



Virginia Coastal Zone
MANAGEMENT PROGRAM

Virginia Coastal Zone Management Program – Conservation Planning through Coastal VEVA Model & CELCP Plan

Lucas Manweiler & Nick Meade

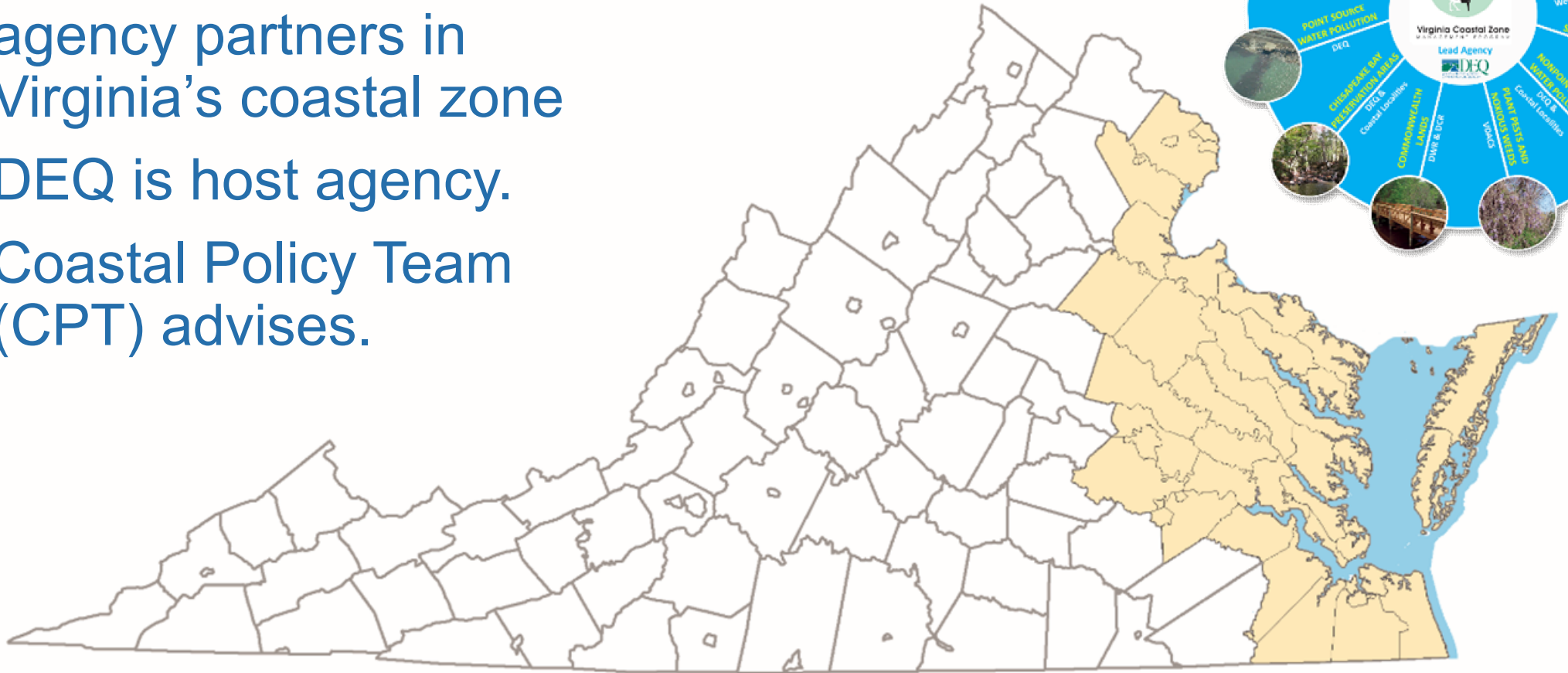
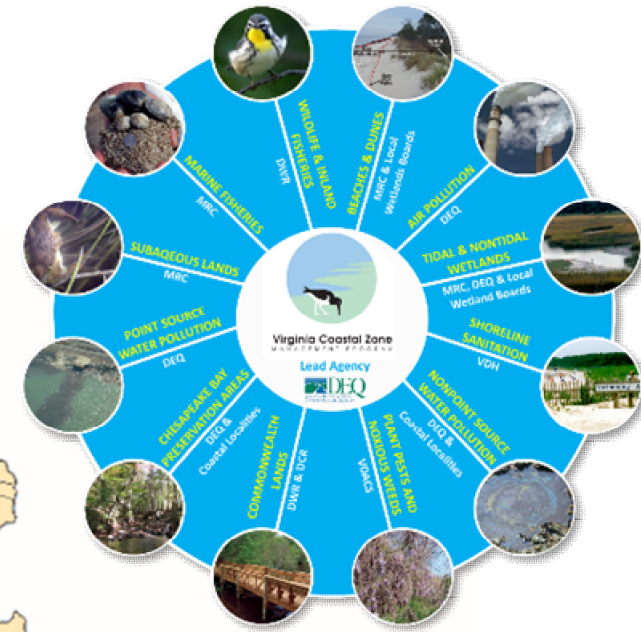
Conservation Coordinator & GIS Coordinator

