

Appendix B

INVESTIGATION AND ANALYSIS REPORT

Appendix B. Investigation and Analysis Report

This section presents information that supports the formulation, evaluation and conclusions of the watershed plan. Items of a routine nature are not included; however citations are included throughout the Watershed Plan and Areawide Environmental Impact Statement text for appropriate manuals, handbooks, research and other references. Supporting data developed for this study are on file at the Natural Resources Conservation Service State Office in Amherst, Massachusetts.

The Project began as a single purpose project to address improving water quality for shellfish beds because of the high demand for NRCS technical assistance. It was expanded to include restoration of degraded salt marshes and restoring anadromous fish runs after scoping meetings identified these objectives as important to project sponsors and residents.

The Natural Resources Conservation Service (NRCS) staff worked with other federal, state, and local agencies, individual watershed residents, private professional services consultants, and the Project Sponsors throughout the planning process. Interdisciplinary teams were utilized in the assessment and evaluation of present, Future Without-Project, and Future With-Project conditions.

This coordinated planning effort produced a forecasted Without-Project condition that permitted the consideration of several alternatives. Consideration of these alternatives led to the selection of a cost-effective alternative that was socially, politically, and economically acceptable.

Several state and local planning and implementation programs have demonstrated that degraded salt marshes and anadromous fish runs can be restored, and that stormwater remediation measures can improve water quality for shellfish beds. The Massachusetts Office of Coastal Zone Management's Coastal Pollution Remediation Program, EPA's Section 319 grants, Massachusetts Division of Marine Fisheries, the Town of Chatham and USDA's Wildlife Habitat Incentives Program and Wetland Restoration Program are some examples. Over 435 individual project sites were evaluated to select the 76 priority sites.

Field visits were made to each priority site to re-affirm need and basic feasibility, develop a preliminary cost estimate, sponsor interest, and that the proposed practice should produce the estimated habitat benefits. The Massachusetts Division of Marine Fisheries provided the analysis for the anadromous fish runs and the shellfish beds. The Massachusetts Office of Coastal Zone Management's Wetland Restoration Program assisted in the analysis for salt marsh restoration.

Chapters 4 (Watershed Problems and Opportunities) and Chapter 6 (Formulation and comparison of alternatives) provide more detail for the Project investigations and analyses. They are presented in the text of the plan to aid a reader who is not familiar with the watershed to understand the problems, opportunities and rationale for the Project. Tables summarizing the site ranking and screening process follow (Tables B-1 – B-4).

Table B-1. Cape Cod Water Resources Restoration Project - Marsh Rankings by Ecological Factors

Site Number ^(a)	Ecological Ranking Score Total	Size of upstream affected area (salt marsh acres/ total affected acres)	Score	Is the upstream affected area contiguous to protected open space (ownership)?	Score	Does this tidal channel support a shellfish resource area?	Score	Is the channel or system part of an anadromous fish pathway?	Score	Does the affected area include Priority Habitat of Rare Species (PH) or Estimated Habitat of Rare Wildlife (WH)?	Score	Local Interest	Others Addressing Site
BN-SM-09	14	83.2	11	yes	1	yes	1	yes	1	no	0		No
BN-SM-10	14	84.2	11	yes	1	yes	1	yes	1	no	0		No
BN-SM-14	14	70	11	yes	1	no	0	yes	1	yes	1		No
BN-SM-33	14	46.3	11	yes	1	no	0	yes	1	yes	1	H	No
HA-SM-1	14	205.62 / 420.27	10	YES (municipal)	1	YES	1	YES	1	YES (PH, WH)	1	H	Done
HA-SM-2	14	192.28 / 406.93	10	YES (municipal)	1	YES[1]	1	YES	1	YES (PH, WH)	1	H	No
SA-SM-10	14	211.80 / 258.76	10	YES	1	YES	1	YES	1	YES (PH)	1	H	No
WE-SM-6	14	0.81 / approx. 1000 acres[2]	10	YES (municipal, state, federal)	1	YES	1	YES	1	YES (PH, WH)	1	H	No
BA-SM-13	13	56.26 / 81.33	10	YES (municipal; BA Land Trust)	1	YES	1	YES	1	NO	0	L	No
BR-SM-5	13	12.25 / 31.56	10	NO	0	YES	1	YES	1	YES (PH, WH)	1	H	No
BR-SM-6	13	12.25 / 31.56	10	NO	0	YES	1	YES	1	YES (PH, WH)	1	H	No
DE-SM-11	13	85.44 / 112.36	10	YES (municipal)	1	YES	1	YES	1	NO	0	L	No
DE-SM-12	13	46.62 / 72.71	10	YES (municipal)	1	YES	1	YES	1	NO	0	L	No
FA-SM-3	13	34.17 / 35.78	10	YES (municipal)	1	YES	1	YES	1	NO	0	No	Yes
TR-SM-3	13	0.0 / 152.38	10	YES (federal)	1	YES	1	YES*	1	NO	0	H	No
TR-SM-4	13	0.0 / 152.38	10	YES (federal)	1	YES	1	YES*	1	NO	0	No	No
TR-SM-6	13	0.0 / 322.05	10	YES (federal)	1	NO	0	YES	1	YES (PH, WH)	1	H	Yes

(a) shaded cells indicate selected priority sites

Table B-1. Cape Cod Water Resources Restoration Project - Marsh Rankings by Ecological Factors

Site Number ^(a)	Ecological Ranking Score Total	Size of upstream affected area (salt marsh acres/ total affected acres)	Score	Is the upstream affected area contiguous to protected open space (ownership)?	Score	Does this tidal channel support a shellfish resource area?	Score	Is the channel or system part of an anadromous fish pathway?	Score	Does the affected area include Priority Habitat of Rare Species (PH) or Estimated Habitat of Rare Wildlife (WH)?	Score	Local Interest	Others Addressing Site
TR-SM-7	13	0.0 / 322.05	10	YES (federal)	1	NO	0	YES	1	YES (PH, WH)	1	H	Yes
YA-SM-11/ DE-SM-13	13	19.54 / 31.71	10	YES[3] (municipal)	1	YES	1	YES	1	NO	0	H	No
YA-SM-11/ DE-SM-13	13	19.54 / 31.71	10	YES[1] (municipal)	1	YES	1	YES	1	NO	0	H	No
YA-SM-9	13	21.11 / 35.18	10	YES (municipal)	1	YES	1	YES	1	NO	0	H	Yes
BA-SM-5	12	32.82 / 38.21	10	YES (BA Land Trust)	1	YES	1	NO	0	NO	0	Done	Done
CH-SM--6	12	0.0 / 34.58	10	YES (private)	1	NO	0	YES	1	NO	0	H	No
FA-SM-7	12	53.78 / 55.27	10	YES (municipal)	1	YES	1	NO	0	NO	0	No	Yes
MA-SM-6/ BA-SM-9	12	11.07 / 29.77	10	No	0	YES	1	YES	1	NO	0	Done	Done
MA-SM-6/ BA-SM-9	12	11.07 / 29.77	10	NO	0	YES	1	YES	1	NO	0	Done	Done
SA-SM-12	12	17.89 / 33.89**	10	NO	0	YES	1	NO	0	YES (PH)	1	H	done
SA-SM-13 / BA-SM-1	12	17.89 / 33.89**	10	NO	0	YES	1	NO	0	YES (PH)	1	H	Yes
SA-SM-13/ BA-SM-1	12	17.89 / 33.89	10	NO	0	YES	1	NO	0	YES (PH)	1	L	No
DE-SM--5	11	10.99 / 42.16	10	NO	0	YES	1	NO	0	NO	0	H	No
EA-SM-1	11	9.71 / 11.56	7	YES (municipal)	1	YES	1	YES	1	YES (PH,WH)	1	H	No
SA-SM-9	11	0.0 / 79.71	10	NO	0	YES	1	NO	0	NO	0	H	No
BA-SM-12	10	0.0 / 10.06	7	NO	0	YES	1	YES	1	YES (PH & WH)	1	H	No

(a) shaded cells indicate selected priority sites

Table B-1. Cape Cod Water Resources Restoration Project - Marsh Rankings by Ecological Factors

