

Carver Cotton Dam Removal and Satucket River Restoration Project Monitoring Plan:

The Monitoring Plan for the removal of the Carver Cotton Gin Dam and restoration of ecological processes of the Satucket River focuses on NOAA Tier I metrics¹ in keeping with the guidance and methods found in the Gulf of Maine Council's Stream Barrier Removal Guide². The Monitoring Plan has been designed to capture pre and post-implementation characteristics related to: (1) site passability; (2) photo monitoring; and (3) safety hazard reduction, as required by permitting.

1. Site Passability:

Deliverables: PDF of stamped, scaled As-Built plans and a memorandum documenting constructed as-built conditions compared to pre-implementation conditions and key target species site passage criteria. See Table 1 below.

ENGINEER STAMPED AS-BUILT (RECORD) PLANS AND ACCOMPANYING LETTER INCLUDED WITH SUBMISSION PACKET

Table 1: Site Passability Monitoring Summary

Cross-sections A/10 (riffle - sta. 66+25) & D/11 (pool - sta. 66+52)					
Survey Date: January 18, 2018					
Description	Measure (Unit)	Target	Actual	Min.	Max.
Channel Width	Feet	Varies	30	5	32
Channel Depth	Inches	12	30	12	-
Average Channel Slope	%	1.1	0.9	0	5
Pool Width	Feet	Varies	40	5	40
Pool Length	Feet	20	45	10	-
Pool Depth	Inches	27	48	24	-
Meets Fish Passage Criteria	Y/N	Y	Y	-	-
Stream Habitat Restored	Miles	13	13	-	-
Spawning Habitat Restored	Acres	652	124*	-	-
Exceedance Flow Range	-	-	-	5%	95%
Data Source: http://www.habitat.noaa.gov/pdf/Final_Federal_Interagency_Technical_Memorandum_Fish_Passage_Guidelines.pdf					

***Due to physical barriers upstream of Robbins Pond, the highest amount of river herring spawning habitat that can be realized at this time is 124 acres.**

2. Photo Monitoring:

Deliverables: Annual completion of a Photo Monitoring documenting changes to key site features.

SEE TABLE 2 BELOW AND ATTACHED PHOTO MONITORING DOCUMENTATION.

¹ Adapted from http://www.habitat.noaa.gov/pdf/NOAA_RC_Tier1_Monitoring_Guidance.pdf

² Collins et al. 2007. Stream Barrier Removal Monitoring Guide. www.gulfofmaine.org/streambarrierremoval.

3. Safety Hazard Reduction Assessment:

Deliverables: Electronic copy of dam hazard classification change request and all supporting documentation.

CHANGE OF HAZARD CLASSIFICATION OF DAM CERTIFICATION LETTER FROM
THE MA OFFICE OF DAM SAFETY INCLUDED WITH SUBMISSION PACKET.

Table 2: Photo Monitoring Documentation Summary*

Photo Station	Stream Station	Angle (°)	Photo Description	Date	Time	Photo #	Meets Design (Y/N); Observed Changes
A1	Sta. 68+70	355	Impoundment (upstream)	11/21/18	4:32PM	1	YES
A2	Sta. 68+70	220	Bridge barrels (downstream)	11/21/18	4:32PM	2	YES
B1	Sta. 68+25	25	Impoundment (upstream)	11/21/18	4:30PM	3	YES
C1	Sta. 67+45	225	Restored channel (downstream)	11/21/18	4:27PM	4	YES
D1	Sta. 66+25	40	Bridge barrels (upstream)	11/21/18	4:15PM	5	YES
D2	Sta. 66+25	0	Building pier protection	11/21/18	4:15PM	6	YES
D3	Sta. 66+25	335	Building protection (right bank)	11/21/18	4:15PM	7	YES
D4	Sta. 66+25	255	Restored channel (downstream)	11/21/18	4:15PM	8	YES
D5	Sta. 66+25	155	Staging area	11/21/18	4:15PM	9	YES
E1	Sta. 65+30	30	Restored channel (upstream)	11/21/18	4:12PM	10	YES
E2	Sta. 65+25	250	Channel (downstream)	11/21/18	4:12PM	11	YES
F1	Sta. 67+10	265	Restored channel (downstream)	11/21/18	4:28PM	12	YES
F2	Sta. 67+10	210	Wall protection (left bank)	11/21/18	4:28PM	13	YES
G1	Sta. 66+25	40	Riffle (upstream)	11/21/18	4:19PM	14	YES
G2	Sta. 66+25	320	Building protection (right bank)	11/21/18	4:19PM	15	YES
G3	Sta. 66+25	250	Riffle (downstream)	11/21/18	4:19PM	16	YES
G4	Sta. 66+25	150	Wall protection (left bank)	11/21/18	4:19PM	17	YES
H1	Sta. 66+52	30	Pool (upstream)	11/21/18	4:22PM	18	YES
H2	Sta. 66+52	310	Building protection (right bank)	11/21/18	4:22PM	19	YES
H3	Sta. 66+52	240	Pool (downstream)	11/21/18	4:22PM	20	YES
H4	Sta. 66+52	140	Wall protection (left bank)	11/21/18	4:22PM	21	YES

*See Figure 1: Photo Monitoring Site Plan

Carver Cotton Gin Dam Removal, East Bridgewater, MA – Post Removal Photo Monitoring

Photo 1: Station A1 – Impoundment (looking upstream) (11/21/18)



Photo 2: Station A2 – Bridge barrels (looking downstream) (11/21/18)



Photo 3: Station B1 – Impoundment (looking upstream) (11/21/18)



Photo 4: Station C1 – Restored Channel (looking downstream) (11/21/18)



Photo 5: Station D1 – Bridge barrels (looking upstream) (11/21/18)



Photo 6: Station D2 – Building pier protection (11/21/18)



Photo 7: Station D3 – Building protection (right bank) (11/21/18)



Photo 8: Station D4 – Restored channel (looking downstream) (11/21/18)



Photo 9: Station D5 – Staging area (11/21/18)



Photo 10: Station E1 – Restored channel (looking upstream) (11/21/18)



Photo 11: Station E2 – Channel (looking downstream) (11/21/18)



Photo 12: Station F1 – Restored channel (looking downstream) (11/21/18)



Photo 13: Station F2 – Wall protection (left bank) (11/21/18)



Photo 14: Station G1 – Riffle (looking upstream) (11/21/18)



Photo 15: Station G2 – Building protection (right bank) (11/21/18)



Photo 16: Station G3 – Riffle (looking downstream) (11/21/18)



Photo 17: Station G4 – Wall protection (left bank) (11/21/18)



Photo 18: Station H1 – Pool (looking upstream) (11/21/18)



Photo 19: Station H2 – Building protection (right bank) (11/21/18)



Photo 20: Station H3 – Pool (looking downstream) (11/21/18)



Photo 21: Station H4 – Wall protection (left bank) (11/21/18)



Photo 22: Historical plague installation

