

5.9. Potential Fertilization Project. The Brown Tract is considering fertilizing all stands that are aged 25 to 40 years. Not only are the forest staff concerned about the proximity of this operation to the stream system, but also to water sources on the forest.

a) How many water sources are within 200 feet of the stands that could potentially be fertilized?

To arrive at the answer to this question, first open the stands and watersources GIS databases related to the Brown Tract.

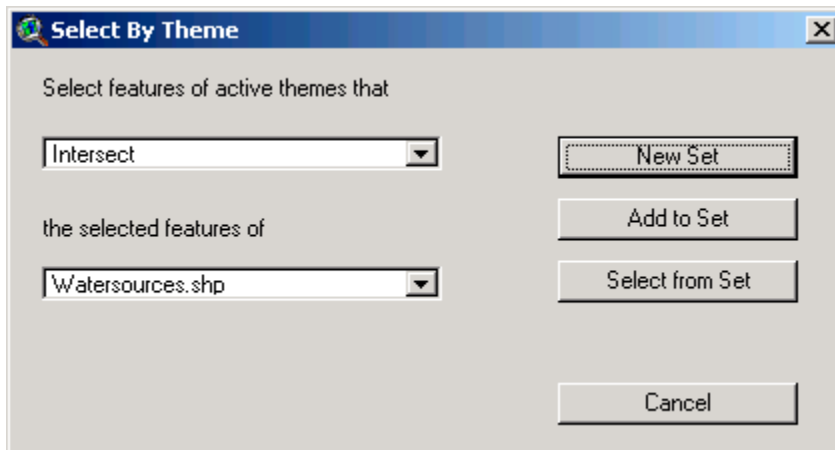
Before you begin, make certain that the map and distance units related to this View window are "feet." Select from the Main Menu system, *View*, then *Properties*. If the map and distance units are not "feet," change them to "feet."

To begin the analysis, first perform a regular query of the stands GIS database for those stands that are between the ages of 25 and 40 years.

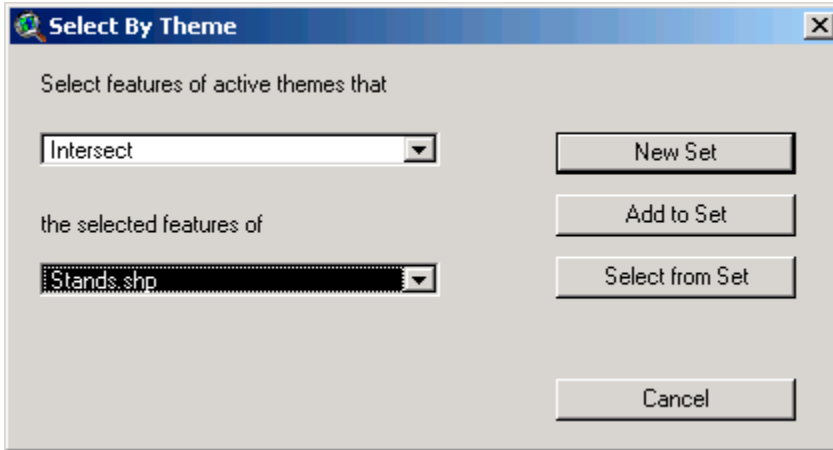
Query: ([Age] >= 25) and ([Age] <= 40)

Result: 470.8 acres

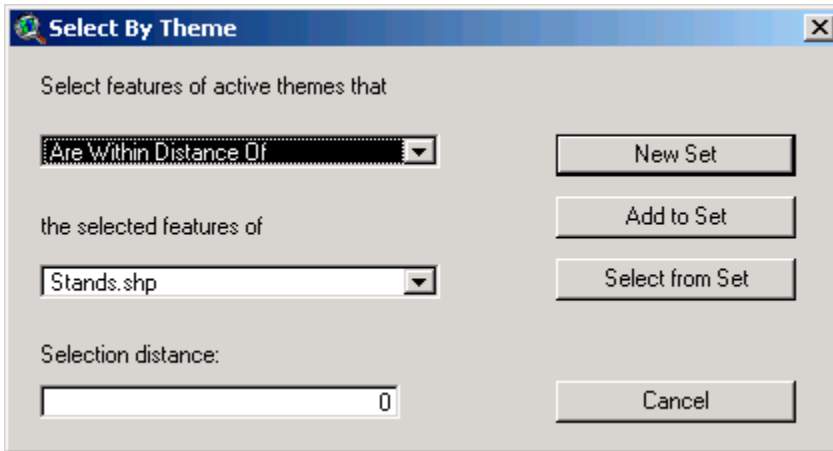
To perform the spatial query, first make the watersources GIS database the active theme in the Table of Contents. Then select from the Main Menu system, *Theme*, then *Select by theme*. A dialog box similar to the one shown below should appear.



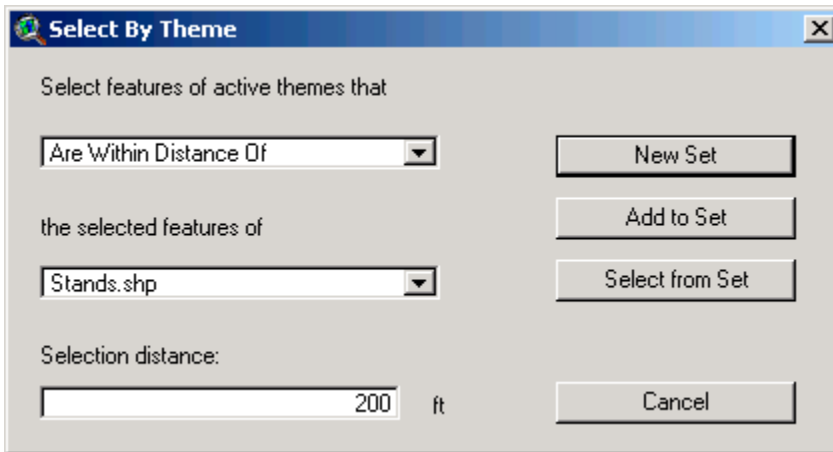
Change the option noted under *the selected features of* to "Stands.shp."



Change the option noted under *Select features of active themes that* to "Are within distance of."



Now change the "Selection distance" to 200 feet.



Press the *New Set* button.

Open the watersources GIS database Theme Table, and note that two of the watersources are within 200 feet of stands that are aged 25 to 40 years (ones that could potentially be fertilized).