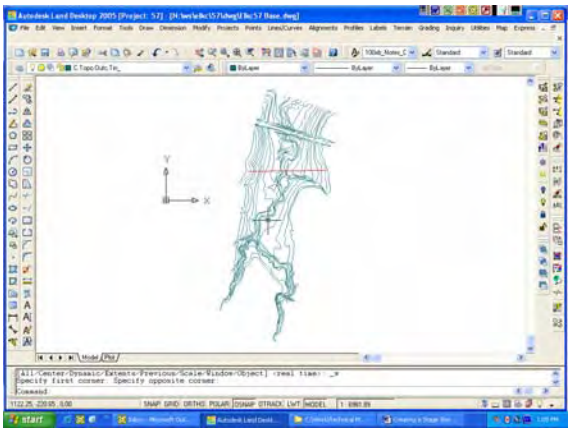
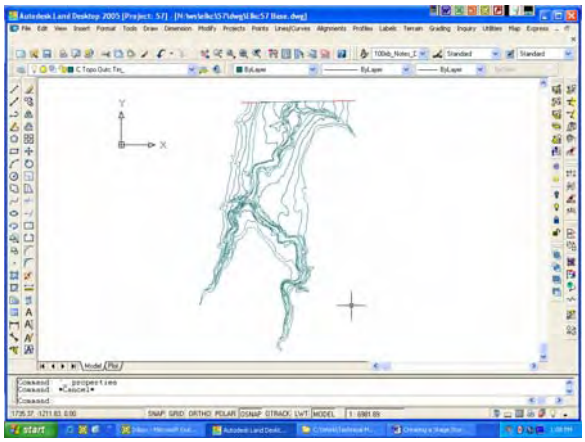
CREATING A STAGE-STORAGE TABLE

This procedure can be used to automatically create a stage-storage table for a pond or storage pit. In this example, a stage-storage table will be created for a new dam.

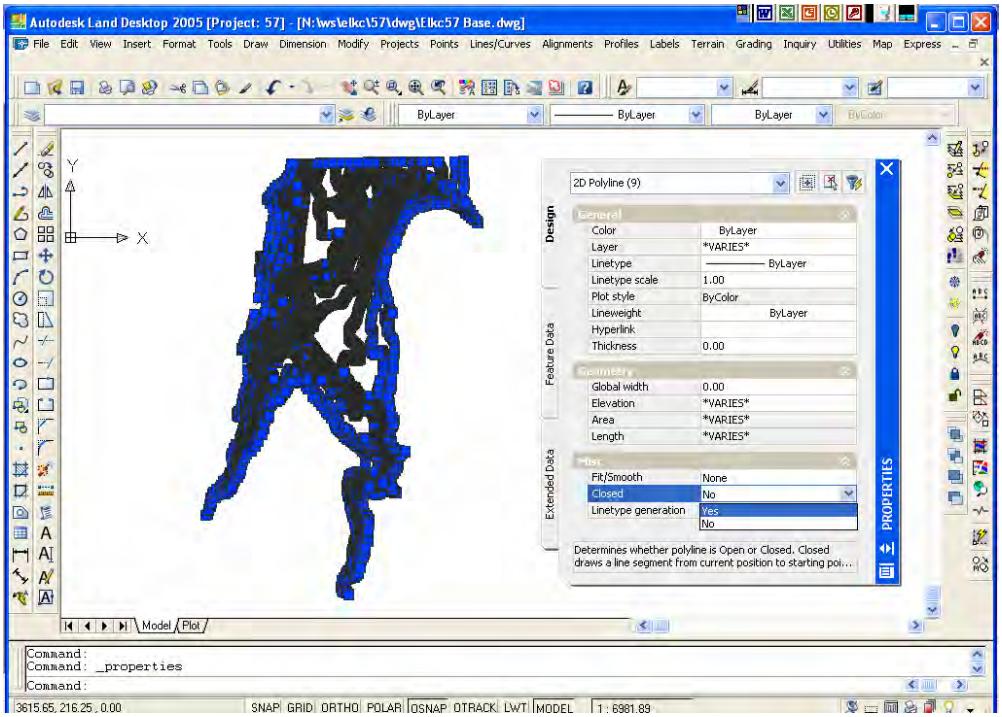
Note: If you already have contour objects that form continuous loops around your storage area such as with a pit or excavated pond, you can skip ahead to Step 4.

