

**ATTENDEES:** SWMAC: Heather Gill, Paige Maz, Charles Boschen, Paul Burgmayer,  
Joe Schanne  
Township: Stephen Norcini  
CH2M: Daniel Wible

**PREPARED BY:** CH2M

**MEETING DATE:** December 10, 2015

**SUBJECT:** December 2015 meeting

**YouTube link:**

[https://www.youtube.com/watch?v=DHqjaQqXHDw&index=10&list=PLWSgQZEOK8cWuk\\_of0zq2i9J-kzoKsYZx](https://www.youtube.com/watch?v=DHqjaQqXHDw&index=10&list=PLWSgQZEOK8cWuk_of0zq2i9J-kzoKsYZx)

**Review of Previous Meeting Minutes**

- November 12, 2015 SWMAC meeting minutes – approved with one typographical edit to page 3

**Public Comment**

- Alan Brotman (102 Cumberland Place, Wayne, Ithan Creek watershed) discussed an on-going, significant flooding problem on his property and several other neighboring properties
  - Mr. Brotman presented several maps of his neighborhood, several of which were from the Ithan Creek watershed assessment by CH2M
  - Mr. Brotman’s property is located in a bowl-shaped depression bordered by Radnor Valley Country Club (RVCC) to the north, Clyde Road to the south, residential properties on Arbor Place to the west, and Cumberland Place to the east
  - Over the years, many property owners in the neighborhood have tried to divert runoff from the golf course around their properties in a variety of ways (pipes, swales, etc); much of the diverted runoff ends up flowing towards and through Mr. Brotman’s property; all of this runoff eventually discharges to Ithan Creek near I-476
  - According to Steve, there is no stormwater management in the vicinity of Mr. Brotman’s property, only stormwater conveyance elements (pipes and culverts); stormwater management was not required at the time this area was originally developed
  - The runoff directed towards Mr. Brotman’s property originates from Arbor Place (uphill cul-de-sac), uphill residential properties, and RVCC
  - Steve noted the possibility of an uphill volume control project to help reduce the flooding at Mr. Brotman’s property and other neighboring properties; in addition, such a project could help to improve the quality of runoff (i.e. reduce sediment loads) discharging to Ithan Creek
  - According to Mr. Brotman, RVCC has not claimed responsibility for the on-going flooding problems; Steve noted that he observed several HPDE pipes on RVCC property but could not determine their purpose as he did not enter the property
  - Paul suggested that RVCC might be a good candidate for the potential ODP grant program; though the details would have to be worked out, this could allow for a Township-funded, volume control project to be constructed on RVCC property
- Regarding the SWMAC’s overall approach to prioritizing and selecting stormwater retrofit projects, Maya van Rossum (Delaware Riverkeeper) emphasized the importance of developing precise project selection criteria in order to have a more informed dialogue with the community at large

- Ms. van Rossum also emphasized the importance of looking at private properties in addition to public properties for potential stormwater projects and noted that the original plan for the Radnor Middle School project was to also include uphill distributed stormwater projects
- Ms. van Rossum stated that she was not aware of any studies or analyses that have quantified the impacts of flooding on the Township’s emergency services

