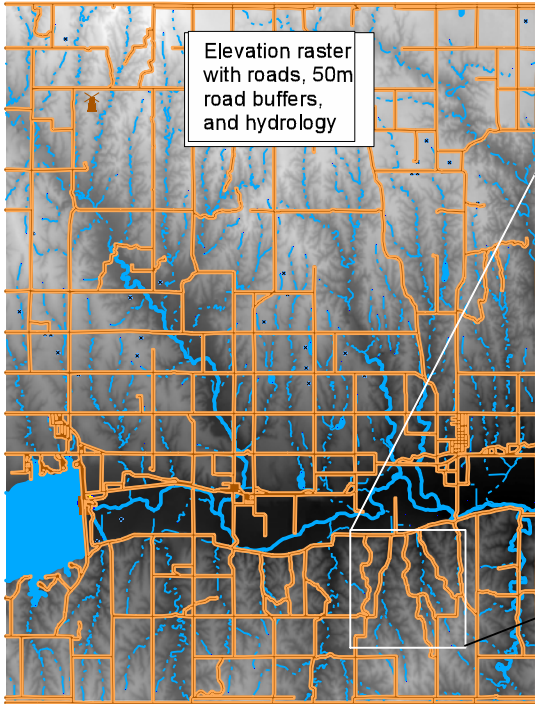
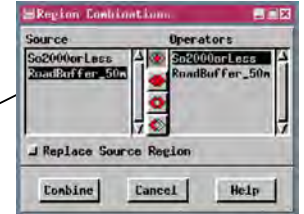
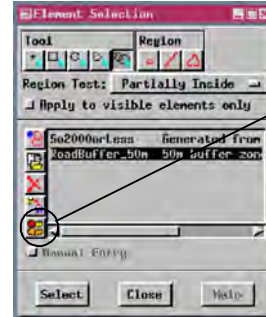
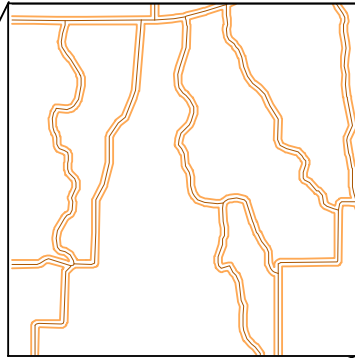


Interactive GIS--Region Combinations

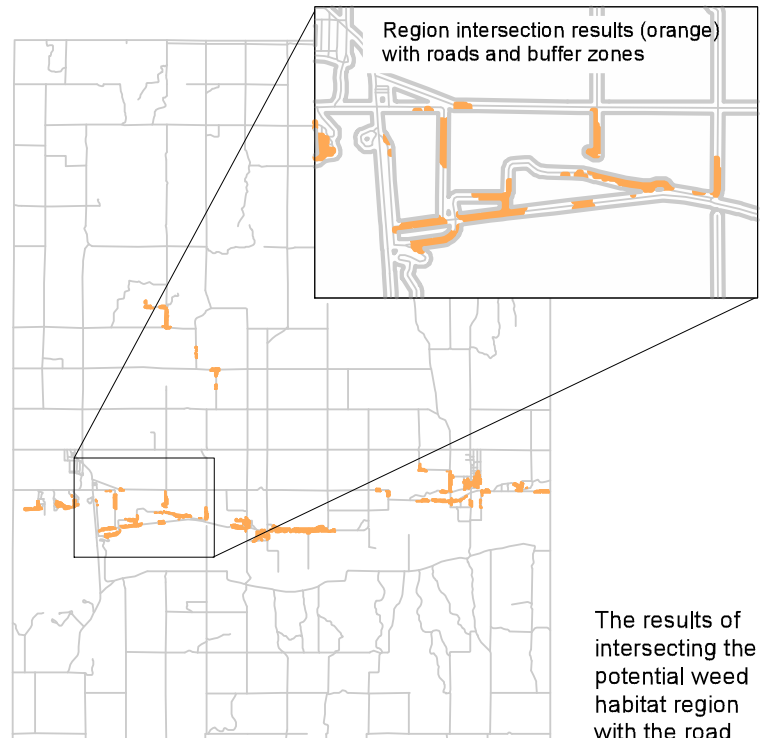
Region Combinations make powerful, interactive GIS functions available in all TNT products. A myriad of region generation methods are available based on either selected or drawn elements. The region combination functions let you Intersect, Add, Subtract, and do "Exclusive Or" combinations on any selected pair of regions. You can use these operations iteratively to further refine the answers to your GIS questions. The problem addressed in this example is to identify the public right-of-way areas to target for control of a noxious weed species known to grow only on south facing slopes at elevations less than 2000 feet. The region for potential weed growth was identified using a raster expression (see the Regions from Raster Expressions color plate) and the public right-of-way was generated as a buffer zone around the roads. Areas for spraying can be identified by the intersection of these two regions. The area for spraying could be further refined by subsequent intersection with a region generated from polygons selected by the soil type preference of the weed.



An enlargement of the roads and the 50 meter right-of-way generated as a buffer zone region around selected roads.



Clicking on the Combine icon opens the Region Combinations window. The Combine icon is active once two or more regions are listed in the Element Selection window. The regions may have been generated in this display session or previously saved. All regions are listed in both the Source and Operators column. You can pick one Source region and multiple Operators--the first to act on the source, the second to act on the first result, and so on. The available operations are Intersect, Union, Subtract, and Exclusive Or.



The results of intersecting the potential weed habitat region with the road buffer region is shown above in orange (with the roads shown for reference). The buffer zones are added in the enlarged inset to demonstrate that the intersection results are only those areas on south facing slopes at 2000 feet or less that also fall within the public right-of-way along the roads.



The example on this page was prepared entirely in TNTmips using public domain data downloaded from the Internet. All the steps necessary to accomplish what is illustrated here, beginning with the import of the data, can also be accomplished in TNTview, TNTedit, and TNTlite, with the exception of mosaicking the four Digital Elevation Model (DEM) 7.5' quadrangles into the single 15' map shown. This page layout created in and printed from TNTmips, January 1998.