

Tidal Wetlands Management Technical Support Grant

Center for Coastal Resources Management

Virginia Institute of Marine Science

Grant #NA22NOS4190187, Task #6

November 10, 2023



This project was funded, in part, by the Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant #NA22NOS4190187 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended. The views expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Department of Commerce, NOAA, or any of its sub-agencies.

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Product 1: Education / Outreach

Tidal Wetlands Workshop

Shoreline Assessment Tools 101: supporting coastal resilience and living shoreline assessments

CCRM hosted a Zoom webinar August 2, 2023 to highlight tools that deliver the best available science for shoreline and resilience assessments. A virtual format allowed for unrestricted level of participation to reach a broad audience across coastal Virginia. Webinar participants included shoreline professionals, environmental program staff from coastal localities and state agencies, nonprofit watershed groups, and public educators including Virginia Master Naturalists and Extension Master Gardeners (N=132 attendees). Four CCRM panelists demonstrated shoreline applications using online mapping tools. The role of VIMS during the Joint Permit Application process was also described. Webinar production assistance was provided by the Chesapeake Bay National Estuarine Research Reserve Virginia.

Presentations and related workshop materials are available online:

<https://www.vims.edu/ccrm/outreach/workshops/2023/index.php>

Handouts

- Digital Handout

Presentations

- Workshop Introduction *Karen Duhring Webinar Host, VIMS*
- Virginia Coastal Resources Tool *Karinna Nunez, CCRM Geospatial Modeling Manager, VIMS*
- Shoreline Protection Suitability Assessments *Karen Duhring, Coastal Scientist, VIMS*
- Chesapeake Bay Preservation Act Guidance: Guidance Data Layers *Pamela Mason, Senior Marine Scientist, VIMS*
- Rising Waters *Molly Mitchell, Research Assistant Professor, VIMS*
- VIMS Shoreline Advisory Service *Mark Luckenbach, Associate Dean of Research & Advisory Service, VIMS*

Publications

Center staff annually produces our *Rivers & Coast* newsletter. The *Rivers & Coast* covers one relevant topic in detail through the use of charts, graphs, maps and photos in an 8-page color publication. Except this year, we doubled the newsletter length to cover 50 years of coastal research and advisory service focused on wetlands and tidal shores. The newsletter was mailed to local wetlands boards, is available online and announced through CCRM's quarterly e-newsletter to nearly 3,000 email addresses which include local and state agency personnel, General Assembly members, and interested private citizens. *CCRM e-News* summarizes and communicates a variety of issues that support integrated management of

coastal zone resources, announces pertinent publications, programs and events, and points the reader to more detailed information on our website (and others).

Rivers and Coast

Summer 2023, Vol. 18 – “Over a Half Century of Connecting Science and Management for Virginia’s Tidal Wetlands at the Virginia Institute of Marine Science” focuses on the 50th Anniversary of the publication of the first Tidal Marsh Inventory while highlighting how this all got started (mandated from the General Assembly and passage of the Tidal Wetlands Act in 1972), the basic research that has supported the tidal marsh and shoreline management work, the science that has evolved because of VIMS-CCRM’s original work (SLR, living shorelines, migrating marshes, shoreline best practices) and the continued importance of the work in planning and regulation in Virginia, Maryland, and elsewhere. VIMS-CCRM doubled the length of the report to 16 pages to cover the story of 50 years of tidal wetlands work in Virginia. <https://scholarworks.wm.edu/reports/2858/>

CCRM e-News

- **December 2022** – New Virginia Coastal Resources Tool, Coastal Living Guide - Marine Debris, GCA scholarship, CCRM In-The-News, Catch the King Tide results, CCRM peer-reviewed publications, and events. <https://conta.cc/45fxmja> (847 opens)
- **April 2023** – Webinar announcement, Coastal Living Guide – Sea-Level Rise, SLR Report Cards, CCRM In-The-News, CCRM peer-reviewed publications. <https://conta.cc/403z2tu> (878 opens)
- **June 2023** – Webinar announcement, Coastal Living Guide-Managing My Shoreline, Shoreline Decision Support Tool, GCA scholarship winners, TRAP program grant, Diamondback Dash community science project, CCRM In-The-News, CCRM peer-reviewed publications. <https://conta.cc/44BHfrl> (1591 opens)
- **September 2023** – Rivers & Coast announcement, webinar results, AdaptVA Interactive Map User Guide, USACOE Public Notice for shoreline managers, CCRM In-The-News, CCRM peer-reviewed publications. <https://conta.cc/3LKzybe> (905 opens)