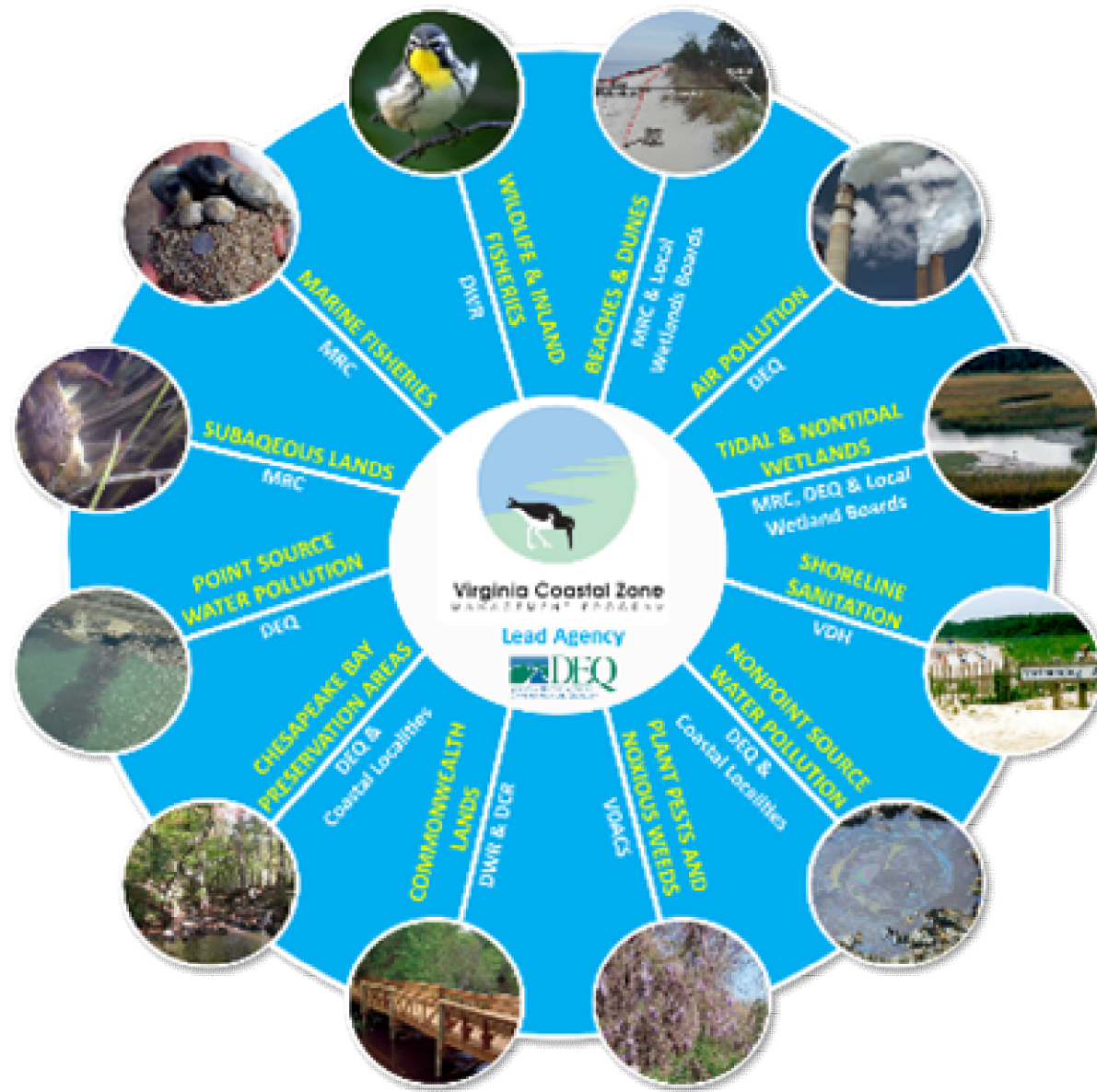
Virginia Department of Environmental Quality – Coastal Zone Management Program

April 28, 2026

Virginia Coastal Zone Management Program

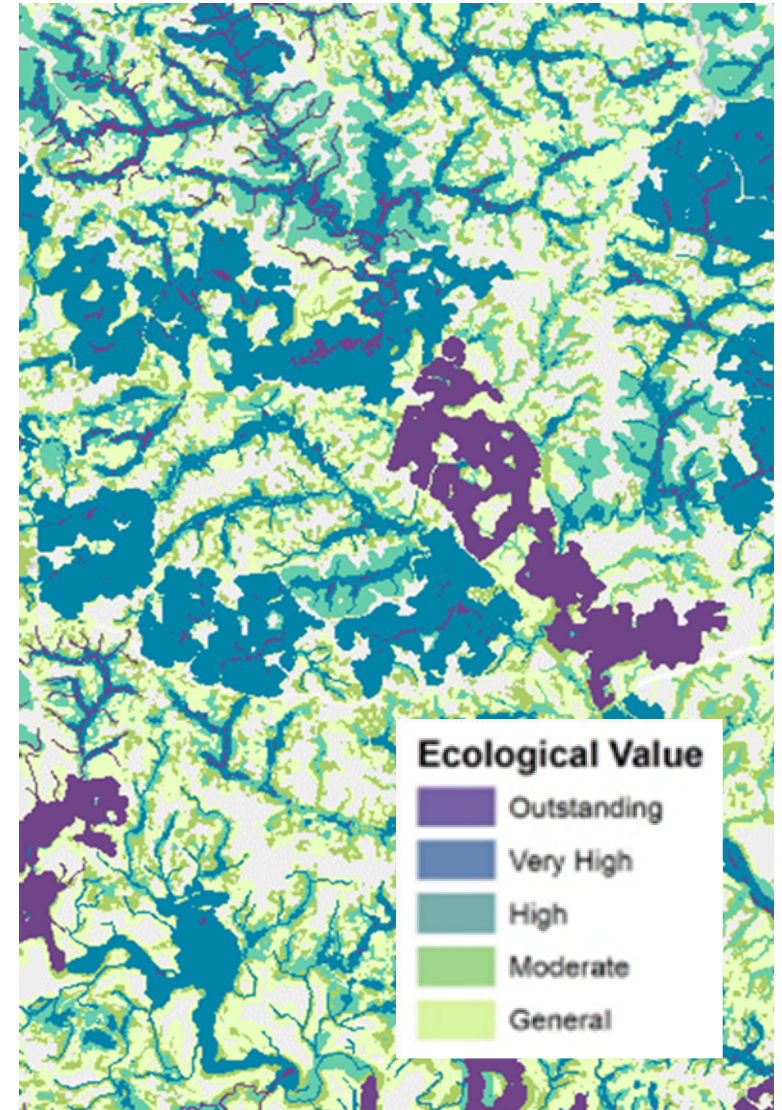
- Network of local & agency partners in Virginia's coastal zone
- DEQ is host agency.
- Coastal Policy Team (CPT) advises.



