



THE BLACK CREEK WATERSHED WIRE

News from Black Creek Watershed, Cary, NC

September 2006

Visit the project website at www.ncsu.edu/WECO/blackcreek

Black Creek Meeting Highlights

The Black Creek Watershed Association (BCWA) met on Sept. 25 at Cary Academy. Thanks to Heidi Malloy for hosting the meeting in her very well equipped classroom at Cary Academy. Heidi's high school AP Environmental Science class will be focusing activities on the Black Creek Watershed this year. Students will collect water quality data from the creek, and a rain gauge will be installed on the campus to provide rainfall data. Several of her students helped to set up for the meeting and took photos. Thanks to you all- we're excited to have Cary Academy on board!

Mitch Woodward, an area Environmental Agent with Wake County Cooperative Extension, provided a whirlwind overview of watershed hydrology, stormwater runoff problems associated with urban areas, and potential engineered solutions (Best Management Practices). Mitch's presentation is summarized in this newsletter, and his complete powerpoint presentation is posted on the project website.

The Working Charter was brought out again, to remind people to review and provide any feedback before we finalize it. Barring any other comments we may receive before our next meeting, consider it finalized.

Jim Gregory handed out an overview of the watershed assessment and monitoring components. Technical team members have been brainstorming ways for the BCWA and other interested stakeholders to become involved in the assessment. Fostering a stream watch group to collect stream data is high on their list. We will plan on setting up a side-discussion about a Stream Watch Group soon.

Along those lines, Pat Hudson from Cary Rotary informed the group that it is the year of the stream for Rotary International, and that her chapter would like to "adopt" Black Creek to help with it's clean-up. They kicked off this effort by helping with the Oct. 7 Big Sweep for Black Creek (alongside Cary Presbyterian Church volunteers- see Page 4). We look forward to working with Cary Rotary.

Participants asked about a final group roster- we will create and distribute one.

Finally, if you are not yet on the Black Creek listserve but would like to be, send an email to: mj2@lists.ncsu.edu with the following in the body of the email: subscribe blackcreek J.DOE@ADDRESS.COM



Forming a Black Creek Stream Watch Group

Are you interested in getting your feet wet in Black Creek?

We would like to organize a group of stream watch volunteers and provide them with special training on what to look for. The technical team at NCSU has identified a number of activities with which a stream watch group could assist:

- A one time visual assessment of the creek and its banks

- Regular "creek walks" to look for any unusual happenings (possibly monthly)
- Collecting water quality samples during stormflows
- Others? We're open to ideas...

If you are interested in helping, keep your eyes open for a call to participate! We will likely send an email out to the Black Creek listserve to see who may be interested in various activities- please note that you don't have to be a member of the Black Creek Watershed Association to participate.



The Black Creek Watershed Association will meet on the last Monday of the month*.

Next meeting is:

Monday, Oct. 30

6:30-8:30 p.m.

Bond Park Community Center; Oak Room

**Note-NEW LOCATION!
Bond Park is located on High House Road, halfway between Maynard Rd. & Cary Parkway.**

Agenda:

- **Bugs in the creek- benthic macro-invertebrates and what they mean for Black Creek, by Dave Penrose, NC State**

- **Discussion items:**

Stream sampling protocol

Open discussion

**Our last meeting of 2006 will be held on Monday, December 4- a week late due to the Thanksgiving holiday weekend.*

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Stormwater 101

Mitch Woodward, Area Environmental Agent with Wake County Cooperative Extension, provided a presentation on watershed hydrology, covering a wide range of topics relevant to Black Creek. Key points are summarized here, with his powerpoint file posted online at the project website.

The Hydrologic Cycle: In a natural system, most precipitation returns to the atmosphere via evapo-transpiration through plants. Urbanization alters this cycle, sending more water overland, reducing groundwater recharge and interflow, and

- ◆ The amount of runoff is increased by hard, impervious, or compacted surfaces (think about what happens to rainfall when it hits a forested area, versus a parking lot)

Point source pollution: is a pollutant discharge that comes from a permitted source, such as a wastewater treatment plant or a factory. Once the main polluter of our waterways, the federal Clean Water Act mandates permits to control point source pollution.

Non-point source pollution: comes from diverse and diffuse sources such as pet waste, fertilizer, automobile fluids, construction sediment, and agricultural practices, and is carried by stormwater runoff into waterways. This is the main problem with water quality in the United States.

