

Virginia's Green Infrastructure



**Implementation
of the
Virginia Conservation
Lands Needs
Assessment**





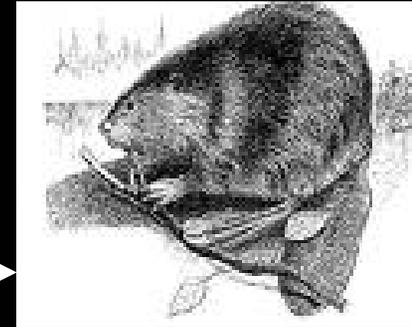
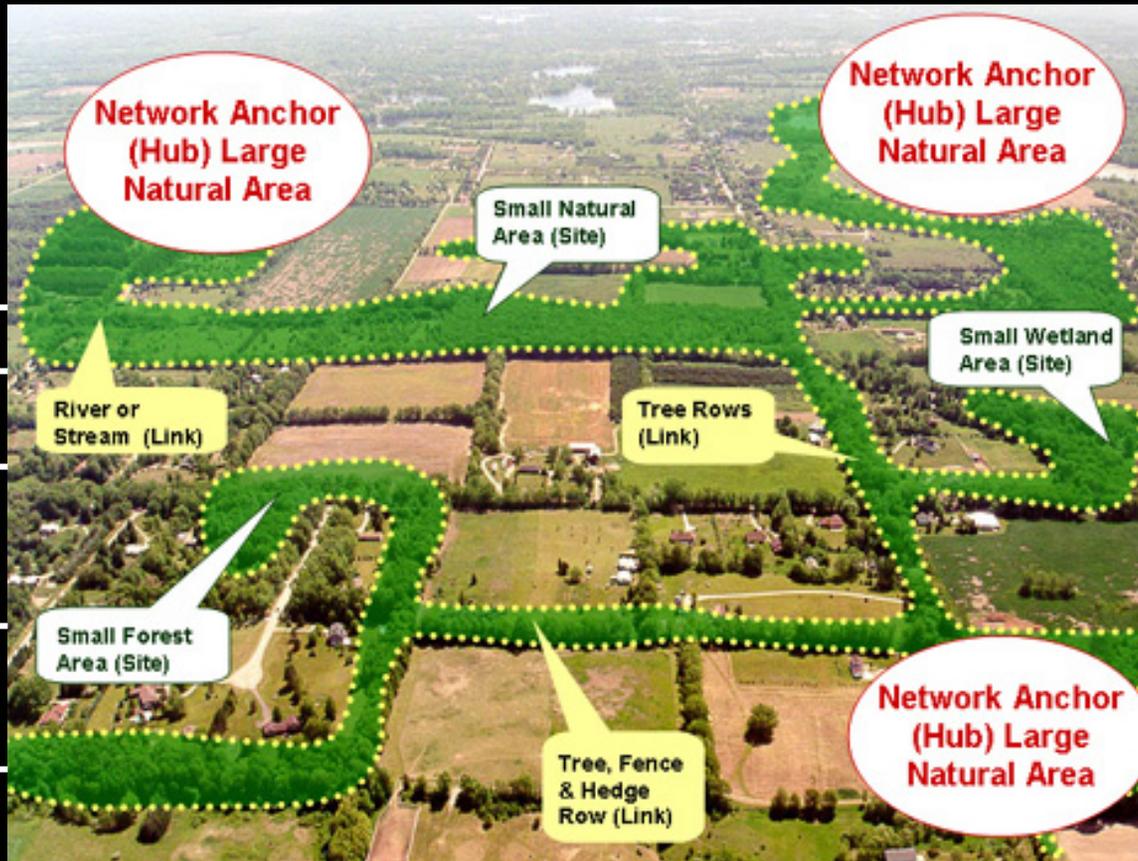
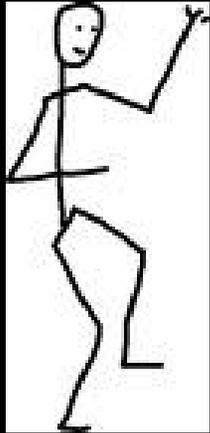
Division of Natural Heritage

MISSION:

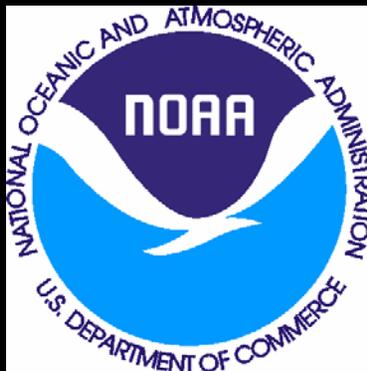
- to conserve Virginia's biodiversity through statewide biological inventory, protection, and stewardship.
- by maintaining a statewide database for conservation planning, project review, land protection for the conservation of biodiversity, and the protection and ecological management of natural heritage resources



Conservation Planning

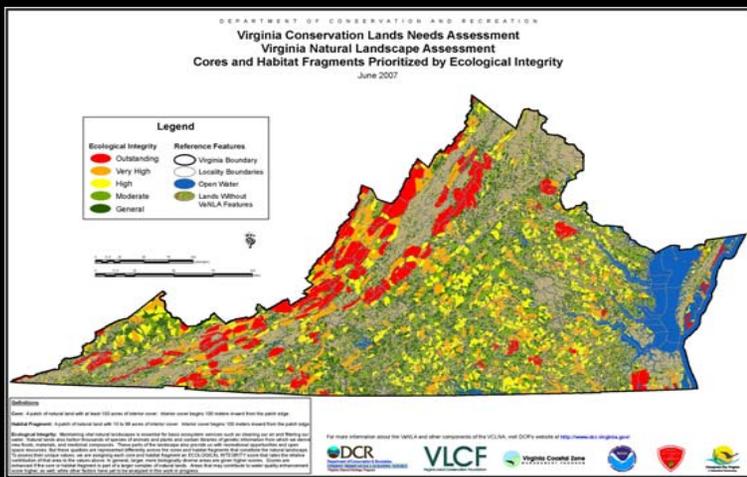


The Department of Conservation and Recreation acknowledges:

