

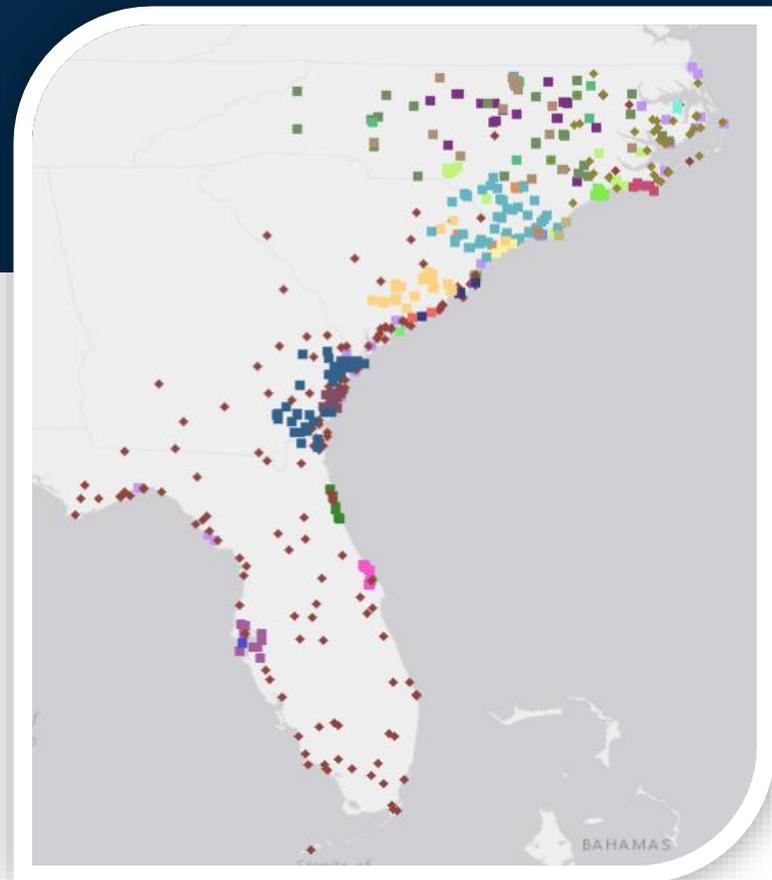
# Coastal Wetlands Monitoring Data Catalog User Guide

December 2016

## Legend

### Monitoring Program

- ACE Basin NERR
- SEIWA
- GA Adopt-A-Wetland Program
- CHIMMP (FL)
- CWEM (FWS)
- CWRE (FL)
- DCERP
- Headwater Wetlands (NC)
- NC mitigation wetlands
- Field Verification (NC)
- GCE LTER Climate Monitoring
- GCE LTER Water Level Monitoring
- GCE LTER Water Quality Monitoring
- GTM NERR SWMP
- Hydrologic Connectivity of IWs (NC)
- LoBOS (SC)
- NOAA Shoreline Marsh Monitoring
- NSF LTRE at North Inlet SC
- NWCA (NC)
- NWCA 2011
- NWCA Intensification
- NC NERR SWMP
- Mitigation Evaluation Pilot Study (NC)
- NC WMN
- Oyster Reef Restoration
- Sapelo Island NERR SWMP
- SC HGM
- TNC Living Shoreline Program
- Tampa Bay
- TOWeR
- Winyah Bay North Island Living Shoreline



# Contact Information

Questions and Comments about the database contact:

Kim Matthews, RTI

919-316-3366 (w); 919-618-1421 (m)

kmatthews@rti.org

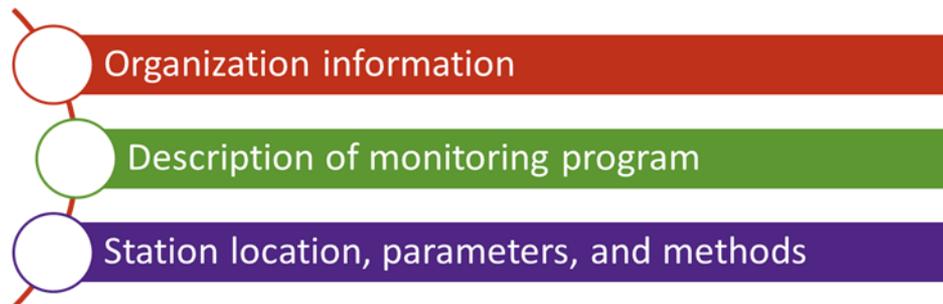
This project is funded by EPA Region 4  
Wetland Program Development Grant to the  
Governors' South Atlantic Alliance  
(<http://southatlanticalliance.org/>).



