

Appendix 1
Online Query Builder Users Manual

Online Database Query Builder

Building a Custom Query

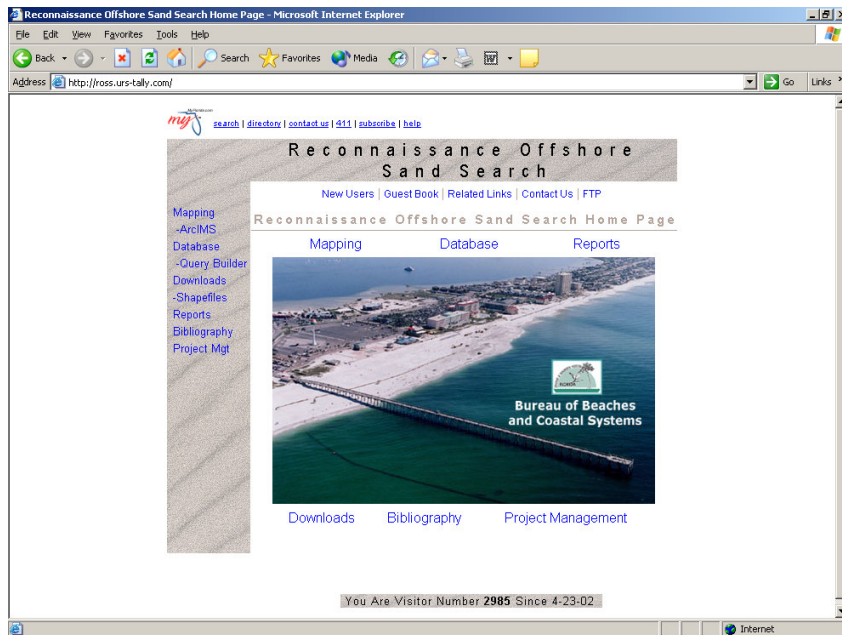
Introduction:

The query builder works by allowing you to create a "where" clause that is added to an SQL (Structured Query Language) selection statement. This selection statement tells the database to retrieve rows where the conditions you have set are true.

The query is made against one of two database views that join together data from several different database tables. Because of the structure of the database, you must specify whether the query should be run against the samples or core view. The sample view includes all data in the samples data, plus related data in the core table. The core view includes all data in the core table plus related data in the samples table. They appear to be very similar, but they are different representations of the data.

Creating a custom query

First you need to get to the Query Builder page.

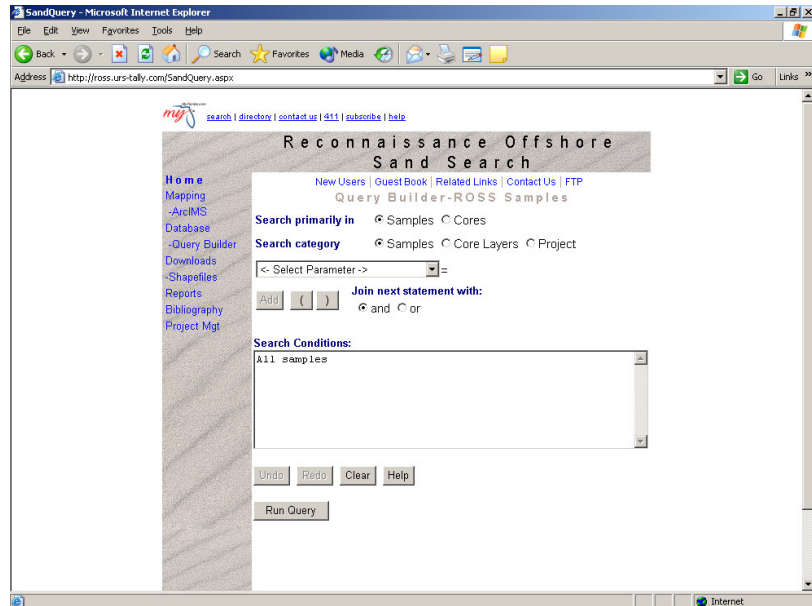


Click on the link titled 'Query Builder' on the ROSS Main page.

You should now see the Online Query Builder page. From this page you can select the query criteria you want to use to filter the data.

