

8.3 Predefined Delineation

Purpose

The BASINS *Predefined Delineation* tool allows the user to provide data sets regarding a study watershed, the relative sub-watersheds and stream network, bypassing both the *Automatic* and *Manual* delineation processes.

Application

The user can provide the same data sets resulting from the automatic or manual delineation application. The following resulting themes will be added to the *Basins View*: *Subbasins*, *Streams*, *Outlets* and (optional) *Reservoirs* themes. See Tables 8.3.1 through 8.3.5 for the content of the respective table of attributes that are required to proceed with the other tools in BASINS.

Before you Get Started

The *Predefined Delineation* option is available once the BASINS *Automatic Delineation* extension is loaded. See beginning of Section 8.2 for the loading instructions.

Key Procedures

- Load the “Subbasins” theme
- Load the “Streams” theme
- Load the “Outlets” theme
- (Optional) Load the “Reservoirs” theme
- Click **OK**

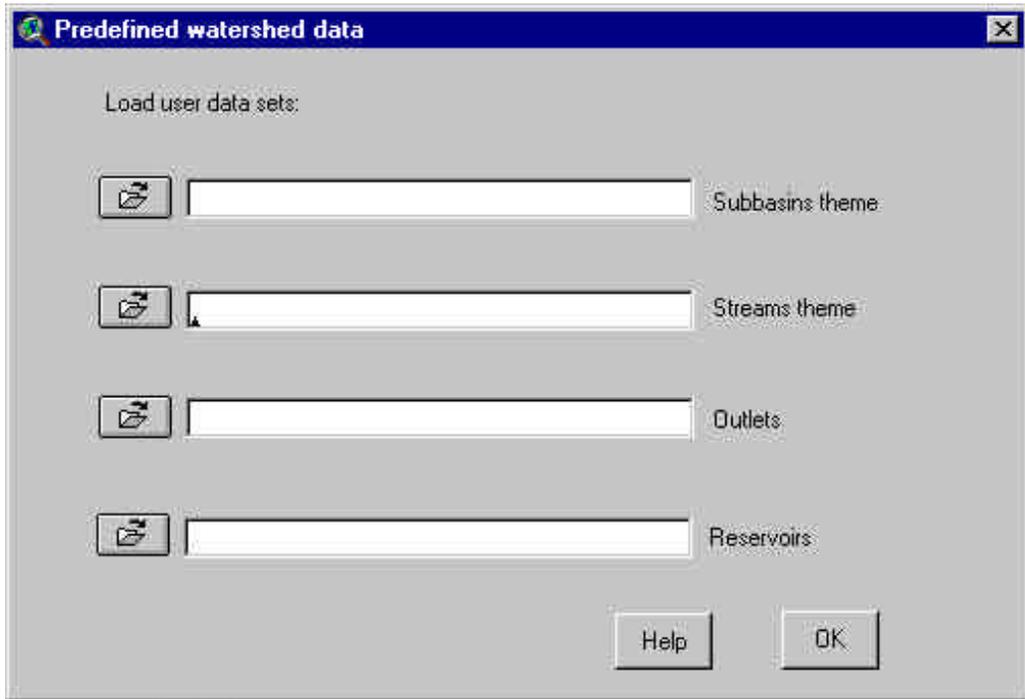
Detailed Operations

Select the choice *Predefined data*, from the *BASINS View* menu *Delineate*, to begin the set up (Screen 8.3.1).



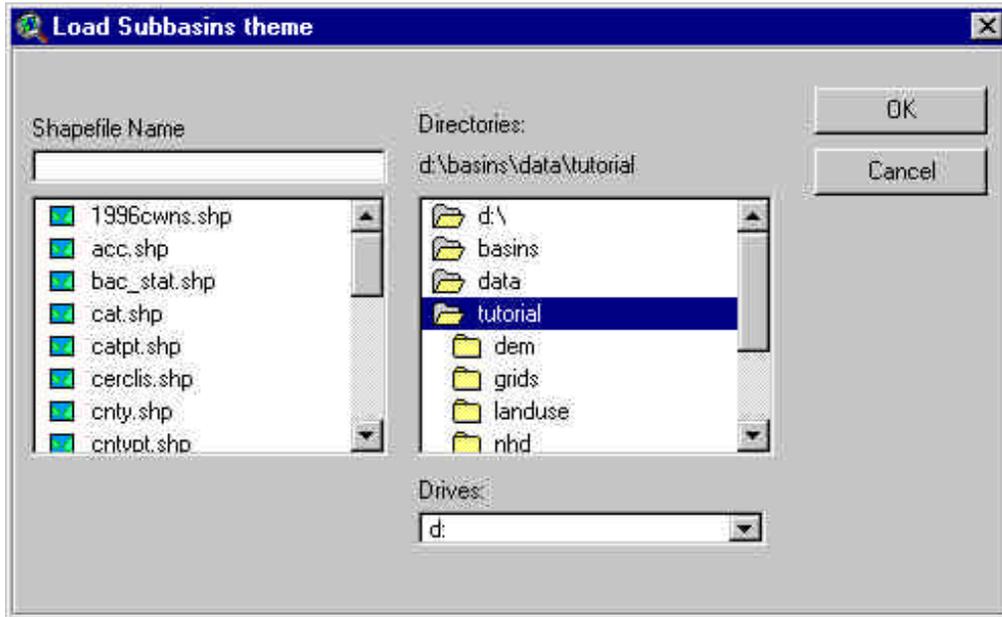
Screen 8.3.1

The *Predefined Watershed Data* dialog will open (Screen 8.3.2).



