



**US Army Corps
of Engineers**
Mobile District

eCoastal Shoreline Classification Tool

Version 1.0

Document Packet

System Requirements
Installation Instructions
User's Guide



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of Engineers**
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eCoastal Shoreline Classification Tool

Version 1.0

To be used within ArcMap

System Requirements



Introduction

A shoreline, where land meets water, can be made up of many different components.

For instance, a shoreline may be nothing but hundreds of miles of white sandy beach. But shorelines can also vary, shifting, for example, from sand to swamp, with concrete walls, docks and bridges punctuating it along the way.

This tool, when used in ArcMap within a GIS, will allow a user to classify the shoreline of an area, and define the unique characteristics that make up a specific piece of shoreline. The end result will be a collection of data readily available when a user clicks on a specific piece of shoreline.

The following are the system requirements needed to install and use the shoreline management tool in ArcMap.

Requirements

- ✦ ArcMap, version 9.2
- ✦ Service pack # 3
- ✦ .Net support must be installed within ArcMap
- ✦ Internet access



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The following instructions will explain how to install the shoreline management tool in ArcMap.

Getting started

Open the pathway \\sam-db01mob\E_Drive\OPJGIS\eCoastal Production Packages\OPJ Beta\Shoreline Classification\Release. From here, click setup.exe.



Figure 1-1

A window will pop up instructing user to set up the tool. Click Next. See Figure 1-1.

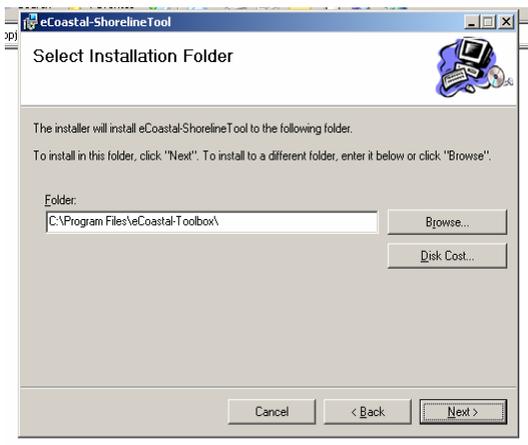


Figure 1-2

A new window will open asking the user to select an installation folder. Select C:\Program Files\Coastal-Toolbox\ and click next. See Figure 1-2.

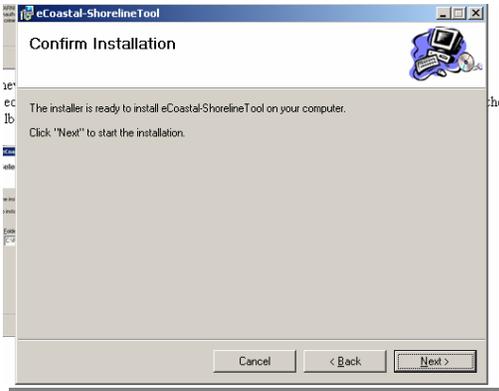


Figure 1-3

Confirm Installation should open. Click Next. See Figure 1-3.

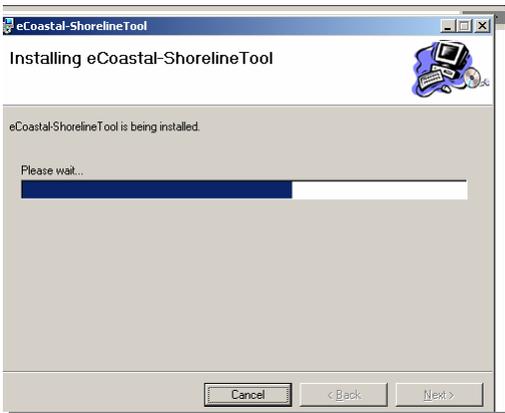


Figure 1-4

The tool should begin installing. See Figure 1-4.

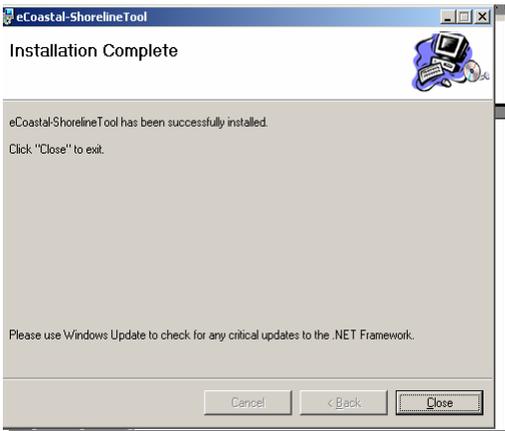


Figure 1-5

A window should confirm the successful installation. Click Close. See Figure 1-5.

The tool should have successfully installed. Now the user should be able to start ArcMap.



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A user's guide



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Introduction

A shoreline, where land meets water, can be made up of many different components.

