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Memorandum

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Date: May 1, 2014

To: Heidi Davis – MassDEP, Brad Chase- DMF -

CC: Frank Tramontozzi-COQ, Rob Stevens-COQ, David Mariano-FST, Tom Russo-FST, Dean Groves

From: Paul Bergquist - Environmental Monitor

Subject: Town Brook Enhancement Project - Quincy – May 5th Update

This memo provides an update of the current status of the 2014 smelt egg monitoring season that began March 1 and is approximately two thirds complete. It is noted that this season has encountered a colder than normal March and April that also included some heavy rains. The cooler weather has also affected the seasonal growth of the vegetation planted last fall. Plants have been slow to sprout and begin the growing season.

This 2014 monitoring period is the 2nd of a three year requirement associated with the Order of Conditions to the Massachusetts Water Quality Certification. During the period beginning March 1st and ending May 31st water chemistry analysis and smelt egg monitoring are conducted twice a week and vegetation visits weekly. This year also includes continuous analytical monitoring. The instruments for continuous monitoring were installed at the end of January 2014 for a trial period prior to the monitoring period.

The smelt spawning season has been off to a late and slow start. Eggs have been observed downstream of Miller Stile Road. The eggs have not been present in the new spawning area adjacent to Mechanic Street. This memo reflects information from the continuous monitoring station just west of Mechanic Street. The temperature of the brook has gradually increased from 38 degrees in early March, peaking at 58 degrees on April 15, before averaging around 50 degrees at the end of April. Average velocities for the two months has been 1.98 fps. The average depth has been approximately 9.5 inches. It is noted that variances in data are observed during rain events. Data graphs and summary have been attached to the end of this memo.

Vegetation growth has been off to a slow start. Weekly site visits in April were conducted to observe the status of the vegetation planted in the fall of 2013 and to see what survived the winter. It is noted that this spring has been colder than normal and plants have been slow to bud and sprout however growth has begun for season as observed. It is noted that during the heavy rains water was flowing in the overflow area and the edge of the brook at the concrete walls were below water. As a habitat, ducks have been observed in the BVW Island area. The following pictures show conditions on the site visits in April.

Picture 100-1 4.23.14 BVW Island – Red Maple is budding, Gray Birch and Pin Oak still dormant.



Picture 100-2 – BVW Area 4.23.14 after heavy rain.

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Photo 100-3 BVW Island area, note cattails and sedges are present. .



Photo 100-4 - Plantings and cattails observed.

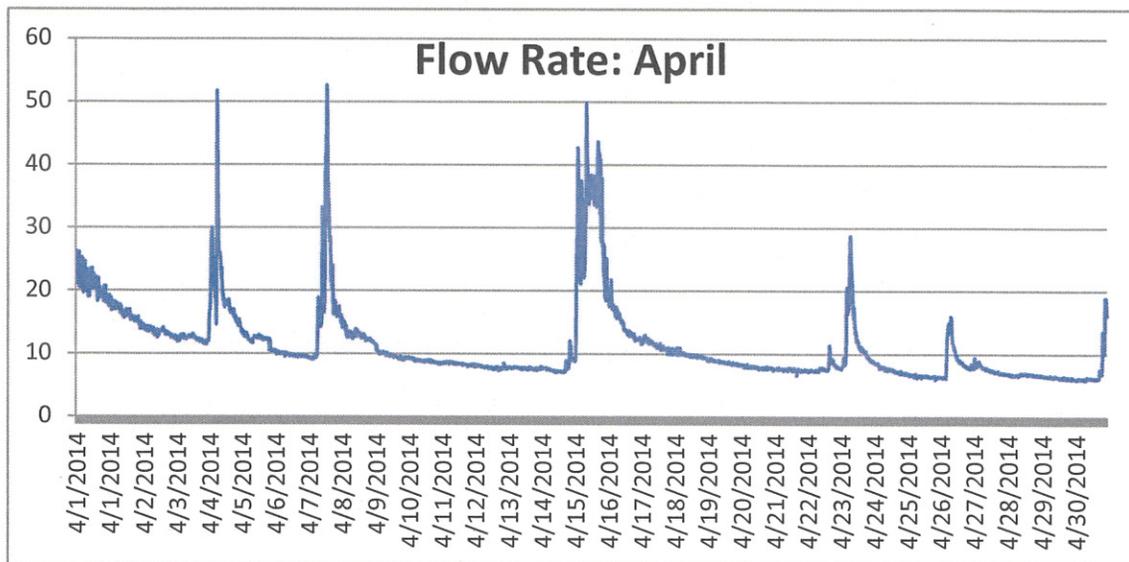
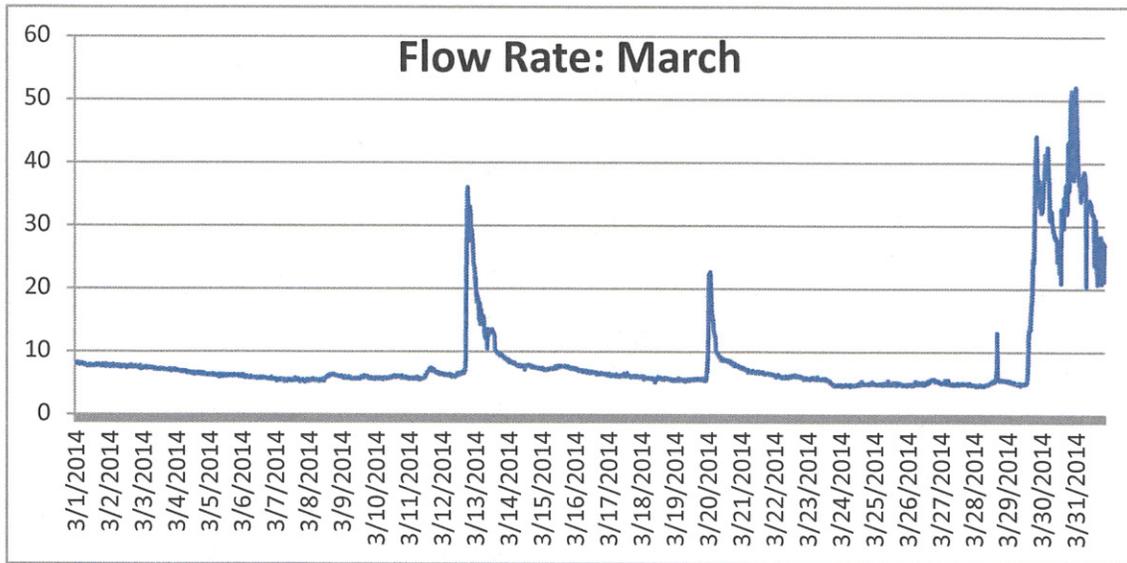




Picture 100-5 4.23.14 – Planting wall



Picture 100-6 4.30.14- Normal flow west of Mechanic Street
End of Memo



Town Brook Continuous Monitoring Station

AVERAGES

	March	April
Velocity (FPS)	1.84	2.11
Flow (CFS)	8.56	11.26
Temp (F)	41.6	50.9
Sp. Cond. (Spec Cond US-cr)	1248.53	1661.14
pH	7.21	6.91
Turbidity (NTU)	7.23	7.47