# Purpose of Data Catalog



- The Coastal Wetlands Monitoring Data Catalog provides a centralized location to access information about coastal wetland monitoring programs and station information in North Carolina, South Carolina, Georgia and Florida (Atlantic Coast).
- Information includes organization and monitoring programs and station details including geographic location, wetland type, parameters monitored, and sampling methods used. If available, web links are provided for the user to access the data and the monitoring program. The data catalog was created using Microsoft Access.



- The user can query on each component variable and find information based on location, watershed, wetland type, or monitoring parameter. The purpose of the data catalog is to increase collaboration and sharing of data and information to better assess the condition and function of coastal wetlands in the South Atlantic region of the United States.

# Target Population (more than just wetlands)



Examples of coastal wetland types. Forested wetland (top left); oyster reef bed (top right); estuarine marshes (bottom left); and planted marsh (bottom right).



# Query Information

# Search Interface

Search GSAACoastalWetlandsMonitoringMetadataPortal

**Organization Search** \*No criteria selected returns all

Organization Name:  ?

OR Organization name containing:

Organization Type:  ?

---

**Monitoring Program Search**

Program Name:  ?

OR Program name containing:

Program Scale:  ?

---

**Station Search** (includes search criteria above)

State:  ?

County:  ?

HUC8:  ?

HUC12:  ?

Waterbody Name:  ?

OR Waterbody name containing:

Station Type:  ?

Parameter Category:  ?

Add or edit data in this database --   Version 1.1 October 27, 2016

Organization Search

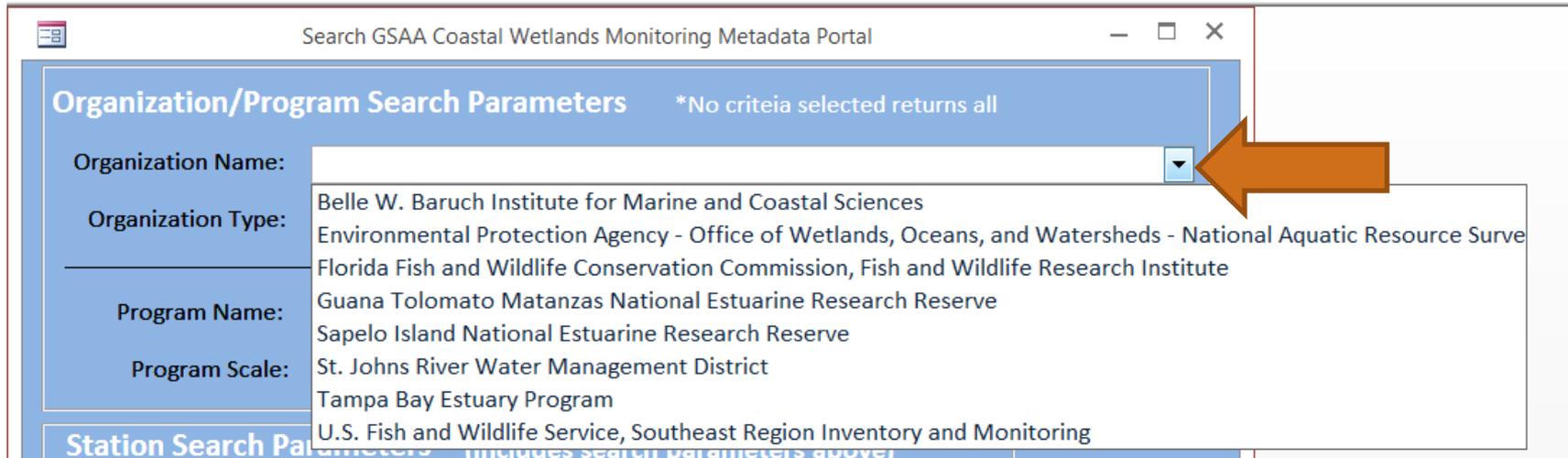
Monitoring Program Search

Station Search

Edit and Update

# Search: Organization Name

## 1. Select from list or start typing the name.



Search GSA Coastal Wetlands Monitoring Metadata Portal

Organization/Program Search Parameters \*No criteria selected returns all

Organization Name:

