

Tools, Tips, and Workflows

Using Base Maps in ArcGIS

LP360



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Did you know that Base Maps are available in ArcMap 10.1 and 10.2? You can use this feature to display a backdrop image or road map, providing context for LIDAR data processing (see Figure 1). This is a coal pile area at the Tennessee Valley Authorities' (TVA) Widows Creek fossil fuel generation facility near Stevenson, Alabama on the Tennessee River.

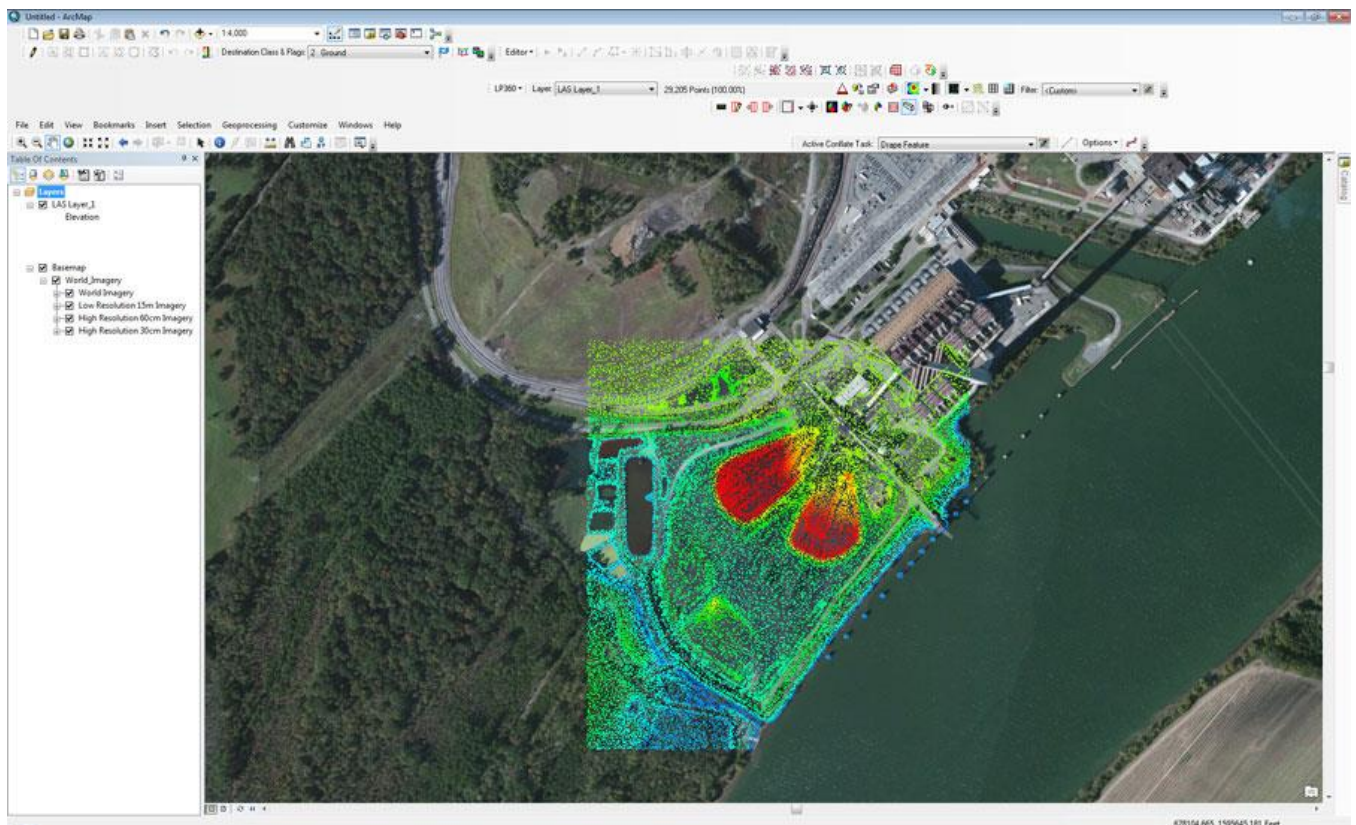


Figure 1 - Using a base map for context

The first step in using context data is to ensure that coordinate reference systems (CRS) are properly established for the table of content data. It is often the case that LAS files are not properly geocoded and thus will show a CRS of “unknown.” The easiest way to address this is to bring up a blank map and set the top level layer’s CRS in the table of contents to the CRS of the LIDAR. Next import the LIDAR.

The Base Maps are accessed via the drop down arrow of the Add Data button in the main ArcMap toolbar (see Figure 2).

