

Eagle Point Steps Using the NRCS/EP Customized Menu

Notation Method

Button to Press *Displayed Text* **Icon** Action {Text to Enter} *Menu Item...*

Earthen Storage Pond

Placing an Earthen Storage Pond Template

- 1) From AutoCAD Click *NRCS/EP... NRCS Storage Pond...Place Storage Pond into CAD ...*
- 2) Input the dimensions, slopes and top of fill elevation.
- 3) Click **Place into CAD**.
- 4) Select the point in CAD for the lower left corner of the inside top of fill.
- 5) To move the template and maintain the same elevation:
 - a) Turn *Osnaps off*, select any line of the pond, Click the **Move icon**.
 - b) Click any location as a reference point for moving the storage pond.
 - c) Click the new location of the corner.
- 6) To move the template and change the elevation:
 - a) Select any line of the pond, Click the **Move icon**.
 - b) Snap to an outer gray corner of the storage pond.
 - c) Snap to a contour line at the new location of the corner **OR**
 - d) Shift/RightClick...Click *Point Filters... XY...* Select the new location of the corner. Input the new elevation of the snapped point {1105.5}. Press Enter
- 7) To rotate the pond:
 - a) Select the pond. Click the **Rotate icon**.
 - b) Snap to the pivot point.
 - c) Click to place the new rotation angle.

Note: If a second storage pond graphic is going to be placed into CAD the selection group must be renamed.

- 8) AutoCAD Click *NRCS/EP... NRCS Storage Pond...Manage Object Groupings ...*
- 9) Highlight *StorPond*
- 10) Input a new Group Name. E.g. {Pond1}
- 11) Click **Rename**
- 12) Click **OK**

Preparing Surface Model settings for the Embankment

1. From AutoCAD Click *NRCS/EP... Create Contours... Manage Surface Model...*
2. Click the **New Surface Model Icon**. This brings up New Surface Model box.
3. Click on the **Library icon** (looks like books on a shelf) and select the *Embankment* surface model. Click **Load Prototype**. Click **Yes**. Click **Close**.
4. Input a Description name. E.g {EmbkInside}, which would represent embankment template.
5. Once you have settings done Click **OK**.

6. Click the **Copy Surface Model Icon**.
7. Pulldown the embankment template model. E.g. *EmbkInside*.
8. Input a surface model description name. E.g {EmbkBal}, which would represent embankment that has been moved up or down to get balanced quantities .
9. Click . Click .
10. Click to close out Manage Surface Models

Creating a Surface model for the Embankment Template

1. From AutoCAD Click *NRCS/EP... Create Contours... Trianagulate Surface Model...*
2. Pulldown the name - for example *EmbkInside*.
3. Pulldown to set boundary line to *Select*.
4. Place a checkmark by *Display Model* if you want to see a temporary set of triangulation. Place a checkmark by *Place Triangles* if you want to have triangulation objects placed into the drawing.
5. Click .
6. Use AutoCAD selection methods to pick the pond lines. Press enter.
7. Select the outer line of the pond.
8. Click on the Triangulate Surface Model.

Verifying the Embankment Template Surface Model

1. From AutoCAD Click *NRCS/EP... Create Contours... Make Intermediate & Index...*
2. Verify the surface model name *EmbkInside*
3. Usually no checkmarks are place in any of the boxes.
4. Click Contours will appear in CAD.
5. Click
6. Review the contours to determine whether the surface model is correct.
7. From AutoCAD Click *NRCS/EP... Create Contours...Track Coordinates...*
8. Verify the surface model name *Embk*
9. Click
10. Move cursor around in CAD and elevations will be displayed.
11. Click
12. From AutoCAD Click *NRCS/EP... Create Contours... Erase Existing Objects...*
13. Checkmark *Contours* and any other items that have been placed into CAD. Click . Click

Balancing the Embankment Volumes

1. From AutoCAD Click *NRCS/EP... Volumes... Balance...*
2. Pulldown original surface model as Original Ground. E.g. *Ognd*
3. Pulldown Final surface model as Embankment template. E.g. *EmbkInside*
4. Pulldown Balanced surface model as Balanced Embankment. E.g. *EmbkBal*
5. Input any upward or downward displacement limits.

6. Pulldown material as *Balanced*
7. Input upper and lower limits E.g. {20} and {20}
8. Click Settings...
9. Input slopes H/V: E.g. Cut = {3.0}, Fill = {-3.0}
10. Checkmark *Keep When complete*
11. Checkmark *Use Compaction Factor*
12. Input shrinkage for cut. E.g. Cut = {-25}
13. Checkmark *Calculate Prismoidal for Balanced.*
14. Click Click .
15. Click **Print Icon** to get printed results.
16. Click
17. To move the Pond CAD lines to the final elevation select any inner pond line. Click **Move**.
18. Click any point. Click a second location to displace it.
19. Select the pond. Click **Move**
20. Snap to a corner on the outer line. Snap to the corresponding corner of the slope projection lines.
21. Select the pond and verify elevation of grips.