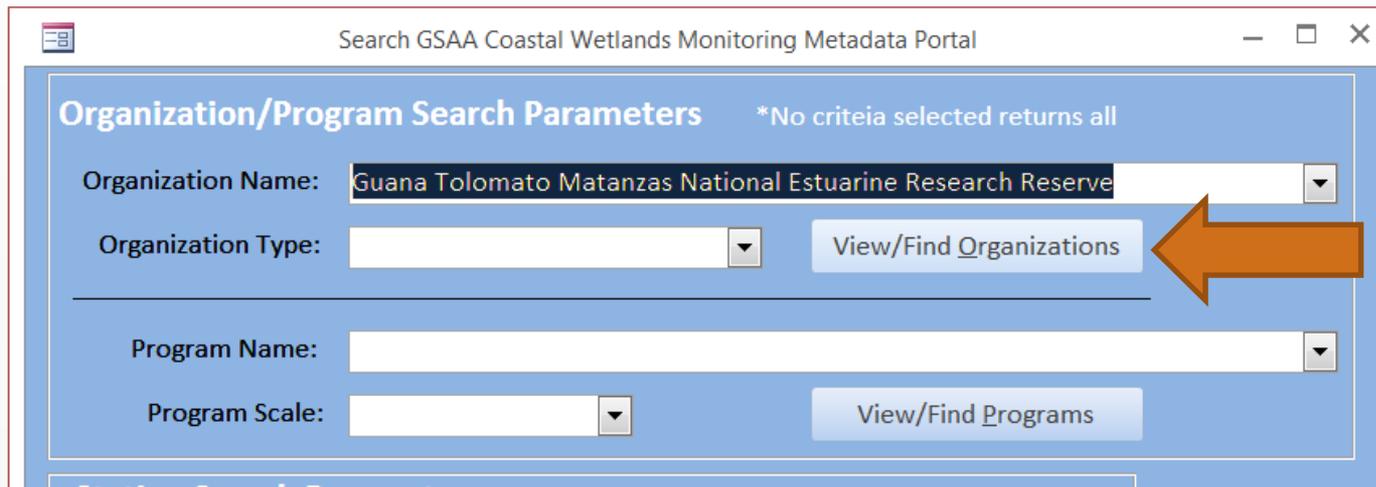
Organization Type: Belle W. Baruch Institute for Marine and Coastal Sciences  
Environmental Protection Agency - Office of Wetlands, Oceans, and Watersheds - National Aquatic Resource Survey  
Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute

Program Name: Guana Tolomato Matanzas National Estuarine Research Reserve  
Sapelo Island National Estuarine Research Reserve

Program Scale: St. Johns River Water Management District  
Tampa Bay Estuary Program  
U.S. Fish and Wildlife Service, Southeast Region Inventory and Monitoring

Station Search Parameters (includes search parameters above)

## 2. Click on “View/Find Organization”.



Search GSA Coastal Wetlands Monitoring Metadata Portal

Organization/Program Search Parameters \*No criteria selected returns all

Organization Name:

Organization Type:

Program Name:

Program Scale:

# Results: Organization Name

Organization Information

Organization Name: Guana Tolomato Matanzas National Estuarine Research Reserve Close Form

Organization Acronym: GTMNERR

Organization Description: The GTMNERR is one of 28 reserves in the U.S. protected for long-term monitoring, research, and education (see [www.nerrs.noaa.gov](http://www.nerrs.noaa.gov)). It is a partnership between the National Oceanic and Atmospheric Administration (NOAA) and Florida's Department of Environmental Protection (DEP). The GTMNERR participates in the System-Wide Monitoring Program (SWMP), which is designed to measure short-term variability and long-term

Organization Type: Government - Federal

Type Details:

Organization Web Page: [www.gtmnerr.org](http://www.gtmnerr.org)

Contact Names: Nikki Dix (Research Director), Pam Marcum (Biologist)

Email: [nikki.dix@dep.state.fl.us](mailto:nikki.dix@dep.state.fl.us)

Phone: 904-823-4500

Mailing Address: 505 Guana River Rd

City: Ponte Vedra Beach State: FL Zip Code: 32082

Organization Programs: Guana Tolomato Matanzas National Estuarine Research Reserve System-Wide Monitoring Program

Record: 1 of 1 Filtered Search

Information about the organization conducting the monitoring

Monitoring Programs

Search results for key words

Navigate through multiple records

# Search: Stations

- Search by location or waterbody name.
- Both wetland and non-wetland data include near by surface water and atmospheric data are included in the database.
- Parameter Categories are defined on next page.

