

CCV Stormwater Management Committee Meeting
November 10, 2020 7:00-8:30 PM

In Attendance: Julie Sparacino, Peter Marks, David Goldwyn, Elise Pas, Paul Kempton, Nancy Somerville, Thomas McCarty, Bruce Hebbard, Kevin Cannard (joined in progress)

1. Call to Order
 - a. 6 members of SWM committee present at start of meeting- quorum noted
2. Approval of Minutes
 - a. Motion to approve meeting minutes from last call and motion was seconded- minutes were approved.
3. Review of Current Town Actions Relevant to this Work (Pete Marks):
 - a. Civil Engineering Company (Azar) is conducting a drainage study to examine streets, curbs, etc; this was amended to include water flow a couple of weeks ago to assist with this work.
 - i. They will note variations across the town in street width, curbs.
 - b. CCV Council will want to know the scope of the time we want with Joe Toomey and Ron Bolt. Pete Marks will relay the request to the Council. The committee should then be able to contact Joe about the permitting requirements as they relate to water and new builds. Looking to engage them on Dec 1.
 - i. Nancy will be exploring this in comparison to other neighborhoods.
 - ii. CCV guidelines follow the County water requirements- this can be confirmed with Joe. The relationship between the county and the homeowner on these requirements is something we can further explore with Joe and also Ron Bolt (town lawyer)
 - iii. Questions about the enforcement of compliance with water requirements: compliance can be determined through build site plans; complaints can also be made to the county
4. Discussion/Implications of GIS mapping of CCV (McCarty)
 - a. CCV boundary and drainage mapping: natural watersheds and streams going through CCV- county drains are present along the natural watersheds and then tie into the state pipes on Connecticut (for eastern portion of CCV). Maps do not suggest constrained piping on Puller (would need to confirm with the county)- the piping appears to widen going downhill to accommodate the water in the NW portion of CCV. Maps also indicate where stormwater management facilities are present - they indicate that newer construction have such facilities (e.g., dry wells, cisterns, rain gardens).
 - i. **Item to come back to later:** Explore whether the new build plans include such stormwater management facilities and find out how the county determines the adequacy of plans.
 1. Nancy reported that within towns with more stringent stormwater management policies, they are checking these themselves (i.e.,

the county may not). Other towns also have ordinances about tree removal.

2. Nancy also raised the question about drains on private property (e.g., beyond their house) and then also within their house (e.g., unfinished basements) and whether we can find out whether/how they tie into the stormwater system. How do we identify who these belong to (county or homeowner) and how to determine how it is working and how to optimize it?
 3. Kevin raised the questions of how the county can determine whether the pipes are functioning at their full capacity (e.g., collapsed pipes; growth in pipes).
5. Presentation on rainfall/weather related data (Hebbard)
- a. Reviewed how rainfall is measured differently by two types of rain gauges (traditional gauges which measure precise accumulation between readings -- say, once a day -- while others can also measure the intensity of rain as it varies over time), providing context for how we discuss and ascertain the amount of rainfall that is documented for any given storm. For the September 10 storm, the most reliable gauge (CoCoRaHS) documented 4.69 inches in the Town of Kensington (these gauges measure 24-hour accumulation so do not tap the rain per hour intensity). The storm probably had about [4 inches of rain in roughly 3 hours and, as such, would be between a 50 and 100 year storm](#). At the peak of the storm (about 1 PM as measured by an unofficial, intensity-measuring gauge in CCV), rainfall could have averaged 2 inches/hour or more for at least 30 minutes. There was a second, lesser peak at about 3 PM. - Bruce will examine further.
 - b. There is also published data in the US [Fourth National Climate Assessment](#) (NCA4) to suggest the frequency of such high intensity storms have increased over time and are projected to continue to increase. From 1958-2016, the NE of the US has seen a 55% increase in total annual precipitation falling in the heaviest 1% of events (if you look at average rainfall in the worst events- the rainfall for those most severe events, the rainfall has increased by 55%). In the SE, this is a 27% increase. (The demarcation line for NE and SE is the Potomac River.) In the future, these trends are projected to continue; between now and late this century, those increases in our area could range from about 20-30% to 40% or more, depending on which climate change scenario plays out.
 - c. Additional notes:
 - i. Another resource documenting the rainfall shared by Tom: National Weather Service site showing total rainfall for selected heavy rainfall events in our area over the past several years:
<https://www.weather.gov/lwx/pnsmap?type=rain&date=20200910&option=rain>
 - ii. [NWS Quantitative Precipitation Estimate map](#) for our area (24 hours including the September 10 storm) shared by Bruce.

- iii. [CoCoRaHS rainfall observer reports interactive map](#) (for our area the same day) shared by Bruce.
 - iv. Relevant other data point shared by Paul: Precipitation trend across the U.S. over the last century (Kunkel et al 1999) NOAA. Global warming increases evaporation rates, leading to more precipitation. The increase amounts to about 2 inches in 30, or roughly a 7-8% over the last century.
 - v. **Group discussion and other ideas:** Can we examine prior storm data (e.g., for 2-3 weeks prior) to determine if prior saturation played a role (e.g., the day before the Sept 10th storm, there was rain; and flash flood warnings in the prior week as well)? Can we look at the historical weather radar data to take a look at the intensity of the storm and its relation to CCV? Are there data from the US (e.g., NOAA studies) that demonstrate the changes in rainfall over years? Are there updates to the models about the intensity of storms that are needed? Bruce will follow up on all of these (but welcomes others' contributions as well).
6. Resident Questions: no residents present
7. Other Information and Next Steps
- a. CCV walk through last week with Councilmen Friedson and Alborno; Delegates Carr and Solomon; MCDOT reps; DEP rep; SWM committee members. MCDOT is going to present to the MoCo Council on November 23rd. MCDOT is already conducting a study in a nearby town (it is \$75K) and we could similarly conduct such a study, but that would take a year.
 - b. Next steps should focus on what we can be doing in the interim. This includes examination of other town and MD county models for stormwater management (individual steps homeowners can make; town ordinances; green infrastructure requirements). On the list are: Village of Chevy Chase, Town of Chevy Chase, Chevy Chase Section 5, Town of Somerset, TOK, Town of Glen Echo, Martin's Additions, Garrett Park; other counties: Queen Anne's and Prince George's. Examining projects meeting criteria for "Sustainable Site" by LEED (Resource: <https://www.usgbc.org/articles/leed-cities-and-communities-around-world-february-2020>). Nancy can share back in early December (or later, if needed)
 - c. Kevin shared that 5 families on Everett sought consultation from an engineer on how to address their property issues- he will reach out about this, to determine whether they would be willing to share.
 - d. Brief discussion about soil protection with new construction and the importance of vegetation preservation to increase soil permeability. Tom said he would look for that soil characteristic GIS link to review for mapping.
8. Adjournment