Facebook

CCRM staff continued a social media campaign by posting content to the CCRM Facebook page to inform our followers about CCRM activities and coastal issues in Virginia. We ended the performance period with 789 followers, an increase of 136 for the year. CCRM Facebook page fans mostly live in the United States (639), although we reached another 37 people in countries worldwide. Slightly more than half of our fans are women (60.2%). We continue to share posts from and tag other entities (mostly State Agencies) that are in the CZM networked program including VMRC, DEQ, DCR, Sea Grant, MPPDC as well as CCRM partners including Wetlands Watch, Virginia Coastal Policy Center, Master Naturalists, Master Gardeners and others and they have tagged CCRM. CCRM “Posted” statuses, photos, links, videos and more 102 times this grant period. Our greatest post engagement (551) was on a post about TRAP, Trap Removal, Assessment and Prevention, a NOAA funded national program to address derelict fishing gear. It had the most post impressions (5,793) and post reach (3,450). *[Facebook engagement is any action someone takes on your Facebook Page or one of your posts. The most common examples are reactions (including likes), comments and shares, but it can also include saves, viewing a video or clicking on a link. Impressions are*

the number of times any content from your page or about your page entered a person's screen. Reach is the number of people who saw any content from your page or about your page - this metric is estimated.]

Facebook: <https://www.facebook.com/CCRM10/>



Center for Coastal Resources Management (CCRM)

804 followers • 122 following



Promote

Manage

Edit

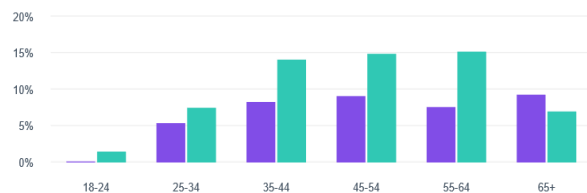
Audience

Audience

804 Facebook followers

Age and Gender

Men 39.80%
Women 60.20%



Top Post

Center for Coastal Resources Management (CCRM)
Published by Amy Nicholson · April 24 ·

The National Oceanic and Atmospheric Administration recently announced that VIMS will be leading a national program for removal of derelict fishing gear thanks to an \$8M grant awarded through NOAA. This program, TRAP (Trap Removal, Assessment, & Prevention), is led by two CCRM scientists, director Dr. Kirk Havens and assistant director Dr. Donna Bilkovic, as well as VIMS professor Dr. Andrew Scheld. This project will significantly help reduce the economic and ecological imp... [See more](#)

TRAP PROGRAM
VIMS AWARDED \$8M GRANT TO COMBAT DERELICT GEAR

Total Insights
See more details about your post.

Post Impressions
5,793

Post reach
3,450

Engagement
551

Kenah Consulting

Kenah and VIMS have each had individual conversations with the tribes while building their plans. In early August, Kenah and VIMS held a meeting with several of the tribal environmental directors and representatives from NOAA. The meeting focused on consideration and discussions around the packaging and service of NOAA products to increase usefulness for tribal nation planning. Kenah collaborated on the planning and meeting invitations and managed honorariums for tribal representative participation. These grant funds were used to support tribal honorariums and were not used to plan the meeting. Regardless, meeting outcomes included GIS assistance for building tribal databases and a plan for more formalized GIS assistance, in addition to the development of a draft RESOURCE GUIDE FOR CHICKAHOMINY TRIBE that highlights NOAA resources of interest to them, presented in a way that meets their needs. The format of the guide was determined during the meeting based on stakeholder input.