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The query parameters are categorized into three different groups. The Sample group, which provides parameters associated with the samples table. The Cores group, which provides parameters associated with the cores and core layers tables, and the Project group, which provides parameters associated with the project table.



Depending on which parameter you choose, the screen will change to allow you to enter an appropriate value.

If you choose a numeric or date parameter (such as Mean Grain Size, or Sample Date), the screen will change to show you a drop-down list of relational operators ("=", ">", "<", etc.) and a text box into which you can enter a number or date, as appropriate.

If you choose a text parameter, the screen will change to show you a different set of relational operators ("=", "<>", "like" and "not like"). The first two operators allow you to search for a specific text value, while the latter two operators allow you to search using a wildcard character ("*") to represent any text. The following examples demonstrate the difference between the relational operators:

For example, searching for a sample record that contains the word "island" in the project location field yields the following results based on the relational operator

- The “=” operator requires an EXACT match to return any results
- The “like” and “not like” require the use of the ‘wildcard character’ (“*”, an asterisk) placed in the appropriate location within the search criteria for example
 - Choose “like” then enter “*island*” this will return ANY Project location that has the word island anywhere in the location

- **Captiva Island**

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- Sanibel and Captiva **Islands**
- Captiva **Island**, Lee County, Florida
- Choose “like” then enter “*island” this will return results where the word “island” is at the end of the project location.
 - Captiva **Island**
- Choose “like” then enter “island*” this will return results where the word “island” is at the beginning of the project location.
 - Currently there are no Project Locations that begin with the word “island”

There are several parameters (such as Layer Structure) you can use that provide you with a lookup list. If you choose one of these parameters, a drop-down list containing the acceptable values will appear.

There are other parameters that provide an even more customized query interface. These include Munsell color, named descriptive color, and core layer qualifiers. These screens are described in more detail below.

Search by range of dates or numbers

If you choose one of the numeric or date parameters, you will see the "between" relational operator appear in the drop-down list. This allows you to enter two values in the textbox and return records whose values fall between the two numbers (or dates). For example, to search for samples with a mean grain size greater or equal to -1 and less than or equal to 2, you would select the "between" relational operator and enter "-1 and 2" in the textbox.

Acceptable date formats

The query builder allows you to enter a date in a variety of formats, including:

Format	Example
mm/dd/yyyy	12/31/2003
mm dd yyyy	12 31 2003
mm-dd-yyyy	12-31-2003
mm.dd.yyyy	12/31/2003
mm/dd/yyyy	12/31/2003
dd month yyyy	3 May 2004
month dd yyyy	May 3 2004
dd mon yyyy	3 Jan 2006
mon dd yyyy	Jan 3 2006

If you leave the year off, it will assume you mean the current year. Enter the date in whatever format you are most comfortable with, and the query builder will reformat the date into a standard MM/DD/YYYY format for you.

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Searching by Munsell color

If you choose the Munsell color parameter, the screen will change to show a drop-down list and two textboxes. To enter a Munsell color, select the hue from the drop-down list, and enter numbers in the value and chroma text boxes.

Munsell Color =

Hue	Value	Chroma
2.5YR	4 and 6	5

Dry Wet Washed Unknown

You can also search by a range of Munsell values or chromas. To do this, enter the lower and upper limits of the range you wish to search in the value or chroma textboxes. For example, to search for Munsell colors with a range of values between 2 and 5, enter "2 and 5" in the value textbox.

Searching by named color

If you choose Named Color as the parameter, the screen will display three drop-down lists. These allow you to enter a descriptive color name.

Named Color =

Named Color: DARK GREENISH GRAY

Undo and Redo

If you make a mistake and enter a query condition accidentally, you can "undo" the mistake simply by clicking the Undo button. You can undo as many changes as you like. If you undo one too many changes, hit the Redo button to reapply the last change.