Stormwater management:

Is approached by *preventing* runoff by designing sites to allow natural infiltration into the ground and evapo-transpiration by vegetation, and *slowing and treating* runoff through Best Management Practices (BMPS).

What is a Best Management Practice (BMP)?

Structural, vegetative, or management practices used to protect and improve our surface and groundwater

Some Types of BMPS include (see Mitch's presentation for pictures!):

- | | |
|---|-----------------------|
| Bioretention (raingardens) | Stormwater wetland |
| Grass swales | Dry and wet detention |
| Riparian buffers | Permeable pavements- |
| Green roofs | Level spreaders |
| Rainwater cisterns | stream restoration |
| Erosion and sedimentation control devices | |
| Stream restoration or enhancement of degraded streams | |

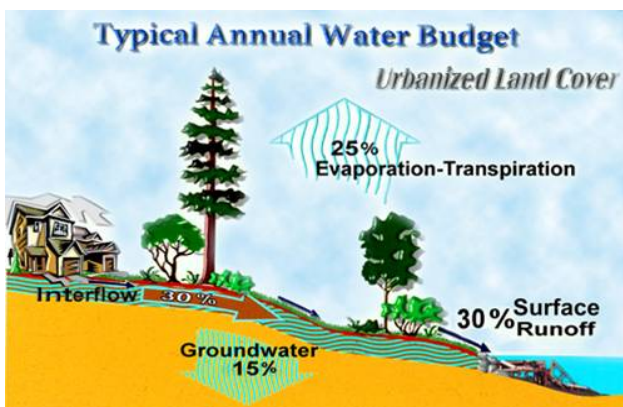


A rain garden, also called a bioretention area, is pictured at left.

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reducing normal base flows of streams. Streams become “flashier”, rising higher more quickly, during storms, due to higher volume and velocity of runoff, which may result in eroding streambanks and downstream flooding.



Stormwater runoff:


- ◆ is precipitation that flows overland to streams and other bodies of water
- ◆ collects pollutants as the water flows overland (esp. first flush!)
- ◆ is typically not treated– stormdrains lead to streams, or ponds (which provide minimal pollutant removal)

News from Black Creek Watershed, Cary, NC

Christy Perrin
Watershed Education for Communities and Officials
Dept. Agricultural and Resource Economics, NCSU
Campus Box 8109
Raleigh, NC 27695-8109

Big Sweep for Black Creek

Sixteen brave and hearty volunteers spent a Saturday morning on October 7 cleaning up litter from Black Creek and the Black Creek Greenway. On a cool and damp morning, volunteers from Cary Rotary and the Cary Presbyterian Senior Youth Group joined WECO and Town of Cary Public Utilities staff in collecting more than 90 bags of garbage from the creekbanks and flood plain! Items picked up included hundreds of bottles, 4 tires, a kiddie wading pool and numerous other items.

Thank you to our volunteers– Black Creek is looking much better now! 

One of our Town of Cary Public Utilities partners ponders the trash gathered from Black Creek– with one more pick-up to go! See more pix on our website



Phone: 919-515-4542
Fax: 919-515-1824
E-mail: Christy_perrin@ncsu.edu
Patrick_beggs@ncsu.edu



September 25 Meeting Participants

Patrick Beggs, *WECO; NCSU*
Drew Cade, *Lake Crabtree County Park*
Cameron Cobb, *Reedy Creek Elementary/Beechtree resident*
Nathan Cobb, *Beechtree resident*
Susan Davenport, *Beechtree, Cary PRCR Advisory Board*
Bill Dupont, *North Raleigh resident*
Matt Flynn, *Town of Cary*
Jeff Furman, *Crosland, Inc.*
Scott Gilchrest, *Royal Oaks resident*
James Gregory, *NCSU*
Marilyn Grolitzer, *North Raleigh*
Elena Horvath, *Silverton resident*
Pat Hudson, *Cary Rotary*
Eric Kulz, *NCDWQ, North Harrison Trace resident*
Heidi Malloy, *Cary Academy*
Vickie Maxwell, *Wessex HOA*
William Moore, *Royal Oaks resident*
Christy Perrin, *WECO, NCSU; Windchase resident*
Shirley Wasson, *Northwoods resident*
Mitch Woodward, *Wake County Cooperative Extension*