

MEETING NOTES
of the
STORMWATER STAKEHOLDER ADVISORY COMMITTEE (SSAC)
Lexington-Fayette Urban County Government (LFUCG)

Meeting: December 2, 2022
Time of Meeting: 9:00 a.m.
Location of Meeting: Phoenix Building – 3rd Floor Conference Room

Attendees:

COMMITTEE MEMBERS

Eileen Burk – Kentucky River Watershed At-Large
Doug Burton – LFUCG Division of Engineering
Jennifer Carey – LFUCG Division of Environmental Services
Jim Conner – Cane Run Watershed At-Large
Ken Cooke – Friends of Wolf Run
Steve Evans – Kentucky Water Resources Research Institute
Stephen Garland – East Hickman Watershed At-Large
Amanda Gumbert – Friends of Cane Run
Don Hill – Fayette County Neighborhood Council
Greg Lubeck – LFUCG Division of Water Quality (for Charlie Martin)
Tom Martin – LFUCG Division of Planning (for Jim Duncan)
Mary Murray – Federal Facilities, Lexington VHA Medical Center
Amy Sohner – Chair, Bluegrass Greensource
Clay Turner – Hickman Creek Conservancy
Russ Turpin – Wolf Run Watershed At-Large
Jerry Weisenfluh – Kentucky River Watershed Watch

LFUCG STAFF AND REPRESENTATIVES

Denice Bullock – LFUCG Division of Water Quality
Jeffinisha Cobb – LFUCG Division of Water Quality
Sarah Donaldson – LFUCG Division of Environmental Services
Becky Irwin – LFUCG Division of Water Quality
Demetria Kimball Mehlhorn – LFUCG Division of Environmental Services
Jennifer Myatt – LFUCG Division of Environmental Services
Lindsie Nicholas – LFUCG Division of Water Quality
Abby Terry – Tetra Tech, LFUCG MS4 Program Management
Richard Walker – Tetra Tech, LFUCG MS4 Program Management

OTHER ATTENDEES

Amy Clark – Fayette County Neighborhood Council
Josiah Frey – Kentucky Division of Water
Bob Hawley – Sustainable Streams, LLC
Ken Johnson – Volunteer Water Quality Sampler
Brad Lee – UK Cooperative Extension Service
Malissa McAlister – Kentucky Water Resources Research Institute
Steve Vogel – Strand Associates

Opening Remarks

Amy Sohner opened the December meeting at 9:02 a.m. and asked those attending to share their name and organization when speaking.

Approval of 09/09/2022 Minutes

Ms. Sohner asked if there were any additions or corrections to the minutes. There were none.

A motion was made by Ken Cooke; seconded by Eileen Burk, and carried unanimously to approve the minutes of the September 9, 2022, meeting.

Kentucky's Nutrient Reduction Strategy Update

Josiah Frey, Kentucky Division of Water (KDOW), gave a synopsis of the updated Kentucky Nutrient Reduction strategy. He began by talking about how the nutrient reduction strategy focuses on removing excess nitrogen and phosphorus from waterways. This is important because the excess nutrients will affect the drinking water's taste and odor and can be toxic to the public, cause recreational issues, and are expensive to treat.

Mr. Frey said that the Mississippi River/Gulf of Mexico Hypoxia Task Force is a collaborative state/federal partnership that focuses on reducing the flow of nutrients to the Gulf of Mexico dead zone. He explained that as water drains toward the Gulf of Mexico, the excess nutrients will impact the ecosystem in the Mississippi River. They will also affect the businesses, such as fisheries, who depend on the Gulf of Mexico for their livelihood.

Mr. Frey indicated that Kentucky is truly different from other surrounding states. All watersheds in the state drain to the Gulf of Mexico. Kentucky's unique landscape, livestock (beef cattle) industry, diverse agricultural land use, and population growth put nutrient pressure on wastewater facilities, septic systems, and local waterways.

