



Virginia Commonwealth University, Center for Environmental Studies
Coastal Management GIS Support & Coastal GEMS
Maintenance: FY10 Annual Report

October 1st 2010 – September 30th 2011

NOAA Grant # NA10NOS4190205

Grant Year FY2010, Task #1.02



Virginia Coastal Zone
MANAGEMENT PROGRAM



Acknowledgements

This report was prepared by the Virginia Coastal Zone Management Program's Coastal GIS Coordinator. The Coastal GIS Coordinator position is provided through a contract with Virginia Commonwealth University's Center for Environmental Studies and is funded by the Virginia Coastal Zone Management Program at the Virginia Department of Environmental Quality through Grant # NA10NOS4190205 from the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.

Introduction

This report outlines tasks performed and products created under task #1.02 by the Virginia Coastal Zone Management Program's Coastal GIS Coordinator and by staff of Virginia Commonwealth University's Center for Environmental Studies during the grant year FY2010 (October 1st 2010 – September 30th 2011).

This report does not include an image of every map product created for task #1.02 during FY2010. Instead, the images in this report are a sample of the map products created selected to best illustrate each product description.

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Virginia Commonwealth University's Center for Environmental Studies (VCU CES) continued to host the Coastal GEMS online mapping application through the FY10 grant period and VCU CES staff performed routine maintenance and updates on Coastal GEMS during this time.

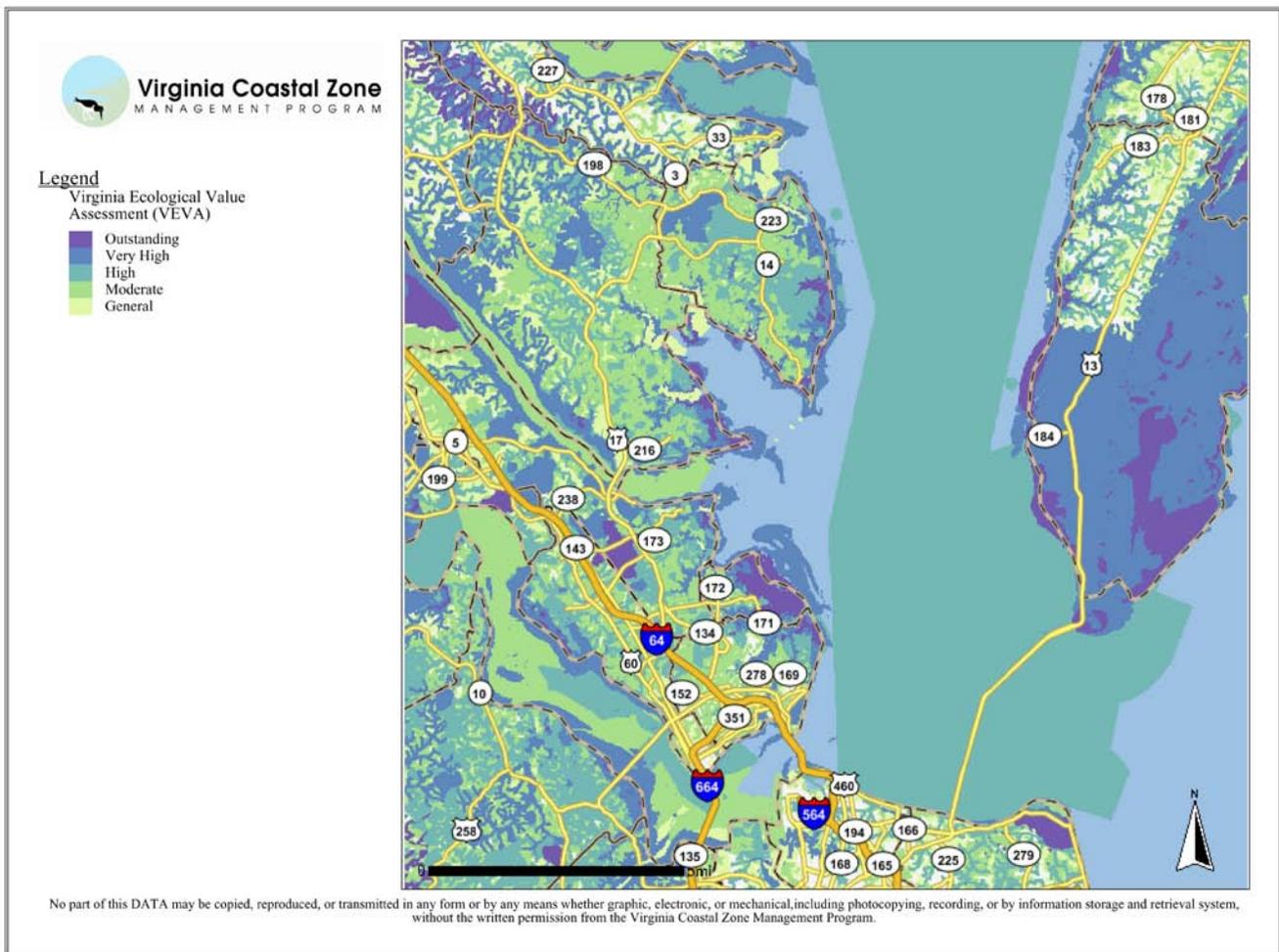
Tasks were to refresh map services, to update data and cartography in the map file as per CZM staff request, and to install software and security upgrades. Coastal Gems remained operational throughout the FY10 grant period and was only offline to install software/security updates or to refresh map services.

During the FY10 grant period, at CZM staff request, VCU CES staff updated the data and symbology on two currently in production GEMS layers and added four new data layers to the application.

The Coastal GIS Coordinator processed GIS data layers for effective display on Coastal GEMS and uploaded layers to VCU to be added to Coastal GEMS. GEMS fact sheets were added/updated where applicable.

