



Memorandum

To: Stormwater Management Task Force

From: CDM

Date: July 31, 2006

Subject: Wake County Stormwater Task Force Meeting #5 – Issues Module

On July 20, 2006, CDM and Wake County staff facilitated the fifth meeting for the Wake County Stormwater Management Task Force. Attendees were provided with meeting materials, including a copy of the agenda, a copy of the PowerPoint presentation, and a set of results from the questionnaires that were completed at the previous meeting. All meeting materials can be found on the Task Force website at <http://www.wakegov.com/environment/stormwater/>.

The meeting began with a welcome by Commissioner Ken Gardner, Chairman of the Wake County Stormwater Task Force. Mr. Gardner thanked everyone for his or her attendance and also briefed the task force on the passing of Lyddia Pritchard, who was a member of the County's Stormwater Focus Group from the first phase of this project. Commissioner Gardner then introduced the staff of CDM who would be facilitating the meeting.

Special Topics – Lake Wheeler Monitoring Data

Following Commissioner Gardner's introduction, Mark Bailey of Wake County Environmental Services presented monitoring data performed as a response to the recent sewage spill on Swift Creek. The County monitored numerous private wells in the vicinity of the spill and did not detect any pollutants. Additionally, Mr. Bailey presented sampling data from Lake Wheeler that was performed by the City of Raleigh. The City sampled the lake at various locations for fecal coliform, e. coli, and dissolved oxygen. In the days immediately following the spill, pollutant levels in the lake exceeded state standards for each pollutant type. However, the data showed that all levels were below state standards within five days of the spill.

Special Topics – WRAL Nuisance Flooding Story

David Mason of CDM presented a summary and video of a nuisance flooding issue that was recently reported on a WRAL newscast. A resident in the Town of Cary was contesting a rezoning case upstream of his property that he felt would exacerbate the existing flooding condition on his property. The property owner purchased the property and assumed that no

flooding would be present since it wasn't in the designated FEMA floodplain. However, as much as eight times this year, the creek running along his back yard overflowed its banks and flooded his yard. The property owner requested that the rezoning case be denied unless adequate measures are taken place to eliminate any downstream impacts. This case was presented as an example of a typical nuisance flooding complaint that local stormwater managers deal with on a frequent basis.

Work Group Process & Reporting

Following the special topics forum, Tommy Esqueda of CDM explained the work group process that would be employed at the meeting. A technical memorandum documenting the work group process was presented to the task force by email prior to the meeting. As stated, the task force was divided into four groups consistent with the four case studies presented at the previous meeting (structural flooding, nuisance flooding, water quality, sedimentation and erosion control). Each group was given a set of responses from the previous meeting's questionnaires that pertained to their group topic. Each group was asked to answer the following four questions using the previous responses and the group's discussion:

1. Why do you believe this issue is important to our community?
2. What are the primary causes of this issue?
3. How would you define a level of service expectation for this issue?
4. What other data do you need on these topics?

For questions one and two, the groups were also asked to prioritize their responses. All responses and rankings were recorded by CDM staff and reported to the group at the conclusion of the work group sessions. The raw data responses are summarized in the attached table. A follow-up technical memorandum will be presented to the task force that will include an evaluation and analysis of the work group responses.

Wrap-Up and Path Forward

There will be no meeting in August. Our next meeting in September will conclude the issues module of the work plan. At the September meeting, the task force will finalize the list of prioritized issues developed from the fifth meeting. The prioritized list will then be used for the next module, which is Tools & Strategies. During the next few months, CDM will research any requested information from the work group process and will also begin to research other "peer counties" that have similar stormwater management issues. CDM will present examples of how other communities are solving or have solved these issues.