Site Number ^(a)	Ecological Ranking Score Total	Size of upstream affected area (salt marsh acres/ total affected acres)	Score	Is the upstream affected area contiguous to protected open space (ownership)?	Score	Does this tidal channel support a shellfish resource area?	Score	Is the channel or system part of an anadromous fish pathway?	Score	Does the affected area include Priority Habitat of Rare Species (PH) or Estimated Habitat of Rare Wildlife (WH)?	Score	Local Interest	Others Addressing Site
EA-SM--9	10	6.31 / 16.51	7	YES (private)	1	YES	1	NO	0	YES (PH,WH)	1	M	No
HA-SM-9/ CH-SM-7	10	2.73 / 18.07	7	YES (municipal)	1	YES	1	YES	1	NO	0	H	No
HA-SM-9/ CH-SM-7	10	2.73 / 18.07	7	YES (municipal)	1	YES	1	YES[4]	1	NO	0	H	No
SA-SM-1	10	13.48 / 24.96	7	YES (municipal)	1	NO	0	YES	1	YES (PH)	1	H	Yes
SA-SM-2	10	12.31 / 23.25	7	YES (municipal)	1	NO	0	YES	1	YES (PH)	1	H	Yes
WE-SM-3	10	4.16 / 17.33	7	YES (federal, private)	1	YES	1	NO	0	YES (PH, WH)	1	H	No
BA-SM-18	9	12.11 / 12.11	7	YES	1	YES	1	NO	0	NO	0	H	No
BN-SM-15	9	8	6	yes	1	yes	1	no	0	yes	1		No
BN-SM-43	9	10.3	8	yes	1	no	0	no	0	no	0	H	No
BR-SM-4	9	8.39 / 21.29	7	YES (municipal)	1	NO	0	YES	1	NO	0	H	Yes
EA-SM-4	9	0.0 / 10.18	7	NO	0	YES	1	NO	0	YES (PH)	1		Yes
FA-SM-6	9	18.10 / 19.59	7	NO	0	YES	1	YES[1]	1	NO	0	No	Yes
FA-SM-8	9	1.66 / 6.46	5	YES (municipal)	1	YES	1	YES	1	YES (PH)	1	No	Yes
HA-SM-4	9	0.0 / 13.84	7	NO	0	YES	1	NO[3]	0	YES (PH, WH)	1	H	No
TR-SM-1	9	0.0 / 16.19	7	YES (federal)	1	YES	1	NO	0	NO	0	M	No
TR-SM-2	9	0.0 / 13.13	7	NO	0	YES	1	NO	0	YES (PH)	1	M	No
WE-SM-5	9	0.0 / 19.33	7	YES (municipal, private)	1	YES	1	NO	0	NO	0	H	No
BA-SM-19	8	0.0 / 20.19	7	NO	0	YES	1	NO	0	NO	0	H	No
BA-SM-4	8	8.54 / 9.43	5	NO	0	YES	1	YES	1	YES (PH & WH)	1	L	No

(a) shaded cells indicate selected priority sites

Table B-1. Cape Cod Water Resources Restoration Project - Marsh Rankings by Ecological Factors

Site Number ^(a)	Ecological Ranking Score Total	Size of upstream affected area (salt marsh acres/ total affected acres)	Score	Is the upstream affected area contiguous to protected open space (ownership)?	Score	Does this tidal channel support a shellfish resource area?	Score	Is the channel or system part of an anadromous fish pathway?	Score	Does the affected area include Priority Habitat of Rare Species (PH) or Estimated Habitat of Rare Wildlife (WH)?	Score	Local Interest	Others Addressing Site
BA-SM-8/ YA-SM-1	8	15.10 / 19.20	7	NO	0	YES	1	NO	0	NO	0	H	No
BA-SM-8/ YA-SM-1	8	15.10 / 19.20	7	NO	0	YES	1	NO	0	NO	0	L	No
BN-SM-38	8	8.2	6	yes	1	no	0	yes	1	no	0	H	No
EA-SM-2	8	0.72 / 6.87	5	NO	0	YES	1	YES	1	YES (PH,WH)	1	H	No
EA-SM-7	8	1.71 / 6.93	5	YES (federal, state)	1	YES	1	NO	0	YES (PH,WH)	1	M	No
FA-SM-1	8	0.99 / 9.57	5	YES (municipal, private)	1	YES	1	YES	1	NO	0	H	Yes
BN-SM-24	7	5.5	6	yes	1	no	0	no	0	no	0	M	No
DE-SM-7	7	5.85 / 5.58	5	YES (municipal)	1	NO	0	NO	0	YES (PH)	1	L	Done
HA-SM-6	7	8.87 / 9.77	5	YES (municipal)	1	NO	0	YES	1	NO	0	No	No
HA-SM-7	7	5.54 / 5.54	5	YES (municipal)	1	NO	0	YES	1	NO	0	No	No
OR-SM-3	7	0.0 / 7.69	5	NO	0	YES	1	NO	0	YES (PH, WH)	1	H	Yes
WE-SM-4	7	0.0 / 6.69	5	NO	0	YES	1	NO	0	YES (PH, WH)	1	H	No
BA-SM-6	6	0.0 / 5.39	5	YES (BA land Trust)	1	NO	0	NO	0	NO	0	H	No
BN-SM-12	6	1.7	4	yes	1	no	0	no	0	yes	1		No
BN-SM-13	6	0.9	4	yes	1	no	0	yes	1	no	0		No
BN-SM-28	6	1	4	yes	1	no	0	no	0	yes	1	H	No
BN-SM-32	6	8.1	6	no	0	no	0	no	0	no	0	H	No
CH-SM-4	6	4.77 / 5.51	5	NO	0	YES	1	NO	0	NO	0	H	No
DE-SM-8	6	5.85 / 5.85	5	NO	0	NO	0	NO	0	YES (PH)	1	L	Done
DE-SM-9	6	5.85 / 5.58	5	NO	0	NO	0	NO	0	YES (PH)	1	L	Done

(a) shaded cells indicate selected priority sites

Table B-1. Cape Cod Water Resources Restoration Project - Marsh Rankings by Ecological Factors

Site Number ^(a)	Ecological Ranking Score Total	Size of upstream affected area (salt marsh acres/ total affected acres)	Score	Is the upstream affected area contiguous to protected open space (ownership)?	Score	Does this tidal channel support a shellfish resource area?	Score	Is the channel or system part of an anadromous fish pathway?	Score	Does the affected area include Priority Habitat of Rare Species (PH) or Estimated Habitat of Rare Wildlife (WH)?	Score	Local Interest	Others Addressing Site
EA-SM-5	6	1.13 / 1.13	3	YES (municipal)	1	YES	1	NO	0	YES (PH,WH)	1	M	No
HA-SM-8/ CH-SM-1	6	3.0 / 3.0	3	YES (private)	1	YES	1	YES	1	NO	0	L	No
HA-SM-8/ CH-SM-1	6	3.0 / 3.0	3	YES (private)	1	YES	1	YES	1	NO	0	L	No
MA-SM-1	6	0.0 / 0.73	3	Yes (Municipal, State)	1	YES	1	NO	0	YES (PH, WH)	1	L	No
PR-SM-1	6	5.22 / 5.22	5	YES (federal)	1	NO	0	NO	0	YES (PH, WH)	1	H	No
SA-SM-4	6	3.81 / 5.88	5	NO	0	NO	0	YES	1	NO	0	H	done
WE-SM-1	6	0.0 / 3.94	3	YES (federal, private)	1	YES	1	NO	0	YES (PH, WH)	1	L	No
YA-SM-5	6	1.06 / 1.06	3	YES (municipal)	1	YES	1	NO	0	YES (PH)	1	H	No
BA-SM-14	5	0.0 / 3.25	3	NO	0	YES	1	YES	1	NO	0	H	No
BA-SM-15	5	2.52 / 5.56	5	NO	0	NO	0	NO	0	NO	0		No
BN-SM-02	5	2.5	4	no	0	yes	1	no	0	no	0	M	No
BN-SM-06	5	4.9	4	yes	1	no	0	no	0	no	0	H	No
BN-SM-11	5	3.4	4	no	0	no	0	no	0	yes	1		No
BN-SM-16	5	3.7	4	no	0	yes	1	no	0	no	0	H	No
BN-SM-17	5	0.4	4	yes	1	no	0	no	0	no	0	M	No
BN-SM-21	5	0.3	4	yes	1	no	0	no	0	no	0	H	No
BN-SM-26	5	1.4	4	no	0	no	0	no	0	yes	1		No
BN-SM-34	5	0.8	4	yes	1	no	0	no	0	no	0		No
BN-SM-35	5	0.8	4	yes	1	no	0	no	0	no	0		No
BN-SM-39	5	4	4	no	0	no	0	no	0	yes	1	H	No
BN-SM-40	5	1.6	4	no	0	no	0	no	0	yes	1	H	No
BN-SM-44	5	0.5	4	yes	1	no	0	no	0	no	0		No

