Appendix 5A Western Washington Hydrology Model Recharge Module Instructions



#### **CLEAR CREEK SOLUTIONS, INC.**

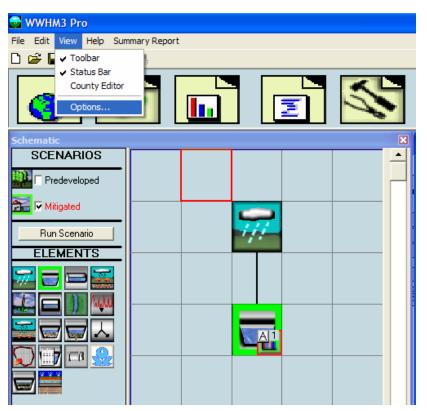
6200 Capitol Blvd, Suite F
Tumwater WA, 98501
360-943-0304
www.clearcreeksolutions.com

# Kitsap County Recharge Expansion for WWHM3 7 May 2009

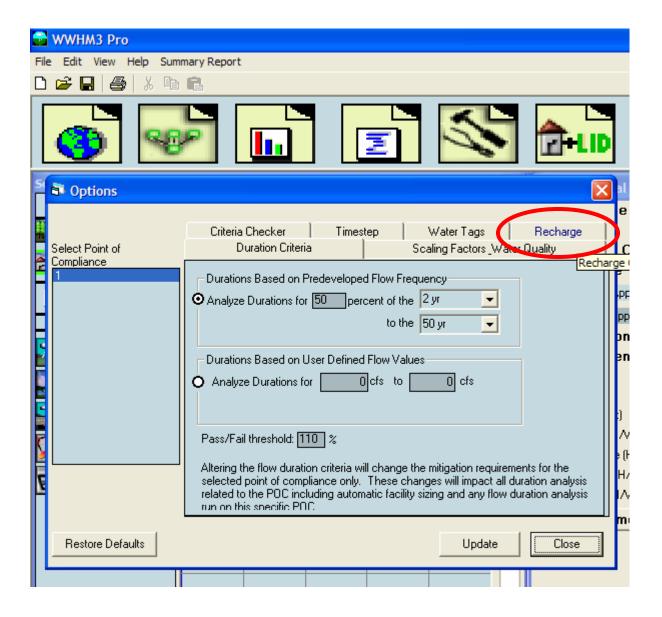
#### **Purpose**

Currently WWHM3 does not track recharge information. Recharge is considered infiltration into the groundwater layer from either pervious soils or infiltration facilities. Clear Creek Solutions has modified WWHM3 to track and compute all inflow to the groundwater level and sum these values based on each point of compliance (POC).

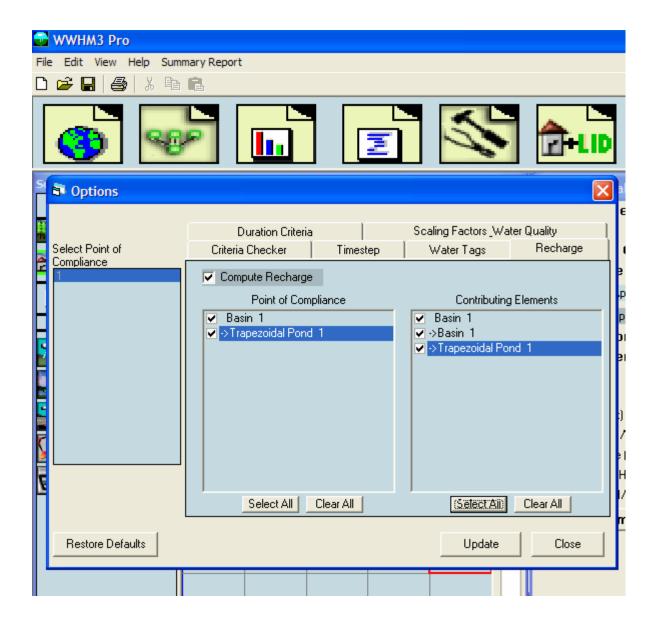
### **Model Operation**



To use the recharge calculation feature simply set up your model normally and then before running the model go to the View, Options menu item and bring up the Options window.