Joining Query Conditions

The conditions you enter must be joined together by a combinatorial operator, either "and" or "or". "And" signifies that all conditions must be true to return a record, while "or" signifies that only one must be true. You can group conditions together to clarify how the "or" operator is to be applied. For example, to search for samples with a mean grain size of -1 phi with a color of 2.5yr 5/6 or 5yr 5/6, you should group the color conditions together within parentheses. To do this:

1. Enter the grain size condition
2. Change the join operator to "and"
3. Click the "(" button
4. Enter the first color
5. Change the join operator to "or"
6. Enter the second color
7. Click the ")"

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Example

Now that you know how to provide the information to the Query Builder, Its time to put that knowledge to the test and create a query. Let's say that you want to run a query for All Samples in the 1994 Panama City Beach Renourishment Program that contain at least 80% Fine Sand (as determined by the Unified Soils Classification) that are found within 2 feet of the bottom*. You would open the Query Builder page and select the following:

Part 1: Add project condition

1. Select the Project search category.
2. Select the Project Name parameter.
3. Select 1994 Panama City Beach Renourishment Program from the drop-down list that appears after you select the project name.
4. Click the Add button.

Search primarily in Samples Cores
Search category Samples Core Layers Project

Project Name = 1994 Panama City Beach Renourishment Program

Add () **Join next statement with:**
 and or

You will see the first query condition appear in the Search Conditions textbox.

Search Conditions:

```
Search samples where Project Name = 1994 Panama City  
Beach Renourishment Program
```

Part 2: Add the USCS Find Sand condition

1. Select the Samples search category
2. Select the % USCS Fine Sand parameter
3. Change the relational operator to ">="
4. Enter 80 in the text box.
5. Click the Add button.

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Search category Samples Core Layers Project

% USCS Fine Sand >= 80

Add () **Join next statement with:**
 and or

Search Conditions:

```
Search samples where Project Name = 1994 Panama City  
Beach Renourishment Program and % USCS Fine Sand >= 80
```

Part 3: Add the depth condition

1. Select the Top of Sample Interval parameter
2. Enter 2 in the text box.
3. Click the Add button.

Top of Sample Interval <= 2

Add () **Join next statement with:**
 and or

Search Conditions:

```
Search samples where Project Name = 1994 Panama City  
Beach Renourishment Program and % USCS Fine Sand >= 80  
and Top of Sample Interval <= 2
```

Now that you have entered all of the search conditions, click the Run Query button.

Query Results

The next screen that appears shows you a table of the results of your query.

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Sand Sample Query Results

Project Name = 1994 Panama City Beach Renourishment Program and %
USCS Fine Sand >= 80 and Top of Sample Interval <= 2

Project Name	Project Date	Project Location	Agency Managing	Agency I
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
1994 Panama City B	01/01/1994	Panama City Florida	Army Corp of Engine	Army
64/64				

[Download](#) [View Map](#) [Query Builder](#)

Sorting Query Results

You can sort the results that appear in this table by clicking on one of the column headings. Click the column heading again to reverse the sort order.

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ate	Range Monument	Collection Method	Core ID	Core Identifier	Core
		Vibracore	170	S-2-94	-
		Vibracore	173	S-37-94	-
		Vibracore	174	S-39-94	-
		Vibracore	174	S-39-94	-
		Vibracore	176	S-52-94	-
		Vibracore	177	S-7-94	-
		Vibracore	179	V-10-94	-
		Vibracore	179	V-10-94	-
		Vibracore	181	V-13-94	-
		Vibracore	181	V-13-94	-
		Vibracore	181	V-13-94	-
		Vibracore	182	V-14-94	-
		Vibracore	183	V-16-94	-
		Vibracore	183	V-16-94	-
		Vibracore	183	V-16-94	-
		Vibracore	184	V-17-94	-
		Vibracore	184	V-17-94	-

Filtering Query Results

You can further narrow the results of your search by either clicking the Query Builder button to go back to the query builder, or you can filter the results on the fly using the filter bar.

ent	Collection Method	Core ID	Core Identifier	Core Top Elevation	Co
	Vibracore	183	V-16-94	-39.90	11
	Vibracore	183	V-16-94	-39.90	11
	Vibracore	183	V-16-94	-39.90	11

			V-16	
--	--	--	------	--

To query using the filter bar, simply start typing a pattern in the column of data you want to filter. In this example, only samples from cores with a core identifier like "V-16" are

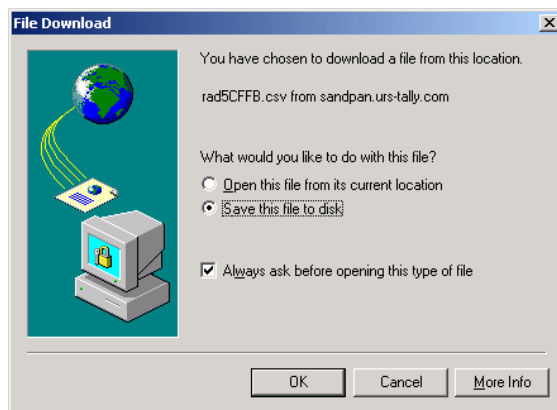
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shown. It's important to note that the filter bar does not query the database, so you cannot use it to add results to your output.

