Hydraulic Modeling: Basic Steps

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Note: Steps in yellow are not yet defined

1. Launch instance of AMI “Hydro Model 7\_15\_2015”
   1. Or latest AMI. Check to ensure latest controlled copy of R-code is downloaded.
   2. Select one of the higher end options for AWS PC
2. Connect to remote desktop connection
   1. Connect as “administrator”
   2. Use password from file “windows\_password.txt”
3. Increase memory on AWS PC
   1. Open command prompt
   2. Diskmgmt.msc
      1. Right click on c: drive and select “Extend Volume” and increase to ~ 300 GB
4. Ensure latest copy of R-code is downloaded
   1. Open Source Tree and check for updates
5. Download DEM, WSEDEM, thalweg data from bucket
   1. Sort sites to model on file “Data Download Template” on local PC
   2. Copy column of AWS download commands for sites to model from local file to a batch file on AWS instance PC
   3. Run batch file to download input data from bucket.
6. Generate “CFD\_Site\_List.csv”
   1. Run R-code “Build\_CFD\_Site\_List.R”
7. For non-default flow rates:
   1. Copy and paste “CFD\_Site\_List.csv” to local PCD
   2. Modify column for “modeled” discharge as needed.
   3. Copy and paste “CFD\_Site\_List.csv” back to AWS PC
8. Run “Build\_Input\_Files.R” on AWS PC (will take hours for more than a few sites)
9. Run batchfile “batchprocess.bat” (may take several days ore more for 20-30 sites)
   1. This run the Delft 3D program
10. Run macro “quickplot\_macro.m”
    1. This converts Delft 3D output to text output
11. Run “Post\_Processing.R”
    1. Will take hours or up to a day or so for 20-30 sites
12. Upload results to bucket
    1. TBD. Need to automatically generate batch file during post-processing to enable this
13. Stop AWS Instance
14. QA Results.
    1. Process TBD
    2. Remove invalid results
    3. Adjust inputs if required and re-run subset of results
15. Terminate AWS Instance