



Virginia Coastal Zone Management Program Semi-Annual Success Story (“Section C”)  
 October 2018 – March 2019  
 Submitted to the Office of Coastal Management/NOAA

**Coastal GEMS and Coastal VEVA Updates**

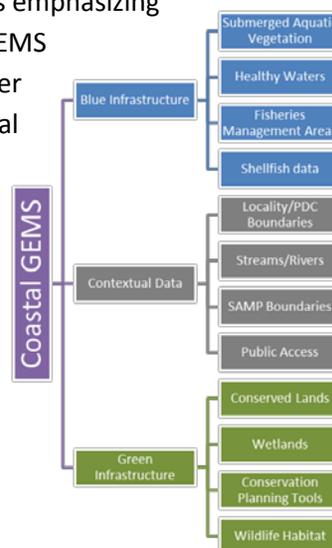
**THE PROBLEM:** Coastal resource spatial data has become increasingly plentiful over the years, with a considerable amount created through CZM grants, but without cost prohibitive computer software and the skills to use it, this data hasn’t always been easily accessible. Even with the necessary GIS training and software, determining what data exists and how to obtain it can be a formidable task for users. Additionally, analyzing all the available data in an effort to identify the most important areas for conservation presents a time consuming and costly undertaking for local governments and land conservation organizations who are often working on limited funding and timescales.

**THE FIX:** It’s no secret that better access to scientifically sound information results in improved planning and decision making, and so, for its entire 30 year history, VA CZM has been committed to creating and compiling coastal resource data and making it available to planners and decision makers in formats that they can quickly and easily utilize.

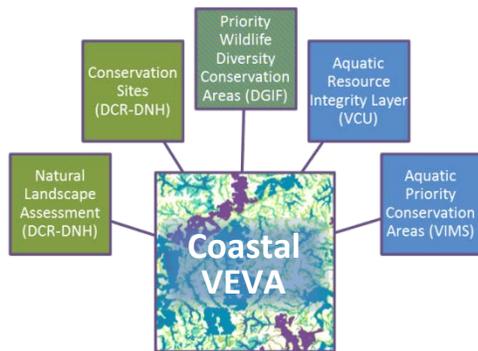


In response to a need expressed by our partners at a workshop in 2001, VA CZM began to identify and compile spatial data for the best remaining water and land based natural resources within the state’s coastal zone. This effort eventually grew into a two pronged approach which included building a big picture online data portal for the coastal zone housing many data layers emphasizing the connection between blue and green infrastructure called Coastal GEMS (Geospatial and Educational Mapping System), and creating a single layer synthesizing and ranking the state’s conservation priorities in the Coastal Zone called Coastal VEVA (Virginia Ecological Value Assessment).

*Coastal GEMS* – In 2006 VA CZM teamed up with VCU’s Center for Environmental Studies (VCU CES) to create a comprehensive coastal data resource for its partners and the public called Coastal GEMS. At that time online mapping applications were becoming popular but they typically only highlighted a specific dataset or two from one organization and some of the user interfaces were far from intuitive.



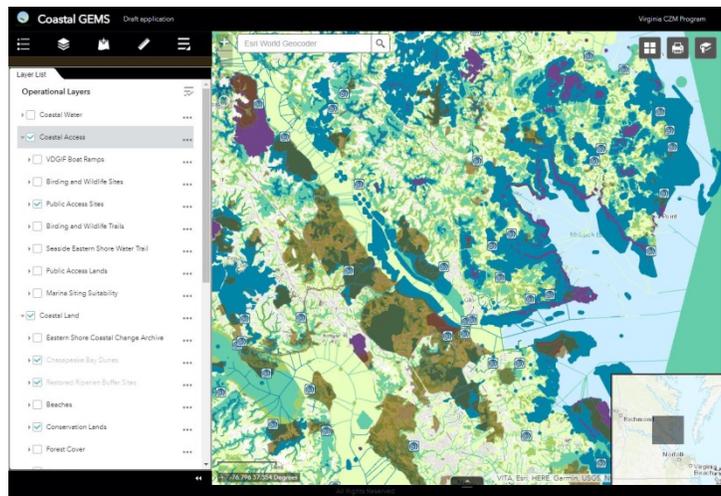
Coastal GEMS was ahead of the curve, leveraging some of the latest technologies from several software platforms and pulling together data from local, state, and federal agencies, non-profit organizations and academic institutions and fusing them all into one, easy to use, comprehensive, data portal. In addition to the spatial data, GEMS also includes fact sheets with information about each data layer as well as links to collaborating agencies.