Product 2: General Technical Guidance

Summary

The Center for Coastal Resources Management (CCRM) continues to provide technical advice to the public, regulatory and non-regulatory authorities. We provide general advice on shorelines and marine issues via phone, email, and/or when feasible on-site. To maximize the efficacy of site visit efforts, we focus on requests that involve living shoreline suitability assessments, proposed living shoreline projects and those from more rural localities. Advice draws from routinely used data and tools including on-line resources at CCRM/VIMS, from other coastal partners and agencies, aerial imagery, decision tools and decision models. All general technical guidance is tracked in the Advisory Database and all projects associated with a Joint Permit Application (JPA) are tracked in the Shoreline Permit Database.

Advisory Database: The Center continues to populate an advisory database to track our provision of technical advice outside of the joint permit application process so that we can adapt CCRM's guidance development and outreach program to address issues identified through data analysis.

- Technical Advisory and General Information – 66*

**Please note:*

- *1 living shoreline advisory request was omitted from prior reporting (Oct 1, 2022 – March 31, 2023)*
- *3 living shoreline advisory requests were omitted from prior reporting (April 1, 2023 – Sept 30, 2023) and are added to this final report*

Shoreline Permit Database: This database is continuously updated to track Virginia tidal shoreline erosion control projects. Joint Permit Applications (JPAs) are reviewed for proposed erosion and sediment control activities. These projects are categorized into CCRM-defined types, location of the projects are geo-referenced, and various project information is collected and entered into the database. This information is used to support various CCRM coastal resources management research and other activities.

- Shoreline Project Updates – 599

Historical Permit Records Database: The Center for Coastal Resources Management also serves the historical records for tidal wetland Joint Permit Applications (JPA) in a searchable database online. These records include 31,130 original JPAs and all associated photos, public hearing notices, additional information, and VIMS Reports. All records prior to January 1, 2010 as well as a link to current records can be found on CCRM's website.

- Shoreline Permit Records: <https://www.vims.edu/ccrm/advisory/ccrmp/permits/index.php>

Details of Advisory Requests (extracted from the Advisory Database):

Advice Topic Areas Requested:

- **Wetlands/Marshes** - 12
(Data: Tidal Marsh Inventory, Forested Non-Tidal wetlands, Tidal Marsh Model; MHW/MLW determination; education materials; sea level rise; dying/loss of wetlands; identification of wetlands; policy/regulations; floating wetlands)
- **Plants** - 9
(Identification, recommendations, plant information resources/links, invasive removal)
- **Living Shorelines** - 7
(Professional Contact List/Process Information, LS Data, Promotional/Marketing, Funding Assistance, Shoreline Erosion Advice)
- **Sea Level Rise** - 4
(2050 sea level rise scenarios of MHW, inundation times, flooding)
- **Shoreline Inventory** - 3
(Shoreline Inventory Data)
- **Erosion and Sediment Control (Not LS)** - 3
(Shoreline evaluation/Erosion Control Advice)
- **Wildlife/Fauna** - 3
(Identification of jellyfish; Mallard nest/eggs on pier removal, mussels and nitrogen removal)
- **Climate Change** - 3
(Carbon sequestration research, Tide levels and weather events, salinity)
- **Chesapeake Bay Preservation Act** - 3
(RPA buffer delineation, complaint, tree removal)
- **Education** - 2
(Wetlands Board Training Workshop, Bay Wise Program)
- **Social Vulnerability** - 2
(Social Vulnerability Classifications and Index Scores, Trouble shooting)
- **Septic** - 2
(Septic System Failures)
- **Flooding** - 2
(Removal effects of flood prone structures, flood surge height)
- **Other** - 11
(NDZ, SAV, Water quality, Stream Sampling protocol, Permits, Oyster bags/reefs, etc.)

Advice Requested From:

- | | |
|--|----|
| • Citizen/Property Owner | 22 |
| • Community/Non-Profit/NGO/Master Gardener/Master Naturalist | 12 |
| • Local Government/Wetland Board Staff or Member/Elected Officials/PDC | 6 |
| • Federal Agencies | 3 |
| • Academic/Research/Students | 6 |
| • State Agencies (including VIMS) | 9 |
| • Consultant/Business Owner | 7 |
| • Out of State Agencies | 1 |

During this grant period, citizens and property owners remained the largest group requesting information overall.

