Final Massachusetts Integrated List of Waters for the Clean Water Act 2022 Reporting Cycle

Appendix 16
Islands Coastal Drainage Area
Assessment and Listing Decision Summary

Prepared by:
Watershed Planning Program
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Massachusetts Department of Environmental Protection

MassDEP's mission is to protect and enhance the Commonwealth's natural resources – air, water, and land – to provide for the health, safety, and welfare of all people, and to ensure a clean and safe environment for future generations. In carrying out this mission MassDEP commits to address and advance environmental justice and equity for all people of the Commonwealth; provide meaningful, inclusive opportunities for people to participate in agency decisions that affect their lives; and ensure a diverse workforce that reflects the communities we serve.

Watershed Planning Program

The Watershed Planning Program is a statewide program in the Division of Watershed Management, Bureau of Water Resources, at MassDEP. We are stewards of the water resources of Massachusetts. Together with other state environmental agencies, we share in the duty and responsibility to protect, enhance, and restore the quality and value of the waters of the Commonwealth. We are guided by the federal Clean Water Act and work to secure the environmental, recreational, and public health benefits of clean water for the residents of Massachusetts. The Watershed Planning Program is organized into five Sections that each have a different technical focus under the Clean Water Act: (1) Surface Water Quality Standards; (2) Surface Water Quality Monitoring; (3) Data Management and Water Quality Assessment; (4) Total Maximum Daily Load; and (5) Nonpoint Source Pollution.

Disclaimer

References to trade names, commercial products, manufacturers, or distributors in this report constituted neither endorsement nor recommendation by MassDEP.

Contact Information

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Notice of Availability

This report is available on the Massachusetts Department of Environmental Protection website: https://www.mass.gov/lists/integrated-lists-of-waters-related-reports.

Table of Contents

2022 Cycle Impairment Changes

Waterbody	AU_ID	2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
Black Brook	MA97-46	--	3	None		Unchanged
Black Point Pond	MA97-33	2	3	None		Unchanged
Caleb Pond	MA97-39	--	2	None		Unchanged
Cape Poge Bay	MA97-08	2	5	Estuarine Bioassessments		Added
Chilmark Pond	MA97-05	5	4a	Enterococcus	R1_MA_2020_03	Changed
Chilmark Pond	MA97-05	5	4a	Estuarine Bioassessments	R1_MA_2020_3	Changed
Chilmark Pond	MA97-05	5	4a	Fecal Coliform	R1_MA_2020_03	Changed
Chilmark Pond	MA97-05	5	4a	Nitrogen, Total	R1_MA_2020_3	Changed
Chilmark Pond	MA97-05	5	4a	Nutrient/Eutrophication Biological Indicators	R1_MA_2020_3	Changed
Coskata Pond	MA97-03	2	2	None		Unchanged
Cuttyhunk Pond	MA97-21	5	4a	Fecal Coliform	R1_MA_2020_03	Changed
Edgartown Great Pond	MA97-17	4a	4a	Estuarine Bioassessments	64380	Unchanged
Edgartown Great Pond	MA97-17	4a	4a	Nitrogen, Total	64380	Unchanged
Edgartown Great Pond	MA97-17	4a	4a	Nutrient/Eutrophication Biological Indicators	64380	Unchanged
Edgartown Harbor	MA97-15	5	5	Estuarine Bioassessments		Added
Edgartown Harbor	MA97-15	5	5	Fecal Coliform	R1_MA_2020_03	Changed
Farm Pond	MA97-30	4a	5	Dissolved Oxygen	64662	Unchanged
Farm Pond	MA97-30	4a	5	Estuarine Bioassessments	64662	Unchanged
Farm Pond	MA97-30	4a	5	Fecal Coliform		Added
Farm Pond	MA97-30	4a	5	Nitrogen, Total	64662	Unchanged
Farm Pond	MA97-30	4a	5	Nutrient/Eutrophication Biological Indicators	64662	Unchanged
Gibbs Pond	MA97028	4a	4a	Mercury in Fish Tissue	33880	Unchanged
Great Point Pond	MA97-04	3	3	None		Unchanged
Head of Hummock Pond	MA97035	5	5	Harmful Algal Blooms		Unchanged
Hither Creek	MA97-28	4a	4a	Dissolved Oxygen	64480	Unchanged
Hither Creek	MA97-28	4a	4a	Estuarine Bioassessments	64480	Unchanged
Hither Creek	MA97-28	4a	4a	Nitrogen, Total	64480	Unchanged
Hither Creek	MA97-28	4a	4a	Nutrient/Eutrophication Biological Indicators	64480	Unchanged
James Pond	MA97-38	--	5	Chlorophyll-a		Added
James Pond	MA97-38	--	5	Dissolved Oxygen		Added
Katama Bay	MA97-16	5	5	Fecal Coliform		Unchanged
Lagoon Pond	MA97-11	4a	5	Dissolved Oxygen	64584, 64583	Unchanged
Lagoon Pond	MA97-11	4a	5	Estuarine Bioassessments	64584, 64583	Unchanged
Lagoon Pond	MA97-11	4a	5	Fecal Coliform		Added
Lagoon Pond	MA97-11	4a	5	Nitrogen, Total	64584, 64583	Unchanged
Lagoon Pond	MA97-11	4a	5	Nutrient/Eutrophication Biological Indicators	64584, 64583	Unchanged
Lake Tashmoo	MA97-12	5	5	Dissolved Oxygen	68396	Changed
Lake Tashmoo	MA97-12	5	5	Estuarine Bioassessments	68396	Changed
Lake Tashmoo	MA97-12	5	5	Fecal Coliform		Added

Waterbody	AU_ID	2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
Lake Tashmoo	MA97-12	5	5	Nitrogen, Total	68396	Changed
Lake Tashmoo	MA97-12	5	5	Nutrient/Eutrophication Biological Indicators	68396	Changed
Long Pond	MA97-29	5	5	Dissolved Oxygen	64482	Unchanged
Long Pond	MA97-29	5	5	Dissolved Oxygen Supersaturation	64482	Unchanged
Long Pond	MA97-29	5	5	Estuarine Bioassessments	64482	Unchanged
Long Pond	MA97-29	5	5	Fecal Coliform		Unchanged
Long Pond	MA97-29	5	5	Nitrogen, Total	64482	Unchanged
Long Pond	MA97-29	5	5	Nutrient/Eutrophication Biological Indicators	64482	Unchanged
Long Pond	MA97-29	5	5	Transparency / Clarity	64482	Unchanged
Madaket Harbor	MA97-27	2	2	None		Unchanged
Mattakeset Bay	MA97-14	2	2	None		Unchanged
Menemsha Creek	MA97-42	--	2	None		Unchanged
Menemsha Pond	MA97-06	2	2	None		Unchanged
Miacomet Pond	MA97055	4a	5	Harmful Algal Blooms		Added
Miacomet Pond	MA97055	4a	5	Mercury in Fish Tissue	33880	Unchanged
Mill Brook	MA97-22	2	2	None		Unchanged
Mill Brook	MA97-24	2	2	None		Unchanged
Nantucket Harbor	MA97-01	5	4a	Estuarine Bioassessments	36011	Unchanged
Nantucket Harbor	MA97-01	5	4a	Fecal Coliform	R1_MA_2020_03	Changed
Nantucket Harbor	MA97-01	5	4a	Nitrogen, Total	36011	Unchanged
Nashaquitsa Pond	MA97-41	--	5	Estuarine Bioassessments		Added
Nashaquitsa Pond	MA97-41	--	5	Fecal Coliform		Added
Nashaquitsa Pond	MA97-41	--	5	Nitrogen, Total		Added
Nashaquitsa Pond	MA97-41	--	5	Nutrient/Eutrophication Biological Indicators		Added
North Head Long Pond	MA97-34	4a	4a	Nutrient/Eutrophication Biological Indicators	64481	Unchanged
Oak Bluffs Harbor	MA97-07	5	4a	(Other Anthropogenic substrate Alterations*)		Unchanged
Oak Bluffs Harbor	MA97-07	5	4a	Fecal Coliform	R1_MA_2020_03	Changed
Oyster Pond	MA97-13	3	3	None		Unchanged
Paint Mill Brook	MA97-23	2	2	None		Unchanged
Pocha Pond	MA97-40	--	2	None		Unchanged
Polpis Harbor	MA97-26	5	4a	Estuarine Bioassessments	36012	Unchanged
Polpis Harbor	MA97-26	5	4a	Fecal Coliform	R1_MA_2020_03	Changed
Polpis Harbor	MA97-26	5	4a	Nitrogen, Total	36012	Unchanged
Roaring Brook	MA97-37	3	2	None		Unchanged
Sengekontacket Pond	MA97-10	5	4a	Dissolved Oxygen	65320	Unchanged
Sengekontacket Pond	MA97-10	5	4a	Estuarine Bioassessments	65320	Unchanged
Sengekontacket Pond	MA97-10	5	4a	Fecal Coliform	R1_MA_2020_03	Changed
Sengekontacket Pond	MA97-10	5	4a	Nitrogen, Total	65320	Unchanged
Sengekontacket Pond	MA97-10	5	4a	Nutrient/Eutrophication Biological Indicators	65320	Unchanged

Waterbody	AU_ID	2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
Sesachacha Pond	MA97-02	5	4a	Fecal Coliform	R1_MA_2020_03	Changed
Seths Pond	MA97085	5	5	Algae		Unchanged
Seths Pond	MA97085	5	5	Transparency / Clarity		Unchanged
Squibnocket Pond	MA97-43	--	5	Dissolved Oxygen		Added
Squibnocket Pond	MA97-43	--	5	Nitrogen, Total		Added
Squibnocket Pond	MA97-43	--	5	Nutrient/Eutrophication Biological Indicators		Added
Sunset Lake	MA97-31	2	3	None		Unchanged
Tiasquam River	MA97-25	2	4c	(Fish Passage Barrier*)		Added
Tiasquam River	MA97-35	3	3	None		Unchanged
Tisbury Great Pond	MA97-18	5	4a	Dissolved Oxygen	R1_MA_2019_02	Changed
Tisbury Great Pond	MA97-18	5	4a	Estuarine Bioassessments	R1_MA_2019_02	Changed
Tisbury Great Pond	MA97-18	5	4a	Fecal Coliform	R1_MA_2020_03	Changed
Tisbury Great Pond	MA97-18	5	4a	Nitrogen, Total	R1_MA_2019_02	Changed
Tisbury Great Pond	MA97-18	5	4a	Nutrient/Eutrophication Biological Indicators	R1_MA_2019_02	Changed
Tom Nevers Pond	MA97097	4a	4a	Mercury in Fish Tissue	33880	Unchanged
Trapps Pond	MA97-32	4a	4a	Dissolved Oxygen	65321	Unchanged
Trapps Pond	MA97-32	4a	4a	Estuarine Bioassessments	65321	Unchanged
Trapps Pond	MA97-32	4a	4a	Nitrogen, Total	65321	Unchanged
Trapps Pond	MA97-32	4a	4a	Nutrient/Eutrophication Biological Indicators	65321	Unchanged
Unnamed Tributary	MA97-44	--	3	None		Unchanged
Unnamed Tributary	MA97-45	--	3	None		Unchanged
Vineyard Haven Harbor	MA97-09	5	5	Estuarine Bioassessments		Unchanged
Vineyard Haven Harbor	MA97-09	5	5	Fecal Coliform	R1_MA_2020_03	Changed
Westend Pond	MA97-20	2	2	None		Unchanged
Witch Brook	MA97-36	2	5	Temperature		Added

Black Brook (MA97-46)

Location:	Headwaters east of State Road, Aquinnah to mouth at inlet Squibnocket Pond, Aquinnah.
AU Type:	RIVER
AU Size:	1.4 MILES
Classification/Qualifier:	B

No usable data were available for Black Brook (MA97-46) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Black Point Pond (MA97-33)

Location:	Chilmark (includes channel connector to Tisbury Great Pond).
AU Type:	ESTUARY
AU Size:	0.09 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	3	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aquatic Life Use for Black Point Pond (MA97-33), so it is Not Assessed.	

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Black Point Pond (MA97-33); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Insufficient Information	YES
2022 Use Attainment Summary	
Black Point Pond (MA97-33): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.066 sq mi (72%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.066 sq mi (72%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V31.4	Crab Creek	Prohibited	0.06598	72.3%

Aesthetic

2022 Use Attainment	Alert

Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Black Point Pond (MA97-33), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the Primary Contact Recreational Use for Black Point Pond (MA97-33), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Black Point Pond (MA97-33): The total of all shellfish growing area classifications within this AU is 0.066 sq mi (72%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the Secondary Contact Recreational Use for Black Point Pond (MA97-33), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Black Point Pond (MA97-33): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.066 sq mi (72%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Caleb Pond (MA97-39)

Location:	Edgartown.
AU Type:	ESTUARY
AU Size:	0.06 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aquatic Life Use for Caleb Pond (MA97-39), so it is Not Assessed.	

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Caleb Pond (MA97-39); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
Caleb Pond (MA97-39): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0557 sq mi (89%). The approved shellfish growing area represents 0.0557 sq mi (89%). The Shellfish Harvesting Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V19.1	Edgartown Inner Harbor	Conditionally Approved	0.00000	0.0%
V20.0	Katama Bay	Approved	0.05565	88.6%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO

2022 Use Attainment Summary
No data are available to assess the status of the Aesthetic Use for Caleb Pond (MA97-39), so it is Not Assessed.

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0557 sq mi (89%). The approved shellfish growing area represents 0.0557 sq mi (89%). The growing area (normalized to the AU area) is classified as 100% approved, so the Primary Recreation Use for Caleb Pond (MA97-39) is assessed as Fully Supporting.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Caleb Pond (MA97-39): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0557 sq mi (89%). The approved shellfish growing area represents 0.0557 sq mi (89%). The Primary Contact Recreational Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Secondary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0557 sq mi (89%). The approved shellfish growing area represents 0.0557 sq mi (89%). The growing area (normalized to the AU area) is classified as 100% approved, so the Secondary Recreation Use for Caleb Pond (MA97-39) is assessed as Fully Supporting.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Caleb Pond (MA97-39): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0557 sq mi (89%). The approved shellfish growing area represents 0.0557 sq mi (89%). The Secondary Contact Recreational use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Cape Poge Bay (MA97-08)

Location:	From the outlet of The Lagoon at Toms Neck, Edgartown to the confluence with Edgartown Harbor at the Cape Poge Gut, (excluding Shear Pen Pond and Pease Pond) Edgartown, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	2.3 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	5	Estuarine Bioassessments		Added

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Estuarine Bioassessments	Source Unknown (N)	X					

Designated Use Attainment Decisions

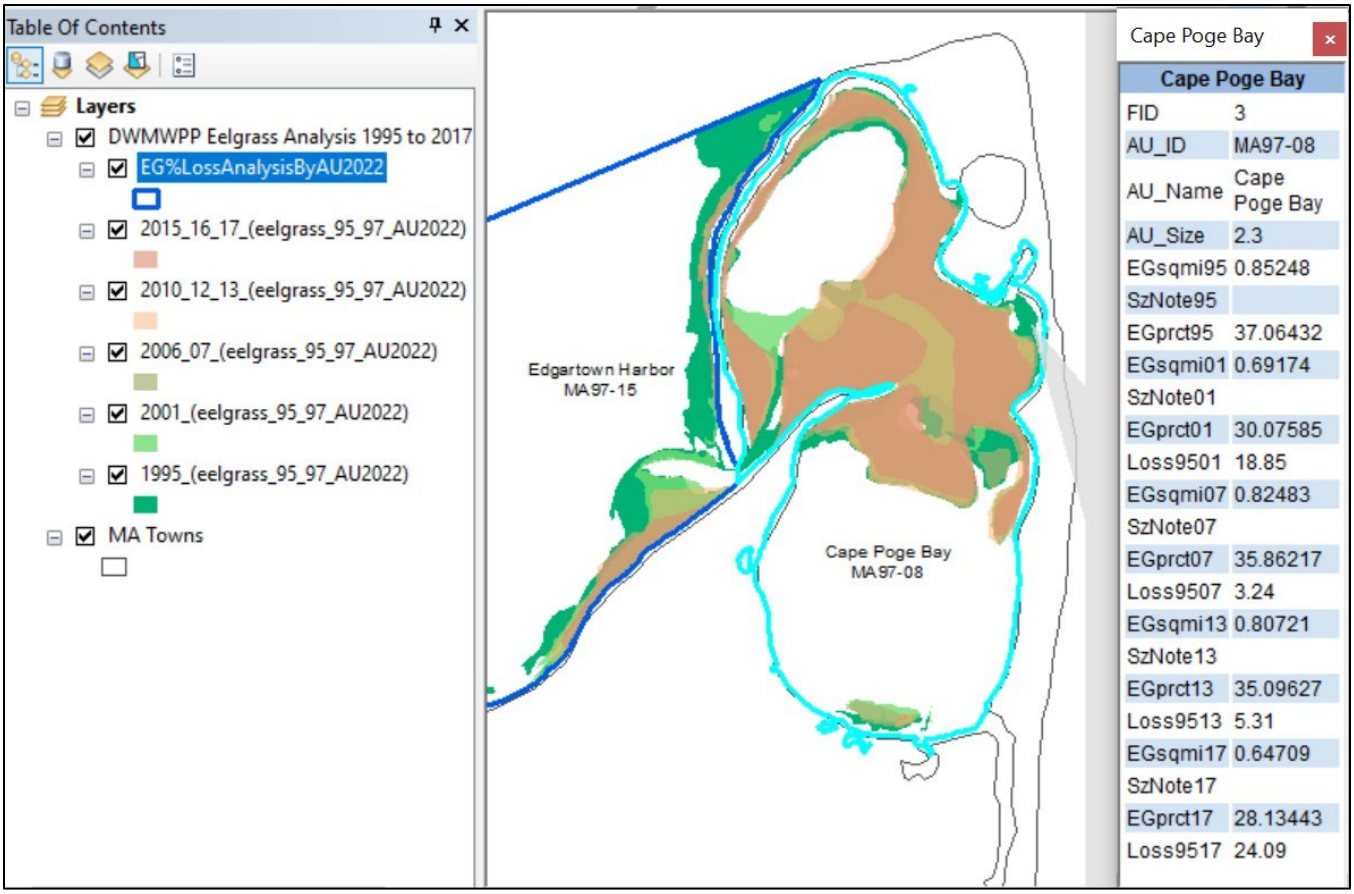
Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
The MassDEP Eelgrass Mapping Project documented ~24% loss of eelgrass bed habitat in Cape Poge Bay between 1995 and 2017. The Aquatic Life Use for Cape Poge Bay (MA97-08) is assessed as Not Supporting based on the loss of eelgrass bed habitat so an Estuarine Bioassessment impairment is being added. The former alert for some evidence of eelgrass bed habitat loss is no longer needed.	

Biological Monitoring Information

Primary Producers Data

Eelgrass analysis 1995-2017 for Cape Poge Bay MA97-08 (MassGIS 2018, MassDEP Undated 4):



The MassDEP Eelgrass Mapping Project documented an ~24% loss of eelgrass bed habitat in Cape Poge Bay between 1995 and 2017.

Fish Consumption

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Cape Poge Bay (MA97-08); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	**Alert**
Fully Supporting	NO
2022 Use Attainment Summary	
Cape Poge Bay (MA97-08): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 2.216 sq mi (97%). The approved shellfish growing area represents 2.216 sq mi (97%). The Shellfish Harvesting Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V13.0	Edgartown Outer Harbor	Approved	0.00268	0.1%
V18.0	Chappaquiddick Beach	Approved	0.00004	0.0%
V21.0	Cape Poge Bay	Approved	2.21323	96.4%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Cape Poge Bay (MA97-08), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 2.216 sq mi (97%). The approved shellfish growing area represents 2.216 sq mi (97%). The growing area (normalized to the AU area) is classified as 100% approved, so the Primary Contact Recreation Use for Cape Poge Bay (MA97-08) will continue to be assessed as Fully Supporting.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Cape Poge Bay (MA97-08): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 2.216 sq mi (97%). The approved shellfish growing area represents 2.216 sq mi (97%). The Primary Contact Recreational Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Secondary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 2.216 sq mi (97%). The approved shellfish growing area represents 2.216 sq mi (97%). The growing area (normalized to the AU area) is classified as 100% approved, so the Secondary Contact Recreation Use for Cape Poge Bay (MA97-08) will continue to be assessed as Fully Supporting.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Cape Poge Bay (MA97-08): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 2.216 sq mi (97%). The approved shellfish growing area represents 2.216 sq mi (97%). The Secondary Contact Recreational use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Chilmark Pond (MA97-05)

Location:	South of South Road including Wades Cove and Gilberts Cove, Chilmark, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	0.31 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Enterococcus	R1_MA_2020_03	Changed
5	4a	Estuarine Bioassessments	R1_MA_2020_3	Changed
5	4a	Fecal Coliform	R1_MA_2020_03	Changed
5	4a	Nitrogen, Total	R1_MA_2020_3	Changed
5	4a	Nutrient/Eutrophication Biological Indicators	R1_MA_2020_3	Changed

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Enterococcus	Source Unknown (N)					X	
Estuarine Bioassessments	Agriculture (Y)	X					
Estuarine Bioassessments	Impervious Surface/Parking Lot Runoff (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Residential Districts (Y)	X					
Fecal Coliform	Source Unknown (N)			X			
Nitrogen, Total	Agriculture (Y)	X					
Nitrogen, Total	Impervious Surface/Parking Lot Runoff (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Residential Districts (Y)	X					
Nutrient/Eutrophication Biological Indicators	Agriculture (Y)	X					
Nutrient/Eutrophication Biological Indicators	Impervious Surface/Parking Lot Runoff (Y)	X					
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nutrient/Eutrophication Biological Indicators	Residential Districts (Y)	X					

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Enterococcus	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the Islands Watershed (Report CN 254.1, approved 2020-05-20, ATTAINS Action ID: R1_MA_2020_03)
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the Islands Watershed (Report CN 254.1, approved 2020-05-20, ATTAINS Action ID: R1_MA_2020_03)
Estuarine Bioassessments	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Chilmark Pond Estuarine System TMDL for Nitrogen (Total) (Report CN CN 451.1, approved 2019-11-26, ATTAINS Action ID: R1_MA_2020_3)
Nitrogen, Total	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Chilmark Pond Estuarine System TMDL for Nitrogen (Total) (Report CN CN 451.1, approved 2019-11-26, ATTAINS Action ID: R1_MA_2020_3)
Nutrient/Eutrophication Biological Indicators	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Chilmark Pond Estuarine System TMDL for Nitrogen (Total) (Report CN CN 451.1, approved 2019-11-26, ATTAINS Action ID: R1_MA_2020_3)

Recommendations

2022 Recommendations
ALU: Since diadromous fish passage limitations do occur at the barrier beach along Chilmark Pond (MA97-05), a well-designed operation and management plan for breaching for fish passage and the health of the salt pond should be developed with the community's Natural Resource Manager staff and DMF biologists. REC: The Enterococci impairment was first identified for Chilmark Pond (Primary Contact Recreational Use in the 2016 IR reporting cycle based on beach closures at the Lucy Vincent Beach in Chilmark (postings >10% during the 2010 through 2013 bathing seasons). Testing is no longer being conducted in the pond (the ocean side of the Lucy Vincent Beach is being tested) so follow-up data gathering/sampling plan/sampling/source identification/corrective actions should be developed and implemented for Chilmark Pond.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
According to DMF biologists, channel limitations from Chilmark Pond to the ocean on the south side of the island, was noted to provide adequate passage to diadromous fish. The passage score of "2" on a 0-10 scale (with 10 equating to no possible passage), indicates that the barrier is only a minor obstruction to the passage of the targeted fish species, river herring and white perch. The population score in this area was noted to be "1". No other data are available to assess the Aquatic Life Use for Chilmark Pond (MA97-05), so it will continue to be assessed as Not Supporting, with the impairments for Estuarine Bioassessments, Nitrogen, Total and Nutrient/Eutrophication Biological Indicators being carried forward.	

Biological Monitoring Information

Habitat and Flow Data (anthropogenic alterations)

MassDMF Status of Priority Diadromous Fish Passage Barriers. (Chase 2020)

Assessment Summary
According to DMF biologists, channel limitations from Chilmark Pond to the ocean on the south side of the island, was noted to provide adequate passage to diadromous fish. This barrier was given a passage score of "2" on a 0-10 scale (with 10 equating to no possible passage), indicating that the barrier beach is only a minor obstruction to the passage of the targeted fish species, river herring and white perch. The population score in this area was noted to be "1". Notes were made that operational guidelines are needed for the opening of a man-made channel at this location.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Chilmark Pond (MA97-05); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	
Chilmark Pond (MA97-05): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.2674 sq mi (86%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.2674 sq mi (86%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi. There is insufficient information available to delist the existing Fecal Coliform impairment, so the Shellfish Harvesting Use is evaluated as not supporting.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V32.0	Chilmark Pond	Prohibited	0.26743	85.6%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Chilmark Pond (MA97-05), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the Primary Contact Recreational Use for Chilmark Pond (MA97-05), so it will continue to be assessed as Not Supporting with the *Enterococcus* impairment being carried forward.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Chilmark Pond (MA97-05): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.2674 sq mi (86%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the Secondary Contact Recreational Use for Chilmark Pond (MA97-05), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Chilmark Pond (MA97-05): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.2674 sq mi (86%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Coskata Pond (MA97-03)

Location:	Pond north of Nantucket Harbor, Nantucket to confluence with Nantucket Harbor, Nantucket.
AU Type:	ESTUARY
AU Size:	0.08 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aquatic Life Use for Coskata Pond (MA97-03), so it is Not Assessed.	

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Coskata Pond (MA97-03); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
Coskata Pond (MA97-03): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0699 sq mi (86%). The approved shellfish growing area represents 0.0699 sq mi (86%). The Shellfish Harvesting Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
NT5.0	Nantucket Harbor	Approved	0.00039	0.5%
NT6.0	Coskata Pond	Approved	0.06953	85.3%

Aesthetic

2022 Use Attainment	Alert

Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Coskata Pond (MA97-03), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	**Alert**
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0699 sq mi (86%). The approved shellfish growing area represents 0.0699 sq mi (86%). The growing area (normalized to the AU area) is classified as 100% approved, so the Primary Contact Recreation Use for Coskata Pond (MA97-03) will continue to be assessed as Fully Supporting.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Coskata Pond (MA97-03): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0699 sq mi (86%). The approved shellfish growing area represents 0.0699 sq mi (86%). The Primary Contact Recreational Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0699 sq mi (86%). The approved shellfish growing area represents 0.0699 sq mi (86%). The growing area (normalized to the AU area) is classified as 100% approved, so the Secondary Contact Recreation Use for Coskata Pond (MA97-03) will continue to be assessed as Fully Supporting.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Coskata Pond (MA97-03): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0699 sq mi (86%). The approved shellfish growing area represents 0.0699 sq mi (86%). The Secondary Contact Recreational use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Cuttyhunk Pond (MA97-21)

Location:	Waters west of the channel connecting Cuttyhunk Pond to Cuttyhunk Harbor, Gosnold, Elizabeth Islands (formerly reported as 1996 segment: Cuttyhunk Pond MA95-26).
AU Type:	ESTUARY
AU Size:	0.15 SQUARE MILES
Classification/Qualifier:	SA: ORW, SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Fecal Coliform	R1_MA_2020_03	Changed

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Fecal Coliform	Source Unknown (N)			X			

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the Islands Watershed (Report CN 254.1, approved 2020-05-20, ATTAINS Action ID: R1_MA_2020_03)

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	

The MassDEP Eelgrass Mapping Project documented a steady gain in eelgrass bed habitat in Cuttyhunk Pond from 1995 to 2017 (from ~0.02 mi^2 to ~0.08mi^2, respectively), which is indicative of improved water quality conditions. The Buzzards Bay Coalition (BBC) staff/volunteers conducted discrete water quality monitoring in the surface waters of Cuttyhunk Pond, Gosnold (MA97-21) towards its west end (BBC_CI1), usually weekly (between the hours of 6 and 9am) in the summers of 2015-2019. The data were indicative of generally good conditions: maximum temperature 25.5°C (n=42) and most DO measurements were ≥ 6.0mg/L (minimum 4.5mg/L in July 2018 with all other measurements >5.0mg/L, n=26). The nutrient sampling efforts (ebb tides in July and August) documented a seasonal average total nitrogen concentration between 0.27-0.28mg/L (n=14, maximum measurement 0.36mg/L); the maximum *C*hlorophyll *a* was 7.07ug/L (n=20) on four occasions >5ug/L but never >10ug/L, and Secchi disk depth ranged from 1.4-2.8m. Ammonia-nitrogen concentrations were generally low (range 0.004 to 0.03mg/L, n=20), but TUs could not be calculated (lack of quality assured pH and salinity data availability).
The Aquatic Life Use of Cuttyhunk Pond (MA97-21) will continue to be assessed as Fully Supporting based on a steady gain in eelgrass bed habitat from 1995 to 2017 and the water quality data collected by BBC staff/volunteers between 2015 and 2019.

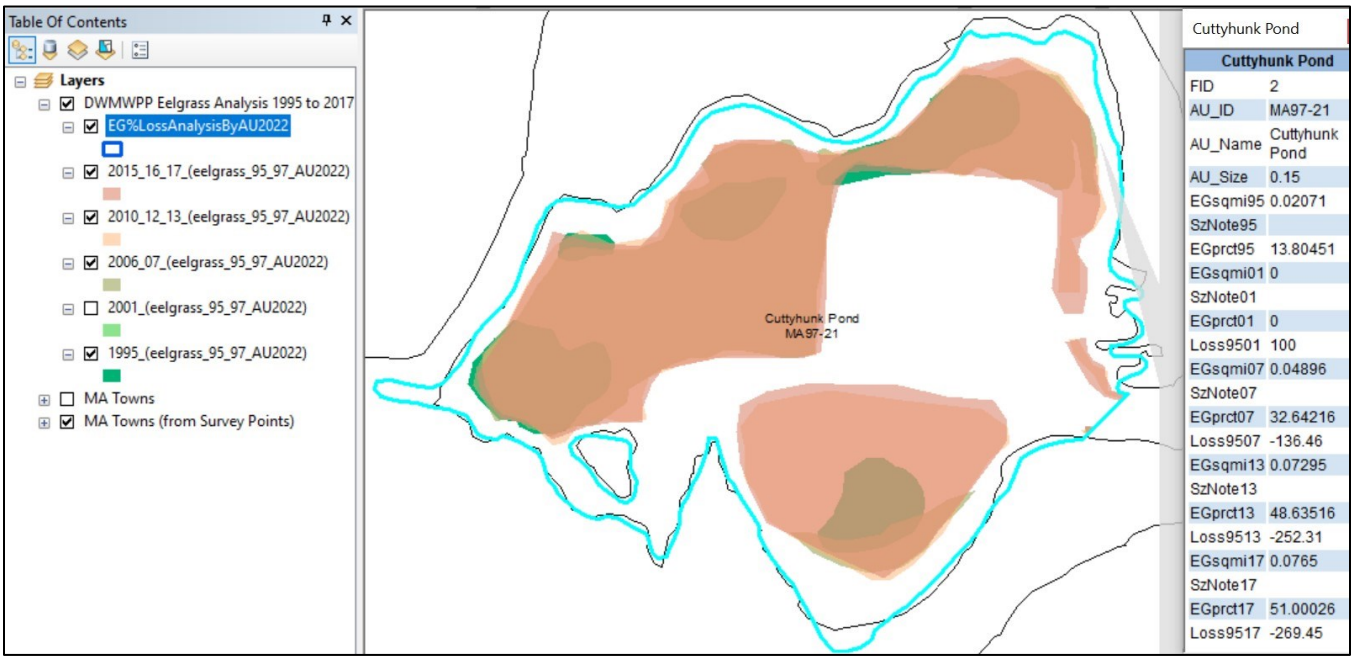
Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
BBC_CI1	Buzzards Bay Coalition	Water Quality	Cuttyhunk Pond	Cuttyhunk Pond, Gosnold	41.424552	-70.92869

Biological Monitoring Information

Primary Producers Data

Eelgrass analysis 1995-2017 for Cuttyhunk Pond MA97-21 (MassGIS 2018, MassDEP Undated 4):



The MassDEP Eelgrass Mapping Project documented a steady gain in eelgrass bed habitat in Cuttyhunk Pond from 1995 to 2017 (from ~0.02 mi^2 to ~0.08mi^2, respectively), indicative of improved water quality conditions.

Physico-chemical Water Quality Information

DO, pH, Temperature

Buzzards Bay Coalition Estuarine Discrete Dissolved Oxygen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[DO was measured at a variety of depths originally categorized by BBC as "S" and "D". Average depths at "S" and "D" for each year are presented in this table]

Station Code	Start Date	End Date	Average Sample Depth (m)	DO Count	DO Min (mg/L)	DO Avg (mg/L)	% Meas. <6.0	% Meas. <5.0	% Meas. <4.0
BBC_CI1	06/11/15	09/27/15	0.2	9	6.5	7.6	0	0	0
BBC_CI1	06/16/16	09/10/16	0.2	5	6.0	6.7	0	0	0
BBC_CI1	06/29/17	08/25/17	0.2	4	6.5	7.1	0	0	0
BBC_CI1	06/11/18	08/07/18	0.2	4	4.5	5.6	50	25	0
BBC_CI1	06/25/19	09/04/19	0.2	4	6.0	6.9	0	0	0

Buzzards Bay Coalition Discrete Estuarine Temperature Data (2014-2018). (BBC 2021) (MassDEP Undated 2)
[Temperature was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer Index is June 1 – Sept 15]

Station Code	Start Date	End Date	Average Sample Depth (m)	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count >29.4
BBC_CI1	06/11/15	09/27/15	0.2	13	11	25.0	21.8	0
BBC_CI1	06/16/16	09/10/16	0.2	9	9	25.5	21.9	0
BBC_CI1	06/29/17	08/25/17	0.2	8	8	22.2	20.5	0
BBC_CI1	06/11/18	08/21/18	0.2	6	6	23.4	18.9	0
BBC_CI1	06/25/19	09/04/19	0.2	8	8	24.5	21.7	0

Nutrients (Primary Producer Screening, Physico-chemical Screening)

Buzzards Bay Coalition Estuarine Nutrient Enrichment Indicator Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer seasonal total nitrogen data collected May-Sept]

Station Code	Data Year	Average Sample Depth (m)	Seasonal TN Count	Seasonal TN Min (mg/L)	Seasonal TN Max (mg/L)	Seasonal TN Avg (mg/L)	Chl-a Count	Chl-a Min (ug/L)	Chl-a Max (ug/L)	Chl-a Avg (ug/L)	Chl-a Count ≤5	Chl-a Count >10
BBC_CI1	2015	0.2	3	0.25	0.30	0.27	4	1.87	5.74	4.07	2	0
BBC_CI1	2016	0.2	3	0.23	0.36	0.28	4	1.55	7.07	3.47	3	0
BBC_CI1	2017	0.2	2	0.24	0.32	0.28	4	1.41	3.32	2.32	4	0
BBC_CI1	2018	0.2	4	0.19	0.35	0.28	4	1.86	5.26	3.34	3	0
BBC_CI1	2019	0.2	2	0.24	0.29	0.27	4	1.06	2.98	2.20	4	0

Buzzards Bay Coalition Secchi Disk Depth Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

Station Code	Start Date	End Date	Secchi disk depth Count	Secchi disk depth Min (m)	Secchi disk depth Max (m)	Secchi disk depth Avg (m)
BBC_CI1	07/06/17	08/17/17	3	2.5	2.8	2.6
BBC_CI1	07/24/18	07/24/18	1	2.5	2.5	2.5
BBC_CI1	07/11/19	08/15/19	5	1.4	2.6	1.9

Toxics and other pollutants (metals, ammonia, chlorine)

Buzzards Bay Coalition Ammonia-Nitrogen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.

Station Code	Start Date	End Date	Average Sample Depth (m)	NH3 Count	NH3 Min (mg/L)	NH3 Max (mg/L)	NH3 Avg (mg/L)
BBC_CI1	07/13/15	08/25/15	0.2	4	0.011	0.031	0.019
BBC_CI1	07/05/16	08/15/16	0.2	4	0.005	0.019	0.011
BBC_CI1	07/06/17	08/17/17	0.2	4	0.004	0.017	0.009
BBC_CI1	07/10/18	08/21/18	0.2	4	0.004	0.024	0.012
BBC_CI1	07/11/19	08/15/19	0.2	4	0.004	0.017	0.009

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Cuttyhunk Pond (MA97-21); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	
Cuttyhunk Pond (MA97-21): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.1492 sq mi (98%). The approved shellfish growing area represents 0 sq mi (0%). The Shellfish Harvesting Use is assessed as not supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing fecal coliform impairment is being retained. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
E9.1	Cuttyhunk Pond	Prohibited	0.01283	8.4%
E9.2	Cuttyhunk Pond	Conditionally Approved	0.13636	89.2%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Cuttyhunk Pond (MA97-21), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the Primary Contact Recreational Use for Cuttyhunk Pond (MA97-21), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Cuttyhunk Pond (MA97-21): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.1492 sq mi (98%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the Secondary Contact Recreational Use for Cuttyhunk Pond (MA97-21), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Cuttyhunk Pond (MA97-21): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.1492 sq mi (98%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Edgartown Great Pond (MA97-17)

Location:	excluding Jacobs Pond (PALIS# 97038) Edgartown, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	1.35 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Estuarine Bioassessments	64380	Unchanged
4a	4a	Nitrogen, Total	64380	Unchanged
4a	4a	Nutrient/Eutrophication Biological Indicators	64380	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Estuarine Bioassessments	Agriculture (Y)	X					
Estuarine Bioassessments	Impervious Surface/Parking Lot Runoff (Y)	X					
Estuarine Bioassessments	Municipal Point Source Discharges (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Residential Districts (Y)	X					
Nitrogen, Total	Agriculture (Y)	X					
Nitrogen, Total	Impervious Surface/Parking Lot Runoff (Y)	X					
Nitrogen, Total	Municipal Point Source Discharges (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Residential Districts (Y)	X					
Nutrient/Eutrophication Biological Indicators	Agriculture (Y)	X					
Nutrient/Eutrophication Biological Indicators	Impervious Surface/Parking Lot Runoff (Y)	X					
Nutrient/Eutrophication Biological Indicators	Municipal Point Source Discharges (Y)	X					
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nutrient/Eutrophication Biological Indicators	Residential Districts (Y)	X					

Recommendations

2022 Recommendations
ALU: While diadromous fish passage limitations do occur at the barrier beach along Edgartown Great Pond (MA97-17), a well-designed operation and management plan for breaching for fish passage and the health of the salt pond should be developed with the community's Natural Resource Manager staff and DMF biologists.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
According to DMF biologists, there are channel limitations between Edgartown Great Pond and the ocean on the south side of Martha's Vineyard in Edgartown that limits the passage of diadromous fish. The passage score of "5" on a 0-10 scale (with 10 equating to no possible passage), indicates that the barrier beach restricts the passage of the targeted fish species, river herring and white perch. The population score in this area was noted to be "4". Notes were made that the Town currently breaches the barrier beach at the outlet under permit three to five times per year, to allow for fish passage. The Aquatic Life Use for Edgartown Great Pond (MA97-17) will continue to be assessed as Not Supporting with the impairments for Estuarine Bioassessments, Nitrogen, Total, and Nutrient/Eutrophication Biological Indicators being carried forward. While diadromous fish passage limitations do occur at the barrier beach, an impairment decision is not being made because it is considered natural. Recommendations for managing passage (well-designed operation and management plans for breaching that plan for fish passage and the health of the salt pond) should be developed with the community's Natural Resource Manager staff and DMF biologists.	

