



Semi-Annual Success Story ("Section C")
submitted to the
Office of Ocean and Coastal Resource Management/NOAA
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Virginia CZM Uses Participatory GIS to Map Offshore Recreational Uses

CZMA Performance Measure Areas:

Government Coordination & Decision-Making, Coastal Dependent Uses & Community Development, Public Access

Identification & Description of Issue:

The state and federally managed waters off Virginia's coast are used in many ways including commercial fishing, aquaculture, shipping, military exercises, habitat for wildlife, and recreation. With new uses such as renewable energy production emerging and existing uses like shipping expanding, the pressure is mounting to ensure there is space for both traditional and new uses and that conflicts are minimized. Finding ways to engage stakeholders in coastal and marine planning has never been more important.



As a member of the Mid-Atlantic Regional Council on the Ocean (MARCO), the Virginia CZM Program has begun to engage stakeholders and address these impending ocean planning issues. Utilizing VA CZM funding, MARCO created a first of its kind regional scale web based GIS portal that displays a wide range of ocean spatial data including human use, environmental, socioeconomic and regulatory data. An initial step in creating the portal was to identify existing data as well as critical data gaps. Recreational uses were identified as a data gap early on and Virginia CZM took the lead among the MARCO states in mapping these uses.

Capturing recreational use data can be a challenge. For each of a broad range of activities, which can be variable in time and place, knowledge is generally held by only a few key individuals. Getting the right experts to the table and keeping them engaged in the delineation of recreational use patterns is the most difficult part of this process.

Geographic Location: VA Congressional District 2.

How the Virginia CZM Program Was Involved:

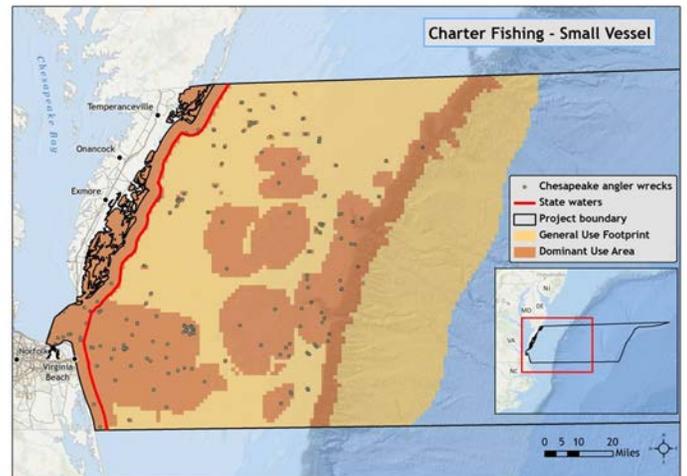
Utilizing a participatory GIS process developed by NOAA's MPA Center and with help from NOAA MPA and CSC staff, VA's CZM Program, collected data on the variety of ways the public recreates

along and off the state's Atlantic coast during a 2 day workshop in July, 2012. The MPA Center process, which has been used to map human uses of the ocean in several successful projects throughout the U.S., applies GIS and digital whiteboard technologies to yield accurate data while simultaneously building stakeholder support by engaging them directly in the creation of the data. VA CZM invited a wide array of expert stakeholders to the workshop which allowed participants to draw directly into a digital map, quickly and efficiently sharing their collective spatial knowledge of various recreational uses.



The VA workshop captured data for 22 distinct uses (e.g. recreational and charter fishing, kayaking, boating, surfing, barrier island day use, etc.) occurring from the shoreline out to the 200 mile US Exclusive Economic Zone (EEZ) boundary and received overwhelmingly positive reviews from its participants. After the workshop the data was cleaned up and processed and draft maps were posted to an interactive online mapping site for public review and comment.

It is a testament to the validity of the participatory GIS process, that all participants, as well as others who reviewed the data but could not attend the workshop, found no errors in the draft maps. Following this public review, the finalized maps were added to VA CZM's Coastal GEMS public mapping portal. An additional success of this effort was that, through the efforts of VA CZM's GIS Coordinator, the finalized metadata served as a test case for determining the process for uploading state data to the national portal, data.gov (see below). VA CMZ's GIS Coordinator worked with Bureau of Ocean Energy Management staff to troubleshoot the process.



