HENDERSON COUNTY
ENGINEERING DEPARTMENT

Environmental Advisory Committee

Thursday, March 4, 2010

The Environmental Advisory Committee met on Thursday, March 4, 2010 at 3:30 pm at the King Street Meeting Room at 100 N. King St.

Committee members present: Mr. Ron Ehlinger, Dr. Richard DeSimone, Mr. Richard Freudenberger, Mr. Anthony Brancato, Mr. Jim Fickes, Dr. Tom Davis, and Mr. David Lowles

Staff present: Ms. Alexis Baker, Mrs. Autumn Radcliff, Mr. Matthew Cable, Mr. Anthony Starr, Ms. Rebecca Coplin, Mr. Chuck McGrady

Guest: Larry Rogers (PEP), John Garner (SM&E)

CALL TO ORDER/WELCOME

Committee member Dr. Richard DeSimone called the meeting to order.

APPROVAL OF MINUTES

The motion made to pass the minutes was passed unanimously.

DISCUSSION

Mr. John Garner with SM&E joins the EAC to talk about stormwater. He has a background in hydrology and hydraulics. He said that in terms of stormwater, quantity and quality is looked at. Quantity is run-off volume and flooding. Run off peak flows lead to degradation of streams and infrastructure. As development comes in, peak flows go up. With quality, one is concerned with erosion and non-point sources of pollution.

Statistical probabilities for rain fall are expressed, for example, as 2-year storms, 5-year storms, or 25-year storms. For a 25-year storm there is a 4% chance of a storm in any given year exceeding 7 inches in 24-hours for Henderson County.

Soil conditions such as soil type and moisture also affect how much rainfall is absorbed and how much runs off. There are four soil groups: A, B, C, and D. B-type has moderate run-off, and C has a higher run-off potential. C soils are in and around stream beds because soils are already saturated and run-off is greater.

Watershed characteristics incorporate soil characteristics, land use, and slope. Watersheds are broken up analyzed and potential uses are looked at. The element of time is used to developed peak flow calculations for larger watersheds and longer duration storms. There can be a dramatic runoff in densely populated area. Time, intensity, and distribution can also affect run-off. A heavy rainfall on a forest may cause less run-off than on a developed area.

1 inch over 24 hours will be regulated in the proposed stormwater rules for Henderson County.

Some measures to control run-off includes retention and detention pounds. Retention keeps the first inch of rainfall onsite and releases it over 1-2 day period while detention implies simply slowing down run-off. These best management practices are proven effective when implemented properly. Non-structural BMPs include vegetated swales, buffers, and wetlands.

Enforcement processes include posting bonds to make sure that BMPs are implement. The City of Monroe has a stormwater utility where they have a monthly fee for stormwater. A credit is given if the stormwater ordinance is exceeded.

Planning staff answered a question about stormwater retention. In Henderson County, stormwater retention is maintained by the property owner and subsequent owners under the proposed stormwater regulations. Those BMPs implemented prior to the proposed regulations fall outside enforcement.

Highway culverts and bridges are designed for 25 or 50-year storm events.

Percent build upon area for the Henderson County proposed stormwater regulations are based on the state stormwater rules. The public hearing is set for March 30, 2010 for the Henderson County stormwater regulations. The percent built upon area is for each individual project is dependent upon the watershed. A higher percent built upon area may be allowed if there are engineered stormwater controls.

State regulations stop at the first inch of rainfall and not at the 1-year average storm that Fletcher uses. From a pollutant standpoint, the first inch captures 80% of the pollutants.

To be most effective, Mr. Garner, said that treating smaller areas have a cumulative areas rather than larger developments.

According to Planning Staff, the City of Hendersonville has stormwater rules more stringent than the State. Municipalities that fall within the census designated MSA must have Phase II regulations. Fletcher, Hendersonville, and Laurel Park must implement these rules. The state is enforcing rules on behalf of some counties know as tipped-in counties, which is why Henderson County is currently state administered.

Mr. Garner discusses landslides. Landslides are a natural process in the mountains. Rainfall is a trigger for landslide instabilities. Including development scenarios, excavating at a toe of a

natural slope or increasing the runoff to a slope by developing at the top of a slope, can cause more landslides. A stormwater ordinance may not be able to address all issues related to landslides. The state is working on landslide hazard maps. Buncombe County has published landslide hazard maps.

The committee would like a set of standard for both low and high density developments. Under a certain threshold, low density developments may not be required to have stormwater control measures. The committee would like to see that all developments have BMPs for the first inch of rainfall.

Commissioner McGrady said it is unlikely that the proposed stormwater regulations will be approved during the public hearing. If the committee has recommendations, they should make it to the commissioners as soon as possible.

Planning staff said that data shows that from January 1, 2000 to the end of 2009, 11% of run-off was not captured by the 1 inch requirement. Only about 133 days exceed the 1 inch mark.

The website address shown by Mr. Garner was:
http://hdsc.nws.noaa.gov/hdscpfds/orb/nc_pfds.html

The proposed stormwater regulations may be read online at www.hcplanning.org

The next meeting will be April 1, 2010 at 3:30 pm.

Meeting Adjourned

Minutes submitted by Ms. Alexis Baker

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