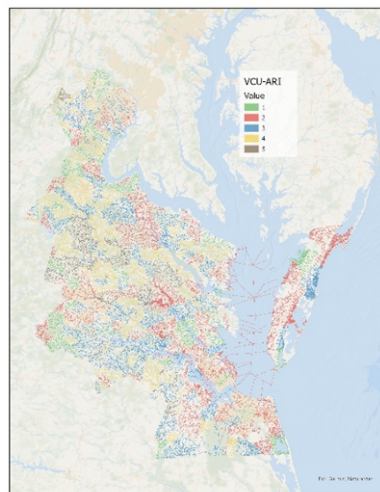
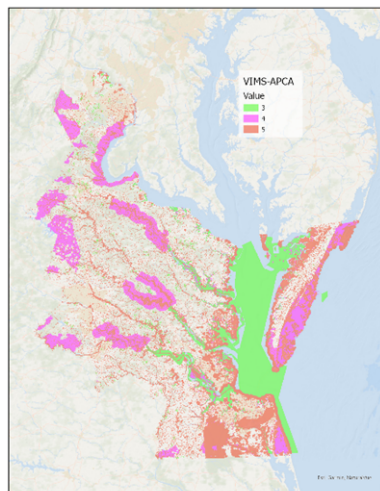
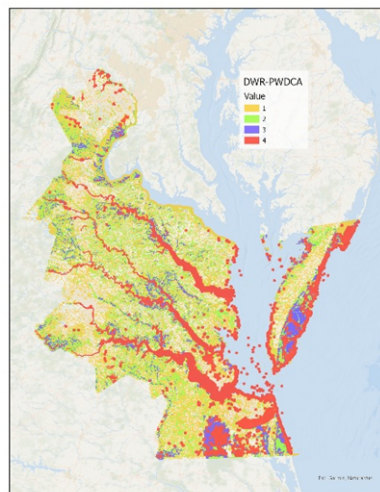
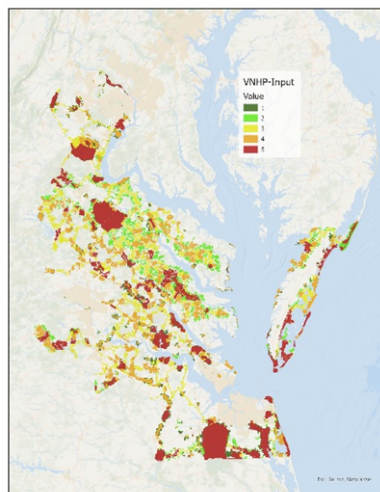


Coastal Virginia Ecological Value Assessment (VEVA)

- A collaborative integration of conservation datasets and priorities in VA's coastal zone.
- Synthesizes the best available natural resource information into a single geospatial product
- Developed to provide guidance for land use management and conservation



Coastal Virginia Ecological Value Assessment (VEVA) Model Update



- State agencies and institutions independently identify and quantify conservation priorities. These efforts are formed with different missions, perspectives, and purposes.
- Coastal Veva Partners
 - VA Natural Heritage Program
 - VA Department of Wildlife Resources
 - VA Institute for Marine Science
 - VA Commonwealth University

