

DRAFT
Stream Team Meeting Minutes
Thursday, January 4, 2007

Attendees: Roger Edwards (presiding), Terry Dyben, Robin Timmons, Bill Allen, Al Pawlowski, Frank Stillinger

The meeting at GSWA headquarters convened at 9:05am. Minutes of the preceding meeting, held Dec. 7, 2006 were distributed, and were approved subject to one possible modification to be checked, concerning ISCO samplers on loan to GSWA.

Frank outlined the main features of the Bio-Blitz planned for May 18-19 (Fri.-Sat.), 2007, to take place in the Loantaka Brook Reservation. A major objective will be to perform biological inventories of plant and animal species (including MIV's), to assess the ecological health of the area examined, and to identify needed remediation. The Stream Team will contribute water sampling and analyses during the 24hr period of the Bio-Blitz. The "headquarters" will be located in a picnic pavilion at the South St. entrance to the Reservation. Terry made some suggestions about appropriate food for the participants.

Roger and Terry provided a summary of the Volunteer Monitoring Summit held at Monmouth University on November 2 and 3, 2006. It was attended by 4 GSWA volunteers and Kelley. NJDEP described a new data management system into which local monitoring groups can submit their findings; it has considerable flexibility in the formats of information that it can accept. The new system is expected to become operational this winter. The meeting included a field trip to a local stream to illustrate flow velocity measurement techniques. Terry reported the impression was that of very good cooperation between all of the state and federal agencies present.

Discussion of the Loantaka Brook Restoration project was deferred to the following meeting on account of Kelley Curran's absence.

Roger presented data for Loantaka Brook headwaters sampling. Two years of quarterly sampling at sites between Turtle Basin and the outflow from Kitchell Pond have resulted in the following main findings:

- Total Dissolved Solids (TDS) are very high (600 – 1300 mg/l) upstream from the Woodland Wastewater Treatment plant outlet and somewhat lower (500 – 750 mg/l) below the outlet.
- On 11/07/06 water samples were taken directly from the plant effluent, and were found to contain TDS and constituent ion concentrations comparable with those found at our stream sampling site LB4, about 200 yds downstream from the plant outlet. This suggests there was little or no dilution of the effluent by water from upstream at the time of sampling.
- Sodium and chloride ions typically account for > 50% of TDS, suggesting road salt as a likely reason for the high TDS, at least upstream from the plant outlet. Road salt leaking into the plant influent may contribute to the high TDS, Na, and Cl in the plant effluent, but there also may be other sources of salt responsible.
- Nitrate-N levels at and below the plant outlet are consistently high, ranging from 5.2 to 13.8 mg/l at the LB4 site.
- Total-Phosphorus levels are highly variable (0.04 to 1.2 mg/l at LB4). Some seasonal variation is evident, with higher concentrations being measured in samples collected in August, when flow volumes are often low.

USGS, in collaboration with NJDEP, has recently conducted quarterly monitoring in Loantaka Brook at a site about 300 yards downstream from LB4. Their sampling site appears to be located near where Symor Drive approaches the stream. Their published results cover the period October 2004 to August 2005.

- USGS TDS and component ion concentrations are very similar to our 2005 LB4 results.
- Nutrient levels are a little higher than our 2005 measurements on average, with less quarter-to-quarter fluctuation. USGS found higher total-nitrogen and total-phosphorus concentrations than we did in February and May 2005, and did not observe the extra-high phosphorus level in August 2005 that we recorded at LB4.
- Since the USGS and GSWA samplings were not done on the same dates, a strict comparison of the two data sets cannot be made, but the USGS data are supportive of GSWA's with regard to the general level of TDS and nutrients measured immediately downstream from the plant outlet.

Roger commented that with two years of sampling now completed, some modification of GSWA's LB monitoring may be appropriate. For example, analysis for several of the TDS constituent ions could be discontinued and the cost saved could enable other LB sites or other streams to be sampled. We should continue to measure TDS, TSS, Na, Cl and N- and P-nutrients, though perhaps not at all the current LB sites. Determining flow volumes in the stream at the time of sampling is highly desirable to assess the significance of fluctuations seen in pollutant concentrations.

Al reported on the status of his internet search concerning leaching of contaminants from municipal leaf mulching areas. This was motivated by a visit Nov. 8, 2006 to the Chatham Township recycling center next to a Black Brook tributary. It has not yet become clear whether that site constitutes a sufficiently worrisome source of contaminated runoff to warrant intervention.

Bill and Terry raised several issues concerning the use of water softeners, and their contributions to the high sodium and chloride levels present in sampled waters.

The meeting adjourned at 11:42am.