- LP360 Basic Edition
- LP360 Standard Edition
- LP360 sUAS Edition
- LP360 Advanced Edition

- ArcGIS
- Windows
- GeoCue

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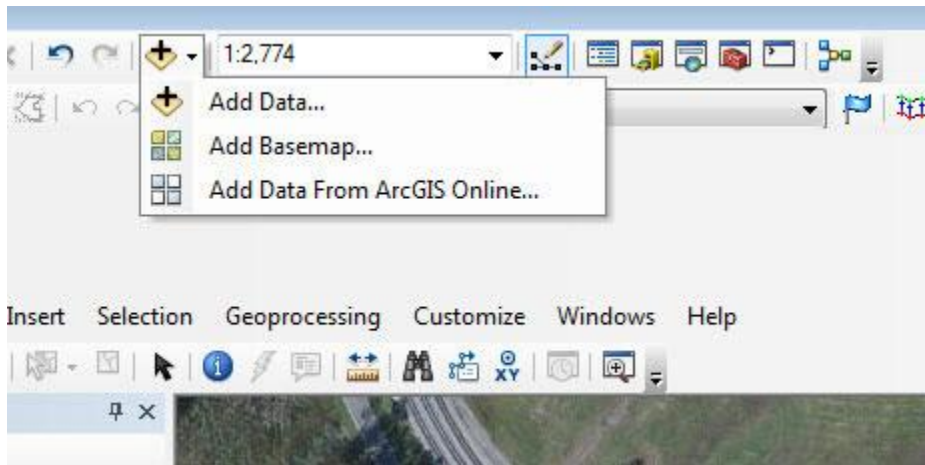


Figure 2 - The Add Basemap tool

Selecting “Add Basemap...” brings up a palette of maps from which to choose (see Figure 3).

