MARINE AND COASTAL SPATIAL DATA SUBCOMMITTEE

ANNUAL UPDATE TO FGDC COORDINATION GROUP

TONY LA VOI, MCSD SUBCOMMITTEE CHAIR / NOAA GIO

March 8, 2016
Is there still a role for the Marine and Coastal Spatial Data [MCSD] Subcommittee?

What is the relationship of the MCSD and the Water-Oceans and Coasts Theme?

How do we make the work of MCSD and W-O&C meaningful beyond the FGDC?
Topics

Brief History of the MCSD – 1993 to Today

Enter the Water – Oceans and Coasts Theme

Reflection on MCSD Role in the FGDC NGDA Framework

Next Steps - More than Checking the NGDA Boxes?

Discussion
Brief History of the MCSD

• FGDC Subcommittee on Bathymetric and Nautical Charting Data was created in 1993
• Late 1990’s, desire to give a broader voice to the Marine SDI contributions
• Created the Marine and Coastal Spatial Data Subcommittee [MCSD] in 2000
• MCSD active with numerous accomplishments during the period 2000-2010
• MCSD coordination approach changed as other ‘ocean GIS’ bodies became active
• NGDA process created the Water – Oceans and Coasts [W-O&C] Theme
• NOAA leads both the MCSD and W–O&C Theme
MCSD Objectives

From Original Charter

• **Promote standards** in marine and coastal spatial data financed in whole or in part by Federal funds

• **Exchange information** on technological improvements for collecting marine and coastal spatial data

• Encourage the Federal and non-Federal community to **identify and adopt standards and specifications** for marine and coastal spatial data

• **Engage in partnerships** to develop marine and coastal data
Standards
MCSD Accomplishments

- Classification of Wetlands and Deepwater Habitats in the United States (1996)
- Metadata Profile for Shoreline Data (2001)
- Coastal and Marine Ecological Classification Standard – CMECS (2012)
Standards
MCSD Accomplishments

Marine Boundary Handbook

Technical Assistance

Determining Marine Boundaries
It's not what it used to be

Marine Managed Areas:
Best Practices for Boundary Making

Marine Boundary Working Group
Federal Geographic Data Committee

Marine Boundary Setting
Yesterday and Today

Creating Digital Boundaries

National Boundary Explanations

FGDC
Federal Geographic Data Committee

What is the United States' Response to Marine Boundary Issues?

Federal Geographic Data Committee (FGDC)
Marine Boundary Working Group

For more information, visit www.ncca.noaa.gov/marin/boundaries
Data Development and Registries
MCSD Accomplishments
Partnerships / Spin-off Projects
MCSD Accomplishments
Partnerships / Conferences
MCSD Accomplishments
Partnerships / Coordination
MCSD Accomplishments

Marine and Coastal Spatial Data Subcommittee

FGDC Water – Oceans and Coasts Theme
What should be the relationship of the Marine and Coastal Spatial Data Subcommittee and the Water – Oceans and Coasts Theme?
Comparison of MCSD and W-O&C

**MCSD:** The purpose of the Marine and Coastal Spatial Data Subcommittee is to advance and implement the Marine and Coastal National Spatial Data Infrastructure, working to develop strategic partnerships, relevant standards, and enhance access to and utility of coastal and ocean framework data.

**W-O&C:** Features and characteristics of salt water bodies (i.e. tides, tidal waves, coastal information, reefs) and features and characteristics that represent the intersection of the land with the water surface (i.e. shorelines), the lines from which the territorial sea and other maritime zones are measured (i.e. baseline maritime) and lands covered by water at any stage of the tide (i.e. Outer Continental Shelf), as distinguished from tidelands, which are attached to the mainland or an island and cover and uncover with the tide.
W-O&C Theme = 25 NGDAs by Topic

