

Garden State Greenways ArcView 3.x Planning Tool Guide

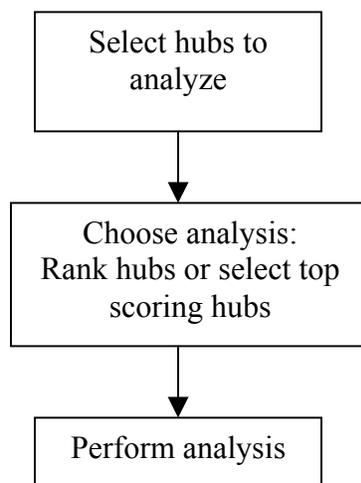
In order to help GIS users make the most of the Garden State Greenways (GSG) data, the New Jersey Conservation Foundation has created a planning tool to assist in the ranking and prioritizing of Garden State Greenways hubs. This functionality is embedded in an ArcView 3.x project available for download at <http://yoda.rutgers.edu/njcf/ims>. The planning tool is written to work with the Garden State Greenways data also available at the above website.

Overview

To use the planning tool, first download the customized project and Garden State Greenways data from the above link. If you are interested in working with hubs in a particular geographic area (such as a municipality, county or watershed) you may want to download data for these areas from the New Jersey Department of Environmental Protection's GIS website (<http://www.state.nj.us/dep/gis>). This type of data can be used within the planning tool to select subsets of hubs for analysis.

After downloading the project, GSG data and any other data you need, extract the project and data from their .zip files. Open the project in ArcView 3.x and load at least one GSG hub data theme into the project. To start the planning tool, click on the button at the extreme right of the toolbar.

The basic structure of the planning tool is diagrammed below:



Selecting Hubs

The planning tool first gives users the opportunity to choose the hub theme they wish to work with. If it isn't loaded into the view, the user is given the option of ending the script to load it. The next dialogue box asks the users if they want to work with a subset

of the hubs in the hub theme. If not, they can click on “No” in the first dialogue box and will then move on to choosing which analysis they want to perform.

If the user decides to work with a subset of hubs, the tool asks first if the subset is already selected. If not, the user can select the hubs using one of two methods, using the mouse or using another theme. If the user wishes to manually select the hubs with the mouse, the script ends and the user must restart the script after the hubs have been selected.

Using another theme to select the hubs requires that theme to be loaded into the view. If it is not, the user can end the tool, add the theme, and restart the tool. The user can use either the extent of the entire selection theme or the extent of a subset of the selection theme to select hubs. If a subset is used, the user can define it using the mouse or by querying the attributes of the selection theme. If the user wants to use the mouse, the tool ends and the user must restart the tool. If the user wants to select features in the selection theme by attributes, the tool provides access to the Query Builder.

After the selection theme (and any desired subset of its features) is chosen, the user must choose the type of spatial selection they wish to perform. They can select hubs that have their center within the selection theme, intersect the selection theme, or are completely within the selection theme.

Users have one final selection option before analysis. They can choose one or more of types of hubs to work with based on the land cover of the hub (upland forest, wetland forest, emergent wetland, beach/dune, agriculture/grassland). Note that this option is valid only for certain hub themes. It is best to check the hubtype field in the theme you are analyzing to ensure that it contains these hubtypes. If it doesn't the tool will analyze all of the previously selected hubs.

Choosing the Analysis

Once the user completes the process of selecting the hubs for analysis, the user must choose either the Rank Hubs or the Identify Priority Hubs analysis. The Rank Hubs analysis creates an equal area ranking of the hubs based on a user selected hub attribute. The ranking can be performed on the total area or the unpreserved area of the hubs. The Identify Priority Hubs analysis queries the hubs to find the top scoring acres based on a particular attribute. The user can select the acreage and the attribute, and can choose whether to tally the acreage based on total or unpreserved hub acreage.

Ranking Hubs

After choosing the Rank Hubs analysis, the user selects the attribute to rank on using a drop down menu. Then the user chooses the number of classes for the ranking and whether to use only the unpreserved acreage when calculating the area for the equal area ranks. If the user is working with a selection of hubs from the hub theme, the tool prompts the user to save the selection as a new theme. This new theme will be added to

the view and the analysis will be performed on it. Once the analysis is complete, the ranked theme is displayed in the view and the user is prompted to save the rankings to the theme table (in a new, user named field) if desired.

Identifying Priority Hubs

For this analysis, the users must input the approximate hub acreage they wish to select and the attribute they wish to use. The user is given the choice of tallying preserved or unpreserved acres. If the user is working with a selection of hubs from the hub theme, the tool prompts the user to save the selection as a new theme. This new theme will be added to the view and the analysis will be performed on it. If the acreage input by the user exceeds the available acreage the user is prompted to choose an acreage smaller than the available acreage. Once a suitable acreage has been chosen, the tool selects the highest scoring hubs (based on the user selected attribute) until the user input acreage has been met. The hubs are selected in the hub theme and the total acreage selected is reported to the user in a dialogue box.

Category	Measure	Field Name
Hub Size	Acres per Polygon	ACRES
Preserved Land	Acres per Polygon	PRESERV_AC
Preserved Land	Percent of Polygon	PRESERV_PE
Unpreserved Land	Acres per Polygon	UNPRSRV_AC
Unpreserved Land	Percent of Polygon	UNPRSRV_PE
Estimated Groundwater Recharge	Inches/ Yr, Avg for Polygon	GRWT_RCHR
Area within 300 ft. of C1 Waters	Acres per Polygon	C1BUFFR_AC
Area within 300 ft. of C1 Waters	Percent of Polygon	C1BUFFR_PE
Area within 300 ft. of C1+ Waters	Acres per Polygon	C_BUFFR_AC
Area within 300 ft. of C1+ Waters	Percent of Polygon	C_BUFFR_PE
Area within 300 ft. of All Waters	Acres per Polygon	ALLBUFF_AC
Area within 300 ft. of All Waters	Percent of Polygon	ALLBUFF_PE
Area within the 100-year Floodplain	Acres per Polygon	FP100YR_AC
Area within the 100-year Floodplain	Percent of Polygon	FP100YR_PE
Prime Agricultural Soils	Acres per Polygon	PRIMSOL_AC
Prime Agricultural Soils	Percent of Polygon	PRIMSOL_PE
Prime + Statewide Significant Soils	Acres per Polygon	PR_STAT_AC
Prime + Statewide Significant Soils	Percent of Polygon	PR_STAT_PE
Federal T & E Species Observed or with Habitat in Hub Polygon	Number of Species	FED_T_E_NU
State-only T & E Species Observed or with Habitat in Hub Polygon	Number of Species	STA_T_E_NU
Special Concern Species Observed or with Habitat in Hub Polygon	Number of Species	SPECIAL_NU
State + Fed + Specl Species Observed or with Habitat in Hub Polygon	Number of Species	COMBINE_NU