Living Shoreline Requests: Requests related to Living Shorelines fell from being the most requested category of advisory service last grant period to third place falling below requests about wetlands and tidal marshes including jurisdiction and determination, tidal marsh inventory data, dying plants, impact from sea level rise, and policy and regulations and inquiries about plants including identification, recommendations, resources, and how to remove invasives such as *Phragmites*.

Requests related to Living Shorelines involved professional contact lists and permit and design process information, erosion control advice, funding assistance, demonstration site locations to support living shoreline promotional efforts, and data layers including the location of Living Shoreline project sites and historical erosion rates.

Of the advisory requests associated with *shoreline erosion control*, 25% were related to the living shoreline management approach (1 out of 4). Citizens and property owners were the largest group (57%) requesting information on controlling erosion with living shorelines, with one request each for student, state agency, and federal agency groups. NGOs (Non-Governmental Organizations) and consultants did not request any living shoreline advice during this grant period.

Locality Type of Living Shoreline Advice Requested: This grant period, 75% percent of living shoreline requests from citizens/property owners (3 out of 4) were from citizens/property owners living in rural localities this grant period, up from 21% last year. The percentage of living shoreline advisory requests from citizens/property owners living in suburban localities decreased to 25% this year, down from 50% last year. Requests in urban designated localities remained the same at none. No requests for living shoreline information came from out of state. Local governments (represented by local government staff, wetlands board, and elected officials) made no requests for living shoreline advice this grant period.

Living Shoreline Advisory Request Summary: Just under 11% of all advisory requests received during this grant period (7 out of 66) were in reference to living shorelines, decreasing from the last grant period, at 22%. The total number of living shoreline related requests from citizen/property owners, local governments, and other groups all decreased from the last grant period. No site visits were conducted for living shoreline advisory requests this grant period (not all requests warrant a site visit). Two site visits were conducted for non-living shoreline advisory requests.

Table 1. Demographics for CCRM Advisory Service

LOCALITY	CITIZEN	LOCAL GOV'T	OTHER	TOTAL	LOCALITY TYPE *
Out of State				0	NA
Gloucester			1	1	Suburban

Lancaster	1			1	Rural
Middlesex	1			1	Rural
Prince George	1			1	Rural
Williamsburg			1	1	Suburban
York	1			1	Suburban
Multi-Locality			1	1	NA
TOTAL	4	0	3	7	

**Locality designation was defined by housing unit density; Rural tracts = less than 64 units per square mile, Suburban tracts = 64 to 1,600 housing units per square mile, and urban tracts = greater than 1600 housing units per square mile. Housing density information obtained from the U.S. Census.*

Details of Data Requests (extracted from the Virginia Tidal Shoreline Permit Database):

CCRM developed a comprehensive database using Microsoft Access with fillable forms to store Virginia tidal shoreline erosion control permit and associated project information. The CCRM Virginia Tidal Shoreline Permit Database integrates permit and project information from various existing sources into one master, searchable database. Center staff continue to populate the database with information collected from review of a subset of Joint Permit Applications (JPAs) submitted to the Virginia Marine Resources Commission (VMRC) requesting erosion and sediment control activities, project shoreline site characteristics from local government and other websites, Google Earth and Bing maps, and field observations.

Data has been preliminarily collected on 29,918 shoreline erosion control projects to date, with data entry and geolocation completed for **10,573** projects, including **599 projects** during this grant period. This includes, but is not limited to, the following information:

- VMRC number
- applicant name and contact information
- property owner information
- contractor
- project type
- length
- impacts
- wetlands board decision
- VMRC decision and date
- year built
- project location (site address, locality, parcel ID, and lat., long.)
- fetch and waterway
- And specific information required by CCRM to support various aspects of CCRM projects, such as field site selection, comparative assessments, and various surveys and analyses of social and natural systems.