**Table 1
Wake County, North Carolina
Stormwater Management Task Force
Summary of Work Group Process Issues and Priorities**

1. Why do you believe this issue is important to our community?			
Nuisance Flooding	Sediment	Structural Flooding	Water Quality
Reduced property value	#1 Pollutant - Don't want it to get worse!	Public Health/danger.	Human health
Environment Impacts	Happens every time it rains.	Economy impact.	Protection of water supply
Public Health and Safety	Expensive to remove/fines for sedimentation	Environmental impact.	Cost
Consumes a lot of resources for stormwater program/other depts.	Risk/damage exist to infrastructure (sewer lines, etc.).	Property damage	Recreation
Aesthetics (looks bad)	Public Health - What else is in the sediment?	Insurance issues (cost/availability).	Healthy aquatic habitat
Hazard	Loss of topsoil from farms.	Cost to tax payers.	Required by law
Not a problem.	Lots of development, so critical issue.	Destroys tax base.	Protection for future generations
Politically charged/hot topic	Supporting stream uses/aquatic habitat.	Disruptive to government.	Property values (economics)
Continued growth and development	Water quality/quantity	Retrofit costs.	
Difficult to assign responsibility.	Accumulation of sediment in reservoirs.	Water supply/utilities	
Encroachment on private property.	Impede flood control ability.	Transportation	
Not sufficient funds for ongoing maintenance and rehab	Loss of topsoil - need for more nutrient addition to AF, lawns.		
Customers unaware - homeowner, political bodies, education	Aesthetics.		
Difficult to retrofit.	Loss of property if stream erodes.		
	Property values at degraded streams/unmaintained ponds.		
	Disenfranchisement of customers.		
	Hard to trace - Who is responsible?		
2. What are the primary causes of this issue?			
Nuisance Flooding	Sediment	Structural Flooding	Water Quality
Upstream development	Stream bank erosion.	Building in floodplain.	Runoff/impervious surface (greed)
Poor design of subdivision & stormwater devices	Lack of maintenance on E.C. devices.	Impervious surface.	Urban outfalls (untreated)
Poor land use decisions - flood impacts not identified early.	Poor controls (design or construction)	Development standards.	Car/highway - runoff and air pollutant deposition
Improper siting of houses and stormwater devices	Removal of vegetation.	Poor forecasting.	Lack of buffers/loss of wetlands
Uninformed homeowners	Enforcement/staffing.	Old regulations.	Sewer overflows
Poor development review	Change in volume of runoff.	Awareness (past)	New urban development
Poor enforcement of regulations	Buffer disturbance.	Expectations changing.	Old development
Not cost prohibitive - not a cost consideration	Lack of volume controls/BMPs	Street widths.	New construction/land development activities
Not regulating streams correctly; expand stream definition		Design storm.	Industry
Continued growth and development		Maintenance of storm system.	Septic tank failures
Lack of downstream impact study.		Parking requirements.	
		Platting in floodplain.	
		Poor mapping.	
		Lack of modeling.	
		Awareness (public).	
		Awareness (developer)	
3. How would you define a level of service (LOS) expectation for this issue?			
Nuisance Flooding	Sediment	Structural Flooding	Water Quality
Low expectation/Level of Service/Below and S&E structural	Increase public education	Level of Service vs. Risk	Level that enhances and restores human and aquatic life now and in the future
Increased maintenance of devices.	Some reasonable rate of stream bank erosion.	High level of service for major roads.	
Approximate pre-development hydrograph when site developed.	Sediment/Erosion Control devices meet intended.	Maintain baseline.	
Innovative BMPs will continue to be explored and implemented	No sediment leaves site for 1/4" rain +/-	No adverse impact downstream.	
No nuisance flooding.	Standard ration of sediment/erosion control devices.	Increase current standards.	
Public education about flooding	Lower threshold for use of sediment/erosion control.	Different level of service for past and future development.	
No complaints.	Conveyance functions as intended.	Consider assistance to existing properties in floodplain.	
Customer Expectation for no flooding	More enforcement/funding.	No flooding for residential properties in future.	
	Better long-term O&M of established vegetation.	Disclosure for all drainage issues.	
		Unrestricted access for emergency vehicles.	
4. What other information is necessary to evaluate or prioritize these issues?			
Nuisance Flooding	Sediment	Structural Flooding	Water Quality
Where in the watershed is nuisance flooding an issue? Starts where?	Soil parameters across the county.		Technical sources and statistics
	Rich Gannon ground cover study.		Quantify "enhance & restore"
	Efficient for devices.		Cost
	New technologies		LID standards
	Case studies for other towns.		Inventory on existing habitat
	Relative cont. of sedimentation.		Examples of benefits
	Rules/laws debrief.		Experience with alternative development methods and performance
	Threshold % imperviousness for stream erosion.		