- Boundary Information
  - Submerged Land Act Boundaries
  - 200 Nautical Mile Limit
  - Outer Continental Shelf Revenue Zone Boundaries
  - Marine Protected Areas
  - Maritime Limits and Boundaries (EEZ, Territorial Sea, Contiguous Zone)
- Nautical Charts (Electronic/Vector [ENCs] and Raster [RNCs])
- Shoreline Products
- Physical Oceanographic Data
  - Sea Level Data
  - Tides and Water Levels
- Observational Data (data from buoys)
A-16 Supplemental Guidance
Compliance

✓ Executive Champion named
✓ Theme Lead named
✓ NGDAs selected and approved
✓ Metadata for datasets reviewed, verified, and posted to data.gov and Geospatial Platform
✓ Theme community page content updated on Geospatial Platform
✓ NGDA assessments complete
✓ Theme strategic plan [in progress]
Community Webpage

WATER - OCEANS & COASTS THEME
Theme Lead Agency: National Oceanic and Atmospheric Administration (NOAA)
Theme Lead: Tony LaVoi (NOAA)

Overview
Water - Oceans and Coasts Theme
Definition: Features and characteristics of salt water bodies (i.e. tides, tidal waves, coastal information, reefs) and features and characteristics that represent the intersection of the land with the water surface (i.e. shorelines), the lines from which the territorial sea and other maritime zones are measured (i.e. baseline maritime) and lands covered by water at any stage of the tide (i.e. Outer Continental Shelf), as distinguished from tidelands, which are attached to the mainland or an island and cover and uncover with the tide.

Committees and Work Groups
- FGDC Marine and Coastal Spatial Data Subcommittee
- FGDC Wetlands Subcommittee
- FGDC Marine Boundary Working Group
- Interagency Working Group on Ocean and Coastal Mapping

Geospatial Standards
- Classification of Wetlands and Deepwater Habitats in the United States (1996)
- Metadata Profile for Shoreline Data (2001)
- Coastal and Marine Ecological Classification Standard (2012)

NGDA Water Oceans And Coasts Community
Community Type: A-16
Sponsor: FDGC
Sponsor Email: geoplatform@fdgc.gov
You must register or login in order to subscribe to this community.
# Lifecycle Maturity Assessments

