

A COMPREHENSIVE SEARCH FOR ESSENTIAL FISH HABITAT DATA IN THE GULF OF MEXICO



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Overall Process



Data Collection:

Gather all available spatial data for each habitat type



Data Analysis:

Use ArcPro to visualize spatial data layers
Aggregate data by zones



Metadata:

Include information on data source, title, author, description, geographic extent, projection, and format.

Data Collection Methods

General online search

- Keywords

Federal and State Agencies

ArcGIS Online and GIS Clearinghouse

Google Scholar

Refers

Interactive Webpages

```
mirror_mod = modifier_ob.  
set mirror object to mirror.  
mirror_mod.mirror_object  
operation == "MIRROR_X":  
mirror_mod.use_x = True  
mirror_mod.use_y = False  
mirror_mod.use_z = False  
operation == "MIRROR_Y":  
mirror_mod.use_x = False  
mirror_mod.use_y = True  
mirror_mod.use_z = False  
operation == "MIRROR_Z":  
mirror_mod.use_x = False  
mirror_mod.use_y = False  
mirror_mod.use_z = True  
selection at the end -add  
mirror_ob.select= 1  
modifier_ob.select=1  
context.scene.objects.active  
("Selected" + str(modifier_ob.  
mirror_ob.select = 0  
= bpy.context.selected_object  
data.objects[one.name].select  
print("please select exactly  
OPERATOR CLASSES -----  
types.Operator):  
X mirror to the selected  
object.mirror_mirror_x"  
mirror X"  
context):  
context.active_object is not
```

Habitat Types

- ▶ Submerged Aquatic Vegetation
- ▶ Mangroves
- ▶ Drifting algae
- ▶ Emergent Marshes
- ▶ Sand/shell bottoms
- ▶ Hard bottoms
- ▶ Oyster Reefs
- ▶ Banks/shoals
- ▶ Reefs
- ▶ Shelf edge/slope
- ▶ Water column associated (WCA)



Data



State



Data Title



Data Description



Shapefile Name



Contact Name



Contact Position/Association



Contact Information



Data Rest URL (if applicable)

Metadata Categories

Metadata Category	Information
Data Title	Name of the dataset
Data Description	A brief description of the dataset, including its purpose, scope, and limitations.
Data Creator	The name of the person or organization that created the dataset.
Date of Creation	The date the dataset was created.
Data Format	The file format of the dataset, such as shapefile, GeoTIFF, or KML.
Geographic Extent	The spatial extent of the dataset, including its geographic coverage, projection, and units of measure.
Spatial Resolution	The level of detail or resolution of the data.

Metadata Categories

Metadata Category	Information
Spatial Resolution	The level of detail or resolution of the data.
Attribute Information	A list of the attribute fields and their descriptions.
Data Source	Information about the source of the data, including any relevant publications or reports.
Data Quality	Information about the quality of the data, including accuracy, precision, completeness, and any known error or limitations.
Access and Use Constraints	Information about any restrictions or limitations on the use of the data, including licensing or copyright information.
Contact Information	Contact information for the person or organization responsible for the dataset, including their name, email address, and phone number.

SSC Meeting

Missing Data:

- Identify any spatial data sources we may have overlooked.
- Suggestions for additional habitat types or regions to include.

Contacts:

- Recommend experts or organizations we should reach out to for data.
- Introduce us to contacts with valuable data or insights.

Presentation and Sharing:

- Ideas for effective ways to present the data to different audiences.
- Suggestions for platforms or tools to enhance data accessibility and dissemination.

Data Verification

- ▶ Received feedback for Florida, Texas, and Louisiana
- ▶ Verified if we had the data from alternative sources
- ▶ Requested the missing data from Texas
 - ▶ Texas Parks and Wildlife
 - ▶ Individual Habitat Surveys
 - Oyster reefs
 - Seagrass
 - Mangroves
 - Other inshore reefs

StoryMap Links

Louisiana:

<https://storymaps.arcgis.com/stories/f1516ec030c948b6bea6aac9c665a445>

Texas:

<https://storymaps.arcgis.com/stories/f493f4c71a3e4a6a80c60a4da84e9e19>

Deliverables

Shapefiles for all identified spatial data layers and finalized habitat maps, which will be warehoused on the Council's GIS server.

- All shapefiles are organized on a google drive and on arcgis online

A complete set of documentation, including methods used to generate habitat maps and metadata documentation for all spatial data sources used in the project.

- Documentation, databases, and metadata is all organized by shapefile and stored within the google drive

A presentation to the Council summarizing the project and the findings.

- Presented at the July 2024 SSC meeting and November 2024 Council Meeting

A final report outlining methods, metadata, sources, and GIS files (geodatabase, shapefiles, XML files, and attribute tables) for all identified spatial data layers and finalized habitat maps.

- All data has been shared with council staff and a final report will be submitted after presentation to council