**California Marine Life Protection Act Initiative**
Internet Map Services (IMS)
June 8, 2005

The California Marine Geodatabase contains dozens of geographic data layers. These data will be accessed in a variety of ways depending on the needs of those accessing them.

MLPA staff and GIS specialists have been accessing the geodatabase using ArcGIS, and will continue to do so as a means of adding, removing and analyzing the data.
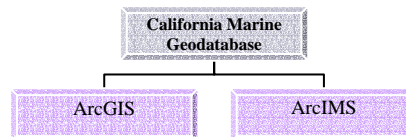
As a means of making our data as accessible as possible to interested parties, we have designed a prototype internet map service (IMS) that allows anyone with access to a standard web browser to view a map of the data layers contained within the geodatabase. To date, only limited jurisdictional and geographic data are loaded into the IMS; we will be adding data incrementally over the next 2 months. Using Internet Explorer, Safari, Netscape or Mozilla, users may access http://maps.msi.ucsb.edu/mlpa where they will see a map that looks something like this:
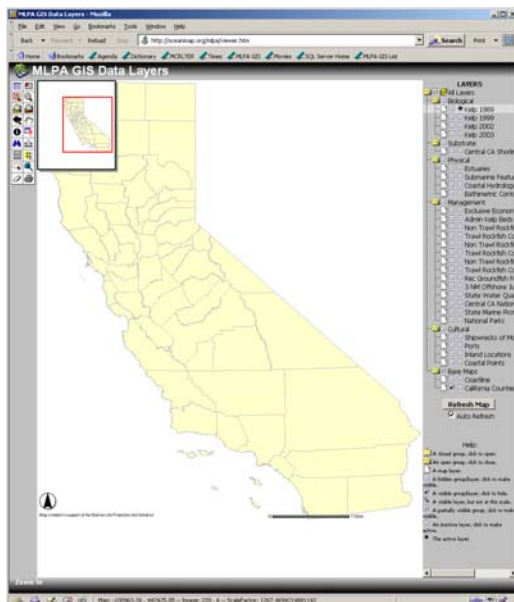
On the left side of the screen are tools that may be used to:
1) view / hide an overview map,
2) view / hide the map legend,
3) change the map extent,
4) query the data layers for information in underlying tables,
5) measure distances between map features,
6) change map units,
7) select features
8) print simple maps.

On the right side of the screen is a list of data layers grouped by category. Here, layers may be turned on and off or selected (i.e., made "active") for querying.

This document is intended to give you a brief description of each of the tools available to you via the MLPA IMS and walk you through a brief tutorial that illustrates some of its current functionality.

Tools

The following table describes the tool icons available to you.

|		
show / hide legend		show / hide overview map
zoom in		zoom out
zoom to full extent		zoom to active layer
back to last extent		pan
identify		query
find		measure
set units		buffer
select by rectangle		select by line / polygon
clear selection		print

Tutorial

Most of the above tools are self explanatory and playing with them will help you understand what they do. To work properly, however, some of the tools require that one of the layers listed in the table of contents is either visible or active. When you first visit the website, the IMS shows one active layer (California Counties) and one active layer (Kelp 1989). Begin by finding "Coastal Points" in the table of contents, and clicking on the box and circle next to it. You should now see all of the coastal points appear on the map. Some of the labels are visible while others are hidden to avoid cluttering the map.

Let's say you wish to locate Point Lobos and determine the bathymetry surrounding that point. With the "Coastal Points" layer active and visible, select the "find" tool from the toolbar. At the bottom of the map enter "Point Lobos" and click "Find String" to locate the point. A table appears at the bottom of the map indicating two points called Point Lobos found in the layer.

The first column of the table lists the record number from the search and the second column is extracted directly from the geodatabase table that is associated with the Coastal Points dataset. (The second column heading is necessarily long but for your purposes you only need to pay attention to the last few characters: POINT_NAME.)