Biological Monitoring Information

Habitat and Flow Data (anthropogenic alterations)

MassDMF Status of Priority Diadromous Fish Passage Barriers. (Chase 2020)

Assessment Summary
According to DMF biologists, there are channel limitations between Edgartown Great Pond and the ocean on the south side of Martha's Vineyard in Edgartown that limits the passage of diadromous fish. The passage score of "5" on a 0-10 scale (with 10 equating to no possible passage), indicates that the barrier beach restricts the passage of the targeted fish species, river herring and white perch. The population score in this area was noted to be "4". Notes were made that the Town currently breaches the barrier beach at the outlet under permit 3-5 times per year, to allow for fish passage. Recommendations for managing passage (well-designed operation and management plans for breaching that plan for fish passage and the health of the salt pond) should be developed with the community's Natural Resource Manager staff and DMF biologists.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Edgartown Pond (MA97-17); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
Edgartown Great Pond (MA97-17): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.3085 sq mi (97%). The approved shellfish growing area represents 1.3085 sq mi (97%). The Shellfish Harvesting Use will continue to be assessed as Fully Supporting because the growing area (normalized to the AU area) is classified as 100% approved.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V26.0	Edgartown Great Pond	Approved	1.12311	82.9%
V26.1	Slough Cove	Approved	0.05116	3.8%
V26.2	Turkeyland Cove	Approved	0.13420	9.9%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Edgartown Great Pond (MA97-17), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.3085 sq mi (97%). The approved shellfish growing area represents 1.3085 sq mi (97%). The Shellfish Harvesting Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, so the Primary Contact Recreation Use for Edgartown Great Pond (MA97-17) will continue to be assessed as Fully Supporting.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Edgartown Great Pond (MA97-17): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.3085 sq mi (97%). The approved shellfish growing area represents 1.3085 sq mi (97%). The Primary Contact Recreational Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Secondary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO

2022 Use Attainment Summary
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.3085 sq mi (97%). The approved shellfish growing area represents 1.3085 sq mi (97%). The Shellfish Harvesting Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, so the Secondary Contact Recreation Use for Edgartown Great Pond (MA97-17) will continue to be assessed as Fully Supporting.

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Edgartown Great Pond (MA97-17): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.3085 sq mi (97%). The approved shellfish growing area represents 1.3085 sq mi (97%). The Secondary Contact Recreational use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Edgartown Harbor (MA97-15)

Location:	Waters west of Cape Poge Gut bounded by an imaginary line drawn from Chappaquiddick Point to Dock Street and northeasterly from the end of Plantingfield Way to Cape Poge Elbow (excluding Eel Pond), Edgartown, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	3.09 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Estuarine Bioassessments		Added
5	5	Fecal Coliform	R1_MA_2020_03	Changed

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Estuarine Bioassessments	Source Unknown (N)	X					
Fecal Coliform	Source Unknown (N)			X			

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the Islands Watershed (Report CN 254.1, approved 2020-05-20, ATTAINS Action ID: R1_MA_2020_03)

Designated Use Attainment Decisions

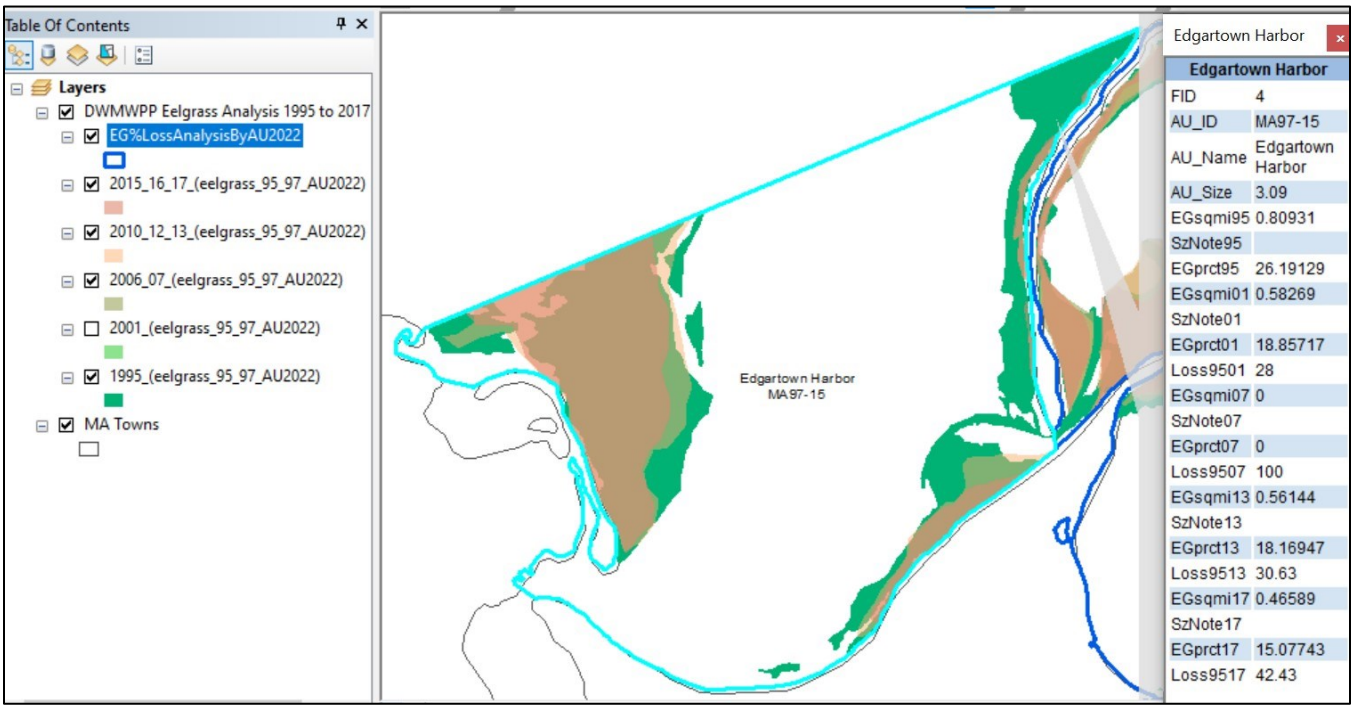
Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
The MassDEP Eelgrass Mapping Project documented a ~42% loss of eelgrass bed habitat in Edgartown Harbor between 1995-2017. The Aquatic Life Use for Edgartown Harbor (MA97-15) is assessed as Not Supporting based on the loss of eelgrass bed habitat so an Estuarine Bioassessment impairment is being added. The former alert for some evidence of eelgrass bed habitat loss along deeper water edges is no longer needed.	

Biological Monitoring Information

Primary Producers Data

Eelgrass analysis 1995-2017 for Edgartown Harbor MA97-15 (MassGIS 2018, MassDEP Undated 4):



[Note 100% loss documented in 2007, but this is likely to correspond to a time when no mapping was done in this AU.]

The MassDEP Eelgrass Mapping Project documented a ~42% loss of eelgrass bed habitat in Edgartown Harbor between 1995-2017.

Fish Consumption

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Edgartown Harbor (MA97-15); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	**Alert**
Not Supporting	NO
2022 Use Attainment Summary	
Edgartown Harbor (MA97-15): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 3.0546 sq mi (99%). The approved shellfish growing area represents 2.9938 sq mi (97%). The Shellfish Harvesting Use is assessed as not supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing fecal coliform impairment is being retained.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V13.0	Edgartown Outer Harbor	Approved	1.73853	56.3%
V17.0	Eel Pond	Conditionally Approved	0.01750	0.6%
V18.0	Chappaquiddick Beach	Approved	1.25456	40.6%
V19.1	Edgartown Inner Harbor	Conditionally Approved	0.04333	1.4%
V21.0	Cape Poge Bay	Approved	0.00070	0.0%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Edgartown Harbor (MA97-15), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
Three Edgartown beaches (Fuller Street (ID 2806), Chappy Point (ID 2809) & Chappy Beach Club (ID 2810)) were almost never posted for swimming between 2014 and 2019. The Primary Contact Recreational Use for Edgartown Harbor (MA97-15) will continue to be assessed as Fully Supporting, since there were few, if any, swimming advisory postings at the Fuller Street, Chappy Point & Chappy Beach Club Beaches between 2014 and 2019.	

Beach Postings

MassDPH Beach Posting Data Summary (% Bathing Season Posted 2014-2019) (Bailey, Logan Feb. 2, 2021) (MassDEP Undated 2)

Beach ID	Beach Name/Town	Left Boundary (Latitude)	Left Boundary (Longitude)	Right Boundary (Latitude)	Right Boundary (Longitude)	2014	2015	2016	2017	2018	2019	# years> 10%
2806	Fuller Street/Edgartown	41.39714	-70.50600	41.39463	-70.50440	0%	0%	1%	0%	0%	0%	0
2809	Chappy Point Beach/Edgartown	41.38871	-70.50830	41.38876	-70.50620	0%	0%	0%	0%	0%	0%	0
2810	Chappy Beach Club/Edgartown	41.38707	-70.50380	41.38603	-70.50200	0%	0%	0%	0%	0%	0%	0

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Edgartown Harbor (MA97-15): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 3.0546 sq mi (99%). The approved shellfish growing area represents 2.9938 sq mi (97%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
Three Edgartown beaches (Fuller Street (ID 2806), Chappy Point (ID 2809) & Chappy Beach Club (ID 2810)) were infrequently posted for swimming between 2014 and 2019. The Secondary Contact Recreational Use for Edgartown Harbor (MA97-15) will continue to be assessed as Fully Supporting, since there were few if any swimming advisory postings at the Fuller Street, Chappy Point & Chappy Beach Club Beaches between 2014 and 2019.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Edgartown Harbor (MA97-15): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 3.0546 sq mi (99%). The approved shellfish growing area represents 2.9938 sq mi (97%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Farm Pond (MA97-30)

Location:	Oak Bluffs.
AU Type:	ESTUARY
AU Size:	0.05 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	5	Dissolved Oxygen	64662	Unchanged
4a	5	Estuarine Bioassessments	64662	Unchanged
4a	5	Fecal Coliform		Added
4a	5	Nitrogen, Total	64662	Unchanged
4a	5	Nutrient/Eutrophication Biological Indicators	64662	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Dissolved Oxygen	Impervious Surface/Parking Lot Runoff (Y)	X					
Dissolved Oxygen	Landfills (Y)	X					
Dissolved Oxygen	Municipal Point Source Discharges (Y)	X					
Dissolved Oxygen	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Dissolved Oxygen	Residential Districts (Y)	X					
Estuarine Bioassessments	Impervious Surface/Parking Lot Runoff (Y)	X					
Estuarine Bioassessments	Landfills (Y)	X					
Estuarine Bioassessments	Municipal Point Source Discharges (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Residential Districts (Y)	X					
Fecal Coliform	Source Unknown (N)			X			
Nitrogen, Total	Impervious Surface/Parking Lot Runoff (Y)	X					
Nitrogen, Total	Landfills (Y)	X					
Nitrogen, Total	Municipal Point Source Discharges (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Residential Districts (Y)	X					
Nutrient/Eutrophication Biological Indicators	Impervious Surface/Parking Lot Runoff (Y)	X					
Nutrient/Eutrophication Biological Indicators	Landfills (Y)	X					
Nutrient/Eutrophication Biological Indicators	Municipal Point Source Discharges (Y)	X					

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nutrient/Eutrophication Biological Indicators	Residential Districts (Y)	X					

Recommendations

2022 Recommendations
ALU: Continue to monitor eelgrass bed habitat, dissolved oxygen and nutrient enrichment indicators, to evaluate whether or not improvement is continuing, as suggested by recent indication of eelgrass bed growth.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
The MassDEP Eelgrass Mapping Program documented no eelgrass bed habitat in Farm Pond in 1995, however during the 2015-2017 surveys an area of approximately 0.004sq miles was documented in the south basin. This data, in effect, suggests a 100% gain of eelgrass bed habitat in Farm Pond between 1995-2017. Despite the apparent improvement in eelgrass bed habitat there are no other data available to assess the Aquatic Life Use for Farm Pond (MA97-30), so it will continue to be assessed as Not Supporting, with the impairments for Dissolved Oxygen, Estuarine Bioassessments, Nitrogen, Total and Nutrient/Eutrophication Biological Indicators being carried forward. Recommendations will be made to collect additional water quality and biological monitoring data in Farm Pond, to confirm if the improvement trend continues.	

Biological Monitoring Information

Primary Producers Data

Eelgrass analysis 1995-2017 for Farm Pond MA97-30 (MassGIS 2018, MassDEP Undated 4):

The MassDEP Eelgrass Mapping Project documented an ~100% gain of eelgrass bed habitat in Farm Pond between 1995-2017.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Farm Pond (MA97-30); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	
Farm Pond (MA97-30): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0497 sq mi (94%). The approved shellfish growing area represents 0 sq mi (0%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications, a fecal coliform impairment is being added. Alert due to prohibited area >= 0.0001 sq mi carried forward.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V15.0	Farm Pond	Conditionally Approved	0.04648	87.6%

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V15.1	Farm Pond, East	Prohibited	0.00327	6.2%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Farm Pond (MA97-30), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the Primary Contact Recreational Use for Farm Pond (MA97-30), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Farm Pond (MA97-30): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0497 sq mi (94%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the Secondary Contact Recreational Use for Farm Pond (MA97-30), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Farm Pond (MA97-30): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0497 sq mi (94%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Gibbs Pond (MA97028)

Location:	Nantucket.
AU Type:	FRESHWATER LAKE
AU Size:	34 ACRES
Classification/Qualifier:	B

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Mercury in Fish Tissue	33880	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Mercury in Fish Tissue	Atmospheric Deposition - Toxics (Y)		X			
Mercury in Fish Tissue	Source Unknown (N)		X			

Recommendations

2022 Recommendations
ALU: Conduct additional Total Phosphorus sampling as well as Secchi disk depth and Chlorophyll *a*, to better evaluate the nature and extent of possible nutrient enrichment impairments for Gibbs Pond (MA97028).

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	YES
2022 Use Attainment Summary	
No recent data are available to assess the status of the Aquatic Life Use for Gibbs Pond (MA97028), so it is Not Assessed. The Alert for concerns related to elevated total phosphorus in September 2000 (Connors 2003) is being carried forward.	

Fish Consumption

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
MassDEP biologists conducted fish toxics sampling at Gibbs Pond in October 2019 at the recommendation of the Inter-agency Fish Toxics Committee. Edible fillets were analyzed for the presence of mercury, arsenic, cadmium, and selenium. Since no change to the prior site-specific mercury advisory was made, the Fish Consumption Use for Gibbs Pond (MA97028) will continue to be assessed as Not Supporting for Mercury in Fish Tissue. MA DPH recommends that *Children younger than 12 years, pregnant women and nursing mothers should not consume any fish from Gibbs Pond and the general public should limit consumption of all fish from Gibbs Pond to two meals per month.*	

MassDEP fish toxics sampling information (2018-2020) and MassDPH Fish Consumption Advisory information (2019-2021) (MassDPH 2021, MassDEP 2019, Davis July 21, 2021).

MassDEP biologists conducted fish toxics sampling at Gibbs Pond in October 2019 at the recommendation of the Inter-agency Fish Toxics Committee. Edible fillets were analyzed for the presence of mercury, arsenic, cadmium, and selenium. Since no change to the prior site-specific mercury advisory was made, the Fish Consumption Use for Gibbs Pond (MA97028) will continue to be assessed as Not Supporting.

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Gibbs Pond (MA97028), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the Primary Contact Recreational Use for Gibbs Pond (MA97028), so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the Secondary Contact Recreational Use for Gibbs Pond (MA97028), so it is Not Assessed.	

Great Point Pond (MA97-04)

Location:	On Great Point, Nantucket.
AU Type:	ESTUARY
AU Size:	0.01 SQUARE MILES
Classification/Qualifier:	SA: SFO

No usable data were available for Great Point Pond (MA97-04) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None		Unchanged

Head of Hummock Pond (MA97035)

Location:	Nantucket.
AU Type:	FRESHWATER LAKE
AU Size:	16 ACRES
Classification/Qualifier:	B

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Harmful Algal Blooms		Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Harmful Algal Blooms	Source Unknown (N)			X	X	X

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aquatic Life Use for Head of Hummock Pond (MA97035), so it is Not Assessed.	

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
Although fish toxics sampling was conducted in Head of Hummock Pond (MA97035) in 2000, since no site-specific advisory has been issued the Fish Consumption Use for Head of Hummock Pond is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
C-HAB postings for Hummock Pond (Head of Hummock Pond) (MA97035) were reported to MA DPH for 4 days in 2016, 37 days in 2017, and 110 days in 2018 (not issued or confirmed based on samples). The Aesthetics Use for Head of Hummock Pond will continue to be assessed as Not Supporting since blooms >20 days in duration were reported in two recent years, so the Harmful Algal Blooms impairment is being carried forward.	

Algal Bloom Information

Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2019 MassDPH Data (Bailey, Logan April 15, 2021) (MassDEP Undated 2)

C-HAB Summary Statement
C-HAB postings for Hummock Pond (Head of Hummock Pond) (MA97035) were reported to MassDPH for 4 days in 2016, 37 days in 2017, and 110 days in 2018. Since blooms >20 days in duration were reported in two years, the Primary/Secondary Contact Recreational Uses and Aesthetics Use continue to be assessed as Not Supporting.

Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2019) Provided by MassDPH (Bailey, Logan April 15, 2021)

Waterbody	Sample Analysis Used in Issuing Advisory	Bloom Days, 2015	Bloom Days, 2016	Bloom Days, 2017	Bloom Days, 2018	Bloom Days, 2019	# Years with >20 Days of Closure	>1 Posting Per Year
Hummock Pond (Head of Hummock Pond)	Not issued or confirmed by sampling		4	37	110		2	no

Primary Contact Recreation

2022 Use Attainment	**Alert**
Not Supporting	NO
2022 Use Attainment Summary	
C-HAB postings for Hummock Pond (Head of Hummock Pond) (MA97035) were reported to MA DPH for 4 days in 2016, 37 days in 2017, and 110 days in 2018 (not issued or confirmed based on samples). The Primary Contact Recreational Use for Head of Hummock Pond will continue to be assessed as Not Supporting since blooms >20 days in duration were reported in two recent years, the Harmful Algal Blooms impairment is being carried forward.	

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Not Supporting	NO
2022 Use Attainment Summary	
C-HAB postings for Hummock Pond (Head of Hummock Pond) (MA97035) were reported to MA DPH for 4 days in 2016, 37 days in 2017, and 110 days in 2018 (not issued or confirmed based on samples). The Secondary Contact Recreational Use for Head of Hummock Pond will continue to be assessed as Not Supporting since blooms >20 days in duration were reported in two recent years, so the Harmful Algal Blooms impairment is being carried forward.	

Hither Creek (MA97-28)

Location:	From the outlet of Long Pond to Madaket Harbor at an imaginary line drawn easterly from Jackson Point to Little Neck, Nantucket (as of the 2016 reporting cycle this segment includes Madaket Ditch).
AU Type:	ESTUARY
AU Size:	0.07 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Dissolved Oxygen	64480	Unchanged
4a	4a	Estuarine Bioassessments	64480	Unchanged
4a	4a	Nitrogen, Total	64480	Unchanged
4a	4a	Nutrient/Eutrophication Biological Indicators	64480	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Dissolved Oxygen	Impervious Surface/Parking Lot Runoff (Y)	X					
Dissolved Oxygen	Landfills (Y)	X					
Dissolved Oxygen	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Dissolved Oxygen	Residential Districts (Y)	X					
Estuarine Bioassessments	Impervious Surface/Parking Lot Runoff (Y)	X					
Estuarine Bioassessments	Landfills (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Residential Districts (Y)	X					
Nitrogen, Total	Impervious Surface/Parking Lot Runoff (Y)	X					
Nitrogen, Total	Landfills (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Residential Districts (Y)	X					
Nutrient/Eutrophication Biological Indicators	Impervious Surface/Parking Lot Runoff (Y)	X					
Nutrient/Eutrophication Biological Indicators	Landfills (Y)	X					
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nutrient/Eutrophication Biological Indicators	Residential Districts (Y)	X					

Designated Use Attainment Decisions

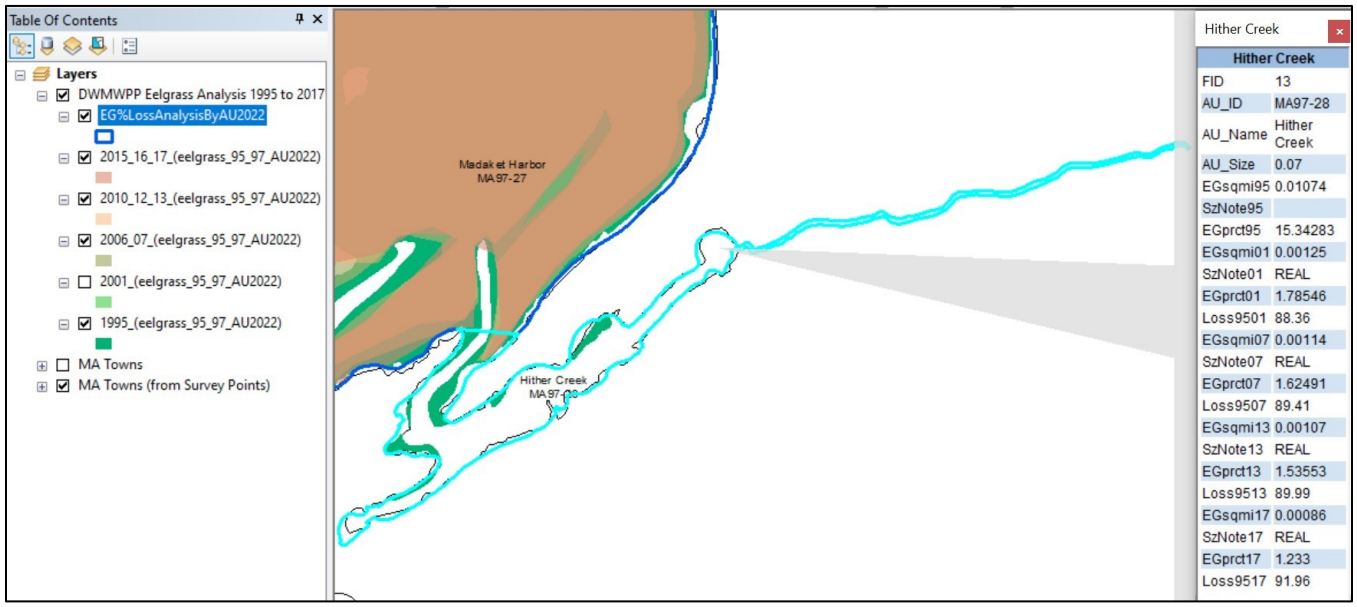
Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
The MassDEP Eelgrass Mapping Project documented a ~92% loss of eelgrass bed habitat in Hither Creek (MA97-28) between 1995-2017. According to DMF biologists, a channel restriction at North Cambridge Street (Chase June 14, 2022) was noted to provide adequate passage to diadromous fish. This location was given a passage score of "0" on a 0-10 scale (with 10 equating to no possible passage), indicating that the channel restriction is not an obstruction to the passage of the targeted species, river herring and American eel. The population score in this area was noted to be "2". It was also noted that the town wants to improve the run with the installation of a counting station as well as channel/culvert work. The Aquatic Life Use for Hither Creek (MA97-28) will continue to be assessed as Not Supporting with the impairments for Dissolved Oxygen, Estuarine Bioassessments, Nitrogen, Total and Nutrient/Eutrophication Biological Indicators being carried forward.	

Biological Monitoring Information

Primary Producers Data

Eelgrass analysis 1995-2017 for Hither Creek MA97-28 (MassGIS 2018, MassDEP Undated 4):



The MassDEP Eelgrass Mapping Project documented a ~92% loss of eelgrass bed habitat in Hither Creek between 1995-2017.

Habitat and Flow Data (anthropogenic alterations)

MassDMF Status of Priority Diadromous Fish Passage Barriers. (Chase 2020)

Assessment Summary
According to DMF biologists, a channel restriction at North Cambridge Street (Chase June 14, 2022) was noted to provide adequate passage to diadromous fish. This location was given a passage score of "0" on a 0-10 scale (with 10 equating to no possible passage), indicating that the channel restriction is not an obstruction to the passage of the targeted species, river herring and American eel. The population score in this area was noted to be "2". It was also noted that the town wants to improve the run with the installation of a counting station as well as channel/culvert work.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Hither Creek (MA97-28); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Insufficient Information	YES
2022 Use Attainment Summary	
Hither Creek (MA97-28): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0604 sq mi (82%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0604 sq mi (82%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
NT11.1	Jacksons Point	Prohibited	0.06041	81.7%
NT11.3	Madeket Harbor	Approved	0.00001	0.0%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Hither Creek (MA97-28), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Primary Contact Recreation Use for Hither Creek (MA97-28), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Hither Creek (MA97-28): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0604 sq mi (82%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Secondary Contact Recreation Use for Hither Creek (MA97-28), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Hither Creek (MA97-28): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0604 sq mi (82%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

James Pond (MA97-38)

Location:	West Tisbury.
AU Type:	ESTUARY
AU Size:	0.08 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	5	Chlorophyll-a		Added
--	5	Dissolved Oxygen		Added

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Chlorophyll-a	Source Unknown (N)	X					
Dissolved Oxygen	Source Unknown (N)	X					

Recommendations

2022 Recommendations
ALU: Conduct additional Total Nitrogen sampling (at least three times per season at mid-ebb tide) to clarify the nature and extent of nutrient enrichment impairments for James Pond (MA97-38). AES: Conduct additional Chlorophyll *a* sampling and take note of any aesthetically objectionable conditions (e.g., algal blooms, water color) to better evaluate the nature and extent of potential impairments of the Aesthetics Use for James Pond (MA97-38).

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	

The Buzzards Bay Coalition (BBC) staff/volunteers conducted discrete water quality monitoring in James Pond, West Tisbury (MA97-38) at five locations spread from near the inlet to near the outlet (BBC_JMS1, JMS2, JMS3, JMS4 & JMS5), usually weekly (between the hours of 6 and 9am) in the summers of 2017-2019, at depths ranging from near the surface to 1.4m. Overall, data were indicative of poor water quality in this Class SA estuarine pond, as follows: while the maximum temperature was 28.8°C (n=139), DO was frequently <6.0mg/L (overall the average % of measurements <6.0mg/L was 67% and <5.0mg/L was 43%, n=147) both near the surface (at depths of 0.1 and 0.2m, n=99 with minimums ranging from 1.3 to 5.0mg/L) and at depth (depths ranging 0.4 to 1.4m, n=48 with minimums ranging from 1.9 to 7.5mg/L) so the incidences of low DO concentrations were spread throughout the water column. The BBC typically scheduled nutrient sampling efforts for ebb tides in July and August at two sites (JMS3 and JMS4) in James Pond. The maximum Chlorophyll *a* was 23.73ug/L (n=22) with nine samples (41%) >10ug/L between 2017 and 2019 with threshold exceedances during three of the four 2019 surveys at both sites. Total nitrogen data were very limited but were indicative of elevated concentrations (range 0.66 to 0.97mg/L, n=4). The maximum Secchi disk depth was 1.3m (n=25) although it is noted that the majority of James Pond is fairly shallow. Ammonia-nitrogen concentrations were generally low (range 0.004 to 0.02mg/L, n=22), but TUs could not be calculated (lack of quality assured pH and salinity data availability).
The Aquatic Life Use of James Pond (MA97-38) is assessed as Not Supporting with impairments for low Dissolved Oxygen and Chlorophyll *a* being added based on BBC staff/volunteers data collected between 2017 and 2019. An Alert for Total Nitrogen is also being added and a recommendation will be made to collect additional data.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
BBC_JMS1	Buzzards Bay Coalition	Water Quality	James Pond	James Pond, West Tisbury	41.4414	-70.67246
BBC_JMS2	Buzzards Bay Coalition	Water Quality	James Pond	James Pond, West Tisbury	41.43971	-70.67372
BBC_JMS3	Buzzards Bay Coalition	Water Quality	James Pond	James Pond, West Tisbury	41.43929	-70.67175
BBC_JMS4	Buzzards Bay Coalition	Water Quality	James Pond	James Pond, West Tisbury	41.43585	-70.67116
BBC_JMS5	Buzzards Bay Coalition	Water Quality	James Pond	James Pond, West Tisbury	41.43541	-70.66979

Physico-chemical Water Quality Information

DO, pH, Temperature

Buzzards Bay Coalition Estuarine Discrete Dissolved Oxygen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[DO was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Average Sample Depth (m)	DO Count	DO Min (mg/L)	DO Avg (mg/L)	% Meas. <6.0	% Meas. <5.0	% Meas. <4.0
BBC_JMS1	06/16/17	09/27/17	0.2	10	3.9	6.0	50	30	10
BBC_JMS1	06/23/18	08/31/18	0.2	5	4.0	5.4	60	60	0
BBC_JMS1	07/24/19	08/08/19	0.2	3	5.0	5.9	67	0	0
BBC_JMS1	08/08/19	08/08/19	0.6	1	7.5	7.5	0	0	0
BBC_JMS2	07/05/17	09/27/17	0.2	8	4.0	6.8	25	13	0
BBC_JMS2	08/08/17	09/27/17	0.4	2	5.3	5.7	50	0	0
BBC_JMS2	07/03/18	09/07/18	0.2	3	3.3	5.8	67	33	33

Station Code	Start Date	End Date	Average Sample Depth (m)	DO Count	DO Min (mg/L)	DO Avg (mg/L)	% Meas. <6.0	% Meas. <5.0	% Meas. <4.0
BBC_JMS2	09/07/18	09/07/18	0.2	1	3.0	3.0	100	100	100
BBC_JMS2	07/24/19	07/24/19	0.1	1	3.7	3.7	100	100	100
BBC_JMS2	07/24/19	07/24/19	0.6	1	3.0	3.0	100	100	100
BBC_JMS3	06/16/17	09/27/17	0.2	10	4.8	6.3	40	10	0
BBC_JMS3	06/16/17	09/27/17	0.9	12	3.1	5.9	33	25	8
BBC_JMS3	07/03/18	09/07/18	0.2	9	2.5	5.7	56	22	11
BBC_JMS3	06/23/18	09/07/18	0.9	5	2.0	4.8	60	60	20
BBC_JMS3	07/10/19	08/14/19	0.2	8	4.5	6.2	50	25	0
BBC_JMS3	07/10/19	08/14/19	1.4	4	4.3	5.8	50	25	0
BBC_JMS4	06/16/17	09/27/17	0.2	10	4.1	5.7	70	40	0
BBC_JMS4	06/16/17	09/27/17	0.6	10	3.4	5.1	90	30	10
BBC_JMS4	06/23/18	09/07/18	0.2	10	2.5	5.6	60	10	10
BBC_JMS4	07/03/18	09/07/18	0.6	4	1.9	4.6	75	75	50
BBC_JMS4	07/10/19	08/14/19	0.2	7	4.5	6.3	43	43	0
BBC_JMS4	07/10/19	08/14/19	0.9	4	4.4	5.9	50	50	0
BBC_JMS5	06/16/17	09/27/17	0.1	8	2.6	4.7	100	63	25
BBC_JMS5	07/05/17	09/08/17	0.4	3	5.7	5.8	100	0	0
BBC_JMS5	06/23/18	09/07/18	0.2	4	1.3	3.4	100	50	50
BBC_JMS5	06/23/18	06/23/18	0.5	1	4.3	4.3	100	100	0
BBC_JMS5	07/24/19	08/14/19	0.2	2	3.2	4.3	100	50	50
BBC_JMS5	08/14/19	08/14/19	0.7	1	4.2	4.2	100	100	0

Buzzards Bay Coalition Discrete Estuarine Temperature Data (2014-2018). (BBC 2021) (MassDEP Undated 2)
[Temperature was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer Index is June 1 – Sept 15]

Station Code	Start Date	End Date	Average Sample Depth (m)	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count >29.4
BBC_JMS1	06/16/17	09/27/17	0.1	10	9	28.8	23.9	0
BBC_JMS1	06/23/18	08/31/18	0.2	5	5	26.8	25.3	0
BBC_JMS1	07/24/19	08/08/19	0.2	3	3	26.3	25.4	0
BBC_JMS1	08/08/19	08/08/19	0.6	1	1	26.4	26.4	0
BBC_JMS2	07/05/17	09/27/17	0.1	8	7	27.9	23.9	0
BBC_JMS2	08/08/17	09/27/17	0.3	2	1	21.4	21.4	0
BBC_JMS2	07/03/18	09/07/18	0.1	3	3	27.4	25.7	0
BBC_JMS2	09/07/18	09/07/18	0.2	1	1	24.8	24.8	0
BBC_JMS2	07/24/19	07/24/19	0.1	1	1	24.1	24.1	0
BBC_JMS2	07/24/19	07/24/19	0.6	1	1	23.7	23.7	0
BBC_JMS3	06/16/17	09/27/17	0.2	10	9	27.3	24.2	0
BBC_JMS3	06/16/17	09/27/17	1.0	12	11	27.2	24.4	0
BBC_JMS3	07/03/18	09/07/18	0.2	8	8	27.5	25.7	0
BBC_JMS3	06/23/18	09/07/18	0.9	5	5	27.3	25.5	0
BBC_JMS3	07/10/19	08/14/19	0.2	7	7	26.0	25.2	0
BBC_JMS3	07/10/19	08/14/19	1.4	4	4	26.7	25.4	0
BBC_JMS4	06/16/17	09/27/17	0.2	10	9	27.1	24.1	0
BBC_JMS4	06/16/17	09/27/17	0.6	10	9	27.1	25.1	0

BBC_JMS4	06/23/18	09/07/18	0.2	9	9	28.2	25.3	0
BBC_JMS4	07/03/18	09/07/18	0.6	4	4	27.6	25.4	0
BBC_JMS4	07/10/19	08/14/19	0.2	6	6	26.1	25.3	0
BBC_JMS4	07/10/19	08/14/19	0.8	4	4	26.3	25.4	0
BBC_JMS5	06/16/17	09/27/17	0.1	8	7	27.0	23.6	0
BBC_JMS5	07/05/17	09/08/17	0.4	3	3	28.0	25.3	0
BBC_JMS5	06/23/18	09/07/18	0.2	4	4	27.9	25.7	0
BBC_JMS5	06/23/18	06/23/18	0.5	1	1	26.5	26.5	0
BBC_JMS5	07/24/19	08/14/19	0.2	2	2	24.6	24.2	0
BBC_JMS5	08/14/19	08/14/19	0.7	1	1	24.0	24.0	0

Nutrients (Primary Producer Screening, Physico-chemical Screening)

Buzzards Bay Coalition Estuarine Nutrient Enrichment Indicator Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

[Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer seasonal total nitrogen data collected May-Sept]

Station Code	Data Year	Average Sample Depth (m)	Seasonal TN Count	Seasonal TN Min (mg/L)	Seasonal TN Max (mg/L)	Seasonal TN Avg (mg/L)	Chl-a Count	Chl-a Min (ug/L)	Chl-a Max (ug/L)	Chl-a Avg (ug/L)	Chl-a Count ≤5	Chl-a Count >10
BBC_JMS3	2017	0.2	--	--	--	--	3	3.18	14.73	9.22	1	1
BBC_JMS3	2017	0.7	--	--	--	--	1	9.82	9.82	9.82	0	0
BBC_JMS3	2018	0.3	--	--	--	--	3	5.77	14.73	9.67	0	1
BBC_JMS3	2019	0.2	1	0.78	0.78	0.78	4	5.15	23.73	15.71	0	3
BBC_JMS4	2017	0.2	--	--	--	--	3	4.02	14.86	7.81	2	1
BBC_JMS4	2017	0.4	--	--	--	--	1	4.78	4.78	4.78	1	0
BBC_JMS4	2018	0.3	2	0.66	0.67	0.66	3	1.98	8.47	6.11	1	0
BBC_JMS4	2019	0.2	1	0.97	0.97	0.97	4	8.08	19.03	15.21	0	3

Buzzards Bay Coalition Secchi Disk Depth Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

Station Code	Start Date		End Date	Secchi disk depth Count	Secchi disk depth Min (m)	Secchi disk depth Max (m)	Secchi disk depth Avg (m)
BBC_JMS1	07/24/19		08/08/19	2	0.3	0.5	0.4
BBC_JMS2	07/24/19		07/24/19	1	0.6	0.6	0.6
BBC_JMS3	07/19/17		08/16/17	3	1.2	1.2	1.2
BBC_JMS3	07/30/18		09/07/18	5	0.7	1.3	0.9
BBC_JMS3	07/10/19		08/14/19	4	0.4	0.7	0.5
BBC_JMS4	07/16/18		09/07/18	4	0.6	1.1	0.8
BBC_JMS4	07/10/19		08/14/19	4	0.3	0.7	0.5
BBC_JMS5	07/24/19		08/14/19	2	0.5	0.6	0.5

Toxics and other pollutants (metals, ammonia, chlorine)

Buzzards Bay Coalition Ammonia-Nitrogen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.