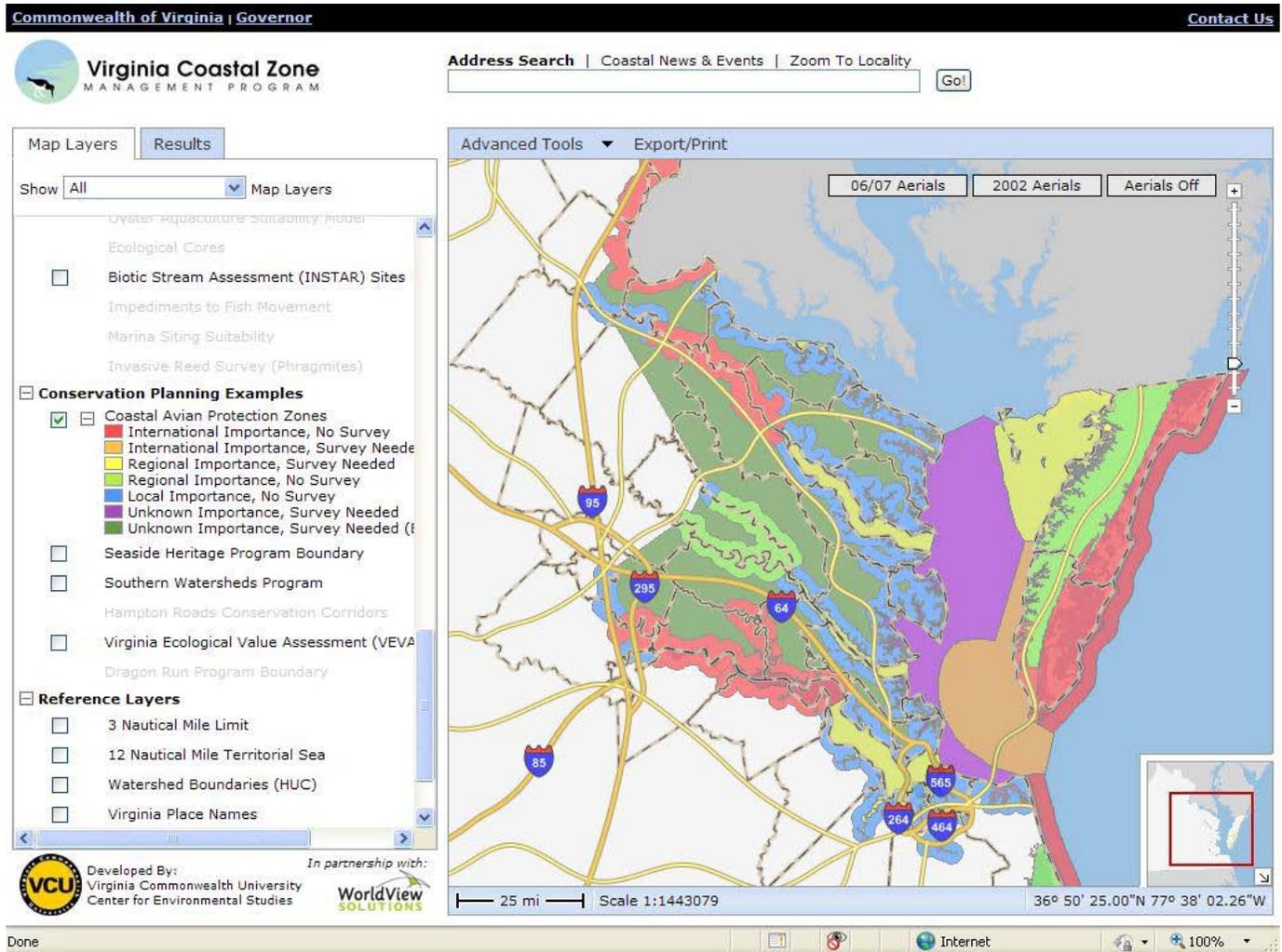
Layers updated in this period include: Healthy Waters, Conservation Lands
Layers added in this period include: Coastal Virginia Ecological Value Assessment (VEVA), Coastal Avian Protection Zones (CAPZ), Publically Accessible Conserved Lands, Healthy Watersheds

Google Analytics services for Coastal GEMS set up by VCU CES staff remained operational throughout the FY10 grant period. Google Analytics sends an email PDF report to CZM staff weekly to show access and web statistics for the Gems application and VCU CES staff created additional reports at CZM staff request by querying specific date ranges. From October 1, 2010 to September 30, 2011, Coastal GEMS received 1,429 visits from 743 unique visitors resulting in 1,969 pageviews and an average site visit time of 2 minutes and 19 seconds. The full Google Analytics report for the Coastal GEMS mapping application during the FY10 grant period can be found in the appendix of this report.



The map above was exported from Coastal GEMS and displays the Coastal Virginia Ecological Value Assessment (Coastal VEVA) layer.

Below is a screenshot from the GEMS application showing the Coastal Avian Protection Zones (CAPZ) layer. To see more visit Coastal GEMS at www.coastalgems.org.

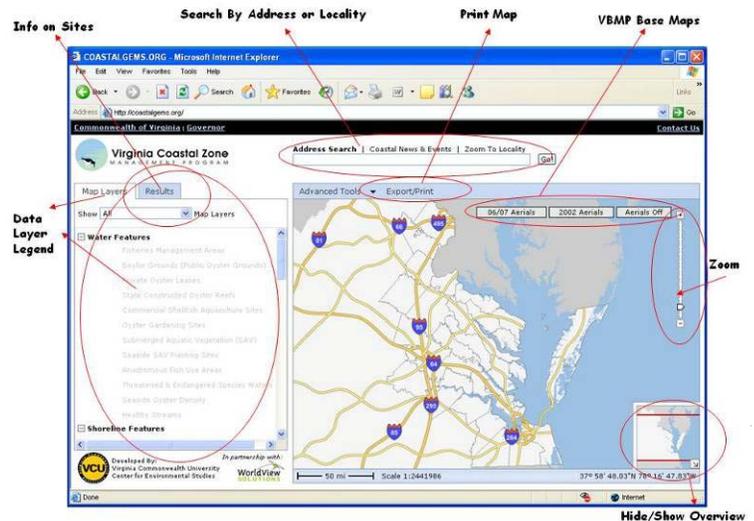
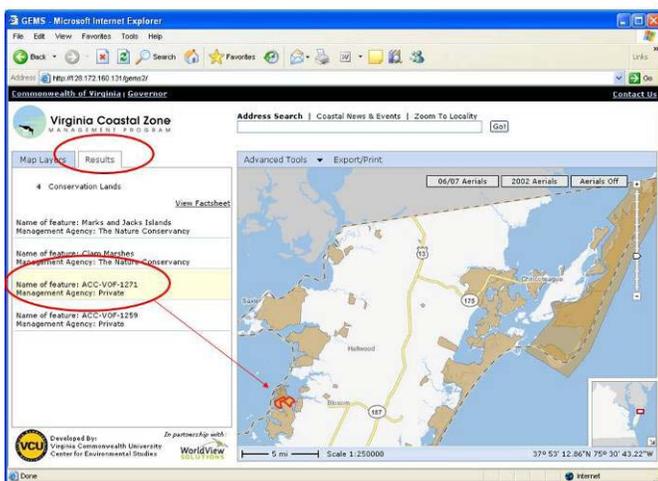


The Coastal GIS Coordinator conducted two formal Coastal GEMS trainings during the FY10 grant period:

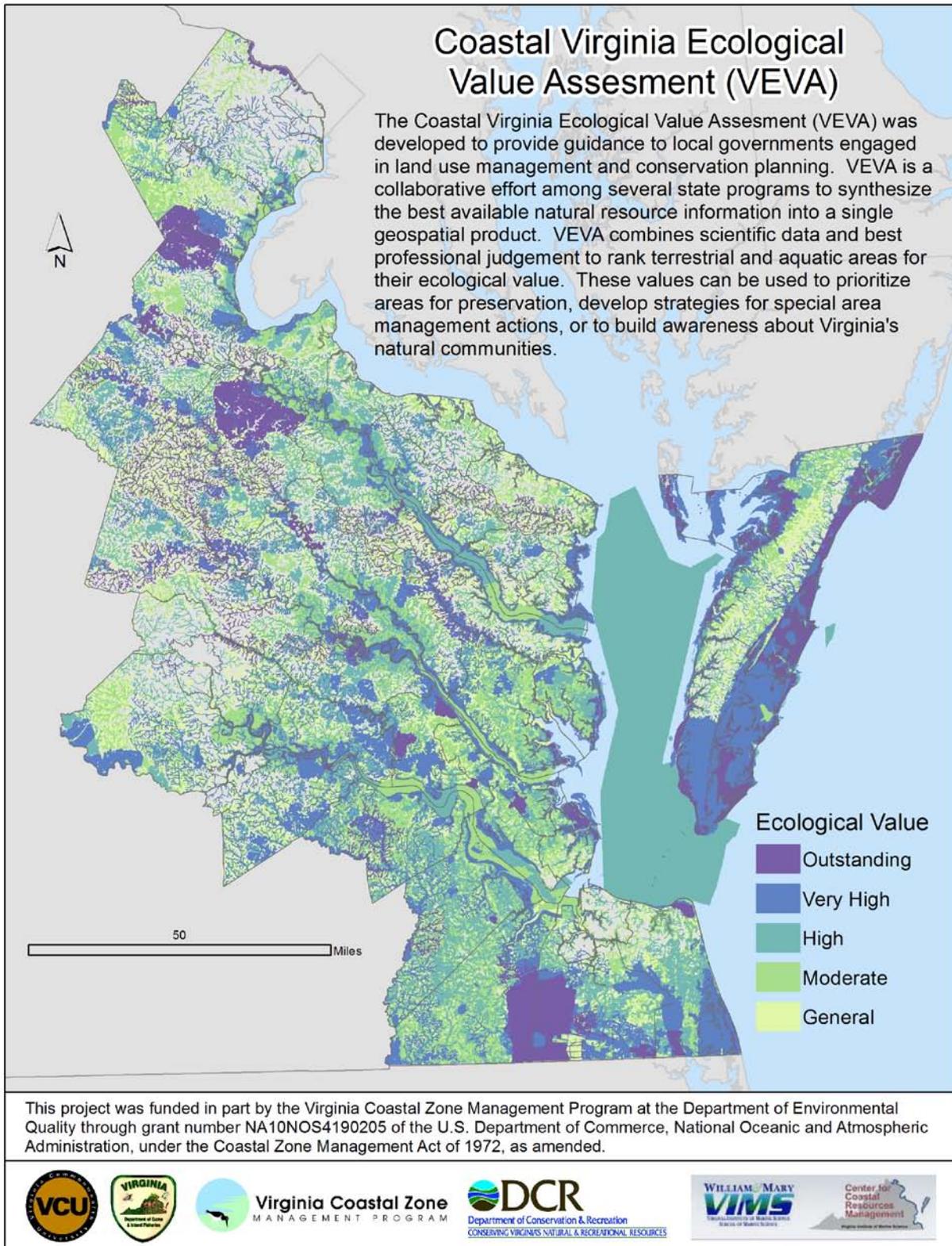
1. As requested by the Richmond Regional PDC presented to local planners during their Environmental TAC meeting
2. A joint training with DEQ Environmental Education staff given at VA DEQ's central office computer lab facility marketed towards master naturalists and other adult educators.

Both presentations/live demos were customized for the audience.