Clicking on record number one in the table zooms the map extent to reveal Point Lobos of Northern California. You know this because the red extent rectangle in the overview map is located along the northern coast. Clicking on record number two zooms you to Point Lobos of Central California.
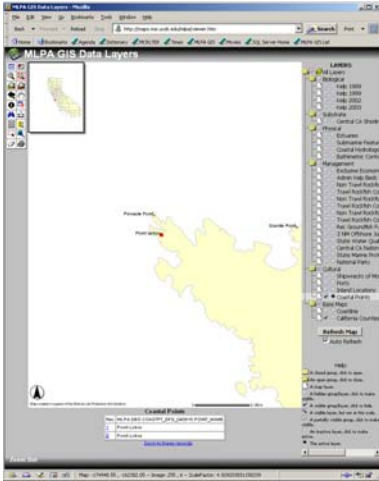
With the map still showing Point Lobos of Central California, choose the "Zoom In" tool from the toolbar. Click and drag a rectangle around the point until the map extent looks something like what you see here. Now, check the box next to the layer called "Bathymetric Contours at 10 m Intervals" making it visible but not active.

Next, click the "Select by Rectangle" tool from the toolbar and drag a box around the dot that represents Point Lobos. Again, you will see a table appear at the bottom of the map that display attributes associated with the feature you just selected. This will happen every time you select a feature from the active layer.

With Point Lobos selected, click the "Buffer" tool from the toolbar and note that a dialogue box appears at the bottom of the map. From the drop down list, choose "Bathymetric Contours at 10 m Intervals", enter .25 as the buffer distance, click the box next to "Display Attributes" and click "Create Buffer."
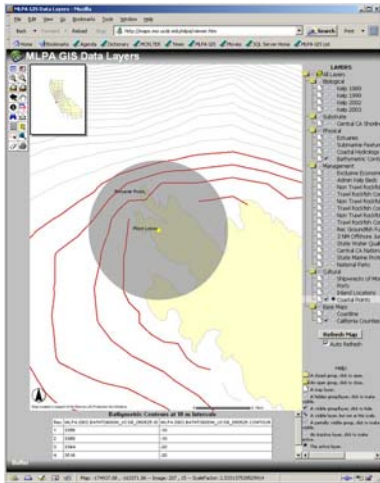
This creates a .25 mile buffer around Point Lobos and selects the contours from the bathymetry layer that fall within that buffer. The table that appears below has a column that lists the contour depth and at the bottom of the table you will see that the maximum contour is -40 meters. That is, the maximum depth within a quarter mile of Point Lobos is approximately 40 meters.

You may wish to try a similar exercise using different layers from the table of contents. To clear your selection and remove your buffer, click the "Clear Selection" tool on the toolbar. Remember that you will need to make layers visible and active before they may be used in a query.

Other suggestions

Depending on your needs, you may wish to change the map units. You may set your units by choosing the "Set Units" tool from the toolbar and choosing feet, miles, meters or kilometers from the drop down list that appears. If you choose the "Measure" tool from the toolbar, you will see that the units you have selected are being used. Click the cursor at several locations on the map (slowly, to allow the server to calculate the distance) and notice that the length of the segment and total length of your line is displayed at the top of the page. To delete your line from the map, use the "Clear Selection" tool.
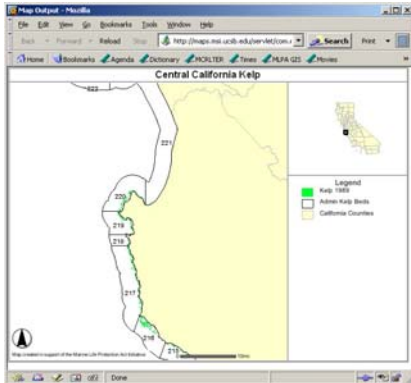
If you have created a map that you wish to save as a JPG image, click the "Print" tool on the toolbar. A dialog box at the bottom of the map gives you the opportunity to create a unique title for the map or simply choose the default. Clicking the "Create Print Page" button generates an image that is displayed in a new browser window. Note: if an image does not appear in a new window it is likely that your browser is blocking pop-ups. Configure your browser to allow pop-ups for this site in order to view your map.

Also note that most browsers are configured by default to cache web site data and reduce upload times. Unfortunately, if a site has changed, you may not be viewing the most up-to-date version. To avoid this problem with our IMS, either delete your browsers cached files before visiting the site or configure your browser to stop caching (i.e., check for a newer version of the stored pages every time you visit a site).

If you have problems, please contact Will McClintock, IMS manager, at mcclintock@msi.ucsb.edu.