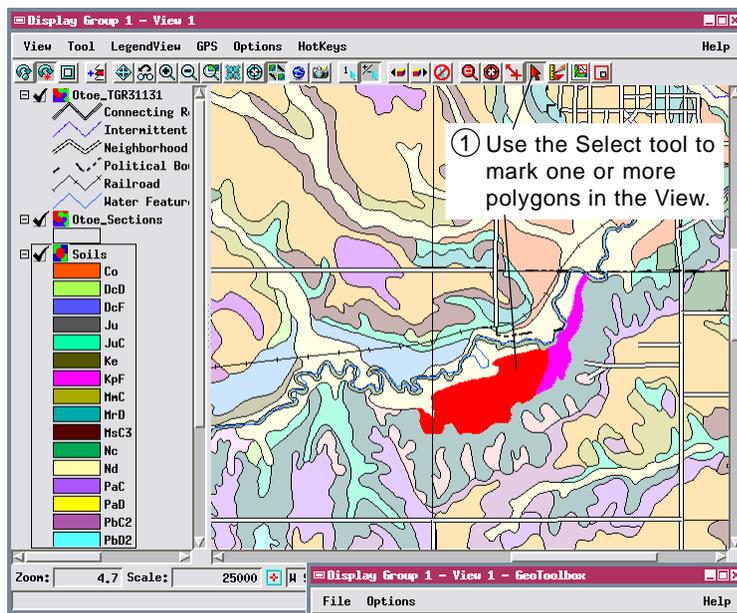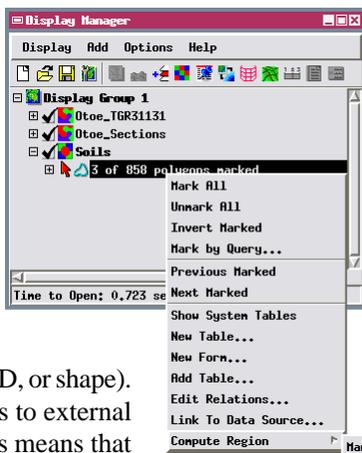# Regions from Polygons in Any Geometric Layer

A region is a simple topological object used to outline a geographic area of interest. Regions can be used in a variety of TNT processes to select portions of other geospatial objects for processing, and they can be added to Sketch layers to quickly build up complex sketch overlays.
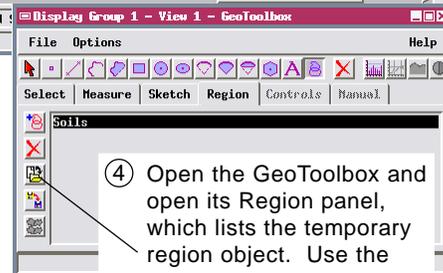
Although there are many ways to define a region, one of the simplest and most convenient is to mark (select) one or more polygons in a geometric object displayed in a View window and make a region from them. You can make a region from marked polygons in any type of geometric object (vector, CAD, or shape). Since shape objects are links to external data in the shape format, this means that you can make regions directly from linked shapefiles, ESRI Geodatabase files, and linked data stored using the spatial extensions of enterprise databases, including Oracle, MySQL, and PostgreSQL (PostGIS). Region generation from polygons is available in TNTatlas in addition to TNTmips and TNTview.
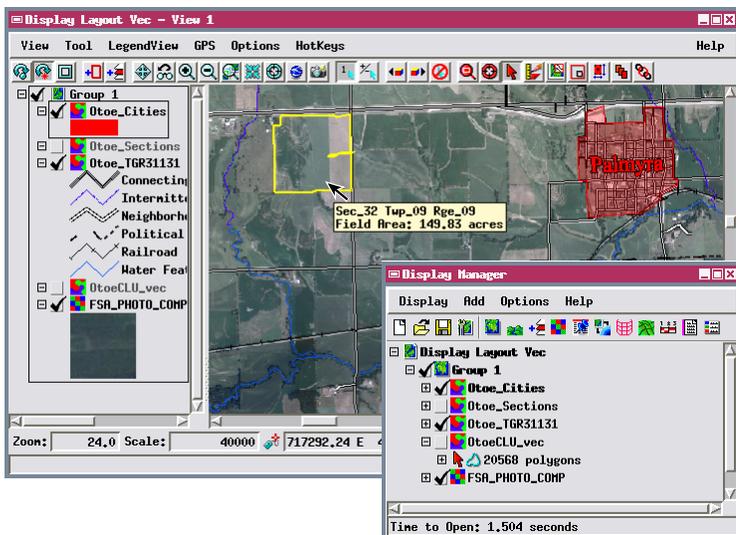
① Use the Select tool to mark one or more polygons in the View.

② Choose Compute Region / Marked Polygons from the right mouse button menu for the object's polygon element entry in the Display Manager

③ Click the OK button in the Selected Polygon Region window.

④ Open the GeoToolbox and open its Region panel, which lists the temporary region object. Use the Save icon button to save the region object to a Project File for later use.
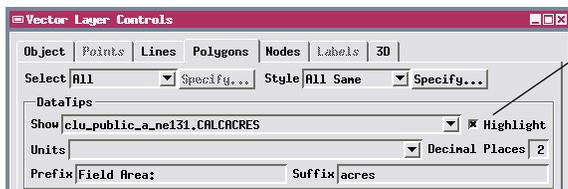
Highlight and Mark Elements in Hidden Layers

Geometric layers that are hidden at the current view scale in a layout or atlas can be set up so that any element in the hidden layer is temporarily highlighted in color when the cursor pauses over the element. With the Select tool active for the View, you can pause the mouse over a hidden element so it highlights, then left-click on the highlighted element to mark it exclusively or add it to a set of previously marked elements from this or other layers. If you have marked a set of polygons, you can then create a region from them as outlined above.

Element highlighting requires that a DataTip be set up and activated for the hidden geometric layer. If this layer is the active layer, using the Select tool in the view automatically activates marking for its elements (as long as you have not enabled marking for other visible layers). If the hidden geometric layer is not the active layer, you must manually enable marking for the desired element type in this layer in the Display Manager.

To enable highlighting for elements in the hidden layer, open the panel for the desired element type in the Layer Controls window, choose a field from an attached database table to provide DataTip information, and turn on the Highlight toggle button. To ensure that the DataTip and highlighting are active for the hidden layer, choose DataTips / Maximum from the Options menu on the View window (activates DataTip information for all layers in the View).