



## SPRING CREEK WATERSHED COMMUNITY

*A grassroots stakeholder initiative*

### Coordinating Committee Meeting Summary: Tuesday, May 19, 2009

Attendance: Pam Adams, Gert Aron, Paul Bartley, Rob Cooper, Ann Donovan, Bob Eberhart, Jason Fellon, Larry Fennessey, Barbara Fisher, Todd Giddings, Brianna Hutchison, Bob Jacobs, Bill Sharp, Jennifer Shuey, Denice Wardrop

#### **Guest Speaker: How Penn State University Identified Critical Water Resource Areas on its Property** (Larry Fennessey, PSU OPP)

Penn State University (PSU) is an independent water purveyor with a holistic approach to managing stormwater, wastewater, and potable water. The university draws water from a number of wells located in two well fields (Big Hollow and Houserville). Recently, surface water runoff following major storm events has affected the university's system, causing some wells to temporarily shut down and leading to PSU's first ever boil water notification. Development projections for the State College area indicate that impervious surfaces in portions of the Big Hollow drainage not owned by PSU could increase by one square mile over the next 30 years. In addition, the university has its own plans for future development that will affect Big Hollow and further increase the percentage of impervious surfaces in the drainage. In 2006, PSU completed the "Big Hollow Well Field Impervious Study," a multi-disciplinary project to identify areas within the Big Hollow drainage that are critical to preserving the long-term sustainability of the well field's water quality and quantity.

PSU's study was guided by several assumptions. First, streams, riparian areas, floodplains, and wetlands should be protected. Second, the karst topography in the region creates additional land/water interfaces that should also be protected, such as sinkholes, depressions, and natural drainage areas. Third, land areas that were not critical before development now play a critical role by buffering downstream areas from runoff generated on upslope impervious surfaces. Fourth, large scale groundwater recharge occurs in discrete areas of the basin and is not uniform across all land types even if land cover and uses are similar. Finally, surface runoff should be allowed to recharge in small closed depressions or known natural recharge areas whenever possible.

Critical areas within the Big Hollow drainage were identified using a multi-disciplinary approach. The first step was to map the surface water boundary for the groundwater area of interest, including import and export areas. PSU then estimated the percentage of impervious surfaces in the study area using aerial photos and the most current maps available. Closed depressions, true sinkholes, and alluvial soils in the study area were identified and mapped. PSU then incorporated geology, groundwater elevation, topography, hydrology, and groundcover data for the study area. PSU hypothesized that undisturbed drainage ways should still be influent compared to engineered drainage ways. Beginning with 305(b) streams and minor drainage ways (as defined by the university), PSU reviewed large-scale construction projects in the region to determine how these affected streams. This information was combined with data on municipal storm drain systems and used to define natural and disturbed drainage ways within the study area. These proposed drainage ways were then field checked for accuracy. Using all of the information described above, PSU developed a map of critical recharge areas within the Big Hollow drainage. This map was divided into 29 subareas, some of which fell outside PSU property. Following the Big Hollow study, PSU created a Water Resources Preservation land use classification in its Master Plan to protect critical recharge areas. PSU also has a Source Water Protection Plan to continue work to protect its well fields.

Although the initial study was completed in 2006, PSU continues to document the importance of recharge areas in the Big Hollow using aerial photography (during major hydrologic events), documentation of natural channelization, modeling, and collection of long-term hydrologic data. PSU operates more than two dozen stream gauges, eight of which are in Big Hollow, to constantly measure both flow and temperature. Despite the high degree of impervious surfaces in the drainage, PSU has found that the percentage of surface runoff in many areas is much lower than the state average on undeveloped land due to the region's karst topography.

Mr. Fennessey ended his presentation with some words of advice for the Community should it pursue identification of critical areas within the Spring Creek Watershed as part of the Sustainability Initiative. First, the definition of a critical area is subjective and depends on what one is trying to protect. The Community would have to settle on a clear definition of a critical area before beginning work on the project. Second, the cost of such a project increases with increasing resolution. The Community would have to determine how fine the resolution would need to be in order to serve the project's intended purpose.