(a) shaded cells indicate selected priority sites

Table B-1. Cape Cod Water Resources Restoration Project - Marsh Rankings by Ecological Factors

Site Number ^(a)	Ecological Ranking Score Total	Size of upstream affected area (salt marsh acres/ total affected acres)	Score	Is the upstream affected area contiguous to protected open space (ownership)?	Score	Does this tidal channel support a shellfish resource area?	Score	Is the channel or system part of an anadromous fish pathway?	Score	Does the affected area include Priority Habitat of Rare Species (PH) or Estimated Habitat of Rare Wildlife (WH)?	Score	Local Interest	Others Addressing Site
CH-SM-5	5	4.32 / 4.87	3	YES (municipal, private)	1	YES	1	NO	0	NO	0	H	No
DE-SM-10	5	5.47 / 5.47	5	NO	0	NO	0	NO	0	NO	0	L	No
FA-SM-2	5	0.75 / 1.64	3	NO	0	YES	1	NO	0	NO	1	M	No
OR-SM-2	5	0.0 / 0.96	3	NO	0	YES	1	NO	0	YES (PH, WH)	1	L	No
SA-SM--6	5	5.50 / 6.97	5	NO	0	NO	0	NO	0	NO	0	H	No
SA-SM-7	5	4.21 / 5.86	5	NO	0	NO	0	NO	0	NO	0	L	No
YA-SM-2	5	2.55 / 6.08	5	NO	0	NO	0	NO	0	NO	0	M	No
BN-SM-07	4	1.7	4	no	0	no	0	no	0	no	0	H	No
BN-SM-08	4	1.3	4	no	0	no	0	no	0	no	0	H	No
BN-SM-25	4	0.7	4	no	0	no	0	no	0	no	0		No
BN-SM-27	4	0.9	4	no	0	no	0	no	0	no	0	M	No
BN-SM-29	4	4.6	4	no	0	no	0	no	0	no	0		No
BN-SM-30	4	4.6	4	no	0	no	0	no	0	no	0	M	No
BN-SM-36	4	0.6	4	no	0	no	0	no	0	no	0		No
BN-SM-37	4	0.6	4	no	0	no	0	no	0	no	0		No
BR-SM-2	4	0.83 / 4.94	3	NO	0	NO	0	NO	0	YES (PH)	1	H	Yes
BR-SM-3	4	0.0 / 3.75	3	NO	0	NO	0	NO	0	YES (PH)	1	H	No
CH-SM-2	4	0.0 / 3.24	3	NO	0	YES	1	NO	0	NO	0	No	No
DE-SM-3	4	3.14 / 4.11	3	NO	0	YES	1	NO	0	NO	0	L	Done
DE-SM-4	4	0.0 / 3.56	3	YES (municipal)	1	NO	0	NO[2]	0	NO	0	L	Done
DE-SM-6	4	1.67 / 3.72	3	NO	0	YES	1	NO	0	NO	0	H	No
EA-SM-8	4	1.71 / 4.51	3	NO	0	YES	1	NO	0	NO	0	H	No
FA-SM-5	4	0.99 / 0.99	3	NO	0	YES	1	NO	0	NO	0	M	No
HA-SM-3	4	Unable to determine	0	YES (municipal)	1	YES	1	YES	1	YES (PH, WH)	1	L	No

(a) shaded cells indicate selected priority sites

Table B-1. Cape Cod Water Resources Restoration Project - Marsh Rankings by Ecological Factors

Site Number ^(a)	Ecological Ranking Score Total	Size of upstream affected area (salt marsh acres/ total affected acres)	Score	Is the upstream affected area contiguous to protected open space (ownership)?	Score	Does this tidal channel support a shellfish resource area?	Score	Is the channel or system part of an anadromous fish pathway?	Score	Does the affected area include Priority Habitat of Rare Species (PH) or Estimated Habitat of Rare Wildlife (WH)?	Score	Local Interest	Others Addressing Site
MA-SM-3	4	2.26 / 4.38	3	YES (Municipal, State)	1	NO	0	NO	0	NO	0	H	No
SA-SM-11	4	1.37 / 2.43	3	NO	0	YES	1	NO	0	NO	0	H	No
SA-SM-5	4	0.0 / 2.07	3	NO	0	NO	0	YES	1	NO	0	H	No
TR-SM-5	4	1.55 / 1.55	3	NO	0	YES	1	NO	0	NO	0	No	No
WE-SM-2	4	0.55 / 0.55	3	NO	0	YES	1	NO	0	NO	0	L	No
YA-SM-3	4	2.90 / 3.92	3	NO	0	YES	1	NO	0	NO	0	H	No
YA-SM-6	4	1.38 / 1.38	3	YES (private)	1	NO	0	NO	0	NO	0	H	Yes
YA-SM-7	4	2.49 / 4.37	3	YES (municipal)	1	NO	0	NO	0	NO	0	H	Yes
BA-SM-11	3	1.95 / 2.26	3	NO	0	NO	0	NO	0	NO	0	H	No
BA-SM-16	3	0.0 / 3.04	3	NO	0	NO	0	NO	0	NO	0	L	No
FA-SM-4	3	0.60 / 0.60	3	NO	0	NO	0	NO	0	NO	0	L	No
HA-SM-5	3	0.0 / 1.85	3	NO	0	NO	0	NO	0	NO	0	No	No
OR-SM-7	3	1.99 / 3.74	3	NO	0	NO	0	NO	0	NO	0	H	No
SA-SM-3	3	0.0 / 0.20	3	NO	0	NO	0	NO	0	NO	0	H	No
YA-SM-8	3	0.0 / 1.06	3	NO	0	NO	0	NO	0	NO	0	NO	No
CH-SM-3	2	Unable to determine	0	YES (private)	1	YES	1	NO	0	NO	0	No	No
BN-SM-03	1	na	0	no	0	no	0	no	0	yes	1		No
BN-SM-04	1	na	0	no	0	no	0	no	0	yes	1		No
MA-SM-2	1	Unable to determined	0	NO	0	YES	1	NO	0	NO	0	L	No
BN-SM-01	0	0	0	no	0	no	0	no	0	no	0		No

(a) shaded cells indicate selected priority sites

Table B-2. Cape Cod Water Resources Restoration Project - Ranking of Fish Passages