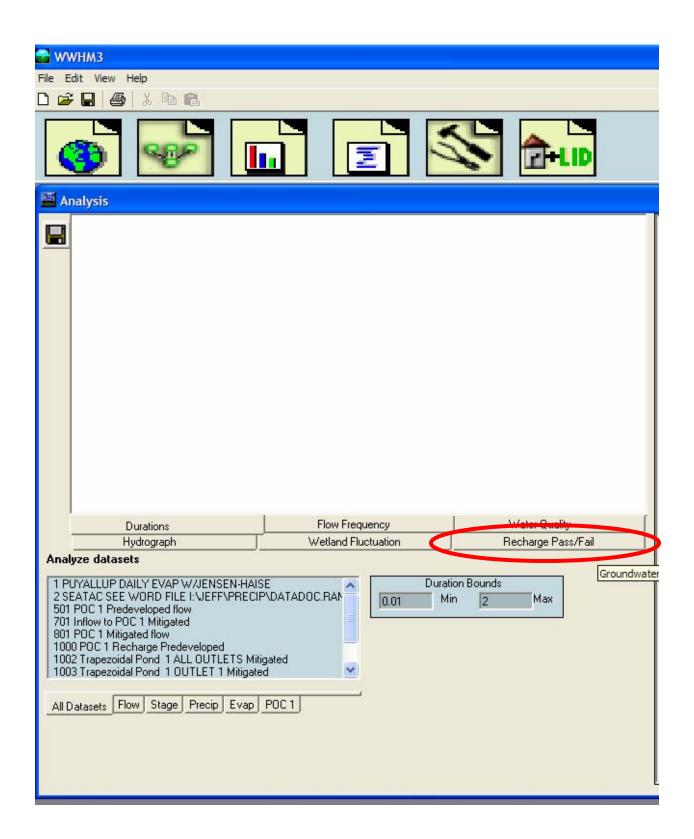


Select the "Recharge" tab.

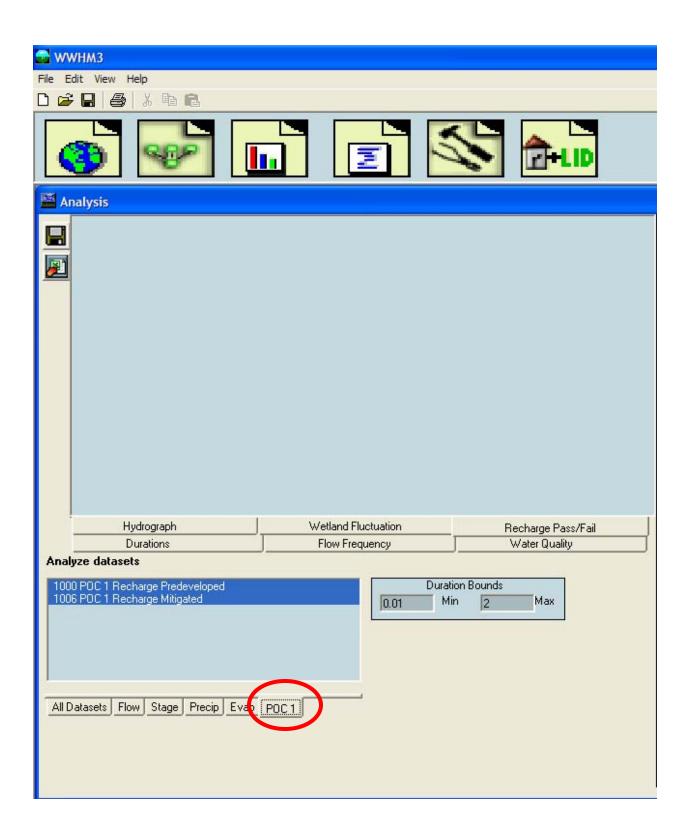


Check the "Compute Recharge" box to turn on recharge calculations. Then select the specific elements for which you want to compute recharge. Click the "Select All" button to select all elements. This turns on the recharge calculations for all the elements you are interested in. (Note: elements with an arrow ("->") in front of their names are Mitigated scenario elements.) Then click Update and return to the Schematic screen where you can simply run the model as usual.