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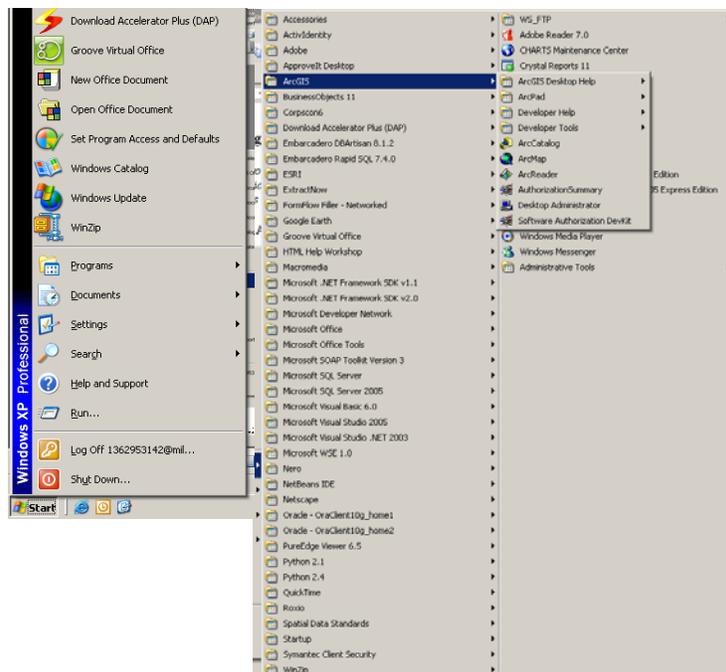
This tool, when used in ArcMap within a GIS, will allow a user to classify the shoreline of an area and define the unique characteristics that make up a specific piece of shoreline. The end result will be a collection of data readily available when a user clicks on a specific piece of shoreline.

The following instructions will explain how the shoreline management tool works, and how a user can utilize the tool to create better and more informative maps.

Getting Started

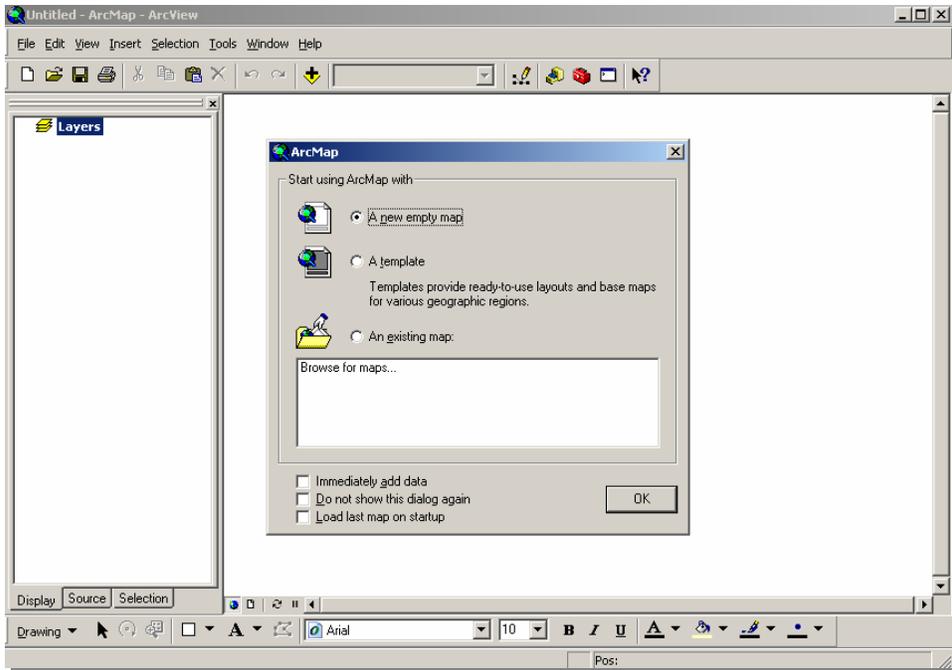
Before you get started, please read the system requirements document and the installation instructions that were sent in this document packet, to ensure that your system is ready for this tool and that the tool has been installed on your computer.

Open Arc Map



1. Click start, then programs, then ArcGIS, then ArcMap. See Figure 1-1.

Figure 1-1



2. A screen will pop up.

Click a new empty map, or browse for the map needed. See Figure 1-2.

Figure 1-2

3. The shoreline management tool should be installed, but isn't visible on any toolbar yet. To make the tool visible, click view, then toolbars, then customize. (Figure 1-3)