<table>
<thead>
<tr>
<th>Dataset</th>
<th>Submission Status</th>
<th>Overall</th>
<th>General</th>
<th>Define</th>
<th>Inventory Evaluate</th>
<th>Obtain</th>
<th>Access Maintain</th>
<th>Use Evaluate</th>
<th>Archive</th>
<th>Agency Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maritime Limits and Boundaries of the United States of America</td>
<td>Complete</td>
<td>5/5</td>
<td>3/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>4/5</td>
<td>4/5</td>
<td>5/5</td>
<td>DOC-NOAA</td>
</tr>
<tr>
<td>NOAA Coastal Mapping Shoreline Products</td>
<td>Complete</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>4/5</td>
<td>5/5</td>
<td>5/5</td>
<td>DOC-NOAA</td>
</tr>
<tr>
<td>NOAA Electronic Navigational Charts (ENC)</td>
<td>Complete</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>DOC-NOAA</td>
</tr>
<tr>
<td>NOAA Raster Navigational Charts (RNC)</td>
<td>Complete</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>5/5</td>
<td>DOC-NOAA</td>
</tr>
<tr>
<td>OCSLA Sec. 8(g) Revenue Zone Boundary - Alaska Region NAD83</td>
<td>Complete</td>
<td>4/5</td>
<td>4/5</td>
<td>2/5</td>
<td>5/5</td>
<td>5/5</td>
<td>3/5</td>
<td>3/5</td>
<td>2/5</td>
<td>DOI-BOEM</td>
</tr>
<tr>
<td>OCSLA Sec. 8(g) Revenue Zone Boundary - Atlantic Region NAD83</td>
<td>Complete</td>
<td>4/5</td>
<td>4/5</td>
<td>2/5</td>
<td>5/5</td>
<td>5/5</td>
<td>3/5</td>
<td>2/5</td>
<td>2/5</td>
<td>DOI-BOEM</td>
</tr>
<tr>
<td>OCSLA Sec. 8(g) Revenue Zone Boundary - Gulf of Mexico Region NAD27</td>
<td>Complete</td>
<td>3/5</td>
<td>4/5</td>
<td>2/5</td>
<td>5/5</td>
<td>4/5</td>
<td>1/5</td>
<td>3/5</td>
<td>2/5</td>
<td>DOI-BOEM</td>
</tr>
<tr>
<td>OCSLA Sec. 8(g) Revenue Zone Boundary - Pacific Region - West Coast NAD83</td>
<td>Complete</td>
<td>4/5</td>
<td>4/5</td>
<td>2/5</td>
<td>5/5</td>
<td>5/5</td>
<td>1/5</td>
<td>3/5</td>
<td>2/5</td>
<td>DOI-BOEM</td>
</tr>
<tr>
<td>ODIN: Observational Data Interactive Navigation, an interactive map of all CO-OPS active stations</td>
<td>Complete</td>
<td>5/5</td>
<td>5/5</td>
<td>4/5</td>
<td>5/5</td>
<td>5/5</td>
<td>4/5</td>
<td>5/5</td>
<td>2/5</td>
<td>DOC-NOAA</td>
</tr>
<tr>
<td>Outer Continental Shelf 200 Nautical Mile Limit - Gulf Of Mexico Region NAD27</td>
<td>Complete</td>
<td>4/5</td>
<td>4/5</td>
<td>2/5</td>
<td>5/5</td>
<td>5/5</td>
<td>1/5</td>
<td>3/5</td>
<td>2/5</td>
<td>DOI-BOEM</td>
</tr>
<tr>
<td>Outer Continental Shelf Submerged Lands Act Boundary - Alaska Region NAD83</td>
<td>Complete</td>
<td>2/5</td>
<td>4/5</td>
<td>2/5</td>
<td>0/5</td>
<td>4/5</td>
<td>3/5</td>
<td>1/5</td>
<td>3/5</td>
<td>DOI-BOEM</td>
</tr>
<tr>
<td>Outer Continental Shelf Submerged Lands Act Boundary - Atlantic Region NAD83</td>
<td>Complete</td>
<td>4/5</td>
<td>4/5</td>
<td>2/5</td>
<td>5/5</td>
<td>5/5</td>
<td>1/5</td>
<td>3/5</td>
<td>2/5</td>
<td>DOI-BOEM</td>
</tr>
<tr>
<td>Outer Continental Shelf Submerged Lands Act Boundary - Gulf of Mexico Region NAD27</td>
<td>Complete</td>
<td>4/5</td>
<td>4/5</td>
<td>2/5</td>
<td>5/5</td>
<td>5/5</td>
<td>1/5</td>
<td>3/5</td>
<td>2/5</td>
<td>DOI-BOEM</td>
</tr>
<tr>
<td>Outer Continental Shelf Submerged Lands Act Boundary - Pacific Region - West Coast NAD 83</td>
<td>Complete</td>
<td>4/5</td>
<td>4/5</td>
<td>2/5</td>
<td>5/5</td>
<td>5/5</td>
<td>1/5</td>
<td>3/5</td>
<td>2/5</td>
<td>DOI-BOEM</td>
</tr>
<tr>
<td>Sea Levels Online: Sea Level Variations of the United States Derived from National Water Level Observation Network Stations</td>
<td>Complete</td>
<td>5/5</td>
<td>5/5</td>
<td>4/5</td>
<td>5/5</td>
<td>5/5</td>
<td>3/5</td>
<td>4/5</td>
<td>2/5</td>
<td>DOC-NOAA</td>
</tr>
<tr>
<td>U.S. Marine Protected Areas Boundaries: MPA Inventory</td>
<td>Complete</td>
<td>4/5</td>
<td>4/5</td>
<td>4/5</td>
<td>3/5</td>
<td>4/5</td>
<td>3/5</td>
<td>3/5</td>
<td>3/5</td>
<td>DOC-NOAA</td>
</tr>
</tbody>
</table>
### MSDI NGDAs not Limited to W–O&C Theme