Station Code	Start Date	End Date	Average Sample Depth (m)	NH3 Count	NH3 Min (mg/L)	NH3 Max (mg/L)	NH3 Avg (mg/L)
BBC_JMS3	07/05/17	08/16/17	0.2	3	0.004	0.006	0.005
BBC_JMS3	07/19/17	07/19/17	0.7	1	0.004	0.004	0.004
BBC_JMS3	07/10/18	08/21/18	0.3	3	0.004	0.006	0.005
BBC_JMS3	07/10/19	08/14/19	0.2	4	0.004	0.015	0.007
BBC_JMS4	07/05/17	08/16/17	0.2	3	0.005	0.011	0.007
BBC_JMS4	07/19/17	07/19/17	0.4	1	0.021	0.021	0.021
BBC_JMS4	07/10/18	08/21/18	0.2	3	0.004	0.014	0.009
BBC_JMS4	07/10/19	08/14/19	0.2	4	0.004	0.015	0.009

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in James Pond (MA97-38); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Insufficient Information	YES
2022 Use Attainment Summary	
James Pond (MA97-38): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0719 sq mi (87%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0719 sq mi (87%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V6.0	James Pond	Prohibited	0.07190	87.1%

Aesthetic

2022 Use Attainment	Alert
Insufficient Information	YES
2022 Use Attainment Summary	
The Buzzards Bay Coalition (BBC) staff/volunteers conducted nutrient sampling in James Pond, West Tisbury (MA97-38) at two locations (BBC_JMS3 and JMS4). Sampling occurred on ebb tides in July and August 2017-2019 at depths ranging from the surface to 1.4m. The maximum Chlorophyll *a* was 23.73ug/L (n=22) with nine samples (41%) >10ug/L between 2017 and 2019. BBC staff/volunteers noted the pond was "very green" once in 2019. Too limited data are available to assess the Aesthetics Use for James Pond (MA97-38), so it is assessed as having Insufficient Information. An Alert is being identified due to the high concentrations of chlorophyll *a* in 2017-2019 and note that the water was "very green" once in 2019.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	YES
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the status of the Primary Contact Recreation Use for James Pond (MA97-38), so it is Not Assessed. An Alert is being identified because BBC staff/volunteers noted the pond was "very green" once in 2019.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
James Pond (MA97-38): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0719 sq mi (87%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	YES
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the status of the Secondary Contact Recreation Use for James Pond (MA97-38), so it is Not Assessed. An Alert is being identified because BBC staff/volunteers noted the pond was "very green" once in 2019.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
James Pond (MA97-38): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0719 sq mi (87%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Katama Bay (MA97-16)

Location:	Waters south of an imaginary line from Chappaquiddick Point to Dock Street excluding Caleb Pond and Mattakeset Bay, Edgartown, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	2.05 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Fecal Coliform		Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Fecal Coliform	Source Unknown (N)			X			

Recommendations

2022 Recommendations
ALU: Conduct additional surveys of the eelgrass bed habitat in Katama Bay (MA97-16) to see if there is any new growth or a continued absence.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	YES
2022 Use Attainment Summary	
No data are available to assess the status of the Aquatic Life Use for Katama Bay (MA97-16), so it is Not Assessed. The Alert identified due to lack of eelgrass bed habitat is being carried forward.	

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Katama Bay (MA97-16); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	

Katama Bay (MA97-16): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 2.0133 sq mi (98%). The approved shellfish growing area represents 1.7673 sq mi (86%). The Shellfish Harvesting Use is assessed as not supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing fecal coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V19.1	Edgartown Inner Harbor	Conditionally Approved	0.24598	12.0%
V19.3	Marsh at Dunham Road	Prohibited	0.00000	0.0%
V20.0	Katama Bay	Approved	1.76732	86.4%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Katama Bay (MA97-16), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the status of the Primary Contact Recreation Use for Katama Bay (MA97-16), so it is Not Assessed. A former alert was identified due to beach closures at Long Point (ID 3194); however Long Point was incorrectly associated with this AU, so the Alert is being removed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Katama Bay (MA97-16): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 2.0133 sq mi (98%). The approved shellfish growing area represents 1.7673 sq mi (86%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No Enterococci bacteria data are available to assess the status of the Secondary Contact Recreation Use for Katama Bay (MA97-16), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Katama Bay (MA97-16): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 2.0133 sq mi (98%). The approved shellfish growing area represents 1.7673 sq mi (86%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Lagoon Pond (MA97-11)

Location:	From Head of the Pond Road to confluence with Vineyard Haven Harbor at Beach Road, Tisbury/Oak Bluffs, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	0.82 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	5	Dissolved Oxygen	64584, 64583	Unchanged
4a	5	Estuarine Bioassessments	64584, 64583	Unchanged
4a	5	Fecal Coliform		Added
4a	5	Nitrogen, Total	64584, 64583	Unchanged
4a	5	Nutrient/Eutrophication Biological Indicators	64584, 64583	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Dissolved Oxygen	Impervious Surface/Parking Lot Runoff (Y)	X					
Dissolved Oxygen	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Dissolved Oxygen	Residential Districts (Y)	X					
Estuarine Bioassessments	Impervious Surface/Parking Lot Runoff (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Residential Districts (Y)	X					
Fecal Coliform	Source Unknown (N)			X			
Nitrogen, Total	Impervious Surface/Parking Lot Runoff (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Residential Districts (Y)	X					
Nutrient/Eutrophication Biological Indicators	Impervious Surface/Parking Lot Runoff (Y)	X					
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nutrient/Eutrophication Biological Indicators	Residential Districts (Y)	X					

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO

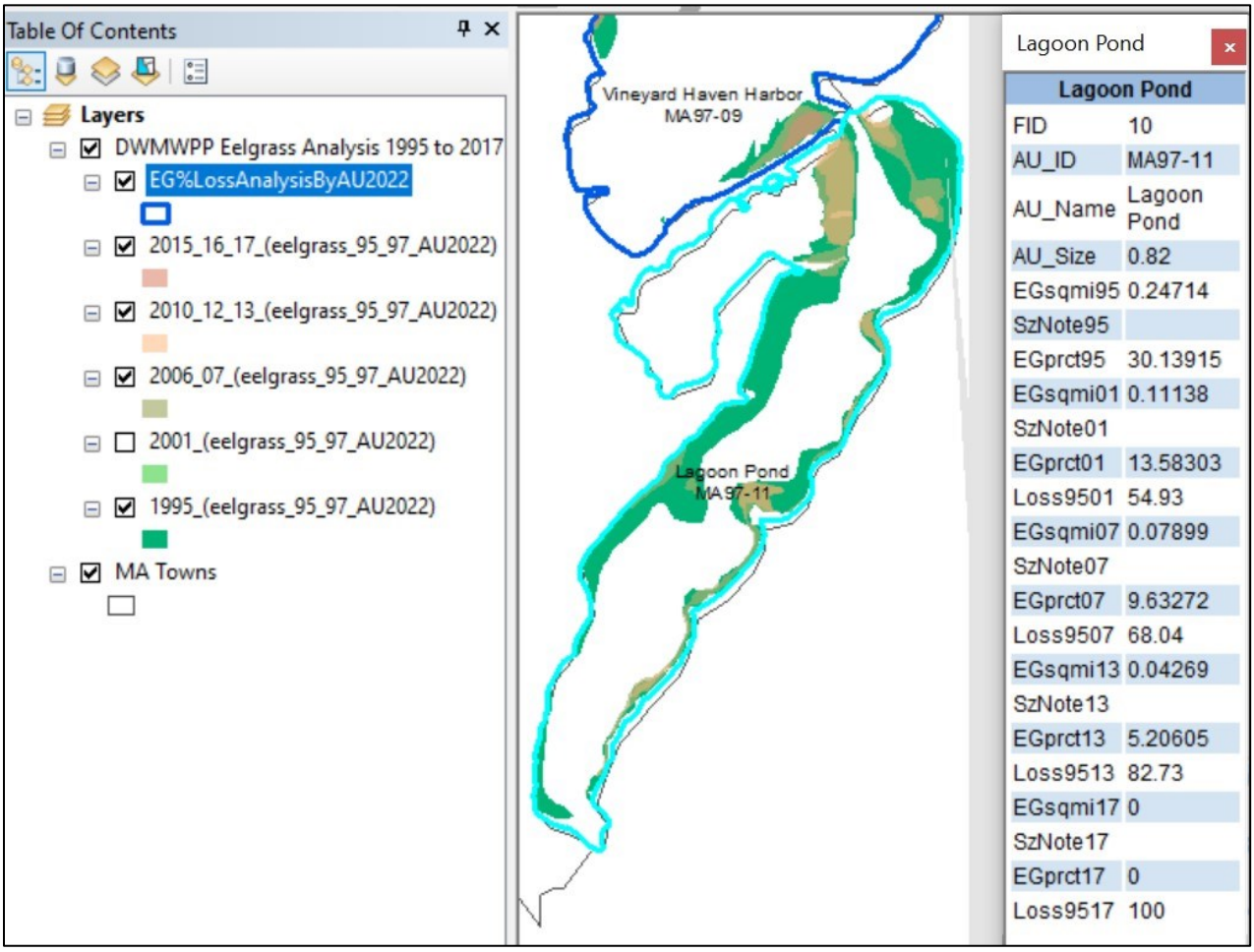
2022 Use Attainment Summary

DMF biologists note the existence of a Madieras fish ladder at the upper (southern) end of the Lagoon Pond AU, assisting the passage of diadromous fish between Lagoon Pond and Upper Lagoon Pond (not an AU). This structure was given a passage score of "0" on a 0-10 scale, indicating that the dam/Head of Pond Road is not an obstruction to the passage of the targeted fish species, river herring and American eel. The population score was noted to be "4". DMF biologists also note that the Town replaced the grating at the ladder in 2019 and planned for a video counting system in 2020, which indicates a healthy population of river herring in this area. The MassDEP Eelgrass Mapping Project documented a complete loss of eelgrass bed habitat in Lagoon Pond as of 2017. No other data are available to assess the Aquatic Life Use for Lagoon Pond (MA97-11), so it will continue to be assessed as Not Supporting, with the impairments for Dissolved Oxygen, Estuarine Bioassessments, Nitrogen, Total and Nutrient/Eutrophication Biological Indicators being carried forward.

Biological Monitoring Information

Primary Producers Data

Eelgrass analysis 1995-2017 for Lagoon Pond MA97-11 (MassGIS 2018, MassDEP Undated 4):



The MassDEP Eelgrass Mapping Project documented complete loss of eelgrass bed habitat in Lagoon Pond after 2017.

Habitat and Flow Data (anthropogenic alterations)

MassDMF Status of Priority Diadromous Fish Passage Barriers. (Chase 2020)

Assessment Summary
DMF biologists note the existence of a Madieras fish ladder at the upper (southern) end of the Lagoon Pond AU, assisting the passage of diadromous fish between Lagoon Pond and Upper Lagoon Pond (not an AU). This structure was given a passage score of "0" on a 0-10 scale, indicating that the dam/Head of Pond Road is not an obstruction to the passage of the targeted fish species, river herring and American eel. The population score was noted to be "4". DMF biologists also note that the Town replaced the grating at the ladder in 2019 and planned for a video counting system in 2020, which indicates a healthy population of river herring in this area.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Lagoon Pond (MA97-11); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	
Lagoon Pond (MA97-11): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.8065 sq mi (98%). The approved shellfish growing area represents 0.6616 sq mi (80%). The Shellfish Harvesting Use is assessed as not supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications, a fecal coliform impairment is being added. Alert due to prohibited area >= 0.0001 sq mi carried forward.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V10.0	Outer Vineyard Haven Harbor	Approved	0.00000	0.0%
V11.0	Lagoon Pond	Approved	0.66156	80.5%
V11.10	Reniers Mooring Area	Conditionally Approved	0.01231	1.5%
V11.2	Brush Pond	Prohibited	0.00016	0.0%
V11.3	Lagoon Pond West Arm	Prohibited	0.03538	4.3%
V11.4	Northeast Corner Mooring Area	Conditionally Approved	0.05628	6.8%
V11.5	Medeiros Cove Mooring Area	Conditionally Approved	0.01334	1.6%
V11.6	Lagoon Landing Mooring Area	Conditionally Approved	0.02750	3.3%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	

No data are available to assess the status of the Aesthetic Use for Lagoon Pond (MA97-11), so it is Not Assessed.

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
Three Oak Bluffs beaches (Medeiros Cove (ID 3033), Eastville Town Beach- Harbor side (ID 3037) & Eastville Town Beach-Lagoon side (ID 3038)) were infrequently posted for swimming between 2014 and 2019 (the most postings were seen at Medeiros Cove in 2014 when 8% of the bathing season was posted). The Primary Contact Recreational Use for Lagoon Pond (MA97-11) will continue to be assessed as Fully Supporting, since there were few if any swimming advisory postings at the Medeiros Cove and Eastville Town Beaches between 2014 and 2019.	

Beach Postings

MassDPH Beach Posting Data Summary (% Bathing Season Posted 2014-2019) (Bailey, Logan Feb. 2, 2021) (MassDEP Undated 2)

Beach ID	Beach Name/Town	Left Boundary (Latitude)	Left Boundary (Longitude)	Right Boundary (Latitude)	Right Boundary (Longitude)	2014	2015	2016	2017	2018	2019	# years> 10%
3033	Medeiros Cove (Sailing Camp)/Oak Bluffs	41.44302	-70.58910	41.44530	-70.58710	8%	0%	0%	0%	1%	0%	0
3037	Eastville Town Beach - Harbor side/Oak Bluffs	41.45915	-70.58540	41.45879	-70.58240	0%	0%	0%	0%	0%	0%	0
3038	Eastville Town Beach - Lagoon side/Oak Bluffs	41.45947	-70.58460	41.45751	-70.58080	1%	0%	0%	0%	0%	0%	0

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Lagoon Pond (MA97-11): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.8065 sq mi (98%). The approved shellfish growing area represents 0.6616 sq mi (80%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	

Three Oak Bluffs beaches (Medeiros Cove (ID 3033), Eastville Town Beach- Harbor side (ID 3037) & Eastville Town Beach-Lagoon side (ID 3038)) were infrequently posted for swimming between 2014 and 2019 (the most postings were seen at Medeiros Cove in 2014 when 8% of the bathing season was posted). The Secondary Contact Recreational Use for Lagoon Pond (MA97-11) will continue to be assessed as Fully Supporting, since there were few if any swimming advisory postings at the Medeiros Cove and Eastville Town Beaches between 2014 and 2019.

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Lagoon Pond (MA97-11): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.8065 sq mi (98%). The approved shellfish growing area represents 0.6616 sq mi (80%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Lake Tashmoo (MA97-12)

Location:	Waters including Drew Cove and Rhoda Pond to confluence with Vineyard Sound at channel south of Herring Creek Road, Tisbury, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	0.41 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Dissolved Oxygen	68396	Changed
5	5	Estuarine Bioassessments	68396	Changed
5	5	Fecal Coliform		Added
5	5	Nitrogen, Total	68396	Changed
5	5	Nutrient/Eutrophication Biological Indicators	68396	Changed

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Dissolved Oxygen	Agriculture (Y)	X					
Dissolved Oxygen	Landfills (Y)	X					
Dissolved Oxygen	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Dissolved Oxygen	Residential Districts (Y)	X					
Estuarine Bioassessments	Agriculture (Y)	X					
Estuarine Bioassessments	Landfills (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Residential Districts (Y)	X					
Fecal Coliform	Source Unknown (N)			X			
Nitrogen, Total	Agriculture (Y)	X					
Nitrogen, Total	Landfills (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Residential Districts (Y)	X					
Nutrient/Eutrophication Biological Indicators	Agriculture (Y)	X					
Nutrient/Eutrophication Biological Indicators	Landfills (Y)	X					
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Nutrient/Eutrophication Biological Indicators	Residential Districts (Y)	X					

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Dissolved Oxygen	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Lake Tashmoo Estuarine System Total Maximum Daily Load for Nitrogen (Total) (Report CN 353.1, approved 2017-09-29, ATTAINS Action ID: 68396)
Estuarine Bioassessments	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Lake Tashmoo Estuarine System Total Maximum Daily Load for Nitrogen (Total) (Report CN 353.1, approved 2017-09-29, ATTAINS Action ID: 68396)
Nitrogen, Total	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Lake Tashmoo Estuarine System Total Maximum Daily Load for Nitrogen (Total) (Report CN 353.1, approved 2017-09-29, ATTAINS Action ID: 68396)
Nutrient/Eutrophication Biological Indicators	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Lake Tashmoo Estuarine System Total Maximum Daily Load for Nitrogen (Total) (Report CN 353.1, approved 2017-09-29, ATTAINS Action ID: 68396)

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	

According to DMF biologists, one structure on Lake Tashmoo, Tisbury (MA97-12) was noted to be of minimal impact to the passage of diadromous fish. The fish ladder, which was constructed by the town in 2001 (located near the water works at the southern end of the lake) was given a passage score of "0" on a 0-10 scale (with 10 equating to no possible passage), indicating that the crossing is not an obstruction to the passage of the targeted species, river herring and American eel. The population score in this area was noted to be "1". The MassDEP Eelgrass Mapping Project documented an ~46% loss of eelgrass bed habitat in Lake Tashmoo between 1995-2017. The Buzzards Bay Coalition (BBC) staff/volunteers conducted discrete water quality monitoring in Lake Tashmoo at seven locations spread throughout the AU landward to seaward (BBC_TSH5, TSH8, TSH2, TSH1S, TSH1W and TSH1), usually weekly (between the hours of 6 and 9am) in the summers of 2017-2019 at depths ranging from the surface to 3.2m. While the maximum temperature was only 26.2^{o}C (n=312), DO was occasionally <6.0mg/L (overall the average % of measurements <6.0mg/L was 18.2% and 2.65% of measurements <5.0mg/L, n=330). There were fewer low DO excursions near the surface (at depths of 0.1 and 0.2m, n=182 with minimums ranging from 5.3 to 7.1mg/L) than deeper in the water column (depths ranging 0.3 to 3.2m, n=148 with minimums ranging from 3.9 to 8.3mg/L). There were also more frequent excursions of the 6.0mg/L criteria noted in certain locations, with incidences of >10% measurement frequency <6.0mg/L most often in the deeper waters at the more inland/southern end of the pond (BBC_TSH8, TSH5, TSH2S & TSH2) mostly in 2017, some in 2018, and fewer excursions in 2019. The BBC typically scheduled nutrient sampling efforts for ebb tides in July and August at two sites (BBC_TSH2 and TSH8). The maximum Chlorophyll *a* was 20.4ug/L (n=24) measuring >10ug/L on just one occasion towards the southern end of the pond (BBC_TSH8) in 2018. Total nitrogen data were very limited (one or two samples per year, n=5 at these two sites) and concentrations ranged from 0.25 to 0.48mg/L in samples collected near the surface. Secchi disk depth ranged from 1.2 to 3.5m (n=90). Ammonia-nitrogen concentrations were generally low (range 0.004 to 0.01mg/L, n=25), but TUs could not be calculated (lack of quality assured pH and salinity data availability).
The Aquatic Life Use of Lake Tashmoo (MA97-12) will continue to be assessed as Not Supporting, with the impairments for Dissolved Oxygen, Estuarine Bioassessments, Nitrogen, Total, and Nutrient Eutrophication Biological Indicators being carried forward.

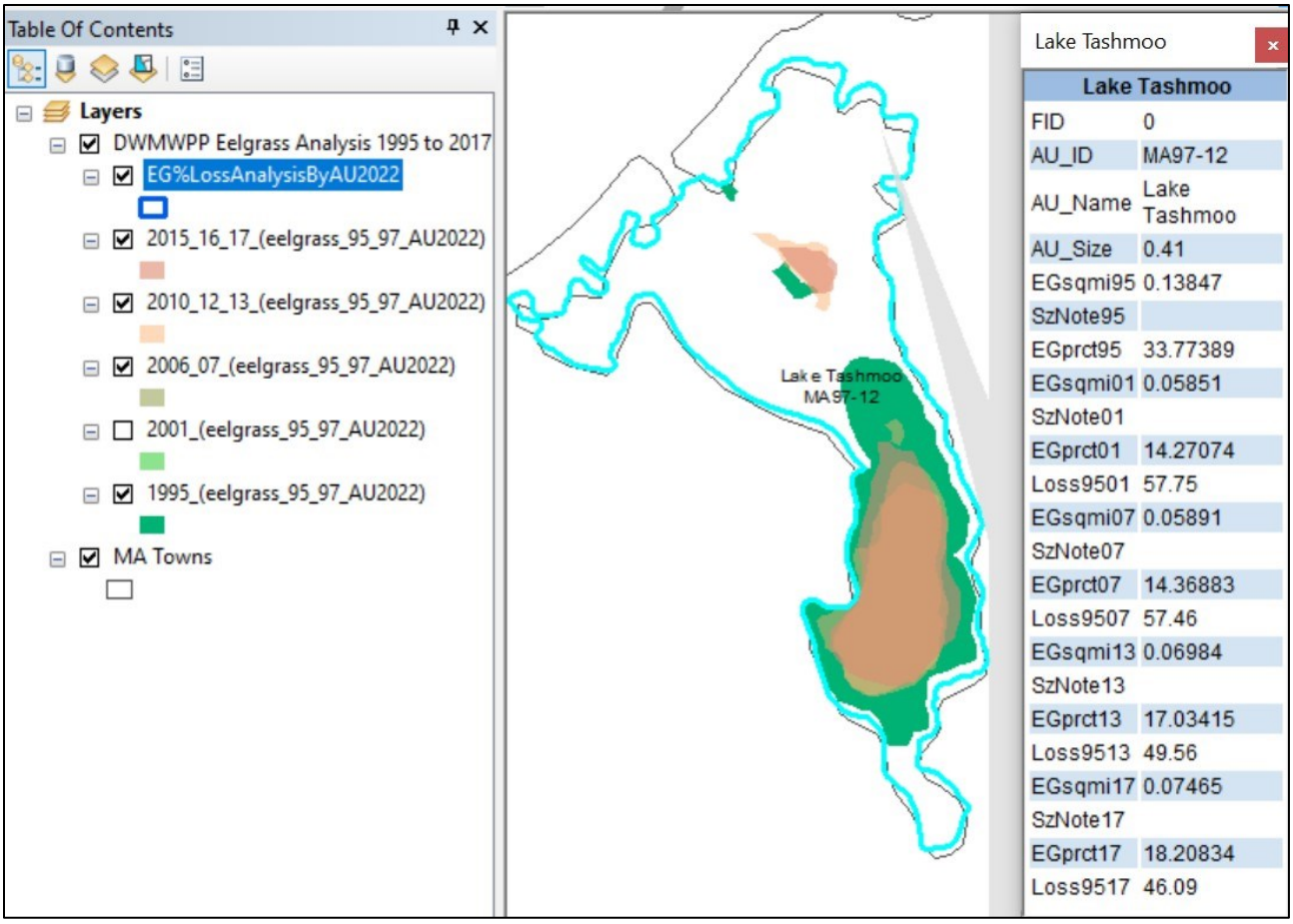
Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
BBC_TSH1	Buzzards Bay Coalition	Water Quality	Lake Tashmoo	Lake Tashmoo, Tisbury	41.46638	-70.62657
BBC_TSH1S	Buzzards Bay Coalition	Water Quality	Lake Tashmoo	Lake Tashmoo, Tisbury	41.46073	-70.6256
BBC_TSH1W	Buzzards Bay Coalition	Water Quality	Lake Tashmoo	Lake Tashmoo, Tisbury	41.46182	-70.63097
BBC_TSH2	Buzzards Bay Coalition	Water Quality	Lake Tashmoo	Lake Tashmoo, Tisbury	41.45633	-70.62377
BBC_TSH2S	Buzzards Bay Coalition	Water Quality	Lake Tashmoo	Lake Tashmoo, Tisbury	41.45363	-70.62445
BBC_TSH5	Buzzards Bay Coalition	Water Quality	Lake Tashmoo	Lake Tashmoo, Tisbury	41.44903	-70.62327
BBC_TSH8	Buzzards Bay Coalition	Water Quality	Lake Tashmoo	Lake Tashmoo, Tisbury	41.45104	-70.62418

Biological Monitoring Information

Primary Producers Data

Eelgrass analysis 1995-2017 for Lake Tashmoo MA97-12 (MassGIS 2018, MassDEP Undated 4):



The MassDEP Eelgrass Mapping Project documented an ~46% loss of eelgrass bed habitat in Lake Tashmoo between 1995-2017.

Habitat and Flow Data (anthropogenic alterations)

MassDMF Status of Priority Diadromous Fish Passage Barriers. (Chase 2020)

Assessment Summary
According to DMF biologists, one structure on Lake Tashmoo was noted to be of minimal impact to the passage of diadromous fish. The fish ladder, which was constructed by the town in 2001 (located near the water works at the southern end of the lake) was given a passage score of "0" on a 0-10 scale (with 10 equating to no possible passage), indicating that the crossing is not an obstruction to the passage of the targeted species, river herring and American eel. The population score in this area was noted to be "1".

Physico-chemical Water Quality Information

DO, pH, Temperature

Buzzards Bay Coalition Estuarine Discrete Dissolved Oxygen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[DO was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Average Sample Depth (m)	DO Count	DO Min (mg/L)	DO Avg (mg/L)	% Meas. <6.0	% Meas. <5.0	% Meas. <4.0
BBC_TSH1	06/29/17	09/29/17	0.1	13	5.8	6.7	23	0	0
BBC_TSH1	07/06/17	09/29/17	0.7	12	5.3	6.8	17	0	0
BBC_TSH1	06/19/18	09/14/18	0.2	9	6.7	7.6	0	0	0
BBC_TSH1	06/24/18	09/14/18	0.6	7	6.6	7.3	0	0	0
BBC_TSH1	07/10/19	08/07/19	0.2	3	5.5	6.5	33	0	0
BBC_TSH1	07/25/19	07/25/19	0.3	1	8.0	8.0	0	0	0
BBC_TSH1S	06/29/17	09/29/17	0.1	13	5.4	6.9	15	0	0
BBC_TSH1S	06/29/17	09/29/17	2.7	13	5.1	6.2	46	0	0
BBC_TSH1S	06/19/18	09/14/18	0.2	9	7.0	7.6	0	0	0
BBC_TSH1S	06/19/18	09/14/18	2.0	9	6.1	6.8	0	0	0
BBC_TSH1S	07/10/19	08/07/19	0.2	3	6.9	7.7	0	0	0
BBC_TSH1S	07/25/19	08/07/19	2.3	2	6.7	6.7	0	0	0
BBC_TSH1W	07/27/17	09/29/17	0.1	9	5.9	6.6	11	0	0
BBC_TSH1W	07/27/17	09/29/17	0.9	8	5.3	6.6	25	0	0
BBC_TSH1W	06/19/18	09/14/18	0.2	9	5.9	7.1	11	0	0
BBC_TSH1W	06/24/18	09/14/18	0.6	5	7.2	7.8	0	0	0
BBC_TSH1W	07/10/19	08/07/19	0.1	3	7.0	7.8	0	0	0
BBC_TSH1W	07/25/19	08/07/19	0.8	2	8.3	8.5	0	0	0
BBC_TSH2	06/29/17	09/29/17	0.1	14	5.7	7.1	14	0	0
BBC_TSH2	06/29/17	09/29/17	2.7	13	4.6	6.0	62	15	0
BBC_TSH2	06/19/18	09/14/18	0.1	13	6.3	7.8	0	0	0
BBC_TSH2	06/19/18	09/14/18	2.6	9	5.5	6.5	22	0	0
BBC_TSH2	07/10/19	08/15/19	0.2	8	7.1	8.0	0	0	0
BBC_TSH2	07/10/19	08/15/19	2.8	4	5.1	6.3	50	0	0
BBC_TSH2S	06/29/17	09/29/17	0.2	13	5.6	7.0	15	0	0
BBC_TSH2S	06/29/17	09/29/17	2.6	13	4.2	5.8	54	38	0
BBC_TSH2S	06/19/18	09/14/18	0.2	9	6.9	7.9	0	0	0
BBC_TSH2S	06/19/18	09/14/18	2.1	9	4.7	6.9	22	11	0
BBC_TSH2S	07/10/19	08/07/19	0.2	3	6.8	7.8	0	0	0
BBC_TSH2S	07/10/19	08/07/19	2.3	3	5.2	5.9	33	0	0
BBC_TSH5	07/27/17	09/29/17	0.2	9	5.3	6.3	33	0	0
BBC_TSH5	07/27/17	09/29/17	0.9	9	4.9	5.9	56	11	0
BBC_TSH5	06/24/18	09/14/18	0.2	8	5.5	6.6	25	0	0
BBC_TSH5	07/02/18	09/07/18	2.6	4	6.0	6.9	0	0	0
BBC_TSH8	06/27/17	09/29/17	0.1	14	5.5	6.5	36	0	0
BBC_TSH8	06/27/17	09/29/17	3.2	13	3.9	5.5	62	31	8
BBC_TSH8	06/19/18	09/14/18	0.2	13	5.9	7.4	8	0	0
BBC_TSH8	06/19/18	09/14/18	2.6	9	5.5	6.9	22	0	0
BBC_TSH8	07/10/19	08/15/19	0.2	7	6.4	7.4	0	0	0
BBC_TSH8	07/25/19	08/15/19	2.9	3	5.7	6.2	33	0	0

Buzzards Bay Coalition Discrete Estuarine Temperature Data (2014-2018). (BBC 2021) (MassDEP Undated 2)
[Temperature was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer Index is June 1 – Sept 15]

Station Code	Start Date	End Date	Average Sample Depth (m)	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count >29.4
BBC_TSH1	06/29/17	09/29/17	0.1	13	12	23.9	21.3	0
BBC_TSH1	07/06/17	09/29/17	0.7	12	11	23.9	21.1	0
BBC_TSH1	06/19/18	09/14/18	0.2	9	9	23.1	22.0	0
BBC_TSH1	06/24/18	09/14/18	0.6	7	7	23.1	22.1	0
BBC_TSH1	07/10/19	08/07/19	0.2	3	3	23.3	22.7	0
BBC_TSH1	07/25/19	07/25/19	0.3	1	1	22.8	22.8	0
BBC_TSH1S	06/29/17	09/29/17	0.1	13	12	23.9	21.3	0
BBC_TSH1S	06/29/17	09/29/17	2.7	13	12	21.7	20.4	0
BBC_TSH1S	06/19/18	09/14/18	0.2	9	9	23.8	22.1	0
BBC_TSH1S	06/19/18	09/14/18	2.0	9	9	23.2	21.2	0
BBC_TSH1S	07/10/19	08/07/19	0.2	3	3	23.2	22.6	0
BBC_TSH1S	07/25/19	08/07/19	2.3	2	2	22.6	22.4	0
BBC_TSH1W	07/27/17	09/29/17	0.1	9	8	22.3	20.9	0
BBC_TSH1W	07/27/17	09/29/17	1.0	8	7	21.9	20.7	0
BBC_TSH1W	06/19/18	09/14/18	0.2	8	8	24.2	22.0	0
BBC_TSH1W	06/24/18	09/14/18	0.6	5	5	23.6	21.8	0
BBC_TSH1W	07/10/19	08/07/19	0.1	3	3	23.5	22.9	0
BBC_TSH1W	07/25/19	08/07/19	0.7	2	2	23.5	23.3	0
BBC_TSH2	06/29/17	09/29/17	0.1	14	13	23.7	21.5	0
BBC_TSH2	06/29/17	09/29/17	2.7	12	11	22.6	19.1	0
BBC_TSH2	06/19/18	09/14/18	0.1	13	13	24.4	22.6	0
BBC_TSH2	06/19/18	09/14/18	2.6	9	9	23.5	21.6	0
BBC_TSH2	07/10/19	08/15/19	0.2	7	7	23.2	22.9	0
BBC_TSH2	07/10/19	08/15/19	2.8	4	4	22.8	22.3	0
BBC_TSH2S	06/29/17	09/29/17	0.2	13	12	24.2	21.6	0
BBC_TSH2S	06/29/17	09/29/17	2.6	13	12	22.8	21.3	0
BBC_TSH2S	06/19/18	09/14/18	0.2	9	9	26.2	22.7	0
BBC_TSH2S	06/19/18	09/14/18	2.1	9	9	24.0	22.0	0
BBC_TSH2S	07/10/19	08/07/19	0.2	3	3	23.6	23.0	0
BBC_TSH2S	07/10/19	08/07/19	2.3	3	3	23.0	22.7	0
BBC_TSH5	07/27/17	09/29/17	0.1	9	8	22.0	20.8	0
BBC_TSH5	07/27/17	09/29/17	0.8	9	8	22.4	21.2	0
BBC_TSH5	06/24/18	09/14/18	0.2	8	8	23.5	21.5	0
BBC_TSH5	07/02/18	09/07/18	2.6	4	4	24.1	22.7	0
BBC_TSH8	06/27/17	09/29/17	0.1	14	13	23.8	21.4	0
BBC_TSH8	06/27/17	09/29/17	3.2	13	12	22.8	21.3	0
BBC_TSH8	06/19/18	09/14/18	0.2	13	13	24.4	22.4	0
BBC_TSH8	06/19/18	09/14/18	2.6	9	9	24.1	22.0	0
BBC_TSH8	07/10/19	08/15/19	0.2	6	6	23.4	23.0	0
BBC_TSH8	07/25/19	08/15/19	2.9	3	3	23.0	22.5	0

Nutrients (Primary Producer Screening, Physico-chemical Screening)

Buzzards Bay Coalition Estuarine Nutrient Enrichment Indicator Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer seasonal total nitrogen data collected May-Sept]

Station Code	Data Year	Average Sample Depth (m)	Seasonal TN Count	Seasonal TN Min (mg/L)	Seasonal TN Max (mg/L)	Seasonal TN Avg (mg/L)	Chl-a Count	Chl-a Min (ug/L)	Chl-a Max (ug/L)	Chl-a Avg (ug/L)	Chl-a Count ≤5	Chl-a Count >10
BBC_TSH1	2017	0.3	1	0.24	0.24	0.24	1	1.57	1.57	1.57	1	0
BBC_TSH2	2017	0.2	--	--	--	--	4	2.87	5.56	3.97	3	0
BBC_TSH2	2018	0.2	1	0.34	0.34	0.34	4	2.81	6.93	5.43	1	0
BBC_TSH2	2019	0.2	1	0.25	0.25	0.25	4	2.39	8.18	4.90	3	0
BBC_TSH8	2017	0.2	1	0.48	0.48	0.48	4	5.57	8.10	6.88	0	0
BBC_TSH8	2018	0.2	--	--	--	--	4	4.85	20.40	10.21	1	1
BBC_TSH8	2019	0.2	2	0.28	0.37	0.32	4	4.37	9.78	6.96	2	0

Buzzards Bay Coalition Secchi Disk Depth Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

Station Code	Start Date	End Date	Secchi disk depth Count	Secchi disk depth Min (m)	Secchi disk depth Max (m)	Secchi disk depth Avg (m)
BBC_TSH1S	07/06/17	09/07/17	6	2.5	3.5	2.8
BBC_TSH1S	06/19/18	06/24/18	2	2.4	2.7	2.5
BBC_TSH1S	07/25/19	07/25/19	1	2.4	2.4	2.4
BBC_TSH2	06/29/17	09/29/17	10	2.0	3.3	2.8
BBC_TSH2	06/19/18	09/14/18	13	1.8	3.1	2.5
BBC_TSH2	07/10/19	08/15/19	4	2.2	3.0	2.5
BBC_TSH2S	06/29/17	09/14/17	10	1.9	2.8	2.4
BBC_TSH2S	06/19/18	09/14/18	9	1.6	2.6	2.2
BBC_TSH2S	07/10/19	08/07/19	3	2.1	2.7	2.4
BBC_TSH5	07/02/18	09/07/18	3	1.3	1.9	1.6
BBC_TSH8	06/27/17	09/29/17	13	1.5	3.2	2.4
BBC_TSH8	06/19/18	09/14/18	12	1.2	2.4	2.0
BBC_TSH8	07/10/19	08/15/19	4	1.6	2.4	2.0

Toxics and other pollutants (metals, ammonia, chlorine)

Buzzards Bay Coalition Ammonia-Nitrogen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Average Sample Depth (m)	NH3 Count	NH3 Min (mg/L)	NH3 Max (mg/L)	NH3 Avg (mg/L)
BBC_TSH1	07/06/17	07/06/17	0.3	1	0.004	0.004	0.004
BBC_TSH2	07/06/17	08/17/17	0.2	4	0.004	0.007	0.005
BBC_TSH2	07/09/18	08/20/18	0.2	4	0.004	0.004	0.004
BBC_TSH2	07/10/19	08/15/19	0.2	4	0.004	0.008	0.005
BBC_TSH8	07/06/17	08/17/17	0.1	4	0.004	0.006	0.005
BBC_TSH8	07/09/18	08/20/18	0.2	4	0.004	0.004	0.004

Station Code	Start Date	End Date	Average Sample Depth (m)	NH3 Count	NH3 Min (mg/L)	NH3 Max (mg/L)	NH3 Avg (mg/L)
BBC_TSH8	07/10/19	08/15/19	0.2	4	0.004	0.013	0.008

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Lake Tashmoo (MA97-12); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	
Lake Tashmoo (MA97-12): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.3961 sq mi (96%). The approved shellfish growing area represents 0.268 sq mi (65%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications, a fecal coliform impairment is being added. Alert due to prohibited area >= 0.0001 sq mi carried forward.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V8.0	Lake Tashmoo	Approved	0.26796	64.7%
V8.1	Bournes Pond	Prohibited	0.01997	4.8%
V8.2	East Tashmoo Mooring Area	Conditionally Approved	0.08371	20.2%
V8.3	Town Anchor Field	Conditionally Approved	0.02444	5.9%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Lake Tashmoo (MA97-12), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	

The Buzzards Bay Coalition (BBC) staff/volunteers measured Secchi disc depths in Lake Tashmoo (MA97-12) at five locations (BBC_TSH1S, TSH2, TSH2S, TSH5 & TSH8), usually weekly in the summers of 2017-2019; Secchi disk depths indicated that conditions were always safe for recreational use, ranging from 1.2-3.5m (n=90). Two Tisbury beaches in Lake Tashmoo (Tashmoo Cut (ID 3141) and Hilman's Point (ID 3142) were infrequently posted for swimming between 2014 and 2019 (postings were only 2% of the bathing season at Tashmoo Cut in 2017 with no postings any other year for this beach or Hilman's Point).
The Primary Contact Recreational Use for Lake Tashmoo (MA97-12) will continue to be assessed as Fully Supporting, since there were few if any swimming advisory postings at Tashmoo Cut and Hilman's Point Beaches between 2014 and 2019 and BBC Secchi disk depths in the summers of 2017-2019 were all also indicative of good clarity.