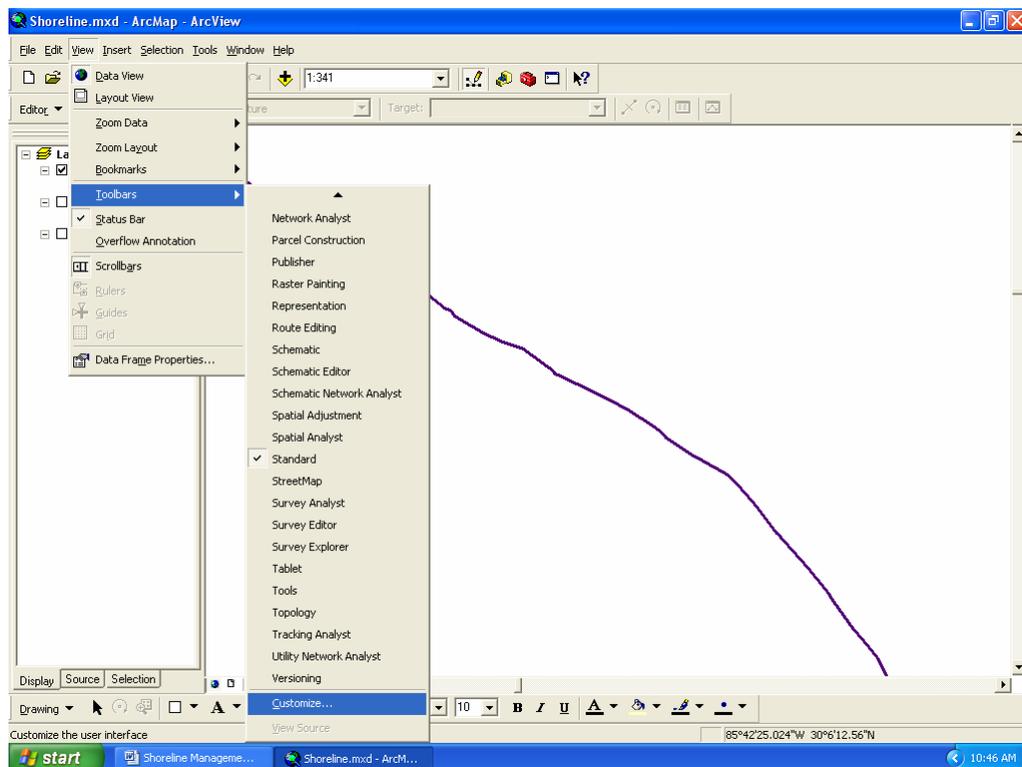
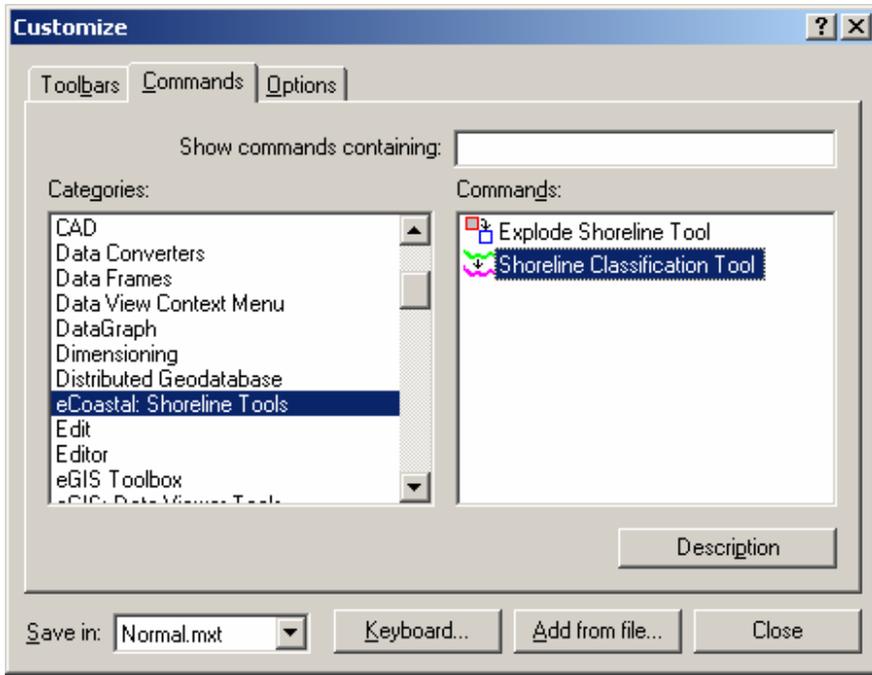


Figure 1-3



4. The customize window will open.

Click the commands tab at the top of the box, then click eCoastal: Shoreline Tools, then Shoreline Classification tool. See Figure 1-4.

Click and drag the shoreline classification tool to the toolbar of your choice. (Figure 1-5)