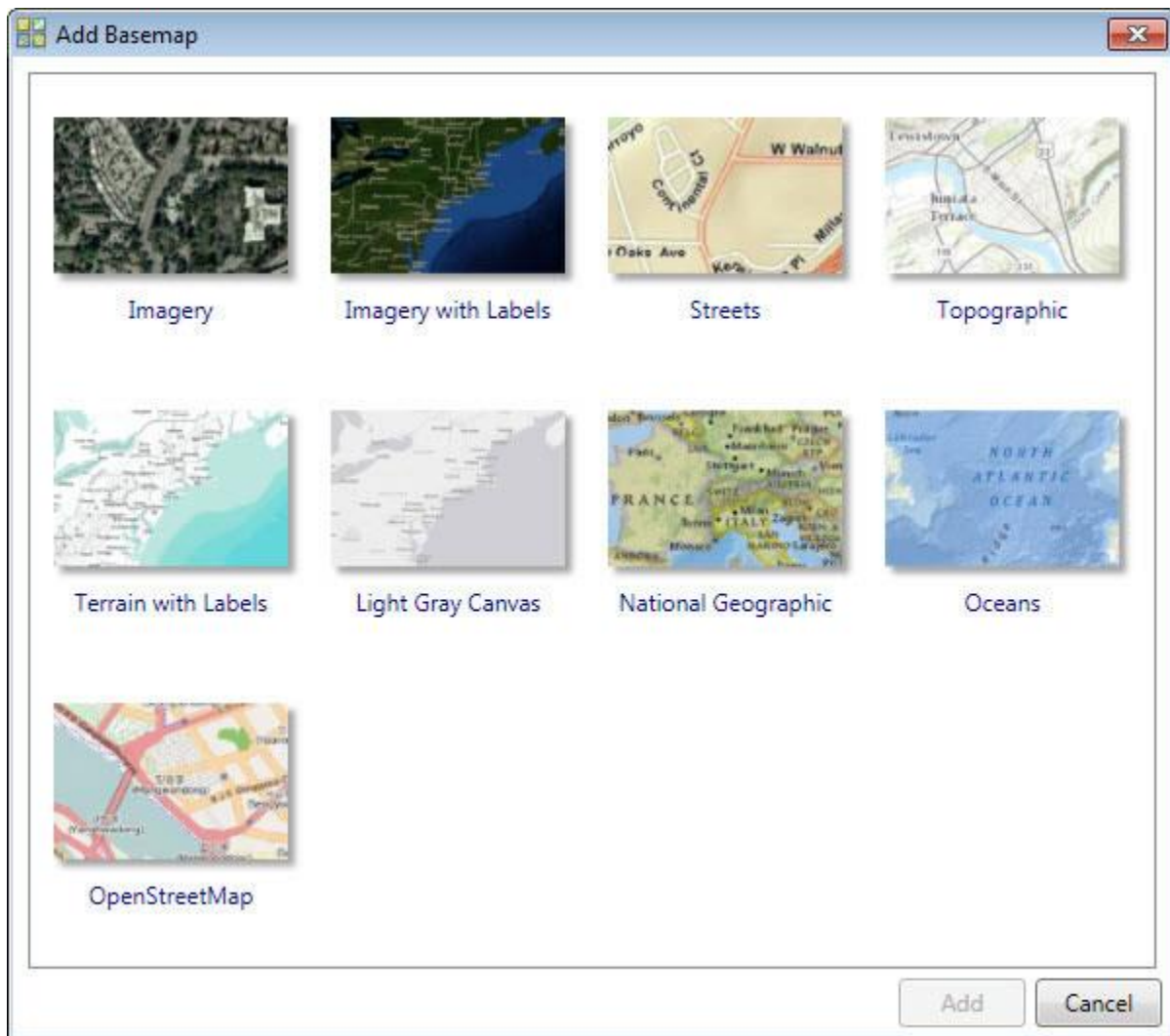


Figure 3 - The Basemap palette

Note that you have to employ a lot of patience for these particular operations as they are (at least in the GeoCue offices) very, very slow. However, if you are working in a localized area, the base maps can provide a rich context for data editing. One of the visualizations that I like (call me old fashioned!) is to turn off the LIDAR points entirely and turn on the LP360 “on-the-fly” contour display. This provides a nice contour rendering superimposed over the base map (see Figure 4). Here we see the coal piles clearly delineated in the base map image.

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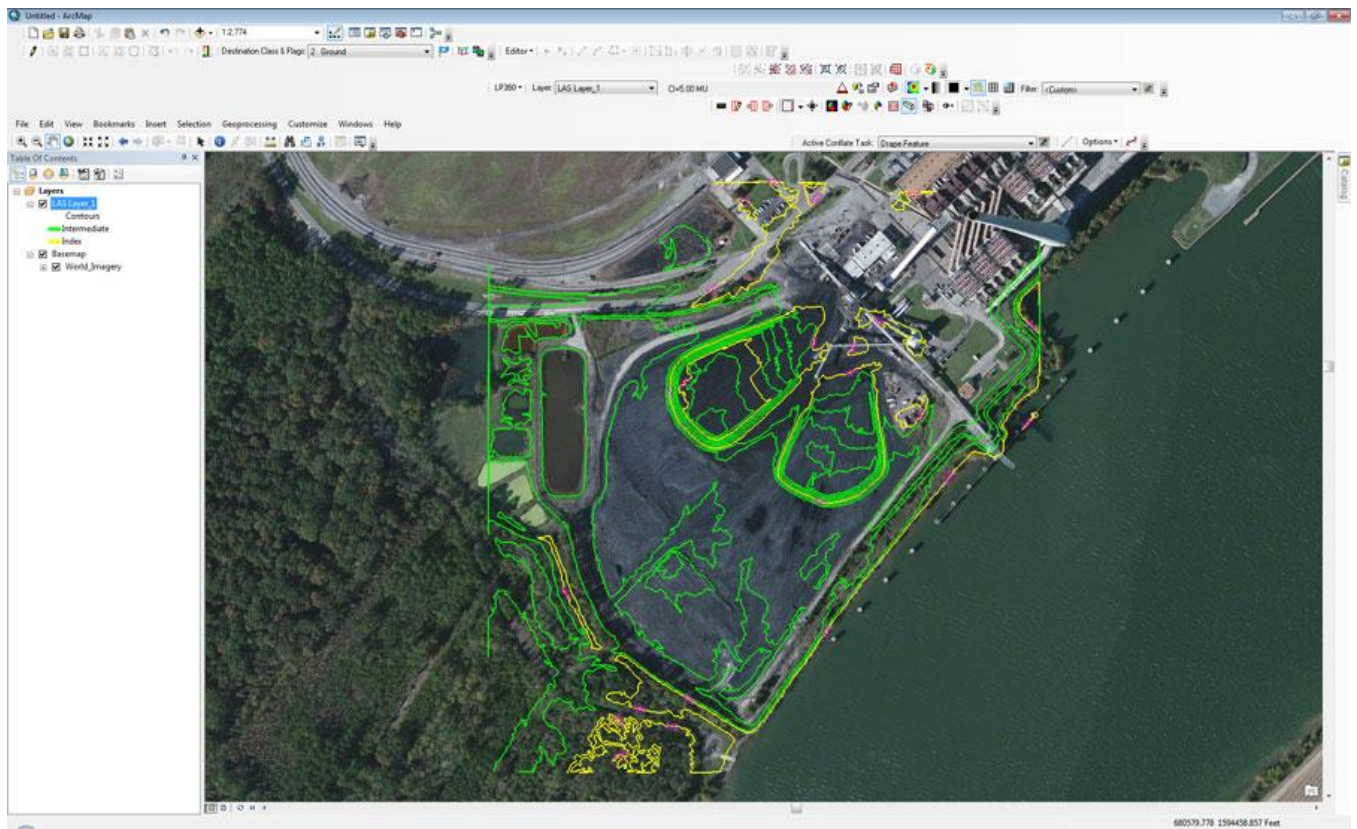


Figure 4 - Coal piles clearly delineated in the base map via on-the-fly contours from the LIDAR data