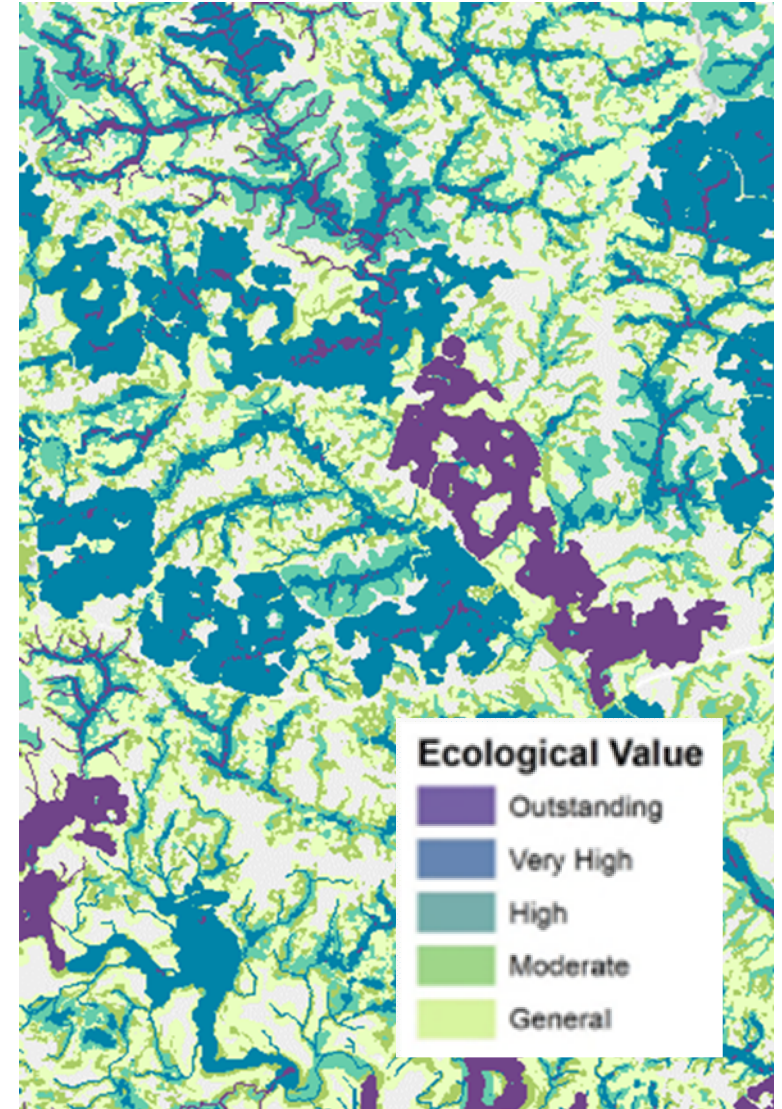


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Coastal Virginia Ecological Value Assessment (VEVA) Partnership

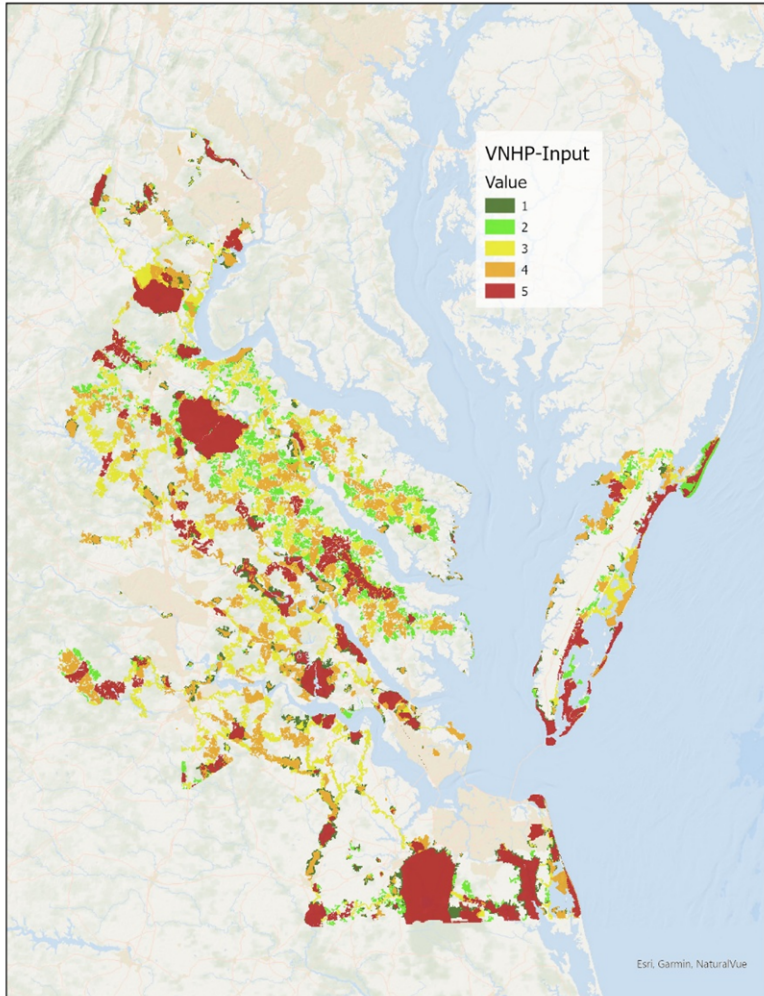
- Priority Conservation Areas – 2008
- Coastal Veva v1 – 2011
- Coastal Veva v2 – 2018
- Coastal Veva v3 – 2025

THANK YOU, PARTNERS!!!



