



Sumter Stormwater Solutions

Meeting Agenda

Tuesday, April 11, 2013
10:00 AM – 12:00 PM
North Hope Center
904 North Main St
Sumter, SC 29150

Purpose of Meeting: Continuing Development of Stormwater Education Plan and Decision-Making for Sumter Stormwater Solutions

Meeting Facilitators: Mary Caflisch & Jolie Brown, Clemson Carolina Clear

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|---------------|---|--------------------------------|
| 10:00 – 10:05 | Welcome & Meeting Purpose | Mary Caflisch |
| 10:05 – 10:20 | Outreach Activity Updates | Mary Caflisch & Jolie Brown |
| 10:20 – 10:50 | Shoreline Management Workshop – Discussion | All Present |
| 10:50 – 11:25 | Stormwater Utility Credit Workshop – Discussion | All Present |
| 11:25 – 11:55 | Promoting LID - Discussion | All present |
| 11:55 – 12:00 | Wrap-up | Mary Caflisch |



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Notes from the Meeting

Attendance:

| <i>Name</i> | <i>Organization</i> |
|----------------|-----------------------------|
| Geoff Smith | URS |
| Teige Elliot | City of Sumter |
| John Merkel | Sumter County |
| Peter Wilson | Sumter County |
| Dan Geddings | Sumter County |
| Claudia Rainey | Sumter City-County Planning |
| Mary Caflisch | Carolina Clear |
| Jolie Brown | Carolina Clear |

Minutes

Outreach Activity Updates

The meeting started with a review of recent activities:

- Sumter Soil & Water Conservation District Meeting – Jan. 17, presented pet waste station proposal for Dillon Park
- Storm drain marking with St. Francis Xavier High School – Jan. 30
- Shot Pouch Creek Cleanup – Feb. 16, Canceled due to weather!
- Career Day at Alice Drive Elementary – Feb. 22
- Rain Barrel Workshop – March 7, Sumter Co. Public Works
- Career Day at Crosswell Elementary – March 8
- Kayak Trip with Natural Resources Management Club – March 9, Saluda River (Josh Castleberry)
- Hornaday Award Weekend for Boy Scouts – March 9 & 10, Sumter fairgrounds
- Pond Management Workshop – March 12, Swan Lake
- Turkey Creek Cleanup – March 16, Lemira Elementary School
- Dog Day – March 29, Dillon Park
- Stormwater presentation at Leadership Sumter (Dan Geddings)

Upcoming activities are as follows:

- Career Day at Crestwood High – April 17
- Sumter Earth Day Celebration – April 20, Swan Lake
- Earth Day at Cherryvale Elementary – April 22
- Earth Day at Oakland Elementary – April 22
- Woofstock – April 28, Elaine D. Korn Memorial Center
- Jolie in the “Making It Grow” Chat Room– April 30
- Carolina Yards Presentation for Master Gardeners – May 6, Extension Office
- Iris Festival – May 25, Swan Lake
- Rain Garden Dedication Day (sign installation) – May? TBD

Public Involvement

Jolie also said that St. Francis Xavier High School is interested in doing more drain marking in Idlewild neighborhood. It was noted for future cleanups that alligators have been spotted in Turkey Creek. This shouldn't prevent us from doing cleanups of Turkey Creek, since we work along the upper banks and not in the water, but it is something to be aware of for safety. The Shot Pouch Creek cleanup that was canceled in March will be rescheduled for either May 18th or June 8th.

Jolie reported that the pet waste stations installed at Dillon Park were a success. Pet waste stations needed for Patriot Park next. The Dog Day event went well, but was not as well attended as we would have liked because of the Good Friday holiday. Jolie would like to make Dog Day a bigger event next time. The SPCA could bring out pets for an adoption day, and we could invite Chick-fil-A to provide food. It might also be possible to tie it into a sports event at the park.

The rain garden dedication day, with installation of the new signage needed to be scheduled. Prior to the dedication, some maintenance is needed. Jolie will email Cheryl and Claudia about doing maintenance on the rain garden. Much of the mulch has washed to the lower end of the garden again. Peter suggested triple pounded mulch, which does not float. He also mentioned rubber mulch as an option. Cypress mulch is supposed to mat together and not float, but Claudia explained that it is not renewable, because it is harvested from large, slow growing cypress trees. Small rock could be used at the top edge of the rain garden and around the in-flow area from the parking lot. Geoff recommended planting more native grasses along the upper edges. A short grass would be best, such as monkey grass or a similar native species. John Merkel suggested using native rushes, which are available and similar in size. Geoff will find out what was used in a recent rain garden installation he was involved with in Hartsville.