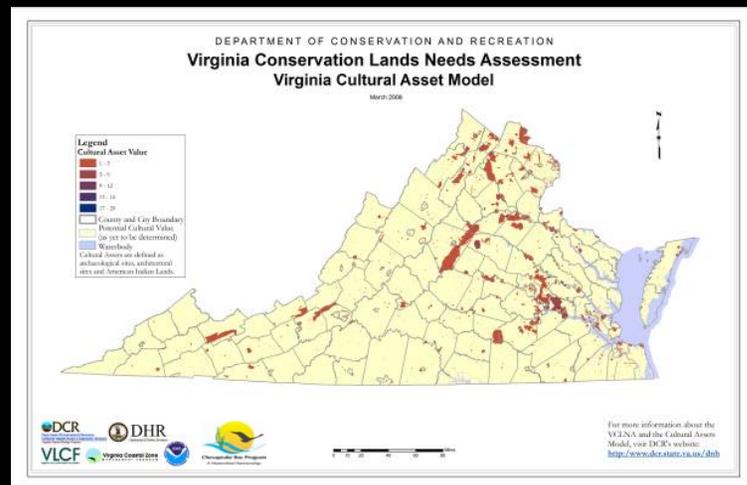


Virginia Conservation Lands Needs Assessment

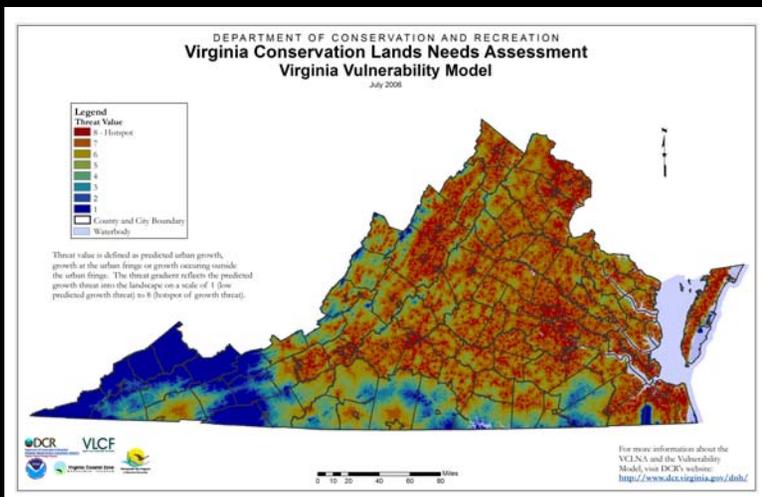
Ecological



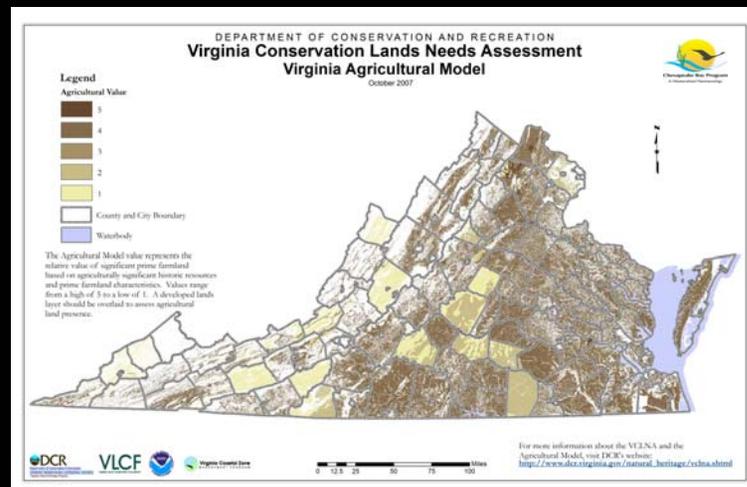
Cultural



Vulnerability



Agricultural



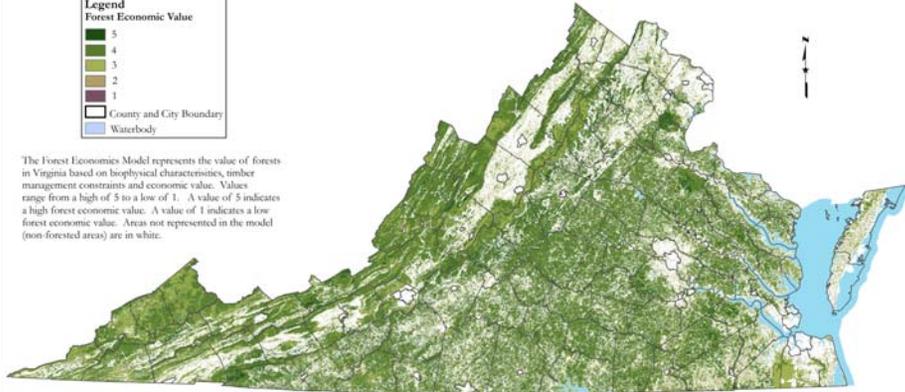
Forest Economics

DEPARTMENT OF CONSERVATION AND RECREATION Virginia Conservation Lands Needs Assessment Virginia Forest Economics Model

April 2007



The Forest Economics Model represents the value of forests in Virginia based on biophysical characteristics, timber management constraints and economic value. Values range from a high of 5 to a low of 1. A value of 5 indicates a high forest economic value. A value of 1 indicates a low forest economic value. Areas not represented in the model (non-forested areas) are in white.

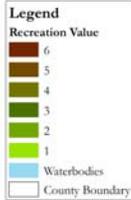


For more information about the VCLNA and the Forest Economics Model, visit DCR's website:
http://www.dcr.virginia.gov/natural_heritage/vclna.shtml

Recreation

DEPARTMENT OF CONSERVATION AND RECREATION Virginia Conservation Lands Needs Assessment Virginia Recreation Model

April 2007



The Recreation Model represents the public recreation value of lands in Virginia based on datasets compiled from a variety of state and federal recreation resource agencies. Values range from a high of 6 to a low of 1. A value of 6 indicates a high presence of recreation value. A value of 1 indicates a low presence of recreation value. White areas represent null areas, where recreation opportunity has not been catalogued by the input resource agencies, it does not represent an absence of any recreational value.



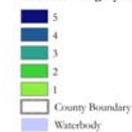
For more information about the VCLNA and the Recreation Model, visit DCR's website:
http://www.dcr.virginia.gov/natural_heritage/vclna.shtml

Watershed Integrity

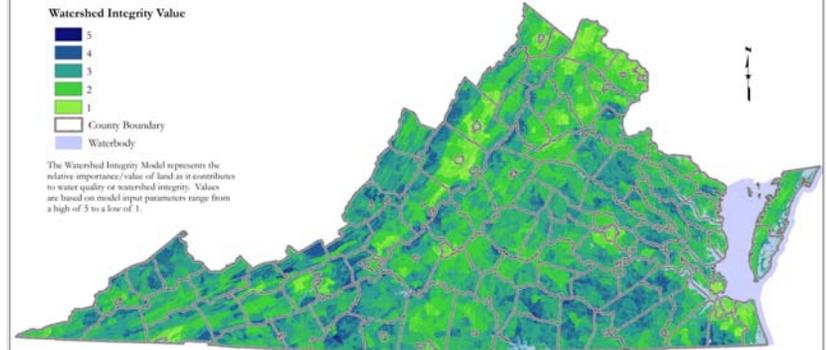
DEPARTMENT OF CONSERVATION AND RECREATION Virginia Conservation Lands Needs Assessment Virginia Watershed Integrity Model

October 2007

Watershed Integrity Value



The Watershed Integrity Model represents the relative importance/value of land as it contributes to water quality or watershed integrity. Values are based on model input parameters range from a high of 5 to a low of 1.