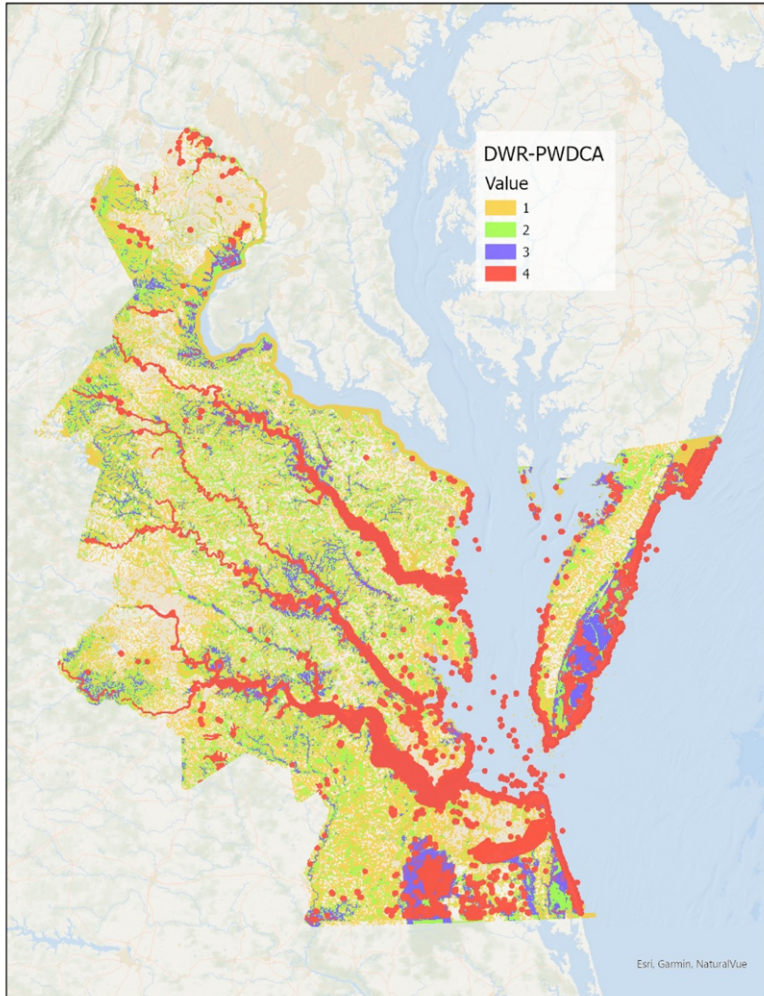
Coastal Virginia Ecological Value Assessment (VEVA) Model Update

- VNHP: Conservation Sites & Natural Landscape Assessment
 - Data represents a synthesis of the program's science-based conservation priorities, including many of the datasets utilized to fulfill their mission of protecting Virginia's native plant and animal life and the ecosystems upon which it depends.
 - Layers Included: Conservation Sites, VNHP Priority Parcels, VNHP Action and Portfolio Sites, DCR ConserveVirginia Natural Habitat and Ecosystem Diversity category, VNHP VaNLA Natural Land Network, Wildlife Biodiversity Resilience Corridors from the Virginia Wildlife Corridor Action Plan



Coastal Virginia Ecological Value Assessment (VEVA) Model Update

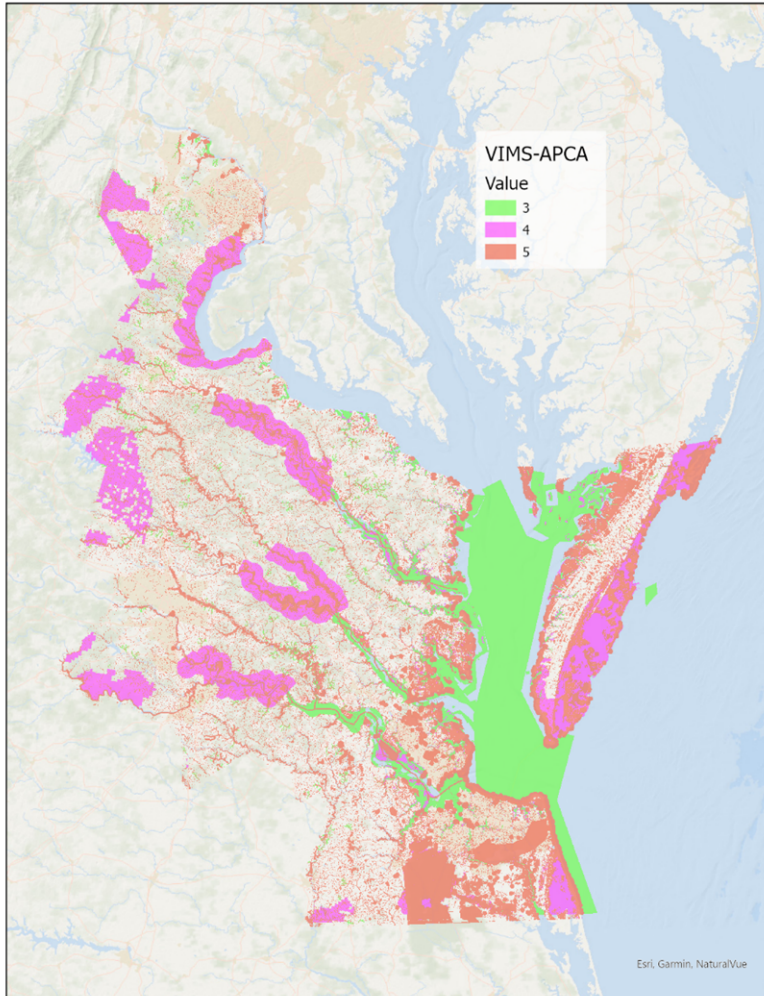
- VA DWR: Priority Wildlife Diversity Conservation Areas
 - Data represents conservation areas of concern within Virginia's coastal zone, specifically related to wildlife.
 - Layers Included: Important Bird Areas, Colonial Waterbirds, National Wetlands Inventory, National Hydrography Dataset, VaNLA Cores, Anadromous Fish Use Waters, Mapped Habitat, Habitat Condition, Threatened and Endangered Species Waters, Unique Terrestrial and Aquatic Areas, Species Observations, Coastal Marsh Conservation Area, Salt Marsh Sparrow Priority Marshes, Threatened and Endangered Bats