Downloading Query Results

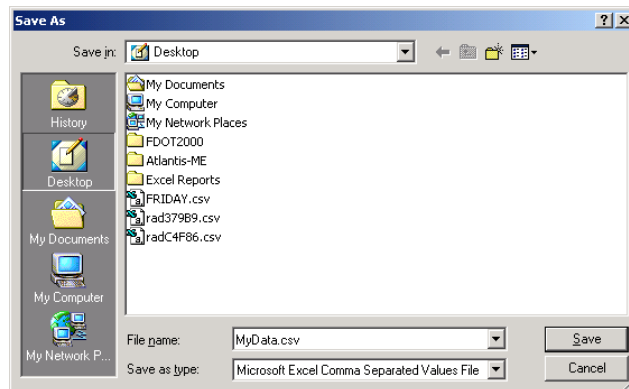
To export the filtered data from the table into a tab-delimited format suitable for import into a spreadsheet program, click the Download button. This will open up a new browser window.

Most browsers, however, will show the data as text in the window. Simply select all of the text and copy and paste it into a blank spreadsheet page. (Hit Ctrl-A, Ctrl-C, switch to your spreadsheet program and hit Ctrl-V).



On some browsers you will be prompted to save the data, or it may open up directly in your spreadsheet program. You may see a window that looks like the one to the left. Select 'Save this file to disk' and click 'OK'

You should see a window that looks like the one to the right. Select the location where you wish to save the file. Rename the file if you wish. Now click 'Save' and the download will begin.



Appendix 2
Online Mapping Users Manual

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Interactive Mapping

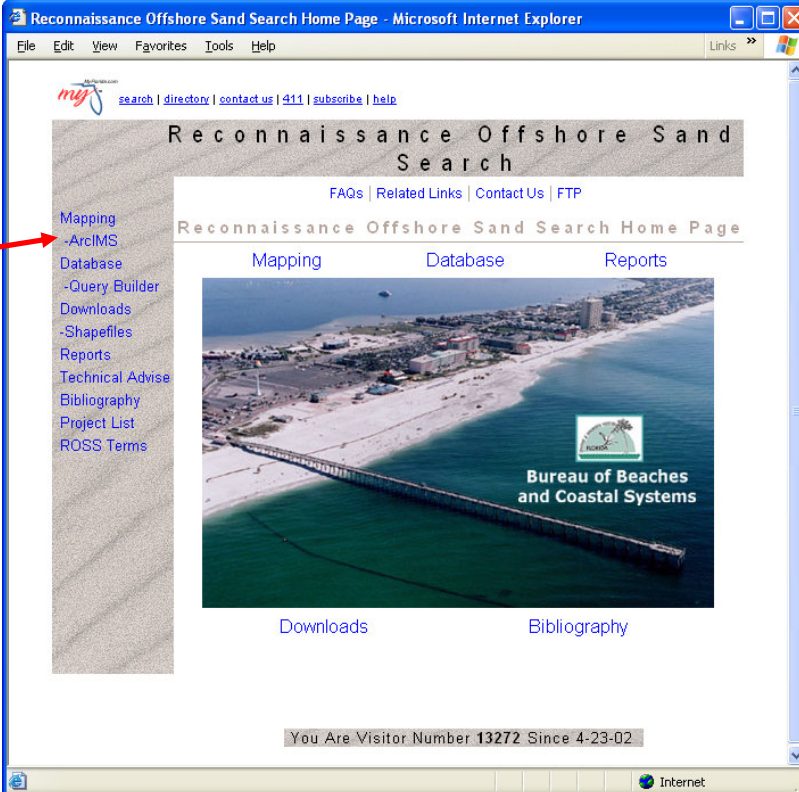
Internet Map Services

What does an Internet Map Service do?