Figure 1-4

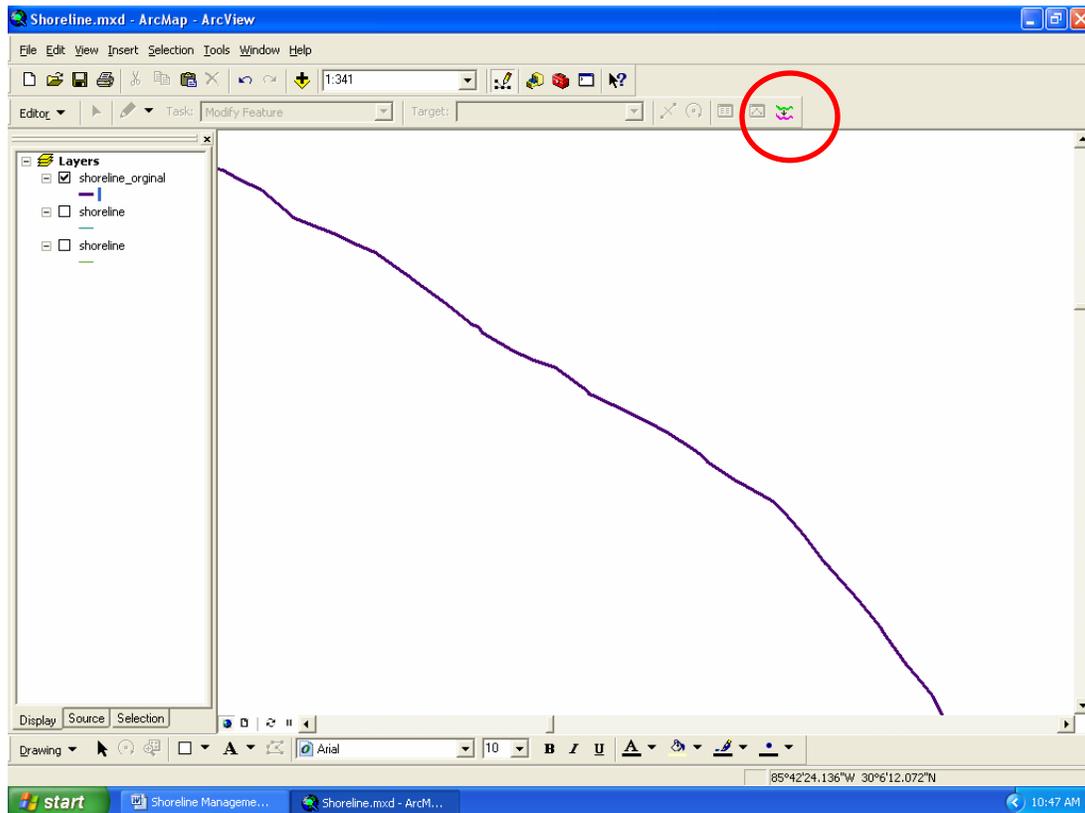


Figure 1-5

Icons

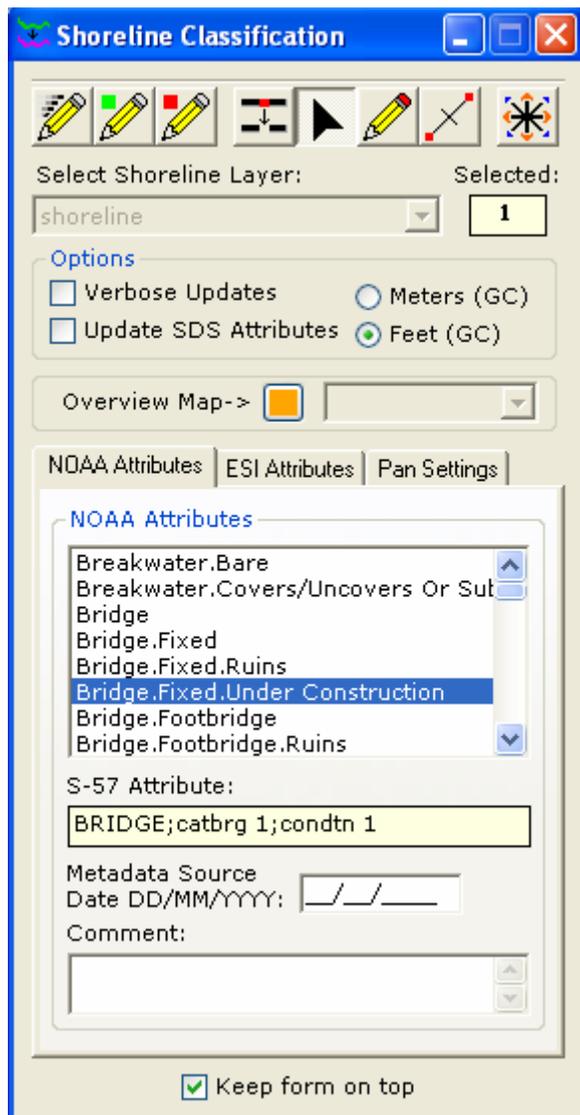


Figure 2-1

Now you're ready to start using the tool.

Click on the  icon. The tool should appear on your screen like in Figure 2-1.

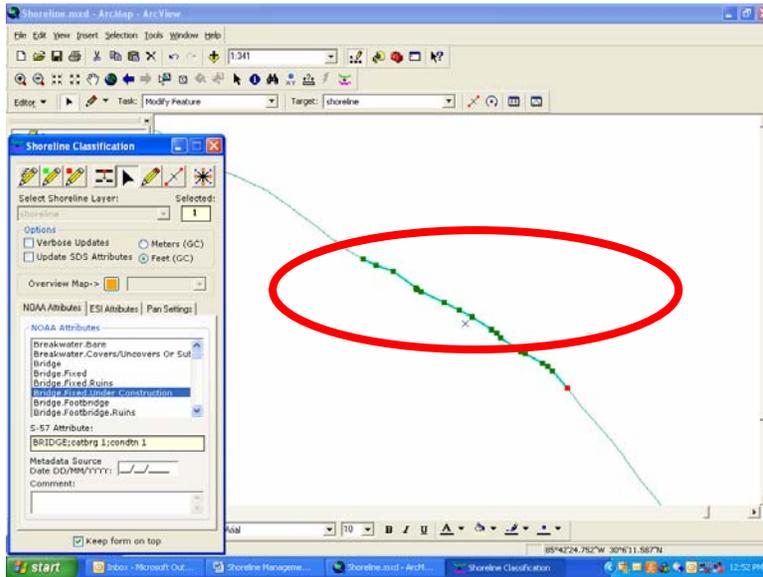
The buttons across the top are the editing tools. The icons labeled below represent the following:

1. Click  to start editing.
2. Click  to save edited changes.
3. Click  to stop editing, and save no changes made during the last editing session.
4. Click  to “explode” a polyline, or piece of shoreline. This will break a line into the smallest constituent parts possible.
5. Click  to select pieces of shoreline, features, etc.
6. Click  to sketch a new piece of shoreline or to fill in gaps on an existing piece of shoreline.

7. Click  to split a polygon or piece of shoreline into two or more pieces.

8. Click  to pan the screen north, south, east or west.

Start Editing



Click  to start editing. Select a piece of shoreline. The selected shoreline should be highlighted, with vertices of the shoreline visible (Figure 3-1). If a line segment needs to be broken into two segments based on a change in shoreline makeup, click the  button. Now click on any point in a line segment and create a new vertex. Each new segment can now be classified and attributed.

