

February 14, 2005
Meeting Summary

Tar-Pamlico

Local Watersheds Planning Group

NEXT MEETING

Wednesday, March 23

1:00- 3:00

Agriculture Subcommittee meets from 11:30- 12:45
Please RSVP to Christy_perrin@ncsu.edu

Edgecombe CES will provide subcommittee's lunch

Location for both meetings:
Edgecombe County Center, Tarboro

From the west: Hwy 64 East from Raleigh to Jct. of US 64 & 258 (Exit 486) immediately past Tar River Bridge. Take US 258 right loop to stop light. Left at stop light to stop sign. Left at stop sign to stop light immediately past old Tar River Bridge. Right at the stop light. The Edgecombe Co. Center is located on the first floor in the four story building on the right as soon as you pass the left hand curve. The auditorium is in the back. Parking is in the lot on the right.

From the East: Take Exit 487 (hwy 33- Greenville/Princeville Exit). Turn right on Hwy 33 (go less than a mile where it intersects with "old" Hwy 64). Turn left and continue till it crosses the Tar River Bridge into Tarboro.

Watershed Education for Communities and Local Officials
www.ces.ncsu.edu/depts/agecon/WECO/rockriv.html

Laying the groundwork for a watershed plan

At the February 14 Tar-Pamlico local watersheds meeting, the group heard an interesting presentation on hydrology and stormwater management in the coastal plains, and saw a demonstration of the model that BLUE LWI will use to help make recommendations for a watershed management plan. Potential goals and objectives for the plan that were developed based on the November meeting results were shared with the group. Finally, a strategy for addressing the unique issues in the rural watersheds of Cow Swamp and Crisp Creek was discussed.

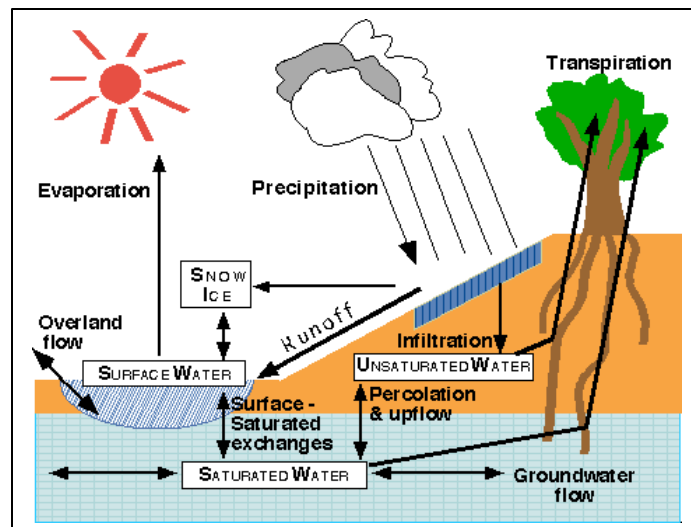
As a result, an agricultural subcommittee is being formed to specifically address the interests of stakeholders in these watersheds.

At our next meeting, BLUE LWI will provide their suggestions for specific restoration projects, and participants will discuss the feasibility of these projects. The agricultural subcommittee will meet first at 11:30, to develop an outreach and involvement plan for Crisp Creek and Cow Swamp. The main group meets at 1:00 p.m.

We look forward to seeing you there!

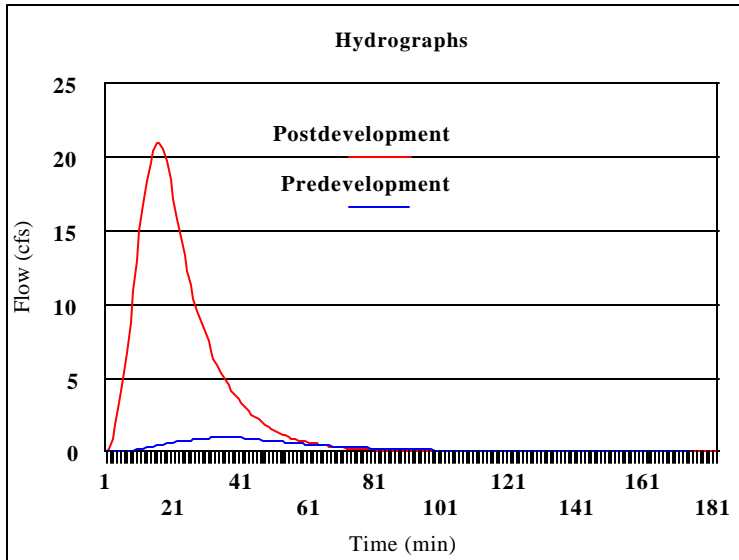
Watershed Hydrology and Stormwater Management in Northern Coastal Plain