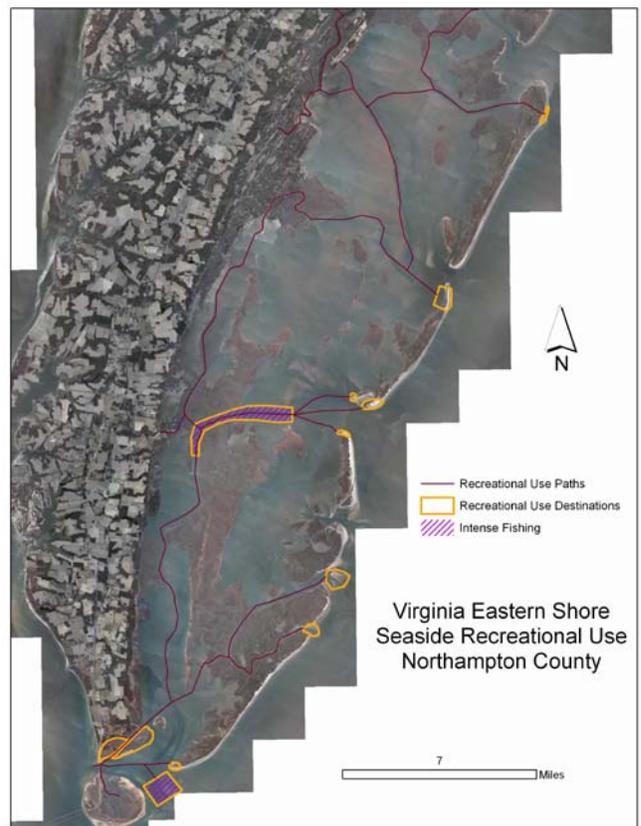
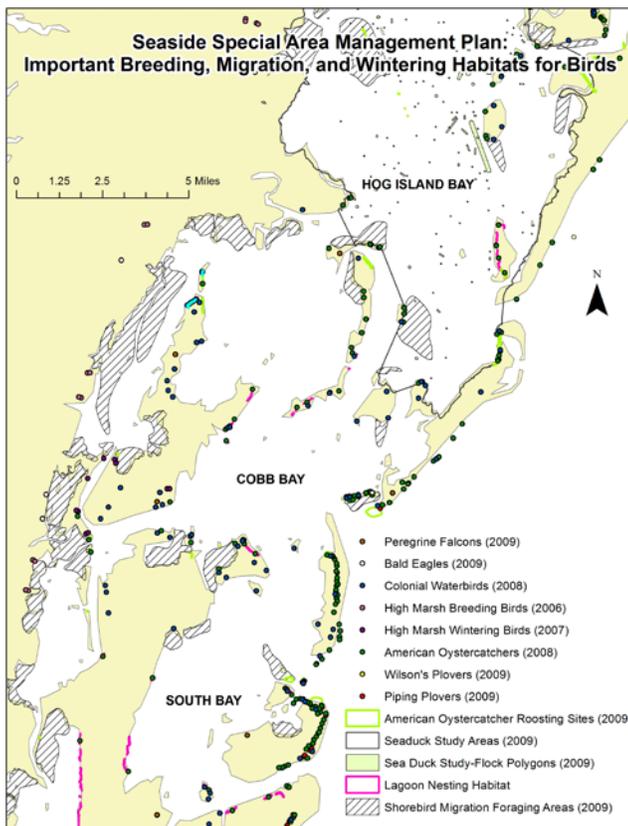
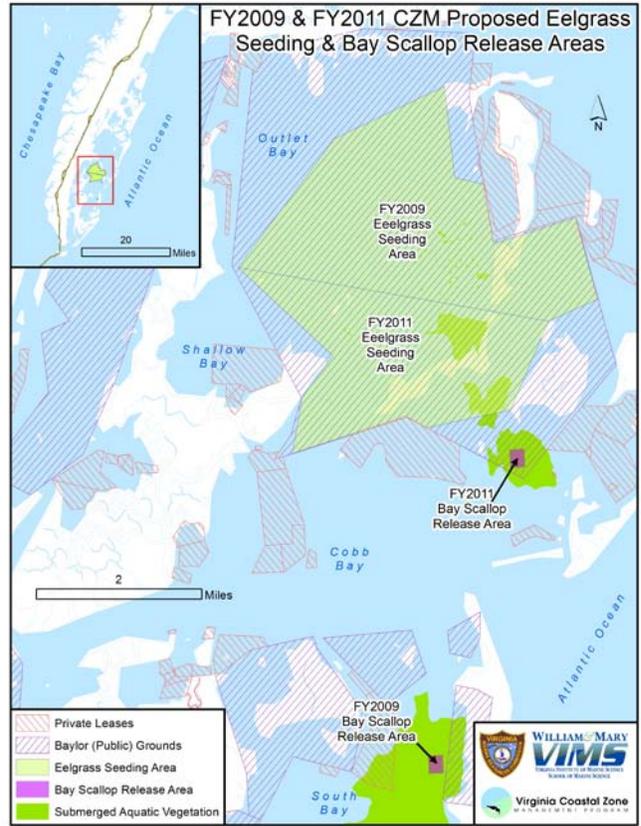
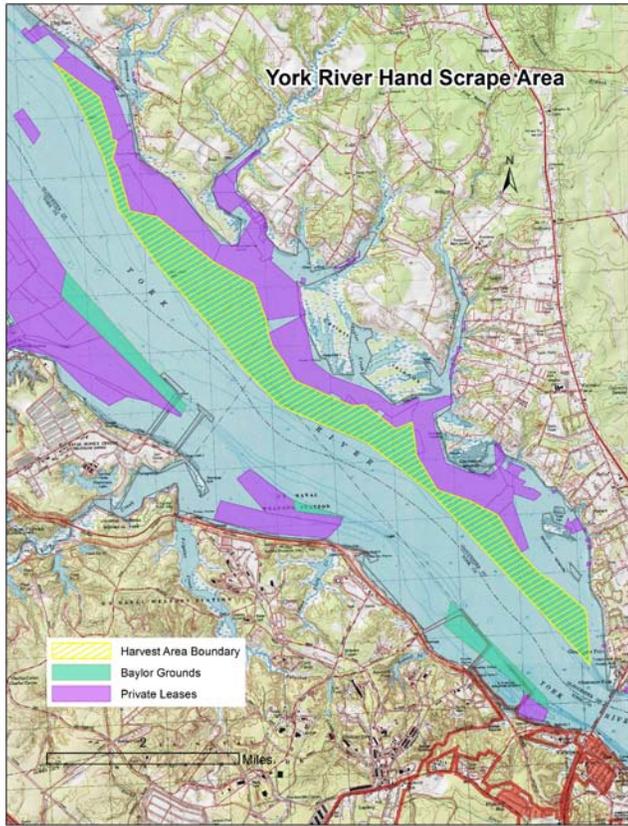
The Coastal GIS Coordinator also provided slides to and advised DEQ Environmental Education staff who gave a presentation at the 2010 VA Council for Social Studies Conference outlining GEMS as a useful tool for educators to help address curriculum needs for advanced placement high school geography classes.



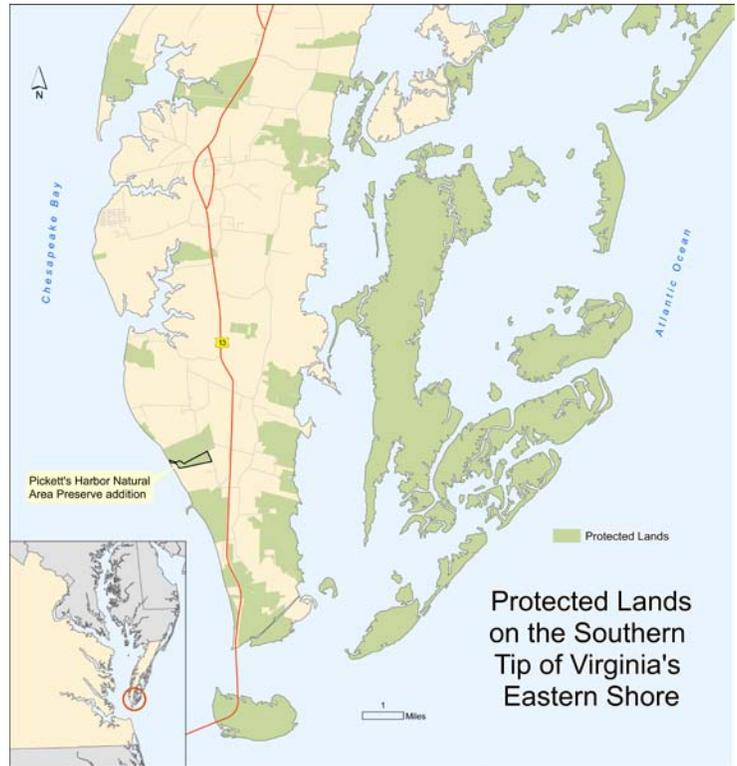
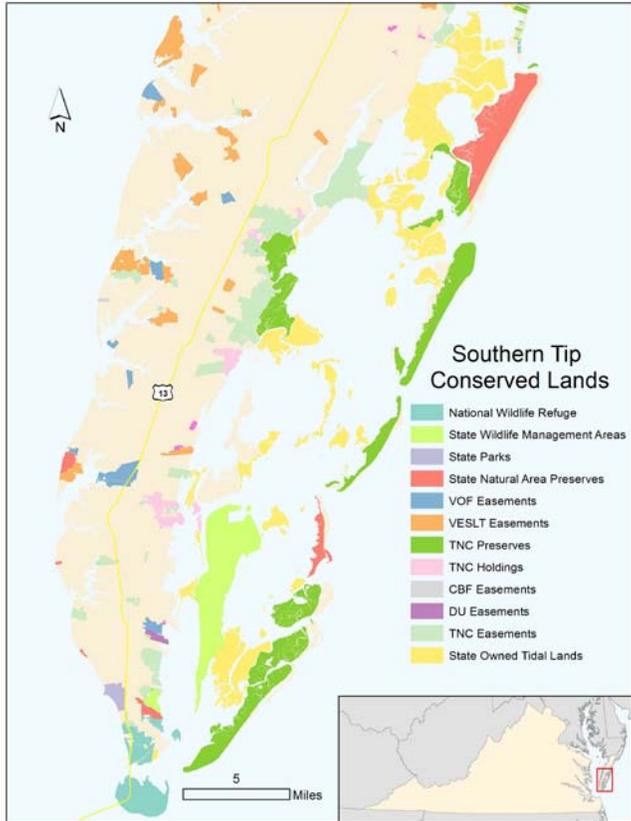
The Coastal GIS Coordinator worked with the Coastal VEVA workgroup to create and finalize a visually appealing map symbology that best represented the Coastal VEVA dataset. The Coastal GIS Coordinator created several map layouts of the Coastal VEVA dataset, including handouts as well as large scale maps.