Coastal Virginia Ecological Value Assessment (VEVA) Model Update

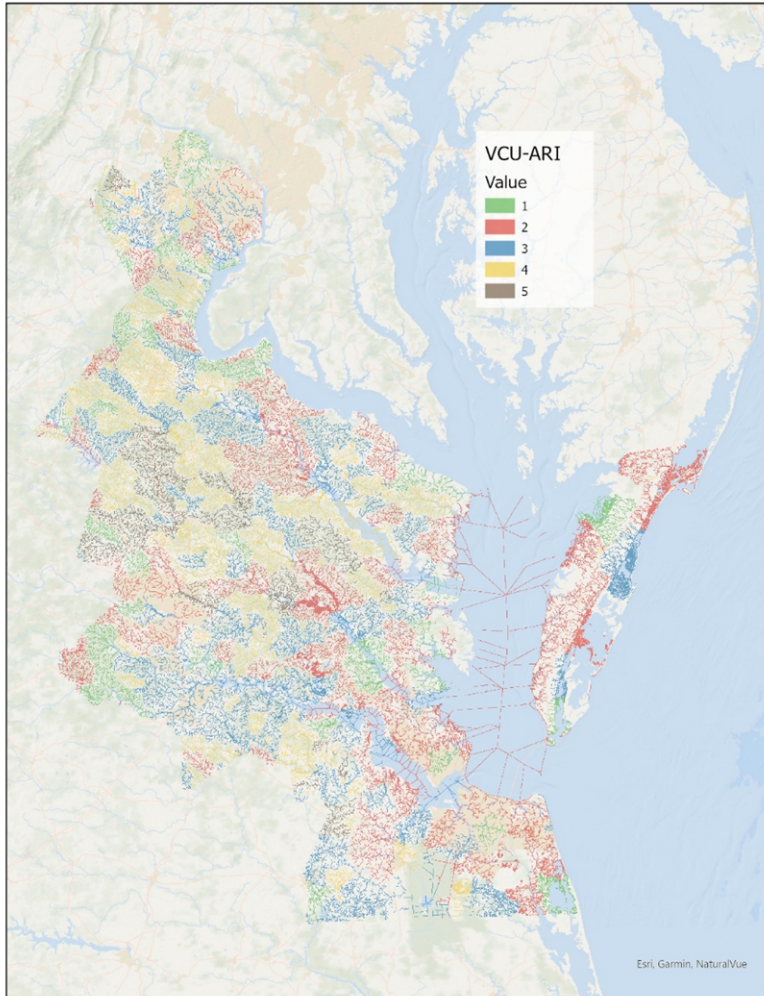
- VIMS: Aquatic Priority Conservation Areas

- Data identifies aquatic habitats and estuarine systems of high ecological value.
- Layers Included: Colonial Waterbirds Database, Audubon Important Bird Areas, Shellfish Suitability, Reef Restoration Sites, Oyster Reefs, Artificial Fishing Reef, Sand/Mudflats (NWI), Wetlands (VIMS-TMI & NWI), Seed Areas, Aquaculture Sites, Turtle Nests, SAV Coverage, Aquatic Confirmed Habitat, Threatened & Endangered Waters, Aquatic Resource Integrity, Stream Conservation Sites, Regulated Areas, Marsh Vulnerability Index, 2050 CBPA Upland Shoreline, Living Shoreline Priority Ranking Data, Marsh Migration Corridors