The screenshot shows a web-based search interface for stations. The main search area is titled "Station Search (includes search criteria above)". It contains several input fields and buttons:

- Geographic Search:** A callout box points to the State, County, HUC8, and HUC12 dropdown menus. The State is set to "Florida" and the County is "FL -- St. Johns".
- Waterbody Name:** A text input field with a dropdown arrow and a help icon.
- OR Waterbody name containing:** A text input field.
- Station Type:** A text input field with a help icon.
- Parameter Category:** A dropdown menu with a help icon.
- View/Find Stations:** A box containing two buttons: "Tabular Format" and "Individual Format".
- Export Stations (Excel):** A button.
- View Results:** A callout box points to the "View/Find Stations" box.
- Export Results:** A callout box points to the "Export Stations (Excel)" button.
- Explanation of parameter categories:** A callout box points to the "Parameter Category" dropdown.

Notes:

1. State and counties are linked so that selecting a state limits the counties to those in the selected state.
2. Station Type searches three fields: Wetland Type, Cowardin Type, and HGM Type.

# Parameter Categories Defined

Categories	Definition
Atmospheric Conditions	Data characterizing daily conditions of the atmosphere or weather in terms of air temperatures, barometric pressure, wind, precipitation, and photosynthetically active radiation.
Biology	Data relating to flora and fauna of wetlands include vegetation, algae, benthic macroinvertebrates, and fish.
Hydrology	Data relating to water level and saturation of the wetlands include a description of hydrologic indicators or conditions and quantitative well/gauge data.
Physical/Chemical Water Properties	Data characterizing the chemical and physical condition of surface water include water temperature, pH, dissolved oxygen, nutrients, metals, and sediment.
Porewater	Data characterizing the shallow groundwater contained in the wetland sediment.
Rapid Assessment Methods	On-site assessment of wetlands to characterize the condition or function of wetlands based on visual observations. Examples include USARAM, ORAM, and NC WAM.
Soils and Elevation	Data characterizing chemical (e.g., pH, metals) and physical (e.g., bulk density) soil properties, narrative descriptions soil horizons, and elevation (e.g., marker horizon, surface elevation).

[Close Form](#)

# Results from Station Search: Tabular Format

Monitoring Program

Station Name and Location

Wetland Classification

Station Parameters

Search Stations - Access

Matthews, Kimberly

Program Name	Site Code	Site Name	State	County	Waterbody Name	Is it a Wetland	Cowardin	Station Parameters	Station Parameters
National Wetland Condition Assessment	3732	NWCA11-1326	FL	St. Johns	Tolomato River	yes	E2EM	algae species, algae toxin, ammonium, chlorophyll, conductivity, hydrology (description), nitrate+nitrite, pH, soil bulk density, soil chemistry, soil enzymes, soil stable isotopes, total nitrogen, total phosphorus, USA Rapid Assessment Method, vegetation native/alien species, vegetation species composition and abundance, vegetation structure	<a href="#">http</a> <a href="#">pa.f</a> <a href="#">l-aq</a> <a href="#">resc</a>
National Wetland Condition Assessment	4916	NWCA11-1292	FL	St. Johns	Tolomato River-Moses Creek Frontal	yes	E2EM	algae species, algae toxin, ammonium, chlorophyll, conductivity, hydrology (description), nitrate+nitrite, pH, soil bulk density, soil chemistry, soil enzymes, soil stable isotopes, total nitrogen, total phosphorus, USA Rapid Assessment Method, vegetation native/alien species, vegetation species composition and abundance, vegetation structure	<a href="#">http</a> <a href="#">pa.f</a> <a href="#">l-aq</a> <a href="#">resc</a>
National Wetland Condition Assessment	5383	NWCA11-1248	FL	St. Johns	Tolomato River	yes	E2EM	algae species, algae toxin, ammonium, chlorophyll, conductivity, hydrology (description), nitrate+nitrite, pH, soil bulk density, soil chemistry, soil enzymes, soil stable isotopes, total nitrogen, total phosphorus, USA Rapid Assessment Method, vegetation native/alien species, vegetation species composition and abundance, vegetation structure	<a href="#">http</a> <a href="#">pa.f</a> <a href="#">l-aq</a> <a href="#">resc</a>
National Wetland Condition Assessment	5808	NWCA11-3069	FL	St. Johns	Tolomato River	yes	E2EM	algae species, algae toxin, ammonium, chlorophyll, conductivity, hydrology (description), nitrate+nitrite, pH, soil bulk density, soil chemistry, soil enzymes, soil stable isotopes, total nitrogen, total phosphorus, USA Rapid Assessment Method, vegetation native/alien species, vegetation species composition and abundance, vegetation structure	<a href="#">http</a> <a href="#">pa.f</a> <a href="#">l-aq</a> <a href="#">resc</a>