Mr. Frey directed the audience to the Updated (2021) version of the 2019 Nutrient Loads and Yields in Kentucky Study and briefly explained that the study compares the nutrient loads and yields of the ambient river network to the US Geological Survey (USGS) gage data to see where the highest concentrations of nitrogen and phosphorus are leaving the different watersheds in Kentucky. This study will help focus resources on areas with greater need (higher concentrations).

Mr. Frey then directed the audience to Section 319 Nonpoint Source Management Program and indicated that these grant funds help support the KDOW in nonpoint source activities through planning and implementation projects. KDOW is able to track completed projects and projected reductions in nutrients over time. The updated strategy gives the state a holistic picture of where past and current resources have been allocated and areas that need the greatest attention. The loads and yields study also shows a steady increase in nitrogen and phosphorus statewide and overtime across watersheds. KDOW also looked at nitrogen deposition from the air and the study shows a steady decrease, as different emission standards come into effect.

Mr. Frey said that the KDOW along with the University of Kentucky, EPA Regional 4, and others piloted a Wastewater Treatment Optimization Program. He explained that this pilot program is similar to the Bio-Tiger model that was developed by the University of Memphis to help certain-sized facilities turn their blowers on and off at the wastewater facility to save energy and decrease nitrogen outputs. He noted that Princeton University had success with this type of model.

Mr. Frey asked what we are doing as a State to prioritize our resources. He said that the Agriculture Water Quality Act (AWQA) was passed in 1994 to create a planning tool to help with Best Management Practices, funding resources, and technical resources for producers/farmers. He said that the KDOW Water Health Portal is another tool that provides information about the condition of local water and it shows where the State has invested its resources. He then said that KDOW is looking at expanding Wastewater Treatment Optimization and/or adding permit limits where applicable. He added that the Municipal Separate Storm Sewer System (MS4) general permit is being updated and should be available in the spring.

Mr. Frey directed the audience to the color-coded map and explained the areas in red areas with known harmful algae blooms and their drainage areas, which impacts both drinking water and recreation. The areas in gray consistently show the highest yields as far as concentration of nutrients coming from a watershed. The areas in blue are areas that have source water concerns and considerations that need to be factored in. He indicated KDOW already partners with the Natural Resources Conservation Service (NRCS) to provide a higher cost share for projects in Source Water Protection priority areas. This collaboration allows additional resources in upstream areas to protect those source water areas. These identified priority areas are also factored into the ranking system for state-funded programs like the State Revolving Fund (SRF) and 319 programs.

Mr. Frey talked about outreach initiatives and said that the state is funding resources for the Volunteer Lakes Monitoring Program, which will allow volunteers to record their observations. That information is then combined with satellite imagery to identify large-scale trends. This can be used as an early warning system. He said that they are planning to purchase drone boats to access difficult/smaller areas and provide ways for the volunteers to have the first analysis of an area before any lab analysis is done. They are also working with the state basin coordinators through the watershed planning efforts to focus on the reduction strategy. They will continue to update the loads and yield study and work with partners for additional data. They are looking to potentially add another USGS station to help close the gap in areas where there is no ambient monitoring station.

Mr. Frey said that the 2018-2019 data revealed large amounts of precipitation with fairly decent rainfall intensity. Larger, more intense rainfalls are leading to increases in streambank erosion, and excess nitrogen and phosphorus levels are often a result of

erosion. This will lead to a shift in BMPs that target/address erosion. KDOW will continue to monitor and build a network of stakeholders/partners on a statewide scale to focus on erosion and nutrient reduction. He said that through the Water Health Portal, they will continue the long-term monitoring and mapping of the waters across the state.

Mr. Frey said that the KDOW will be allocating federal funding to MS4 and Publically Owned Treatment Works (POTW) training resources. He then said that they recognize the need for uniform training across the board especially when areas do not have the additional resources to help. He added that they will be setting aside funding to invest in agricultural conservation through the Division of Conservation.