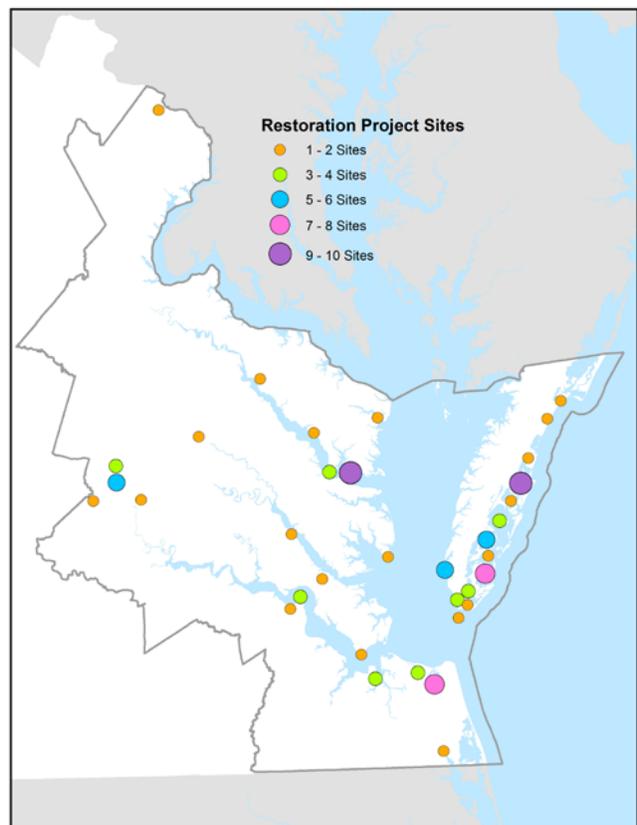
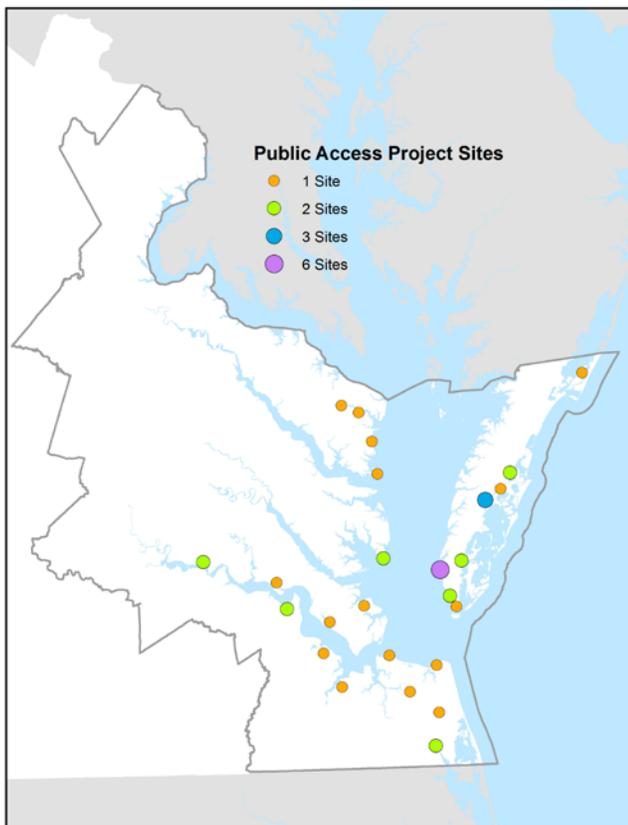
The Coastal GIS Coordinator worked to create GIS data and map products for CZM partners as requested including: Working with VMRC Conservation and Replenishment staff to create maps for regulatory use, creating a map for the VA CZM funded joint VIMS/VMRC FY2009 & 2011 Eelgrass Seeding & Bay Scallop Release project for use in federal and state application documents, creating a representative map of Eastern Shore seaside avian distribution data, and working with the Eastern Shore Keeper to develop spatial data and maps of recreational use on the seaside of the Eastern Shore.