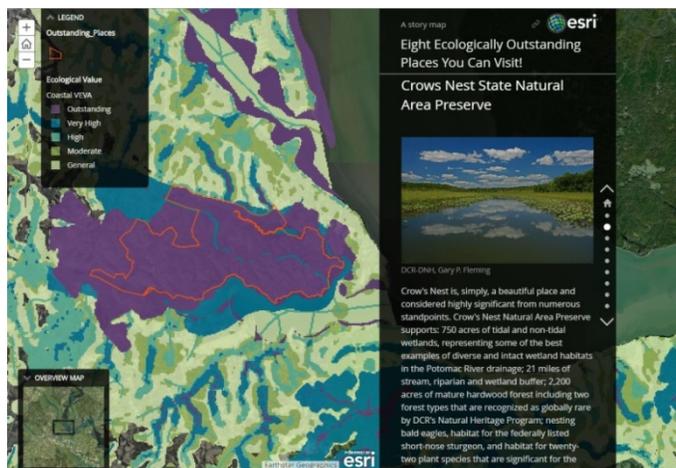
**Coastal VEVA** – Coastal VEVA was originally developed in 2011 to provide guidance to local governments engaged in land use management and conservation planning. VEVA is a collaborative effort among several state programs to synthesize the best available natural resource information into a single geospatial product. To create VEVA, VA CZM

partnered with VCU CES, the Virginia Department of Conservation and Recreation Division of Natural Heritage (VA DCR-DNH), the Virginia Department of Game and Inland Fisheries (VA DGIF), and VIMS Center for Coastal Resources Management (VIMS CCRM).

**Recent Updates** – Both Coastal GEMS and Coastal VEVA have just been updated and improved to ensure that they remain relevant and valuable tools for planning in Virginia’s Coastal Zone. Recent updates to Coastal GEMS include a new landing page featuring new story maps as well as the ability to display various years of Virginia



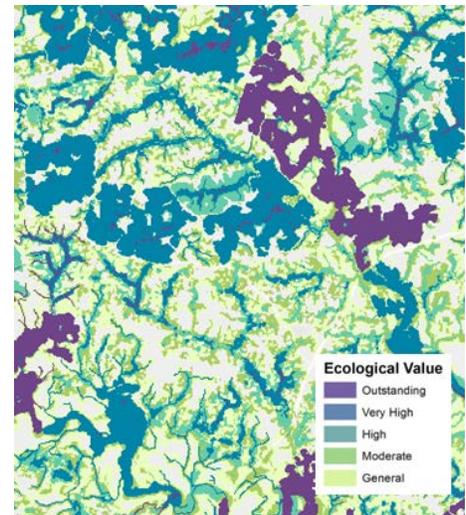
Base Map imagery and load map services from outside sources. Coastal VEVA was updated over two years, with year one including surveying stakeholders to evaluate the use and application of Coastal



VEVA and updating the conservation priority models which are inputs to the Coastal VEVA model and, year two including synthesizing the component models to complete the Coastal VEVA update and executing Coastal VEVA outreach efforts guided by survey results from year one.

The Coastal GEMS mapping application is online at [www.coastalgems.org](http://www.coastalgems.org) and the Coastal VEVA layer can be found on Coastal GEMS under the Conservation Planning category.

**THE IMPACT:** Coastal GEMS is used by local and regional planning agencies to determine the most suitable areas for conservation and development, state and federal agencies for environmental review, habitat restoration, and public access plans, academic institutions to educate students about coastal resources and to provide a basis of information for classroom projects and/or research, and private citizens, advocacy groups, and businesses to formulate their positions on the potential impacts of projects on coastal resources. Since tracking was implemented in 2010, Coastal GEMS has received over 10,000 visits.



Coastal VEVA serves as the required assessment of priority conservation needs in VA's CELCP Plan and is also used by VA CZM to inform multi-year strategic plans which focus on unique ecosystems and engage local partners in integrating economic and environmental protection. VA CZM is currently in year 2 of a 5 year strategic plan for the lower Chickahominy River Watershed, an area identified by VEVA for its outstanding ecological significance.



Coastal VEVA is used by the Southern Tip Partnership, comprised of VA CZM, VA DCR-DNH, VA DGIF, USFWS, and The Nature Conservancy, who work together to acquire and protect land on the southern tip of Virginia's Eastern Shore. Coastal VEVA indicated high value areas on the upper bayside of the Eastern Shore which led the partnership to expand its purview to include the entire Eastern Shore. Along with previous ecological assessment iterations, Coastal VEVA has been used by the Virginia CZM Program to identify and protect over 2,000 acres using Section 306A and CELCP funds. In addition, these

funds have leveraged protection of thousands more acres by our partners.

VA CZM presented the updated Coastal GEMS mapping application and updated Coastal VEVA synthesis in 2018 at the Virginia GeoCon, at a DCR-DNH all staff meeting, and at a "Green Infrastructure for Coastal Resilience workshop" at VIMS.

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