Site Number ^(a)	Town	River	Obst. Name	Total	Obst. #	Acreage	Existing Pop.	Stream Flow	Public Access	Water Quality Issues	Conflicting Water Usage
BR-FP-SB-3	Brewster	Stoney Brook	Connecting Stream	34	-6	12	15	0	5	0	0
	Brewster	Stoney Brook	Elevation Change	29	-6	12	15	0	5	0	0
	Brewster	Stoney Brook	Mill Pond Dam	29	-6	12	15	0	5	0	0
BO-FP-MR-2	Bourne	Monument R.	Benoits Pond Dam	28	-12	12	15	0	5	0	0
BO-FP-MR-3	Bourne	Monument R.	Beals Pond Dam	28	-12	12	15	0	5	0	0
WE-FP-HR-1	Wellfleet	Herring River	Tide Gate	27	-3	12	10	-2	3	0	0
BA-FP-SanR-1	Barnstable	Santuit River	Rt. 130 Bog Sluice	26	-6	12	12	0	0	0	-4
HA-FP-HR-3	Harwich	Herring River	Long Pond Outlet	25	-9	12	12	-2	5	0	-1
	Mashpee	Mashpee River	First Bog Sluice	25	-9	12	15	-1	5	0	0
	Mashpee	Mashpee River	Rt. 130 Dam	25	-9	12	15	-1	5	0	0
	Mashpee	Mashpee River	Mashpee Pond outlet	25	-9	12	15	-1	5	0	0
	Falmouth	Oyster Pond	Oyster Pond Control	24	-3	9	8	0	5	0	0
	Falmouth	Coonamesset R.	Pond 14 Dam	24	-9	12	12	0	5	0	0
	Bourne	Monument R.	Gr. Herring Pd. Outlet	23	-12	12	15	0	5	0	0
DE-FP-SC-1	Dennis	Sesuit Creek	Scargo Lake Outlet	22	-3	9	6	-2	5	0	0
	Falmouth	Coonamesset R.	Bog Flume	22	-9	12	12	-2	5	0	0
	Falmouth	Coonamesset R.	Coonamessett Pond	22	-9	12	12	-2	5	0	0
	Sandwich	Mill Creek	Upper Shawme Dam	21	-6	6	5	0	5	-1	0
YA-FP-WB-1	Yarmouth	Whites Brook	Matthews Pond Outlet	21	-3	6	8	0	5	0	0
BA-FP-MMR-2	Barnstable	Marston Mills R.	Mill Pond Dam	21	-12	12	12	-5	5	0	0
EA-FP-HR-1	Eastham	Herring River	Herring Pond Control	20	-3	6	6	-1	5	0	0
	Bourne	Monument River	Canal Culvert	20	-12	12	15	0	5	0	0
	Dennis	Weir Creek	None	20	0	6	8	0	5	0	0
	Harwich	Herring River	West Reservoir Dam	20	-9	12	12	-2	5	0	-1
	Harwich	Herring River	Hinckleys Pond Dam	20	-9	12	12	-2	5	0	-1
	Eastham	Herring Brook	Outlet Control	20	-3	12	8	-1	2	0	0
MA-FP-SR-2	Mashpee	Santuit River	Santuit Pond Dam	19	-6	12	12	0	0	0	-4
FA-FP-ChR-2	Falmouth	Childs River	Johns Pond Outlet	18	-6	12	3	-2	0	0	0
BO-FP-RB-1	Bourne	Red Brook	Railroad Culvert	18	-6	3	8	0	3	0	0
FA-FP-CL-1	Falmouth	Cedar Lake Ditch	Bay Road Culvert	18	-6	6	5	0	2	0	0
BO-FP-RB-2	Bourne	Red Brook	Red Brook Pond Dam	16	-6	3	8	0	3	0	0
MA-FP-QR-7	Mashpee	Quashnet River	Johns Pond Outlet	16	-12	12	12	-2	5	0	-5
	Barnstable	Marston Mills R.	Elevation Change	16	-12	12	12	-5	5	0	0
	Barnstable	Marston Mills R.	Bog Sluice	16	-12	12	12	-5	5	0	0
	Yarmouth	Mill Creek	Mill Pond Dam	15	-3	3	10	0	3	0	0
	Yarmouth	Town Brook	Culvert above Mill Pd	15	-3	3	10	0	3	0	0
	Barnstable	Little River	Lovells Pond Outlet	14	-6	9	0	-6	5	0	0
BA-FP-WL-1	Barnstable	Wequaquet Lake	Lake Control Structure	14	-3	12	10	-6	1	0	-3
	Falmouth	Childs River	Carriage Shop Dam	13	-6	12	3	0	1	0	0
	Yarmouth	Parkers River	Seine Pond Inlet	13	-12	9	10	0	3	0	0
	Yarmouth	Parkers River	Road Culvert	13	-12	9	10	0	3	0	0
	Yarmouth	Parkers River	Second Road Culvert	13	-12	9	10	0	3	0	0
	Yarmouth	Parkers River	Long Pond Control	13	-12	9	10	0	3	0	0
	Falmouth	Salt Pond	None	12	0	9	2	0	1	0	0
BA-FP-MMR-5	Barnstable	Marston Mills R.	Middle Pond Control	12	-12	12	12	-5	5	0	-2
OR-FP-PL-1	Orleans	Pilgrim Lake	Elevation Change	12	-6	6	5	0	5	0	0
	Truro	Pilgrim Lake	Pilgrim Lake Control	12	-6	6	5	0	5	0	0
	Mashpee	Quashnet River	Golf Course Bridge	11	-12	12	12	-2	5	0	-5

(a) shaded cells indicate selected priority sites; only priority sites have site numbers

Table B-2. Cape Cod Water Resources Restoration Project - Ranking of Fish Passages

Site Number ^(a)	Town	River	Obst. Name	Total	Construction Difficulty	Environmental Benefits	Existing Funding	Community Support	Need	Comments
BR-FP-SB-3	Brewster	Stoney Brook	Connecting Stream	34	0	0	0	3	5	Needs bank stabilization between headwater ponds
	Brewster	Stoney Brook	Elevation Change	29	0	0	0	3	0	Passage adequate
	Brewster	Stoney Brook	Mill Pond Dam	29	0	0	0	3	0	Passage adequate
BO-FP-MR-2	Bourne	Monument R.	Benoits Pond Dam	28	0	0	0	3	5	Repair hole below pool and reline swimming pool
BO-FP-MR-3	Bourne	Monument R.	Beals Pond Dam	28	0	0	0	3	5	Barrier dam in bypass channel needed
WE-FP-HR-1	Wellfleet	Herring River	Tide Gate	27	-5	2	0	0	10	Remove tide gate
BA-FP-SanR-1	Barnstable	Santuit River	Rt. 130 Bog Sluice	26	0	0	0	2	10	Install more efficient fishway
HA-FP-HR-3	Harwich	Herring River	Long Pond Outlet	25	0	0	0	3	5	Extend outlet structure into Long Pond
	Mashpee	Mashpee River	First Bog Sluice	25	0	1	0	2	0	Passable when adjusted properly
	Mashpee	Mashpee River	Rt. 130 Dam	25	0	0	0	2	0	Passable
	Mashpee	Mashpee River	Mashpee Pond outlet	25	0	1	0	2	0	Passable
	Falmouth	Oyster Pond	Oyster Pond Control	24	0	2	0	3	0	Passable
	Falmouth	Coonamesset R.	Pond 14 Dam	24	0	1	0	3	0	Passable
	Bourne	Monument R.	Gr. Herring Pd. Outlet	23	0	0	0	3	0	Passable when adjusted properly
DE-FP-SC-1	Dennis	Sesuit Creek	Scargo Lake Outlet	22	0	0	0	2	5	Replace road culverts
	Falmouth	Coonamesset R.	Bog Flume	22	0	1	0	3	0	Passable when adjusted properly
	Falmouth	Coonamesset R.	Coonamessett Pond	22	0	1	0	3	0	Passable
	Sandwich	Mill Creek	Upper Shawme Dam	21	-5	0	0	2	15	Repair dam and include new fishway
YA-FP-WB-1	Yarmouth	Whites Brook	Matthews Pond Outlet	21	0	0	0	0	5	Replace deteriorating ladder with permanent structure
BA-FP-MMR-2	Barnstable	Marston Mills R.	Mill Pond Dam	21	0	1	0	3	5	Replace deteriorating ladder
EA-FP-HR-1	Eastham	Herring River	Herring Pond Control	20	0	0	0	2	5	Needs outlet retention structure
	Bourne	Monument River	Canal Culvert	20	-3	0	0	3	0	Inefficient passage
	Dennis	Weir Creek	None	20	0	1	0	0	0	No action needed
	Harwich	Herring River	West Reservoir Dam	20	0	0	0	3	0	Passage adequate
	Harwich	Herring River	Hinckleys Pond Dam	20	0	0	0	3	0	Passage adequate
	Eastham	Herring Brook	Outlet Control	20	0	0	0	2	0	Passage adequate
MA-FP-SR-2	Mashpee	Santuit River	Santuit Pond Dam	19	-2	0	0	2	5	Repair dam and install permanent fishway
FA-FP-ChR-2	Falmouth	Childs River	Johns Pond Outlet	18	-5	0	0	1	15	Install outlet screen to prevent juvenile escapement
BO-FP-RB-1	Bourne	Red Brook	Railroad Culvert	18	-3	0	0	3	10	Install fishway
FA-FP-CL-1	Falmouth	Cedar Lake Ditch	Bay Road Culvert	18	0	0	0	1	10	Replace deteriorated fishway
BO-FP-RB-2	Bourne	Red Brook	Red Brook Pond Dam	16	0	0	0	3	5	Repair fishway
MA-FP-QR-7	Mashpee	Quashnet River	Johns Pond Outlet	16	0	1	0	0	5	Install outlet retention structure
	Barnstable	Marston Mills R.	Elevation Change	16	0	1	0	3	0	Passage adequate
	Barnstable	Marston Mills R.	Bog Sluice	16	0	1	0	3	0	Passage adequate
	Yarmouth	Mill Creek	Mill Pond Dam	15	0	0	0	2	0	Passage adequate
	Yarmouth	Town Brook	Culvert above Mill Pd	15	0	0	0	2	0	Passage adequate
	Barnstable	Little River	Lovells Pond Outlet	14	-3	0	0	0	15	Consider surface outlet for Little Pond
BA-FP-WL-1	Barnstable	Wequaquet Lake	Lake Control Structure	14	-2	0	0	0	5	Install outlet retention structures
	Falmouth	Childs River	Carriage Shop Dam	13	-3	1	0	0	5	Repair dam and fishway
	Yarmouth	Parkers River	Seine Pond Inlet	13	0	0	0	3	0	Passage adequate
	Yarmouth	Parkers River	Road Culvert	13	0	0	0	3	0	Passage adequate
	Yarmouth	Parkers River	Second Road Culvert	13	0	0	0	3	0	Passage adequate
	Yarmouth	Parkers River	Long Pond Control	13	0	0	0	3	0	Passage adequate
	Falmouth	Salt Pond	None	12	0	0	0	0	0	No action needed
BA-FP-MMR-5	Barnstable	Marston Mills R.	Middle Pond Control	12	-2	1	0	3	5	Install outlet retention structure
OR-FP-PL-1	Orleans	Pilgrim Lake	Elevation Change	12	0	0	0	2	5	Install outlet retention structure
	Truro	Pilgrim Lake	Pilgrim Lake Control	12	0	0	0	2	0	High salinities have reduced potential for development
	Mashpee	Quashnet River	Golf Course Bridge	11	0	1	0	0	0	Passable when properly adjusted