Figure 3-1

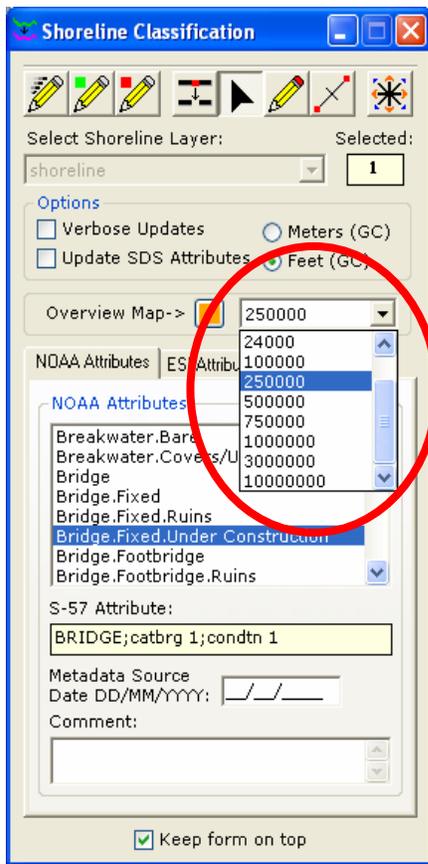


Figure 3-2

If you'd like to see where the selected shoreline is in relation to the rest of the map, click "Overview Map," as shown in Figure 3-2. An overview map will appear in the top right-hand corner of the screen. See Figure 3-3.

The scope of the overview map can be controlled by the user by selecting a distance number in the box/pick list next to the overview map button. See Figure 3-2.

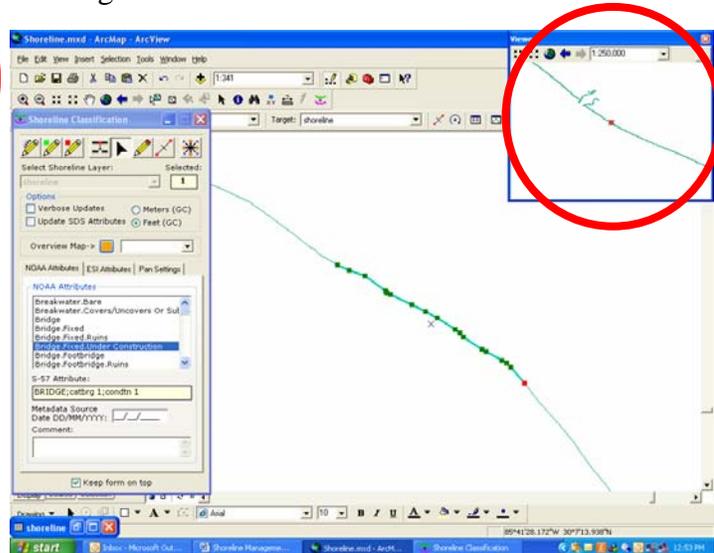


Figure 3-3

Attributing shorelines

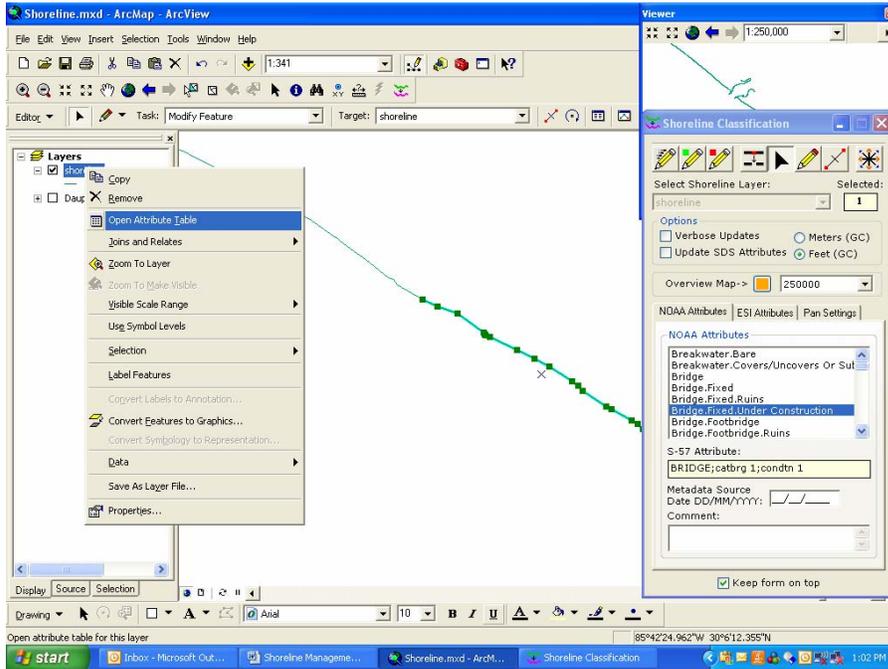


Figure 4-1

To see the attributes you're making, open the attributes of shoreline table. To do this, right click on the layer you wish to attribute (Figure 4-1) and select "Open Attribute Table." The table should open to the bottom of your screen, as shown in Figure 4-2.