Beach Postings

MassDPH Beach Posting Data Summary (% Bathing Season Posted 2014-2019) (Bailey, Logan Feb. 2, 2021) (MassDEP Undated 2)

Beach ID	Beach Name/Town	Left Boundary (Latitude)	Left Boundary (Longitude)	Right Boundary (Latitude)	Right Boundary (Longitude)	2014	2015	2016	2017	2018	2019	# years> 10%
3141	Tashmoo Cut/Tisbury	41.46689	-70.63170	41.46736	-70.62970	0%	0%	0%	2%	0%	0%	0
3142	Hilman's Point/Tisbury	41.45893	-70.62610	41.45835	-70.62590	0%	0%	0%	0%	0%	0%	0

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Lake Tashmoo (MA97-12): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.3961 sq mi (96%). The approved shellfish growing area represents 0.268 sq mi (65%). Because the total of all shellfish growing area classifications is anything less than "approved", the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Fully Supporting	NO
2022 Use Attainment Summary	
Two Tisbury beaches (Tashmoo Cut (ID 3141) and Hilman's Point (ID 3142) were infrequently posted for swimming between 2014 and 2019 (postings were only 2% of the bathing season at Tashmoo Cut in 2017 with no postings any other year for this beach or Hilman's Point). The Secondary Contact Recreational Use for Lake Tashmoo (MA97-12) will continue to be assessed as Fully Supporting, since there were few if any swimming advisory postings at Tashmoo Cut and Hilman's Point Beaches between 2014 and 2019.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Lake Tashmoo (MA97-12): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.3961 sq mi (96%). The approved shellfish growing area represents 0.268 sq mi (65%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Long Pond (MA97-29)

Location:	tidally restricted brackish water, south of Madaket Road, including White Goose Cove, Nantucket.
AU Type:	ESTUARY
AU Size:	0.12 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Dissolved Oxygen	64482	Unchanged
5	5	Dissolved Oxygen Supersaturation	64482	Unchanged
5	5	Estuarine Bioassessments	64482	Unchanged
5	5	Fecal Coliform		Unchanged
5	5	Nitrogen, Total	64482	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	64482	Unchanged
5	5	Transparency / Clarity	64482	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Dissolved Oxygen	Impervious Surface/Parking Lot Runoff (Y)	X					
Dissolved Oxygen	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Dissolved Oxygen	Residential Districts (Y)	X					
Dissolved Oxygen Supersaturation	Impervious Surface/Parking Lot Runoff (Y)	X					
Dissolved Oxygen Supersaturation	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Dissolved Oxygen Supersaturation	Residential Districts (Y)	X					
Estuarine Bioassessments	Impervious Surface/Parking Lot Runoff (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Residential Districts (Y)	X					
Fecal Coliform	Source Unknown (N)					X	
Nitrogen, Total	Impervious Surface/Parking Lot Runoff (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Residential Districts (Y)	X					
Nutrient/Eutrophication Biological Indicators	Impervious Surface/Parking Lot Runoff (Y)	X					

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nutrient/Eutrophication Biological Indicators	Residential Districts (Y)	X					
Transparency / Clarity	Impervious Surface/Parking Lot Runoff (Y)					X	
Transparency / Clarity	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)					X	
Transparency / Clarity	Residential Districts (Y)					X	

Recommendations

2022 Recommendations
ALU: Since diadromous fish passage limitations do occur at the barrier beach along Long Pond (MA97-29), a well-designed operation and management plan for breaching for fish passage and the health of the salt pond should be developed with the community's Natural Resource Manager staff and DMF biologists.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aquatic Life Use for Long Pond (MA97-29), so it will continue to be assessed as Not Supporting, with the impairments for Dissolved Oxygen, Dissolved Oxygen Supersaturation, Estuarine Bioassessments, Nitrogen, Total, and Nutrient/Eutrophication Biological Indicators being carried forward.	

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
Although fish toxics sampling was conducted in Long Pond (MA97-29) in 1995, since no site-specific fish consumption advisory was issued by MA DPH the Fish Consumption Use for Long Pond is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
Long Pond (MA97-29): There are no shellfish growing area classifications within this AU, therefore the Shellfish Harvesting Use is not assessed for 2022.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Long Pond (MA97-29), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
No recent data are available to assess the status of the Primary Contact Recreation Use for Long Pond (MA97-29), so it will continue to be assessed Not Supporting with the impairments for Fecal Coliform and Transparency/Clarity (Connors 2003) being carried forward.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Long Pond (MA97-29): There are no shellfish growing area classifications within this AU, therefore the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Secondary Contact Recreation Use for Long Pond (MA97-29), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Long Pond (MA97-29): There are no shellfish growing area classifications within this AU, therefore the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Madaket Harbor (MA97-27)

Location:	Waters encompassed within imaginary lines from Eel Point to the northern tip of Esther Island, from the southern tip of Esther Island southeasterly to the opposite shore and from Jackson Point easterly to Little Neck, Nantucket.
AU Type:	ESTUARY
AU Size:	1.44 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Recommendations

2022 Recommendations
ALU: Continue to evaluate eelgrass bed habitat in Madaket Harbor.

Designated Use Attainment Decisions

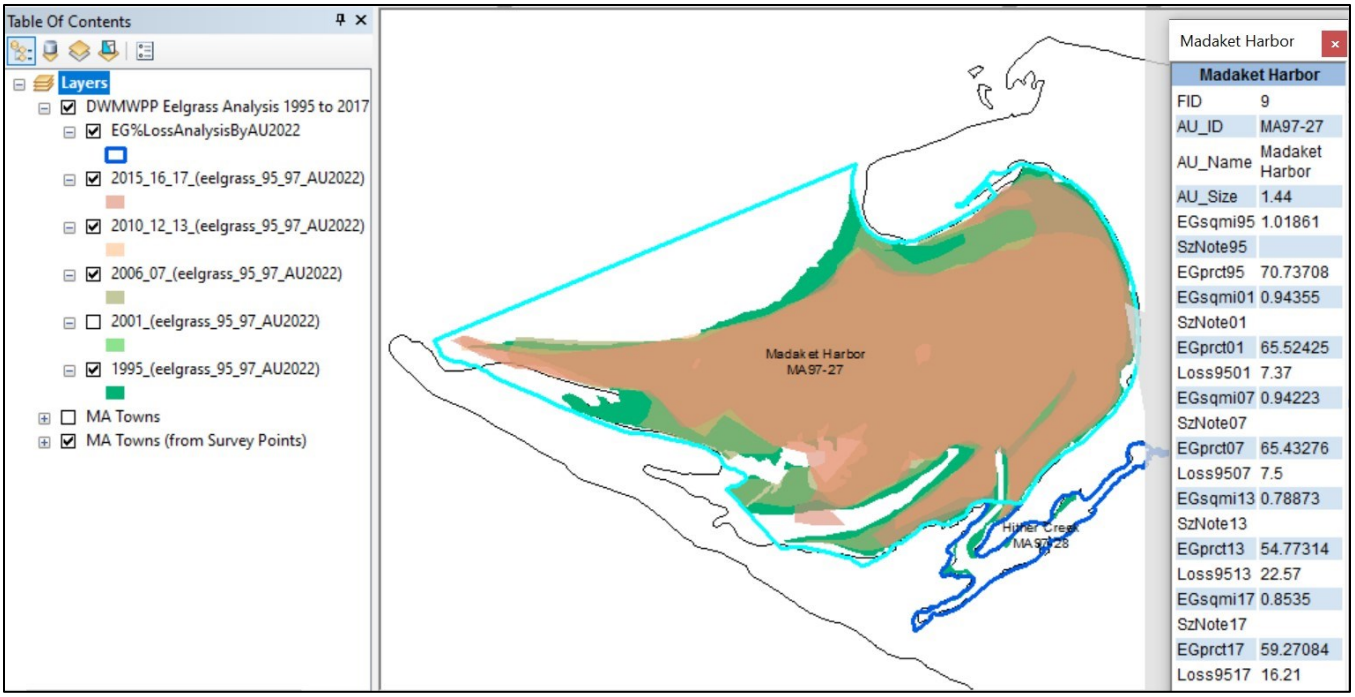
Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	YES
2022 Use Attainment Summary	
The MassDEP Eelgrass Mapping Project documented an ~16% loss of eelgrass bed habitat in Madaket Harbor between 1995-2017. It is noted, however, the harbor has experienced circulation change during this evaluation period with breach opening and closing so the loss cannot be associated with water quality condition alone given the changes associated with tidal energies. As was previously reported (MassDEP Undated 6) initial MEP/Nantucket Water Quality Monitoring Program (NWQMP) project studies documented a healthy estuarine habitat in the harbor with good benthic community structure and function, little oxygen depletion (most measurements >6.0mg/L, seldom <5mg/L), generally low Chlorophyll *a* concentration (MEP average 5.2 µg/L) and low total nitrogen concentrations (NWQMP average 3.3 to 5.3 µg/L) (Howes, Ramsey, et al. 2010). The Aquatic Life Use for Madaket Harbor (MA97-27) is assessed as Fully Supporting based on the overall initial MEP project evaluation indicating generally good health with an Alert being identified because of the loss of eelgrass bed habitat (particularly along the northern and southwest edges of the bed).	

Biological Monitoring Information

Primary Producers Data

Eelgrass analysis 1995-2017 for Madaket Harbor MA97-27 (MassGIS 2018, MassDEP Undated 4):



The MassDEP Eelgrass Mapping Project documented an ~16% loss of eelgrass bed habitat in Madaket Harbor between 1995-2017.

Fish Consumption

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Madaket Harbor (MA97-27); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	**Alert**
Insufficient Information	YES
2022 Use Attainment Summary	
Madaket Harbor (MA97-27): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.3983 sq mi (97%). The approved shellfish growing area represents 1.3154 sq mi (92%). The prohibited shellfish growing area represents 0.0829 sq mi (6%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	**Waterbody/Area Description**	**Classification**	**Area (Sq. Mi.)**	**Area (% of AU)**
NT11.1	Jacksons Point	Prohibited	0.08292	5.8%
NT11.3	Madeket Harbor	Approved	1.31230	91.4%
NT13.0	Tuckernuck Island	Approved	0.00310	0.2%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Madaket Harbor (MA97-27), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
One beach on Nantucket Island i.e., Warrens Landing (ID 3008) was never posted for swimming between 2014 and 2019. The Primary Contact Recreational Use for Madaket Harbor (MA97-27) will continue to be assessed as Fully Supporting, since there were no swimming advisory postings at the Warrens Landing Beach between 2014 and 2019.	

Beach Postings

MassDPH Beach Posting Data Summary (% Bathing Season Posted 2014-2019) (Bailey, Logan Feb. 2, 2021) (MassDEP Undated 2)

Beach ID	Beach Name/Town	Left Boundary (Latitude)	Left Boundary (Longitude)	Right Boundary (Latitude)	Right Boundary (Longitude)	2014	2015	2016	2017	2018	2019	# years> 10%
3008	Warren's Landing/Nantucket	41.28723	-70.19230	41.28659	-70.19200	0%	0%	0%	0%	0%	0%	0

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Madaket Harbor (MA97-27): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.3983 sq mi (97%). The approved shellfish growing area represents 1.3154 sq mi (92%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
One beach on Nantucket Island i.e., Warrens Landing (ID 3008) was never posted for swimming between 2014 and 2019. The Secondary Contact Recreational Use for Madaket Harbor (MA97-27) will continue to be assessed as Fully Supporting, since there were no swimming advisory postings at the Warrens Landing Beach between 2014 and 2019.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Madaket Harbor (MA97-27): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.3983 sq mi (97%). The approved shellfish growing area represents 1.3154 sq mi (92%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Mattakeset Bay (MA97-14)

Location:	Waters west of an imaginary line drawn southeasterly from Katama Point to Norton Point, Edgartown, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	0.17 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aquatic Life Use for Mattakeset Bay (MA97-14), so it is Not Assessed.	

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Mattakeset Bay (MA97-14); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
Mattakeset Bay (MA97-14): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.13 sq mi (74%). The approved shellfish growing area represents 0.13 sq mi (74%). The Shellfish Harvesting Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V20.0	Katama Bay	Approved	0.13004	74.3%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO

2022 Use Attainment Summary
No data are available to assess the status of the Aesthetic Use for Mattakeset Bay (MA97-14), so it is Not Assessed.

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.13 sq mi (74%). The approved shellfish growing area represents 0.13 sq mi (74%). The Primary Contact Recreational Use for Mattakeset Bay (MA97-14) will continue to be assessed as Fully Supporting since the shellfish growing area (normalized to the AU area) is classified as 100% approved.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Mattakeset Bay (MA97-14): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.13 sq mi (74%). The approved shellfish growing area represents 0.13 sq mi (74%). The Primary Contact Recreational Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Secondary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.13 sq mi (74%). The approved shellfish growing area represents 0.13 sq mi (74%). The Secondary Contact Recreational Use for Mattakeset Bay (MA97-14) will continue to be assessed as Fully Supporting since the shellfish growing area (normalized to the AU area) is classified as 100% approved.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Mattakeset Bay (MA97-14): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.13 sq mi (74%). The approved shellfish growing area represents 0.13 sq mi (74%). The Secondary Contact Recreational use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Menemsha Creek (MA97-42)

Location:	Headwaters, outlet Menemsha Pond to mouth at confluence with the Menemsha Bight portion of Vineyard Sound, Aquinnah/Chilmark (includes Menemsha Basin).
AU Type:	ESTUARY
AU Size:	0.17 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO

2022 Use Attainment Summary

The Menemsha-Squibnocket Pond watershed is distributed across the Towns of Chilmark and Aquinnah and are shared by the Wampanoag Tribe of Aquinnah. The Menemsha-Squibnocket Pond Embayment System is a complex coastal open water embayment comprised in part by the large northern basin (Menemsha Pond) that is connected to Vineyard Sound/Menemsha Bight via the Menemsha Creek (MA97-42) with its armored inlet. According to the June 2017 draft Linked Watershed-Embayment Model to Determine the Critical Nitrogen Loading Threshold for the Menemsha-Squibnocket Pond Embayment System, Chilmark/Aquinnah, Massachusetts (Howes, Eichner, et al. 2017), based on data collection during the summers of 2007 dissolved oxygen was generally above 6 mg/L (77% of the 62 day record) and rarely <5mg/L (4% of record, never <4.0mg/L), chlorophyll *a* concentrations were low for a coastal basin, averaging 7µg/L over summer time series (generally between 5-10 µg/L, >90% of the time <10 µg/L and always <15 µg/L), there was sparse to no macroalgae throughout this basin, and the benthic community was considered indicative of very high habitat quality, averaging 25 species and 1500 individuals per grab with high diversity (H'=3.35) and Evenness (E=0.73) and community 90% non-stress indicator species with crustaceans, mollusks and polychaetes dominant. The mean total nitrogen concentrations (average concentration summers 2000 through 2012, MEN 1 and MEN 2) were 0.287 and 0.341mg/L, respectively (Howes, Eichner, et al. 2017). The Buzzards Bay Coalition (BBC) staff/volunteers conducted discrete water quality monitoring in Menemsha Creek (MA97-42) at one location at the north end, near the outlet (BBC_MEN2), usually weekly (between the hours of 6 and 9am) in the summers of 2017-2019, at depths ranging from the surface to 3.7m. The data were indicative of good water quality with a maximum temperature of 22.4°C (n=48), minimum dissolved oxygen 5.8mg/L (only one of 48 measurements <6.0mg/L), and good Secchi disk depth (range 2.5 to 4.2m, n=19). The MassDEP Eelgrass Mapping Project documented a ~34% loss of eelgrass bed habitat in Menemsha Creek between 1995-2017 with the majority of loss along the western edge/navigation channel of the creek. Maintenance dredging of the channel was conducted between 2015 and 2017.

The Aquatic Life Use for Menemsha Creek (MA97-42) is assessed as Fully Supporting based primarily on the results of the MEP analysis and the 2017 -2019 BBC data which were all indicative of good water quality conditions. Although there was a loss of eelgrass bed habitat between 1995 and 2017, the loss occurred primarily along the western edge of the bed in the navigation channel area where maintenance dredging was done, so it is not considered an indicator of water quality degradation.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
BBC_MEN2	Buzzards Bay Coalition	Water Quality	Menemsha Pond	Menemsha Pond, Aquinnah/Chilmark	41.3536	-70.7662

Biological Monitoring Information

(Howes, Eichner, et al. 2017)

Table VIII-1. Summary of nutrient related habitat quality within the Menemsha-Squibnocket Embayment System within the Towns of Chilmark and Aquinnah, MA, based upon assessments in Section VII. WQMP indicates Water Quality Monitoring Program.

Health Indicator	Menemsha-Squibnocket Embayment System				
	Menemsha Channel	Menemsha Main Basin	Nashaquitsa Pond	Stonewall Pond	Squibnocket Pond
Dissolved Oxygen	H[1]	HI[1]	HI[1]	MI[2]	MI/SI[3]
Chlorophyll	H[4]	H/MI[5]	MI[6]	MI/SI[7]	H/MI[5]
Macroalgae	H[8]	H/MI[9]	H[8]	H[8]	H/MI[10]
Eelgrass	H[11]	H/M[11]	SI[12]	SI[12]	--[13]
Infaunal Animals	H[14]	H[15]	MI[16]	MI[16]	MI[17]
Overall:	**H[18]**	**H/MI[19]**	**MI/SI[20]**	**SI[21]**	**MI[22]**

1- oxygen always >4mg/L and above 5 mg/L 91%-96% of record and for Nashaquitsa >6 mg/L for 97% of record.
2- moderate to high oxygen depletion, <6mg/L 36%, <4 mg/L 5% of record and periodically <2 mg/L
3- except for near the channel to Menemsha Pond, oxygen has high diurnal shifts (6-12 mg/L), frequent depletion to <4 mg/L, 8%-26% of record and <3mg/L 4%-16% of record, with declines to <2mg/L common, with some anoxia.
4- levels low for a coastal basin, averaging 7 ug/L over summer time series generally between 5-10 ug/L, >90% of the time <10 ug L^{-1} and always <15 ug L^{-1}..
5 - low to moderate for a coastal basin, 6-8 ug/L, >10 ug/L ~24% of record and rarely >15ug/L.
6- moderate for a coastal basin, averaging 8.4 ug/L, but >10 ug/L 18% of record with blooms to 25 ug/L.
7- moderate to high for a coastal basin averaging 10 ug/L, >20 ug/L 8% of record with periodic blooms to >25 ug/L
8- sparse to no macroalgae throughout this basin.
9- modest accumulations of green filamentous drift algae accumulating in shallow area of mid basin, but generally absent.
10- sparse to no macroalgae in North region, but south region has relatively high accumulation and east region dense micro-algal mat covering sediments.
11- most of the main basin margin supports eelgrass habitat, loss of some deeper beds and fringing beds throughout basin. No clear loss of beds associated with N enrichment in Channel. Temporal/spatial loss pattern of loss in Main Basin is typical of nitrogen enrichment (loss deeper, stable in shallows) and indicates moderate impairment.
12- basin coverage in 1995 completely lost in Stonewall; Nashaquitsa loss from deep area, now shrinking of fringing beds.
13- no documented (verified) evidence of eelgrass "presence" in this basin historically.
14 - very high habitat quality, averaging 25 species & 1500 individuals per grab with high diversity (H'=3.35) and Evenness (E=0.73) and community 90% non-stress indicator species with crustaceans and mollusks and polychaetes dominant.
15 – high habitat quality averaging 20 species and 600 individuals per grab with high diversity (H'=3.12) and Evenness (E=0.73) and <20% tubificids and capitellids. Communities dominated by crustacean, polychaetes and crustaceans. Main basin has highest quality habitat is in the shallow areas not in the deep southern depositional basin
16-productive benthic animal communities (high numbers of organisms, >800 per grab), but only moderate numbers of species (14-17), diversity (H' 2.6-2.2) and Evenness (0.57-0.63). Consistent with moderate organic matter enrichment is a community dominated by amphipods with mainly polychaetes colonizing soft organic muds.
17- slightly higher impairment than Nashaquitsa and Stonewall Ponds, but supports a productive community (moderate to high numbers of organisms, >400 per grab) with fewer species (9) and lower diversity (H' 1.72) and Evenness (0.55), community is generally dominated by *Streblospio* and *Leptocheirus* (amphipod), with few stress indicator species..
18 High water quality, diversity productive benthic community, no macroalgae, oxidized sediments and stable eelgrass.
19 - High water quality, diversity productive benthic community, no macroalgae, oxidized sediments. Generally stable eelgrass coverage with only slight indication of loss in deeper waters of deep southern basin, the slight loss of eelgrass requires a designation moderately impaired, although benthic animal habitat remains of high quality..
20 – moderate oxygen depletion and elevation chlorophyll with organic soft sediments. Significant loss of eelgrass coverage since 1995 some remaining. Overall, moderately to significantly impaired eelgrass habitat and moderately impaired benthic animal habitat.
21- as for #20 above, except that eelgrass loss is complete gaining a designation significantly impaired for eelgrass.
22 - no eelgrass habitat historically. Supports productive but moderately impaired benthic infauna habitat with low to moderate species, diversity and Evenness. Moderate impairment is consistent with the levels of oxygen depletion, macroalgal accumulations and mats, organic rich soft sediments in much of the basin and high nitrogen levels. As found in many moderately impaired benthic habitats, the community is dominated by *Leptocheirus* (amphipod) and *Streblospio*

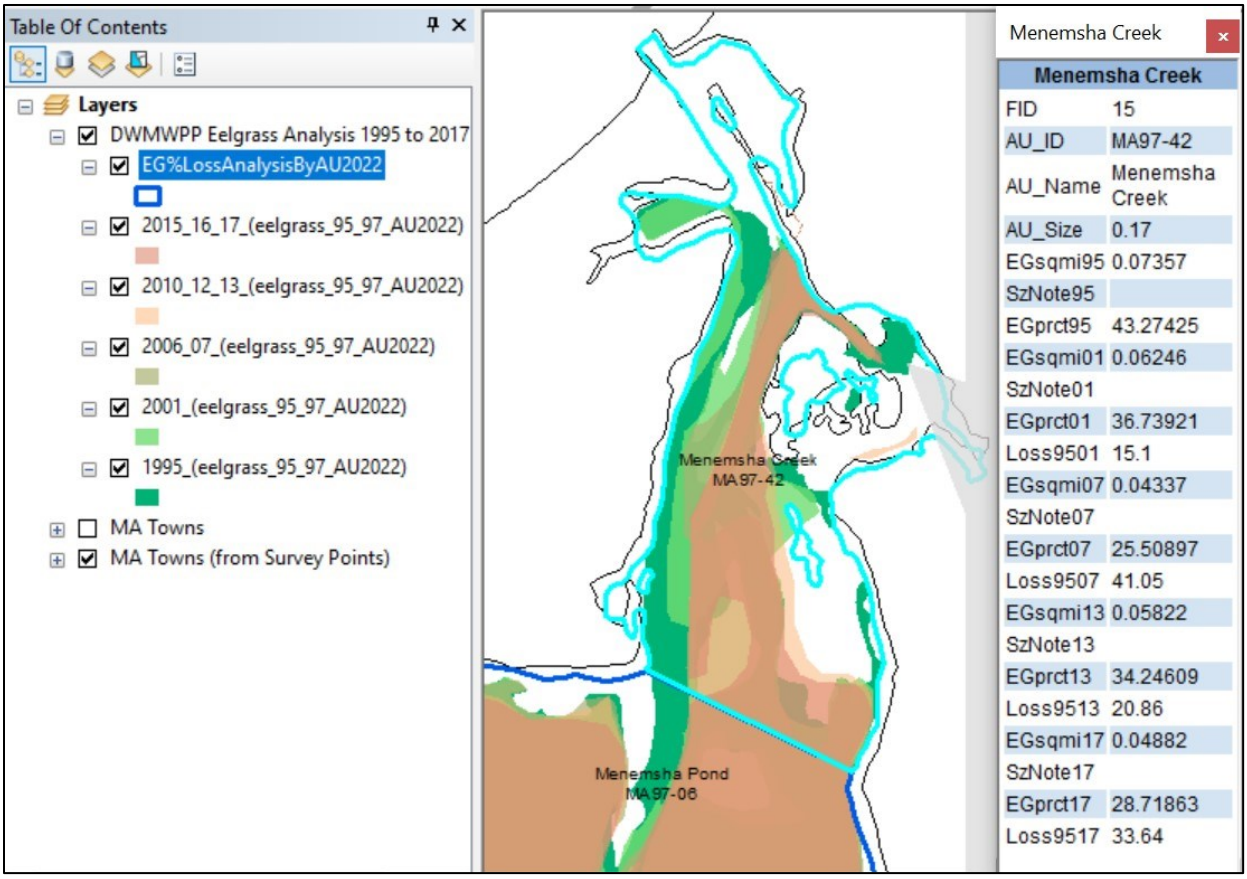
H = High quality habitat conditions; MI = Moderate Impairment; SI = Significant Impairment;
SD = Severely Degraded; -- = not applicable to this estuarine reach

Table VI-1. Measured data and modeled nitrogen concentrations for the Menemsha and Squibnocket Ponds system used in the model calibration plots of Figures VI-2 and VI-3. All concentrations are given in mg/L N. "Data mean" values are calculated as the average of all measurements. Data represented in this table were collected in the summers of 2000 through 2012.

Sub-Embayment	Monitoring station	Data Mean	s.d. all data	N	model min	model max	model average
Menemsha Creek Low	MEN 1	0.287	0.037	23	0.289	0.310	0.296
Menemsha Creek Low	MEN 2	0.341	0.078	24	0.293	0.318	0.304
Menemsha Main Basin	MEN 3	0.385	0.118	29	0.291	0.328	0.311
Menemsha Main Basin	MEN 4	0.399	0.156	25	0.385	0.423	0.404
Nashaquitsa Mouth	MEN 5	0.338	0.107	26	0.319	0.344	0.335
Nashaquitsa Basin	MEN 6	0.341	0.082	23	0.338	0.354	0.347
Menemsha Main Basin	MEN 8	0.379	0.111	23	0.360	0.374	0.368
Menemsha Main Basin	MEN 9	0.386	0.099	23	0.340	0.370	0.358
Menemsha Creek	MEN 10	0.351	0.120	22	0.290	0.326	0.308
Squibnocket Basin	SQ 1	0.763	0.321	20	0.725	0.782	0.761
Squibnocket Basin	SQ 2	0.798	0.327	22	0.788	0.798	0.793
Squibnocket Basin	SQ 3	0.769	0.386	18	0.780	0.791	0.786
Squibnocket Basin	SQ 4	0.853	0.318	15	0.812	0.822	0.817

Primary Producers Data

Eelgrass analysis 1995-2017 for Menemsha Creek MA97-42 (MassGIS 2018, MassDEP Undated 4):



The MassDEP Eelgrass Mapping Project documented an ~34% loss of eelgrass bed habitat in Menemsha Creek between 1995-2017.

Physico-chemical Water Quality Information

DO, pH, Temperature

Buzzards Bay Coalition Estuarine Discrete Dissolved Oxygen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[DO was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Average Sample Depth (m)	DO Count	DO Min (mg/L)	DO Avg (mg/L)	% Meas. <6.0	% Meas. <5.0	% Meas. <4.0
BBC_MEN2	07/06/17	09/26/17	0.2	12	6.2	7.2	0	0	0
BBC_MEN2	07/06/17	09/26/17	3.7	12	6.7	7.5	0	0	0
BBC_MEN2	06/27/18	08/02/18	0.1	2	5.8	6.3	50	0	0
BBC_MEN2	06/27/18	08/02/18	3.7	2	7.1	7.5	0	0	0
BBC_MEN2	06/24/19	09/12/19	0.2	10	6.5	7.1	0	0	0
BBC_MEN2	06/24/19	09/12/19	3.5	10	6.8	7.5	0	0	0

Buzzards Bay Coalition Discrete Estuarine Temperature Data (2014-2018). (BBC 2021) (MassDEP Undated 2)
[Temperature was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer Index is June 1 – Sept 15]

Station Code	Start Date	End Date	Average Sample Depth (m)	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count >29.4
BBC_MEN2	07/06/17	09/26/17	0.2	12	10	21.6	20.5	0
BBC_MEN2	07/06/17	09/26/17	3.7	12	10	20.3	19.4	0
BBC_MEN2	06/27/18	08/02/18	0.1	2	2	22.4	20.0	0
BBC_MEN2	06/27/18	08/02/18	3.6	2	2	21.2	19.0	0
BBC_MEN2	06/24/19	09/12/19	0.2	10	10	22.2	20.0	0
BBC_MEN2	06/24/19	09/12/19	3.5	10	10	20.9	19.0	0

Nutrients (Primary Producer Screening, Physico-chemical Screening)

Buzzards Bay Coalition Secchi Disk Depth Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

Station Code	Start Date	End Date	Secchi disk depth Count	Secchi disk depth Min (m)	Secchi disk depth Max (m)	Secchi disk depth Avg (m)
BBC_MEN2	07/06/17	09/26/17	11	2.5	4.2	3.2
BBC_MEN2	06/27/18	08/02/18	2	3.5	3.8	3.7
BBC_MEN2	06/24/19	09/05/19	6	2.8	3.8	3.3

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Menemsha Creek (MA97-42); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Insufficient Information	YES
2022 Use Attainment Summary	
Menemsha Creek (MA97-42): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.1536 sq mi (90%). The approved shellfish growing area represents 0.1419 sq mi (83%). The prohibited shellfish growing area represents 0.0117 sq mi (7%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V1.0	Menemsha Bight, Gay Head	Approved	0.00000	0.0%
V2.0	Menemsha Inlet and Pond, Aquinnah/Chilmark	Approved	0.14191	82.7%
V2.1	Menemsha Basin	Prohibited	0.01166	6.8%

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V4.0	Chilmark North Coast	Approved	0.00001	0.0%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Menemsha Creek (MA97-42), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Primary Contact Recreation Use for Menemsha Creek (MA97-42), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Menemsha Creek (MA97-42): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.1536 sq mi (90%). The approved shellfish growing area represents 0.1419 sq mi (83%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Secondary Contact Recreation Use for Menemsha Creek (MA97-42), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Menemsha Creek (MA97-42): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.1536 sq mi (90%). The approved shellfish growing area represents 0.1419 sq mi (83%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Menemsha Pond (MA97-06)

Location:	Waters between Nashaquitsa Pond and Menemsha Creek, Chilmark/Aquinnah, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	0.89 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Recommendations

2022 Recommendations
ALU: Continue to monitor eelgrass bed habitat in Menemsha Pond (MA97-06) to evaluate whether or not loss is continuing to progress.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	YES
2022 Use Attainment Summary	

The Menemsha-Squibnocket Pond watershed is distributed across the Towns of Chilmark and Aquinnah and is shared by the Wampanoag Tribe of Aquinnah. The Menemsha-Squibnocket Pond Embayment System is a complex coastal open water embayment comprised in part by the large northern basin (Menemsha Pond) that is connected to Nashaquitsa Pond, a smaller basin on the southeastern side, which in turn is connected via a shallow channel to Stonewall Pond and Squibnocket Pond which is connected to the southeastern corner of Menemsha Pond via an unnamed tributary (locally referred to as Herring Creek, Gay Head Creek, or the Wampanoag herring run). Menemsha Pond exchanges water directly with Vineyard Sound/Menemsha Bight via Menemsha Channel and an inlet that is armored to both the east and west. According to the draft Linked Watershed-Embayment Model to Determine the Critical Nitrogen Loading Threshold for the Menemsha-Squibnocket Pond Embayment System, Chilmark/Aquinnah, Massachusetts (Howes, Eichner, et al. 2017), based on data collection during the summers of 2007 and 2012, DO was always >4mg/L and >5 mg/L 91%-96% of record, chl-a conc. were typically 6-8 µg/L, >10 µg/L ~24% of record (rarely >15µg/L), there was modest accumulations of green filamentous drift algae in shallow area of the mid basin (generally absent), and the benthic community was considered indicative of high habitat quality averaging 20 species and 600 individuals per grab with high diversity (H'=3.12) and Evenness (E=0.73) and <20% tubificids and capitellids. The communities were dominated by crustacean, polychaetes and crustaceans with some stress tolerant small opportunistic species (<20% tubificids and capitellids). The highest quality habitat is in the shallow areas not in the deep southern depositional basin. The mean TN conc. (summers 2000 through 2012, MEN3, MEN4, MEN8, MEN9, MEN10) were 0.385, 0.399, 0.379, 0.386, and 0.351mg/L, respectively (Howes, Eichner, et al. 2017). The Buzzards Bay Coalition (BBC) staff/volunteers conducted discrete water quality monitoring in Menemsha Pond (MA97-06) at three locations; roughly in the middle (BBC_MEN3) and along the south bank (BBC_MEN4 and MEN5), usually weekly (between the hours of 6 and 9am) in the summers of 2017-2019, at depths ranging from the surface to 6.0m. The data were generally indicative of good water quality in this estuarine pond; the max Temp. was only 23.2oC (n=146), overall the avg % of DO meas. <6.0mg/L was only 1.5% and no meas. were <5.0mg/L (n=166) (the few excursions <6.0mg/L were all at depth (3 of 82 meas. at avg depths between 4.5 and 5.7m) so the few incidences of low DO conc. were all at depth. Secchi disk depth ranged from 1.8 to 4.4m (n=56). The BBC typically scheduled nutrient sampling efforts for ebb tides in July and August: the max chl-a was 5.7µg/L (n=11) and the single TN meas. was low (0.24mg/L). Ammonia-N conc. were also low (range 0.004 to 0.006mg/L, n=11), though TUs could not be calculated (lack of quality assured pH and salinity data). The MassDEP Eelgrass Mapping Project documented an ~8% loss of eelgrass bed habitat in the pond between 1995 and 2017. A slight gain overall in habitat was found (0.44 sq miles in 2017 vs 0.42 sq miles in 2013), though loss present in deeper and fringing beds throughout the basin (typical of nitrogen enrichment issues).

The Aquatic Life Use of Menemsha Pond will continue to be assessed as Fully Supporting based on the results of the MEP analysis indicating generally high water quality, a diverse and productive benthic community, no macroalgae, oxidized sediments, the relatively stable eelgrass bed habitat from 1995 to 2017 (some signal of nutrient related stress although overall generally stable), and the water quality data collected by the BBC between 2017 and 2019. The Alert identified due to some loss of eelgrass bed habitat in the deeper and fringing beds indicative of nutrient related stress is being carried forward.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
BBC_MEN3	Buzzards Bay Coalition	Water Quality	Menemsha Pond	Menemsha Pond, Aquinnah/Chilmark	41.33678	-70.77283
BBC_MEN4	Buzzards Bay Coalition	Water Quality	Menemsha Pond	Menemsha Pond, Aquinnah/Chilmark	41.33144	-70.78183

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
BBC_MEN5	Buzzards Bay Coalition	Water Quality	Menemsha Pond	Menemsha Pond, Aquinnah/Chilmark	41.33165	-70.76958

Biological Monitoring Information

(Howes, Eichner, et al. 2017)

Table VIII-1. Summary of nutrient related habitat quality within the Menemsha-Squibnocket Embayment System within the Towns of Chilmark and Aquinnah, MA, based upon assessments in Section VII. WQMP indicates Water Quality Monitoring Program.

Health Indicator	Menemsha-Squibnocket Embayment System				
	Menemsha Channel	Menemsha Main Basin	Nashaquitsa Pond	Stonewall Pond	Squibnocket Pond
Dissolved Oxygen	H[1]	HI[1]	HI[1]	MI[2]	MI/SI[3]
Chlorophyll	H[4]	H/MI[5]	MI[6]	MI/SI[7]	H/MI[5]
Macroalgae	H[8]	H/MI[9]	H[8]	H[8]	H/MI[10]
Eelgrass	H[11]	H/M[11]	SI[12]	SI[12]	--[13]
Infaunal Animals	H[14]	H[15]	MI[16]	MI[16]	MI[17]
Overall:	**H[18]**	**H/MI[19]**	**MI/SI[20]**	**SI[21]**	**MI[22]**

1- oxygen always >4mg/L and above 5 mg/L 91%-96% of record and for Nashaquitsa >6 mg/L for 97% of record.
2- moderate to high oxygen depletion, <6mg/L 36%, <4 mg/L 5% of record and periodically <2 mg/L
3- except for near the channel to Menemsha Pond, oxygen has high diurnal shifts (6-12 mg/L), frequent depletion to <4 mg/L, 8%-26% of record and <3mg/L 4%-16% of record, with declines to <2mg/L common, with some anoxia.
4- levels low for a coastal basin, averaging 7 ug/L over summer time series generally between 5-10 ug/L, >90% of the time <10 ug L^{-1} and always <15 ug L^{-1}..
5 - low to moderate for a coastal basin, 6-8 ug/L, >10 ug/L ~24% of record and rarely >15ug/L.
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11- most of the main basin margin supports eelgrass habitat, loss of some deeper beds and fringing beds throughout basin. No clear loss of beds associated with N enrichment in Channel. Temporal/spatial loss pattern of loss in Main Basin is typical of nitrogen enrichment (loss deeper, stable in shallows) and indicates moderate impairment.
12- basin coverage in 1995 completely lost in Stonewall; Nashaquitsa loss from deep area, now shrinking of fringing beds.
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16-productive benthic animal communities (high numbers of organisms, >800 per grab), but only moderate numbers of species (14-17), diversity (H' 2.6-2.2) and Evenness (0.57-0.63). Consistent with moderate organic matter enrichment is a community dominated by amphipods with mainly polychaetes colonizing soft organic muds.
17- slightly higher impairment than Nashaquitsa and Stonewall Ponds, but supports a productive community (moderate to high numbers of organisms, >400 per grab) with fewer species (9) and lower diversity (H' 1.72) and Evenness (0.55), community is generally dominated by *Streblospio* and *Leptocheirus* (amphipod), with few stress indicator species..
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21- as for #20 above, except that eelgrass loss is complete gaining a designation significantly impaired for eelgrass.
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H = High quality habitat conditions; MI = Moderate Impairment; SI = Significant Impairment;
SD = Severely Degraded; -- = not applicable to this estuarine reach

Table VI-1. Measured data and modeled nitrogen concentrations for the Menemsha and Squibnocket Ponds system used in the model calibration plots of Figures VI-2 and VI-3. All concentrations are given in mg/L N. "Data mean" values are calculated as the average of all measurements. Data represented in this table were collected in the summers of 2000 through 2012.