(a) shaded cells indicate selected priority sites; only priority sites have site numbers

Table B-2. Cape Cod Water Resources Restoration Project - Ranking of Fish Passages

Site Number ^(a)	Town	River	Obst. Name	Total	Obst. #	Acreage	Existing Pop.	Stream Flow	Public Access	Water Quality Issues	Conflicting Water Usage
	Mashpee	Quashnet River	First Bog Sluice	11	-12	12	12	-2	5	0	-5
	Mashpee	Quashnet River	Second Bog Sluice	11	-12	12	12	-2	5	0	-5
	Mashpee	Quashnet River	Third Bog Sluice	11	-12	12	12	-2	5	0	-5
	Sandwich	Mill Creek	Grist Mill Dam	11	-6	6	5	0	5	-1	0
BA-FP-LE-1	Barnstable	Red Lily Pond	Lake Elizabeth Dam	9	-3	3	2	0	1	0	0
	Falmouth	Flax Pond	John Parker Road	9	-6	6	2	0	1	0	0
CH-FP-LL-1	Chatham	Lovers Lake	Elevation Change	9	-12	9	5	0	0	0	0
CH-FP-LL-2	Chatham	Lovers Lake	Stillwater Pd Control	9	-12	9	5	0	0	0	0
CH-FP-LL-4	Chatham	Lovers Lake	Lovers Lake Control	9	-12	9	5	0	0	0	0
	Dennis	Swan Pond River	None	9	0	12	2	0	0	-5	0
	Falmouth	Cedar Lake Ditch	Elevation Change	8	-6	6	5	0	2	0	0
	Falmouth	Herring Brook	Herring Brook Dam	7	-3	6	5	-2	1	0	0
	Harwich	Skinequit Pond	Elevation Change	6	-3	3	5	0	0	0	0
	Dennis	Quivett Creek	Pond Outlet	5	-3	0	2	0	5	0	0
	Falmouth	Wild Harbor River	Dam Pond Culvert	4	-3	3	2	0	2	0	0
	Falmouth	Siders Pond	Shivericks Pond Dam	4	-3	3	2	0	2	0	0
CH-FP-LL-1A	Chatham	Lovers Lake	Lovers Lake Culvert	4	-12	9	5	0	0	0	0
	Falmouth	Flax Pond	Flax Pond Outlet	3	-6	6	2	0	0	0	0
	Dennis	Fresh Pond	Overgrown Channel	3	-3	6	0	0	0	0	0
	Barnstable	Mill Pond	Pond Outlet	0	-3	6	2	0	0	0	0
	Harwich	Andrews River	None	0	0	6	0	-6	0	0	0
	Truro	Pilgrim Lake	Outlet Pipe	0	-9	12	2	0	2	-3	0
	Truro	Pilgrim Lake	Tide Gate	0	-9	12	2	0	2	-3	0
	Truro	Pilgrim Lake	Lake Control Structure	0	-9	12	2	0	2	-3	0
	Barnstable	Rushy Marsh Pd.	Culvert	-1	-3	3	0	0	0	0	0
	Barnstable	Skunknett River	Road Culvert	-2	-3	3	0	0	0	0	0
	Barnstable	Skunknett River	Lumbert Pond Dam	-2	-3	3	0	0	0	0	0
	Barnstable	Stewarts Creek	Aunt Betty Pd Control	-2	-3	3	0	0	0	0	0
	Brewster	Cobbs Pond	Outlet Pipe	-3	-3	6	0	-1	0	0	0
	Barnstable	Little River	Road Culvert	-4	-3	9	0	-6	1	0	-2
	Falmouth	Mill Pd/Green Pd	Mill Pond Dam	-5	-3	3	0	0	0	0	0
	Barnstable	Halls Creek	Road Culvert	-5	-3	0	0	0	0	0	0
	Chatham	Muddy Creek	None	-5	0	0	0	0	0	-5	0
	Barnstable	Bumps River	Bumps River Rd Dam	-6	-6	0	0	0	0	0	0
	Truro	Pamet River	Tide Gate	-7	-3	0	1	0	0	0	0
	Eastham	Rock Harbor Crk	Road Culvert	-7	-6	3	2	-2	0	0	0
	Barnstable	Bumps River	Road Culvert	-8	-6	0	0	0	0	0	0
	Dennis	Bass River	Ms Thatchers Pd Dam	-8	-3	3	0	-5	0	0	0
	Bourne	Pocasset River	Lower Mill Pond Dam	-13	-12	3	0	-1	0	0	0
	Bourne	Pocasset River	Upper Mill Pond Dam	-13	-12	0	0	0	0	0	0
	Bourne	Pocasset River	County Road Dam	-16	-12	0	0	0	1	0	0

(a) shaded cells indicate selected priority sites; only priority sites have site numbers

Table B-2. Cape Cod Water Resources Restoration Project - Ranking of Fish Passages

Site Number ^(a)	Town	River	Obst. Name	Total	Construction Difficulty	Environmental Benefits	Existing Funding	Community Support	Need	Comments
	Mashpee	Quashnet River	First Bog Sluice	11	0	1	0	0	0	Passable when properly adjusted
	Mashpee	Quashnet River	Second Bog Sluice	11	0	1	0	0	0	Passable when adjusted properly
	Mashpee	Quashnet River	Third Bog Sluice	11	0	1	0	0	0	Passable when adjusted properly
	Sandwich	Mill Creek	Grist Mill Dam	11	0	0	0	2	0	Passage adequate
BA-FP-LE-1	Barnstable	Red Lily Pond	Lake Elizabeth Dam	9	0	0	0	1	5	Install more permanent fishway
	Falmouth	Flax Pond	John Parker Road	9	0	0	0	1	5	Install more permanent fishway
CH-FP-LL-1	Chatham	Lovers Lake	Elevation Change	9	0	0	0	2	5	Road culvert collapsing
CH-FP-LL-2	Chatham	Lovers Lake	Stillwater Pd Control	9	0	0	0	2	5	Replace with more efficient fishway
CH-FP-LL-4	Chatham	Lovers Lake	Lovers Lake Control	9	0	0	0	2	5	Replace with more efficient fishway
	Dennis	Swan Pond River	None	9	0	0	0	0	0	Passage adequate
	Falmouth	Cedar Lake Ditch	Elevation Change	8	0	0	0	1	0	Passage adequate
	Falmouth	Herring Brook	Herring Brook Dam	7	0	0	0	0	0	Passage adequate
	Harwich	Skinequit Pond	Elevation Change	6	0	0	0	1	0	Passage adequate
	Dennis	Quivett Creek	Pond Outlet	5	0	0	0	1	0	Passage adequate
	Falmouth	Wild Harbor River	Dam Pond Culvert	4	0	0	0	0	0	Passage adequate
	Falmouth	Siders Pond	Shivericks Pond Dam	4	0	0	0	0	0	Little opportunity for improvement
CH-FP-LL-1A	Chatham	Lovers Lake	Lovers Lake Culvert	4	0	0	0	2	0	Passage adequate
	Falmouth	Flax Pond	Flax Pond Outlet	3	0	0	0	1	0	Passable with new structure
	Dennis	Fresh Pond	Overgrown Channel	3	0	0	0	0	0	Stream clearing needed
	Barnstable	Mill Pond	Pond Outlet	0	-5	0	0	0	0	Should be stocked with adult alewives
	Harwich	Andrews River	None	0	0	0	0	0	0	Low flow and no defined channel
	Truro	Pilgrim Lake	Outlet Pipe	0	-5	1	0	0	0	Increased salinities have reduced potential production
	Truro	Pilgrim Lake	Tide Gate	0	-5	1	0	0	0	Increased salinities have reduced potential production
	Truro	Pilgrim Lake	Lake Control Structure	0	-5	1	0	0	0	Increased salinities have reduced potential production
	Barnstable	Rushy Marsh Pd.	Culvert	-1	-2	1	0	0	0	New outlet must be established to restore alewives
	Barnstable	Skunknett River	Road Culvert	-2	-2	0	0	0	0	Habitat size doesn't justify fishway construction
	Barnstable	Skunknett River	Lumbert Pond Dam	-2	-2	0	0	0	0	Habitat size doesn't justify fishway construction
	Barnstable	Stewarts Creek	Aunt Betty Pd Control	-2	-2	0	0	0	0	Low flow and little potential habitat
	Brewster	Cobbs Pond	Outlet Pipe	-3	-5	0	0	0	0	Difficult access problem
	Barnstable	Little River	Road Culvert	-4	-3	0	0	0	0	Low flows limit potential for development
	Falmouth	Mill Pd/Green Pd	Mill Pond Dam	-5	-5	0	0	0	0	Difficult construction issues
	Barnstable	Halls Creek	Road Culvert	-5	-2	0	0	0	0	Insufficient habitat to justify fishway construction
	Chatham	Muddy Creek	None	-5	0	0	0	0	0	High salinity and lack of habitat
	Barnstable	Bumps River	Bumps River Rd Dam	-6	0	0	0	0	0	Potential habitat doesn't justify fishway construction
	Truro	Pamet River	Tide Gate	-7	-5	0	0	0	0	Increased salinities have reduced available habitat
	Eastham	Rock Harbor Crk	Road Culvert	-7	-5	1	0	0	0	Construction difficulties at Rt6 reduce potential
	Barnstable	Bumps River	Road Culvert	-8	-2	0	0	0	0	Potential habitat doesn't justify fishway construction
	Dennis	Bass River	Ms Thatchers Pd Dam	-8	-3	0	0	0	0	Lack of flow negates development to this point
	Bourne	Pocasset River	Lower Mill Pond Dam	-13	-3	0	0	0	0	Lack of sufficient habitat to justify fishways
	Bourne	Pocasset River	Upper Mill Pond Dam	-13	-1	0	0	0	0	Lack of sufficient habitat to justify fishways
	Bourne	Pocasset River	County Road Dam	-16	-5	0	0	0	0	Lack of sufficient habitat to justify fishways

