

**Middle Cuyahoga River Watershed
February 24, 2010
Notes**

Kent State University Introduction

Dr. Laura Leff from Kent State University biology department gave a presentation to introduce the research interests and capabilities of the department and to discuss student involvement. Biology department faculty and students have done research on the streams, rivers, and lakes in this region ranging from the smallest headwaters to Lake Erie, urban to rural. There is a lot of monitoring and research capability in the department – faculty and students. Some of their work involves assessing the effects of restoration on biota and nutrient uptake.

This is a great opportunity for community-based learning for the students and services for watershed members. Good internships (with supervision and real field work) help the students learn and provide labor for sponsoring agencies. Class (or individual) research projects can be designed, with a few months notice. And if you're applying for funding for restoration work, think about involving the Kent State folks in monitoring – at least let them know. Give some thought to how the Kent State students and faculty can work with your organization. Students are already looking for summer internships! And with a wealth of expertise in the department, are there questions that they can help us answer?

Work Program

Matt Adkins, from Ohio DNR and several area assistance team members reviewed the progress of the Middle Cuyahoga project in January. They were pleased that some watershed action plan text has been developed. They have offered to come help us start on problem statements in April. They are also pleased with the level of collaboration that is developing.

The 2010 Middle Cuyahoga River Watershed Work Program has been submitted, but it can still be amended. The major focus and deliverable is to get a draft WAP submitted by the end of the year. We also need to do some outreach to have a complete discussion.

Steering Committee members are asked to review the draft sections and get comments back to me for wider release of the documents.

Updates:

- The website server should be upgraded soon, and I'll be more able to use the website to post information.
- Potter Creek – see hydrology
- The Plum Creek dam in Kent is due to be removed in March.

Outreach

- I've got Girl Scouts (my own and others) who'd love an opportunity to learn about watersheds and do community service.
- Dave Herpy is running another kayak clean-up trip on National Public Lands Day at the end of September. We may want to start thinking about a fall clean-up in conjunction with this effort.

- We tossed around the idea of having a kayak float into the Gorge. Dave Herpy has indicated he can provide kayaks and instructors for \$20 per person for a weekday float, minimum of 5 people. Paddlers would contract with KSU to provide the services, which would handle everything, including liability. The gorge is an amazing resource, and a kayak trip allows you to get views that you would never be able to see otherwise, cliffs towering above as you paddle. You can visit where the river enters the dam pool and imagine what a free-flowing Cuyahoga River could look like. We'll see if we can work out the details, and we'll keep you posted.
- We'll need to have some workshops/outreach with communities as the plan gets developed. Suggestions are appreciated, as are invitations to present to councils, commissioners, etc.
- Who's Your Mama Earth Day Festival – contact Jeff Ingram, Standing Rock Cultural Arts in Kent (See attached Opportunities).
- River Day(s)
 - o Munroe Falls – May 22
 - o Official River Day May 15
 - Kent Bog hikes
 - Breakneck Creek
 - Kent activities
- Cuyahoga Falls Earth Day to River Day clean-up (pizza on River Day, May 15)

Opportunities for Collaboration and potential projects – Green Infrastructure/Restoration

Some of these were discussed at the meeting, some have been added more recently.

- Please note how the list of interest and potential green infrastructure/ restoration projects is growing!! How can you jump on board? How can we work together on this?

- Sandy Barbic from Summit Soil and Water has had conversations with Matt Adkins from Ohio DNR coastal nonpoint program. She'd like to submit a grant application for rain gardens, but Matt would like to see a regional approach. There has been a great deal of interest expressed in green infrastructure projects, let's see if we can put together a proposal for green infrastructure that extends watershed wide.
- The City of Cuyahoga Falls has expressed interest in working on Kelsey Creek, which could involve restoration and work in the older neighborhoods in the watershed to reduce runoff, improve the way people take care of the creek..
- Claudia James from Portage County Regional Planning Commission has expressed interest in putting bioswales into their parking lot.
- The City of Stow is again pursuing their green infrastructure initiative in the Walnut Creek subwatershed.
- Kent State University is looking to incorporate green infrastructure into the campus. I'll be meeting with them 3/15.
- Officials from the Portage County discussed some areas of flooding concerns with me. Some of these may be conducive to green infrastructure or stream/wetland/ floodplain

restoration/enhancement approaches that address flooding concerns while protecting/improving hydrology and water quality.

- At the Portage County storm water task force meeting in December, there was a great discussion and some interest in riparian setbacks.
- The City of Ravenna is investigating riparian setbacks.

Review of Hydrology – summary of 2/24 presentation

Maia presented hydrology mapping that computer problems had interrupted in November, focusing on slope (stream rise/stream length), sinuosity (stream length/valley length), the stream network, and how these relate to important water quality/water quantity functions.

Bottom line: The mapping shows that the streams in this watershed have been highly altered (urbanization, ditching) and have lost many of the functions that occur undisturbed streams and that help protect water quality and reduce flooding and erosion problems. Our focus, which will have a strong element of the physical hydrology, will need to be:

- Protect the intact systems and the features that are protecting water quality
- Restore what has been impaired – and it may mean restoring *functions* rather than entire streams. This applies to the urbanized and agricultural areas.
- Protect the remaining streams and stream functions before they become altered, especially in rapidly developing areas.

Special case: The Potter Creek subwatershed. This watershed is characterized by wetland soils (many have been drained) scattered across the landscape in between hummocky glacial deposits, instead of in along definite stream corridors. Most of the drainage has been carved as ditches into the landscape. The drainage between Congress Lake and Lake Hodgson was created to provide water for canals, and has since been used for water supply. The original landscape was likely wetlands amongst glacial uplands, with poorly defined drainage networks.

This is important to our work, because the Army Corps of Engineers would not issue a stream restoration permit for the Potter Creek over-wide ditch/self-forming stream design. The Corps noted that there was no guarantee that the stream would not revert to a wetland, given this landscape, and the project would then be in violation of the permit to restore a stream.

The entire Potter Creek watershed landscape is similar, with ditches providing minimal functions. Potter Creek is in partial attainment of water quality standards due to poor habitat, and is likely providing minimal nutrient treatment, aeration, flood storage, or sediment removal. The other numerous ditches in the watershed would be expected to show similar characteristics.

The question, then, is what can/should we do in this altered landscape to restore or enhance some of the stream/watershed functions? The question applies equally (if in a different way) to the developed landscapes, and it is one we'll continue exploring.

In addition to the basic hydrology, the discussion also addressed large wellfields and the major water supplies in the watershed, Kent, Cuyahoga Falls, Ravenna, Portage County, of which only Ravenna has a surface water supply. The Kent and Cuyahoga Falls well fields receive recharge from recharge basins near Breakneck Creek and the Cuyahoga River. The wellfields are all in surface material with high transmissivity (large volumes of water move through quickly). This results in a good yield for the wells but also means that these supplies more susceptible to pollution.