Record: 1 of 4

Datasheet View

Number of stations

Scroll Bar to see more information

# Results from Station Search: Individual Format (1 of 2)

Organization Name

Monitoring Program

Two Tabs to View Information

1

Station Details

- Wetland Type
- Methods
- Web Links

Station Information

\* Use the navigation buttons at the bottom of this form to page through each station and view the station detail

Organization Name: Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute

Program Name: Coastal Habitat Integrated Mapping and Monitoring Program

Site Code: Mangrove 1

Site Name: Clam Bayou Mangrove 1

Description: SWFWMD restoration site. Hydrologic restoration for adjacent mangroves

State: FL County: Pinellas

Latitude (DD): 27.739233 Longitude (DD): -82.692233

Station Details | Station Parameter List

Property Ownership: Southwest Florida Water Management District (SWFWMD)

HUC8: 03100207 HUC12: 031002070500

Waterbody Name: Clam Bayou

Waterbody Classification: Is it a wetland? unknown

Wetland Category: Wetland Type: Mangrove

Cowardin Type: estuarine intertidal scrub-shrub wetland broad-leaved evergreen

HGM Type: Tidal fringe

Other Information: SWFWMD restoration site. Hydrologic restoration for mangroves

Date Start: 12/8/14 Date End: ongoing

Sample Design:

Station URL:

Data URL:

Record: 1 of 6 Filtered Search

Station Location

# Results from Station Search: Individual Format (2 of 2)

Station Information

\* Use the navigation buttons at the bottom of this form to page through each station and view the station detail

Organization Name: Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute Close Form

Program Name: Coastal Habitat Integrated Mapping and Monitoring Program

Site Code: Mangrove 1

Site Name: Clam Bayou Mangrove 1

Description: SWFWMD restoration site. Hydrologic restoration for adjacent mangroves

State: FL County: Pinellas

Latitude (DD): 27.739233 Longitude (DD): -82.692233

Station Details | Station Parameter List

Parameter Name	Parameter Category
adjacent surface water DO	Physical/Chemical Water Properties
canopy cover	Biology
PCQ sampling	Biology
pH	Physical/Chemical Water Properties
porewater salinity	Porewater
salinity	Physical/Chemical Water Properties
soil pH	Soils and Elevation
temperature	Physical/Chemical Water Properties
tree height	Biology
vegetation cover	Biology

Record: 1 of 6 Filtered Search

Two Tabs to View Information

2

List of parameters collected at this station

# Additional Controls

Search GSAACoastalWetlandsMonitoringMetadataPortal

**Organization Search** \*No criteria selected returns all

Organization Name:  ?

OR Organization name containing:

Organization Type:  ?

---

**Monitoring Program Search**

Program Name:  ?

OR Program name containing:

Program Scale:  ?

---

**Station Search** (includes search criteria above)

State:  ?

County:  ?

HUC8:  ?

HUC12:  ?

Waterbody Name:  ?

OR Waterbody name containing:

Station Type:  ?

Parameter Category:  ?