(a) shaded cells indicate selected priority sites; only priority sites have site numbers

Table B-2. Cape Cod Water Resources Restoration Project - Ranking of Fish Passages

Site Number ^(a)	Town	River	Obst. Name	Total	Obst. #	Acreage	Existing Pop.	Stream Flow	Public Access	Water Quality Issues	Conflicting Water Usage
	Yarmouth	Plashes Brook	Winslow Gray Rd Dam	-20	-21	6	0	0	0	0	-5
	Yarmouth	Plashes Brook	First Bog Sluice	-20	-21	6	0	0	0	0	-5
	Yarmouth	Plashes Brook	Second Bog Sluice	-20	-21	6	0	0	0	0	-5
	Yarmouth	Plashes Brook	Third Bog Sluice	-20	-21	6	0	0	0	0	-5
	Yarmouth	Plashes Brook	Plashes Pd Dam	-20	-21	6	0	0	0	0	-5
	Yarmouth	Plashes Brook	Fourth Bog Sluice	-20	-21	6	0	0	0	0	-5
	Yarmouth	Plashes Brook	Fifth Bog Sluice	-20	-21	6	0	0	0	0	-5
	Yarmouth	Plashes Brook	Pump House Dam	-20	-21	6	0	0	0	0	-5

(a) shaded cells indicate selected priority sites; only priority sites have site numbers

Table B-2. Cape Cod Water Resources Restoration Project - Ranking of Fish Passages

Site Number ^(a)	Town	River	Obst. Name	Total	Construction Difficulty	Environmental Benefits	Existing Funding	Community Support	Need	Comments
	Yarmouth	Plashes Brook	Winslow Gray Rd Dam	-20	0	0	0	0	0	Stream is highly altered by cranberry bog diversions
	Yarmouth	Plashes Brook	First Bog Sluice	-20	0	0	0	0	0	Stream is highly altered by cranberry bog diversions
	Yarmouth	Plashes Brook	Second Bog Sluice	-20	0	0	0	0	0	Stream is highly altered by cranberry bog diversions
	Yarmouth	Plashes Brook	Third Bog Sluice	-20	0	0	0	0	0	Stream is highly altered by cranberry bog diversions
	Yarmouth	Plashes Brook	Plashes Pd Dam	-20	0	0	0	0	0	Stream is highly altered by cranberry bog diversions
	Yarmouth	Plashes Brook	Fourth Bog Sluice	-20	0	0	0	0	0	Stream is highly altered by cranberry bog diversions
	Yarmouth	Plashes Brook	Fifth Bog Sluice	-20	0	0	0	0	0	Stream is highly altered by cranberry bog diversions
	Yarmouth	Plashes Brook	Pump House Dam	-20	0	0	0	0	0	Stream is highly altered by cranberry bog diversions

(a) shaded cells indicate selected priority sites; only priority sites have site numbers

Table B-3. Cape Cod Water Resources Restoration Project - Initial List of Stormwater Remediation Sites for Shellfish Restoration

NRCS Site Number	Town	Local Site ID Name/Number
BA-SW-1	Barnstable	West Bay
BA-SW-2	Barnstable	Centerville
BA-SW-3	Barnstable	Inner Harbor
BA-SW-4	Barnstable	Kalmus Beach
BA-SW-5	Barnstable	Millway Beach
BA-SW-6	Barnstable	Rendezvous Lane
BO-SW-1	Bourne	Hen Cove
Brew S-1AB	Brewster	Consodine Ditch
Brew SW-1C	Brewster	Consodine Ditch
Brew SW-2	Brewster	Paines Creek
Brew SW-3	Brewster	Stoney Brook Rd
Chat SW-1	Chatham	Cha 7 - Old Stage Harbor Rd and Champlain Rd
Chat SW-2	Chatham	Cha 8 - Bridge St
Chat SW-3	Chatham	Cha 9 - Eliphamets Lane
Chat SW-4	Chatham	Cha 10 Oyster Pond Furlong
Chat SW-5	Chatham	Cha 11, 12 - Stage Harbor Road and Pond St
Chat SW-6	Chatham	Cha 14 - Holway Street
Chat SW-7	Chatham	Cha 16 - Bar Cliff Ave Ext
Chat SW-8	Chatham	Cha 17 - Cow Yard Landing
Chat SW-9	Chatham	Cha 18 - Rt 28 at Ryders Cove 1
Chat SW-10	Chatham	Cha 20, 21,30 - Rt 28 at Ryders Cove 2
Chat SW-11	Chatham	Cha 22 - Rt 28 at Muddy Creek
Chat SW-12	Chatham	Cha 23 - Fox Hill Road
Chat SW-13	Chatham	Cha 6 - Sears Road
Chat SW-14	Chatham	Rt 28 Contribution to Oyster Pond Furlong
Chat SW-15	Chatham	Rt 28 Contribution to Stage Harbor Rod
DE-SW-1	Dennis	D2/S3 - Sesuit Harbor Marina
DE-SW-2	Dennis	S39 - Mayfair Boat Yard
DE-SW-3	Dennis	D17/S41 - Follins Rd. Boat Ramp
DE-SW-4	Dennis	D19/S35 - Fishermans Landing
DE-SW-5	Dennis	S35A - Leif Erickson Rd
DE-SW-6	Dennis	D36/S21 - Cove Road Landing
DE-SW-7	Dennis	S47 - Aunt Julia Mooring Area
DE-SW-8	Dennis	D57/S68 - Bass River Marina
DE-SW-9	Dennis	D56/S74 - Boat Landing and Retail Area
DE-SW-10	Dennis	D57/S68 - Sundancers Lounge
DE-SW-11	Dennis	D51/S3 - Wrinkle Point
DE-SW-12	Dennis	S6 - West Dennis Yacht Club
DE-SW-13	Dennis	D47/S8 - Weir Creek on Lower County Rd
DE-SW-14	Dennis	Baxter Road
DE-SW-14	Dennis	Sesuit Creek
EA-SW-1	Eastham	Rt. 6 Salt Pond
EA-SW-2	Eastham	Salt Pond Boat Ramp
EA-SW-3	Eastham	Rt. 6 Fort Hill
EA-SW-4	Eastham	Fort Hill Area, Gov. Prence Rd. Mary Chase Rd.
EA-SW-5	Eastham	Thumpertown Landing
EA-SW-6	Eastham	Campground Landing
EA-SW-7	Eastham	Massoit Road and Wellfleet Drive In
EA-SW-8	Eastham	Hemenway landing
EA-SW-9	Eastham	Town line Elio Rd.
EA-SW-10	Eastham	Town Landing
FA-SW-1	Falmouth	Garnet Ave
FA-SW-2	Falmouth	Megansett Harbor
FA-SW-3	Falmouth	Great Pond

