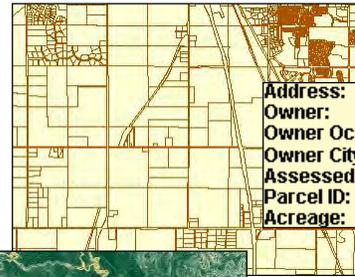


## Site Selection Analysis

TNTmips provides powerful tools for site selection analysis, which decides the best location for various urban land uses. Basic zoning decisions at various urban planning scales are based on an initial selection process using several criteria, which generally take into account the different views of stakeholders involved in the process. The site selection process requires a flexible GIS tool that is capable of combining attributes of various thematic layers easily as well as conducting additional layer-based analyses such as buffer zone analysis, slope analysis and so on. The power of TNTmips for site selection comes from the various tools embedded in the software that enable professionals to prepare the thematic layers and make analysis easy. TNTmips lets you easily apply element selection queries that meet multiple criteria that come from a variety of sources by transferring attributes from a number of differently themed vector objects.

In this hypothetical example, there are several thematic layers such as slope, property information (vacancy, area, ownership), flood plain status, accessibility from major streets and so on. A query for the parcel layer polygon database is shown below to select suitable parcels that fit the following criteria: parcels with a mean slope of less than 10% and area greater than 50000 m<sup>2</sup>, vacant and not in the flood plain, located outside the 500 meter buffer zone from major streets.



ownership pattern with the property records

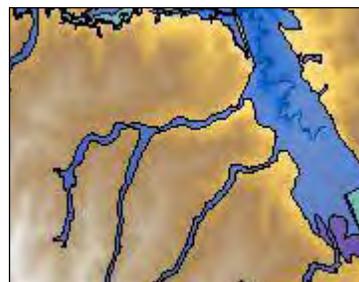
|                        |                   |
|------------------------|-------------------|
| <b>Address:</b>        | 10600 S 14 ST     |
| <b>Owner:</b>          | LEE, DOUGLAS K    |
| <b>Owner Occupied:</b> | Yes               |
| <b>Owner City:</b>     | LINCOLN, NE       |
| <b>Assessed Value:</b> | \$162800          |
| <b>Parcel ID:</b>      | 09-36-100-003-000 |
| <b>Acreeage:</b>       | 8.688 acres       |



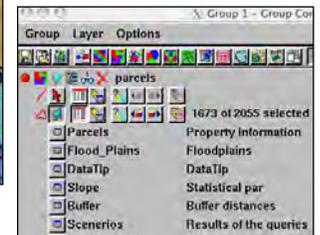
slope layer computed in degrees



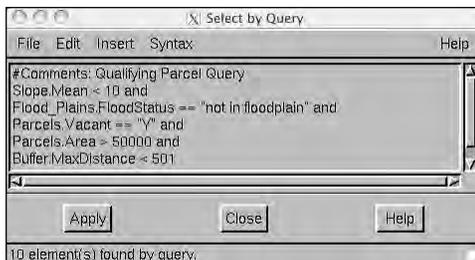
multiple buffer zones from major streets (300, 500, 1500 m)



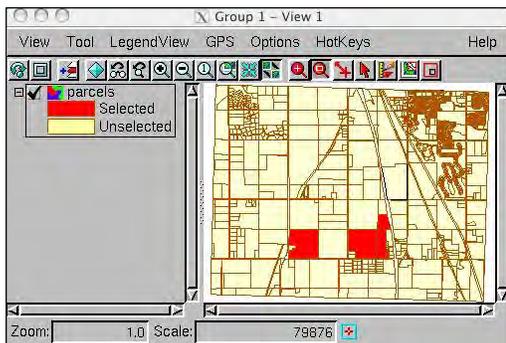
floodplain vector object displayed with transparency over an elevation raster



tables transferred from other vector objects



There are alternative ways that TNTmips can be used to find the suitable parcels based on these criteria. In this example, making queries using the parcel polygon database is the simplest way. This method requires that pertinent tables of other layers such as floodplain, buffer distances, and slope be transferred into the polygon database of the parcels layer to which the query will be applied.



The parcels vector object displayed by attribute shows the selected parcels that fit the given criteria.

The thematic layers are prepared using various processes in TNTmips. The information on parcels' vacancy and area are separate fields in the parcels table.

A raster layer for slope analysis is generated either in degrees or percentages (along with aspect and shading) by using Process/Raster/Elevation/Slope, Aspect, and Shading. In order to use the properties of this raster layer as a table for the parcels layer, TNTmips provides another tool to compute the slope statistics for each parcel (Process/Vector/Attributes/Raster Properties). Similarly, the buffer zones can be computed using Process/Vector/Compute/BufferZones. After preparing these thematic layers, you can transfer the tables of the vector objects such as floodplain and buffer distances to the parcels layer (Process/Vector/Transfer Attributes). Then you will have one vector layer with the all necessary attributes attached in order to make the queries based on the stated criteria.