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sample datasets of interest</th>
<th>Water – Oceans and Coasts datasets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biota</td>
<td>Environmental Sensitivity Index (ESI)</td>
<td></td>
</tr>
<tr>
<td>Cadastre</td>
<td>Outer Continental Shelf datasets</td>
<td>Shoreline Products</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outer Continental Shelf Boundaries</td>
</tr>
<tr>
<td>Elevation</td>
<td>Coastal Lidar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Digital Elevation Models</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multibeam Bathymetric Data</td>
<td></td>
</tr>
<tr>
<td>Geology</td>
<td>Outer Continental Shelf Sand and Gravel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Outer Continental Shelf Wells</td>
<td></td>
</tr>
<tr>
<td>Governmental Units</td>
<td></td>
<td>Maritime Limits and Boundaries</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine Protected Areas Boundaries</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lands Act Boundaries</td>
</tr>
<tr>
<td>Imagery</td>
<td>Coastal Mapping Remote Sensing Data</td>
<td></td>
</tr>
<tr>
<td>Land Use – Land Cover</td>
<td>Coastal Change Analysis Program data</td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td>Ports</td>
<td>Nautical Charts</td>
</tr>
<tr>
<td>Utilities</td>
<td>Outer Continental Shelf Pipelines</td>
<td></td>
</tr>
<tr>
<td>Water - Inland</td>
<td>National Wetlands Inventory</td>
<td></td>
</tr>
</tbody>
</table>
A potential approach for moving forward – and bringing value.
NEED
NICHE
Priorities
VALUE
Step One: Confirm Need for the MCSD

- Solicit input from FGDC membership and related coordination bodies on the need for the MCSD

- **Potential groups with similar interests to engage**
  - National Ocean Council Data and Information WG [NOC DIWG]
  - Interagency WG on Ocean and Coastal Mapping [IWG-OCM]
  - Integrated Ocean Observing Systems [IOOS]
  - Committee on Marine Transportation [CMTS] and IHO
  - UN Global Geospatial Information Management [UN GGIM]
  - Group on Earth Observations [GEO]
  - Marine Planning Portal Network [MPPN]

- **Discuss the MCSD’s purpose, its stewardship role for the W-O&C Theme, and coordination with other related groups**

- **Outcome:** Go or no-go on the MCSD
Step Two: Define Niche and Housekeeping

- Reach agreement on the purpose of the MCSD/W-O&C Theme
  - Is it just about compliance with the NGDA requirements or is there more?

- Need to tightly define scope
  - Data stewardship/access?
  - Strategies and technologies related to acquisition of data?
  - Use of data – societal impacts?
  - Voice of the U.S. MSDI?
  - Partnerships?

- Membership – recommend leads for other ocean/coast coordination bodies be the MCSD principal members

- **Outcome:** Updated Charter, Membership, and web presence
Step Three: Establish Priorities

- The MCSD will collapse under its own weight if it tries to embrace the entirety of the MSDI concept and required implementation steps on its own
- Must set a limited and doable short-list of initial priorities
  - Focus on where gaps exists, what is not currently being addressed by other topical coordination efforts
  - Fewer is better
- Discuss with other groups how to build a comprehensive work plan that captures contributions of all groups
- Receive commitments to develop W-O&C Theme Strategy by FGDC deadline
- **Outcome:** Shared work plan and path to develop W-O&C strategy
Step Four: Explain the Value

- No one wants to carry-out the NGDA activities for the sheer bureaucratic pleasure of paperwork
- All FGDC/NGDA efforts should focus on what is the purpose and how does it bring value
- Audience must be beyond the FGDC community
- Ocean and Coasts are under increasing pressures from multiple forcing factors – focus on delivering value to issues of strong societal value [e.g. GEO Societal Development Goals]
  - Coastal Resilience and Climate Impacts
  - Healthy Coastal Ecosystems
  - Economic Development
- **Outcome:** Ability to articulate why this matters
Discussion.

Tony LaVoi
MCSD Chair and NOAA GIO
tony.lavoi@noaa.gov
843.834.3516