

Stream Team Meeting Minutes
Thursday, April 5, 2007

Attendees: Deb Apruzzese, Kelley Curran, Terry Dyben, Roger Edwards, Gene Fox, Harry Gerken, Al Pawlowski, and Frank Stillinger

The meeting at GSWA headquarters convened at 9:05am. Minutes of the preceding meeting held March 1, 2007 were distributed, and were approved.

Roger summarized the last round of Loantaka Brook sampling results for the samples collected on February 22, 2007. Roger provided attendees with handouts of the associated data tables. Refer to the separate attachment for additional details.

Harry confirmed that there are plans to continue stream bank restoration efforts on Loantaka Brook adjacent to the Morris Township municipal pool. Princeton Hydro completed restoration on the portion of the stream next to the Police Department building/parking lot.

Terry reported on an interesting article/advertisement that he found in one of the Recorder Newspapers on fertilizer. The article claimed that phosphorus is not bad if properly used and is better than non-fertilized thin-grass lawns.

Harry indicated that the Ten Towns Committee is actively working on the science to determine solutions to address pollution issues in the Loantaka Brook headwaters region. Part of the plan is devising a campaign to business owners to inform them about the water quality of the stream. The Ten Towns Committee has completed several demonstration projects that are detailed on their website.

Kelley reported that the National Fish & Wildlife Service recently completed a 5-year update of the Contaminant Assessment Process (CAP) for the Great Swamp National Wildlife Refuge. The original report and the 5-year update identify several point source contaminant sites within and adjacent to the GSNWR that warrant monitoring. They concluded, however, that non-point source contamination associated with changing land use toward urban/suburban development remain the principal contaminant threat to the GSNWR. The full report can be found on the web at: <http://ecos.fws.gov/cap/viewPublicSummaries.do>

Kelley reported that the new online database management system developed by the NJDEP for volunteer monitoring data is nearly complete. The Department will provide training on the system. GSWA is eager to get historical and current water quality data into the system.

Princeton Hydro (PH) completed the full water quality monitoring report for the Great Swamp Watershed under contract to the Ten Towns Committee. A link to the report can be found on the Ten Towns Committee's homepage at: <http://www.tentowns.org/10t/> Highlights include:

- ▶ The more developed Loantaka, Black, and Great Brook watersheds have elevated nutrient and sediment concentrations during both base flow and stormflow conditions.
- ▶ For 7 years, intra-stream data trends are consistent in measured base flow concentrations of the various pollutants.

- ▶ Elevated concentrations of total suspended solids (TSS) during stormflow conditions have been observed in Primrose Brook. This is likely due to erosion from streambed and bank scouring and sediment loading from Route 287.
- ▶ Soluble reactive phosphorus accounts for more than ½ of the total phosphorus in all streams during base flow conditions. This form of phosphorus is readily available for uptake by plants, which often leads to algal blooms.
- ▶ The Great Swamp is serving as a significant nutrient and sediment sink.
- ▶ Princeton Hydro took over the flow measurements from GSWA Stream Team volunteers in 2005.
- ▶ Pollutant loads cannot be accurately determined using available data due to the various sources of error (i.e. inaccuracies of ISCO level readings).
- ▶ It will cost approximately \$5,000 to \$7,000 per year per site to generate accurate flow data.
- ▶ PH recommends using the ISCO samplers for sample collections only but still record the level readings. They also recommend installing flow transducers and staff gauges on Loantaka Brook upstream and downstream of Kitchell Pond.
- ▶ Some of the report conclusions include: Loantaka and Black Brooks have the poorest water quality and pollutant concentrations frequently exceed the NJDEP criteria but Black Brook is not well represented; propose to rely on hydrologic models and the USGS gauging station located on the Passaic River at the outlet of the Great Swamp to determine annual nonpoint pollutant loads generated by each tributary.

Currently, PH is collecting monthly base flow samples and quarterly stormflow samples under the new EPA grant.

The sheds housing the ISCO samplers are in need of repair. Several of the doors are bowing out allowing for mice to enter. Bill and Gene said that they would look into fixing the problem by bracing the doors.

The upcoming round of visual assessments is scheduled to be completed within the months of May and June. The next round of Loantaka Brook sampling and flow measurements is tentatively scheduled for Tuesday, May 8th at 9:30 am.

The next meeting is scheduled for Thursday, May 3rd at 9:00 am.

Respectfully submitted by:
Kelley Curran