For more information about the VCLNA and the Watershed Integrity Model, visit DCR's website:
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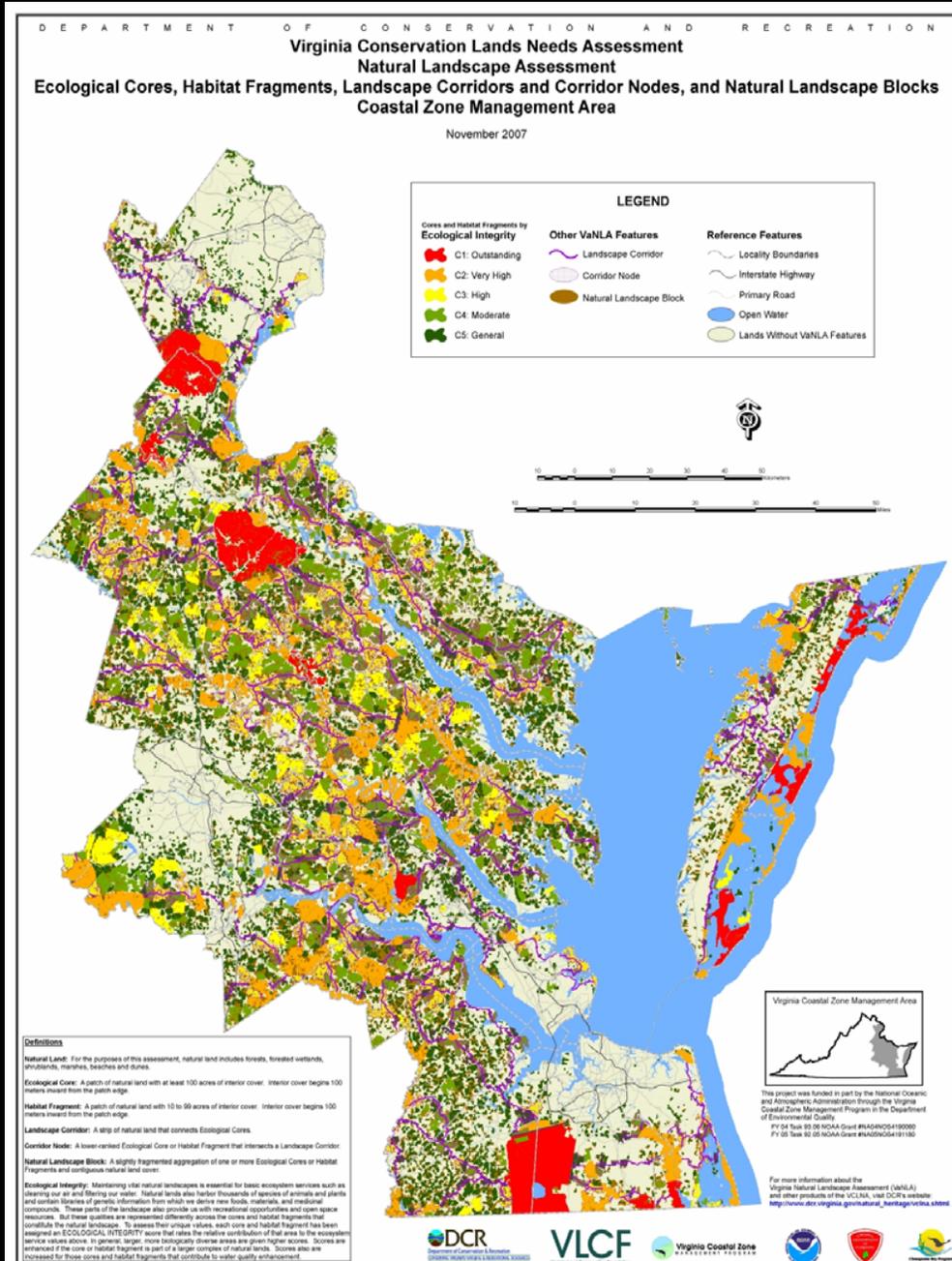
Ecological Model