Table B-3. Cape Cod Water Resources Restoration Project - Initial List of Stormwater Remediation Sites for Shellfish Restoration

NRCS Site Number	Town	Local Site ID Name/Number
FA-SW-4	Falmouth	Wild Harbor
FA-SW-5	Falmouth	Eel Pond
HARW-SW-1	Harwich	Hulse Point Road
HARW-SW-2	Harwich	Bridge Lower Cnty Rd at Allens Harbor
HARW-SW-3	Harwich	Wychemere Harbor West
MA-SW-1	Mashpee	Captain's Row
MA-SW-2	Mashpee	Shoestring Bay
MA-SW-3	Mashpee	New Seabury
Orle - SW-1	Orleans	Champlain Road
Orle - SW-2	Orleans	Pricilla Road
Orle - SW-3	Orleans	High Tide Lane - Nauset Marina
Orle - SW-4	Orleans	Gilman Lane - Pochet Inlet
Orle - SW-5	Orleans	Barley Neck Road
Orle - SW-6	Orleans	River Road
Orle - SW-7	Orleans	Ares Pond
Orle - SW-8	Orleans	Quanset Landing
Orle - SW-9	Orleans	Skaket Beach Park Lot
Prov - SW-1	Provincetown	P1 - Provincetown Inn
Prov - SW-2	Provincetown	P2 - Point Street
Prov - SW-3	Provincetown	P3 - West End Parking Lot
Prov - SW-4	Provincetown	P4 - Mechanic Street
Prov - SW-5	Provincetown	P6 - Coast Guard Outfall
Prov - SW-6	Provincetown	P7 - Atlantic Avenue
Prov - SW-7	Provincetown	P8 - Court Street
Prov - SW-8	Provincetown	P9 - Post Office
Prov - SW-9	Provincetown	P13B - End Arch Street
Prov - SW-10	Provincetown	P14 - Pearl Street
Prov - SW-11	Provincetown	P15 - Dyer Street
Prov - SW-12	Provincetown	P16 - 435 Commercial
Prov - SW-13	Provincetown	P17 - 458 Commercial
Prov - SW-14	Provincetown	P18 - Cooks Street
Prov - SW-15	Provincetown	P19 - Howland Street
Prov - SW-16	Provincetown	P20 - Kendall Lane
Prov - SW-17	Provincetown	P21 - Conway Street
Prov - SW-18	Provincetown	P22 - 605 Commercial St.
Prov - SW-19	Provincetown	P23 - 619 Commercial St.
Prov - SW-20	Provincetown	P24 - 647 Commercial St.
SA-SW-1	Sandwich	Shawme Lake
SA-SW-2	Sandwich	6A at Mill Creek
SA-SW-3	Sandwich	Scorton Cr. At Town Line
SA-SW-4	Sandwich	Scorton Cr. at Jones Lane
Trur - SW-1	Truro	County Road & Mill Pond Road
Trur - SW-2	Truro	Mill Pond Road
Trur - SW-3	Truro	Pamet Harbor Parking Lot
Trur - SW-4	Truro	Meetinghouse Road
Trur - SW-5	Truro	Pamet River
Trur - SW-6	Truro	High Head Road
Trur - SW-7	Truro	Rt 6 At Stotts Crossing
Well - SW-1	Wellfleet	Chequessett Neck Road at Herring River
Well - SW-2	Wellfleet	Chequessett Neck Road
Well - SW-3	Wellfleet	Chequessett Neck Road - Town Landing
Well - SW-4	Wellfleet	Kendrick Avenue
Well - SW-5	Wellfleet	Holbrook Avenue
Well - SW-6	Wellfleet	Commercial Street 1

Table B-3. Cape Cod Water Resources Restoration Project - Initial List of Stormwater Remediation Sites for Shellfish Restoration

NRCS Site Number	Town	Local Site ID Name/Number
Well - SW-7	Wellfleet	Main St 1
Well - SW-8	Wellfleet	Main St 2
Well - SW-9	Wellfleet	Rt 6 at East Commercial Street
Well - SW-10	Wellfleet	Paine Hollow Rd Town Landing
Well - SW-11	Wellfleet	Arrow Head Town Landing
YA-SW-1	Yarmouth	Hallett Mill Pond Outlet
YA-SW-2	Yarmouth	Cummaquid Inn
YA-SW-3	Yarmouth	Mill Lane
YA-SW-4	Yarmouth	Thatcher Shore Road
YA-SW-5	Yarmouth	Mill Pond Outlet @ Rt. 28
YA-SW-6	Yarmouth	Route 28 @ Cosey Home Terr
YA-SW-7	Yarmouth	Rte 28 @ Standish Way
YA-SW-8	Yarmouth	Standish Wy @ Massassoit Rd
YA-SW-9	Yarmouth	Standish Wy @ Alden
YA-SW-10	Yarmouth	Standish Wy @ Windemere Rd
YA-SW-11	Yarmouth	Webster Rd@ 90 deg. bend
YA-SW-12	Yarmouth	Webster Rd@ so. End Tanglewood Dr
YA-SW-13	Yarmouth	Webster Rd. @ n. end Tanglewood Dr.
YA-SW-14	Yarmouth	Canary St. @ Swan Pond
YA-SW-15	Yarmouth	Robin St. @ Swan Pond
YA-SW-16	Yarmouth	Winslow Gray Rd. @ unnamed trib
YA-SW-17	Yarmouth	Parker River @ Rt. 28
YA-SW-18	Yarmouth	Neptune Lane @ Pawkanawkut
YA-SW-19	Yarmouth	Parker River @ Kearsarge
YA-SW-20	Yarmouth	So. Shore Dr. @ Little Dipper Lane
YA-SW-21	Yarmouth	Run Pond Outlet @ South St. (WD1)
YA-SW-22	Yarmouth	Trib to Run Pond s. of Alden Rd.
YA-SW-23	Yarmouth	Trib to Run Pond @ Misty Ln.
YA-SW-24	Yarmouth	Breezy Point Rd. @ Melva & Grove Sts.
YA-SW-25	Yarmouth	Breezy Point Rd. @ Willow St.
YA-SW-26	Yarmouth	Smuggler's Beach Boat Ramp @ Bass River
YA-SW-27	Yarmouth	Aunt Jane's Road @ Bass River
YA-SW-28	Yarmouth	North Cove Landing @ Bass River
YA-SW-29	Yarmouth	Packet's Landing (south of Rt. 28 bridge)
YA-SW-30	Yarmouth	Route 28 Bridge over Bass River
YA-SW-31	Yarmouth	Highbank Road Bridge @ Bass River
YA-SW-32	Yarmouth	Susan Rd.
YA-SW-33	Yarmouth	Aunt Dorah's Lane @ Follins Pond
YA-SW-34	Yarmouth	Follins Pond Boat Ramp
YA-SW-35	Yarmouth	Longview Rd. @ Follins Pond
YA-SW-36	Yarmouth	Surfside Terrace @ Bass River
YA-SW-37	Yarmouth	Charles Road @ Bass River
YA-SW-38	Yarmouth	Snug Harbor Development
YA-SW-39	Yarmouth	Grandview Drive
YA-SW-40	Yarmouth	#200 Blue Rock Road
YA-SW-41	Yarmouth	#148 Blue Rock Road
YA-SW-42	Yarmouth	Mayflower Terrace by Wild Rose
YA-SW-43	Yarmouth	# 96 Mayflower Terrace
YA-SW-44	Yarmouth	#146 Mayflower Terrace
YA-SW-45	Yarmouth	Merchant Ave
YA-SW-46	Yarmouth	Paved Swales on Susan Road
YA-SW-47	Yarmouth	# 149 Macomber Drive

Table B-4. Cape Cod Water Resources Restoration Project -Ranking of Stormwater Remediation Sites