Mr. Frey said that compared to the stakeholders and private partners, KDOW does not represent the full picture. He said that they want to highlight long-term trends for both the private and public sector investments in nutrient reduction/ water quality improvement on a larger scale. They understand that there are lags between nitrogen and phosphorus facility reduction and downstream water quality monitoring stations. They need to be able to forecast what is being done and then present those findings to federal counterparts, other stakeholders, and partners to show the whole story and the good that is being done.

Mr. Frey indicated that this information can be found online at Kentucky Energy & Environmental Cabinet.
<https://eec.ky.gov/Environmental-Protection/Water/Protection/Pages/Nutrient-Reduction-Strategy.aspx>

Questions and comments

Melissa McAlister was glad to hear about more assistance being provided for wastewater treatment. Watershed watch sampling efforts have often identified elevated nutrient concentrations that can be traced back to treatment facility effluent. She indicated that she is involved with Harrington Lake monitoring and recommended some sort of annual outreach/feedback to keep the volunteers engaged and encourage them to participate. Mr. Frey agreed.

In terms of conservation, Ken Cooke asked how much Farm Bill funds are utilized for nutrient reduction verses 319 funds. Mr. Frey explained that since the NRCS is a federal agency there are more restrictions and information is not shared as easily. He said that the KDOW is collaborating with the NRCS on National Water Quality Initiative and the Mississippi River Basin Initiative about ways to use the same methods as was done with Section 319 Nonpoint Source Management Program in tracking nitrogen and phosphorus.

Mr. Cooke then asked if the KDOW anticipates including the nutrient reduction strategies in future permit conditions. Mr. Frey replied that the KDOW Permitting group will be looking at when it makes sense to do optimization work verse adding permit limits for POTW permits. He indicated that the KDOW will be collaborating with the Office of Energy Policy to help link their equipment together to make sure it works correctly.

Steve Evans asked if the SRF will prioritize tertiary treatment for nutrients in wastewater treatment plant applications even if they are outside of a priority area. Mr. Frey said that the SRF does not have requirements to treat or monitor nutrients because it is a loan program where anyone can apply for funding. He then said that if the applicant will be addressing nutrients then the project will be ranked higher if they are within a priority area. He added that even if the project is not within a priority area, if they are addressing nutrients, that project can still rank higher.

Russ Turpin said that he wants to believe that these BMPs work, but when there is a watershed with a known impairment, where there has been a collaborative/community effort to add BMPs, and the watershed is still impaired, it is hard to have hope or to say that it made a difference or even made an improvement to the watershed. He understands telling the success stories but asked if anything could be said to give hope to continue on this path in terms of are these changes making a difference or does something need to shift to demonstrate the value of the work that has been done over the years. Mr. Frey briefly explained how the KDOW is working with the Water Quality Branch to identify success stories and what could be included in the process to monitor the impacts to nutrient loading. He indicated that in terms of knowing if the process is working that is harder to forecast, but asked everyone to continue their help in water quality conservation.

Steve Evans said that sediment and addressing erosion is a major issue, but also permitting is a huge obstacle. He asked if there would be any interest for the KDOW to create a Task Force to streamline the management of erosion and sedimentation in the state. Mr. Frey said that they would consider it. Russ Turpin agreed with a Task Force being created and indicated that the process exists to keep people from doing bad things, but it also inhibits people from doing good things with a large administrative/financial/ regulatory burden to apply to do simple but impactful work along KY streams.

Low-Cost, High-Benefit Strategies for Facilitating Watershed-Scale Stream Restoration

Bob Hawley, Sustainable Streams, LLC, recognized the Boone County Conservation District and Sanitation District No. 1 (SD1) on their strategies and the implementation of the Gunpowder Creek watershed stream restoration. He explained the group had recently got the lower 8 miles of Gunpowder Creek delisted which used to be impaired for sediment and habitat. The biological community has come back in the lower section of the 60 square mile watershed. Instead of working on a smaller scale restoration, they are trying to facilitate larger, watershed scale stream restoration as was done with Gunpowder Creek.