Objective: identify remaining lands that provide a network of intact natural habitats, biodiversity, and functioning ecosystem services

Partners: VCZMP, VDGIF

Data Layers:

- RESAC 2000 - excluded anthropogenic features and highlighted forest types, wetlands, other natural cover classes for study-specific landcover classification
- Cores - areas of natural cover with at least 100 acres of interior habitat
- Natural Landscape Blocks – clusters of cores in geographical proximities that display exceptional ecosystem service benefits
- Ecological Integrity Scores
- Corridors - linear natural cover features ≥ 300 meters wide that network the best cores



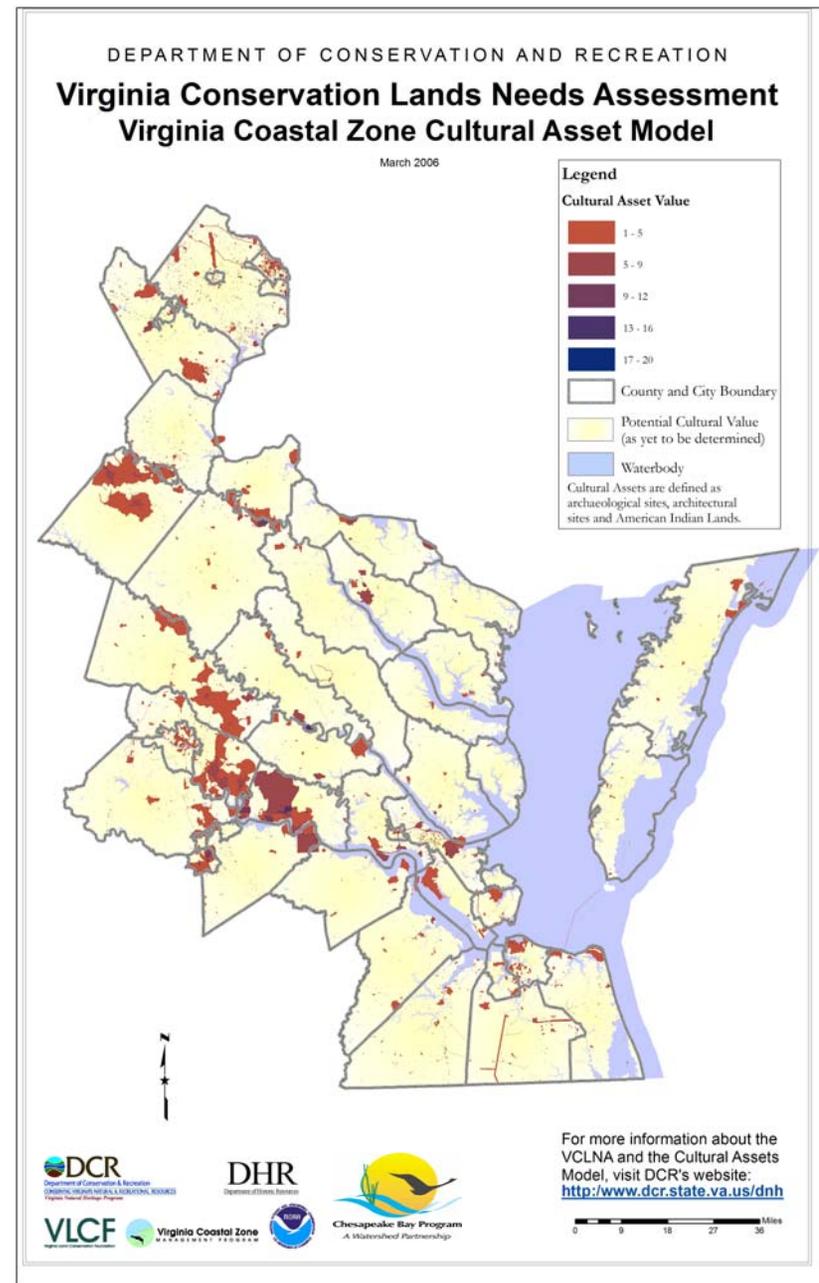
Cultural Assets

Objective: The objective of the cultural assets model is to identify the relative cultural value of lands as defined by the model input parameters.