Tom Blue, Blue Land, Water, Infrastructure (BLWI) provided an interesting presentation about the basic hydrologic cycle, and the impacts that occur when this natural cycle is interrupted by land use change.



The accompanying graphic is a sample from Tom's presentation, illustrating the hydrologic cycle. Take a look online at his presentation if you were unable to attend the meeting.

Watershed Hydrology continued...



Some highlights from Tom's presentation:

- 95% of rainfall events are 2 inches or less, so it makes sense to design stormwater management to address these amounts of rainfall
- Land use changes, particularly impervious surfaces, can drastically change the hydrology cycle (see the Hydrograph illustrating the rate and amount of flow that runs off a site before and after development)
- Innovative development methods (low-impact development) are designed to allow stormwater to infiltrate onsite, alleviating potential downstream stormwater runoff impacts. Low-impact development can be designed to meet landowners' needs, and is usually similar in cost or less expensive than traditional development, due to potential savings of infrastructure costs.
- The cumulative impact of stormwater detention (the conventional engineering approach) can cause downstream erosion. This method lets out the flow over a long time, and the natural system can not handle it. The solution is to use many pockets of on-site infiltration, with more vegetation.

Music Model Presentation

Tom showed how BLUE LWI was using the "MUSIC" model (Model for Urban Stormwater Improvement Conceptualization) in the watershed assessment. The model provides a mathematical representation of land uses and impacts on water quality in the watersheds. He emphasized that this is a planning/decision-level model, and is not necessarily intended to make exact predictions of things like pollutant loadings.

The model does allow the user to input local water quality data to get more accurate projections. The user can also change percentages of impervious surface, properties of soil, infiltration, and other parameters. The model allows for adding "treatment nodes" to estimate how various treatments in various locations will reduce resulting pollutants and runoff. As more data is collected in the watershed, users can improve the model by entering new data and fine-tuning the treatment options.

After running the model, BLUE LWI will recommend a suite of treatment options throughout the watersheds for the watershed group to consider. The suite will be based upon existing conditions and what BLUE LWI determines may be the best option based on assessment data and the modeling results.

Questions:

Q: Can the model be used for nutrient management?

Answer: Yes, it can do many things, and be very specific. This model is not a mechanistic model, but mechanistic models require GREAT amounts of data, not all of which can always be counted on as correct, without spending lots and lots of time and money. This model takes a more general view. A mechanistic model is very specific and requires details like physics info, etc, within the watershed.

Music Model Presentation continued

Q: When were the aerial photos you are using taken?

A: Using 2003 aerial photos mainly, but we have 3-4 data sets for each watershed, and are also looking at older aerial photos to determine land-use change trends (this is a separate analysis from the MUSIC model).

Q: Is 100% infiltration on a development site a reasonable goal?

A: It depends upon the landscape position and other variables.

Q: Does the model allow you to estimate existing projects?

A: Yes, that is put into the model as an existing condition.

Q: Do most municipalities know where their stormwater outfalls are?

A: Not all- different levels of surveys are done in different municipalities.

Q: How can you tell where areas drain to in the model?

A: Topographic information is in the model to define the watersheds, and we field verify them for accuracy.