Mr. Hawley explained that 300-400 years ago watersheds were a lot messier, mostly forested, and very wet. The streams within the watersheds were well connected with the floodplain through multiple threads, loaded with wood and beaver dams. He said that now streams are less connected to their floodplains and concentrated through a drainage channel, exacerbating erosive forces. Our drainage systems are more efficient in taking water back to the stream, giving streams more water and disconnecting them from their floodplain.

Mr. Hawley indicated that several factors have impacted a watershed - the loss of beaver dams, which aided in water retention, and helped maintain the vegetation that removes nutrients; the historical deforestation of the lands and the stream channelization to transport logs downstream to waterfront cities. The floodplains, streams, and rivers used to be loaded with wood and the hillside slopes were mostly forested, but once stream channelization occurred and hillsides cleared for farming, sediment that used to be up on the hillside started flowing downstream to the valleys filling up the floodplains. This caused the streams to be disconnected from the floodplain.

Mr. Hawley referenced the stream in Zandale Park in the Lansdowne Neighborhood and explained that even though this is a small stream, there are four (4) feet of sediment taking up space in the floodplain that used to provide a good habitat and flood storage for this area.

Mr. Hawley touched on the agricultural drainage system and explained that tile drains, ditches, and channelized streams were created to keep the valleys drier and suitable for farming. Even though this was good for society, it sent the water downstream faster making it harder to keep the water on the landscapes and in the floodplain.

Mr. Hawley asked how watershed impacts affect our streams. He explained that urbanization, deforestation, stream channelization, lack of beaver activity, and lack of wood/vegetation have tipped the scales toward erosion in reference to Lane's Sediment-Water Balance. These impacts are increasing erosion, reducing resistance on the banks, and concentrating energy in our streams. These actions have caused streambanks to erode and collapse; and over time, the stream starts to widen eventually to the point where sediment cannot be transported so it starts to build up. Then decades later, bars are colonized by vegetation that becomes benches connecting that stream to a new floodplain. He further explained when a stream is thrown out of balance it takes many years for that stream to adjust to the new system. During this time the soil is lost, land is lost, the stream erodes and sediment and nutrients are sent downstream.

Mr. Hawley asked what can be done on the landscape, stream, and floodplain scale to make our systems wetter and hold back more water. This begins with finding strategies that help restore a more natural flow regime and less erosive flow regime. Strategies that also lower costs, have beneficial reuses, and work for farmers.

Mr. Hawley touched on low-cost, high-benefit restoration strategies:

1. Landscape restoration/ headwater storage
 - Reforestation and Native Meadows (e.g. Gateway Community College converted a mowed field to a native meadow allowing interception storage and better soil infiltration)
 - Green Infrastructure and Stormwater Control Measures
 - Amended Swales and Stream/Wetland Complexes
 - Stormwater Optimization in the Right-of-Way (e.g. Kentucky Highway project in Boone Co converted a roadside ditch into a stream/wetland complex with an underdrain that detains the stormwater runoff of the 100-year event and releases it at a trickle)
 - Detention Basin Retrofits
 - Restricting the low flow outlet for storms under the 2-year event (low cost, no regrading)
 - Reducing downstream erosion from smaller events ($Q_{critical}$)
 - Takes pressure off receiving streams and gives them time to allow vegetation to establish/take root
 - Stormwater Policy Optimization
 - Outlet Optimization ($Q_{critical}$)
 - Make sure new development is not making the problem worse