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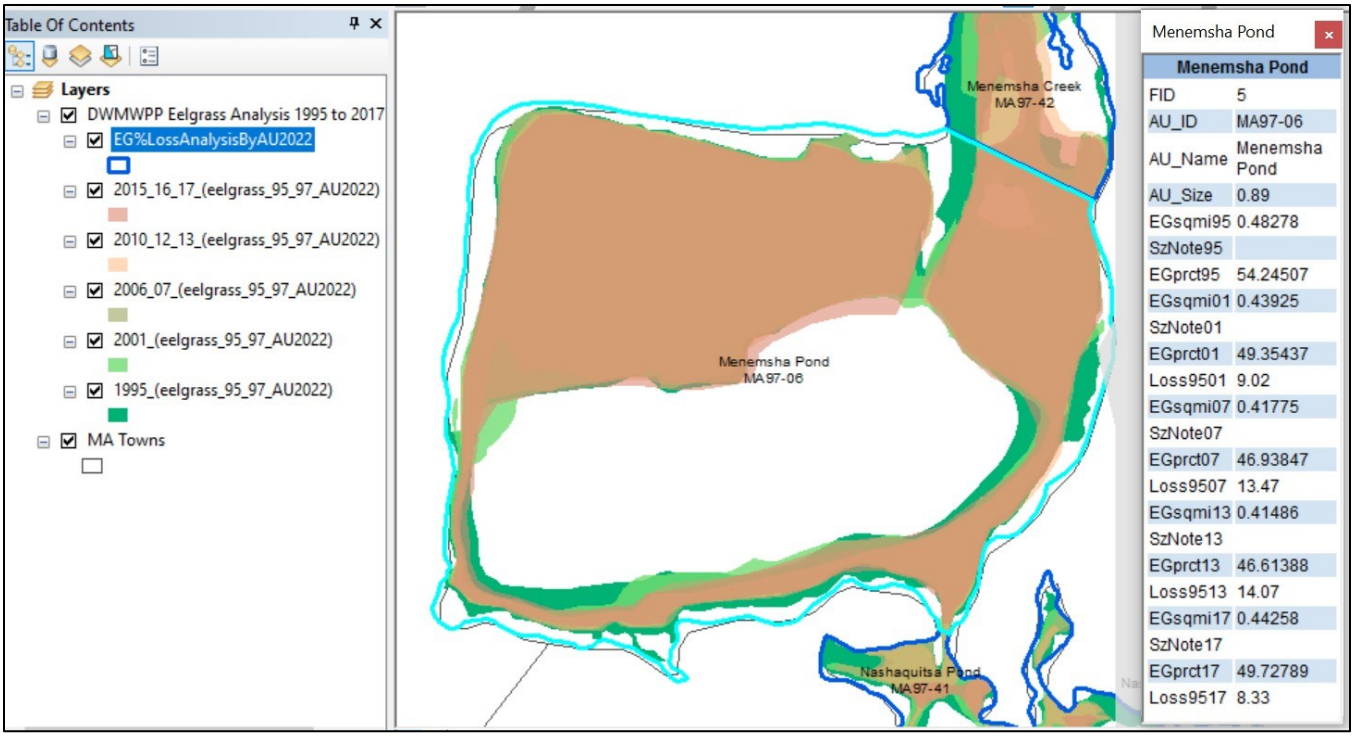
Menemsha Main Basin	MEN 8	0.379	0.111	23	0.360	0.374	0.368
Menemsha Main Basin	MEN 9	0.386	0.099	23	0.340	0.370	0.358
Menemsha Creek	MEN 10	0.351	0.120	22	0.290	0.326	0.308
Squibnocket Basin	SQ 1	0.763	0.321	20	0.725	0.782	0.761
Squibnocket Basin	SQ 2	0.798	0.327	22	0.788	0.798	0.793
Squibnocket Basin	SQ 3	0.769	0.386	18	0.780	0.791	0.786
Squibnocket Basin	SQ 4	0.853	0.318	15	0.812	0.822	0.817

Primary Producers Data

Eelgrass analysis 1995-2017 for Menemsha Pond MA97-06 (MassGIS 2018, MassDEP Undated 4):



The MassDEP Eelgrass Mapping Project documented an ~8% loss of eelgrass bed habitat in Menemsha Pond between 1995 and 2017.

Physico-chemical Water Quality Information

DO, pH, Temperature

Buzzards Bay Coalition Estuarine Discrete Dissolved Oxygen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[DO was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Average Sample Depth (m)	DO Count	DO Min (mg/L)	DO Avg (mg/L)	% Meas. <6.0	% Meas. <5.0	% Meas. <4.0
BBC_MEN3	07/06/17	09/26/17	0.2	12	6.4	7.5	0	0	0
BBC_MEN3	07/06/17	09/26/17	5.7	11	5.3	7.1	9	0	0
BBC_MEN3	06/27/18	09/26/18	0.2	9	7.2	7.8	0	0	0
BBC_MEN3	06/19/18	09/18/18	2.4	6	7.4	7.8	0	0	0
BBC_MEN3	06/24/19	09/12/19	0.2	14	6.7	7.6	0	0	0
BBC_MEN3	06/24/19	09/12/19	6.0	10	6.9	7.3	0	0	0
BBC_MEN4	07/13/17	09/26/17	0.2	11	6.8	7.6	0	0	0
BBC_MEN4	07/13/17	09/26/17	4.5	11	5.6	7.0	18	0	0
BBC_MEN4	06/19/18	09/26/18	0.2	4	7.1	7.6	0	0	0
BBC_MEN4	06/12/18	09/18/18	1.4	7	7.3	7.8	0	0	0
BBC_MEN4	07/02/19	09/12/19	0.2	8	7.3	7.8	0	0	0
BBC_MEN4	07/02/19	09/12/19	4.4	7	6.6	7.2	0	0	0
BBC_MEN5	07/06/17	09/26/17	0.2	12	6.2	7.2	0	0	0
BBC_MEN5	07/06/17	09/26/17	2.4	12	6.1	7.5	0	0	0
BBC_MEN5	06/19/18	09/26/18	0.2	4	7.2	7.6	0	0	0

Station Code	Start Date	End Date	Average Sample Depth (m)	DO Count	DO Min (mg/L)	DO Avg (mg/L)	% Meas. <6.0	% Meas. <5.0	% Meas. <4.0
BBC_MEN5	06/12/18	09/18/18	1.0	8	7.4	7.8	0	0	0
BBC_MEN5	06/24/19	09/12/19	0.2	10	6.9	7.4	0	0	0
BBC_MEN5	06/24/19	09/12/19	2.0	10	6.7	7.5	0	0	0

Buzzards Bay Coalition Discrete Estuarine Temperature Data (2014-2018). (BBC 2021) (MassDEP Undated 2)
[Temperature was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer Index is June 1 – Sept 15]

Station Code	Start Date	End Date	Average Sample Depth (m)	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count >29.4
BBC_MEN3	07/06/17	09/26/17	0.2	11	9	22.4	20.8	0
BBC_MEN3	07/06/17	09/26/17	5.7	11	9	20.8	19.6	0
BBC_MEN3	06/27/18	09/26/18	0.2	9	8	23.2	21.4	0
BBC_MEN3	06/19/18	09/18/18	2.8	6	5	23.1	20.0	0
BBC_MEN3	06/24/19	09/12/19	0.2	13	13	22.1	20.9	0
BBC_MEN3	06/24/19	09/12/19	5.9	10	10	20.8	19.3	0
BBC_MEN4	07/13/17	09/26/17	0.2	11	9	22.2	20.6	0
BBC_MEN4	07/13/17	09/26/17	4.5	11	9	20.7	19.7	0
BBC_MEN4	06/19/18	08/02/18	0.2	3	3	21.8	19.9	0
BBC_MEN4	06/12/18	09/18/18	1.5	7	6	22.9	20.5	0
BBC_MEN4	07/02/19	09/12/19	0.2	8	8	22.3	20.9	0
BBC_MEN4	07/02/19	09/12/19	4.4	7	7	21.6	19.9	0
BBC_MEN5	07/06/17	09/26/17	0.2	12	10	22.6	21.3	0
BBC_MEN5	07/06/17	09/26/17	2.2	12	10	21.9	20.7	0
BBC_MEN5	06/19/18	09/26/18	0.2	4	3	22.6	19.9	0
BBC_MEN5	06/12/18	09/18/18	1.0	8	7	23.2	21.3	0
BBC_MEN5	06/24/19	09/12/19	0.2	10	10	22.7	21.4	0
BBC_MEN5	06/24/19	09/12/19	2.0	10	10	22.3	20.7	0

Nutrients (Primary Producer Screening, Physico-chemical Screening)

Buzzards Bay Coalition Estuarine Nutrient Enrichment Indicator Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer seasonal total nitrogen data collected May-Sept]

Station Code	Data Year	Average Sample Depth (m)	Seasonal TN Count	Seasonal TN Min (mg/L)	Seasonal TN Max (mg/L)	Seasonal TN Avg (mg/L)	Chl-a Count	Chl-a Min (ug/L)	Chl-a Max (ug/L)	Chl-a Avg (ug/L)	Chl-a Count ≤5	Chl-a Count >10
BBC_MEN3	2017	0.2	--	--	--	--	4	1.90	3.76	2.49	4	0
BBC_MEN3	2018	0.2	--	--	--	--	3	1.40	3.19	2.17	3	0
BBC_MEN3	2019	0.2	1	0.24	0.24	0.24	4	0.51	5.73	2.60	3	0

Buzzards Bay Coalition Secchi Disk Depth Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

Station Code	Start Date	End Date	Secchi disk depth Count	Secchi disk depth Min (m)	Secchi disk depth Max (m)	Secchi disk depth Avg (m)
BBC_MEN3	07/06/17	09/26/17	10	2.6	4.4	3.4
BBC_MEN3	06/27/18	08/21/18	5	2.0	3.3	2.8
BBC_MEN3	06/24/19	09/12/19	10	2.1	4.3	3.0
BBC_MEN4	07/20/17	09/26/17	10	2.1	4.0	3.1
BBC_MEN4	08/02/18	08/02/18	1	2.2	2.2	2.2
BBC_MEN4	07/02/19	08/14/19	7	2.3	3.6	2.8
BBC_MEN5	07/06/17	09/26/17	8	1.8	3.2	2.5
BBC_MEN5	08/02/18	08/02/18	1	2.5	2.5	2.5
BBC_MEN5	07/02/19	09/05/19	4	2.1	2.9	2.5

Toxics and other pollutants (metals, ammonia, chlorine)

Buzzards Bay Coalition Ammonia-Nitrogen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

[Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Average Sample Depth (m)	NH3 Count	NH3 Min (mg/L)	NH3 Max (mg/L)	NH3 Avg (mg/L)
BBC_MEN3	07/06/17	08/17/17	0.2	4	0.004	0.006	0.005
BBC_MEN3	07/10/18	08/21/18	0.2	3	0.004	0.006	0.005
BBC_MEN3	07/11/19	08/14/19	0.2	4	0.004	0.005	0.004

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Menemsha Pond (MA97-06); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
Menemsha Pond (MA97-06): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.8809 sq mi (99%). The approved shellfish growing area represents 0.8809 sq mi (99%). The Shellfish Harvesting Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V2.0	Menemsha Inlet and Pond, Aquinnah/Chilmark	Approved	0.88070	98.9%

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V3.0	Nashaquitsa Pond	Approved	0.00015	0.0%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Menemsha Pond (MA97-06), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within Menemsha Pond (MA97-06) is 0.8809 sq mi (99%). The approved shellfish growing area represents 0.8809 sq mi (99%). The Buzzards Bay Coalition (BBC) staff/volunteers measured Secchi disk depth in Menemsha Pond weekly in the summers of 2017-2019 at three locations (roughly in the middle of the pond - BBC_MEN3),in the southwest area of the pond - BBC_MEN4, and in the southeast area of the pond BBC_MEN5). These data indicate that conditions were always safe for recreational use with Secchi disk depths ranging from 1.8 to 4.4m (n=56). One Aquinnah beach (Red Beach ID 3246) was never posted for swimming between 2014 and 2019. The Primary Contact Recreational Use for Menemsha Pond (MA97-06) is assessed as Fully Supporting since there were no swimming advisory postings at Red Beach between 2014 and 2019 and the shellfish growing area (normalized to the AU area) is classified as 100% approved.	

Beach Postings

MassDPH Beach Posting Data Summary (% Bathing Season Posted 2014-2019) (Bailey, Logan Feb. 2, 2021) (MassDEP Undated 2)

Beach ID	Beach Name/Town	Left Boundary (Latitude)	Left Boundary (Longitude)	Right Boundary (Latitude)	Right Boundary (Longitude)	2014	2015	2016	2017	2018	2019	# years> 10%
3246	Red Beach/Aquinnah	41.34353	-70.78400	41.34424	-70.78140	0%	0%	0%	0%	0%	0%	0

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Menemsha Pond (MA97-06): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.8809 sq mi (99%). The approved shellfish growing area represents 0.8809 sq mi (99%). The Primary Contact Recreational Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Secondary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within Menemsha Pond (MA97-06) is 0.8809 sq mi (99%). The approved shellfish growing area represents 0.8809 sq mi (99%). One Aquinnah beach (Red Beach ID 3246) was never posted for swimming between 2014 and 2019. The Secondary Contact Recreational Use for Menemsha Pond (MA97-06) will continue to be assessed as Fully Supporting, since there were no swimming advisory postings at Red Beach and because the shellfish growing area (normalized to the AU area) is classified as 100% approved.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Menemsha Pond (MA97-06): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.8809 sq mi (99%). The approved shellfish growing area represents 0.8809 sq mi (99%). The Secondary Contact Recreational use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Miacomet Pond (MA97055)

Location:	Nantucket.
AU Type:	FRESHWATER LAKE
AU Size:	34 ACRES
Classification/Qualifier:	B

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	5	Harmful Algal Blooms		Added
4a	5	Mercury in Fish Tissue	33880	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Harmful Algal Blooms	Source Unknown (N)			X	X	X
Mercury in Fish Tissue	Atmospheric Deposition - Toxics (Y)		X			
Mercury in Fish Tissue	Source Unknown (N)		X			

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aquatic Life Use for Miacomet Pond (MA97055), so it is Not Assessed.	

Fish Consumption

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
MassDEP biologists conducted fish toxics sampling at Miacomet Pond in October 2019 at the recommendation of the Inter-agency Fish Toxics Committee. Edible fillets were analyzed for the presence of mercury, arsenic, cadmium, and selenium. Since no change to the prior site-specific mercury advisory was made, the Fish Consumption Use for Miacomet Pond (MA97055) will continue to be assessed as Not Supporting for Mercury in Fish Tissue. MA DPH recommends that *Children younger than 12 years, pregnant women and nursing mothers should not consume any fish from Miacomet Pond, the general public should not consume any white perch caught from Miacomet Pond, and the general public should limit consumption of other fish species from Miacomet Pond to two meals per month.*	

MassDEP fish toxics sampling information (2018-2020) and MassDPH Fish Consumption Advisory information (2019-2021) (MassDPH 2021, MassDEP 2019, Davis July 21, 2021).

MassDEP biologists conducted fish toxics sampling at Miacomet Pond in October 2019 at the recommendation of the Inter-agency Fish Toxics Committee. Edible fillets were analyzed for the presence of mercury, arsenic, cadmium, and selenium. Since no change to the prior site-specific mercury advisory was made, the Fish Consumption Use for Miacomet Pond (MA97055) will continue to be assessed as Not Supporting.

Aesthetic

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
C-HAB postings for Miacomet Pond (MA97055) were reported to MA DPH for 47 days in 2018 (not issued or confirmed based on samples). The Aesthetics Use for Miacomet Pond is assessed as Not Supporting since blooms >20 days in duration were reported in a recent year, so a Harmful Algal Blooms impairment is being added.	

Algal Bloom Information

Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2019 MassDPH Data (Bailey, Logan April 15, 2021) (MassDEP Undated 2)

C-HAB Summary Statement
C-HAB postings for Miacomet Pond (MA97055) were reported to MassDPH for 47 days in 2018. Since blooms >20 days in duration were reported in a recent year, the Primary/Secondary Contact Recreational Uses and Aesthetics Use are assessed as Not Supporting.

Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2019) Provided by MassDPH (Bailey, Logan April 15, 2021)

Waterbody	Sample Analysis Used in Issuing Advisory	Bloom Days, 2015	Bloom Days, 2016	Bloom Days, 2017	Bloom Days, 2018	Bloom Days, 2019	# Years with >20 Days of Closure	>1 Posting Per Year
Miacomet Pond	Not issued or confirmed by sampling				47		1	no

Primary Contact Recreation

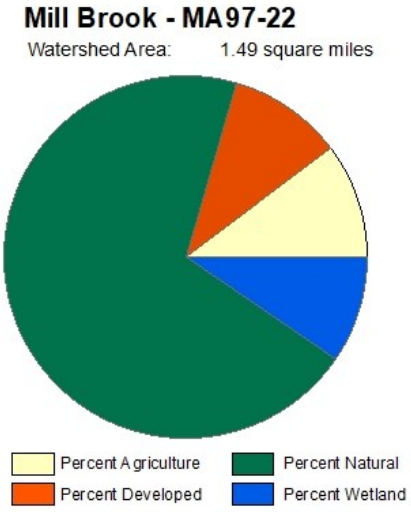
2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
C-HAB postings for Miacomet Pond (MA97055) were reported to MA DPH for 47 days in 2018 (not issued or confirmed based on samples). The Primary Contact Recreation Use for Miacomet Pond is assessed as Not Supporting since blooms >20 days in duration were reported in a recent year, so a Harmful Algal Blooms impairment is being added.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
C-HAB postings for Miacomet Pond (MA97055) were reported to MA DPH for 47 days in 2018 (not issued or confirmed based on samples). The Secondary Contact Recreation Use for Miacomet Pond is assessed as Not Supporting since blooms >20 days in duration were reported in a recent year, so a Harmful Algal Blooms impairment is being added.	

Mill Brook (MA97-22)

Location:	Outlet of Bliss Pond, Chilmark to inlet Chilmark Pond, Chilmark, Martha's Vineyard.
AU Type:	RIVER
AU Size:	2.4 MILES
Classification/Qualifier:	B



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.49	1.49	0.56	0.56
Agriculture	10.2%	10.2%	10.7%	10.7%
Developed	10.3%	10.3%	9.8%	9.8%
Natural	70%	70%	63.5%	63.5%
Wetland	9.5%	9.5%	16%	16%
Impervious Cover	3.8%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Recommendations

2022 Recommendations
ALU: Long-term temperature (thermistor) data and fish community sampling between July 1 and August 31 (inclusive) in this CFR are needed to inform whether this Mill Brook AU (MA97-22) should be classified as Cold Water in the next revision of the Massachusetts Surface Water Quality Standards. Currently, this stream should be protected as a Tier 1 Existing Use Cold Water Fishery.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	

MassDEP staff conducted temperature monitoring in this Mill Brook AU (MA97-22), at Windy Gates Road in Chilmark (W2816) as part of the "Short Term Temperature Network Project" during the summer of 2018. The maximum temperature recorded by the thermistor deployed between June 1 to September 15 was 21.7°C, the 7DADM exceeded 20°C eight times, and the maximum 24hr rolling average was 20.7°C. It should be noted that this stream is identified by DFG as a CFR. MA DFG biologists conducted backpack electrofishing in the brook at this same location in August 2011 (Sample ID 3791). The sample was comprised almost entirely by fluvial species and included multiple age classes of Eastern brook trout.
The Aquatic Life Use for this Mill Brook AU (MA97-22), will continue to be assessed as Fully Supporting based on the temperature data collected during the summer of 2018 which did not exceed use impairment thresholds and the fish sample data collected in August 2011 indicated the presence of cold water fish species which is also indicative of excellent habitat and water quality conditions.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
3791	MassDFG	Fish Community	Mill Brook	Windy Gates Rd xing, Chilmark	41.33926	-70.73536
W2816	MassDEP	Water Quality	Mill Brook	[Windy Gates Road, Chilmark]	41.339168	-70.735547

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2011-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 6)
[Habitat: FD = Fluvial Dependent, FS = Fluvial Specialist, MG = Macrohabitat Generalist; Tolerance: I = Intolerant, M = Moderately Tolerant, and T = Tolerant]

Station Description	Mill Brook (1) -- Windy Gates Rd xing, Chilmark (41.33926, -70.73536)		
Habitat Comments			
Efficiency	(Seconds Shocked - 957)		
Sample Date	**Species**	3	
08/30/11	**Total Ind**	97	
Method	**% Dom**	43%	
Backpack Shocking	**Habitat**	**Species**	**% Ind**
Saris/Palis	FS	2	76%
9763550	FD	0	0%
	MG	1	24%
	Tolerant	**Species**	**% Ind**
	I	1	43%
	M	1	33%
	T	1	24%
	SampleID	3791	

Common Name	Fish Code	Count	Min Length	Max Length	Temp	FG	PT	Function
Brook trout	EBT	42	55	220	C	FS	I	Top Carnivore
Tesselated darter	TD	32	31	69	CW	FS	M	Benthic Insectivore
American eel	AE	23	80	280	W	MG	T	Top Carnivore

Physico-chemical Water Quality Information

DO, pH, Temperature

MassDEP Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 3)

[Summer Index is June 1 – Sept 15; Max Daily Mean= Maximum 24-Hour Average, 7DADM= 7-Day Average of the Daily Maxima, 7DADA= 7-Day Average of the Daily Average, CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Index Count	7day Count	Max Daily Mean (°C)	Max Temp (°C)	Max 7DADM (°C)	Max 7DADA (°C)	Count CWTier1 7DADM >20	Count CWTier1 Daily Mean >23.5	Count CWTier2 7DADA >21	Count CWTier2 Daily Mean >24.1	Count WW 7DADM >27.7	Count WW Daily Mean >28.3
W2816	06/01/18	09/15/18	107	107	20.6	21.7	20.9	20.1	8	0	0	0	0	0

24-hour Rolling Average Calculations for MassDEP Short- and Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 3)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Count Days Deployed	24hr Rolling Count	Max 24hr Avg Rolling Temp (°C)	Count CWTier1 24hr Avg Rolling >23.5 °C	Count CWTier2 24hr Avg Rolling >24.1 °C	Count WW 24hr Avg Rolling >28.3°C
W2816	06/01/18	09/15/18	107	5136	20.7	0	0	0

MassDEP Discrete Temperature Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 3)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater]

Station Code	Start Date	End Date	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count CW >20	Count CW >22	Count WW >28.3	Count WW >30.3
W2816	07/17/18	10/28/18	3	2	19.8	15.4	0	0	0	0

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO

2022 Use Attainment Summary
No fish toxics monitoring has been conducted in this Mill Brook AU (MA97-22); therefore, the Fish Consumption Use is Not Assessed.

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for this Mill Brook AU (MA97-22), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreation Use for this Mill Brook AU (MA97-22), so it is Not Assessed.	

Secondary Contact Recreation

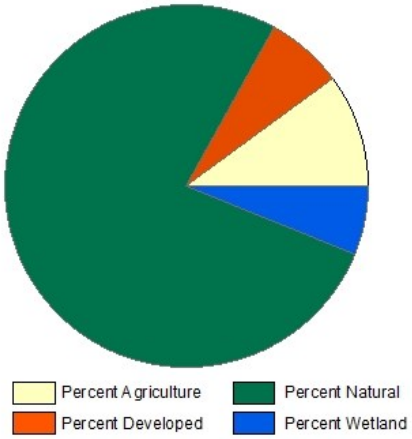
2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreation Use for this Mill Brook AU (MA97-22), so it is Not Assessed.	

Mill Brook (MA97-24)

Location:	Source in wetlands west of Roth Woodland Road, Chilmark to Old Millpond Dam, West Tisbury, Martha's Vineyard.
AU Type:	RIVER
AU Size:	3.6 MILES
Classification/Qualifier:	B

Mill Brook - MA97-24

Watershed Area: 4.93 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	4.93	4.9	1.07	1.06
Agriculture	10.1%	10.1%	11.9%	12%
Developed	6.9%	6.9%	5%	5%
Natural	77%	76.9%	60.6%	60.4%
Wetland	6.1%	6.1%	22.5%	22.6%
Impervious Cover	3.2%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Recommendations

2022 Recommendations
ALU: Long-term temperature (thermistor) data and fish community sampling between July 1 and August 31 (inclusive) in this CFR are needed to inform whether this Mill Brook AU (MA97-24) should be classified as Cold Water in the next revision of the Massachusetts Surface Water Quality Standards. Currently, this stream should be protected as a Tier 1 Existing Use Cold Water Fishery. Thermistors should be placed bracket the effects on the thermal regime of the brook by the five dams (upstream to downstream: Fisher Pond Dam, Crocker Pond Dam, Priester Pond Dam, Alberts Pond Dam, and Old Mill Pond Dam).

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	YES
2022 Use Attainment Summary	

DMF biologists note two potential barriers providing adequate passage to diadromous fish at the downstream end of the Mill Brook AU (MA97-24). The dam spillway at Old Mill Pond (with undocumented fish ladder) and the culvert at Edgartown Rd, were both given a passage score of "3" on a 0-10 scale, indicating that both are only minor obstructions to the passage of the targeted fish species (river herring and American eel) between Tisbury Great Pond and Mill Brook. The population score was noted to be "1" in this area. The road culvert is located immediately downstream of the Old Mill Pond Dam (NATID# MA02480) and in fact leads directly to the dam. It was further noted by DMF that potential improvements to these structures would require a replacement or removal of the dam. The Sheriff's Meadow Foundation, in partnership with the MassDER, plans to replace two perched and undersized culverts located beneath the Old Farm Rd crossing in the Mill Brook headwaters (Chilmark). The Mill Brook Headwaters Restoration Project is designed to improve ecological communities by allowing wildlife and fish passage (Burt, et al. 2021), and construction is expected to take place in the Fall of 2022 (Wildman June 14, 2021). As part of the Mill Brook Watershed Study Report, commissioned by the Mill Brook Watershed Management Planning Committee (of West Tisbury), consultants/ partners collected continuous and discrete water temperature data at six locations in the watershed (many below impoundments) between March 2015 and August 2016. These data appear to indicate that temperature at many of the stations in the downstream portion of the brook reaches elevated levels that would detrimentally affect coldwater fish species, such as brook trout (which are found in the upper portion of the brook) (Hodgkinson, et al. 2018). However, the data unfortunately cannot be used for use attainment decisions, as they were not collected under a MassDEP-approved QAPP. This stream is identified by DFG as a CFR. As was previously reported, multiple age classes of Eastern brook trout were found in the upper portion of this stream (sampling conducted in September 2012) upstream from the Priester and Crocker Pond dams) although downstream only one trout was collected (MassDEP Undated 6). MA DFG biologists conducted backpack electrofishing in the brook downstream of Priester Pond (in the middle of the AU) in 2008 and two stations (5116 and 5121) in September 2012 but only collected one brook trout in this reach (MassDEP Undated 6). The Aquatic Life Use for this Mill Brook AU (MA97-24) will continue to be assessed as Fully Supporting based on the presence of cold water fish species upstream of Priester Pond which are indicative of excellent habitat and water quality conditions; but the Alert due to the low number of trout downstream from the Priester Pond Dam will be carried forward and a new Alert for temperature is being added.

Biological Monitoring Information

Habitat and Flow Data (anthropogenic alterations)

MassDMF Status of Priority Diadromous Fish Passage Barriers. (Chase 2020)

Assessment Summary
DMF biologists note two potential barriers providing adequate passage to diadromous fish at the downstream end of the Mill Brook AU. The dam spillway at Old Mill Pond (with undocumented fish ladder) and the culvert at Edgartown Rd, were both given a passage score of "3" on a 0-10 scale, indicating that both are only minor obstructions to the passage of the targeted fish species, river herring and American eel. The population score was noted to be "1" in this area. The road culvert is located immediately downstream of the Old Mill Pond Dam (NATID# MA02480) and in fact leads directly to the dam. It was further noted by DMF that potential improvements to these structures would require a replacement or removal of the dam.

Status of MassDER Habitat Restoration priority projects (Wildman April 15, 2021).

The Sheriff's Meadow Foundation, in partnership with the Massachusetts Division of Ecological Restoration, plans to replace two perched and undersized culverts located beneath the Old Farm Road crossing in the Mill Brook headwaters (in Chilmark). The Mill Brook Headwaters Restoration Project is designed to improve ecological communities by allowing wildlife and fish passage (Burt, et al. 2021), and construction is expected to take place in the Fall of 2022 (Wildman June 14, 2021). As part of the Mill Brook Watershed Study Report, commissioned by the Mill Brook Watershed Management Planning Committee (of West Tisbury), consultants/ partners collected continuous and discrete water temperature data at six locations in the watershed (many below impoundments) between March 2015 and August 2016. These data appear to

indicate that temperature at many of the stations in the downstream portion of the brook reaches elevated levels that would detrimentally affect coldwater fish species, such as brook trout (which are found in the upper portion of the brook) (Hodgkinson, et al. 2018). However, the data unfortunately cannot be used for use attainment decisions, as they were not collected under a MassDEP-approved QAPP.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in this Mill Brook AU (MA97-24); therefore, the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for this Mill Brook AU (MA97-24), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreation Use for this Mill Brook AU (MA97-24), so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreation Use for this Mill Brook AU (MA97-24), so it is Not Assessed.	

Nantucket Harbor (MA97-01)

Location:	Waters south and east of an imaginary line drawn from Jetties Beach to Coatue Point (excluding Polpis Harbor and Coskata Pond), Nantucket.
AU Type:	ESTUARY
AU Size:	7.17 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Estuarine Bioassessments	36011	Unchanged
5	4a	Fecal Coliform	R1_MA_2020_03	Changed
5	4a	Nitrogen, Total	36011	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Estuarine Bioassessments	Impervious Surface/Parking Lot Runoff (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Residential Districts (Y)	X					
Fecal Coliform	Source Unknown (N)			X			
Nitrogen, Total	Impervious Surface/Parking Lot Runoff (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Residential Districts (Y)	X					

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the Islands Watershed (Report CN 254.1, approved 2020-05-20, ATTAINS Action ID: R1_MA_2020_03)

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

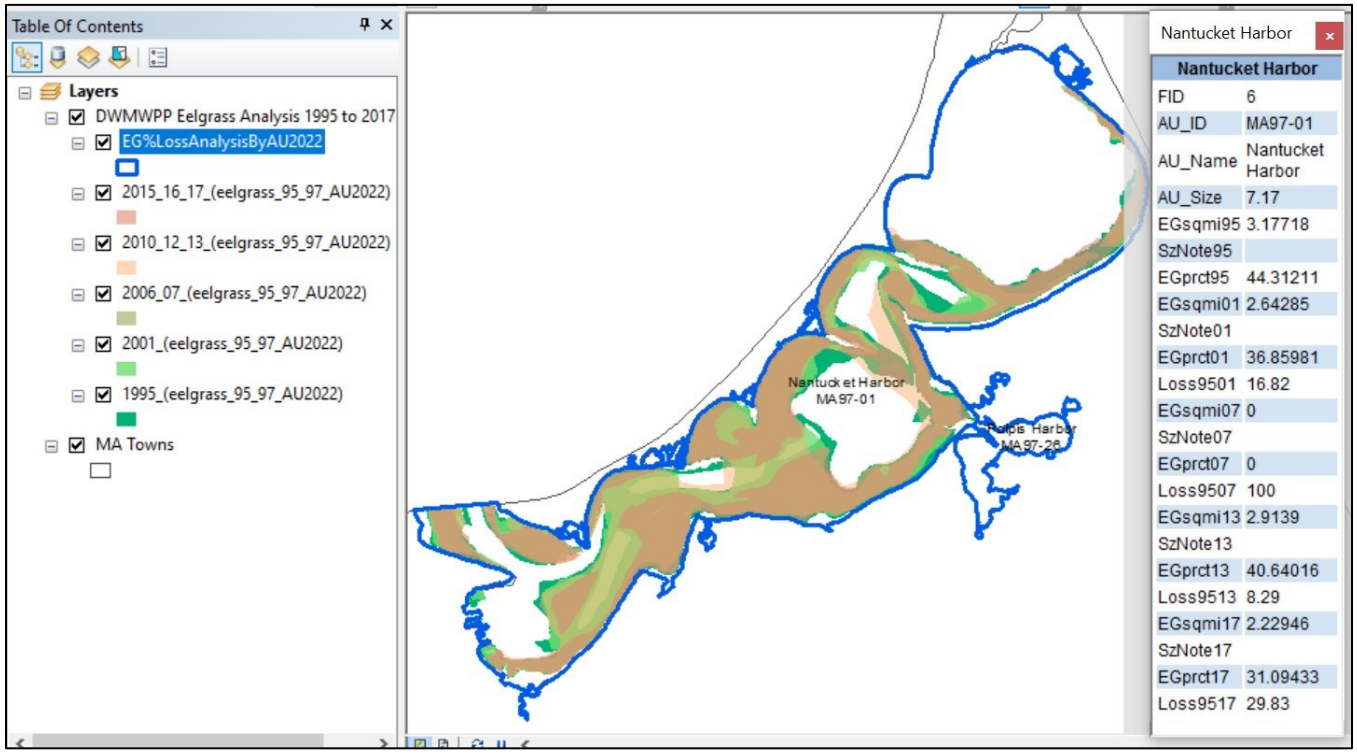
2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	

The MassDEP Eelgrass Mapping Project documented an ~30% loss of eelgrass bed habitat in Nantucket Harbor between 1995 and 2017. No other data are available to assess the Aquatic Life Use for Nantucket Harbor (MA97-01), so it will continue to be assessed as Not Supporting, with the impairments for Estuarine Bioassessments and Nitrogen, Total being carried forward.

Biological Monitoring Information

Primary Producers Data

Eelgrass analysis 1995-2017 for Nantucket Harbor MA97-01 (MassGIS 2018, MassDEP Undated 4):



[Note 100% loss documented in 2007, but this is likely to correspond to a time when no mapping was done in this AU.]

The MassDEP Eelgrass Mapping Project documented an ~30% loss of eelgrass bed habitat in Nantucket Harbor between 1995 and 2017.

Fish Consumption

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Nantucket Harbor (MA97-01); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	**Alert**

Not Supporting	YES
2022 Use Attainment Summary	
Nantucket Harbor (MA97-01): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 6.9732 sq mi (97%). The approved shellfish growing area represents 5.8023 sq mi (81%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing fecal coliform impairment is being retained. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
NT2.0	Nantucket Harbor West	Approved	0.54522	7.6%
NT2.2	Nantucket Boat Basin	Prohibited	0.35122	4.9%
NT2.4	First Point	Prohibited	0.00664	0.1%
NT2.5	Pimney's Point	Prohibited	0.03045	0.4%
NT2.6	Nantucket Harbor West Mooring Area	Conditionally Approved	0.77807	10.8%
NT3.0	Nantucket Harbor	Approved	2.53393	35.3%
NT5.0	Nantucket Harbor	Approved	2.72316	38.0%
NT5.1	Squam Brook	Prohibited	0.00450	0.1%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Nantucket Harbor (MA97-01), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
Three Nantucket beaches (Children's (ID 2998), Washington St. (ID 3010) and Wauwinet Bayside (ID 5446)) were infrequently posted for swimming between 2014 and 2019. The Primary Contact Recreational Use for Nantucket Harbor (MA97-01) will continue to be assessed as Fully Supporting, since there were no reported swimming advisory postings at the Children's, Washington St. or Wauwinet Bayside beaches between 2014 and 2019.	