Jolie attended a "VIP" meeting for the Sumter neighborhood associations. Many of the neighborhoods are doing cleanups. Jolie offered to provide them with bags if they would report numbers to Sumter Stormwater Solutions. Having good connections with neighborhood association leaders may increase participation in SSS cleanups. Jolie found out that the groups are generally unwilling to work outside of their own neighborhoods. Jolie also made a great contact at Shaw Air Force Base, Rob Sexton. Mr. Sexton gave Jolie a tour of stormwater management on base, which was very impressive. Mr. Sexton acts as a bridge from Shaw to the public. They discussed our education and involvement programs and brainstormed how people on the base can get involved. There are lots of families at Shaw. Mr. Sexton will put us in touch with the community planner and contractor for new homes. In might be possible to install rain gardens and rain barrels at new homes as they are built on base. We could also do some workshops on base.

Stormwater Management Ideas

Claudia Rainey is currently working on Master Plan for Turkey Creek, similar to what she developed for Shot Pouch Creek. The plan will address issues related to the floodplain, wetlands, and stormwater, as well as improve aesthetics and tie in recreation, connectivity, and community use. Claudia would like input from the engineers in the Solutions group, to help design wetland diversions for stormwater along the creek. These diversions would provide treatment and also storage. Geoff Smith said that he is also working with the City and County on a Watershed Plan for Turkey Creek, using a 319 grant, to address water quality concerns. It was agreed that Claudia should meet with Geoff and City and County representatives to work on overlapping areas of their two projects, as both address the same area.

Claudia also brought to the group her concerns about stormwater going into Shot Pouch Creek from Guignard Drive. Claudia suggested a floating island attached to the banks on either side to filter pollution, the biggest issues of which are oil and trash. Dan Geddings pointed out that the flow and rise of the creek at that point is too great during storms, and the island would not be able to

withstand it. Geoff suggested that instead to consider putting devices at the outlets to filter the water as it comes off the street. This would be a major alteration to the existing stormwater system but is certainly possible. However Guignard Drive is a DOT street, so any modifications would have to be approved through DOT.

Littering and Illegal Dumping

Littering continues to be a huge issue around Sumter. There are two schools in the Turkey Creek Watershed, Lamira Elementary and Crosswell Elementary. Both of these could be heavily targeted with anti-littering messages to students. We could also reach youth through the 4-H program. It was suggested that we come up with a stormwater mascot to engage kids. Characters suggested included a turtle, duck or swan. Dan Geddings has already done some work in this area. Following a major dumping violation, he canvassed a nearby neighborhood with illegal dumping brochures. We could create a billboard or commercial with positive spin about attracting companies to Sumter with a clean community. We have several great photos of before and after cleanups that could be used for education pieces. Posters and signage could be placed in neighborhoods. We need to educate people about where recycling centers and landfill drop-offs are located, as well as training with sheriff department to increase enforcement. Littering carries a \$500 fine. A lot of the people in the heavily littered neighborhoods are renters. It would be beneficial to involve the property owners, who could be identified using census or tax data. We might organize a meeting for HOAs and landlords. The local churches should be involved in preventing litter, too. There are several churches in the immediate area around Turkey Creek. Jolie could get on the agenda for the Neighborhoods VIP meeting to promote an Adopt a neighborhood/street/creek program. John Merkel will make a list of the neighborhoods to target. Knowing the specific subdivision name is important, because the neighborhood associations are reluctant to work outside of their own areas.

Shoreline Management Workshop Discussion

Erosion control is needed along the shoreline of the two large ponds at Patriot Park. Our goal is to install some management practices as part of a demonstration workshop. We would like to target areas of the shoreline that have significant erosion problems and are also highly visible by the public. Jolie said that the worst spot is where the power lines come into the park. There is no ground cover there, and deep gullies have formed. The gullies need repair, and the area is very wet, with standing water.