An Internet Map Service (IMS) displays a map image based on an underlying database of spatial information. The map service allows the user to interact with the map display and query the underlying spatial data. The technology used to coordinate the database and map display is ArcIMS. More information on ArcIMS can be found on the web at <http://www.esri.com/software/arcims>.

Creating an Interactive Map

First you need to get to the Interactive Mapping page.



Click on the link titled 'ArcIMS' on the navigation bar of the BCS Reconnaissance Offshore Sand Search web page.

The screenshot shows the website's navigation bar with the following links: [Mapping](#), [Database](#), [Downloads](#), [Shapefiles](#), [Reports](#), [Technical Advice](#), [Bibliography](#), [Project List](#), and [ROSS Terms](#). The 'Mapping' link is highlighted with a red arrow. Below the navigation bar, there is a large aerial map of a coastal area with a pier extending into the water. The map is titled 'Bureau of Beaches and Coastal Systems'. At the bottom of the page, there is a visitor counter that reads 'You Are Visitor Number 13272 Since 4-23-02'.

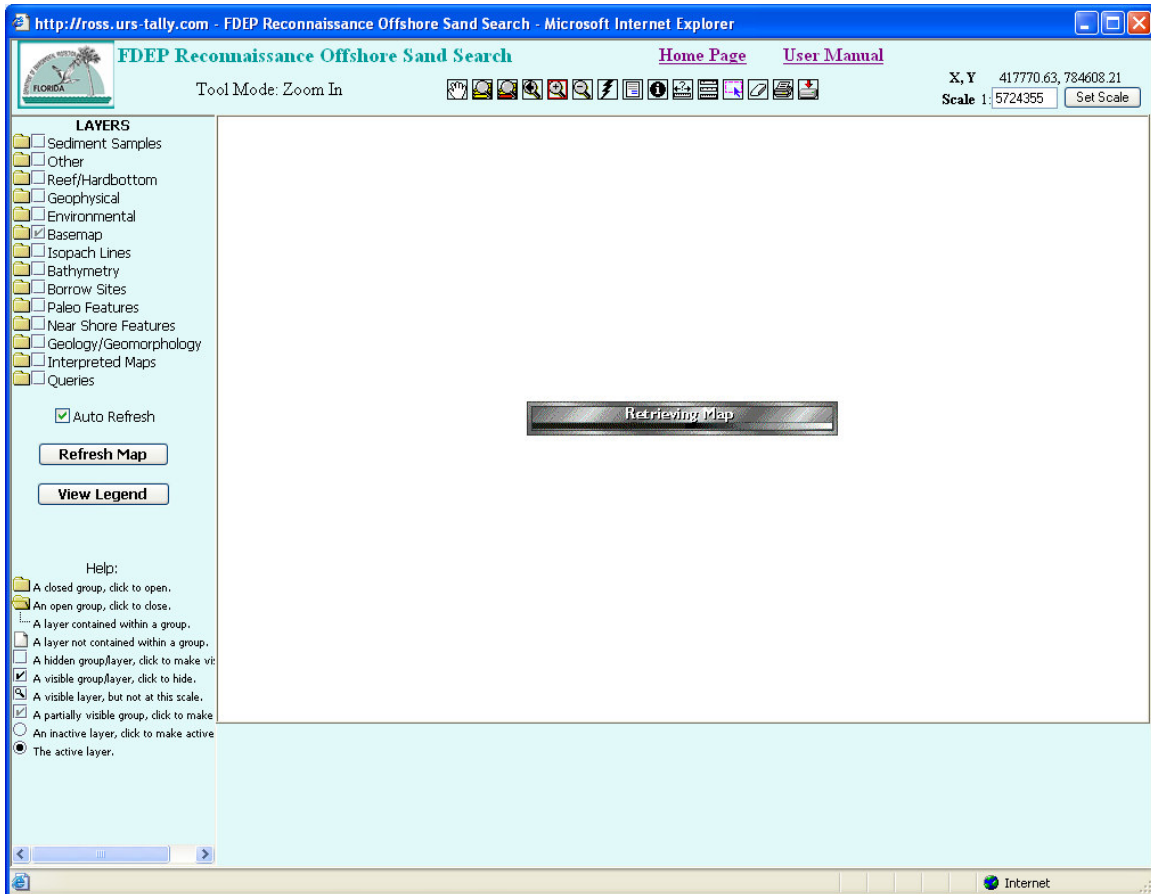
You should now see the Interactive Mapping page in a new browser window. From this page you can use a variety of tools to navigate the map and query the underlying data.