Beach Postings

MassDPH Beach Posting Data Summary (% Bathing Season Posted 2014-2019) (Bailey, Logan Feb. 2, 2021) (MassDEP Undated 2)

Beach ID	Beach Name/Town	Left Boundary (Latitude)	Left Boundary (Longitude)	Right Boundary (Latitude)	Right Boundary (Longitude)	2014	2015	2016	2017	2018	2019	# years> 10%
2998	Children's/Nantucket	41.28704	-70.09710	41.28784	-70.09710	0%	0%	1%	0%	0%	0%	0

Beach ID	Beach Name/Town	Left Boundary (Latitude)	Left Boundary (Longitude)	Right Boundary (Latitude)	Right Boundary (Longitude)	2014	2015	2016	2017	2018	2019	# years> 10%
3010	Washington Street/Nantucket	41.28011	-70.09370	41.27993	-70.09340	0%	0%	0%	0%	0%	0%	0
5446	Wauwinet Bayside/Nantucket	41.32631	-70.00050	41.32746	-69.99980	0%	0%	0%	0%	0%	0%	0

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Nantucket Harbor (MA97-01): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 6.9732 sq mi (97%). The approved shellfish growing area represents 5.8023 sq mi (81%). Because the total of all shellfish growing area classifications is anything less than "approved", the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Fully Supporting	NO
2022 Use Attainment Summary	
Three Nantucket beaches (Children's (ID 2998), Washington St. (ID 3010) and Wauwinet Bayside (ID 5446)) were infrequently posted for swimming between 2014 and 2019. The Secondary Contact Recreational Use for Nantucket Harbor (MA97-01) will continue to be assessed as Fully Supporting since there were no swimming advisory postings at the Children's, Washington St. or Wauwinet Bayside Beaches between 2014 and 2019.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Nantucket Harbor (MA97-01): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 6.9732 sq mi (97%). The approved shellfish growing area represents 5.8023 sq mi (81%). Because the total of all shellfish growing area classifications is anything less than "approved", the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Nashaquitsa Pond (MA97-41)

Location:	Chilmark.
AU Type:	ESTUARY
AU Size:	0.14 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	5	Estuarine Bioassessments		Added
--	5	Fecal Coliform		Added
--	5	Nitrogen, Total		Added
--	5	Nutrient/Eutrophication Biological Indicators		Added

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Estuarine Bioassessments	Agriculture (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Yard Maintenance (Y)	X					
Fecal Coliform	Source Unknown (N)			X			
Nitrogen, Total	Agriculture (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Yard Maintenance (Y)	X					
Nutrient/Eutrophication Biological Indicators	Agriculture (Y)	X					
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nutrient/Eutrophication Biological Indicators	Yard Maintenance (Y)	X					

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	

The Menemsha-Squibnocket Pond watershed is distributed across the Towns of Chilmark and Aquinnah and are shared by the Wampanoag Tribe of Aquinnah. The Menemsha-Squibnocket Pond Embayment System is a complex coastal open water embayment comprised in part by the large northern basin (Menemsha Pond) that is connected to Nashaquitsa Pond, a smaller basin on the southeastern side, which in turn is connected via a shallow channel to Stonewall Pond. According to the June 2017 draft Linked Watershed-Embayment Model to Determine the Critical Nitrogen Loading Threshold for the Menemsha-Squibnocket Pond Embayment System, Chilmark/Aquinnah, Massachusetts (Howes, Eichner, et al. 2017), except for near the channel to Menemsha Pond, based on data collection during the summers of 2007 dissolved oxygen was >6 mg/L for 97% of record, >5 mg/L 91%-96% of the record and always >4mg/L, chlorophyll *a* concentrations averaged 8.4 µg/L, >10 µg/L 18% of record with blooms to 25 µg/L, there was sparse to no macroalgae present, and the benthic community was considered to be moderately impaired with productive benthic animal communities (high numbers of organisms, >800 per grab), but only moderate numbers of species (17), diversity (H' 2.6) and Evenness (0.63). Samples were noted to be consistent with moderate organic matter enrichment (community dominated by amphipods with mainly polychaetes colonizing soft organic muds). Both the moderate oxygen levels (5 to 9 mg/L), the moderate daily excursion and the moderate chlorophyll levels suggests that organic matter enrichment is occurring within this basin. The mean total nitrogen concentration (average concentration summers 2000 through 2012, MEN6) was 0.341mg/L (Howes, Eichner, et al. 2017). The MassDEP Eelgrass Mapping Project documented an ~87% loss of eelgrass bed habitat in Nashaquitsa Pond between 1995 and 2017. Buzzards Bay Coalition (BBC) staff/volunteers conducted discrete water quality monitoring in Nashaquitsa Pond (MA97-41) at two locations (BBC_MEN6 and MEN7), usually weekly (between the hours of 6 and 9am) in the summers of 2017-2019, at depths ranging from the surface to 2.2m. The maximum temperature was 25.2°C (n=93) and minimum DO was 5.5mg/L (n=102) (overall only 8.3% of measurements <6.0mg/L). Nutrient sampling efforts were typically scheduled for ebb tides in July and August. Total nitrogen concentrations ranged from 0.24 to 0.59mg/L (n=4), chlorophyll *a* concentrations ranged from 1.72 to 8.33µg/L (n=11), and Secchi disk depth ranged from 1.7 to 3.0m (n=15). Ammonia-nitrogen concentrations were generally low (range 0.004 to 0.01mg/L, n=11), but TUs could not be calculated (lack of quality assured pH and salinity data availability).

The Aquatic Life Use of Nashaquitsa Pond (MA97-41) is assessed as Not Supporting based on the loss of eelgrass bed habitat from 1995 to 2017 and the results of the MEP analysis indicating nutrient enrichment stress (moderately impaired benthic community/habitat and elevated chlorophyll *a*). Impairments for Estuarine Bioassessments, Nutrient/Eutrophication Biological Indicators, and Nitrogen, Total are being added. The MEP project identified nitrogen loading to this system results primarily from on-site disposal of wastewater, agriculture (animal and plant), and fertilizer applications (residential and agricultural), and to a lesser extent stormwater flows.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
BBC_MEN6	Buzzards Bay Coalition	Water Quality	Menemsha Pond	Menemsha Pond, Aquinnah/Chilmark	41.32615	-70.76846
BBC_MEN7	Buzzards Bay Coalition	Water Quality	Menemsha Pond	Menemsha Pond, Aquinnah/Chilmark	41.32868	-70.76055

Biological Monitoring Information

(Howes, Eichner, et al. 2017)

Table VIII-1. Summary of nutrient related habitat quality within the Menemsha-Squibnocket Embayment System within the Towns of Chilmark and Aquinnah, MA, based upon assessments in Section VII. WQMP indicates Water Quality Monitoring Program.

Health Indicator	Menemsha-Squibnocket Embayment System				
	Menemsha Channel	Menemsha Main Basin	Nashaquitsa Pond	Stonewall Pond	Squibnocket Pond
Dissolved Oxygen	H[1]	HI[1]	HI[1]	MI[2]	MI/SI[3]
Chlorophyll	H[4]	H/MI[5]	MI[6]	MI/SI[7]	H/MI[5]
Macroalgae	H[8]	H/MI[9]	H[8]	H[8]	H/MI[10]
Eelgrass	H[11]	H/M[11]	SI[12]	SI[12]	--[13]
Infaunal Animals	H[14]	H[15]	MI[16]	MI[16]	MI[17]
Overall:	**H[18]**	**H/MI[19]**	**MI/SI[20]**	**SI[21]**	**MI[22]**

1- oxygen always >4mg/L and above 5 mg/L 91%-96% of record and for Nashaquitsa >6 mg/L for 97% of record.
2- moderate to high oxygen depletion, <6mg/L 36%, <4 mg/L 5% of record and periodically <2 mg/L
3- except for near the channel to Menemsha Pond, oxygen has high diurnal shifts (6-12 mg/L), frequent depletion to <4 mg/L, 8%-26% of record and <3mg/L 4%-16% of record, with declines to <2mg/L common, with some anoxia.
4- levels low for a coastal basin, averaging 7 ug/L over summer time series generally between 5-10 ug/L, >90% of the time <10 ug L^{-1} and always <15 ug L^{-1}..
5 - low to moderate for a coastal basin, 6-8 ug/L, >10 ug/L ~24% of record and rarely >15ug/L.
6- moderate for a coastal basin, averaging 8.4 ug/L, but >10 ug/L 18% of record with blooms to 25 ug/L.
7- moderate to high for a coastal basin averaging 10 ug/L, >20 ug/L 8% of record with periodic blooms to >25 ug/L
8- sparse to no macroalgae throughout this basin.
9- modest accumulations of green filamentous drift algae accumulating in shallow area of mid basin, but generally absent.
10- sparse to no macroalgae in North region, but south region has relatively high accumulation and east region dense micro-algal mat covering sediments.
11- most of the main basin margin supports eelgrass habitat, loss of some deeper beds and fringing beds throughout basin. No clear loss of beds associated with N enrichment in Channel. Temporal/spatial loss pattern of loss in Main Basin is typical of nitrogen enrichment (loss deeper, stable in shallows) and indicates moderate impairment.
12- basin coverage in 1995 completely lost in Stonewall; Nashaquitsa loss from deep area, now shrinking of fringing beds.
13- no documented (verified) evidence of eelgrass "presence" in this basin historically.
14 - very high habitat quality, averaging 25 species & 1500 individuals per grab with high diversity (H'=3.35) and Evenness (E=0.73) and community 90% non-stress indicator species with crustaceans and mollusks and polychaetes dominant.
15 – high habitat quality averaging 20 species and 600 individuals per grab with high diversity (H'=3.12) and Evenness (E=0.73) and <20% tubificids and capitellids. Communities dominated by crustacean, polychaetes and crustaceans. Main basin has highest quality habitat is in the shallow areas not in the deep southern depositional basin
16-productive benthic animal communities (high numbers of organisms, >800 per grab), but only moderate numbers of species (14-17), diversity (H' 2.6-2.2) and Evenness (0.57-0.63). Consistent with moderate organic matter enrichment is a community dominated by amphipods with mainly polychaetes colonizing soft organic muds.
17- slightly higher impairment than Nashaquitsa and Stonewall Ponds, but supports a productive community (moderate to high numbers of organisms, >400 per grab) with fewer species (9) and lower diversity (H' 1.72) and Evenness (0.55), community is generally dominated by *Streblospio* and *Leptocheirus* (amphipod), with few stress indicator species..
18 High water quality, diversity productive benthic community, no macroalgae, oxidized sediments and stable eelgrass.
19 - High water quality, diversity productive benthic community, no macroalgae, oxidized sediments. Generally stable eelgrass coverage with only slight indication of loss in deeper waters of deep southern basin, the slight loss of eelgrass requires a designation moderately impaired, although benthic animal habitat remains of high quality..
20 – moderate oxygen depletion and elevation chlorophyll with organic soft sediments. Significant loss of eelgrass coverage since 1995 some remaining. Overall, moderately to significantly impaired eelgrass habitat and moderately impaired benthic animal habitat.
21- as for #20 above, except that eelgrass loss is complete gaining a designation significantly impaired for eelgrass.
22 - no eelgrass habitat historically. Supports productive but moderately impaired benthic infauna habitat with low to moderate species, diversity and Evenness. Moderate impairment is consistent with the levels of oxygen depletion, macroalgal accumulations and mats, organic rich soft sediments in much of the basin and high nitrogen levels. As found in many moderately impaired benthic habitats, the community is dominated by *Leptocheirus* (amphipod) and *Streblospio*

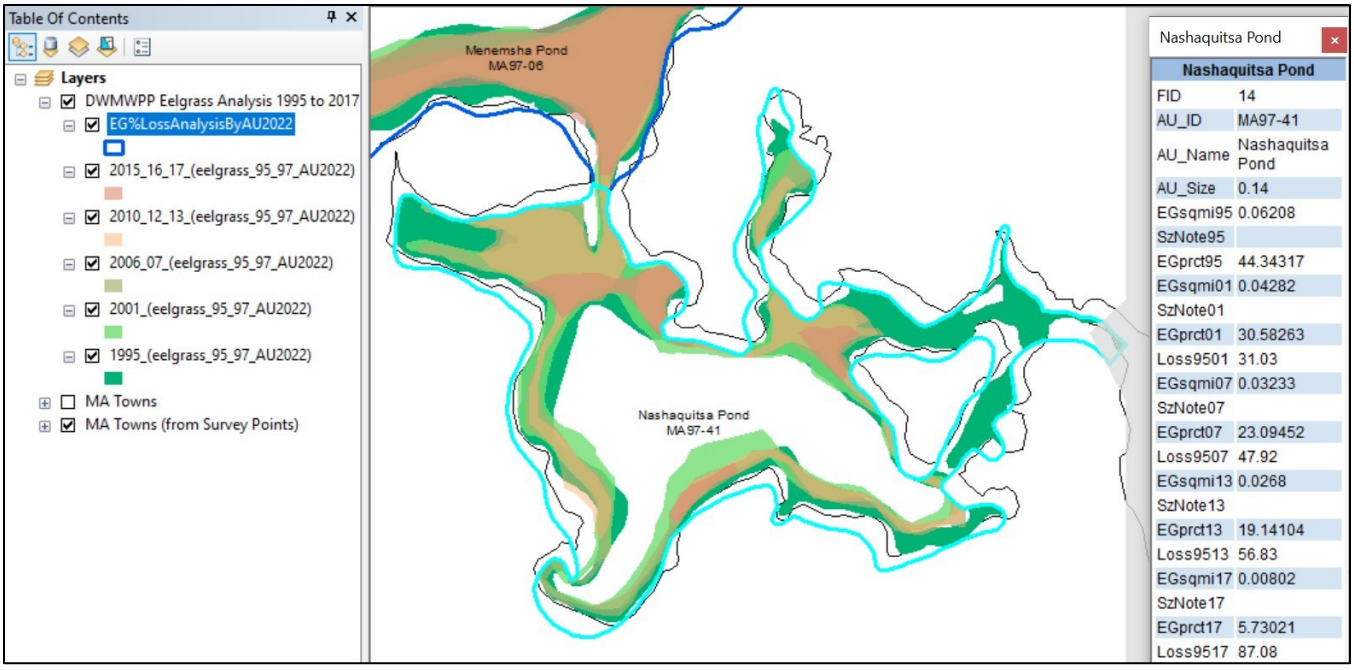
H = High quality habitat conditions; MI = Moderate Impairment; SI = Significant Impairment;
SD = Severely Degraded; -- = not applicable to this estuarine reach

Table VI-1. Measured data and modeled nitrogen concentrations for the Menemsha and Squibnocket Ponds system used in the model calibration plots of Figures VI-2 and VI-3. All concentrations are given in mg/L N. "Data mean" values are calculated as the average of all measurements. Data represented in this table were collected in the summers of 2000 through 2012.

Sub-Embayment	Monitoring station	Data Mean	s.d. all data	N	model min	model max	model average
Menemsha Creek Low	MEN 1	0.287	0.037	23	0.289	0.310	0.296
Menemsha Creek Low	MEN 2	0.341	0.078	24	0.293	0.318	0.304
Menemsha Main Basin	MEN 3	0.385	0.118	29	0.291	0.328	0.311
Menemsha Main Basin	MEN 4	0.399	0.156	25	0.385	0.423	0.404
Nashaquitsa Mouth	MEN 5	0.338	0.107	26	0.319	0.344	0.335
Nashaquitsa Basin	MEN 6	0.341	0.082	23	0.338	0.354	0.347
Menemsha Main Basin	MEN 8	0.379	0.111	23	0.360	0.374	0.368
Menemsha Main Basin	MEN 9	0.386	0.099	23	0.340	0.370	0.358
Menemsha Creek	MEN 10	0.351	0.120	22	0.290	0.326	0.308
Squibnocket Basin	SQ 1	0.763	0.321	20	0.725	0.782	0.761
Squibnocket Basin	SQ 2	0.798	0.327	22	0.788	0.798	0.793
Squibnocket Basin	SQ 3	0.769	0.386	18	0.780	0.791	0.786
Squibnocket Basin	SQ 4	0.853	0.318	15	0.812	0.822	0.817

Primary Producers Data

Eelgrass analysis 1995-2017 for Nashaquitsa Pond MA97-41 (MassGIS 2018, MassDEP Undated 4):



The MassDEP Eelgrass Mapping Project documented an ~87% loss of eelgrass bed habitat in Nashaquitsa Pond between 1995 and 2017.

Physico-chemical Water Quality Information

DO, pH, Temperature

Buzzards Bay Coalition Estuarine Discrete Dissolved Oxygen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[DO was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Average Sample Depth (m)	DO Count	DO Min (mg/L)	DO Avg (mg/L)	% Meas. <6.0	% Meas. <5.0	% Meas. <4.0
BBC_MEN6	07/06/17	09/26/17	0.2	12	6.1	6.8	0	0	0
BBC_MEN6	07/06/17	09/26/17	2.2	12	5.6	6.9	8	0	0
BBC_MEN6	06/27/18	08/21/18	0.2	5	6.4	7.2	0	0	0
BBC_MEN6	06/27/18	08/02/18	1.9	2	7.3	7.6	0	0	0
BBC_MEN6	06/24/19	09/12/19	0.2	14	6.6	7.3	0	0	0
BBC_MEN6	06/24/19	09/12/19	2.2	10	6.5	7.3	0	0	0
BBC_MEN7	07/06/17	09/26/17	0.2	12	5.6	7.0	25	0	0
BBC_MEN7	07/06/17	09/26/17	1.4	11	5.5	6.9	27	0	0
BBC_MEN7	06/27/18	08/02/18	0.2	2	6.0	6.6	0	0	0
BBC_MEN7	06/27/18	08/02/18	0.9	2	6.0	6.6	0	0	0
BBC_MEN7	06/24/19	09/12/19	0.2	10	5.9	6.6	20	0	0
BBC_MEN7	06/24/19	09/12/19	1.0	10	5.7	6.7	20	0	0

Buzzards Bay Coalition Discrete Estuarine Temperature Data (2014-2018). (BBC 2021) (MassDEP Undated 2)
[Temperature was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer Index is June 1 – Sept 15]

Station Code	Start Date	End Date	Average Sample Depth (m)	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count >29.4
BBC_MEN6	07/06/17	09/26/17	0.2	12	10	24.3	21.8	0
BBC_MEN6	07/06/17	09/26/17	2.1	12	10	22.8	21.1	0
BBC_MEN6	06/27/18	08/21/18	0.2	5	5	24.7	22.1	0
BBC_MEN6	06/27/18	08/02/18	1.9	2	2	22.8	21.1	0
BBC_MEN6	06/24/19	09/12/19	0.2	13	13	23.1	21.9	0
BBC_MEN6	06/24/19	09/12/19	2.2	10	10	23.1	21.3	0
BBC_MEN7	07/06/17	09/26/17	0.2	12	10	25.1	22.7	0
BBC_MEN7	07/06/17	09/26/17	1.4	11	9	25.2	22.4	0
BBC_MEN7	06/27/18	08/02/18	0.2	2	2	24.8	22.6	0
BBC_MEN7	06/27/18	08/02/18	0.9	2	2	24.7	22.6	0
BBC_MEN7	06/24/19	09/12/19	0.2	10	10	24.7	23.0	0
BBC_MEN7	06/24/19	09/12/19	1.0	10	10	24.2	22.8	0

Nutrients (Primary Producer Screening, Physico-chemical Screening)

Buzzards Bay Coalition Estuarine Nutrient Enrichment Indicator Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

[Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer seasonal total nitrogen data collected May-Sept]

Station Code	Data Year	Average Sample Depth (m)	Seasonal TN Count	Seasonal TN Min (mg/L)	Seasonal TN Max (mg/L)	Seasonal TN Avg (mg/L)	Chl-a Count	Chl-a Min (ug/L)	Chl-a Max (ug/L)	Chl-a Avg (ug/L)	Chl-a Count ≤5	Chl-a Count >10
BBC_MEN6	2017	0.2	2	0.34	0.59	0.47	4	1.72	8.33	3.94	3	0
BBC_MEN6	2018	0.2	1	0.28	0.28	0.28	3	2.73	5.77	3.96	2	0
BBC_MEN6	2019	0.2	1	0.24	0.24	0.24	4	2.26	4.30	3.24	4	0

Buzzards Bay Coalition Secchi Disk Depth Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

Station Code	Start Date	End Date	Secchi disk depth Count	Secchi disk depth Min (m)	Secchi disk depth Max (m)	Secchi disk depth Avg (m)
BBC_MEN6	07/06/17	09/26/17	7	1.9	3.0	2.4
BBC_MEN6	07/10/18	08/21/18	3	1.7	3.0	2.2
BBC_MEN6	06/24/19	09/05/19	3	2.1	2.2	2.1
BBC_MEN7	07/13/17	07/13/17	1	2.3	2.3	2.3
BBC_MEN7	08/01/19	08/01/19	1	1.7	1.7	1.7

Toxics and other pollutants (metals, ammonia, chlorine)

Buzzards Bay Coalition Ammonia-Nitrogen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

[Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Average Sample Depth (m)	NH3 Count	NH3 Min (mg/L)	NH3 Max (mg/L)	NH3 Avg (mg/L)
BBC_MEN6	07/06/17	08/17/17	0.2	4	0.006	0.012	0.008
BBC_MEN6	07/10/18	08/21/18	0.2	3	0.004	0.004	0.004
BBC_MEN6	07/11/19	08/14/19	0.2	4	0.004	0.006	0.004

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Nashaquitsa Pond (MA97-41); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
Nashaquitsa Pond (MA97-41): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.1247 sq mi (87%). The approved shellfish growing area represents 0.1237 sq mi (87%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications, a fecal coliform impairment is being added.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V3.0	Nashaquitsa Pond	Approved	0.12368	86.6%
V3.1	Stonewall Pond	Conditionally Approved	0.00102	0.7%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Nashaquitsa Pond (MA97-41), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the Primary Contact Recreational Use for Nashaquitsa Pond (MA97-41), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Nashaquitsa Pond (MA97-41): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.1247 sq mi (87%). The approved shellfish growing area represents 0.1237 sq mi (87%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the Secondary Contact Recreational Use for Nashaquitsa Pond (MA97-41), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Nashaquitsa Pond (MA97-41): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.1247 sq mi (87%). The approved shellfish growing area represents 0.1237 sq mi (87%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

North Head Long Pond (MA97-34)

Location:	tidally restricted brackish water, Nantucket.
AU Type:	ESTUARY
AU Size:	0.07 SQUARE MILES
Classification/Qualifier:	SA: SFO

No usable data were available for North Head Long Pond (MA97-34) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Nutrient/Eutrophication Biological Indicators	64481	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X					

Oak Bluffs Harbor (MA97-07)

Location:	North of Lake Avenue to confluence with Nantucket Sound, Oak Bluffs, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	0.05 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	(Other Anthropogenic substrate Alterations*)		Unchanged
5	4a	Fecal Coliform	R1_MA_2020_03	Changed

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Other Anthropogenic substrate Alterations*)	Dredging (e.g., for Navigation Channels) (N)	X					
Fecal Coliform	Source Unknown (N)			X			

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the Islands Watershed (Report CN 254.1, approved 2020-05-20, ATTAINS Action ID: R1_MA_2020_03)

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
There are no data available to assess the status of the Aquatic Life Use of Oak Bluffs Harbor (MA97-07), so it will continue to be assessed as Not Supporting, with the impairment for Other Anthropogenic Substrate Alterations being carried forward.	

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Oak Bluffs Harbor (MA97-07); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	
Oak Bluffs Harbor (MA97-07): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0462 sq mi (94%). The approved shellfish growing area represents 0 sq mi (0%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing fecal coliform impairment is being retained. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V13.1	Mouth of Oak Bluffs Harbor	Conditionally Approved	0.00035	0.7%
V14.1	Oak Bluffs Harbor	Conditionally Approved	0.04544	92.6%
V14.2	Sunset Lake	Prohibited	0.00041	0.8%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Oak Bluffs Harbor (MA97-07), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the status of the Primary Recreation Use for Oak Bluffs Harbor (MA97-07), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Oak Bluffs Harbor (MA97-07): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0462 sq mi (94%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	

No *Enterococci* bacteria data are available to assess the status of the Secondary Recreation Use for Oak Bluffs Harbor (MA97-07), so it is Not Assessed.

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Oak Bluffs Harbor (MA97-07): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0462 sq mi (94%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Oyster Pond (MA97-13)

Location:	Including Ripley Cove, Edgartown, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	0.29 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aquatic Life Use for Oyster Pond (MA97-13), so it is Not Assessed.	

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Oyster Pond (MA97-13); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Insufficient Information	YES
2022 Use Attainment Summary	
Oyster Pond (MA97-13): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.2497 sq mi (85%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.2497 sq mi (85%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V29.0	Oyster Pond	Prohibited	0.24972	84.9%

Aesthetic

2022 Use Attainment	Alert

Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Oyster Pond (MA97-13), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Primary Contact Recreation Use for Oyster Pond (MA97-13), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Oyster Pond (MA97-13): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.2497 sq mi (85%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Secondary Contact Recreation Use for Oyster Pond (MA97-13), so it is Not Assessed.	

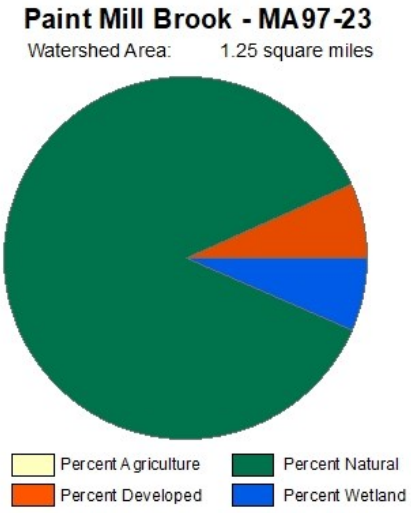
Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Oyster Pond (MA97-13): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.2497 sq mi (85%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Paint Mill Brook (MA97-23)

Location:	Source east of Tea Lane, Chilmark to inlet of Paint Mill Brook Pond, Chilmark, Martha's Vineyard.
AU Type:	RIVER
AU Size:	0.9 MILES
Classification/Qualifier:	B



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.25	1.25	0.4	0.4
Agriculture	0.3%	0.3%	0.5%	0.5%
Developed	6.6%	6.6%	3.2%	3.2%
Natural	86.7%	86.7%	80.5%	80.5%
Wetland	6.5%	6.5%	15.8%	15.8%
Impervious Cover	3.3%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Recommendations

2022 Recommendations
ALU: Long-term temperature (thermistor) data and fish community sampling between July 1 and August 31 (inclusive) in this CFR should be conducted to provide additional evidence that Paint Mill Brook (MA97-23) should be classified as Cold Water in the next revision of the Massachusetts Surface Water Quality Standards. This stream should also be protected as a Tier 1 Existing Use Cold Water.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	

MassDEP staff conducted temperature monitoring in Paint Mill Brook (MA97-23), at North Road, Chilmark (W2817) as part of the "Short Term Temperature Network Project" during the summer of 2018. A continuous probe deployment that ran from June 1 to September 15 was indicative of good conditions, with a maximum temperature of 21.2°C, the 7-DADM exceeded <20°C only seven times and the maximum 24hr rolling average was 20.2°C. It should be noted that this stream is identified by DFG as a CFR based on the presence of multiple age classes of Eastern brook trout documented during an electrofishing backpack survey in August 2011 (SampleID 3794). The Aquatic Life Use for Paint Mill Brook (MA97-23) is assessed as Fully Supporting based on the presence of multiple age classes of Eastern brook trout in the summer of 2011 as well as temperature data collected during the summer of 2018 which was indicative of generally good cold water habitat.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
3794	MassDFG	Fish Community	Paint Mill Brook	DS of North Rd (driveway crossing at end)	41.39722	-70.72279
W2817	MassDEP	Water Quality	Paint Mill Brook	[North Road, Chilmark]	41.389443	-70.717698

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2011-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 6)

[Habitat: FD = Fluvial Dependent, FS = Fluvial Specialist, MG = Macrohabitat Generalist; Tolerance: I = Intolerant, M = Moderately Tolerant, and T = Tolerant]

Station Description	Paint Mill Brook -- DS of North Rd (driveway crossing at end), Chilmark (41.39722, -70.72279)		
Habitat Comments			
Efficiency	(Seconds Shocked - 1079)		
Sample Date	**Species**	4	
08/31/11	**Total Ind**	68	
Method	**% Dom**	44%	
Backpack Shocking	**Habitat**	**Species**	**% Ind**
Saris/Palis	FS	1	44%
9763775	FD	0	0%
	MG	3	56%
	Tolerant	**Species**	**% Ind**
	I	1	44%
	M	1	3%
	T	2	53%
	SampleID	3794	

Common Name	Fish Code	Count	Min Length	Max Length	Temp	FG	PT	Function

Brook trout	EBT	30	59	242	C	FS	I	Top Carnivore
Golden shiner	GS	6	76	86	W	MG	T	Generalist Feeder
American eel	AE	30	120	310	W	MG	T	Top Carnivore
White perch	WP	2	76	90	CW	MG	M	Top Carnivore

Physico-chemical Water Quality Information

DO, pH, Temperature

MassDEP Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 3)

[Summer Index is June 1 – Sept 15; Max Daily Mean= Maximum 24-Hour Average, 7DADM= 7-Day Average of the Daily Maxima, 7DADA= 7-Day Average of the Daily Average, CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Index Count	7day Count	Max Daily Mean (°C)	Max Temp (°C)	Max 7DADM (°C)	Max 7DADA (°C)	Count CWTier1 7DADM >20	Count CWTier1 Daily Mean >23.5	Count CWTier2 7DADA >21	Count CWTier2 Daily Mean >24.1	Count WW 7DADM >27.7	Count WW Daily Mean >28.3
W2817	06/01/18	09/15/18	107	107	20.2	21.2	20.9	20.0	7	0	0	0	0	0

24-hour Rolling Average Calculations for MassDEP Short- and Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 3)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Count Days Deployed	24hr Rolling Count	Max 24hr Avg Rolling Temp (°C)	Count CWTier1 24hr Avg Rolling >23.5 °C	Count CWTier2 24hr Avg Rolling >24.1 °C	Count WW 24hr Avg Rolling >28.3°C
W2817	06/01/18	09/15/18	107	5136	20.2	0	0	0

MassDEP Discrete Temperature Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 3)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater]

Station Code	Start Date	End Date	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count CW >20	Count CW >22	Count WW >28.3	Count WW >30.3
W2817	06/17/18	10/28/18	3	2	19.2	14.9	0	0	0	0

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Paint Mill Brook (MA97-23); therefore, the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Paint Mill Brook (MA97-23), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreation Use for Paint Mill Brook (MA97-23), so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreation Use for Paint Mill Brook (MA97-23), so it is Not Assessed.	

Pocha Pond (MA97-40)

Location:	Edgartown.
AU Type:	ESTUARY
AU Size:	0.35 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aquatic Life Use for Pocha Pond (MA97-40), so it is Not Assessed.	

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Pocha Pond (MA97-40); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
Pocha Pond (MA97-40): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.3295 sq mi (95%). The approved shellfish growing area represents 0.3295 sq mi (95%). The Shellfish Harvesting Use is assessed as Fully Supporting because the growing area (normalized to the AU area) is classified as 100% approved.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V21.0	Cape Poge Bay	Approved	0.00433	1.2%
V22.0	Pocha Pond	Approved	0.32519	93.3%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO

2022 Use Attainment Summary
No data are available to assess the status of the Aesthetic Use for Pocha Pond (MA97-40), so it is Not Assessed.

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within Pocha Pond (MA97-40) is 0.3295 sq mi (95%). The approved shellfish growing area represents 0.3295 sq mi (95%). The Primary Contact Recreational Use is assessed as Fully Supporting since the shellfish growing area (normalized to the AU area) is classified as 100% approved.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Pocha Pond (MA97-40): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.3295 sq mi (95%). The approved shellfish growing area represents 0.3295 sq mi (95%). The Primary Contact Recreational Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Secondary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within Pocha Pond (MA97-40) is 0.3295 sq mi (95%). The approved shellfish growing area represents 0.3295 sq mi (95%). The Secondary Contact Recreational Use is assessed as Fully Supporting since the shellfish growing area (normalized to the AU area) is classified as 100% approved.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Pocha Pond (MA97-40): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.3295 sq mi (95%). The approved shellfish growing area represents 0.3295 sq mi (95%). The Secondary Contact Recreational use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

Polpis Harbor (MA97-26)

Location:	Polpis Harbor and all adjacent coves, to an imaginary line drawn from Quaise Point to the opposite shore, Nantucket.
AU Type:	ESTUARY
AU Size:	0.29 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Estuarine Bioassessments	36012	Unchanged
5	4a	Fecal Coliform	R1_MA_2020_03	Changed
5	4a	Nitrogen, Total	36012	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Estuarine Bioassessments	Impervious Surface/Parking Lot Runoff (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Residential Districts (Y)	X					
Fecal Coliform	Source Unknown (N)			X			
Nitrogen, Total	Impervious Surface/Parking Lot Runoff (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Residential Districts (Y)	X					

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the Islands Watershed (Report CN 254.1, approved 2020-05-20, ATTAINS Action ID: R1_MA_2020_03)

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	

No more recent data are available to assess the Aquatic Life Use for Polpis Harbor (MA97-26), so it will continue to be assessed as Not Supporting, with the impairments for Estuarine Bioassessments and Nitrogen, Total being carried forward.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Polpis Harbor (MA97-26); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	
Polpis Harbor (MA97-26): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.2737 sq mi (94%). The approved shellfish growing area represents 0.2348 sq mi (81%). The prohibited shellfish growing area represents 0.0389 sq mi (13%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi. There is insufficient information available to delist the existing Fecal Coliform impairment, so the Shellfish Harvesting Use is evaluated as Not Supporting.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
NT3.0	Nantucket Harbor	Approved	0.00059	0.2%
NT4.0	Polpis Harbor	Approved	0.23419	80.4%
NT4.1	Polpis Harbor	Prohibited	0.03895	13.4%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Polpis Harbor (MA97-26), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Primary Contact Recreation Use for Polpis Harbor (MA97-26), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Polpis Harbor (MA97-26): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.2737 sq mi (94%). The approved shellfish growing area represents 0.2348 sq mi (81%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Secondary Contact Recreation Use for Polpis Harbor (MA97-26), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

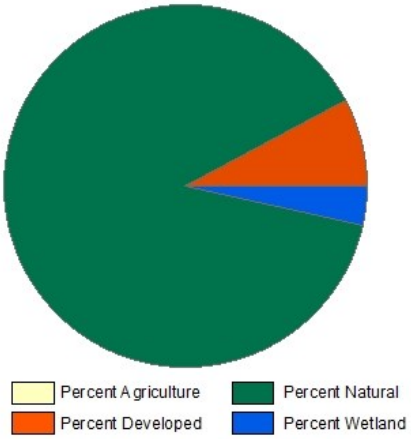
Summary
Polpis Harbor (MA97-26): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.2737 sq mi (94%). The approved shellfish growing area represents 0.2348 sq mi (81%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Roaring Brook (MA97-37)

Location:	Headwaters, south of Tabor House Road, Chilmark to mouth at inlet Vineyard Sound, Chilmark.
AU Type:	RIVER
AU Size:	1.5 MILES
Classification/Qualifier:	B

Roaring Brook - MA97-37

Watershed Area: 1.36 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.36	1.36	0.32	0.32
Agriculture	1%	1%	1.2%	1.2%
Developed	7.7%	7.7%	5.5%	5.5%
Natural	87.8%	87.8%	82.7%	82.7%
Wetland	3.5%	3.5%	10.7%	10.7%
Impervious Cover	3.8%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
3	2	None		Unchanged

Recommendations

2022 Recommendations
ALU: The temperature and fisheries data for Roaring Brook will be considered for its potential classification as Cold Water in the next revision of the Massachusetts Surface Water Quality Standards. Roaring Brook should be otherwise be protected as a Tier 1 Existing Use Cold Water Fishery.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	

MassDEP staff conducted temperature monitoring in Roaring Brook (MA97-37) in the downstream half of the AU at Gosnolds Way at Olde Brickyard Rd, Chilmark (W2819) as part of the "Short Term Temperature Network Project" during the summer of 2018. The maximum temperature recorded by the thermistor deployed between June 1 to September 15 was 18.9°C so there were no exceedances of the 7DADM or 24hr rolling average (the maximum 24hr rolling average was only 17.8°C). It should be noted that this stream is identified by DFG as a CFR. MA DFG biologists conducted backpack electrofishing just upstream from the brook mouth in Chilmark in September 2016 (Sample ID 5940). The sample was comprised almost entirely of multiple age classes of Eastern brook trout. The Aquatic Life Use of Roaring Brook is assessed as Fully Supporting based on the temperature data collected during the summer of 2018 which all met Cold Water criteria and the presence of cold water fish species near the mouth of the brook in September 2016 which is also indicative of excellent habitat and water quality conditions.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
5940	MassDFG	Fish Community	Roaring Brook	Near mouth/brickyard., Chilmark	41.37807	-70.74386
W2819	MassDEP	Water Quality	Roaring Brook	[Gosnolds Way at Olde Brickyard Road, Chilmark]	41.375246	-70.742149

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 1)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: AE = American Eel, B = Bluegill, EBT = Brook Trout]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
5940	09/07/16	BP	TP	3	85	82	72	200	43	0	96%	96%	No	Yes	AE, B, EBT,

Physico-chemical Water Quality Information

DO, pH, Temperature

MassDEP Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 3)

[Summer Index is June 1 – Sept 15; Max Daily Mean= Maximum 24-Hour Average, 7DADM= 7-Day Average of the Daily Maxima, 7DADA= 7-Day Average of the Daily Average, CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Index Count	7day Count	Max Daily Mean (°C)	Max Temp (°C)	Max 7DADM (°C)	Max 7DADA (°C)	Count CWTier1 7DADM >20	Count CWTier1 Daily Mean >23.5	Count CWTier2 7DADA >21	Count CWTier2 Daily Mean >24.1	Count WW 7DADM >27.7	Count WW Daily Mean >28.3
W2819	06/01/18	09/15/18	107	107	17.5	18.9	18.0	17.0	0	0	0	0	0	0

24-hour Rolling Average Calculations for MassDEP Short- and Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 3)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Count Days Deployed	24hr Rolling Count	Max 24hr Avg Rolling Temp (°C)	Count CWTier1 24hr Avg Rolling >23.5 °C	Count CWTier2 24hr Avg Rolling >24.1 °C	Count WW 24hr Avg Rolling >28.3°C
W2819	06/01/18	09/15/18	107	5136	17.8	0	0	0

MassDEP Discrete Temperature Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 3)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater]

Station Code	Start Date	End Date	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count CW >20	Count CW >22	Count WW >28.3	Count WW >30.3
W2819	08/18/18	10/28/18	2	1	16.5	14.1	0	0	0	0

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Roaring Brook (MA97-37); therefore, the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Roaring Brook (MA97-37), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreation Use for Roaring Brook (MA97-37), so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreation Use for Roaring Brook (MA97-37), so it is Not Assessed.	

