

# Section 15: Contour, Slope and Aspect

## Section Objective

This section is intended to introduce users to the concepts of contour, slope and aspect.




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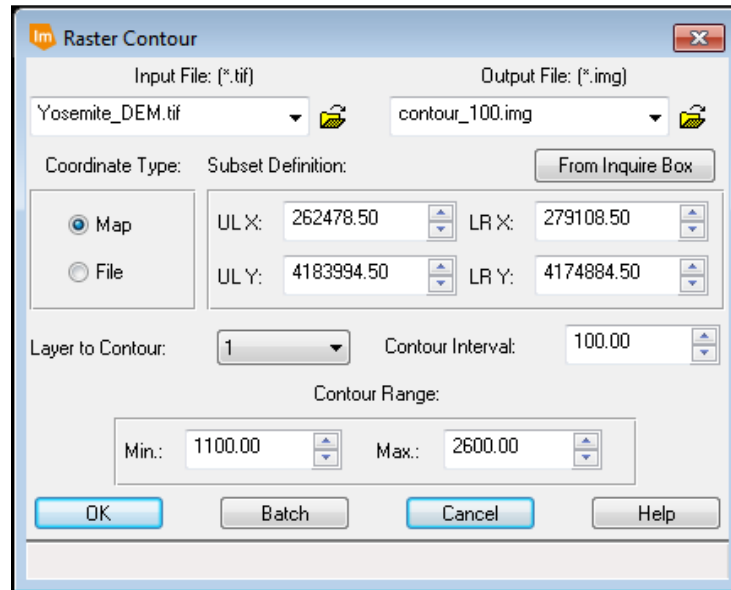
## *Class Notes*

# Contour, Slope and Aspect

## Task 1: Create a Raster Contour

1. From the Terrain tab select **Raster Contour** 

The Raster Contour dialog displays.



2. Use **Yosemite\_DEM.tif** for the Input File and name the Output File: **contour\_100.img**
3. Set the **Contour Interval** to **100.0**.
4. Accept all other defaults and click **OK**.
5. Close **Process List** when complete.
6. **Display** the new image in Pseudo Color and open the Raster Attributes, right-click on the image name in the Contents Panel > **Display Attribute Table**.  
The rows in the Attribute Editor represent each contour level, they are labeled with the elevation values and are further identified by various colours.
7. Experiment with different contour intervals by creating new files for contours at 200 and 500 metres.

**Which of the following contour images is most interpretable?**

**List an application where each would be useful.**

**100?**

**200?**


**500?**

8. Overlay the most interpretable raster contour image over the original DEM file.

**Does this aid in the interpretation?**

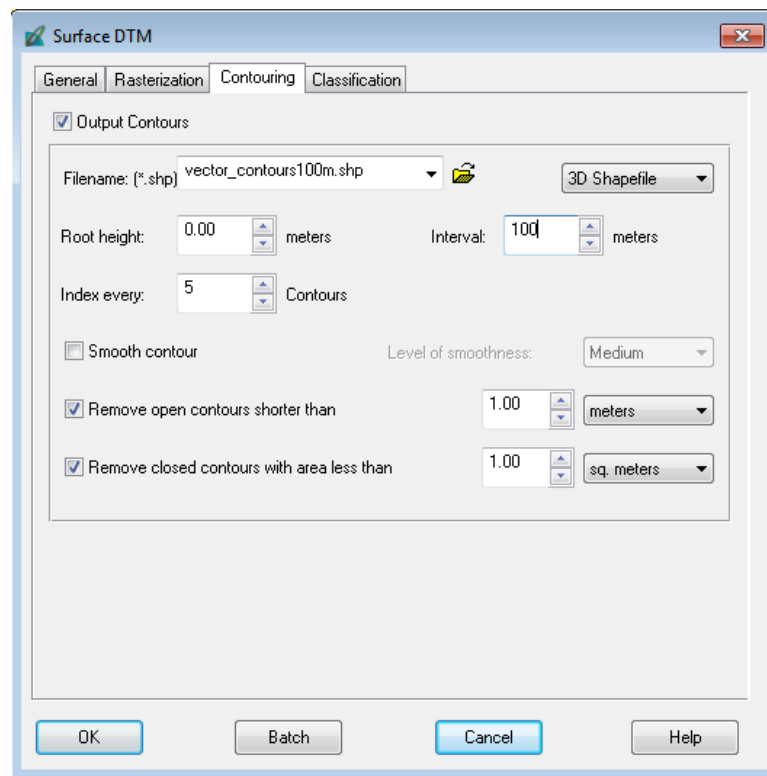
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## Task 2: Create a Vector Contour

1. From the Terrain tab select **Terrain Prep Tool** 
2. From the Terrain Prep Tool tool bar click the **Add DTM Files to List** button.
3. Choose the **Yosemite\_DEM.tif** dataset.
4. Click **Yes** to the warning regarding the NODATA value.
5. Click Process > **Surface**.