Dan remarked that all of the ponds at the park are constructed ponds. When they were built the edges were never grassed or stabilized properly, and now that the topsoil has washed away, it will be difficult to establish grass. The slopes are not steep, though. While the ponds are not attractive now, they have a lot of potential. Walking trails go around them with pedestrian bridges. To improve the appearance, the edges could be planted with native grasses, interspersing wildflower mix. Cattails would establish well, but they take over and don't produce food for wildlife. The soil around the pond is probably poor and will need to be amended by adding compost or mulch. Mary asked if it would be ok to plant seeds in June with the heat. Claudia said it should be alright because the edge of the pond is so wet. She recommended sweet grass because it is nearly maintenance free. She suggested mixing in cone flowers, lobelia, and other plants that have a deep root zone. Sweetspire shrub could be used for areas where the erosion is worst. Native lotuses or water lilies could be planted just below the waterline.

A recent shoreline restoration along the lower section of Conway Canal used a coconut or coir mat with lilies and other plants interwoven into it, which was set into the bank. The same company that Claudia knows of as a source for seed also sells this type of pre-planted mat. Claudia will share the contact information for this company. However these pre-planted mats can be very expensive.

Jolie will work on sponsorships from new industries. We will start by doing a small section as a demonstration. We can use a few different techniques and see which works best. It is our hope that the grass once establishes in a few spots, it will spread around the pond.

There does not seem to be much public interest in a pond management or shorescaping workshop. The county tried to have one earlier this year, and it was poorly attended. Still, we can do a short one and invite the landscaping businesses. We set the week of June 11-14 as the anticipated date for the installation and workshop. The rain garden sign installation will be scheduled for around the same time.

Stormwater Utility Credit Workshop Discussion

After the Sumter County Stormwater Utility was passed, a two-year grace period was given to commercial and industrial sites, during which they simply paid a flat fee. Now that the county has a map of impervious area in the county, they have changed the utility fees to be charged at a rate based on the amount of impervious area at each property. They sent out a newsletter through the Chamber of Commerce telling about the credits. About a dozen businesses have applied for credits.

There are two types of stormwater utility credit applications. A Type 2 application is used when a business believes that the impervious area estimate is incorrect. For example, the mapping considers all roads as impervious. However, if a site has dirt or gravel roads, those have a better infiltration rate than pavement and would not count as much toward the impervious area. Engineering calculations are not necessary to make this type of correction. The Type 1 application is used when an engineer's calculations are needed to show that a site has retention existing. The engineer would calculate the retention value (according to stormwater volume retained) for existing BMPs on the property such as ponds, swales, and bioretention. Using the engineer's calculations, the stormwater utility fee would be reduced based on the amount of water retained on the property. Theoretically, if a site had stormwater runoff the same as predevelopment conditions, there would be no fee other than the minimum annual fee of \$15.

Mary suggested offering two separate workshops. One would be for commercial and industrial property owners explaining what options were available and how to fill out the paperwork. This would also include a generalized overview of the kinds of BMPs that could be installed as retrofits to provide more credits, with the emphasis on LID techniques. A second workshop would be held for engineers to explain the more technical aspects of the credit program. Geoff Smith recommended that both workshops be done in one day, with a lunch in between. Participants could register for one or both parts. Some facilities may have engineers on staff whom they would want to attend both sessions.

Peter Wilson will speak to explain how the credits work. Claudia will speak to explain how these BMPs fit into an overall site design concept, emphasizing LID. Showing examples will be important. For instance, the Sustainable Sites Initiative has a collection of case studies where LID has been implemented to solve stormwater problems. Dan Geddings commented that Pearce Atkins has a contact in Lexington who would also be a good speaker.

The engineers need to know the design parameters that go into getting a credit. We should talk about volume, site development, calculating retention and detention, and swales. We should try to show retention/infiltration values for soft engineering practices, too. The workshop should not include ponds. Engineers for the most part know how to do these calculations for ponds, and ponds do not help stormwater quality. In addition to savings in the form of stormwater credits, the workshop needs to stress overall cost savings, including savings from installing less curb, gutter, and asphalt.

The group needs to have another meeting about this project in about a month. Claudia has a presentation she would like to show to see if it will meet the needs of this workshop. Mary will have

some ideas for speakers that the group can choose from. The target time for this workshop will be July.

Conclusion: With no further business, the meeting concluded at 12:00 PM. The next meeting will be in July.