### **Spring Creek Watershed Sustainability Initiative (SI)**

#### *Status of the Core and Resource Groups*

Bob Eberhart sent letters out to the individuals identified as potential members of the Core and Resource Groups. There has been a good response from the potential Core Group members; Mr. Eberhart pointed out that representatives from the Centre County Planning Office, Centre Region Council of Governments, PSU Cooperative Wetlands Center, and the Department of Environmental Protection were in attendance at this meeting. Mr. Eberhart reported that about one fourth of the individuals on the Resource Group list had responded to the letters thus far.

#### *Survey of "Green" Municipal Ordinances*

Mr. Eberhart informed the Community that Chris Tavella, the first SI intern, will be attending law school after finishing his master's thesis at PSU. Mr. Tavella has promised to complete the survey of green municipal ordinances before moving on, but he had not yet sent the final document to Mr. Eberhart.

#### *Water Well/Geothermal Borehole Model Ordinance*

Todd Giddings reported that the workgroup had not yet advanced work because they were focusing on preparing for the League of Women Voters forum on water wells and geothermal bore holes scheduled for June 3. The hope for the forum is that it will garner support for the ordinance once it is introduced by the Spring Creek Watershed Commission. Mr. Giddings announced that the PA Groundwater Association will hold a drilling demonstration on Ag Progress property on Friday, June 12. To sign up for the demonstration, interested parties should access the PGWA website at <http://www.pgwa.org>. The first 25 homeowners to sign up will receive free registrations (which includes lunch); municipal officials and ClearWater representatives can also attend free of charge.

#### *Spring Creek Watershed Map Update*

Jennifer Shuey regretfully informed the Community that the WREN grant application for updating the watershed map had been denied; however, PSU agreed to fund the project through its Source Water Protection program. The Multiple Separate Storm Sewer System (MS4) partners (College Twp., Ferguson Twp., Patton Twp., State College Borough, and Penn State University) will pay for printing costs. Ms. Shuey indicated that the next step in the process will be to form a small committee to meet with Dave Gilbert (GeoDecisions) to begin hashing out what technologies would best meet the objectives of the watershed map update. Ms. Shuey also suggested that we hire a graphic designer to assist with the layout of the backside of the map, which will include information about the unique features of the Spring Creek watershed.

### *Dirt & Gravel Road Program*

Bob Donaldson was unable to attend the meeting, so Mr. Eberhart reported on this project on Mr. Donaldson's behalf. There was no news; however, Mr. Eberhart stated that he would attempt to gain support from the Commission at their May 20 meeting.

### *Riparian Buffer Model Ordinance*

The Centre Region (which includes six municipalities) is working on drafting a model riparian buffer ordinance. Two municipalities have already accepted this ordinance. Mr. Eberhart planned to suggest at the Commission meeting on May 20 that the downstream municipalities without such an ordinance adopt the Centre Region's model (Benner Township already has a riparian buffer ordinance).

### *Refining the Definition of Sustainability*

Barbara Fisher would like that protection of natural resources remain highlighted in the definition. Mr. Eberhart suggested putting off discussion of the definition until the June 16 meeting in order to give the Coordinating Committee time to think it over.

### **Spring Creek Canyon Master Plan Update** (Jennifer Shuey)

Jennifer Shuey announced that the final version of the Master Plan is now available at <http://www.canyonplanning.org>. In the final version of the Master Plan, the piece of land originally identified as Parcel #2 will be transferred with the rest of the property and the "active recreation" land use no longer appears on the map. ClearWater and the Department of Conservation and Natural Resources will meet to begin drafting the conservation easement for the Spring Creek Canyon property. ClearWater has hired attorney Steve Schiffman, who specializes in easements, to assist with this process. Senator Corman has promised to hold a public meeting in June to discuss granting legislation to transfer ownership of the property to Penn State University, Benner Township, the PA Fish and Boat Commission, and Rockview SCI. This legislation will authorize the transfer, but no actual transfer will take place until the conservation easement is enacted. It is unclear at this time when the land will actually be transferred; this is totally dependant upon how long it takes to draft the easement. The public will have the opportunity to review the easement; however, how much the structure of the easement can change depending on public input will have to be decided by the attorneys. It is also unknown whether there will be a single easement signed by all owners or individual easements, and it is unclear whether or not the PFBC will hold an easement (no state agencies are currently subject to conservation easements).