Add or edit data in this database --   Version 1.1 October 27, 2016

Exit database

Re-start the search

# Add New or Edit Existing Information

The screenshot shows a web application window titled "GSAA Coastal Wetlands Monitoring Metadata Portal -- Data Entry". The interface is divided into two main sections. The top section, titled "Enter New Organizations, Programs, and/or Stations", contains three numbered steps: 1. "Enter the organization:" with an "Add New Organization" button; 2. "Enter a program for an existing organization:" with an "Add New Program" button; and 3. "Enter stations for an existing program:" with an "Add New Station" button. The bottom section, titled "Enter New Look-up Table Values", contains five buttons: "Add New Organization Type", "Add New Scale", "Add New Parameter", "Add New State", and "Add New Parameter Category". A "Return to Search Form" button is located in the top right corner of the main content area.

Enter New Organizations, Programs, and/or Stations

1. Enter the organization:
2. Enter a program for an existing organization:
3. Enter stations for an existing program:

Enter New Look-up Table Values

# Add Organization

The screenshot shows a web form titled "Enter Organization Information". The form contains several input fields, some of which are marked as required. The fields are: Organization Name (required), Organization Acronym (required), Organization Description (required), Organization Type (required), Type Details, Organization Web Page, Contact Names, Email, Phone, Mailing Address, City, State, and Zip Code. There are two buttons on the right side of the form: "Close Form" and "Add Organization". A callout box labeled "Description of Fields" points to the "Add Organization" button. Another callout box labeled "After you enter new information, 'Close Form' will save your information." points to the "Close Form" button. A third callout box labeled "'Add Organization' will provide a blank form." points to the "Add Organization" button. At the bottom of the form, there is a record navigation bar showing "Record: 22 of 22", "No Filter", and a "Search" button.

Description of Fields

After you enter new information, "Close Form" will save your information.

"Add Organization" will provide a blank form.

Note: All Required fields must be completed to save the record.

# Add Monitoring Program

Description of Fields

The screenshot shows a web form titled "Enter Program Information" with the following fields and controls:

- Organization (required)**: A dropdown menu.
- Program Name (required)**: A text input field.
- Program Acronym (required)**: A text input field.
- Program Description (required)**: A large text area.
- Purpose**: A text input field.
- Quality of Data**: A text input field.
- Contact Information**: A text input field.
- Funding Source**: A text input field.
- Data Collected By**: A text input field.
- Program Web Page**: A text input field.
- Scale of Program (reqd.)**: A dropdown menu.
- Buttons**: A question mark icon, a "Close Form" button, and an "Add Program" button.

At the bottom of the form, there is a navigation bar with "Record: 36 of 36", a filter icon labeled "No Filter", and a search input field.

After you enter new information, "Close Form" will save your information.

Note: All Required fields must be completed to save the record.

# Add Station Information

The screenshot shows a web form titled "Enter Station Information" with a close button (X) in the top right corner. The form contains the following fields and controls:

- Program Name:** Text input field with a dropdown arrow and "(required)" label.
- Site Code:** Text input field with "(required)" label and a blue question mark icon.
- Site Name:** Text input field with "(required)" label.
- Description:** Text input field.
- State:** Dropdown menu with "(required)" label.
- County:** Text input field.
- Latitude (DD):** Text input field.
- Longitude (DD):** Text input field with "(both required)" label.
- Buttons:** "Close Form" and "Add Station" buttons are located to the right of the Site Code and Site Name fields, respectively.
- Tabs:** "Station Details" (selected) and "Station Parameter List" tabs are located below the coordinate fields.
- Property Ownership:** Text input field.
- HUC8:** Text input field.
- HUC12:** Text input field.
- Waterbody Name:** Text input field.
- Waterbody Classification:** Text input field.
- Is it a wetland?:** Dropdown menu with "(required)" label.
- Wetland Category:** Text input field.
- Wetland Type:** Text input field.
- Cowardin Type:** Text input field.
- HGM Type:** Text input field.
- Other Information:** Text input field.
- Date Start:** Text input field.
- Date End:** Text input field.
- Sample Design:** Text input field.
- Station URL:** Text input field.
- Data URL:** Text input field.

At the bottom of the form, there is a record navigation bar showing "Record: 785 of 785", a filter icon, "Unfiltered", and a "Search" input field.