1. In this example, we will start with original ground contours drawn as polylines instead of contour objects. This is because the contours will be trimmed at the centerline of the proposed dam and closed to form continuous loops around the reservoir area. The polylines must have correct elevations assigned to them. This can be done by selecting them and opening the Properties window and entering the elevation for each polyline. It is recommended that you copy the contours to a new layer before trimming them if you want to keep the original contours. The left window below shows the original contours for this site, and the right window below shows the contours that have been trimmed at the dam centerline.

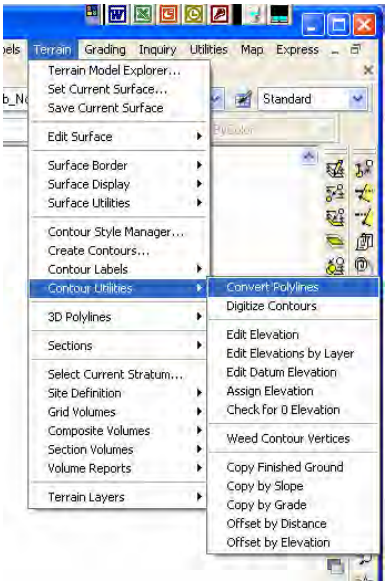


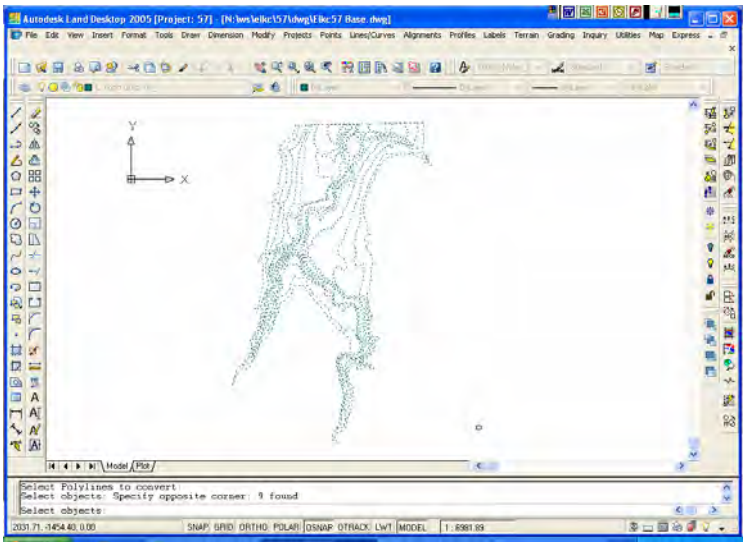


2. Next, select the contour polylines and close them. This can be done through the Properties window.

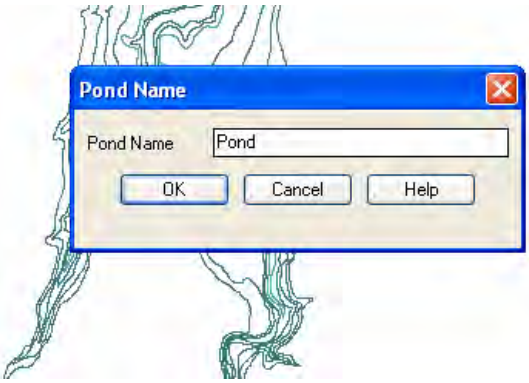


3. Once you have closed polylines which loop continuously around the reservoir area, you can convert them to contour objects before using them to create a pond which will be used to obtain your stage-storage table. Polylines are converted to contour objects under Contour Utilities in the Terrain drop-down menu. Select the polylines that you trimmed and closed in the previous steps when prompted to select objects at the command line.



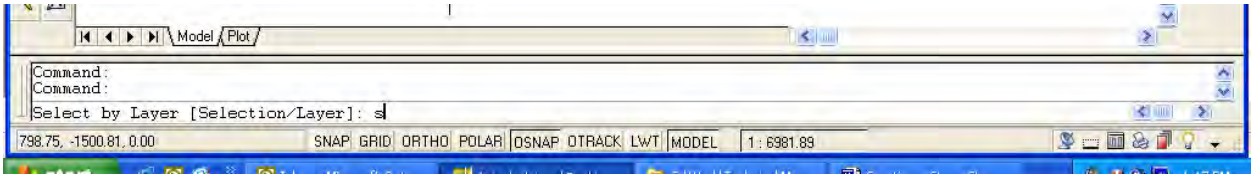


4. A pond will be created using the closed contour objects. The Define Pond command is found under the Grading drop-down menu.