Sengekontacket Pond (MA97-10)

Location:	Between Edgartown-Vineyard Haven Road and Oak Bluffs Road, including Majors Cove, Edgartown/Oak Bluffs, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	1.1 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Dissolved Oxygen	65320	Unchanged
5	4a	Estuarine Bioassessments	65320	Unchanged
5	4a	Fecal Coliform	R1_MA_2020_03	Changed
5	4a	Nitrogen, Total	65320	Unchanged
5	4a	Nutrient/Eutrophication Biological Indicators	65320	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Dissolved Oxygen	Impervious Surface/Parking Lot Runoff (Y)	X					
Dissolved Oxygen	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Dissolved Oxygen	Residential Districts (Y)	X					
Estuarine Bioassessments	Impervious Surface/Parking Lot Runoff (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Residential Districts (Y)	X					
Fecal Coliform	Source Unknown (N)			X			
Nitrogen, Total	Impervious Surface/Parking Lot Runoff (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Residential Districts (Y)	X					
Nutrient/Eutrophication Biological Indicators	Impervious Surface/Parking Lot Runoff (Y)	X					
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nutrient/Eutrophication Biological Indicators	Residential Districts (Y)	X					

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the Islands Watershed (Report CN 254.1, approved 2020-05-20, ATTAINS Action ID: R1_MA_2020_03)

Designated Use Attainment Decisions

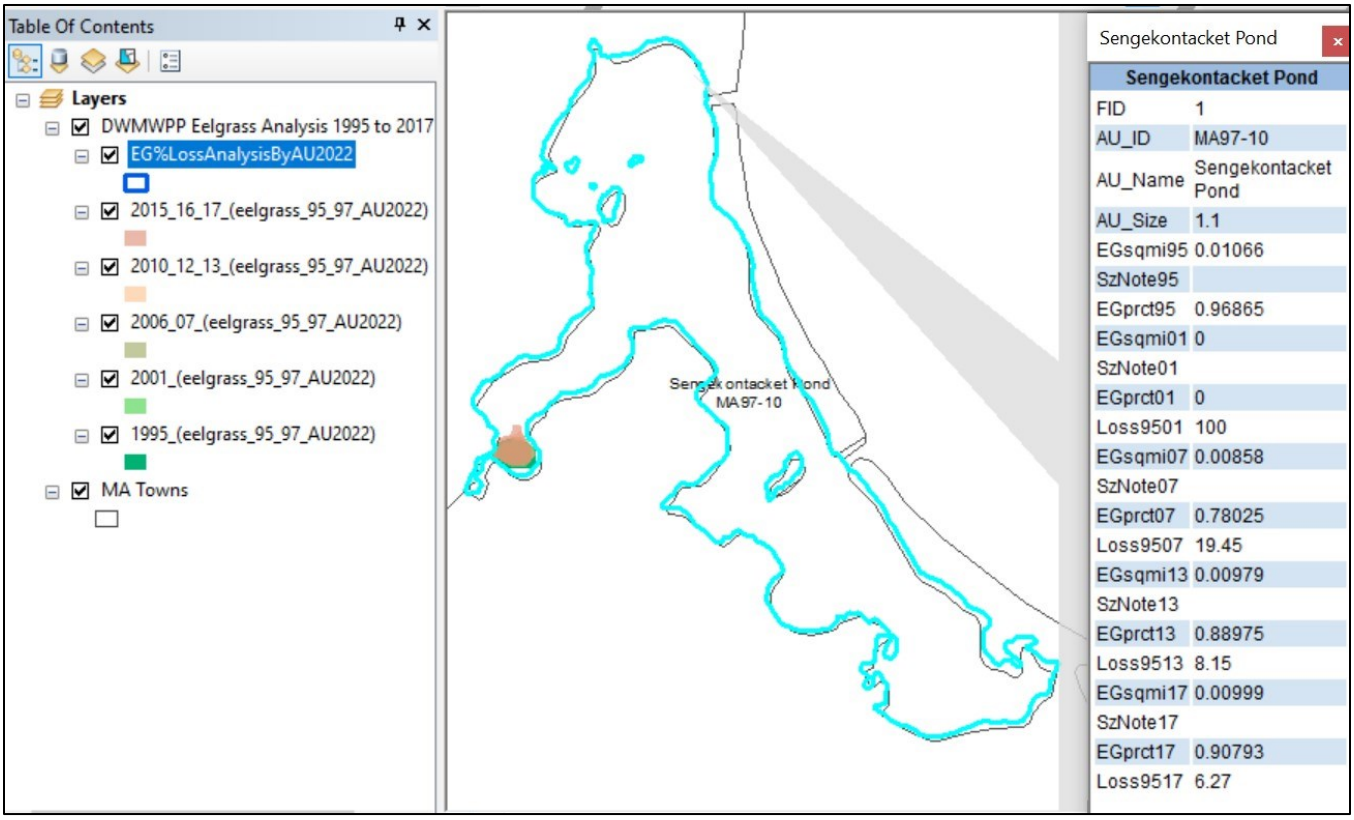
Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
The MassDEP Eelgrass Mapping Project documented a ~6% loss of eelgrass bed habitat in Sengekontacket Pond between 1995 and 2017. The area of eelgrass bed habitat (in the upper reach of Majors Cove) has remained relatively stable since 1998, with a steady encroachment of new growth appearing at the northern edge of the bed between 2006 and 2017. There are no other data available to assess the status of the Aquatic Life Use for the Pond (and not enough to delist the Estuarine Bioassessment impairment at this time), so it will continue to be assessed as Not Supporting for Sengekontacket Pond (MA97-10), with the impairments for Dissolved Oxygen, Estuarine Bioassessments, Nitrogen, Total and Nutrient Eutrophication Biological Indicators being carried forward.	

Biological Monitoring Information

Primary Producers Data

Eelgrass analysis 1995-2017 for Sengekontacket Pond MA97-10 (MassGIS 2018, MassDEP Undated 4):



[Note 100% loss documented in 2001, but this is likely to correspond to a time when no mapping was done in this AU.]

The MassDEP Eelgrass Mapping Project documented an ~6% loss of eelgrass bed habitat in Sengekontacket Pond between 1995 and 2017.

Fish Consumption

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Sengekontacket Pond (MA97-10); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	**Alert**
Not Supporting	YES
2022 Use Attainment Summary	
Sengekontacket Pond (MA97-10): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.0866 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing fecal coliform impairment is being retained. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V16.0	Sengekontacket Pond	Conditionally Approved	0.49816	45.3%
V16.3	Majors Cove	Conditionally Approved	0.10975	10.0%
V16.30	Gravel Island	Conditionally Approved	0.18915	17.2%
V16.31	Southeast Corner	Conditionally Approved	0.11642	10.6%
V16.32	Dividend Point Area	Conditionally Approved	0.11995	10.9%
V16.33	Rod and Gun Club	Prohibited	0.02339	2.1%
V16.34	Boulevard Area	Prohibited	0.02978	2.7%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Sengekontacket Pond (MA97-10), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the status of the Primary Contact Recreation Use for Sengekontacket Pond (MA97-10), so it is Not Assessed. The Alert previously identified due to a single year (2010) that exceeded the 10% posting guidance at Pecoy Point Preserve Beach is removed, since this beach is no longer monitored by the DPH.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Sengekontacket Pond (MA97-10): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.0866 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the status of the Secondary Contact Recreation Use for Sengekontacket Pond (MA97-10), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Sengekontacket Pond (MA97-10): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.0866 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Sesachacha Pond (MA97-02)

Location:	South of Quidnet Road and north of Polpis Road, Nantucket.
AU Type:	ESTUARY
AU Size:	0.42 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Fecal Coliform	R1_MA_2020_03	Changed

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Fecal Coliform	Source Unknown (N)			X			

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the Islands Watershed (Report CN 254.1, approved 2020-05-20, ATTAINS Action ID: R1_MA_2020_03)

Recommendations

2022 Recommendations
ALU: Since diadromous fish passage limitations do occur at the barrier beach along Sesachacha Pond (MA97-02), a well-designed operation and management plan for breaching for fish passage and the health of the salt pond should be developed with the community's Natural Resource Manager staff and DMF biologists.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
According to DMF biologists, the channel from Sesachacha Pond to the ocean on the east side of the island, was noted to be of minimal impact to the passage of diadromous fish. The channel was given a passage score of "3" on a 0-10 scale (with 10 equating to no possible passage), indicating that the barrier beach is only a minor obstruction to the passage of the targeted species, river herring and white perch, with a population score of "3". It was also noted that a beach opening is permitted, but that scope adjustments are necessary to ensure fish passage. No other data are available to assess the Aquatic Life Use for Sesachacha Pond (MA97-02), so it is Not Assessed. The prior Alert related to a fish kill in September 2000 is being removed, since the naturally limited tidal exchange likely contributed to the kill.	

Biological Monitoring Information

Habitat and Flow Data (anthropogenic alterations)

MassDMF Status of Priority Diadromous Fish Passage Barriers. (Chase 2020)

Assessment Summary
According to DMF biologists, the outlet from Sesachacha Pond to the ocean on the east side of the island, was noted to be of minimal impact to the passage of diadromous fish. The channel was given a passage score of "3" on a 0-10 scale (with 10 equating to no possible passage), indicating that the barrier beach is only a minor obstruction to the passage of the targeted species, river herring and white perch, with a population score of "3". It was also noted that a beach opening is permitted, but that scope adjustments are necessary to ensure fish passage.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Sesachacha Pond (MA97-02); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	
Sesachacha Pond (MA97-02): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.418 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.418 sq mi (99%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi. There is insufficient information available to delist the existing Fecal Coliform impairment, so the Shellfish Harvesting Use is evaluated as Not Supporting.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
NT9.0	Sesachacha Pond	Prohibited	0.41795	98.8%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Sesachacha Pond (MA97-02), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO

2022 Use Attainment Summary
No data are available to assess the status of the Primary Contact Recreation Use for Sesachacha Pond (MA97-02), so it is Not Assessed.

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Sesachacha Pond (MA97-02): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.418 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO

2022 Use Attainment Summary
No data are available to assess the status of the Secondary Contact Recreation Use for Sesachacha Pond (MA97-02), so it is Not Assessed.

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Sesachacha Pond (MA97-02): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.418 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Seths Pond (MA97085)

Location:	West Tisbury.
AU Type:	FRESHWATER LAKE
AU Size:	11 ACRES
Classification/Qualifier:	B

No usable data were available for Seths Pond (MA97085) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Algae		Unchanged
5	5	Transparency / Clarity		Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Algae	Source Unknown (N)				X	
Transparency / Clarity	Source Unknown (N)				X	

Squibnocket Pond (MA97-43)

Location:	Aquinnah/Chilmark.
AU Type:	ESTUARY
AU Size:	0.95 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	5	Dissolved Oxygen		Added
--	5	Nitrogen, Total		Added
--	5	Nutrient/Eutrophication Biological Indicators		Added

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Dissolved Oxygen	Agriculture (Y)	X					
Dissolved Oxygen	Natural Sources (Y)	X					
Dissolved Oxygen	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Dissolved Oxygen	Yard Maintenance (Y)	X					
Nitrogen, Total	Agriculture (Y)	X					
Nitrogen, Total	Natural Sources (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Yard Maintenance (Y)	X					
Nutrient/Eutrophication Biological Indicators	Agriculture (Y)	X					
Nutrient/Eutrophication Biological Indicators	Natural Sources (Y)	X					
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nutrient/Eutrophication Biological Indicators	Yard Maintenance (Y)	X					

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	

The Menemsha-Squibnocket Pond watershed is distributed across the Towns of Chilmark and Aquinnah and is shared by the Wampanoag Tribe of Aquinnah. The Squibnocket Pond portion of the system has periodic overwash of the barrier beach under storm conditions and limited tidal exchange with estuarine waters of Menemsha Pond via the herring creek. MA DMF biologists indicate this herring creek (an unnamed tributary locally known as Gay Head Creek or the Wampanoag herring run) connecting Menemsha Pond and Squibnocket Pond has a fish passage score of 0 (no obstruction) for the target species of river herring and white perch (population score is 4). Planning notes at this site include an ageing outlet with some sand shoaling at the entrance channel. The Wampanoag Tribe of Gay Head's Natural Resources Dept. manages this herring run. According to the draft nitrogen loading model report (Howes, Eichner, et al. 2017), except for near the channel to Menemsha Pond, based on data collection during the summers of 2007 and 2012, the pond exhibited high diurnal DO shifts (6-12 mg/L), as well as frequent depletion to <4 mg/L with some anoxia, chl-a concentrations were often 6-8 µg/L, >10 µg/L ~24% of record and rarely >15µg/L. The northern area had sparse to no macroalgae, but the southern area had relatively high accumulation and in the eastern area dense microalgal mats were covering sediments. The benthic community was considered to be moderately impaired but supported a productive community (moderate to high numbers of organisms, >400 per grab) with fewer species (9) and lower diversity (H' 1.72) and Evenness (0.55), the community was generally dominated by Streblospio and Leptocheirus (amphipod), with few stress indicator species present. The mean TN concentrations (summers 2000 through 2012, sites SQ 1, SQ 2, SQ 3, and SQ 4) ranged from 0.763 to 0.853mg/L (Howes, Eichner, et al. 2017). Buzzards Bay Coalition (BBC) conducted discrete water quality monitoring in Squibnocket Pond, Aquinnah/Chilmark (MA97-43) at 2 sites (the North corner at BBC_SQB1 and in the middle of the pond at BBC_SQB3), usually weekly (between 6 and 9 am) in the summers of 2017-2019, at depths ranging from the surface to 4.3m. The maximum temperature was 27.5^{o}C (n=65), overall the avg % of DO measurements <6.0mg/L was 22% and <5.0mg/L was 17%, n=69) but the excursions were all at depth (none of the 41 surface measurements were <6.0mg/L) while just over half of the 24 measurements at avg depths between 2.4 and 4.3m were <6.0mg/L and 41% of those measurements were <5.0mg/L (minimums ranging from 0.3 to 5.3mg/L) so the incidences of low DO concentrations were all at depth. The BBC typically scheduled nutrient sampling efforts for ebb tides in Jul. and Aug. in the northern cove (BBC_SQB1) (limited sampling). The maximum chl-a was 15.39µg/L (n=12), >10µg/L only twice (once in 2017 and once in 2019). TN data were limited (but ranged from 0.69 to 0.83mg/L (n=4). Secchi disk depth at both sites ranged from 0.9-2.9m (n=26). NH3-N concentrations were generally low (range 0.004 to 0.03mg/L, n=12), but TUs could not be calculated (lack of quality-assured pH and salinity data availability).
The Aquatic Life Use of Squibnocket Pond is assessed as Not Supporting based on the results of the MEP analysis indicating nutrient enrichment stress. Impairments for low DO, Nutrient/Eutrophication Biological Indicators, and TN are being added. The natural limited flushing capability of Squibnocket Pond is the primary driver of these conditions (flushing only occurs with periodic overwash of the barrier beach under storm conditions and the very limited tidal exchange with estuarine waters of Menemsha Pond via the "herring creek"). The MEP project identified anthropogenic sources of nitrogen loading to this system, which exacerbates the natural situation, to include the on-site disposal of wastewater, agriculture (animal and plant), and fertilizer applications (residential and agricultural).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
BBC_SQB1	Buzzards Bay Coalition	Water Quality	Squibnocket Pond	Squibnocket Pond, Aquinnah/Chilmark	41.32711	-70.78556
BBC_SQB3	Buzzards Bay Coalition	Water Quality	Squibnocket Pond	Squibnocket Pond, Aquinnah/Chilmark	41.31722	-70.78556

Biological Monitoring Information

(Howes, Eichner, et al. 2017)

Table VIII-1. Summary of nutrient related habitat quality within the Menemsha-Squibnocket Embayment System within the Towns of Chilmark and Aquinnah, MA, based upon assessments in Section VII. WQMP indicates Water Quality Monitoring Program.

Health Indicator	Menemsha-Squibnocket Embayment System				
	Menemsha Channel	Menemsha Main Basin	Nashaquitsa Pond	Stonewall Pond	Squibnocket Pond
Dissolved Oxygen	H[1]	HI[1]	HI[1]	MI[2]	MI/SI[3]
Chlorophyll	H[4]	H/MI[5]	MI[6]	MI/SI[7]	H/MI[5]
Macroalgae	H[8]	H/MI[9]	H[8]	H[8]	H/MI[10]
Eelgrass	H[11]	H/M[11]	SI[12]	SI[12]	--[13]
Infaunal Animals	H[14]	H[15]	MI[16]	MI[16]	MI[17]
Overall:	**H[18]**	**H/MI[19]**	**MI/SI[20]**	**SI[21]**	**MI[22]**

1- oxygen always >4mg/L and above 5 mg/L 91%-96% of record and for Nashaquitsa >6 mg/L for 97% of record.
2- moderate to high oxygen depletion, <6mg/L 36%, <4 mg/L 5% of record and periodically <2 mg/L
3- except for near the channel to Menemsha Pond, oxygen has high diurnal shifts (6-12 mg/L), frequent depletion to <4 mg/L, 8%-26% of record and <3mg/L 4%-16% of record, with declines to <2mg/L common, with some anoxia.
4- levels low for a coastal basin, averaging 7 ug/L over summer time series generally between 5-10 ug/L, >90% of the time <10 ug L^{-1} and always <15 ug L^{-1}..
5 - low to moderate for a coastal basin, 6-8 ug/L, >10 ug/L ~24% of record and rarely >15ug/L.
6- moderate for a coastal basin, averaging 8.4 ug/L, but >10 ug/L 18% of record with blooms to 25 ug/L.
7- moderate to high for a coastal basin averaging 10 ug/L, >20 ug/L 8% of record with periodic blooms to >25 ug/L
8- sparse to no macroalgae throughout this basin.
9- modest accumulations of green filamentous drift algae accumulating in shallow area of mid basin, but generally absent.
10- sparse to no macroalgae in North region, but south region has relatively high accumulation and east region dense micro-algal mat covering sediments.
11- most of the main basin margin supports eelgrass habitat, loss of some deeper beds and fringing beds throughout basin. No clear loss of beds associated with N enrichment in Channel. Temporal/spatial loss pattern of loss in Main Basin is typical of nitrogen enrichment (loss deeper, stable in shallows) and indicates moderate impairment.
12- basin coverage in 1995 completely lost in Stonewall; Nashaquitsa loss from deep area, now shrinking of fringing beds.
13- no documented (verified) evidence of eelgrass "presence" in this basin historically.
14 - very high habitat quality, averaging 25 species & 1500 individuals per grab with high diversity (H'=3.35) and Evenness (E=0.73) and community 90% non-stress indicator species with crustaceans and mollusks and polychaetes dominant.
15 – high habitat quality averaging 20 species and 600 individuals per grab with high diversity (H'=3.12) and Evenness (E=0.73) and <20% tubificids and capitellids. Communities dominated by crustacean, polychaetes and crustaceans. Main basin has highest quality habitat is in the shallow areas not in the deep southern depositional basin
16-productive benthic animal communities (high numbers of organisms, >800 per grab), but only moderate numbers of species (14-17), diversity (H' 2.6-2.2) and Evenness (0.57-0.63). Consistent with moderate organic matter enrichment is a community dominated by amphipods with mainly polychaetes colonizing soft organic muds.
17- slightly higher impairment than Nashaquitsa and Stonewall Ponds, but supports a productive community (moderate to high numbers of organisms, >400 per grab) with fewer species (9) and lower diversity (H' 1.72) and Evenness (0.55), community is generally dominated by *Streblospio* and *Leptocheirus* (amphipod), with few stress indicator species..
18 High water quality, diversity productive benthic community, no macroalgae, oxidized sediments and stable eelgrass.
19 - High water quality, diversity productive benthic community, no macroalgae, oxidized sediments. Generally stable eelgrass coverage with only slight indication of loss in deeper waters of deep southern basin, the slight loss of eelgrass requires a designation moderately impaired, although benthic animal habitat remains of high quality..
20 – moderate oxygen depletion and elevation chlorophyll with organic soft sediments. Significant loss of eelgrass coverage since 1995 some remaining. Overall, moderately to significantly impaired eelgrass habitat and moderately impaired benthic animal habitat.
21- as for #20 above, except that eelgrass loss is complete gaining a designation significantly impaired for eelgrass.
22 - no eelgrass habitat historically. Supports productive but moderately impaired benthic infauna habitat with low to moderate species, diversity and Evenness. Moderate impairment is consistent with the levels of oxygen depletion, macroalgal accumulations and mats, organic rich soft sediments in much of the basin and high nitrogen levels. As found in many moderately impaired benthic habitats, the community is dominated by *Leptocheirus* (amphipod) and *Streblospio*

H = High quality habitat conditions; MI = Moderate Impairment; SI = Significant Impairment;
SD = Severely Degraded; -- = not applicable to this estuarine reach

Table VI-1. Measured data and modeled nitrogen concentrations for the Menemsha and Squibnocket Ponds system used in the model calibration plots of Figures VI-2 and VI-3. All concentrations are given in mg/L N. "Data mean" values are calculated as the average of all measurements. Data represented in this table were collected in the summers of 2000 through 2012.

Sub-Embayment	Monitoring station	Data Mean	s.d. all data	N	model min	model max	model average
Menemsha Creek Low	MEN 1	0.287	0.037	23	0.289	0.310	0.296
Menemsha Creek Low	MEN 2	0.341	0.078	24	0.293	0.318	0.304
Menemsha Main Basin	MEN 3	0.385	0.118	29	0.291	0.328	0.311
Menemsha Main Basin	MEN 4	0.399	0.156	25	0.385	0.423	0.404
Nashaquitsa Mouth	MEN 5	0.338	0.107	26	0.319	0.344	0.335
Nashaquitsa Basin	MEN 6	0.341	0.082	23	0.338	0.354	0.347
Menemsha Main Basin	MEN 8	0.379	0.111	23	0.360	0.374	0.368
Menemsha Main Basin	MEN 9	0.386	0.099	23	0.340	0.370	0.358
Menemsha Creek	MEN 10	0.351	0.120	22	0.290	0.326	0.308
Squibnocket Basin	SQ 1	0.763	0.321	20	0.725	0.782	0.761
Squibnocket Basin	SQ 2	0.798	0.327	22	0.788	0.798	0.793
Squibnocket Basin	SQ 3	0.769	0.386	18	0.780	0.791	0.786
Squibnocket Basin	SQ 4	0.853	0.318	15	0.812	0.822	0.817

Habitat and Flow Data (anthropogenic alterations)

MassDMF Status of Priority Diadromous Fish Passage Barriers. (Chase 2020)

Assessment Summary
MA DMF biologists indicate the unnamed tributary (locally referred to as Gay Head Creek or the Wampanoag herring run) connecting Menemsha Pond and Squibnocket Pond has a fish passage score of 0 (no obstruction) for the target species of river herring and white perch (population score is 4) (Chase 2020). There are notes of some planning for this site (ageing outlet with some sand shoaling at the entrance channel).

Physico-chemical Water Quality Information

DO, pH, Temperature

Buzzards Bay Coalition Estuarine Discrete Dissolved Oxygen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

[DO was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Average Sample Depth (m)	DO Count	DO Min (mg/L)	DO Avg (mg/L)	% Meas. <6.0	% Meas. <5.0	% Meas. <4.0
BBC_SQB1	07/05/17	08/29/17	0.2	9	6.9	7.5	0	0	0
BBC_SQB1	07/05/17	08/29/17	2.4	8	5.3	6.4	38	0	0
BBC_SQB1	06/25/18	09/27/18	0.2	12	6.6	7.5	0	0	0

Station Code	Start Date	End Date	Average Sample Depth (m)	DO Count	DO Min (mg/L)	DO Avg (mg/L)	% Meas. <6.0	% Meas. <5.0	% Meas. <4.0
BBC_SQB1	06/20/18	09/19/18	0.4	4	7.1	7.7	0	0	0
BBC_SQB1	07/10/19	08/15/19	0.2	8	6.8	7.2	0	0	0
BBC_SQB1	07/10/19	08/15/19	2.5	4	4.1	6.2	25	25	0
BBC_SQB3	07/05/17	08/29/17	0.2	7	6.7	7.7	0	0	0
BBC_SQB3	07/05/17	08/29/17	4.0	7	3.3	6.0	29	14	14
BBC_SQB3	06/20/18	07/03/18	0.2	3	8.0	8.5	0	0	0
BBC_SQB3	06/20/18	07/03/18	4.2	3	0.3	2.9	67	67	67
BBC_SQB3	07/10/19	08/15/19	0.2	2	7.8	7.8	0	0	0
BBC_SQB3	07/10/19	08/15/19	4.3	2	1.9	2.4	100	100	100

Buzzards Bay Coalition Discrete Estuarine Temperature Data (2014-2018). (BBC 2021) (MassDEP Undated 2)
[Temperature was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer Index is June 1 – Sept 15]

Station Code	Start Date	End Date	Average Sample Depth (m)	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count >29.4
BBC_SQB1	07/05/17	08/29/17	0.2	9	9	27.5	25.2	0
BBC_SQB1	07/05/17	08/29/17	2.4	8	8	26.8	24.8	0
BBC_SQB1	06/25/18	09/13/18	0.2	9	9	27.4	24.8	0
BBC_SQB1	06/20/18	09/19/18	0.4	4	3	26.0	23.4	0
BBC_SQB1	07/10/19	08/15/19	0.2	8	8	26.3	25.3	0
BBC_SQB1	07/10/19	08/15/19	2.5	4	4	26.3	25.0	0
BBC_SQB3	07/05/17	08/29/17	0.2	7	7	26.3	24.4	0
BBC_SQB3	07/05/17	08/29/17	4.0	7	7	25.5	23.5	0
BBC_SQB3	06/20/18	07/03/18	0.2	3	3	25.4	23.2	0
BBC_SQB3	06/20/18	07/03/18	4.2	3	3	25.1	21.6	0
BBC_SQB3	07/10/19	08/15/19	0.2	2	2	25.1	24.8	0
BBC_SQB3	07/10/19	08/15/19	4.3	2	2	23.8	23.8	0

Nutrients (Primary Producer Screening, Physico-chemical Screening)

Buzzards Bay Coalition Estuarine Nutrient Enrichment Indicator Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer seasonal total nitrogen data collected May-Sept]

Station Code	Data Year	Average Sample Depth (m)	Seasonal TN Count	Seasonal TN Min (mg/L)	Seasonal TN Max (mg/L)	Seasonal TN Avg (mg/L)	Chl-a Count	Chl-a Min (ug/L)	Chl-a Max (ug/L)	Chl-a Avg (ug/L)	Chl-a Count ≤5	Chl-a Count >10
BBC_SQB1	2017	0.2	1	0.83	0.83	0.83	4	3.20	14.53	7.79	1	1
BBC_SQB1	2018	0.2	2	0.70	0.75	0.72	4	4.15	5.64	4.75	3	0
BBC_SQB1	2019	0.2	1	0.69	0.69	0.69	4	5.84	15.39	9.21	0	1

Buzzards Bay Coalition Secchi Disk Depth Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

Station Code	Start Date	End Date	Secchi disk depth Count	Secchi disk depth Min (m)	Secchi disk depth Max (m)	Secchi disk depth Avg (m)
BBC_SQB1	07/19/17	08/29/17	5	0.9	1.9	1.4
BBC_SQB1	06/20/18	08/20/18	5	1.1	2.0	1.6
BBC_SQB1	07/10/19	08/15/19	4	0.9	2.1	1.4
BBC_SQB3	07/05/17	08/29/17	7	1.1	2.9	1.7
BBC_SQB3	06/20/18	07/03/18	3	0.9	1.5	1.1
BBC_SQB3	07/10/19	08/15/19	2	1.0	1.1	1.0

Toxics and other pollutants (metals, ammonia, chlorine)

Buzzards Bay Coalition Ammonia-Nitrogen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)

[Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Average Sample Depth (m)	NH3 Count	NH3 Min (mg/L)	NH3 Max (mg/L)	NH3 Avg (mg/L)
BBC_SQB1	07/05/17	08/17/17	0.2	4	0.004	0.032	0.011
BBC_SQB1	07/09/18	08/20/18	0.2	4	0.004	0.024	0.010
BBC_SQB1	07/10/19	08/15/19	0.2	4	0.004	0.011	0.006

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Squibnocket Pond (MA97-43); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Insufficient Information	YES
2022 Use Attainment Summary	
Squibnocket Pond (MA97-43): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.9338 sq mi (98%). The approved shellfish growing area represents 0.824 sq mi (87%). The prohibited shellfish growing area represents 0.1098 sq mi (12%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V35.0	Squibnocket Pond	Approved	0.82404	86.9%
V35.1	East End of Pond	Prohibited	0.10549	11.1%
V35.2	South of Hillman Point	Prohibited	0.00206	0.2%
V35.3	Black Brook	Prohibited	0.00036	0.0%
V35.4	Black Pond	Prohibited	0.00185	0.2%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Squibnocket Pond (MA97-43), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the status of the Primary Contact Recreation Use for Squibnocket Pond (MA97-43), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Squibnocket Pond (MA97-43): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.9338 sq mi (98%). The approved shellfish growing area represents 0.824 sq mi (87%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the status of the Secondary Contact Recreation Use for Squibnocket Pond (MA97-43), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Squibnocket Pond (MA97-43): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.9338 sq mi (98%). The approved shellfish growing area represents 0.824 sq mi (87%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Sunset Lake (MA97-31)

Location:	Oak Bluffs.
AU Type:	ESTUARY
AU Size:	0.01 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	3	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aquatic Life Use for Sunset Lake (MA97-31), so it is Not Assessed.	

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Sunset Lake (MA97-31); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Insufficient Information	YES
2022 Use Attainment Summary	
Sunset Lake (MA97-31): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0067 sq mi (96%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0067 sq mi (96%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V14.2	Sunset Lake	Prohibited	0.00666	96.3%

Aesthetic

2022 Use Attainment	Alert

Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Sunset Lake (MA97-31), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the status of the Primary Contact Recreation Use for Sunset Lake (MA97-31), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Sunset Lake (MA97-31): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0067 sq mi (96%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the status of the Secondary Contact Recreation Use for Sunset Lake (MA97-31), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

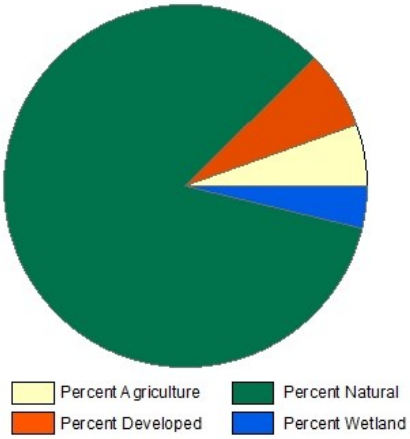
Summary
Sunset Lake (MA97-31): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0067 sq mi (96%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Tiasquam River (MA97-25)

Location:	Source in wetlands west of Tea Lane, Chilmark to Warren Pond Dam, Chilmark/West Tisbury, Martha's Vineyard.
AU Type:	RIVER
AU Size:	3.2 MILES
Classification/Qualifier:	B

Tiasquam River - MA97-25

Watershed Area: 2.88 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	2.88	2.88	0.69	0.69
Agriculture	5.5%	5.5%	8.8%	8.8%
Developed	6.9%	6.9%	6.4%	6.4%
Natural	83.9%	83.9%	70.5%	70.5%
Wetland	3.7%	3.7%	14.3%	14.3%
Impervious Cover	3.3%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	4c	(Fish Passage Barrier*)		Added

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Fish Passage Barrier*)	Hydrostructure Impacts on Fish Passage (Y)	X				

Recommendations

2022 Recommendations
ALU: Long-term temperature (thermistor) data between July 1 and August 31 (inclusive) in this CFR are needed to inform whether the Tiasquam River should be classified as Cold Water in the next revision of the Massachusetts Surface Water Quality Standards. Currently, this stream should be protected as a Tier 1 Existing Use Cold Water Fishery to protect the native trout population. Thermistors should be placed to bracket the effects on the thermal regime of the brook by the six dams (upstream to downstream: Hillman Pond Dam, Maxson Pond Dam, Murphy Pond Dam, Davies Pond Dam, Looks Pond Dam, and Warren Pond Dam).

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	
DMF biologists note four structures causing passage limitation to diadromous fish throughout the Tiasquam River (MA97-25). From upstream to downstream: The Murphy's Pond Dam (NATID# MA02230) was given a passage score of "10" on a 0-10 scale (indicating no possible passage); it was noted that this dam was relatively high for a small pond and that the owner had expressed interest in a fish ladder during a 2016 meeting. The Davies Pond Dam (NATID# MA02232), was given a passage score of "5" (restricts passage); DMF noted that this structure was a low priority for improvement due to <1 acre of habitat being available in this tributary. The Looks Pond Dam (NATID# MA02226), was given a passage score of "2", (minor obstruction to passage). The targeted species at the three most upstream structures are river herring and American eel, with a noted population score of "1". An unnamed dam (locally known as Warren Pond Dam NATID# MA02233) located at the boundary with the downstream AU (MA97-35), was given a passage score of "0", indicating that the dam is not an obstruction to the passage of the targeted species river herring and white perch, with a population score of "1". It should be noted that this stream is identified by DFG as a CFR. MA DFG biologists conducted backpack electrofishing in the Tiasquam River just upstream of Davies Pond off Murphy's Rd in Vineyard Haven (Sample ID 5944) in September 2016. The sample was comprised of only 6% cold-water individuals (i.e., one Eastern brook trout ≤140mm and nine American Brook Lamprey), the rest of the sample was dominated by macrohabitat generalists. The dominance of the sample by macrohabitat generalists likely reflects the influence of the dams creating small impoundments along this river. The Aquatic Life Use for this Tiasquam River AU (MA74-25) is assessed as Not Supporting, based on the barriers to diadromous fish passage at the Murphy's Pond Dam and the Davies Pond Dam. The Alert previously identified due to the small number of cold water fish and dominance by macrohabitat generalists in this cold water habitat, is being carried forward.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
5944	MassDFG	Fish Community	Tiasquam River	US of Murphy's Rd, Vineyard Haven	41.37870	-70.68712

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 1)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net; Trout= any combination of brook trout, brown trout,

rainbow trout, tiger trout; Other Tier2 Species= any size and any combination of American brook lamprey, Atlantic salmon, lake chub, lake trout, longnose sucker, slimy sculpin]
[Species List: AE = American Eel, BB = Brown Bullhead, BL = American Brook Lamprey, BS = Banded Sunfish, CP = Chain Pickerel, EBT = Brook Trout, GS = Golden Shiner, K = Banded Killifish, TD = Tesselated Darter]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	Trout ≤140mm Ind	LLS<200mm Ind	Other Tier2 Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
5944	09/08/16	BP	TP	9	181	1	0	9	6%	13%	Yes	Yes	AE, BB, BL, BS, CP, EBT, GS, K, TD,

Habitat and Flow Data (anthropogenic alterations)

MassDMF Status of Priority Diadromous Fish Passage Barriers. (Chase 2020)

Assessment Summary
DMF biologists note four structures causing passage limitation to diadromous fish throughout the Tiasquam River AU. From upstream to downstream: The Murphy's Pond Dam (NATID# MA02230) was given a passage score of "10" on a 0-10 scale, indicating that the dam allows no possible passage of the targeted species, river herring and American eel. The population score was noted to be “1”. It was noted that this dam was relatively high for a small pond and that the owner had expressed interest in a fish ladder during a 2016 meeting. The Davies Pond Dam (NATID# MA02232), was given a passage score of "5", indicating that the dam restricts the passage of the targeted species, river herring and American eel, with a population score of “1”. DMF noted that this structure was a low priority for improvement due to <1 acre of habitat being available in this tributary. The Looks Pond Dam (NATID# MA02226), was given a passage score of "2", indicating that the dam is only a minor obstruction to the passage of the targeted species river herring and American eel with a population score of “1”. An unnamed dam (locally known as Warren Pond Dam NATID# MA02233) at the boundary with the downstream AU (MA97-35), was given a passage score of "0", indicating that the dam is not an obstruction to the passage of the targeted species river herring and white perch, with a population score of "1". It was noted in the past that herring arrived at Looks Pond in April 2015 after board removal at the dam. The Aquatic Life Use for Tiasquam River (Assessment Unit MA74-25) is assessed as Not Supporting, based on the barrier to diadromous fish passage at in the Murphy's Pond Dam and Davies Pond Dam.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in this Tiasquam River AU (MA97-25); therefore, the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for this Tiasquam River AU (MA97-25), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO

2022 Use Attainment Summary
No bacteria data are available to assess the status of the Primary Contact Recreation Use for this Tiasquam River AU (MA97-25), so it is Not Assessed.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreation Use for this Tiasquam River AU (MA97-25), so it is Not Assessed.	

Tiasquam River (MA97-35)

Location:	From Warren Pond Dam to mouth at inlet of Town Cove of Tisbury Great Pond, Chilmark/West Tisbury, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	0.01 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
DMF biologists note one potential barrier that provides adequate passage to diadromous fish at the upper end of this AU. An unnamed dam (locally known as Warren Pond Dam NATID# MA02233) at the boundary with the upstream AU (MA97-25), was given a passage score of "0" on a 0-10 scale, indicating that the dam is not an obstruction to the passage of the targeted fish species, river herring and white perch. The population score was noted to be "1". No other data available to assess the status of the Aquatic Life Use for this Tiasquam River AU (MA97-35), so it is Not Assessed.	

Biological Monitoring Information

Habitat and Flow Data (anthropogenic alterations)

MassDMF Status of Priority Diadromous Fish Passage Barriers. (Chase 2020)

Assessment Summary
DMF biologists note one potential barrier providing adequate passage to diadromous fish at the upper end of this AU. An unnamed dam (locally known as Warren Pond Dam NATID# MA02233) at the boundary with the upstream AU (MA97-25), was given a passage score of "0" on a 0-10 scale, indicating that the dam is not an obstruction to the passage of the targeted fish species, river herring and white perch. The population score was noted to be "1".