Screen 8.3.2  Load the *Subbasins* theme by clicking the button beside the text box labeled *Subbasins theme*

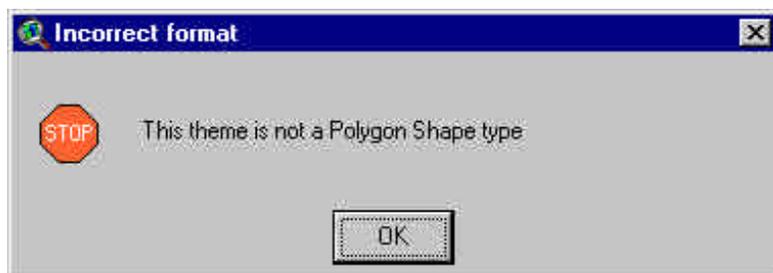
Use the browser (Screen 8.3.3) to select and load the theme file.



Screen 8.3.3

The loading theme must be a Polygon shape file and the table of attributes must contain the fields reported in Tables 8.3.1 through 8.3.5.

A message box pops up if the loading theme does not have the correct format (Screen 8.3.4) or fields (Screen 8.3.5).



Screen 8.3.4



Screen 8.3.5



Load the *Streams* theme by clicking the button beside the text box labeled *Streams theme*

The loading theme must be a Polyline shape file and the table of attributes must contain the fields reported in Tables 8.3.1 through 8.3.5. As in step 1, a message box pops up if the loading theme does not have the correct format or fields.



Load the *Outlets* theme by clicking the button beside the text box labeled *Outlets theme*

The loading theme must be a Point shape file and the table of attributes must contain the fields reported in Tables 8.3.1 through 8.3.5. As in step 1, a message box pops up if the loading theme does not have the correct fields.

Note: The points can be located anywhere within the subbasin boundaries.



(Optional) Load the *Reservoirs* theme by clicking the button beside the text box labeled *Reservoirs theme*

The loading theme must be a Point shape file and the table of attributes must contain the fields reported in Tables 8.3.1 through 8.3.5. As in step 1, a message box pops up if the loading theme does not have the correct fields.



Click **OK**.

The dialog will close and you can proceed.

Table 8.3.1. Subbasins Theme Data Fields

Field Name	Description
Id	ArcView internal field
GridCode	ArcView internal field
Subbasin	Subbasin number
Area	Subbasin area[hectares]
Len1	Stream reach (longest path within the subbasin) length [meters]
Slo1	Subbasin slope [%]
Sll	Field slope length [meters]
Csl	Reach (longest path) slope [%]
Wid1	Reach width [meters]
Dep2	Reach depth [meters]
Latitude	Latitude of the subbasin centroid [decimal degrees]
Elevation	Elevation of the subbasin centroid [meters]
Bname	String available for labeling the theme

Table 8.3.2. Streams Theme Data Fields

Field Name	Description
Arcid	ArcView internal Field
From_node	ArcView internal Field
To_node	ArcView internal Field
Subbasin	Subbasin number
Subbasinr	Subbasin number receiving surface water from the subbasin
Numin	Number of inlet subbasins
Areac	Cumulated drainage area [hectares]
Len2	Stream reach length [meters]
Slo2	Stream reach slope [%]
Wid2	Stream reach width [meters]
Dep2	Stream reach depth [meters]
MinEl	Minimum elevation of the stream reach [meters]
MaxEl	Maximum elevation of the stream reach [meters]
Sname	String available for labeling the theme

Table 8.3.3. Outlet Theme Data Fields

Field Name	Description
PointId	ArcView internal field
Grid_Code	ArcView internal field
Xpr	X coordinate in the current projection
Ypr	Y coordinate in the current projection
Lat	Latitude [decimal degrees]
Long	Longitude [decimal degrees]
Type	Outlet type
Id	Outlet ID
Pcsid	Unique ID from respective program system

Table 8.3.4. Reservoir Theme

Field Name	Description
Subbasins	Subbasin number
Xpr	X coordinate in the current projection
Ypr	Y coordinate in the current projection
Lat	Latitude [decimal degrees]
Long	Longitude [decimal degrees]

Table 8.3.5. Outlet Theme “Type” Field Values

Type	Meaning
L	Linking stream added outlet
O*	Table added outlet
T	Manually added outlet
P	Manually added point source
D*	Table added point source
I*	Table added draining watershed inlet
W	Manually added draining watershed inlet
S	Permit Compliance Systems

* Acceptable values for imported outlet-inlet table.