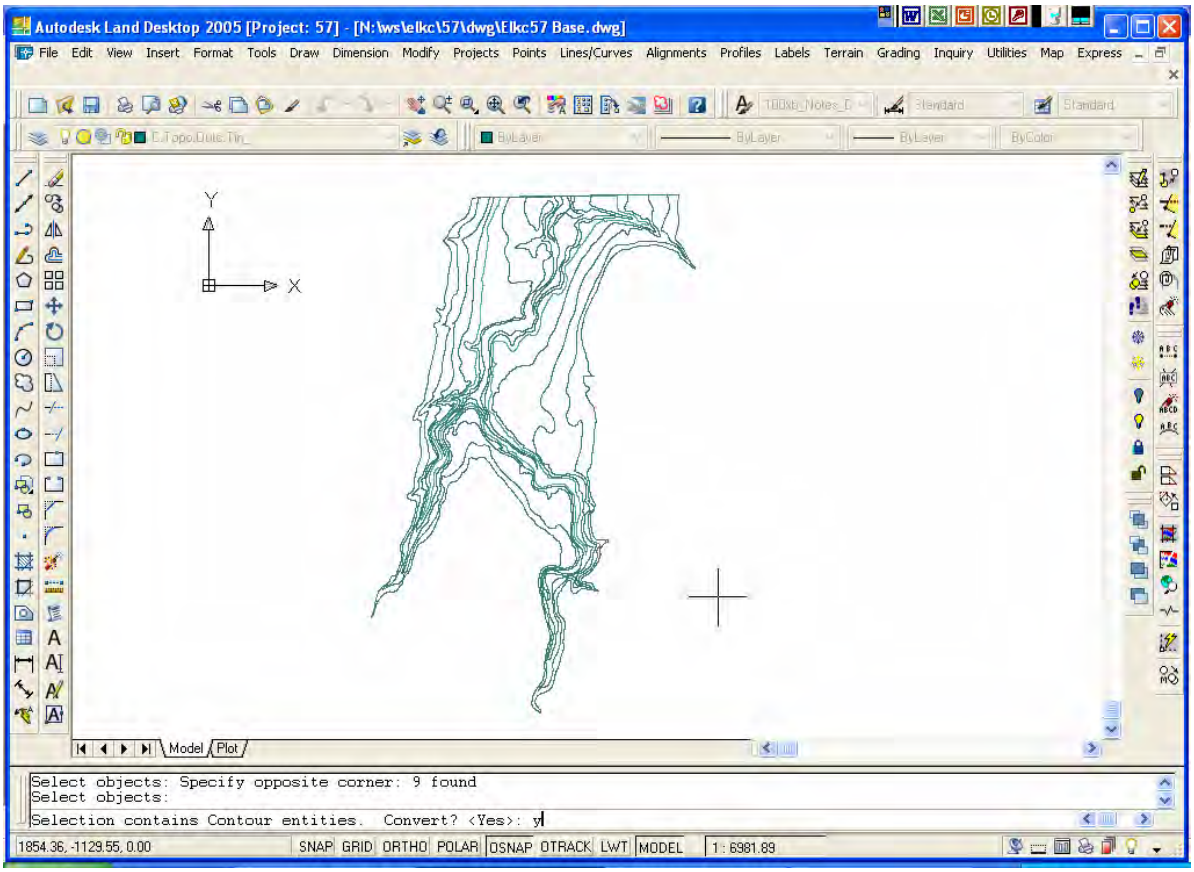


Select the By Contours option. A window will appear which will prompt you for a pond name. Type in a name for the pond and click on the OK button.

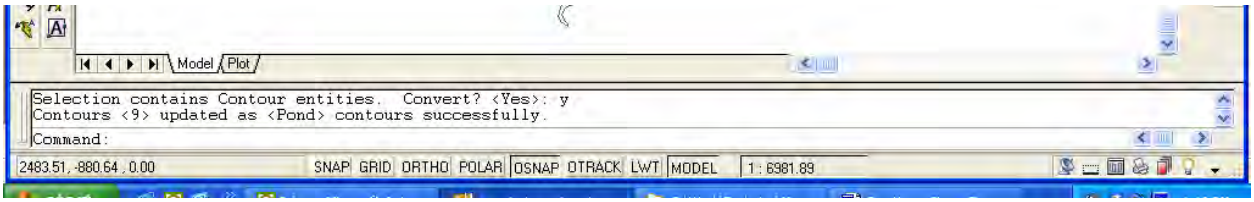
You will now be asked at the command line whether you want to select entities to use to build the pond by selection or by layer. Type in S for selection and hit enter so that you can select the contour objects that you created to model your pond.



Back in model space, select all of the contour objects that you want to use to define the pond. When you are done, you will be told at the command line that the selection contains contour objects, and you will be asked if you want to convert them. Answer Yes to convert the contour objects in order to define the pond.