Site Number ^(a)	Total Score	Town	Local Site ID Name/Number	Remediation Measures Results				Number of user-days available for harvesting without remediation	Growing Area	Shellfish Classification * = close to downgrade ^(c)
				Potential Impact on Classification high prob.=5 moderate =3 low prob.=1	Acreage of Affected Growing Area	Types of shellfish ^(b)	Will remediation measures affect swimming beach? Yes=3 No=0			
BA-SW-18	66	Barnstable	Scudder Lane	3	2092	SSC,O	0	365	CCB31	A
BA-SW-13	64	Barnstable	Bay Shore Rd.	3	46	Q, SSC, O	3	365	SC28.1	P
BA-SW-1	62	Barnstable	Cotuit Town Pier	3	536	Q	3	365	SC21	A
CHAT-SW-11	59	Chatham	Muddy Creek	1	31	SSC	3	182	SC58	CA
WE-SW-5	59	Wellfleet	Holbrook Ave.	3	247	O, Q	0	182	CCB13	CA
BA-SW-11	58	Barnstable	Snow's Creek	1	17	Q, SSC	3	212	SC28.8	CA
BA-SW-n09	58	Barnstable	Calves Pasture Lane	1	2092	SSC	0	365	CCB31	A
WE-SW-6	57	Wellfleet	Commercial St. 1	3	247	O	0	182	CCB13	CA
BA-SW-2	56	Barnstable	Cotuit Old Shore Rd.	3	536	Q	0	365	SC21	A
BO-SW-7	55	Bourne	Queen Sewell Cove	3	98	SSC, Q	0	0	BB44.7	P
DE-SW-4	55	Dennis	Fisherman's Landing	5	298	Q, SSC	0	165	SC35	CA
BA-SW-c04	54	Barnstable	Cotuit - Cross St.	1	536	Q	0	365	SC21	A
BA-SW-9	54	Barnstable	East Bay Boat Ramp	3	157	Q, SSC	0	0	SC24	R
FA-SW-2	54	Falmouth	Curley Blvd.	5	16.9	Q, O, SSC	0	0	BB52.3	P
PR-SW-1	54	Provincetown	Provincetown Inn	3	131	Q, O, SSC	3	0	CCB4.3	A
BO-SW-4	53	Bourne	Cohasset Narrows	3	221	Q, SSC	3	0	BB44.3	CA
DE-SW-11	53	Dennis	Wrinkle Point	3	204	Q, SSC, O	0	182	SC33	CA
DE-SW-5	53	Dennis	Leif Ericson	5	298	Q, SSC	0	165	SC35	CA
EA-SW-1	53	Eastham	Salt Pond	3	22	Q, SSC	0	365	OC6	A
EA-SW-4	53	Eastham	Fort Hill	3	416	Q, SSC	0	0	OC4.1	A *
BA-SW-c05	52	Barnstable	Cotuit Oyster	1	536	Q, O	0	365	SC21	A
ORL-SW-9	52	Orleans	Skaket Beach Lot	1	3261	Q, SSC, RC	3	150	CCB17.1	CA
EA-SW-9	51	Eastham	Ellis Rd. Town Line	1	416	Q	0	365	OC4	A *
ORL-SW-3	51	Orleans	High Tide Lane - Marina	3	314	Q, SSC	0	181	SC63.4	CA
ORL-SW-7	51	Orleans	Arey's Pond	1	314	SSC	0	365	SC63	A
BA-SW-6	50	Barnstable	Rendezvous Lane	1	1801	SSC, O, Q	3	365	CCB31.0	A
BA-SW-5	50	Barnstable	Millway Beach	1	51	SSC	3	274	CCB31.2	CA *
YA-SW-5	50	Yarmouth	Mill Creek @28	3	25.5	Q	3	212	SC28.5	CA
HAR-SW-1	49	Harwich	Hulse Pt.	3	19	Q, SSC	0	181	SC39	CA
MA-SW-2	49	Mashpee	Shoestring Bay	5	102	SSC,Q	0	90	SC20.3	CA *
WE-SW-1	49	Wellfleet	Herring River	1	208	O	0	90	CCB12	CA
YA-SW-45	49	Yarmouth	Merchant Ave 2	3	298	Q, SSC	0	165	SC35	CA
FA-SW-1	48	Falmouth	Falmouth Inner Harbor	1	33	Q	0	0	SC9	P

(a) shaded cells indicate selected priority sites

Table B-4. Cape Cod Water Resources Restoration Project -Ranking of Stormwater Remediation Sites

Site Number ^(a)	Total Score	Town	Local Site ID Name/Number	Remediation Measures Results				Number of user-days available for harvesting without remediation	Growing Area	Shellfish Classification * = close to downgrade ^(c)
				Potential Impact on Classification high prob.=5 moderate =3 low prob. =1	Acreage of Affected Growing Area	Types of shellfish ^(b)	Will remediation measures affect swimming beach? Yes=3 No=0			
YA-SW-7	48	Yarmouth	Mill Creek @ Bogs	3	25.5	Q	3	212	SC28.5	CA
EA-SW-6	47	Eastham	Campground Landing	1	18285	Q	3	365	CCB9	A
HAR-SW-2	47	Harwich	Lower County Rd.	3	19	Q	0	181	SC39	CA
YA-SW-33	47	Yarmouth	Aunt Dorahs	3	298	Q, SSC	0	165	SC35	CA
YA-SW-35	47	Yarmouth	Longview	3	298	Q, SSC	0	165	SC35	CA
YA-SW-32	47	Yarmouth	Merchant Ave 1	3	298	Q, SSC	0	165	SC35	CA
BA-SW-ce01	45	Barnstable	South Main St.	1	32	SSC, O	0	0	SC28.1	P
YA-SW-47	45	Yarmouth	Macomber Drive	1	298	Q, SSC	0	165	SC35	CA
BA-SW-1	43	Barnstable	West Bay	1	332	SSC, Q, O	0	365	SC22	A
BA-SW-2	43	Barnstable	Centerville S. Main St.	1	157	O, Q	0	0	SC24	R
BA-SW-4	43	Barnstable	Veteran's Memorial Park	1	17	Q, BS	3	180	SC28.8	CA
BA-SW-4	43	Dennis	Baxter Rd.	1	164	SSC	0	0	SC36	P
DE-SW-14	41	Truro	High Head Rd	1	314	Q, SSC	0	0	CCB4.5	P
TRU-SW-6	41	Yarmouth	96 Mayflower Terrace	1	298	Q, SSC	0	165	SC35	CA
YA-SW-43	41	Yarmouth	Mayflower Terrace	1	298	Q, SSC	0	165	SC35	CA
YA-SW-44	41	Yarmouth	Mayflower 3	1	298	Q, SSC	0	165	SC35	CA
BO-SW-8	40	Bourne	Grey Gables	1	1	Q, BS	0	0	BB43.3	P
BO-SW-9	37	Bourne	Taylor's Point	1	1	Q, SSC, O	0	0	BB43.5	P
MA-SW-1	37	Mashpee	Mashpee River	1	24	SSC, Q	0	90	SC20.1	CA

(b) Q = Quahog Clams, SSC = Soft Shelled Clams, O = Oysters, RC = Razor Clams

(c) A = Approved, CA = Conditionally Approved, R = Restricted, P = Prohibited

Table B-5
Effects of the recommended plan on resources of national recognition

Types of resources	Principal sources of national recognition	Measurement of effects
Air quality	Clean Air Act, as amended (42 U.S.C. 7401 et seq.)	No areas (0 square miles) where state air quality classifications would change
Areas of particular concern within the coastal zone	Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1451 et seq.)	No adverse effects on the coastal zone; beneficial effects for marshes, anadromous fish, and water quality, as detailed below
Endangered & threatened species critical habitat	Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)	No areas (0 acres) of critical habitat gained or lost; Section 7 consultation to be completed for each project in site-specific Environmental Assessment
Fish & wildlife habitat	Fish and Wildlife Coordination Act (16 U.S.C. Sec. 661 et seq.)	Full access restored to 4,200 acres of spawning habitat for anadromous fish 1,500 acres of salt marsh habitat restored
Flood plains	Executive Order 11988, Flood Plain Management	No floodplain (0 acres) gained or lost
Historic & cultural properties	National Historic Preservation Act of 1966, as amended (16 U.S.C. Sec. 470 et seq.)	No known effects; Section 106 consultation to be completed for each project in site-specific Environmental Assessment
Prime & unique farmland	CEQ Memorandum of August 1, 1980: Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act; Farmland Protection Policy Act of 1981	No areas (0 acres) of prime or unique farmland gained or lost
Water quality	Clean Water Act of 1977 (33 U.S.C. 1251 et seq.)	Water quality protected or improved in 7,300 acres of tidal waters currently listed as impaired and/or closed or potentially closed for shellfish harvesting
Wetlands	Executive Order 11990, Protection of Wetlands; Clean Water Act of 1977 (33 U.S.C. 1251, et seq.); Food Security Act of 1985	1,500 acres salt marsh wetland gained
Wild & scenic rivers	Wild and Scenic Rivers Act, as amended (16 U.S.C. 1271 et seq.)	No wild or scenic rivers (0 miles) gained or lost