**HW3: Assignments due 2/4/19 on BB Learn**

Basics

1. Do Exercise #2 – Surface Drainage Hydraulics
2. Read Cantone & Schmidt (2009) and Goldstein et al (2016)
3. Review NYC Sewer Design Criteria (2000) and more importantly my synthesis
4. Update your precipitation data so that you’ve got both the three 2 hour events, and the new continuous precipitation data from San Juan, PR
5. (Continue to use the St. Croix Evaporation data)
6. Make sure that your model is running in dynamic wave
7. Make sure that your infiltration model is “modified Green Ampt)

Model (Re)design (focusing only on existing conditions, not pre-development):

1. Select a revised level of subcatchment aggregation
2. Redefine the subcatchment properties as necessary
   * Specifically, make sure that the infiltration data is based on the soil maps
3. Define the nodes in the skeletonized collection system (following the guidelines provided (see #3 above)
4. Add the channels
5. Size the culverts and channels to avoid surcharge (start upstream using 100 yr storm). See also #3 above)
6. Define the outfall boundary condition based on tidal elevations
7. Add baseflow to account for infiltration of groundwater into storm pipes

What to turn in:

* Power point in which you show me screen shots and text that help me to understand how you completed steps 8-14
* Make sure there is a nice screen shot in which I can see the entire drainage system.
* Total volume of runoff at the outlet of your model (inches over the study area)
* Top 5 peak rates of discharge at the outlet of your model (cfs)
* Total volume of infiltration over the year (inches over the study area)
* Total volume of evaporation over the year (inches over the study area)