The screenshot shows the DATA.GOV website interface. At the top, there is a search bar with the text "virginia atlantic coast recre" and a search icon. Below the search bar is a navigation menu with options: HOME, ABOUT, DATA, METRICS, OPEN GOVERNMENT, BLOGS, and COMMUNITIES. The main heading is "DATA CATALOG". Below this, there are tabs for "Organizations" and "Interactive Datasets". A note states: "Note that only datasets marked as 'Federal' are subject to the U.S. Federal Government and Data.gov's Data Policy. Non-federal participants (e.g., universities, organizations, and tribal, state, and local governments) maintain their own data policies. It is important that users understand the data policies of participating entities in order to best utilize these datasets. A description of this catalog and information about the datasets presented and associated metrics is available here".

On the left, there is a "Filter by location" section with a "Clear" button and a text input field "Enter location...". The main search results area shows a search bar with "virginia atlantic coast recreational use" and a search icon. Below the search bar, it says "109 datasets found for 'virginia atlantic coast recreational use'" and "Order by: Relevance". A dataset titled "VA Atlantic Coast Recreational Use" is listed, with a description: "deq-virginia-gov — As a member of the Mid-Atlantic Regional Council on the Ocean (MARCO), Virginia, through its Coastal Zone Management (CZM) Program, collected information on how the...". There are "XML" and "HTML" links below the description. A purple ribbon with the word "State" is on the right side of the dataset card. At the bottom left, it says "Map data CC-BY-SA by OpenStreetMap".

Workshops like these require trained GIS staff and facilitators. In addition to helping staff the VA workshop, NOAA MPA Center and Coastal Services Center staff trained additional staff from VA, MD, DE, and NJ, building capacity at the state level so that each consecutive state workshop has required less federal assistance as state employees gain more experience. With additional assistance from VA CZM staff, workshops have since been held in MD and DE and are scheduled for NJ in fall 2013. Once the other mid-Atlantic states complete their recreational use mapping workshops, all five states' data will be synthesized into regional recreational use maps for display on the Mid-Atlantic Regional Council on the Ocean's (MARCO's) Mid-Atlantic Ocean Data Portal.

Qualitative Summary of Accomplishments and Outcomes:

"The data on recreational uses captured by Virginia and other states using PGIS techniques will be critical components of any regional ocean plan for the Mid-Atlantic. This data was previously unavailable and needed to make informed coastal and ocean management decisions"

-Matt Gove, Mid-Atlantic Policy Manager, Surfrider Foundation

"The opportunity to support VA's Atlantic Coast Recreational Use Mapping workshop proved to be an invaluable training experience for Delaware Coastal Programs staff. The lessons learned and insights gained from that process has surely contributed to the success of Delaware's own recreational use mapping effort. Also, the VA CZM staff has been very helpful in providing suggestions about all aspects of the mapping process, from planning, to workshop implementation, to post processing. It has been a very rewarding collaborative experience!"

-Kate Fleming, NOAA Coastal Fellow, Delaware Coastal Program

Quantitative Summary of Accomplishment and Outcomes:

At the VA workshop, 45 expert participants (including personnel from state parks, national wildlife refuges, marine police, Coast Guard, NASA and charter fishing and kayak touring companies) divided

into five work groups to map general footprint and dominant use areas for 22 distinct recreational uses occurring from the shoreline out to the 200 mile US EEZ boundary resulting in over 200 data layers that were then processed and synthesized to create the final VA Atlantic Coast Recreational Use Project maps.

CZM Funds Expended & Other Funds Leveraged:

CZM funds expended include the partial time of the VA CZM GIS Coordinator equal to roughly \$20,000 in salary and fringe over the course of the project plus additional time of the VA CZM Program Manager and the VA CZM Ocean Planning Coordinator. Funds leveraged include the time of partners from NOAA MPA and CSC, Monmouth University, staff from MD, DE, and NJ, and the time of the 45 expert stakeholders who participated in the workshop.