Participants of February 14 meeting

Nancy Baldwin, Edgecombe County
 Patrick Beggs, WECO-NCSU
 Tom Blue, BLWI
 Art Bradley, NCCES-Edgecombe
 Rob Breeding, NCEEP
 Mark Brinson, ECU
 David Brown, City of Greenville
 Robert Cheshire, City of Greenville
 Carolyn Garris, Pitt SCWD
 Troy Lewis, Town of Tarboro
 Chris Lukasina, Upper Coastal Plain COG
 Kevin Miller, NCEEP
 Christy Perrin, WECO- NCSU
 Lee Perry, Town of Tarboro
 Ola Pittman, Edgecombe County
 James Rhodes, Pitt County
 Melissa Ruiz, BLWI
 Jeff Schaeffer, NCEEP
 Lisa Smith, City of Greenville
 Mitch Smith, Pitt County Coop. Ext.
 Maria Tripp, NCWRC

Tar-Pamlico Local Watershed Plan: Proposed Goals, Objectives

At the last meeting, stakeholders shared their vision of how they thought the watersheds should function. The project team incorporated that information into a table that includes watershed function goals for the plan and how they relate to stakeholder suggestions. Melissa Ruiz, BLUE:LWI presented the table (which is attached to this mailing), and the group discussed it.

One of the items that some stakeholders had wanted addressed in the plan was greenways. Partnerships between local governments and EEP on projects could address this issue- if a local government has a greenway plan, stream restoration projects may be designed to incorporate greenways. Participants were interested in knowing if EEP had discussed greenway requirements with DOT, since DOT requires paving if DOT funds are used. If greenway funding sources include federal funds, the greenway design must meet ADA requirements- some natural/alternative surfaces do not meet ADA. Boardwalks are one option that would likely meet ADA requirements, although are more expensive. Tom Blue suggested that traditional asphalt or concrete could be

used within an innovative design to allow stormwater runoff to be infiltrated alongside the greenway through swales and bioretention areas. Since DOT has a Phase II Stormwater Permit, it's possible that a demonstration project for such a greenway could meet their Phase II requirement.

Group recommendation: The group agreed that when the time comes to discuss greenway projects potentially associated with stream restoration projects, some negotiation on a proposal to NCDOT should be attempted.

Watershed Improvements in Drainage Districts

Kevin Miller discussed a potential approach for addressing rural watershed needs. The project goal is to find ways to meet EEP needs for watershed improvements without interfering with Drainage Commission and landowner requirements.

Suggested approach:

- EEP, an agriculture subcommittee of this watershed group, works with the Drainage Commission and others to find solutions
- Develop ways to cooperatively provide financial incentives
- Explore the feasibility of improvement projects that won't cause conflicts
- Test the feasibility of potential projects with modeling and a demonstration project.

More detail about potential types of projects is included in Kevin's presentation that is online at:

http://www.ces.ncsu.edu/depts/agecon/WECO/tar_pamlico/

Although the project team thought this approach would be applied in Crisp Creek, some stakeholders felt that this should also be applied in Cow Swamp, since the headwaters are rural and not currently facing development pressure.

Agricultural Subcommittee

The goals for the subcommittee are:

- Help hone the goals and objectives for the Crisp Creek and Cow Swamp watersheds
- Help us work with the Drainage District Commission to represent their interests in a restoration strategy
- Provide a connection with landowners
- Report back to the larger committee

The group responded to a question regarding who should serve on the subcommittee:

Charles Vandiford	SWCD
NRCS	NC Cooperative Extension (Art Bradley, Edgecombe CES)
Connell Purvis	Another agricultural landowner who lives on their farm
Farm Bureau	APNEP
Division of Forest Resources and or private industry forestry – Weyerhaeuser?	
Pamlico Tar-River Foundation	



Phase II Stormwater Workshops Available in 2005

Christy Perrin informed the group that NC Cooperative Extension is offering workshops for local governments who will have to implement Stormwater Phase II regulations. The workshops will provide guidance for implementing at least 3 of the minimum required measures (including Public Education and Public Involvement). Mitch Smith, Director of Pitt County Cooperative Extension, offered to host a workshop for local governments in the area. More information about this workshop will be announced after it is scheduled.





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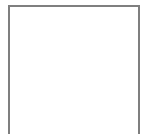
E-MAIL:
name@email.com

We're on the Web!
See us at:
www.Example.com

About Our Organization...

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