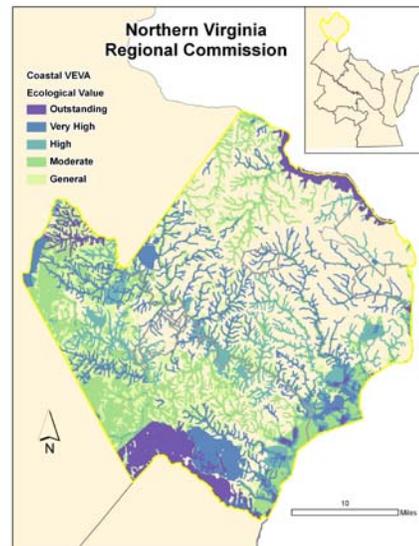
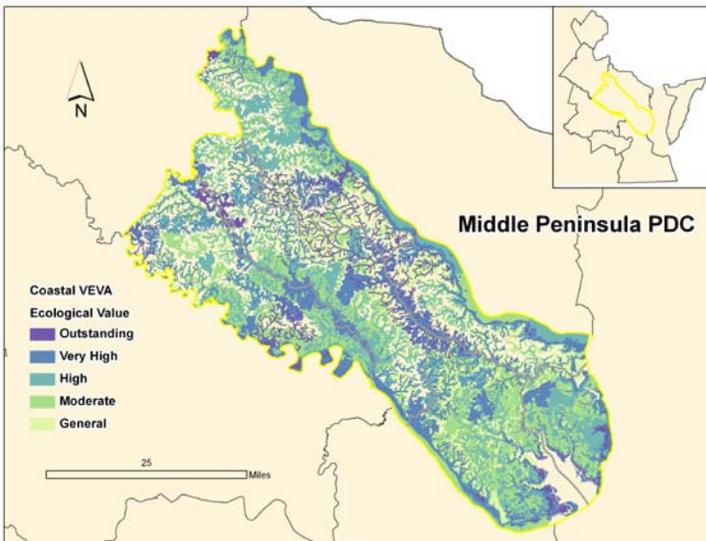
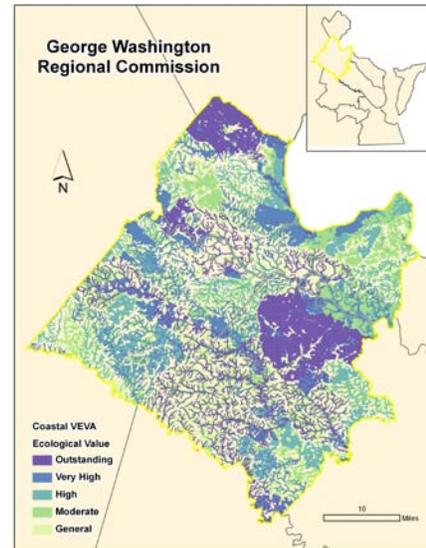
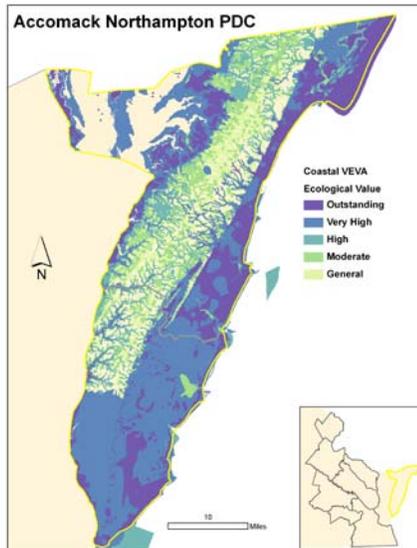
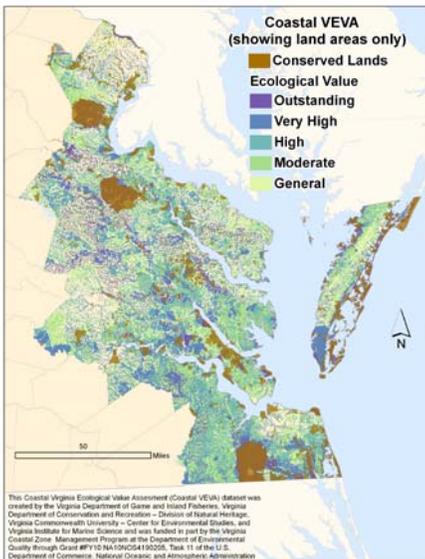
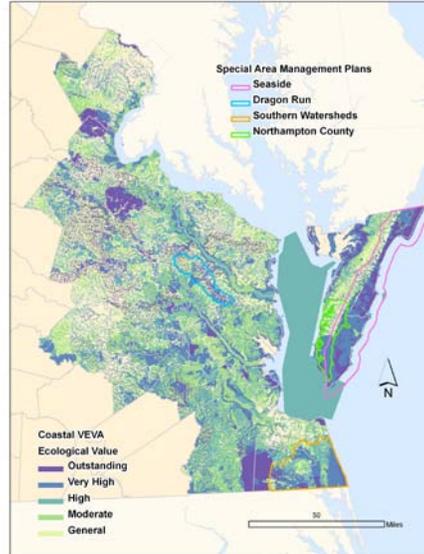
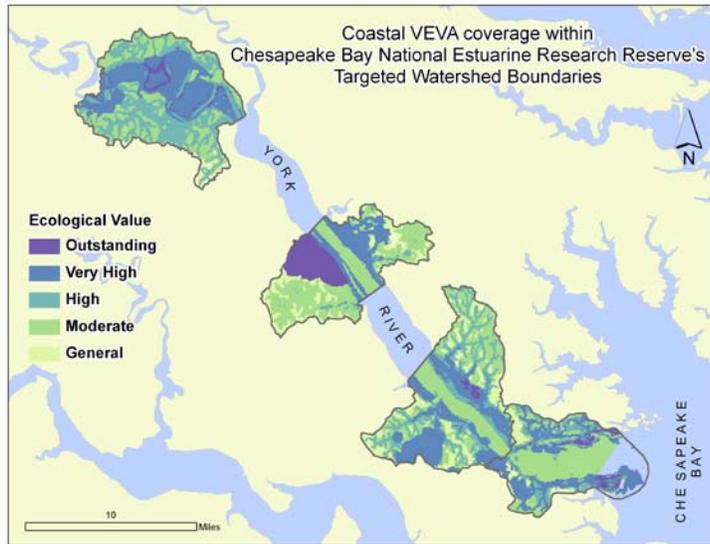
The CZM GIS Coordinator worked with members of the Southern Tip Partnership to create an updated map of lands conserved on the Southern Tip as well as a map attached to a press release regarding a recent land acquisition.

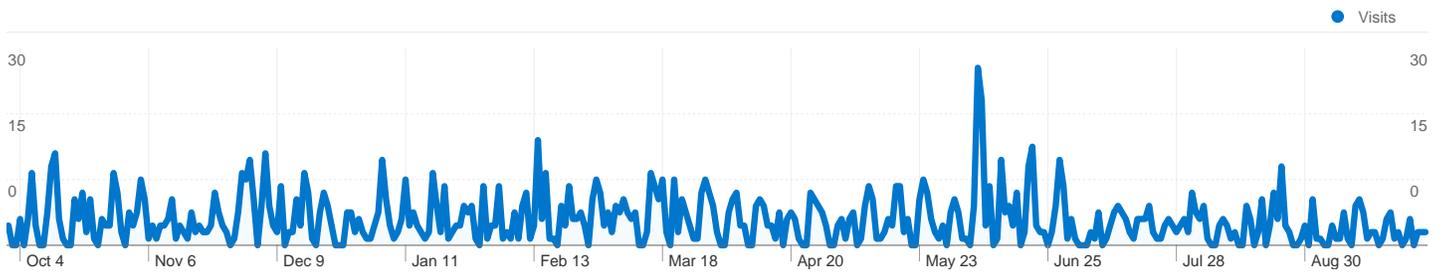


The CZM GIS Coordinator identified locations of and then created point shapefiles for VA CZM public access, land conservation, and habitat restoration sites. These shapefiles were then used by the GIS Coordinator to create "dot distribution" style map layouts for the VA CZM 25th anniversary edition magazine.



The Coastal GIS Coordinator updated over a dozen maps in the Virginia CELCP plan to utilize the new Coastal VEVA dataset (which was an update to the PCA dataset previously used in these maps).