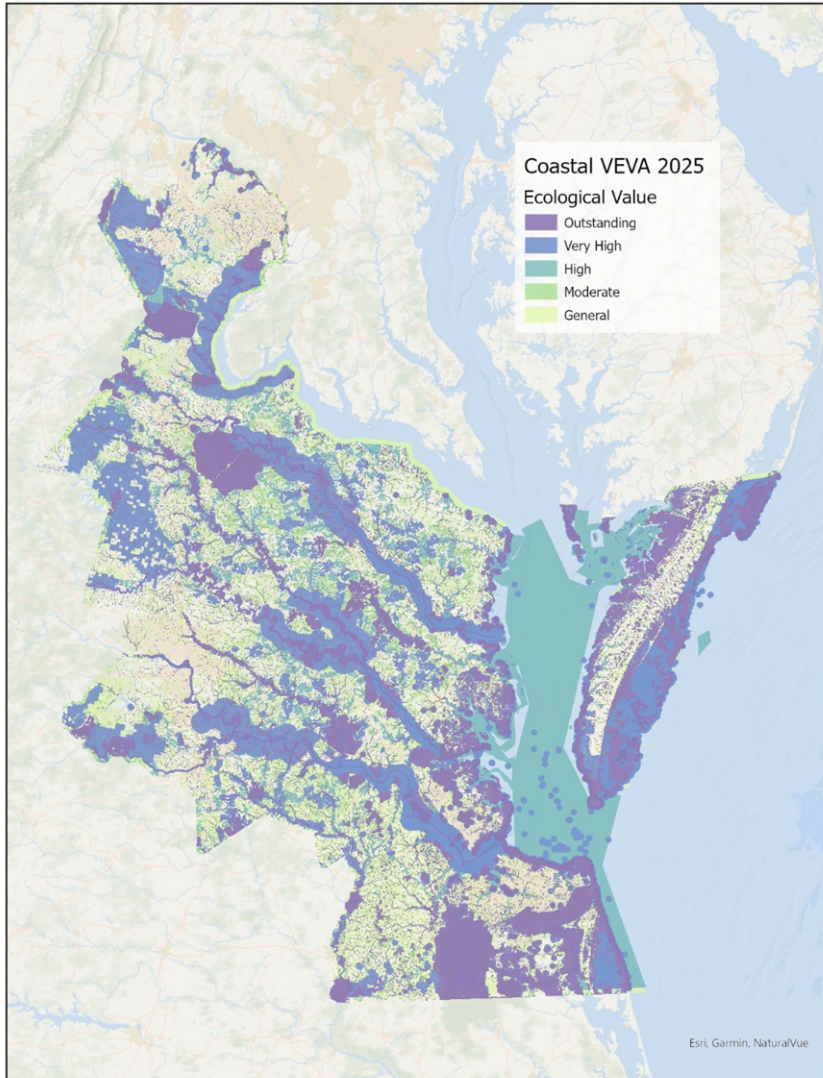


Coastal Virginia Ecological Value Assessment (VEVA) Model Update

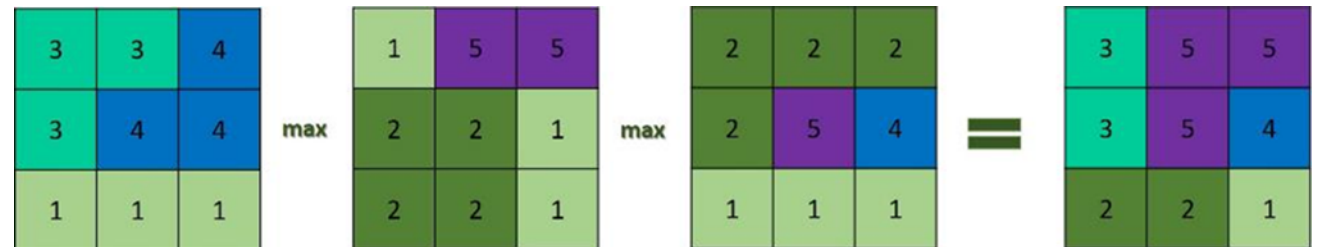
- VCU: Aquatic Resource Integrity model
 - Data is a combination of both local scale and watershed scale fisheries data.
 - Layers Included: Stream Reach Assessments – Fishes, macroinvertebrates, and stream habitat data with over 50 separate ecological metrics, used to calculate a Virtual Stream Assessment (VSA) score representing stream health. Modified Index of Biotic Integrity Watershed Assessments – Biotic data from state and federal agencies used to generate watershed integrity scores using metrics for Virginia's 6th order watersheds. Healthy Waters Watersheds – Watersheds generated at healthy waters sites (Healthy INSTAR sites with a Virtual Stream Assessment Score greater than 70).



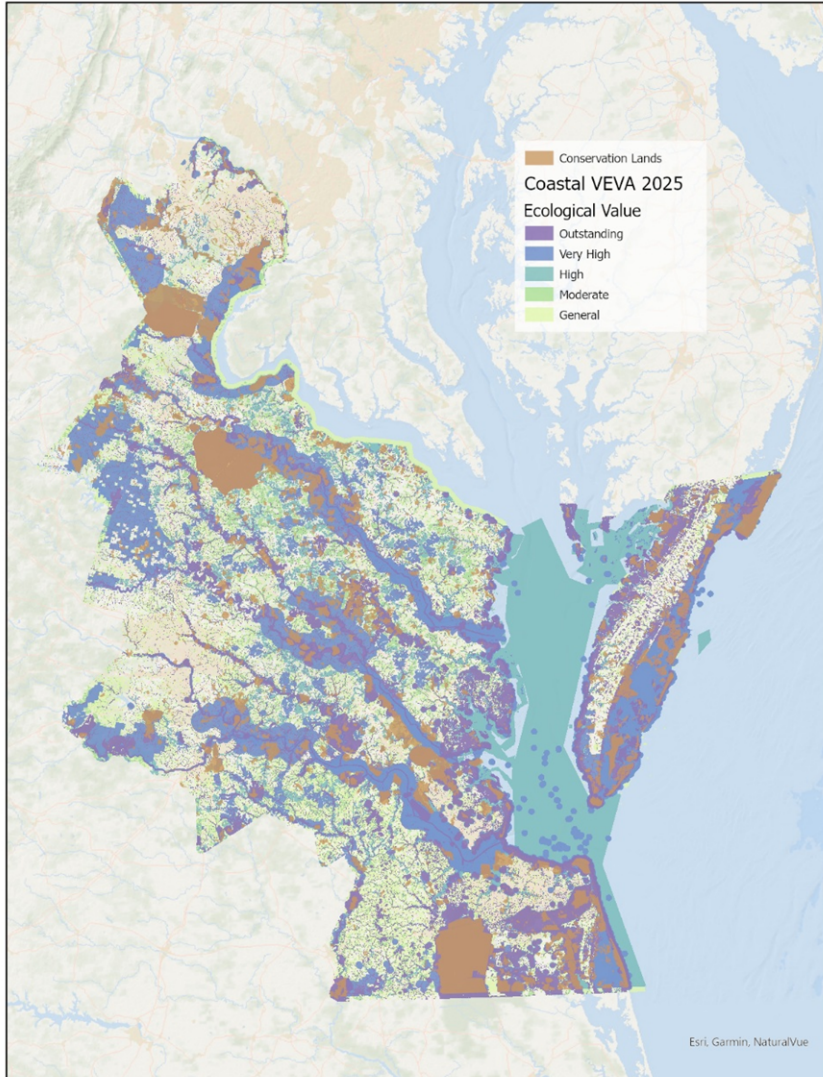
Coastal Virginia Ecological Value Assessment (VEVA) Model Update