The map image displays the full extent of the spatial data contained in the database. You may navigate through any part of the map shown in this initial extent. Below the map is an area for displaying responses from the database to your requests.

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When you make requests of the map service, a response to your request is generated by the server and sent to your browser for display. The response may be a new map or the results of a query for tabular information. A response may take anywhere from a few seconds to a couple of minutes to process, depending on its complexity. During this processing time, the ArcIMS map viewer will be in Retrieving mode, preventing it from producing further requests until a reply from the server is received.



Navigating an Interactive Map

The interactive map page has a variety of tools for manipulating the map and querying the underlying spatial data. Here is a general overview of the Interactive Map page.

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Across the top of the interactive map is a toolbar that includes tools for navigating, querying, and printing. A tool mode message next to the tool bar indicates the currently selected tool.

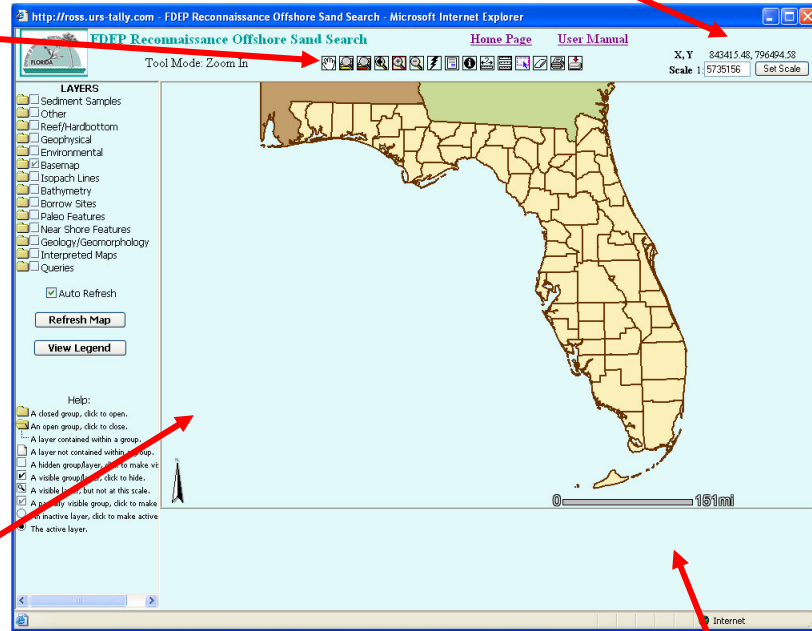
As the mouse cursor moves over the map, the map coordinates under the cursor are displayed in the top right frame, along with the current reference scale.

Appearing in the left-hand frame is the Table of Contents (TOC).

The map frame displays the interactive map.

The results frame below the map displays the records associated with the results of queries and selections, as well as various messages.

Next we will examine in detail the various frames that make up the interactive mapping website.



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Table of Contents Frame

The Table of Contents (TOC) contains a list of all the data sets, or layers, that can be viewed and queried in the ROSS database. The data sets and queries are organized in category folders.

The first section of the TOC is the Layer List, which displays all of the spatial data sets that are potentially visible.

Each of the category folders contains a list of layers. Next to the folder icon is a check box for making all of the layers in the folder visible.

Each layer name appears next to a check box and radio button. The check box indicates if the layer is currently visible on the map, and the radio button indicates if the layer is activated for use with the query, select, and identify tools.

A magnifying glass symbol in the checkbox lets you know that the layer is not visible at the present scale. To improve performance by reducing the map drawing speed, some very detailed layers can only be displayed when the map area is small.

Below the Layer List is the Refresh Map and View Legend buttons. Use the Refresh Map buttons to apply changes to the visible layers. The View Legend button loads a map legend that shows the meaning of all the symbols in the map.

At the bottom of the frame is a Help section that describes all of the icons used in the TOC.

The screenshot shows the web interface for the ROSS database. The URL is <http://ross.urs-tally.com>. The page title is "FDEP Reconnaissance Offshore Sand Search". The main content is a "LAYERS" list. The "Basemap" folder is expanded, showing a list of layers with checkboxes and radio buttons. The "Florida Coastline" layer is checked. Below the list are "Auto Refresh", "Refresh Map", and "View Legend" buttons. A "Help" section at the bottom explains the icons used in the TOC.