Site Usage

1,429 Visits

77.82% Bounce Rate

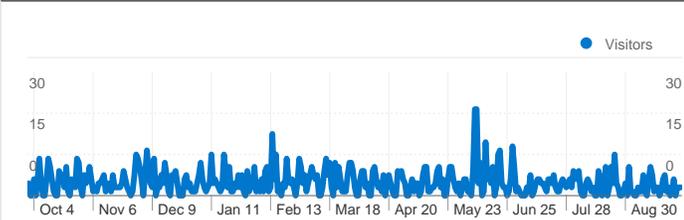
1,969 Pageviews

00:02:19 Avg. Time on Site

1.38 Pages/Visit

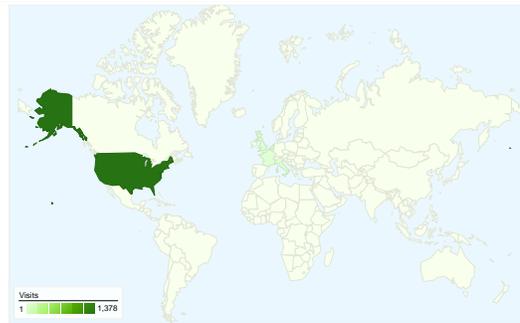
48.29% % New Visits

Visitors Overview

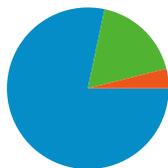


Visitors
743

Map Overlay



Traffic Sources Overview

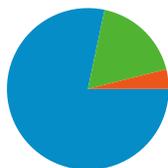


- **Referring Sites**
1,119.00 (78.31%)
- **Direct Traffic**
254.00 (17.77%)
- **Search Engines**
56.00 (3.92%)

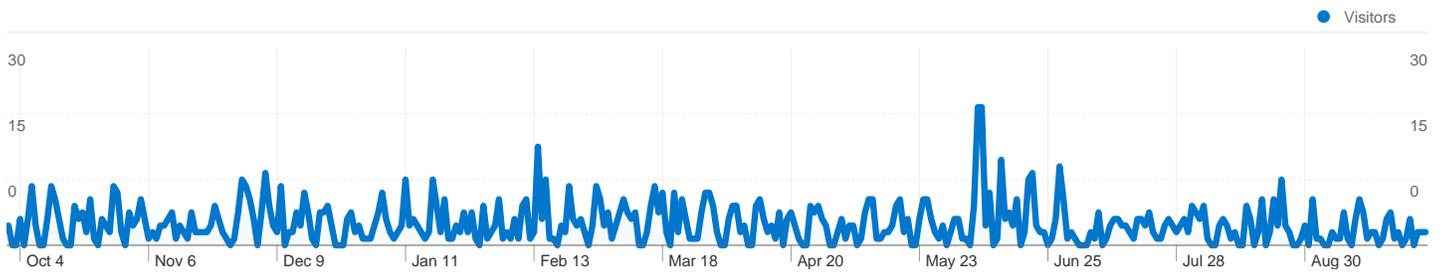
Content Overview

Pages	Pageviews	% Pageviews
/gems2/	1,866	94.77%
/gems2/mapper.aspx	44	2.23%
/gems2/?resetcache=37	10	0.51%
/gems2/?resetcache=13	9	0.46%
/gems2/?resetcache=23	4	0.20%

Traffic Sources Overview



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743 people visited this site

 **1,429** Visits

 **743** Absolute Unique Visitors

 **1,969** Pageviews

 **1.38** Average Pageviews

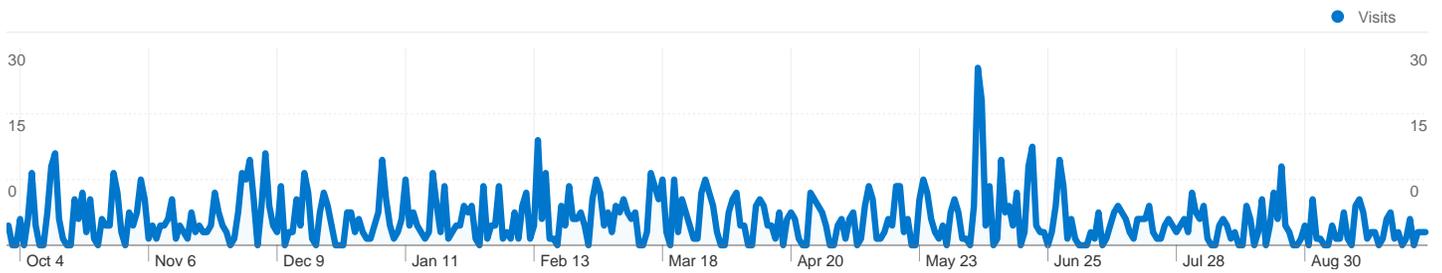
 **00:02:19** Time on Site

 **77.82%** Bounce Rate

 **48.29%** New Visits

Technical Profile

Browser	Visits	% visits
Internet Explorer	1,075	75.23%
Firefox	228	15.96%
Chrome	78	5.46%
Safari	38	2.66%
IE with Chrome Frame	6	0.42%

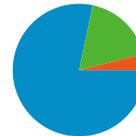


All traffic sources sent a total of 1,429 visits

 17.77% Direct Traffic

 78.31% Referring Sites

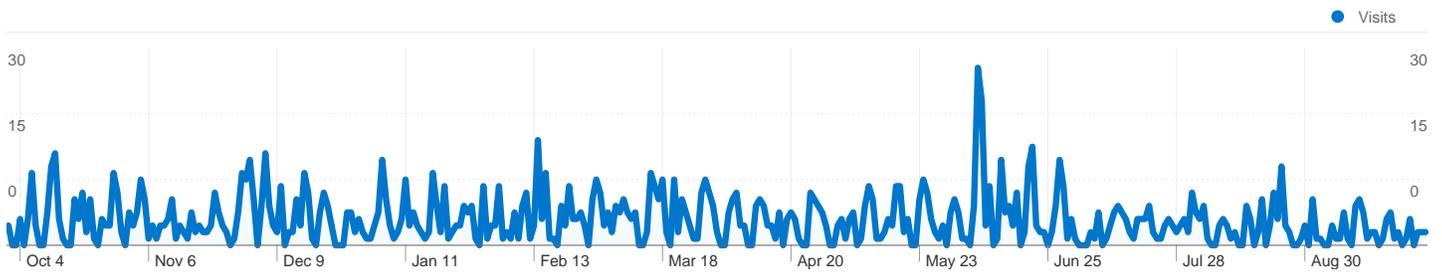
 3.92% Search Engines



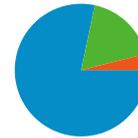
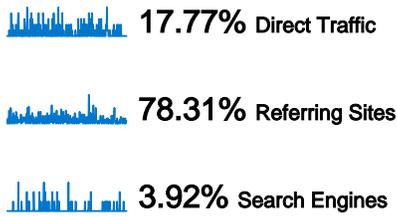
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Top Traffic Sources