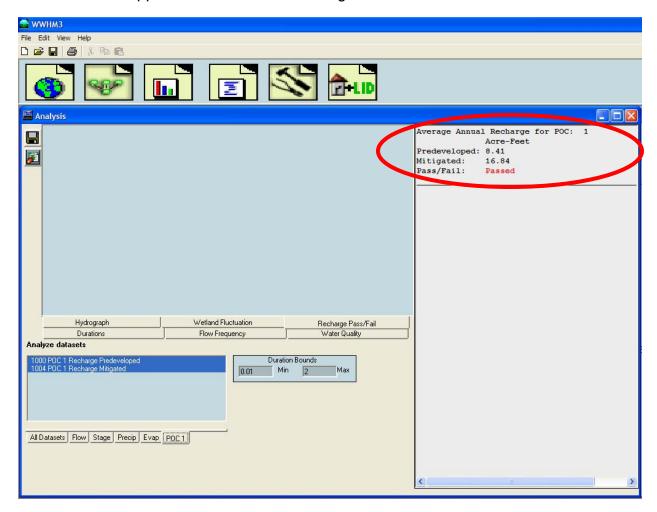
After running the model you need to go to the Analysis window so you can perform the duration analysis and summary analysis for the recharge data.



From here you can then perform the analysis you wish to perform. Simply select the "Recharge Pass/Fail" tab and then select the POC 1 tab to perform POC duration analysis on the selected POC and the model will perform the recharge duration analysis. It is important that you select the tabs in this order. You must select the POC tab after selecting the "Recharge Pass/Fail" tab to activate the recharge analysis. This may take 10 or 15 seconds to complete.

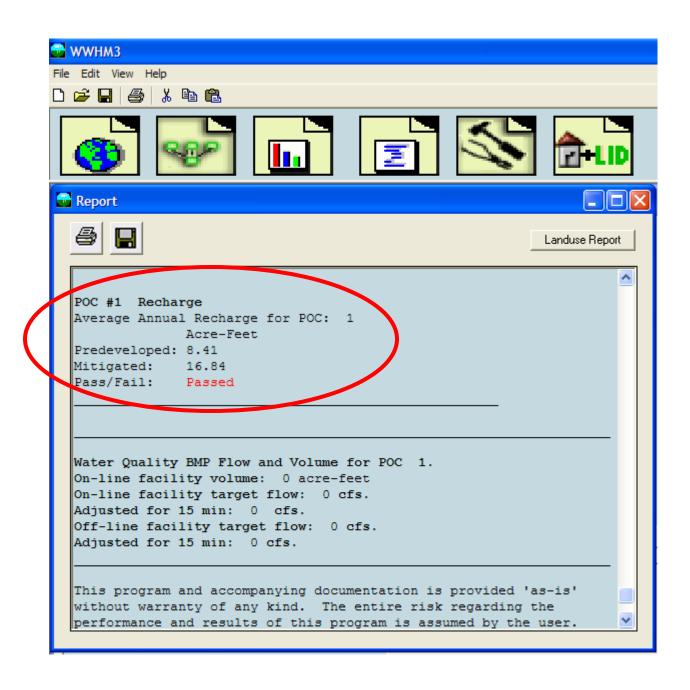


The results will appear in the window to the right.



The results show the predeveloped and mitigated average annual recharge in acre-ft. If the mitigated value is greater than the predeveloped value than this indicates that your project has passed. Pass/Fail is indicated in red.

Once the analysis has been conducted the results will also show up in the report.



## **Summary**

Recharge data analysis has been added to the Kitsap County version of the WWHM3. The results appear in the form of predeveloped and mitigated average annual recharge data with a pass/fail declaration which appears in both the analysis window and in the report. Recharge analysis can be turned on or off by the user through the view/options menu item.