Engineering With Nature
Geographic Project Mapping Tool
(EWN ProMap)

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Engineering With Nature (EWN) is...

...the intentional alignment of natural and engineering processes to efficiently and sustainably deliver economic, environmental and social benefits associated with water resource infrastructures through collaborative processes.

Key Elements:

- Science and engineering that produces operational efficiencies
- Using natural processes to maximum benefit
- Broaden and extend the benefits provided by projects
- Science-based collaborative processes to organize and focus interests, stakeholders, and partners
Opportunities/Existing Examples
EWN Project Mapping Tool

- Interactive on-line catalog of case studies that apply the EWN concept.

http://155.82.160.6/applications/opj/v013/
or
ProMap Specifications

- Previously based on:
  - Esri’s ArcGIS Application Programming Interface (API) for Flex 3.0
  - ArcGIS Online

- Currently based on:
  - HTML5/CSS/JavaScript architecture
  - ArcGIS Portal
  - Better Photo & Document Capabilities
  - Greater Collaboration Options
  - Easier Maintenance
ProMap Spatial Scale

- Global to Project Site
ProMap Benefit Layers

### EWN ProMap site classifications used in the Tool Panel

<table>
<thead>
<tr>
<th>Classification Acronym</th>
<th>Description</th>
<th>Information Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIPT</td>
<td>Associated Infrastructure Project Type</td>
<td>Defines the type of water resource project from which additional benefits are provided</td>
</tr>
<tr>
<td>EWNB1, B2, B3</td>
<td>Engineering With Nature Benefit 1, Benefit 2, Benefit 3</td>
<td>Defines the first, second, and third EWN benefits intended by project designers</td>
</tr>
</tbody>
</table>

### AIPT and EWNB Selections in the Tool Panel

<table>
<thead>
<tr>
<th>Available A IPT Selections</th>
<th>Available EWN Benefit Selections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakwater</td>
<td>Aesthetics</td>
</tr>
<tr>
<td>Bulkhead</td>
<td>Beach nourishment</td>
</tr>
<tr>
<td>Chevron</td>
<td>Bird habitat</td>
</tr>
<tr>
<td>Dike</td>
<td>Fish habitat</td>
</tr>
<tr>
<td>Groin</td>
<td>Invertebrate habitat</td>
</tr>
<tr>
<td>Jetty</td>
<td>Island restoration</td>
</tr>
<tr>
<td>Multiple round point</td>
<td>Mammal habitat</td>
</tr>
<tr>
<td>Navigation dredging</td>
<td>Recreation</td>
</tr>
<tr>
<td>Pier/wharf</td>
<td>Reptile habitat</td>
</tr>
<tr>
<td>Revetment</td>
<td>Shore protection</td>
</tr>
<tr>
<td>Seawall</td>
<td>Vegetated habitat</td>
</tr>
<tr>
<td>Shore protection</td>
<td></td>
</tr>
</tbody>
</table>
ProMap
Benefit
Layers

- Filter sites by infrastructure type (top)
- Filter sites by benefit associations (left)
Additional ProMap Tools

- Legend
- Benefit Layers
- Find Benefit Sites

Search For Text:
fish
- Find Exact Matches Only

Search
Clear

9 Results Found

- Bird Key Stono Fishery Habitat
- Charleston Offshore Fishery Habitat
- Galveston Offshore Fisheries Mounds
- Savannah Harbor Fishery Habitat
- King Fisher Beach
- Mobile Bay Fishery Habitat

Measure and Locate XY

Measurement Result

<table>
<thead>
<tr>
<th>Longitude</th>
<th>Latitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>-94.698132</td>
<td>29.521462</td>
</tr>
<tr>
<td>-94.691759</td>
<td>29.516214</td>
</tr>
</tbody>
</table>
Additional ProMap Tools
ProMap Non-Spatial Information

- Site icon pop-up bubble (left); expanded view below
- Provides non-spatial information
ProMap Submission Process

Step 1. Fill out the below information

- **Project Name:**
  - [Input field]

- **Project Description:**
  - [Input field]

- **Point Of Contact:**
  - [Input field]

- **Project Start Date:**
  - [Input field]

- **District:**
  - [Input field]

- **USACE Division:**
  - [Input field]

- **Collaboration or leveraging capabilities:**
  - [Input field] Examples: People, Equipment, etc.

- **Region:**
  - [Input field] Examples: Atlantic Coast, Gulf Coast, Pacific Coast, Great Lakes, etc.

- **Type of environment:**
  - [Input field] Examples: Coastal Marsh, Inland Channel, Freshwater Wetland, etc.

- **Partners and stakeholders:**
  - [Input field]

- **Project Location:**
  - [Input field]

- **Type of Engineering with Nature Project:**
  - [Input field] Select A Project Type

- **E-Mail Address:**
  - [Input field] Please enter a valid email address

Step 2. Please click the location of the study on the map:
What’s Next…

• Additional *international* sites, as well as national sites

• Expanding/adding non-spatial project information and supporting documents

• Upcoming publication in *Terra et Aqua* journal
Thanks

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EWN ProMap:
http://155.82.160.6/applications/opj/v013/ or

EWN:
www.engineeringwithnature.org