- Consider working with large developments for “over control” opportunities
- 2. Stream Restoration/ Channel Storage
 - Stream Mitigation and Conventional Stream Restoration
 - Large Wood Installations
 - Hand-placed log structures with no equipment (does not require 404/401 permits)
 - Channel-spanning jams (improve habitat/ retain wood/ attenuate hydraulic energy/ prolong baseflows)
 - Lessons learned
 - Go big or go home (abundant key logs and frequent jams)
 - Key logs proportional to channel (length more important than diameter)
 - Ramping/Anchoring
 - Couple with revegetation, reforestation, live stakes
 - Forested Buffers
 - Channel-spanning roots (stability and flow benefits)
 - Sustainable wood loads and wood management
 - Shade, water quality, food web benefits, denitrification
 - Beaver reintroductions (increase resilience in changing climate, e.g. droughts, fires, etc.)
- 3. Floodplain Restoration and Off-channel Storage
 - Stream/Wetland Mitigation
 - Bankfull Wetlands (hydraulically connected to streams/rivers during otherwise erosive flow events)
 - Create more flood storage
 - Can offload erosive flows
 - Expand important/rare habitat (off channel habitat)
 - Water quality benefits
 - Restore a more natural disturbance regime
 - Floodplain Reforestation
 - Beaver Reintroductions

Mr. Hawley concluded by noting that the idea is to use these strategies and tailor them to your local community and watersheds to target lower cost methods and BMPs that will move the needle in our waterways (delist streams, reduce erosion, mitigate nutrients, etc.)

Questions and comments

Mr. Evans asked if linking the hand-placed logs with rebar requires permitting. Mr. Hawley answered he is unsure if a permit is required but he is aware of using Sycamore Willows instead of rebar. The fastest way to slow the flow of water is to mimic what a beaver does, which is to get wood in the system and make sure it does not float (ramped up behind a live tree, lodged into the toe of the other bank, and cross them with brush).

Amanda Gumbert asked if this method has been done on smaller privately owned property. Mr. Hawley responded affirmatively.

Ms. Gumbert asked about the landowner’s perception of added materials to the streams. Mr. Hawley indicated that each situation is different, but the private property owners who have this done can also influence their neighbors’ perceptions.

Mr. Cooke asked what parameters were used to de-list Gunpowder Creek. Mr. Hawley said Gunpowder Creek was de-listed for sediment, not *E.coli*.

Mr. Cooke asked how the sediment was measured to de-list Gunpowder Creek. Mr. Hawley replied it was based on the biology of the creek.

Mr. Cooke asked if mitigation money was accessed either through a bank or some other means. Mr. Hawley replied that the mitigation money was used on the hand-placed log structures and the restored meandering stream was a mitigation project with Kentucky Fish and Wildlife.

Mr. Cooke asked if these were done in conjunction with SD1. Mr. Hawley said that SD1 worked with Fish and Wildlife over the last 15 years to establish its own bank for projects within their jurisdiction inside urban MS4. Mr. Hawley added that SD1 uses migration dollars to retrofit detention basins among other projects.

Mr. Cooke said that the U.S. Army Corps of Engineers will not generally approve projects using mitigation money in Fayette County. Mr. Hawley said that the Corps of Engineers use to not spend money on urban mitigation projects because of the risk factors but restoring the flow regimes upstream mitigates the risks and has opened the door for mitigation in SD1 service area.

Mr. Cooke asked for clarification on how the Rapid Bioassessment Protocol (RBP) went from 70 to 110. Mr. Hawley replied that the adjusted mitigation units are based on the flow class and RBP score.

Amy Clark asked about the impact of invasive species on replanting and buffer areas with respect to maintenance of the projects. Mr. Hawley replied that invasive species will be eliminated if the wetland is restored. He said that with reforestation when the mowing is stopped, it allows invasive species to grow, but having a native canopy established helps with reducing invasive species from growing. He suggested that Black willows can be planted near a stream from live stakes to provide shade/shelter for wildlife.

The Floodplain Appeals Committee: It's Role in Lexington's Floodplain Management

Thomas Martin, Division of Planning, said that the Floodplains Appeal Committee was created through Article 19 (Floodplain Conservation and Protection) of the Zoning Ordinance. The intent of Article 19 was to provide floodplain management; and from a zoning and land use perspective, it specifically regulates floodplains.