Icon	Description
Folder icon	A closed group, click to open.
Open folder icon	An open group, click to close.
Layer icon (dotted line)	A layer contained within a group.
Layer icon (solid line)	A layer not contained within a group.
Checked checkbox	A hidden group/layer, click to make visible.
Unchecked checkbox	A visible group/layer, click to hide.
Layer icon with magnifying glass	A visible layer, but not at this scale.
Checked radio button	A partially visible group, click to make active.
Unchecked radio button	An inactive layer, click to make active.
Active radio button	The active layer.

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Results Frame

The Results Frame is the area below the map image that is used to display several kinds of textual information, such as:

- Diagnostic messages
- Tabular results from identifying, selecting, and querying features
- Forms for user input
- Hyperlinks to related documents

Below is a screen capture of the results from a selection by rectangle on the All Sand Samples layer. The Select By Rectangle tool is described in detail in the Toolbar Frame section.

Each record has a number that can be used to highlight the feature on the map.

Use the 'Zoom to these records' link to focus the map on the results of the selection.

Identify, query, and selection results records are displayed in the results frame in sets of 25; If there are more than 25 records, a link below the records retrieves the next/previous 25 records.

20	1732	6				
21	1733	6				
22	1734	6				
23	1735	6				
24	1736	6				
25	1737	6				

[More Records](#) [Zoom to these records](#) [View Enhanced Query Results](#) [Analyze these records](#)

Features from any of the Sand Samples layers can be analyzed in more depth once they are identified, selected, or returned by a query. See the section on Additional Tools for more details.

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Toolbar Frame

The toolbar buttons that appear near the top of the window are used to navigate around the map and query the database for more information about the visible features on the map.

Important Notes:

- Many tools are dependent on whether or not a layer is Visible and/or Active. To make layers visible, check the box next to the layer name, and then click the Refresh Map button at the bottom of the TOC. To make a layer active, click the radio button next to the layer name. Only one layer can be active at a time.
- Tool icons with a red outline are persistent, which means these tools remain enabled until another tool is selected. The name for the currently enabled tool, or Tool Mode, is displayed to the left of the toolbar. When the map page first loads, the Zoom In tool is automatically selected.

Next is a description of how each toolbar button operates.



Pan: Select the pan tool, and then hold the mouse cursor over any part of the map. The mouse cursor will appear as a pair of arrows. By clicking and holding down the left mouse button, you can drag the map image around the map frame. Release the mouse button to re-center the map in a new position.



Zoom to Full Extent: Clicking this button returns the map image to the initial statewide view of Florida.



Zoom to Active Layer: Each spatial data set occupies some region, or extent, on the map. For example, potential borrow areas have been identified off the Florida Panhandle. Clicking the Zoom to Active Layer button will produce the map with the smallest scale at which the selected layer is entirely visible.



Back to Last Extent: This tool returns the map to the previous spatial extent and scale. This button will cycle back through all of the map images that have been viewed, ending with the statewide view of Florida.



Zoom In: There are two ways to use this tool to zoom in on the map:

- **Zoom to Point:** Click anywhere on the map image to re-center the view on that point, and zoom in by a factor of two.
- **Zoom to Box:** Use this mode to define a rectangular region to zoom in on. Hold the mouse cursor over the map image at the top left corner of the new viewing rectangle. Click and hold down the left mouse button, then drag the cursor across the map to

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create a zoom box. Release the mouse button to complete the rectangle and produce a new map image.



Zoom Out: This button works similarly to the Zoom In tool, allowing you instead to zoom out.



Hyperlink: The hyperlink tool allows you to view documents related to features in some designated layers on the map. There are currently two layers with hyperlinks, Core Locations and Data Buoys. One of these layers must be visible and active to use this tool.

- *Core Locations:* Select the hyperlink tool, and then click on any core location (represented by an orange dot). If there are core logs or photos for that core location, links to these documents will be presented below the map. Click on the links to open these documents.
- *Data Buoys:* Select the hyperlink tool, and then click on the data buoy location (represented by a yellow triangle). If available, a link to the National Data Buoy Center website for the selected buoy will be presented below the map. Click on the link to open the web page containing statistics for the selected buoy.



