

Unkamet Brook

In their November 7, 2006 letter to EPA, GE proposed a plan for Unkamet Brook flow monitoring. This plan was approved by EPA and has been implemented by GE. This flow information will be utilized to support GE's Unkamet Brook hydrological/hydraulic modeling effort.

The data presented in the GE monthly reports for Unkamet Brook are velocities and water levels, which are recorded at five-minute intervals by Isco 2150 Area Velocity Flow Modules deployed in three culverts. Flows corresponding to these data are not currently presented in GE's monthly reports. GE calculates flow by multiplying the measured velocity by the cross-sectional area of the water in the culvert. The cross-sectional area is calculated from the measured water level and a relationship between water level and cross-sectional area, which is based on the geometry of the culvert. The three culverts where these Isco data recorders have been placed are upstream and downstream of the portion of Unkamet Brook subject to re-routing. The upstream location is at the box culvert that discharges to Unkamet Brook from under Dalton Avenue. This location is to the east of GE's Decorative Pond and north of the section of brook subject to re-routing. Downstream of the section of brook subject to re-routing Unkamet flows through two culverts, and Isco data recorders are deployed in each of the two culverts. EPA has asked GE to include the calculated flow rate in future monthly reports and GE has agreed.

Silver Lake

The outlet of Silver Lake is controlled by a weir located behind Pete's Chrysler on East Street. The function of the weir is to maintain a mean surface water elevation (wsel) for Silver Lake throughout each year. The wsel for Silver Lake is 975.93 feet.

GE measured velocities and depths along a transect at established intervals (or stations) on ten days between March 28, 2007 and May 21, 2007. Figure 1 shows total water depth measured at each station along the transect for each sampling event. These measurements were obtained during both baseline conditions and over a range of precipitation events. Two data collection efforts were conducted on days that had no measurable precipitation during the day of collection or the previous two days. The remaining eight data collection efforts were conducted over a large range of precipitation events. The range in precipitation for these events was between 0.03-inches to 2.2-inches. Table 1 shows the date of the velocity measurement and the daily precipitation for the day of collection and previous two-days, to account for total precipitation during a precipitation event.

Based on review of the range in total precipitation measured during these events and measured water depths, it does appear that GE collected a sufficient amount of data to develop a rating curve. Water surface elevations varied by approximately 0.8 feet on the days of data collection, from a low on May 9, 2007 to a high on April 17, 2007. The highest outflow encountered during the data collection effort, 11.63 cubic feet per second

(cfs) on April 17, 2007 was measured on the same day as the highest daily average flow for 2007 at the USGS Coltsville gage. This range, along with eight other measurements between the low and high events appear sufficient to develop a rating curve.

Figure 1 - Total Water Depth versus Station Number for Velocity Measurements Collected by General Electric at Silver Lake Outfall from March to May 2007 - Pittsfield, Massachusetts

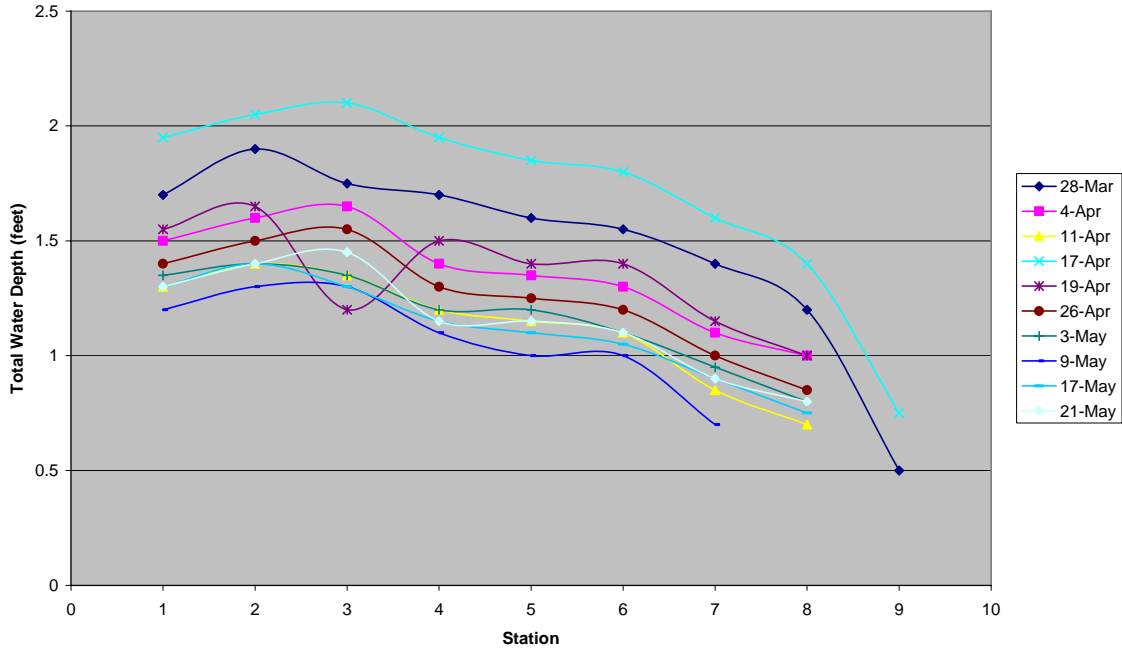


Table 1 – Precipitation in Total Inches Measured During and the Previous Two Days Leading Up to a Velocity Measurement Sample Event, Silver Lake, Pittsfield, Massachusetts

Date	Precipitation (inches)	Comment
3/8/2007	0.61	Additional 0.4-inches on March 24
4/4/2007	0.74	
4/11/2007	0.00	No precipitation for 5-days prior to this sampling event
4/17/2007	2.2	Additional combined 0.6-inch of precipitation on April 12 and 13.
4/19/2007	0.03	Season high event two days prior
4/26/2007	0.33	
5/3/2007	0.21	
5/9/2007	0.00	No precipitation for 6-days prior to this sampling event
5/17/2007	0.47	
5/21/2007	0.92	

Note: Precipitation data is preliminary and subject to change from the National Weather Service Forecast Office.