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in this Tiasquam River AU (MA97-35); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Insufficient Information	YES
2022 Use Attainment Summary	
Tiasquam River (MA97-35): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0049 sq mi (73%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0049 sq mi (73%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V31.3	Town Cove	Prohibited	0.00487	73.1%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the status of the Aesthetic Use for this Tiasquam River AU (MA97-35), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No *Enterococci* bacteria data are available to assess the status of the Primary Contact Recreation Use for this Tiasquam River AU (MA97-35), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Tiasquam River (MA97-35): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0049 sq mi (73%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Secondary Contact Recreation Use for Tiasquam River (MA97-35), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Tiasquam River (MA97-35): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0049 sq mi (73%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Tisbury Great Pond (MA97-18)

Location:	Including Town Cove, Muddy Cove, Pear Tree Cove, Short Cove, Tiah Cove, Tississa Pond, Deep Bottom Cove, and Thumb Cove, Chilmark/West Tisbury, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	1.1 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Dissolved Oxygen	R1_MA_2019_02	Changed
5	4a	Estuarine Bioassessments	R1_MA_2019_02	Changed
5	4a	Fecal Coliform	R1_MA_2020_03	Changed
5	4a	Nitrogen, Total	R1_MA_2019_02	Changed
5	4a	Nutrient/Eutrophication Biological Indicators	R1_MA_2019_02	Changed

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Dissolved Oxygen	Impervious Surface/Parking Lot Runoff (Y)	X					
Dissolved Oxygen	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Dissolved Oxygen	Residential Districts (Y)	X					
Estuarine Bioassessments	Impervious Surface/Parking Lot Runoff (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Residential Districts (Y)	X					
Fecal Coliform	Source Unknown (N)			X			
Nitrogen, Total	Impervious Surface/Parking Lot Runoff (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Residential Districts (Y)	X					
Nutrient/Eutrophication Biological Indicators	Impervious Surface/Parking Lot Runoff (Y)	X					
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nutrient/Eutrophication Biological Indicators	Residential Districts (Y)	X					

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the Islands Watershed (Report CN 254.1, approved 2020-05-20, ATTAINS Action ID: R1_MA_2020_03)
Dissolved Oxygen	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Total-Nitrogen TMDL for Tisbury Great Pond/Black Point Pond Estuarine System (Report CN CN 398.1, approved 2019-07-31, ATTAINS Action ID: R1_MA_2019_02)
Estuarine Bioassessments	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Total-Nitrogen TMDL for Tisbury Great Pond/Black Point Pond Estuarine System (Report CN CN 398.1, approved 2019-07-31, ATTAINS Action ID: R1_MA_2019_02)
Nitrogen, Total	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Total-Nitrogen TMDL for Tisbury Great Pond/Black Point Pond Estuarine System (Report CN CN 398.1, approved 2019-07-31, ATTAINS Action ID: R1_MA_2019_02)
Nutrient/Eutrophication Biological Indicators	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Total-Nitrogen TMDL for Tisbury Great Pond/Black Point Pond Estuarine System (Report CN CN 398.1, approved 2019-07-31, ATTAINS Action ID: R1_MA_2019_02)

Recommendations

2022 Recommendations
ALU: Since diadromous fish passage limitations do occur at the barrier beach along Tisbury Great Pond (MA97-18), a well-designed operation and management plan for breaching for fish passage and the health of the salt pond should be developed with the community's Natural Resource Manager staff and DMF biologists.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
According to DMF biologists, the outlet from Tisbury Great Pond (MA97-18) to the ocean on the south side of the island, was noted to be of minimal impact to the passage of diadromous fish. The channel was given a passage score of "3" on a 0-10 scale (with 10 equating to no possible passage), indicating that the barrier beach is only a minor obstruction to the passage of the targeted species, river herring and white perch, with a population score of "5". Notes were made that an operation and management plan is needed, while currently passage depends on annual barrier beach opening. No other recent water quality data are available to assess the Aquatic Life Use for Tisbury Great Pond (MA97-18), so it will continue to be assessed as Not Supporting, with the impairments for Dissolved Oxygen, Estuarine Bioassessments, Nitrogen, Total and Nutrient/Eutrophication Biological Indicators being carried forward.	

Biological Monitoring Information

Habitat and Flow Data (anthropogenic alterations)

MassDMF Status of Priority Diadromous Fish Passage Barriers. (Chase 2020)

Assessment Summary
According to DMF biologists, the outlet from Tisbury Great Pond to the ocean on the south side of the island, was noted to be of minimal impact to the passage of diadromous fish. The channel was given a passage score of "3" on a 0-10 scale (with 10 equating to no possible passage), indicating that the barrier beach is only a minor obstruction to the passage of the targeted species, river herring and white perch, with a population score of "5". Notes were made that an operation and management plan is needed, while currently passage depends on annual barrier beach opening.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Tisbury Great Pond (MA97-18); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	
Tisbury Great Pond (MA97-18): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.0422 sq mi (94%). The approved shellfish growing area represents 0.8408 sq mi (76%). The prohibited shellfish growing area represents 0.2014 sq mi (18%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi. There is insufficient information available to delist the existing Fecal Coliform impairment, so the Shellfish Harvesting Use is evaluated as Not Supporting.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V30.0	Martha's Vineyard South Coastal	Approved	0.00069	0.1%
V31.0	Tisbury Great Pond	Approved	0.84008	76.2%
V31.3	Town Cove	Prohibited	0.19897	18.0%
V31.4	Crab Creek	Prohibited	0.00244	0.2%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Tisbury Great Pond (MA97-18), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	

The Tisbury Great Pond Beach (ID 4963) was never posted for swimming between 2014 and 2019. The Primary Contact Recreational Use for Tisbury Great Pond (MA97-18) will continue to be assessed as Fully Supporting, since there were no swimming advisory postings at the Tisbury Great Pond Beach between 2014 and 2019.

Beach Postings

MassDPH Beach Posting Data Summary (% Bathing Season Posted 2014-2019) (Bailey, Logan Feb. 2, 2021) (MassDEP Undated 2)

Beach ID	Beach Name/Town	Left Boundary (Latitude)	Left Boundary (Longitude)	Right Boundary (Latitude)	Right Boundary (Longitude)	2014	2015	2016	2017	2018	2019	# years> 10%
4963	Tisbury Great Pond Beach/West Tisbury	41.34751	-70.65330	41.34790	-70.64650	0%	0%	0%	0%	0%	0%	0

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Tisbury Great Pond (MA97-18): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.0422 sq mi (94%). The approved shellfish growing area represents 0.8408 sq mi (76%). Because the total of all shellfish growing area classifications is anything less than "approved", the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Fully Supporting	NO
2022 Use Attainment Summary	
Tisbury Great Pond Beach (ID 4963) was never posted for swimming between 2014 and 2019. The Secondary Contact Recreational Use for Tisbury Great Pond (MA97-18) will continue to be assessed as Fully Supporting, since there were no swimming advisory postings at the Tisbury Great Pond Beach between 2014 and 2019.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Tisbury Great Pond (MA97-18): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.0422 sq mi (94%). The approved shellfish growing area represents 0.8408 sq mi (76%). Because the total of all shellfish growing area classifications is anything less than "approved", the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Tom Nevers Pond (MA97097)

Location:	Nantucket.
AU Type:	FRESHWATER LAKE
AU Size:	11 ACRES
Classification/Qualifier:	B

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Mercury in Fish Tissue	33880	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Mercury in Fish Tissue	Atmospheric Deposition - Toxics (Y)		X			
Mercury in Fish Tissue	Source Unknown (N)		X			

Recommendations

2022 Recommendations
ALU: Evaluation of whether or not nutrient enrichment is problematic in Tom Nevers Pond should be conducted, including Secchi disk depth monitoring. REC: Additional Secchi disk depth monitoring should be conducted to evaluate conditions in Tom Nevers Pond.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	YES
2022 Use Attainment Summary	
No data are available to assess the Aquatic Life Use for Tom Nevers Pond (MA97097), so it is Not Assessed. The Alert previously identified due to elevated total phosphorus and chlorophyll *a* concentrations during sampling event in September 2000 (Connors 2003), is carried forward.	

Fish Consumption

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
MassDEP biologists conducted fish toxics sampling at Tom Nevers Pond in October 2019 at the recommendation of the Inter-agency Fish Toxics Committee. Edible fillets were analyzed for the presence of mercury, arsenic, cadmium, and selenium. Since no change to the prior site-specific mercury advisory was made, the Fish Consumption Use for Toms Nevers Pond (MA97097) will continue to be assessed as Not Supporting for Mercury in Fish Tissue.	

MassDEP fish toxics sampling information (2018-2020) and MassDPH Fish Consumption Advisory information (2019-2021) (MassDPH 2021, MassDEP 2019, Davis July 21, 2021).

MassDEP biologists conducted fish toxics sampling at Tom Nevers Pond in October 2019 at the recommendation of the Inter-agency Fish Toxics Committee. Edible fillets were analyzed for the presence of mercury, arsenic, cadmium, and selenium. Since no change to the prior site-specific mercury advisory was made, the Fish Consumption Use for Toms Nevers Pond (MA97097) will continue to be assessed as Not Supporting.

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Tom Nevers Pond (MA97097), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	YES
2022 Use Attainment Summary	
No data are available to assess the status of the Primary Contact Recreation Use for Tom Nevers Pond (MA97097), so it is Not Assessed. The Alert previously identified due to poor Secchi disk depth in September 2000 (Connors 2003) is carried forward.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Secondary Contact Recreation Use for Tom Nevers Pond (MA97097), so it is Not Assessed.	

Trapps Pond (MA97-32)

Location:	Edgartown.
AU Type:	ESTUARY
AU Size:	0.07 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Dissolved Oxygen	65321	Unchanged
4a	4a	Estuarine Bioassessments	65321	Unchanged
4a	4a	Nitrogen, Total	65321	Unchanged
4a	4a	Nutrient/Eutrophication Biological Indicators	65321	Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Dissolved Oxygen	Impervious Surface/Parking Lot Runoff (Y)	X					
Dissolved Oxygen	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Dissolved Oxygen	Residential Districts (Y)	X					
Estuarine Bioassessments	Impervious Surface/Parking Lot Runoff (Y)	X					
Estuarine Bioassessments	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Estuarine Bioassessments	Residential Districts (Y)	X					
Nitrogen, Total	Impervious Surface/Parking Lot Runoff (Y)	X					
Nitrogen, Total	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nitrogen, Total	Residential Districts (Y)	X					
Nutrient/Eutrophication Biological Indicators	Impervious Surface/Parking Lot Runoff (Y)	X					
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	X					
Nutrient/Eutrophication Biological Indicators	Residential Districts (Y)	X					

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO

2022 Use Attainment Summary
According to DMF biologists, two structures in Trapps Pond were noted to be of minimal impact to the passage of the targeted species, river herring and white perch, though a population score of "0" was assigned in both cases. The Cow Bay Road crossing located roughly in the middle of the AU, was given a passage score of "0" on a 0-10 scale (with 10 equating to no possible passage), indicating that the crossing is not an obstruction to the passage of diadromous fish. The Beach Road culvert at the downstream end of the pond (at the boundary with the Sengekontacket Pond AU MA97-10) was given a passage score of "3" on a 0-10 scale (minor obstruction). It was noted that the culvert was undersized, overgrown and poorly maintained, though the Town was interested in improving it. There is no other data available to assess the Aquatic Life Use for Trapps Pond (MA97-32), so it remains assessed as Not Supporting, with the impairments for Dissolved Oxygen, Estuarine Bioassessments, Nitrogen, Total and Nutrient/Eutrophication Biological Indicators carried forward.

Biological Monitoring Information

Habitat and Flow Data (anthropogenic alterations)

MassDMF Status of Priority Diadromous Fish Passage Barriers. (Chase 2020)

Assessment Summary
According to DMF biologists, two structures in Trapps Pond were noted to be of minimal impact to the passage of the targeted species, river herring and white perch, though a population score of "0" was assigned in both cases. The Cow Bay Road crossing located roughly in the middle of the AU, was given a passage score of "0" on a 0-10 scale (with 10 equating to no possible passage), indicating that the crossing is not an obstruction to the passage of diadromous fish. The Beach Road culvert at the downstream end of the pond (at the boundary with the Sengekontacket Pond AU MA97-10) was given a passage score of "3" on a 0-10 scale (minor obstruction). It was noted that the culvert was undersized, overgrown and poorly maintained, though the Town was interested in improving it.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Trapps Pond (MA97-32); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Insufficient Information	YES
2022 Use Attainment Summary	
Trapps Pond (MA97-32): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0652 sq mi (95%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0652 sq mi (95%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V16.7	Trapps Pond	Prohibited	0.06522	94.7%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Trapps Pond (MA97-32), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Primary Contact Recreation Use for Trapps Pond (MA97-32), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Trapps Pond (MA97-32): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0652 sq mi (95%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Secondary Contact Recreation Use for Trapps Pond (MA97-32), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Trapps Pond (MA97-32): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0652 sq mi (95%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Unnamed Tributary (MA97-44)

Location:	Unnamed tributary to Menemsha Creek, from outlet of Haskell Pond Dam (NATID: MA02096) south of North Road, Chilmark to the boundary of the saltwater wetland north of North Road, Chilmark (referred to as 'Lower Creek' in the Massachusetts Estuaries report for the towns of Chilmark & Aquinnah, MA).
AU Type:	RIVER
AU Size:	0.4 MILES
Classification/Qualifier:	B

No usable data were available for Unnamed Tributary (MA97-44) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Unnamed Tributary (MA97-45)

Location:	Unnamed tributary to Menemsha Creek, from headwaters northeast of Meadow Lane, Chilmark to the boundary of the saltwater wetland east of Peases Point Way, Chilmark (referred to as 'Pease Point Brook' in the Massachusetts Estuaries report for the towns of Chilmark & Aquinnah, MA).
AU Type:	RIVER
AU Size:	0.4 MILES
Classification/Qualifier:	B

No usable data were available for Unnamed Tributary (MA97-45) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Vineyard Haven Harbor (MA97-09)

Location:	The waters south and west of an imaginary line drawn from the tip of West Chop, Tisbury and the tip of East Chop, Oak Bluffs to the confluence of Lagoon Pond at Beach Road, Tisbury/Oak Bluffs, Martha's Vineyard.
AU Type:	ESTUARY
AU Size:	1.54 SQUARE MILES
Classification/Qualifier:	SA: SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Estuarine Bioassessments		Unchanged
5	5	Fecal Coliform	R1_MA_2020_03	Changed

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Shellfish Harvesting	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Estuarine Bioassessments	Source Unknown (N)	X					
Fecal Coliform	Source Unknown (N)			X			

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the Islands Watershed (Report CN 254.1, approved 2020-05-20, ATTAINS Action ID: R1_MA_2020_03)

Designated Use Attainment Decisions

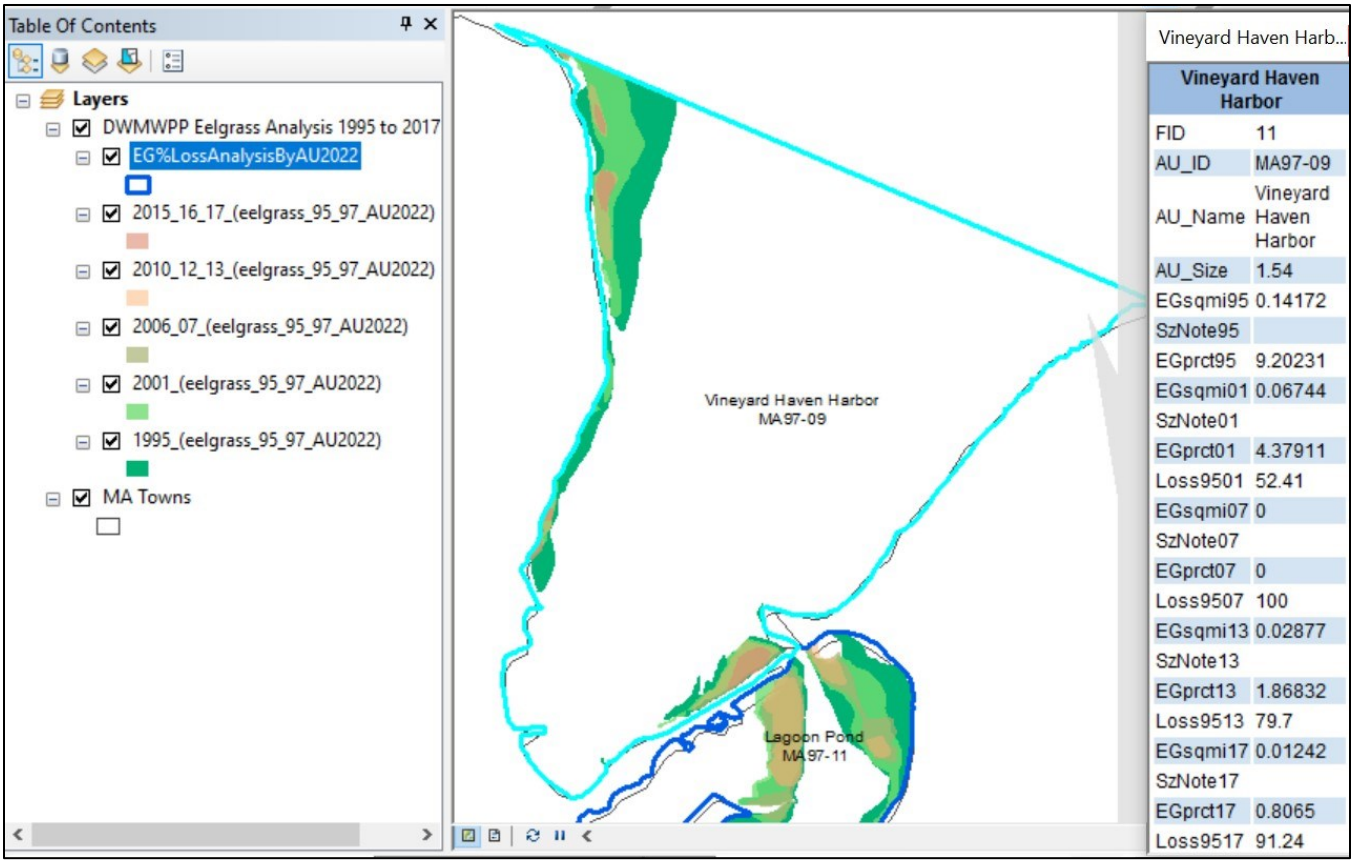
Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
The MassDEP Eelgrass Mapping Project documented an ~91% loss of eelgrass bed habitat in Vineyard Haven Harbor between 1995 and 2017. No other data are available to assess the Aquatic Life Use for Vineyard Haven Harbor (MA97-09), so it will continue to be assessed as Not Supporting, with the impairment for Estuarine Bioassessments carried forward.	

Biological Monitoring Information

Primary Producers Data

Eelgrass analysis 1995-2017 for Vineyard Haven Harbor MA97-09 (MassGIS 2018, MassDEP Undated 4):



[Note 100% loss documented in 2007, but this is likely to correspond to a time when no mapping was done in this AU.]

The MassDEP Eelgrass Mapping Project documented an ~91% loss of eelgrass bed habitat in Vineyard Haven Harbor between 1995 and 2017.

Fish Consumption

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Vineyard Haven Harbor (MA97-09); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	**Alert**
Not Supporting	NO
2022 Use Attainment Summary	
Vineyard Haven Harbor (MA97-09): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.5204 sq mi (99%). The approved shellfish growing area represents 1.3483 sq mi (87%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing fecal coliform impairment is being retained.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
V10.0	Outer Vineyard Haven Harbor	Approved	1.34796	87.3%
V10.1	Vineyard Haven Inner Harbor	Conditionally Approved	0.08788	5.7%
V10.2	Breakwater North Mooring Area	Conditionally Approved	0.08426	5.5%
V11.0	Lagoon Pond	Approved	0.00016	0.0%
V7.0	Tisbury North Coast	Approved	0.00008	0.0%
V9.0	Oak Bluffs North Coast	Approved	0.00008	0.0%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Vineyard Haven Harbor (MA97-09), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
Three Tisbury beaches (Owen Park (ID 3144), Owen Little Way (ID 3145) & Vineyard Harbor Motel (ID 3148)) were infrequently posted for swimming between 2014 and 2019. The most postings overall were seen at Owen Little Way; peaking in 2015 when 10% of the bathing season was posted, however postings were rare (1% or less) at the other two beaches. The Primary Contact Recreational Use for Vineyard Haven Harbor (MA97-09) will continue to be assessed as Fully Supporting, since there were few if any swimming advisory postings at the Owen Park, Owen Little Way, and Vineyard Harbor Motel Beaches between 2014 and 2019.	

Beach Postings

MassDPH Beach Posting Data Summary (% Bathing Season Posted 2014-2019) (Bailey, Logan Feb. 2, 2021) (MassDEP Undated 2)

Beach ID	Beach Name/Town	Left Boundary (Latitude)	Left Boundary (Longitude)	Right Boundary (Latitude)	Right Boundary (Longitude)	2014	2015	2016	2017	2018	2019	# years> 10%
3144	Owen Park/Tisbury	41.46014	-70.59980	41.45574	-70.60100	0%	0%	1%	1%	0%	0%	0
3145	Owen Little Way/Tisbury	41.46272	-70.59980	41.46363	-70.59950	0%	10%	3%	3%	1%	1%	1
3148	Vineyard Harbor Motel/Tisbury	41.45357	-70.59870	41.45327	-70.59830	0%	0%	0%	1%	0%	0%	0

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Vineyard Haven Harbor (MA97-09): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.5204 sq mi (99%). The approved shellfish growing area represents 1.3483 sq mi (87%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
Three Tisbury beaches (Owen Park (ID 3144), Owen Little Way (ID 3145) & Vineyard Harbor Motel (ID 3148)) were infrequently posted for swimming between 2014 and 2019. The most postings overall were seen at Owen Little Way; peaking in 2015 when 10% of the bathing season was posted, however postings were rare (1% or less) at the other two beaches. The Secondary Contact Recreational Use for Vineyard Haven Harbor (MA97-09) will continue to be assessed as Fully Supporting, since overall, there were only a small number of swimming advisory postings at the Owen Park, Owen Little Way and Vineyard Harbor Motel Beaches between 2014 and 2019.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Vineyard Haven Harbor (MA97-09): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 1.5204 sq mi (99%). The approved shellfish growing area represents 1.3483 sq mi (87%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Westend Pond (MA97-20)

Location:	Cuttyhunk Island, Gosnold, Elizabeth Islands.
AU Type:	ESTUARY
AU Size:	0.06 SQUARE MILES
Classification/Qualifier:	SA: ORW, SFO

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO

2022 Use Attainment Summary

In 2014 Buzzards Bay Coalition (BBC) staff worked with the Town of Gosnold to reopen Westend Pond up to the ocean and restore tidal flushing to restore the pond's health, after Hurricanes Bob (1991) and Sandy (2012) caused the inlet to close completely. The MassDEP Eelgrass Mapping Project documented a complete loss of eelgrass bed habitat in Westend Pond (MA97-20) after 2013 and there is no evidence to suggest that any eelgrass has returned to the pond at this time. The Buzzards Bay Coalition (BBC) conducted discrete water quality monitoring in Westend Pond, Cuttyhunk Island, Gosnold (MA97-20) at one surface location in the middle of the pond (BBC_CI2), usually weekly (between the hours of 6 and 9am) in the summers of 2015-2019: The maximum temperature was 26°C (n=48), DO was frequently <6.0mg/L in 2016, 2017, and 2018 (minimum DO 3.5mg/L in August 2018), but above 6.0 and 6.5mg/L in 2015 and 2019, respectively (n=34). The BBC typically scheduled nutrient sampling efforts for ebb tides in July and August; chlorophyll *a* concentrations ranged from 2.44 to 25.87ug/L (n=19) and measured >10ug/L on three occasions, once in 2016 and twice in 2018. Total nitrogen data were limited (n=9) but the maximum was 1.57mg/L with seasonal average concentrations 0.34 to 1.00mg/L (highest in 2019). In addition, the Secchi disk depth was often fairly low (range 0.5-3.3m, n=20), with the yearly average ranging 1.0-1.4m from 2016 onwards. Ammonia-nitrogen concentrations were generally low (range 0.004 to 0.02mg/L, n=20), but TUs could not be calculated (lack of quality assured pH and salinity data availability). Water quality conditions in Westend Pond fluctuate depending on how much tidal exchange is occurring in the pond. Since there is extremely little development on this island and around the pond, the Aquatic Life Use of Westend Pond (MA97-20) is assessed as Fully Supporting despite loss of eelgrass bed habitat and sometimes poor water quality conditions since these conditions are considered to result from natural conditions. The prior Alert for loss of eelgrass beds is being removed.

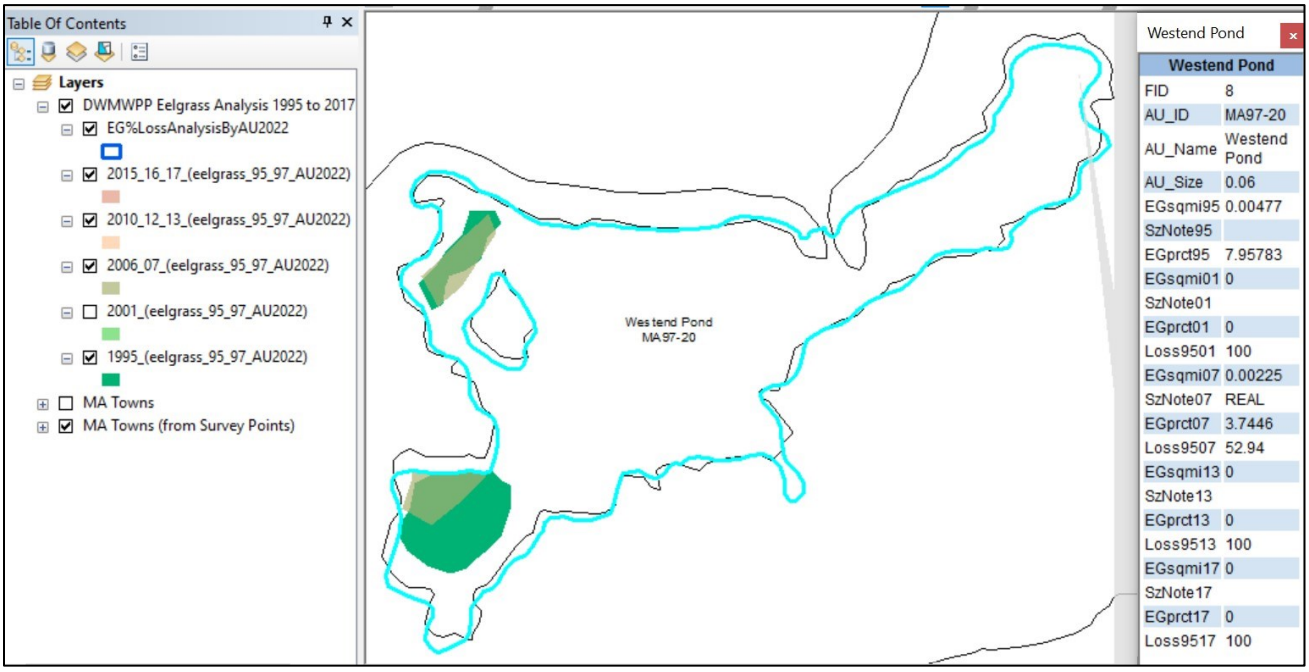
Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
BBC_CI2	Buzzards Bay Coalition	Water Quality	West End Pond	West End Pond, Gosnold	41.414058	-70.945328

Biological Monitoring Information

Primary Producers Data

Eelgrass analysis 1995-2017 for Westend Pond MA97-20 (MassGIS 2018, MassDEP Undated 4):



[Note 100% loss documented in 2001, but this is likely to correspond to a time when no mapping was done in this AU.]

The MassDEP Eelgrass Mapping Project documented a complete loss of eelgrass bed habitat in Westend Pond after 2013.

Physico-chemical Water Quality Information

DO, pH, Temperature

Buzzards Bay Coalition Estuarine Discrete Dissolved Oxygen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[DO was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Average Sample Depth (m)	DO Count	DO Min (mg/L)	DO Avg (mg/L)	% Meas. <6.0	% Meas. <5.0	% Meas. <4.0
BBC_CI2	06/11/15	09/23/15	0.2	9	6.0	7.4	0	0	0
BBC_CI2	06/16/16	09/10/16	0.2	6	4.5	6.4	17	17	0
BBC_CI2	06/30/17	08/25/17	0.2	5	4.0	6.2	20	20	0
BBC_CI2	06/11/18	08/21/18	0.2	7	3.5	5.5	57	43	14
BBC_CI2	06/25/19	09/15/19	0.2	7	6.5	7.4	0	0	0

Buzzards Bay Coalition Discrete Estuarine Temperature Data (2014-2018). (BBC 2021) (MassDEP Undated 2)
[Temperature was measured at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table. Summer Index is June 1 – Sept 15]

Station Code	Start Date	End Date	Average Sample Depth (m)	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count >29.4
BBC_CI2	06/11/15	09/23/15	0.2	12	10	26.0	21.4	0
BBC_CI2	06/16/16	09/10/16	0.2	10	10	25.5	21.8	0
BBC_CI2	07/04/17	08/25/17	0.2	8	8	23.0	21.5	0
BBC_CI2	06/11/18	08/21/18	0.2	9	9	25.1	21.0	0
BBC_CI2	06/25/19	09/15/19	0.2	11	11	24.5	22.8	0

Nutrients (Primary Producer Screening, Physico-chemical Screening)

Buzzards Bay Coalition Estuarine Nutrient Enrichment Indicator Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[Samples collected well below the surface are usually within 1.5m of the bottom. Summer seasonal total nitrogen data collected May-Sept]

Station Code	Data Year	Average Sample Depth (m)	Seasonal TN Count	Seasonal TN Min (mg/L)	Seasonal TN Max (mg/L)	Seasonal TN Avg (mg/L)	Chl-a Count	Chl-a Min (ug/L)	Chl-a Max (ug/L)	Chl-a Avg (ug/L)	Chl-a Count ≤5	Chl-a Count >10
BBC_CI2	2015	0.15	2	0.29	0.38	0.34	4	2.44	4.66	3.82	4	0
BBC_CI2	2016	0.15	--	--	--	--	4	2.95	25.87	9.45	2	1
BBC_CI2	2017	0.15	2	0.44	0.62	0.53	4	3.40	6.90	5.36	2	0
BBC_CI2	2018	0.15	3	0.57	0.65	0.60	4	3.43	14.28	8.75	1	2
BBC_CI2	2019	0.15	2	0.42	1.57	1.00	3	2.90	6.17	4.23	2	0

Buzzards Bay Coalition Secchi Disk Depth Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Secchi disk depth Count	Secchi disk depth Min (m)	Secchi disk depth Max (m)	Secchi disk depth Avg (m)
BBC_CI2	09/23/15	09/23/15	1	3.3	3.3	3.3
BBC_CI2	07/18/16	08/27/16	4	0.9	1.1	1.1
BBC_CI2	07/04/17	08/03/17	2	1.1	1.7	1.4
BBC_CI2	07/10/18	08/21/18	3	1.1	1.6	1.3
BBC_CI2	06/25/19	09/04/19	10	0.5	1.4	1.0

Toxics and other pollutants (metals, ammonia, chlorine)

Buzzards Bay Coalition Ammonia-Nitrogen Data (2014-2019). (BBC 2021) (MassDEP Undated 2)
[Samples were collected at a variety of depths originally categorized by BBC as "S" and "D". Average sample depths at "S" and "D" for each year are presented in this table.]

Station Code	Start Date	End Date	Average Sample Depth (m)	NH3 Count	NH3 Min (mg/L)	NH3 Max (mg/L)	NH3 Avg (mg/L)
BBC_CI2	07/13/15	08/25/15	0.2	4	0.010	0.015	0.013
BBC_CI2	07/05/16	08/15/16	0.2	4	0.004	0.017	0.008
BBC_CI2	07/06/17	08/17/17	0.2	4	0.009	0.046	0.025
BBC_CI2	07/10/18	08/21/18	0.2	4	0.005	0.082	0.025

Station Code	Start Date	End Date	Average Sample Depth (m)	NH3 Count	NH3 Min (mg/L)	NH3 Max (mg/L)	NH3 Avg (mg/L)
BBC_CI2	07/11/19	08/15/19	0.2	4	0.016	0.123	0.049

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Westend Pond (MA97-20); therefore, the Fish Consumption Use is Not Assessed.	

Shellfish Harvesting

2022 Use Attainment	Alert
Insufficient Information	YES
2022 Use Attainment Summary	
Westend Pond (MA97-20): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0548 sq mi (94%). The approved shellfish growing area represents 0.0437 sq mi (75%). The prohibited shellfish growing area represents 0.0111 sq mi (19%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and prohibited. Alert due to prohibited area >= 0.0001 sq mi.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
E10.0	West End Pond	Approved	0.04354	74.7%
E10.2	Little Pond and Fresh Pond	Prohibited	0.01110	19.1%
E4.0	Gosnold West Coastal	Approved	0.00014	0.2%

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Westend Pond (MA97-20), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Primary Contact Recreation Use for Westend Pond (MA97-20), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

Summary
Westend Pond (MA97-20): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0548 sq mi (94%). The approved shellfish growing area represents 0.0437 sq mi (75%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Secondary Contact Recreation Use for Westend Pond (MA97-20), so it is Not Assessed.	

Shellfish Growing Area Classifications

MassDEP Summary Statement for MassDFG Shellfish Growing Area Classification Data (Bettencourt August 25, 2021) (MassDEP Undated 5)

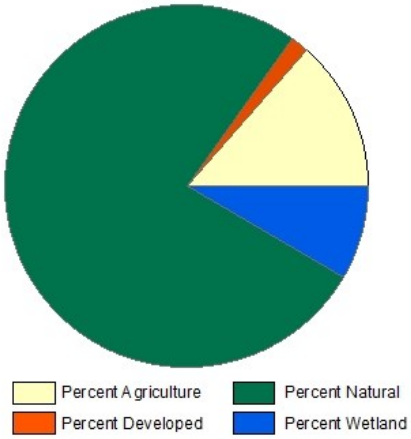
Summary
Westend Pond (MA97-20): The total of all shellfish growing area classifications (Bettencourt August 25, 2021) within this AU is 0.0548 sq mi (94%). The approved shellfish growing area represents 0.0437 sq mi (75%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2022 using the shellfish classification data.

Witch Brook (MA97-36)

Location:	Perennial portion south of South Gate Road, West Tisbury to mouth at Crocker Pond inlet, West Tisbury.
AU Type:	RIVER
AU Size:	0.5 MILES
Classification/Qualifier:	B

Witch Brook - MA97-36

Watershed Area: 0.59 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	0.59	0.59	0.15	0.15
Agriculture	13.5%	13.5%	19.4%	19.4%
Developed	1.6%	1.6%	1.3%	1.3%
Natural	76.4%	76.4%	60.3%	60.3%
Wetland	8.4%	8.4%	19.1%	19.1%
Impervious Cover	1.4%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	5	Temperature		Added

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Temperature	Agriculture (N)	X				

Recommendations

2022 Recommendations
ALU: Encourage improved riparian habitat protection near Witch Brook to increase shading.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO

2022 Use Attainment Summary

MassDEP staff conducted temperature monitoring in Witch Brook (MA97-36), at North Road, West Tisbury (W2818) as part of the "Short Term Temperature Network Project" during the summer of 2018. The maximum temperature recorded by the thermistor deployed between June 1 to September 15 was 22.2°C and the 7DADM exceeded 20°C 20 times although the maximum 24hr rolling average was only 20.8°C. It should be noted that this stream is identified by DFG as a CFR and the Aquatic Life Use for Witch Brook was previously assessed as Fully Supporting based on MA DFG sampling in September 2012, which documented a fish community comprised primarily of fluvial specialists including the presence of multiple age classes of Eastern brook trout (MassDEP Undated 6, MassDEP Undated 1).
The Aquatic Life Use for Witch Brook (MA97-36) is assessed as Not Supporting since temperatures exceeded Existing Use Tier 1 Cold Water thresholds (7DADM >20°C more than 11 times) during the summer of 2018 so a Temperature impairment is being added. Agricultural land use in this tiny watershed increases from 13.5% in the whole watershed to 19.4% in the proximal stream buffer, so the elevated temperatures are not considered a result of natural conditions (the fields are in close proximity to the brook so an increase in the width of the riparian buffer zone should be beneficial to improving thermal regime in the brook).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2818	MassDEP	Water Quality	Witch Brook	[North Road, West Tisbury]	41.403446	-70.685715

Physico-chemical Water Quality Information

DO, pH, Temperature

MassDEP Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 3)

[Summer Index is June 1 – Sept 15; Max Daily Mean= Maximum 24-Hour Average, 7DADM= 7-Day Average of the Daily Maxima, 7DADA= 7-Day Average of the Daily Average, CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Index Count	7day Count	Max Daily Mean (°C)	Max Temp (°C)	Max 7DADM (°C)	Max 7DADA (°C)	Count CWTier1 7DADM >20	Count CWTier1 Daily Mean >23.5	Count CWTier2 7DADA >21	Count CWTier2 Daily Mean >24.1	Count WW 7DADM >27.7	Count WW Daily Mean >28.3
W2818	06/01/18	09/15/18	107	107	20.6	22.2	21.4	19.9	20	0	0	0	0	0

24-hour Rolling Average Calculations for MassDEP Short- and Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 3)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Count Days Deployed	24hr Rolling Count	Max 24hr Avg Rolling Temp (°C)	Count CWTier1 24hr Avg Rolling >23.5 °C	Count CWTier2 24hr Avg Rolling >24.1 °C	Count WW 24hr Avg Rolling >28.3°C
W2818	06/01/18	09/15/18	107	5136	20.8	0	0	0

MassDEP Discrete Temperature Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 3)
[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater]

Station Code	Start Date	End Date	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count CW >20	Count CW >22	Count WW >28.3	Count WW >30.3
W2818	06/17/18	10/28/18	3	2	19.0	14.8	0	0	0	0

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics monitoring has been conducted in Witch Brook (MA97-36); therefore, the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetic Use for Witch Brook (MA97-36), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreation Use for Witch Brook (MA97-36), so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreation Use for Witch Brook (MA97-36), so it is Not Assessed.	

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