TT = Treatment Technique. If > 10% of tap water samples tested exceed the action level of 0.015 mg/L, additional steps must be taken for water treatment.
 3) The sum concentration of the six PFAS compounds regulated by the current MassDEP MCL including PFOS, PFOA, PFHxS, PFNA, PFHpA, and PFDA.
 4) Three of six PFAS compounds proposed by MassDEP for regulation were detected: PFHxS, PFOA, PFOS
 5) NEIFOSAA = N-Methyl Perfluorooctanesulfonamidoacetic Acid
 6) N/L = Not Listed
 7) Sites sampled for completeness, however not favorable for development due to limited yield potential



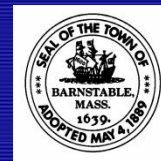
Pilot Studies – Hyannisport & Straightway & Mary Dunn Water Treatment Facilities



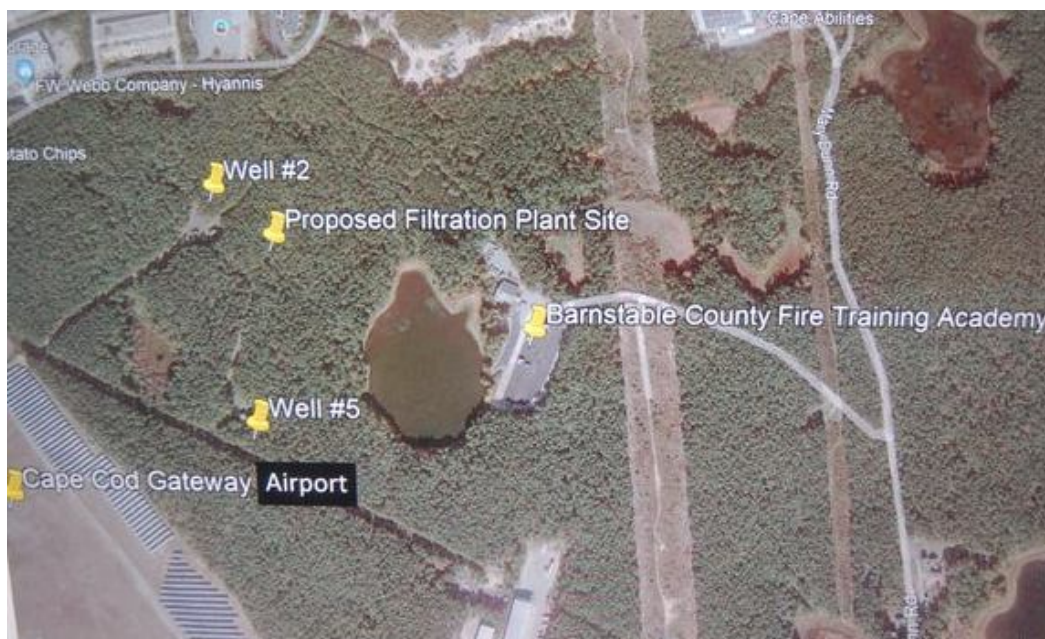
- In Fall 2020, the Town hired Kleinfelder to assist in completing pilot studies on the Town's existing Hyannisport & Straightway Water Treatment Facilities and the Mary Dunn Water Treatment Facility.*
- Spring 2021, Kleinfelder conducted field testing at the Hyannisport, Straightway and Simmons Ponds wells.*
- Fall 2021, Kleinfelder prepared a draft Pilot Study report providing recommendations for water treatment, based on completed field testing for the Straightway Treatment Facility. This report was finalized and submitted to DEP, and subsequently DEP approved the proposed treatment processes on February 22, 2022.*
- On April 28th, the Town Council appropriated funds for the design of the Straightway Treatment Facility. DPW is in the process of contracting for these efforts.*
- Planning of the pilot study for the Mary Dunn Treatment facility is underway.*



Barnstable Fire District New Water Treatment Plant



- *Barnstable Fire District Water Department will be proceeding with construction of a new \$20M drinking water treatment plant to remove PFAS from contaminated drinking water wells.*
- <https://www.barnstablepatriot.com/story/cape-codder/2022/05/16/pfa-pollution-spurs-new-water-treatment-plant-barnstable-fire-district-polyfluoroalkyls/9746084002/>
- <http://www.barnstablefiredistrict.com/wp-content/uploads/Public-Notice-for-5-4-2022-Annual-District-Meeting-Final.pdf>





Discussion?