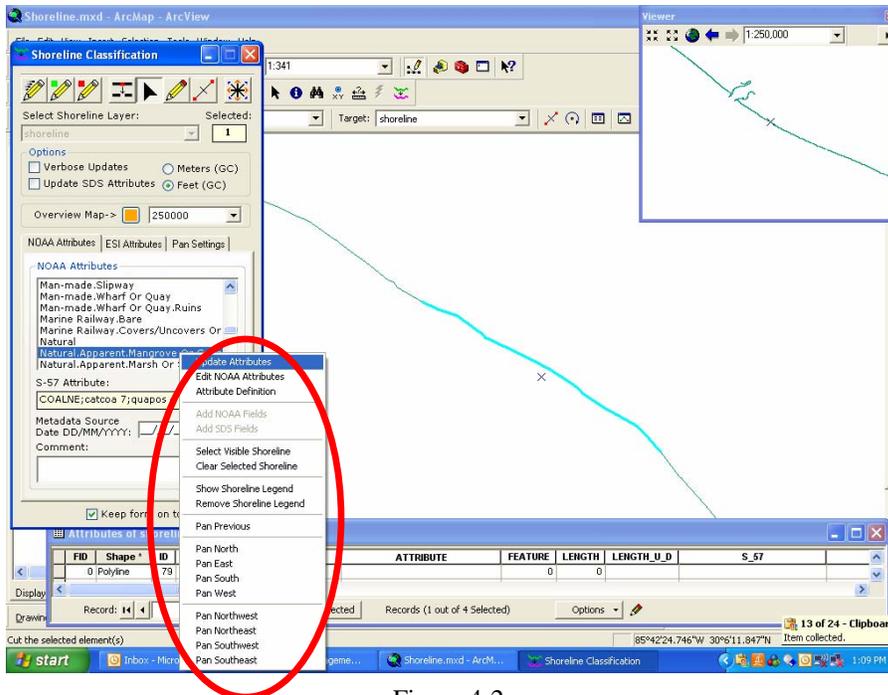


Figure 4-2

Now you can begin attributing. Simply click on a piece of shoreline and select the desired attribute from the NOAA Attributes pick box.

Once you've highlighted the desired attribute from the box, right click to update it, or to see other options. See Figure 4.2

A context menu should appear. See Figure 4-3.

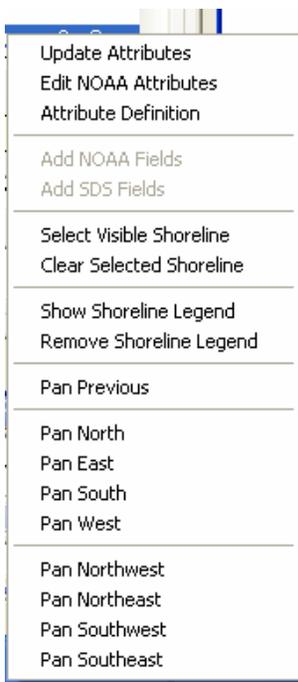


Figure 4-3

Selecting “Update Attributes” will update the attributes for the selected piece of shoreline.

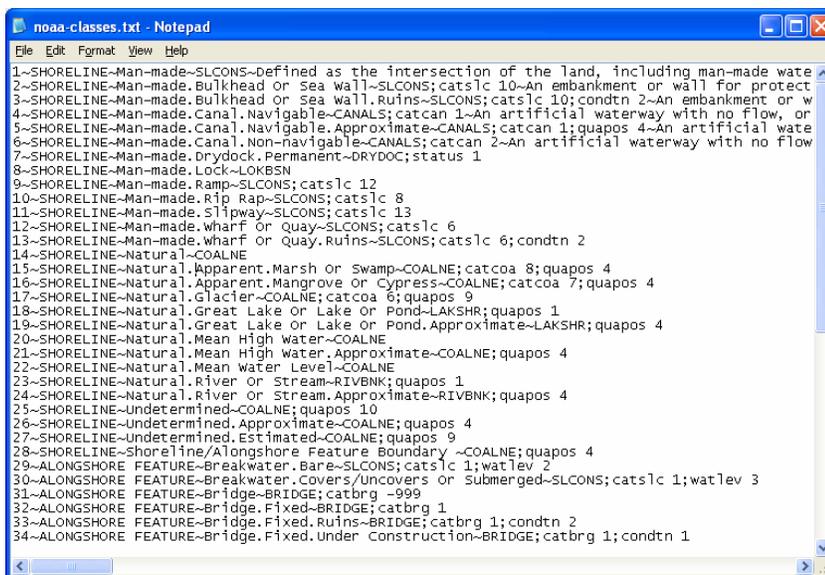


Figure 4-4

“Edit NOAA Attributes” will open a txt. Document, in Notepad of the NOAA classes, and users can edit them here. See Figure 4-4.

Note: This is also where a user can input the definition of an attribute by entering a tilde (~) symbol at the end of a text string for a specific attribute and then typing the desired definition.

Whatever the user types here will pop up in a small window when the user clicks “Attribute Definition” in the context menu, as illustrated in Figure 4-5.

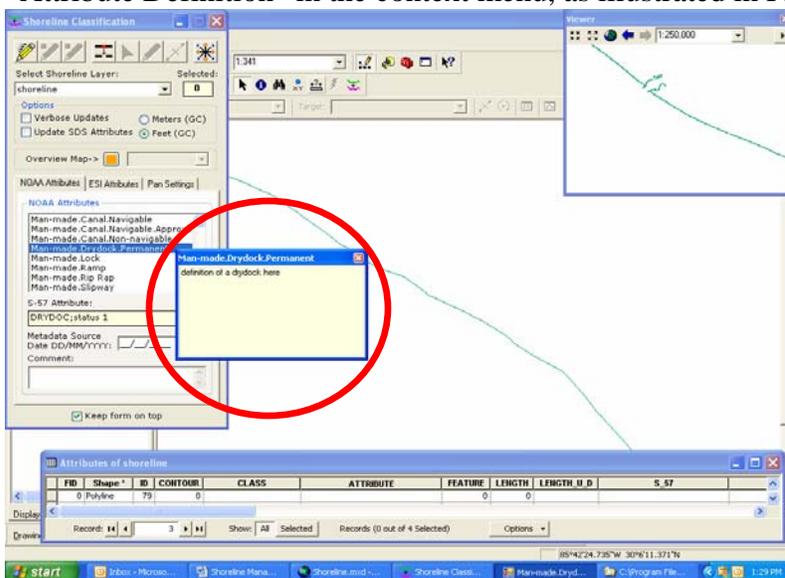


Figure 4-5

However, the tool will have to be restarted to see any changes made to this file.