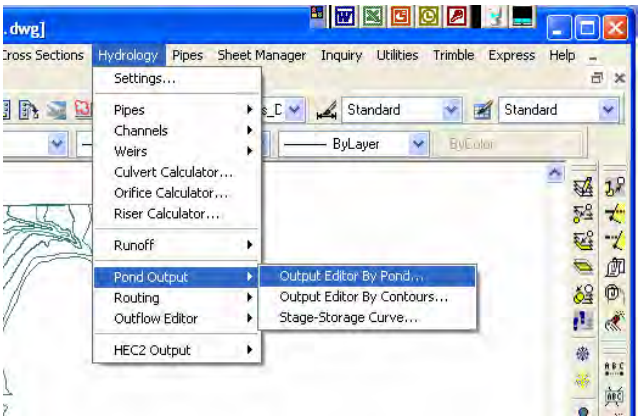


At this point, you will be informed at the command line of the number of contours which were successfully converted in order to define the pond.

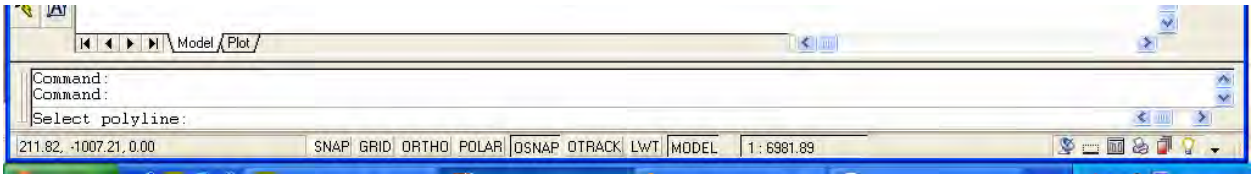


You now have a pond which has been created based on the contours of the reservoir area up to the centerline of the dam. Next, you can display or print out a stage-storage table for this pond.

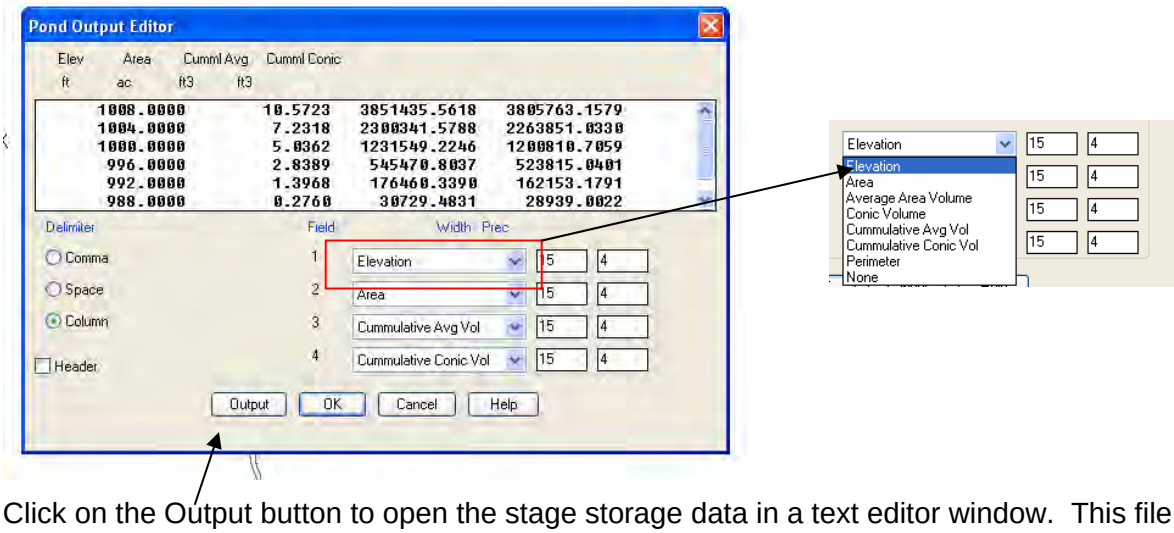
5. In order to obtain the stage-storage table, go to the Pond Output command area under the Hydrology drop-down menu and select Output Editor By Pond. The Hydrology drop-down menu is located on the Civil Design menu palette.



At the command line, you will be asked to select a polyline. Select any of the contours that you used to create your pond.



The stage-storage table for the pond that you created will appear in a new window. You can choose what information appears in each of the four columns, and control its format.



Click on the Output button to open the stage storage data in a text editor window. This file can be saved or its data copied and pasted into a spreadsheet.