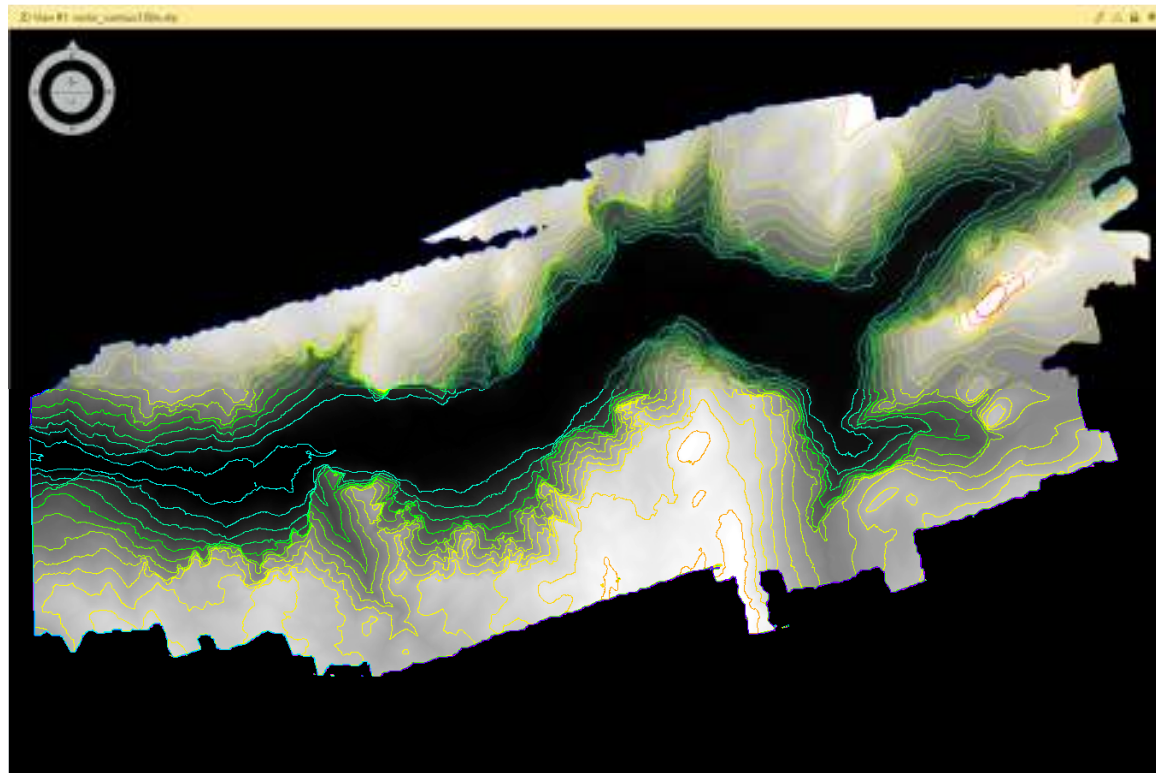
We can create a variety of surfaces using this tool. However we in this exercise we are only interested in contours.

6. Select the **Contouring tab**
7. **Check the Output Contours** button.
8. For the output Filename call the dataset **vector\_contours100m.shp**
9. Set the interval as **100 Meters**.
10. Check **Remove open contours short than**
11. Check **Remove closed contour with area less than**



12. Leave the rest as default and click **OK** to process the contours.
13. When the process is complete, **open vector\_contours100m.shp in a 2D View**.

14. From the Style tab > Categorization Group select **Unique Value**.



15. From the drop-down list select **Height**.

**How well do the vector contours line up with the raster contours created in the previous exercise?**

**Using the contours, identify the highest point of the DEM.**

**You may wish to experiment with the Smooth Contour option in the Terrain Prep Tool to assess the different results.**

16. **Clear** all Viewers

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