Several other options are available in the context menu shown in Figure 4-3. From the context menu, a user can click “Select Visible Shoreline” to select all shoreline visible in the current view, or click “Clear Selected Shoreline” to clear it.

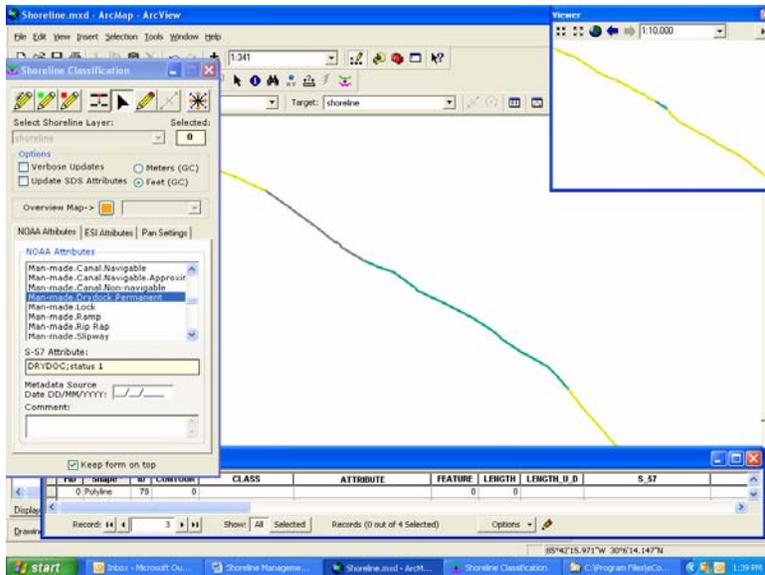


Figure 4-6

Clicking “Show Shoreline Legend” will classify the selected shoreline with a value map renderer, as seen in Figure 4-6.

This feature is useful to see what pieces of shoreline have been classified as you work.

To set the shoreline back to a single line symbol, pick “Remove Shoreline Legend” in the content menu shown in Figure 4-3.

Another way to ensure that all your attributes have been applied is through the “Verbose Updates” box. See Figure 4-7.

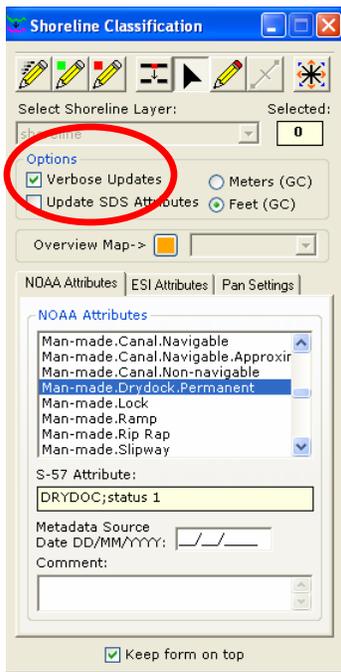


Figure 4-7

Checking this box will result in a window opening after every successful attribute update to confirm the update. See Figure 4-8.

Uncheck the “Verbose Updates” box if you would like to continue editing without confirmation of every attribute change.

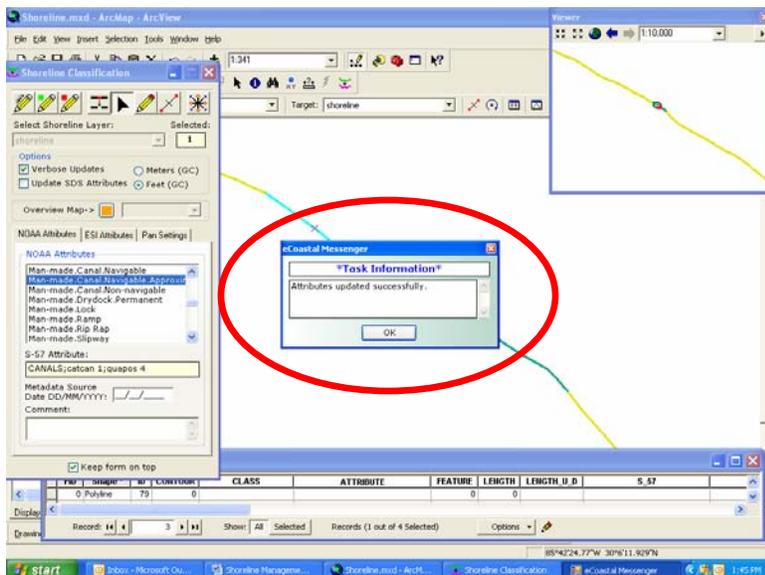


Figure 4-8

Metadata

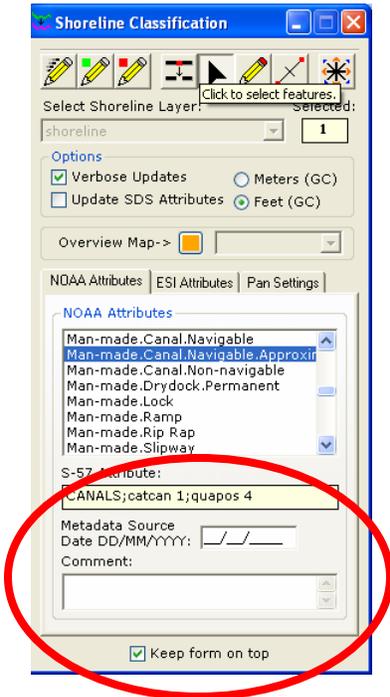


Figure 5-1

With each attribute selected, the user must type in the metadata source date for that information.

