**Conewago Creek Initiative   
Monitoring Team Meeting**

**December 8, 2010**

**Elizabethtown College**

**Minutes**

**Attending:**

Tom Murray, Etown College   
Eric Naguski, DCCD  
Mike Yanchuk, DCCD  
Steph Harmon, Leb CCD  
Matt Kofroth, Lanc CCD  
Jineen Boyle, DEP  
Dan Bogar, DEP  
Tony Shaw, DEP  
Mike Langland, USGS  
Matt Royer, PSU  
Jeremy Zidek, ZedX  
Bob Carline, PSU

The draft plan prepared by Kristen Saacke Blunk was used as a framework for the meeting. Matt Royer to work with Kristen and Bob Carline to revise plan based on the following discussion.

**Location of Monitoring Stations**

Monitoring stations as proposed in draft plan were discussed.

Dan Bogar, DEP, sampled three locations in Spring 2010:

* Lawn Community Park
* Gamelands upstream of Colebrook
* Little Conewago Creek

Habitat impacted at Lawn, Little Conewago stations. Colebrook Gamelands wooded, good habitat. Would be a better upstream headwaters monitoring point than current proposed Station 1 at Lawn.

**Gauges**

USGS discussed latest on instream gauges. Two gauges will be going in for sure. One location will be as close to the mouth as possible. Locations at River Road (Route 441) bridge and upstream from there are suboptimal. Best location closest to mouth is the bridge at Covered Bridge Road.

Decision on location of second gauge will have to wait Congressional action on new budget. If the new budget allows additional monies for one or two more gauges, paired gauges in subwatershed can be established. If budget does not allow for these monies, the second gauge would likely be placed on mainstem at Prospect Road bridge.

**Subwatershed Monitoring**

Pros and cons of several subwatershed locations were discussed. Paired approach is ideal. DCCD ag staff indicates that Hoffer Creek or UNT North may be good candidates based on prospects for BMP adoption, though this is crystal ball work. Lynch Run might be not be good candidate due to large proposed subdivision. USGS has spent a lot of scouting time in the watershed, and wonders about Hoffer since west branch has much more large lot development than east branch (which remains ag), so might be challenging to do a paired approach. Gauge placement on Hoffer also challenging due to low flow conditions. Fact that Lynch has proposed development does not take it off the table, as USGS would be interested in including impact of land conversion within study. Decision deferred until such time as it becomes clear whether funding will allow for additional gauges to do subwatershed paired monitoring (i.e., wait until federal budget action occurs).

**Partner Capacity**

Districts discussed current capacity and funding. DCCD has been doing current sampling using 604(b) money. This will run out next year. DCCD has funding through 2011, and has applied for 604(b) for 2012. Lebanon CCD unsure as to staffing, but Stephanie will discuss with Chuck. DEP could possibly devote one-fourth to one-third of one person’s time to assisting in monitoring.

Etown College putting in for a grant that would allow for supplemental monitoring including Hershey Meadows (current TCCCA permit obligation), and other areas where there are gaps, such as below the Gretna STP, mainstem downstream of Brills (Davis property), and Hoffer Creek, etc.

**Chemistry**

DCCD uses Analytical Labs. Parameters analyzed were discussed. It was suggested that TKN could be dropped and TP should be added. Hardness not needed; could add Turbidity.

**Mussels**

Mussels species of concern have been found in Conewago, including “Triangle floater mussel,” a state endangered species.

**Bacteria**

The idea of adding bacteria monitoring was discussed. Lancaster CCD has worked with Angela Bransteitter at DEP to do bacteria monitoring at riparian buffer project sites and have seen short term responses. On the other hand, bacteria brings challenges of analyzing samples, sample variability, and clear connection to sources. If someone can get samples to USGS right away, they can do the analysis. Perhaps start with a pilot fecal coliform with forested, ag, and buffer site and see what results are.

*[Note: After our 12/8 meeting, Bob Carline followed up with Angela at DEP about bacteria monitoring. Here is her response:*

*Assessment of a stream for recreational use requires an individual to collect ten samples over a sixty day period and the holding time for the sample is eight hours.  Both protocols require that the sample be processed at an accredited laboratory.  The laboratory analysis for fecal coliform is membrane filtration plate counts.  Average cost for one sample is $25.  In addition the quality control plan for sampling requires you submit one blank and one replicate for every ten samples collected.  Depending on the intent of sampling, the bathing season for recreational use assessment is May 1st thru Sept. 30th.  During the recreational season the standard for fecal coliforms is not to exceed  a five sample geometric mean of 200cfu/100mL and no more than 10% of the samples can exceed 400 cfu/100mL.  The rest of the year the count is not to exceed a five sample geometric mean of 2000 cfu/100mL.  If your group is interested in testing for a recreational use assessment on the stream I organize and manage a cooperative program that provides the funding for laboratory analysis during the bathing season, but this is the sampling protocol that requires ten samples over a sixty day period.]*

**Macros**

DCCD sampled their locations in Spring 2009, and Dan Bogar sampled the 3 discussed above in Spring 2010. Once analysis is completed, this data could be used to develop current baseline for watershed. DEP may even be able to make new impairment determination based on this data.

It was agreed that sampling macros once every three years should be sufficient. Next sampling should occur Spring 2012.

**Habitat Assessment**

Habitat Assessments are currently done by DCCD during every macro sampling, and are proposed to take place every 3 years in conjunction with macro sampling.

**Stormwater Sampling**

Stormwater sampling by hand in watershed is impractical due to access and safety concerns. Gauge sampling should be sufficient to collect enough data to make load determinations.

**Fish**

Could be nice icing on the cake, but not necessarily critical. Watershed group has interest in fish monitoring, has a good community engagement potential. TCCCA did fish survey in 2006, working with Matt Kofroth of Lancaster CCD and Mark Metzler of RETTEW. Should discuss further with PFBC (Mike Kauffman).

**Funding**

Is there any NFWF dollars that could support monitoring and how much? No money currently to support Lebanon County sites chemical analysis. Ballpark number discussed is $155/sample. 406(b) funding for DCCD will have to come through to carry monitoring beyond this year. Funding will clearly be limiting factor, and funding issues must be worked out to advance monitoring plan. **Next meeting will be devoted to the who and how (staff and dollars to pay for it).**

**Next Meeting**

Matt will work with Tom to schedule next meeting in February. Monitoring Team will begin meeting once every two months in 2011. In the meantime, Matt will work with Bob and Kristen to revise monitoring plan based on discussions at this meeting.