View Metadata: This button opens a document describing in detail the currently active layer. This document, referred to as the metadata, is presented in Federal Geographic Data Committee (FGDC) format. The information in the metadata file includes a general description of the data set, a description of all the attribute columns that are associated with the data set features, and information about the data set's spatial projection, just to name a few of the available items.



Identify: More than just graphics, features on the map are related to a database record of attribute information. This information can be displayed by using the Identify tool. Any visible map features that are part of the currently active layer can be identified by selecting the identify tool and clicking on a map feature that belongs to the active layer. The database record for that feature will be retrieved and displayed in below the map.



Measure: The measure tool is used to determine the distance along a line segment or series of connected line segments, or path. Select the Measure tool and click once on the map to create a starting point. A new map image will be retrieved showing this starting point. On the new map, click again to mark the ending point of the line segment. A new map will again be retrieved showing the line segment. Continue this process of adding points to create a path. Near the top of the map are two boxes showing the length of the current path, as well as the distance from the last point added to the position of the mouse cursor. The current path may be cleared at any time using the Clear Selection tool, described below.



Set Units: The map units can be changed to feet, miles, meters, or kilometers by selecting this tool and completing the Set Units dialog that appears. A drop-down menu

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provides the various options for units, and a submit button is provided to apply the changes to the map display units.



Enhanced Query: Use this tool to select points from any of the Sand Samples layers and send the area of interest to the advanced Query Builder. The advanced Query Builder can be used to refine the query, sort the results, and download them for further study. See the section on Additional Tools for more information.



Clear Selection: This button clears the current selected features and compound select areas from the map image, resets the measure tool, and clears any buffers from the map.



Print: Opens the print dialog for printing the current map image. A title can be added before creating the print page. The print page opens in a new browser window, and the File menu of the new window may be used to print the map image.



FTP link: Opens the Regional Offshore Sand Search FTP site in a separate browser window. The FTP site contains the seismic images and GIS shape files for download.

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Additional Tools

Enhanced Query

The results from selecting by rectangle or querying can be viewed in the Interactive Query Builder portion of the Sand Search website.

Select the enhanced query tool and draw a rectangle around features of interest on the map. Make sure the sand samples layer you want to query is visible and active.

-OR-

Identify, select, or query any Sand Sample layer, as described in the Toolbar Frame section. Click on the 'View Enhanced Query Results' Link that appears below the table in the Results Frame.

http://ross.urs-tally.com - FDEP Reconnaissance Offshore Sand Search - Microsoft Internet Explorer

FDEP Reconnaissance Offshore Sand Search Home Page User Manual

Tool Mode: Enhanced Query X, Y: 745699.6, 503308.6 Scale: 1:277846 Set Scale

LAYERS

- Sediment Samples
- Cores
- Jet Probes
- Grab Samples
- All Sediment Data
- Other
- Reef/hardbottom
- Geophysical
- Environmental
- Basemap
- Isopach Lines
- Bathymetry
- Borrow Sites
- Paleo Features
- Near Shore Features
- Geology/Geomorphology
- Interpreted Maps
- Queries

Auto Refresh

Refresh Map View Legend

Help:

- A closed group, click to open.
- An open group, click to close.
- A layer contained within a group.
- A layer not contained within a group.
- A hidden group/layer, click to make it visible.
- A visible group/layer, click to hide.
- A visible layer, but not at this scale.
- A partially visible group, click to make it fully visible.
- An inactive layer, click to make active.
- The active layer.

ID	Description	Date	Location	Company
101	Sand Source Analysis for Beach Restoration, Brevard County, FL 1989	Mon, 24 Jul 1992 00:00:00	Brevard County, Florida URS	O'Brien Associates Inc.
101	Sand Source Analysis for Beach Restoration, Brevard County, FL 1989	Mon, 24 Jul 1992 00:00:00	Brevard County, Florida URS	O'Brien Associates Inc.
101	Sand Source Analysis for Beach Restoration, Brevard County, FL 1989	Mon, 24 Jul 1992 00:00:00	Brevard County, Florida URS	O'Brien Associates Inc.

Showing Records 1-0 of 0 [Zoom to these records](#) [View Enhanced Query Results](#) [Analyze these records](#)