#### **Discussion of ODP Incentive Program**

- Deferred to future meetings

#### **Stormwater Budget Discussion**

- General discussion about establishing an annual budget for infrastructure repairs/upgrades
- Steve clarified that the current stormwater budget does not include any costs except previously approved administrative fees and other purchase orders (e.g. Marlbridge Road culvert)
  - upon approval by the Board of Commissioners, a new ordinance is created to establish the Township’s 5-year stormwater budget; however, one month must pass from budget approval before any funds can be spent
- General discussion of how the stormwater budget should be defined (i.e. general categories versus specific items); each specific project must be approved by the Board of Commissioners before it can be advanced
- General discussion of township-wide flood/engineering assessment; SWMAC specifically requested that CH2M prepare a proposal for this work and that the outcome of this work include a township-wide, initial prioritized list of stormwater capital improvement projects
- Steve noted that the approved scope of work for the Ithan Creek study included the development of three Request for Proposals (RFPs) by CH2M
  - the first RFP was for the design of a new storm sewer to the stormwater management system at the Radnor Middle School
  - Steve requested that CH2M prepare RFPs for the concept plans for Banbury/Francis/Windsor and the parking lots at S. Wayne/Runnymede
  - Paul suggested that any decision on the S. Wayne/Runnymede parking lot concepts be deferred until after the township-wide flood assessment has been completed
- Joe suggested that Steve and Daniel work together to take the SWMAC’s recommendations and prepare a 5-year stormwater budget for the January 2016 SWMAC meeting; Joe further suggested that the budget include the following 6 general categories and approximate allocations by percentage:
  - Stormwater O&M, cleaning, MS4 – 10%
  - Repairs/upgrades – 20%
  - Flood mitigation projects – 50%
  - Rebates and incentives – 5%
  - Administration and general engineering support – 3%
  - Existing approved projects – 12%

#### **Ithan Creek Watershed Assessment Recommendations/Solutions by CH2M**

- Daniel presented the final concept designs for the Runnymede Ave parking lot (School District-owned), the S. Wayne Ave parking lot (Township-owned), and the Radnor Memorial Library parking lot
  - The concept designs include underground storage/infiltration systems (with storage depths ranging from 3.25 to 5 feet), bioswales, a tree infiltration trench, overflow control structures, and several new inlets and diversion structures off of Runnymede Ave and W. Wayne Ave

- The combined drainage area to the concepts designs is 81.1 acres, which includes 34.2 acres of impervious area
- Rain events simulated: 5-, 10-, and 25-year 1-hour events; four scenarios modeled: existing conditions, both parking lot systems, S. Wayne parking lot only, and Runnymede Ave parking lot only
- Results of modeling indicate that the conceptual underground storage/infiltration systems at the two parking lots are not able to completely manage the flood volume at the site during the simulated rain events; storage/infiltration systems are constrained by footprint area and excavation depth
- The S. Wayne Ave parking lot system was shown to be more effective than the Runnymede Ave parking lot system
- The modeling also showed that the existing storm sewers uphill from the parking lots are incapable of conveying the simulated rain events without surcharging; Daniel presented several storm sewer profiles demonstrating this
- Daniel presented a series of newly created maps illustrating the flood extents and depths for the various rain events and model scenarios; Daniel also presented similar maps that were created for the concept design at Banbury/Francis/Windsor
- SWMAC in general agreement that the S. Wayne/Runnymede parking lot concepts should not be further advanced until after the township-wide flood assessment has been completed and there is a better basis for comparison with other potential flood mitigation projects
- Daniel presented a summary of historical rain events from a rain gauge at Philadelphia International Airport
  - The top ten rain events from 1980-2013 were presented
  - Daniel noted that the second highest event during that period, by peak intensity, occurred on 9/3/2000; that event, which had a peak intensity of 2.43 inches per hour, is analogous to the 25-year, 1-hour design event (2.4 inches per hour)

#### **Old/New Business**

- Steve stated that Gannett Fleming was awarded the design of the pipe connection to the Radnor Middle School stormwater system at one of the Board of Commissioners meetings in November; design has commenced
- Steve stated that in the new year he would bring back to the SWMAC's attention the list of known stormwater issues throughout the township

**Next SWMAC meeting: 1/14/16**

#### **Action Items**

- **CH2M** to provide Township with proposal to perform township-wide flood assessment
- **CH2M** to present updated Banbury/Francis/Windsor concept modeling at 12/21/15 Board of Commissioners meeting
- **Steve Norcini** to follow-up with Gannett Fleming about whether the abandoned pipe at Mill Dam can be filled as a less expensive and feasible alternative to removal/backfill
- **Steve Norcini** to reach out to the Delaware Valley Regional Planning Commission (DVRPC) about the potential for getting a Route 30 project on the Transportation Improvement Program (TIP)