Mr. Martin said that the Zoning Ordinance and Land Subdivision Regulations are adopted regulations or administrative regulations that are designed to guide the physical development of the community. The Division of Planning addresses the health and safety issues such as light, air, fire, and flooding.

Mr. Martin briefly explained that the intent of Article 19-1 cites *public awareness of the flooding potential, protect human life and health, minimize public and private property damage, protect individuals from buying lands and structures which are unsuited for intended purposes because of flood hazards, and minimize surface and ground-water pollution and erosion of the floodplain soils which will adversely effect human, animal or plant life.*

Mr. Martin said that it is important to remember Article 19 was developed in the 90s primarily for floodplain management relative to damages and danger from flooding; to minimize the public and private impact of flooding; and to minimize the necessity of public investment in flooding. Lexington has been participating in the FEMA - National Flood Insurance Program (NFIP) since the 70s. He explained that NFIP has a point system and the more that is done to address the flooding issue in the community, the lower the property insurance rates will be for the citizens. He said that reasonable flood insurance is a subjective term because flood insurance is more expensive than house insurance. He added that the intent of Article 19 was not to create an unjustified demand for public infrastructure. If flooding is managed, the risk is managed, then there does not need to be a lot of controls. Article 19 is about management and it is a vital part of the city's participation in the National Flood Insurance Program.

Mr. Martin indicated that, in terms of land use, Article 19 is part of the Zoning Ordinance and it outlines what can and cannot be done within or around a floodplain. He explained that structures cannot be built in a floodplain unless a Special Use Permit is approved. He indicated that FEMA uses LiDAR (Light Detection and Ranging) to map an established location of a floodplain, which has been adopted and regulated by the city. The City regulates to the 100-year floodplain.

Mr. Martin said that a 20-year event, a 50-year event, a 100-year event, or a 500-year event is a statistical chance of a rain event occurring in an area. It is not a question of if it will happen, but it's a question of when it will happen, which is why floodplains are regulated.

Mr. Martin said that due to the principal flooding issues, Article 19 is strict, it's specific and it places tremendous emphasis on engineering analysis and its recommendations, which are related to stormwater management and how it is controlled. He then said that Article 19 also governs the development plan and the information that must be shown on it as well as how the plan is reviewed. The development plans must go through the Technical Review Committee, which is where both government and private utilities coordinate in reviewing that plan to Article 19.

Mr. Martin indicated that older areas, that where developed prior to Article 19 standards were in place, are often the most problematic areas when it comes to flooding. If funding is available, the city will purchase properties, tear those houses down and turn that area into greenspace.

Mr. Martin said that Article 19 does allow for Special Permit uses, which allows certain utilization of a property in a floodplain. These plans are reviewed and approved by the Division of Engineering to ensure certain conditions are met, and certified by the Urban County Engineer. There are exclusions to a Special Permit Use such as an above-ground swimming pool, but if a structure is being proposed within the floodplain, then the requirements of Article 19 must be met. Mr. Martin said that the Urban County Engineer can approve, conditionally approve, or deny a Special Use Permit. However, the Urban County Engineer does not have the authority to approve or deny floodplain variance. An appeal of the Urban County Engineer's denial of a Special Permit Use or a request for a floodplain variance must go through the Floodplain Appeals Committee.

Mr. Martin said the Floodplain Appeals Committee is appointed by the Planning Commission and consists of a five (5) member panel that includes the Commissioner of Planning, Preservation, and Development (or the Commissioner's designee) one (1) member of the Planning Commission, one (1) member from the Urban County Council, one (1) professional engineer in private practice, and one (1) member from the Home Builders Association of Lexington.

The committee has met seven (7) times since its inception, and often members of the committee must be reappointed. They have disapproved one appeal and approved the other six (6). All appeals have been for redevelopment projects in areas developed prior to the Article 19 standards.