Sources	Visits	% visits	Keywords	Visits	% visits
deq.state.va.us (referral)	560	39.19%	virginia coastal gems	7	12.50%
deq.virginia.gov (referral)	526	36.81%	coastal avian protection zones	6	10.71%
(direct) ((none))	254	17.77%	http://128.172.160.131/gems2/	3	5.36%
google (organic)	48	3.36%	map of "huc" boundaries	2	3.57%
coastalgems.org (referral)	10	0.70%	sav protection zones	2	3.57%



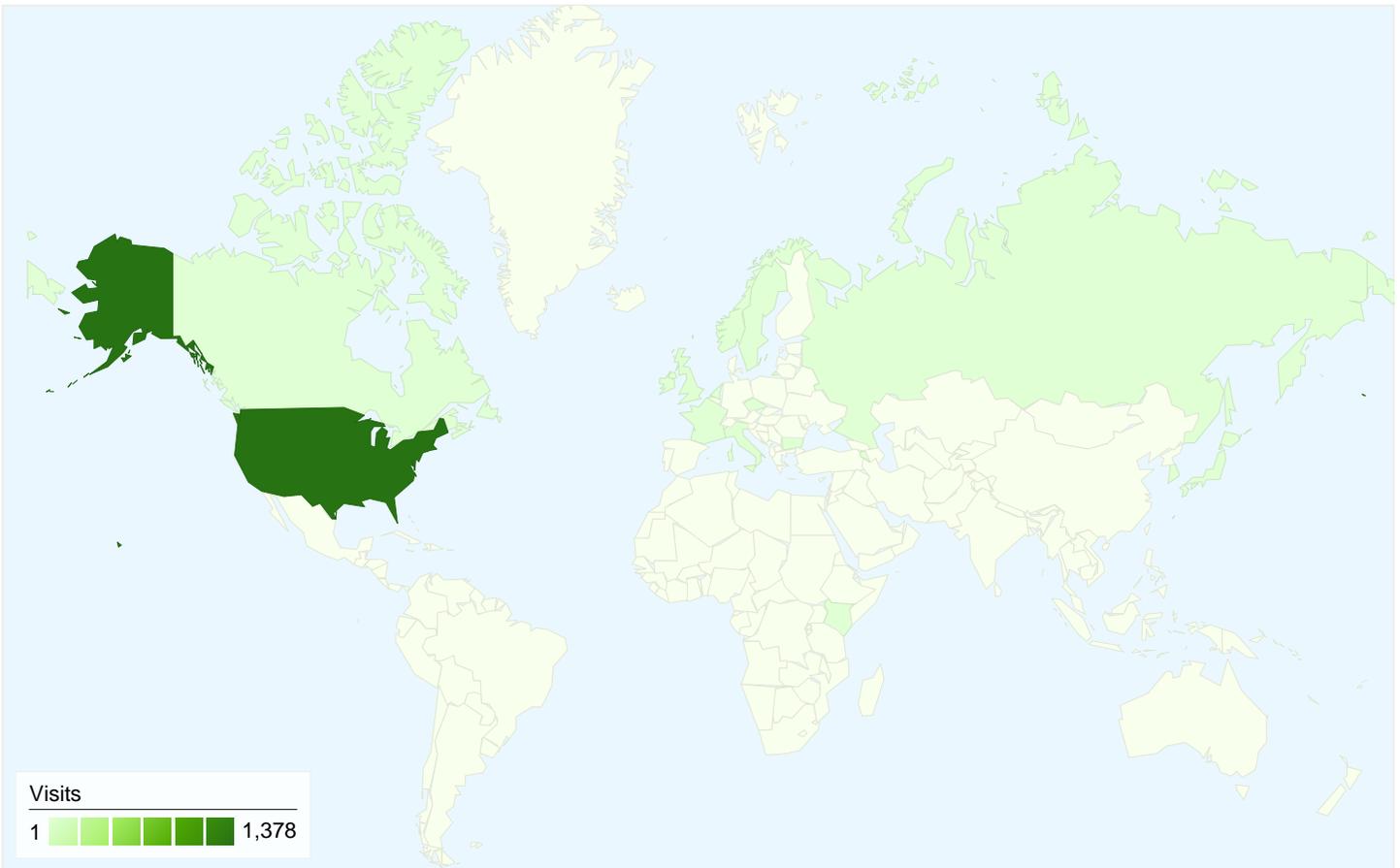
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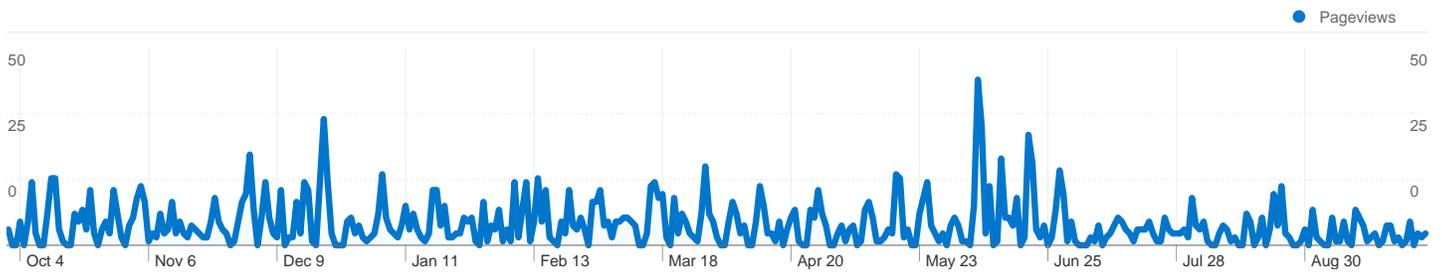


1,429 visits came from 16 countries/territories

Site Usage

Country/Territory	Visits	Pages/Visit	Avg. Time on Site	% New Visits	Bounce Rate
United States	1,378	1.38	00:02:18	48.26%	77.79%
Italy	15	1.13	00:00:20	13.33%	86.67%
United Kingdom	13	1.69	00:08:03	46.15%	69.23%
Netherlands	6	1.50	00:01:43	66.67%	66.67%
France	3	1.00	00:00:00	66.67%	100.00%
Japan	2	1.00	00:00:00	100.00%	100.00%
Sweden	2	2.00	00:06:53	0.00%	0.00%
Russia	2	1.00	00:00:00	100.00%	100.00%
Armenia	1	1.00	00:00:00	100.00%	100.00%

Ireland	1	1.00	00:00:00	100.00%	100.00%
					1 - 10 of 16



Pages on this site were viewed a total of 1,969 times

 1,969 Pageviews

 1,499 Unique Views

 77.82% Bounce Rate

Top Content

Pages	Pageviews	% Pageviews
/gems2/	1,866	94.77%
/gems2/mapper.aspx	44	2.23%
/gems2/?resetcache=37	10	0.51%
/gems2/?resetcache=13	9	0.46%
/gems2/?resetcache=23	4	0.20%