The date can be typed into the box in the bottom of the tool box. See Figure 5-1.

The user can also add any comments desired in the comments box for the piece of shoreline he or she has just attributed.

Later, when a user clicks on a piece of shoreline within the map to see it's attributes, the comments and metadata source will be available for view.

Panning the Map

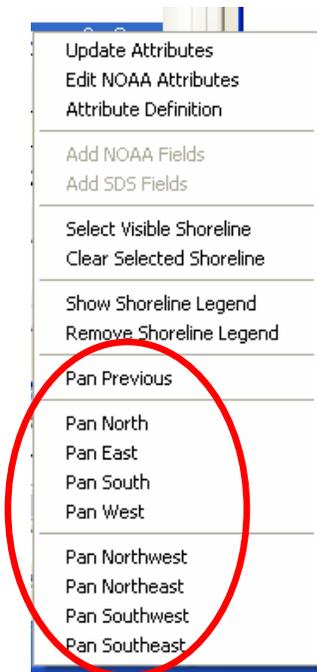


Figure 6-1

Panning the map can be done in two ways through the Shoreline Classification tool.

The pan commands are available from the context menu that opens when a user right clicks in the NOAA attributes box, as seen in Figure 6-1, and in the previous Attributing Shorelines section. A user can also pan the map with a single click using the  button.

The scale of the **pan button only** is controlled through the “Pan Settings” tab, as seen in Figure 6-2. This does not control the pan commands in the context menu.

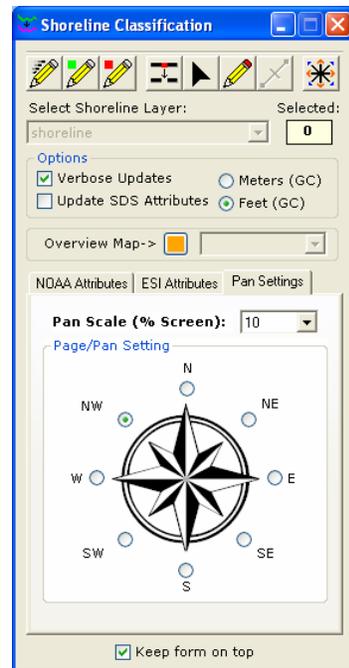


Figure 6-2

Good To Know

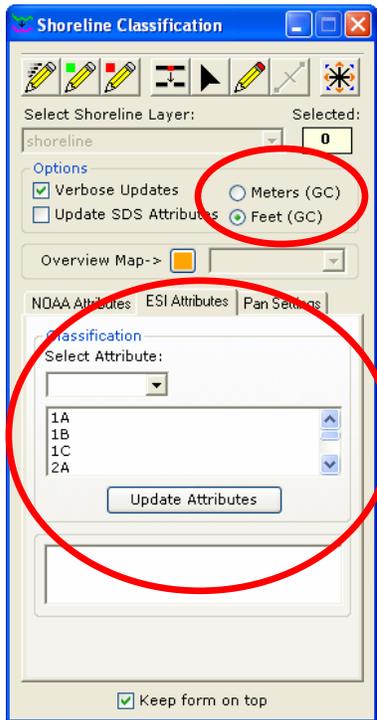


Figure 7-1

✪ The ESI Attributes section is designed for future use and at this time, does not currently provide attribution functions. See Figure 7-1.

✪ Users can select either meters or feet for the unit of measure. When updating the attributes of a shoreline, the length of the polyline selected is automatically extracted and populated into the attributes table based on the unit of measure chosen here. See Figure 7-1.

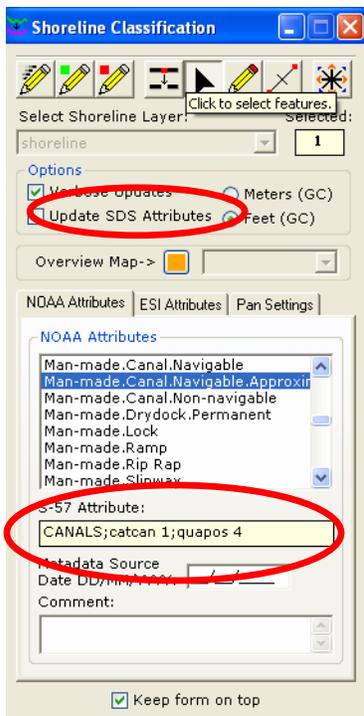


Figure 7-2

✪ The S-57 Attribute button shows the user the correlating S-57 attribute with whatever NOAA attribute has been selected. S-57 is a standard defined by the International Hydrographic Organization (IHO) for the exchange of digital hydrographic data. See Figure 7-2.

✪ Clicking the “Update SDS Attributes” box will automatically populate the attributes table with SDS field data as you classify shoreline shapefiles. Leave the box unchecked to work with only NOAA attributes. See Figure 7-2.