- Partner input raster models were generated using a template provided by VA CZM.
- The final layer was created by overlaying all the models and picking out the highest value at each raster cell location (called a max value).



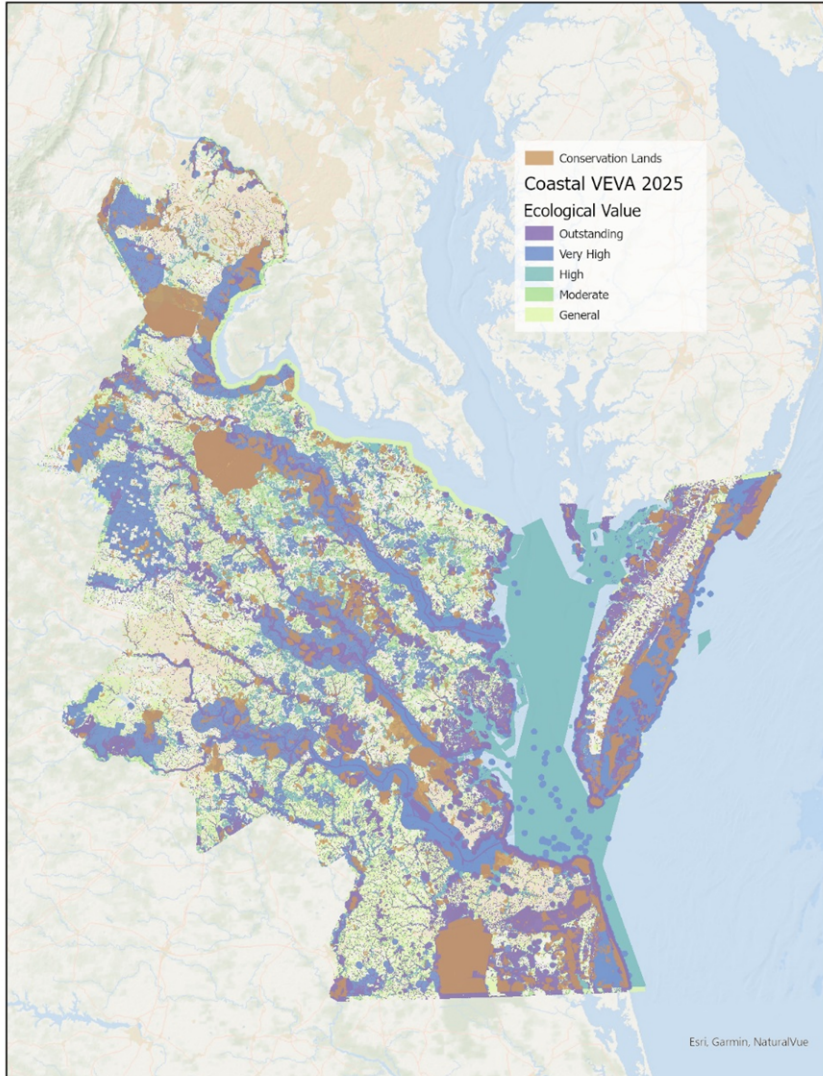
Coastal Virginia Ecological Value Assessment (VEVA) Model Update



- Draft data [map service](#)
 - Split into separate land and water layers

Coastal Virginia Ecological Value Assessment (VEVA) Model Update

Question Prompts



- *What problem were you trying to solve? What data did you pull in?*
 - Needed a single conservation importance layer that represented all the priorities of our partner network.
- *Any unexpected problems you had to solve creatively along the way? What would you do differently?*
 - Make doubly sure that all partners use the correct raster template. For future iterations, consider setting rules to limit priority coverage by partners?
- *How is the finished product being used?*
 - Land use management and conservation prioritization by VA CZM and its partners. CELCP!

Coastal & Estuarine Land Conservation Program Plan 2025 Update

- Conservation plan allowing Virginia to be eligible for specific NOAA funding
- Prioritizes land for conservation for Virginia's coastal zone
- Partners from local governments, state agencies, conservation non-profits, and federal programs
- First update since 2012

Virginia Coastal and Estuarine Land Conservation Program Plan

October 2012



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