Two Tabs to Enter Information

Decimal Degrees

# Enter New Look-up Table Values

- Look-up tables are pre-populated fields that allow the user to select options from the drop down box. New options can be added for:
  - Organization Type
  - Program Scale
  - State
  - Parameter Category
- Each new parameter added to the database must be assigned to a Parameter Category

GSAACoastalWetlandsMonitoringMetadataPortal -- Data Entry

Enter New Organizations, Programs, and/or Stations

1. Enter the organization: Add New Organization

2. Enter a program for an existing organization: Add New Program

3. Enter stations for an existing program: Add New Station

Return to Search Form

Enter New Look-up Table Values

Add New Organization Type Add New Scale

Add New Parameter Add New State

Add New Parameter Category

# Metadata

# Organization Field Descriptions

Field Name	Data Type	Character Limit
<b>Organization Name</b>	Text	150
<b>Organization Acronym</b>	Text	25
<b>Organization Description</b>	Memo	65,536
<b>Organization Type</b>	Selection List	-
<b>Type Details</b>	Text	50
<b>Organization Web Page</b>	Hyperlink	-
<b>Contact Names</b>	Text	100
<b>Email</b>	Text	150
<b>Phone</b>	Text	50
<b>Mailing Address</b>	Text	255
<b>City</b>	Text	50
<b>State</b>	Selection List	-
<b>Zip Code</b>	Text	25

# Monitoring Program Field Descriptions

Field Name	Data Type	Character Limit	Description
<b>Organization</b>	Selection List	-	Organization associated with the program
<b>Program Name</b>	Text	150	
<b>Program Acronym</b>	Text	60	
<b>Program Description</b>	Memo	65,536	
<b>Purpose</b>	Memo	65,536	
<b>Quality of Data</b>	Memo	65,536	
<b>Contact Information</b>	Text	255	Contact information (if different than organization)
<b>Funding Source</b>	Text	150	
<b>Data Collected By</b>	Memo	65,536	
<b>Program Web Page</b>	Hyperlink	-	
<b>Scale of Program</b>	Selection List	-	Associated geographic scales – local, national, regional, state, multiple states

# Station Field Descriptions

Field Name	Data Type	Character Limit	Description
<b>Program Name</b>	Selection List	-	Program associated with each station
<b>Site Code</b>	Text	50	
<b>Site Name</b>	Text	100	
<b>Description</b>	Memo	65,536	
<b>State</b>	Section List	-	State in which site is located
<b>County</b>	Text	50	County in which site is located
<b>Latitude (DD)</b>	Numeric	-	Site latitude in decimal degrees
<b>Longitude (DD)</b>	Numeric	-	Site longitude in decimal degrees
<b>Property Ownership</b>	Text	150	
<b>HUC8</b>	Text	8	USGS82-digit Hydrologic Unit Code where the monitoring station is located
<b>HUC12</b>	Text	12	USGS 12-digit Hydrologic Unit Code where the monitoring station is located
<b>Waterbody Name</b>	Text	100	Name of the USGS waterbody associated with the HUC12 where the monitoring station is located.
<b>Waterbody Classification</b>	Text	50	
<b>Is it a wetland?</b>	Selection List	-	Is this site associated with a wetland? (yes, no, unknown)
<b>Wetland Type</b>	Text		Wetland type based on NC Wetland Assessment Method classification system. If the monitoring station is a not a wetland, the user can enter another name or use "not applicable" for this field. More information: <a href="https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-quality-program-development/ncwam-manual">https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-quality-program-development/ncwam-manual</a>
<b>Cowardin Type</b>	Text		Wetland classification codes are a series of letters and numbers that are used by the National Wetlands Inventory and defined by Cowardin et al (1979). From drop down or enter other. More information: <a href="http://www.fws.gov/wetlands/data/wetland-codes.html">http://www.fws.gov/wetlands/data/wetland-codes.html</a>
<b>HGM Type</b>	Text		The hydrogeomorphic approach to assessing wetland function. Seven wetland classes defined by Brinson (1993): depression, riverine, mineral flats, organic flats, tidal fringe, lacustrine fringe, slopes. From drop down list. More information: <a href="http://el.erdc.usace.army.mil/wetlands/class.html">http://el.erdc.usace.army.mil/wetlands/class.html</a>