Questions and comments

Mr. Cooke commended the Technical Committee Review process, the transparency of Accela, the public notices that are sent to the residents, and to the staff for their efforts. However, in the last Floodplain Appeal Committee, notification was only posted to the website 48 hours prior to the meeting; notification was not sent to the people restoring the area. Mr. Martin said that just like a zone change request or Board of Adjustment request, only properties within a certain radius will be notified.

Mr. Cooke suggested that notification of a Floodplain Appeals Committee meeting should be processed just like the Board of Adjustment requests and zone changes are processed. Mr. Martin replied that the Floodplain Appeals Committee was created specifically through Article 19 of the Zoning Ordinance and it follows very specific legal requirements regarding notification. He agreed that interested parties should be involved and notices made available to them. He suggested that a written request be sent to the Division of Planning and if a request comes through for that area then the staff can notify that person.

Ms. Clarke asked why the floodplain variance does not require the Board of Adjustment review. Mr. Martin said that the Floodplain Appeals Committee was created specifically through Article 19 of the Zoning Ordinance for floodplain management. The Floodplain Appeals Committee allows the applicant a legal process to appeal the Urban County Engineer's denial of a Special Use Permit.

Mr. Lubeck commented in a 30-year mortgage there is a 1 in 4 chance of seeing a 100-year flood event.

Nominations for Expired Watershed At-Large Seats

Ms. Sohner commented that the Watershed At-Large seats for Boone Creek will be expiring in March and if there is a suggestion to contact Ms. Nicholas before that meeting.

Approval of Meeting Dates for 2023

- March 3rd
- June 2nd
- September 8th
- December 1st

A motion was made by Ken Cooke; seconded by Steve Vogel, and carried unanimously to accept the 2023 meeting dates.

Potential Topics for Next Meeting

Mr. Cooke proposed a discussion regarding the MS4 permit.

Mr. Turpin asked if the Infill and Redevelopment presentation will include the impact of increased impervious area on stormwater volumes and flooding. Mr. Martin said that Infill and Redevelopment from a planning perspective is not fully and completely from an engineering perspective, but it also includes the other staff members referencing manuals/regulations that the engineers must follow.

Mr. Turpin then asked if the Infill and Redevelopment could include, on some degree, the broader picture of what is projected on our streams as a result of infill. Mr. Martin replied affirmatively.

Mr. Cooke asked how often the Stormwater Manuals should be updated and whether it is per permit cycle or every three (3) years. Mr. Walker replied the permit does not indicate it needs to be updated at any particular milestone. It's when the community or government feels a change is necessary.

Ms. Clarke said that there have been amendments on parking or open space that were partially or entirely passed particularly for townhome developments. She asked if that type of initiative to change the shape of Infill and Redevelopment through a ZOTA be part of the scope. Mr. Martin said that next month's presentation will be dealing with Infill and Redevelopment as opposed to the impact of all development. He said that the presentation would not include planning in general, but it would focus on how infill and redevelopment are done legally and how it is perceived.

Ms. Clarke suggested that engineering give their perspective on impervious surface and stormwater impact associated with the new regulations. Mr. Martin said that in regard to the parking, there is more landscape being involved so development is heading in the right direction to be more environmentally friendly.

Ms. Clarke asked if the Division of Planning keeps a map to show the intensity of development associated with built areas. Mr. Martin replied that he is not sure, but the staff could probably put that type of information together.

Announcements

- Nov. 25th – Gobble Grease Toss collected 500 gallons of cooking oil from 106 participants
- Dec. 16th – Workshop with the Engineering, Development, and Construction Industry @ Fayette Co Extension
- March 3rd – Next SSAC Meeting
- March 7th and 8th – Bluegrass Sustainability Summit
- March 18th – 25th – Water Week
- March 18th – Reforest 5K (Tentative)
- Community Environmental Academy (CEA) Detention Basin Planting Project

Adjournment

The meeting concluded at 11:05 a.m.