Partner: Virginia Department of Historic Resources

Data Layers

- Archaeological Sites & Architectural Sites
 1. National Historic Districts
 2. National Historic Landmarks
 3. National Historic Register Sites
 4. State Inventoried Sites (Eligible for possible National Register and Easements)
- American Indian Areas



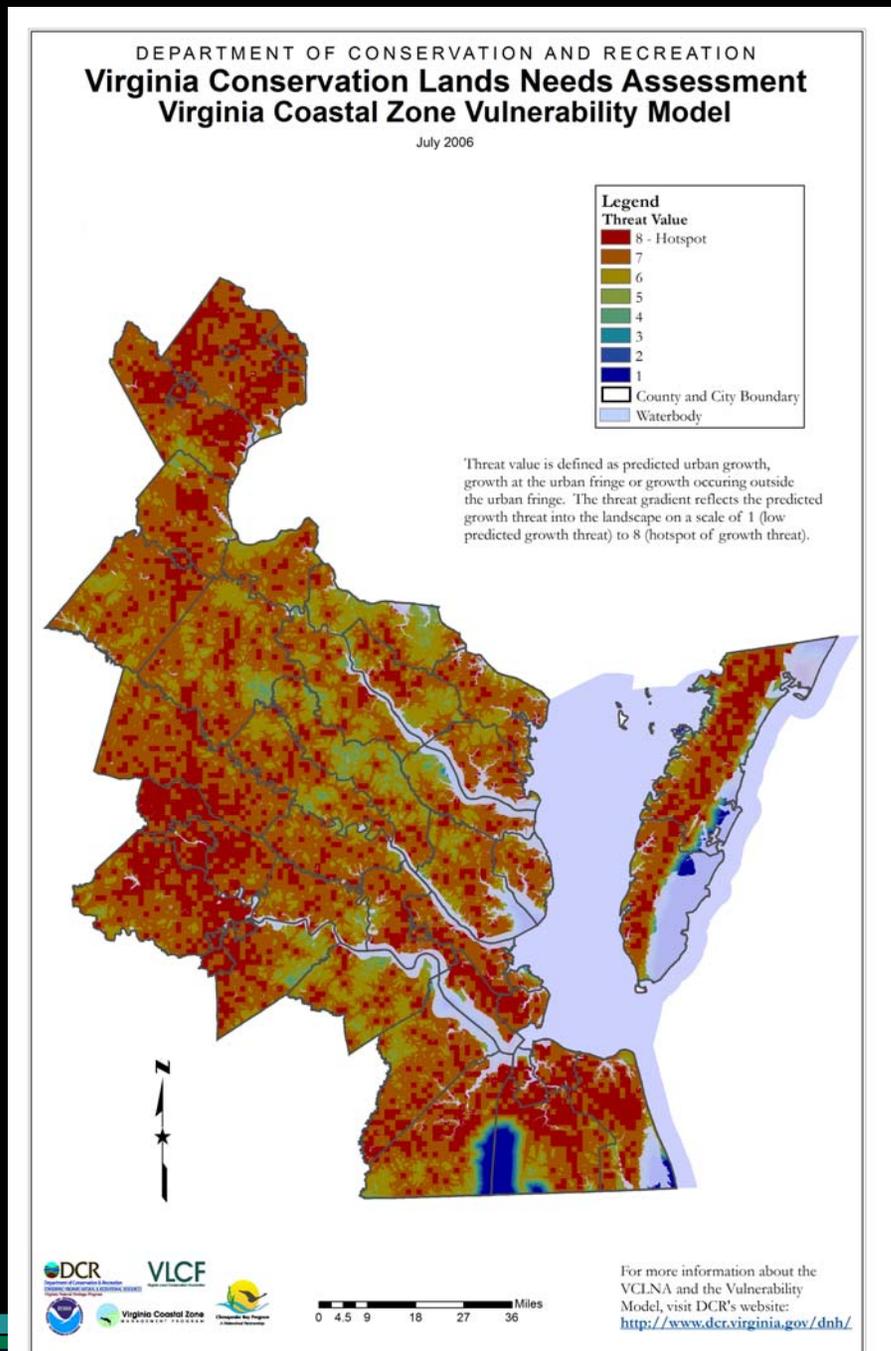
Vulnerability Model

Objective: To develop a growth prediction model to provide a landscape view of growth trends in Virginia.

Partner: Virginia Commonwealth University

Data Layers:

- Land Use
- Slope
- 1990 Census Block Group data
- 2000 Census Block Group data
- 1990 Impervious Surface data
- 2000 Impervious Surface data
- Road Density
- Parcel data
- Rural-Urban Commuting Area Codes (RUCA)



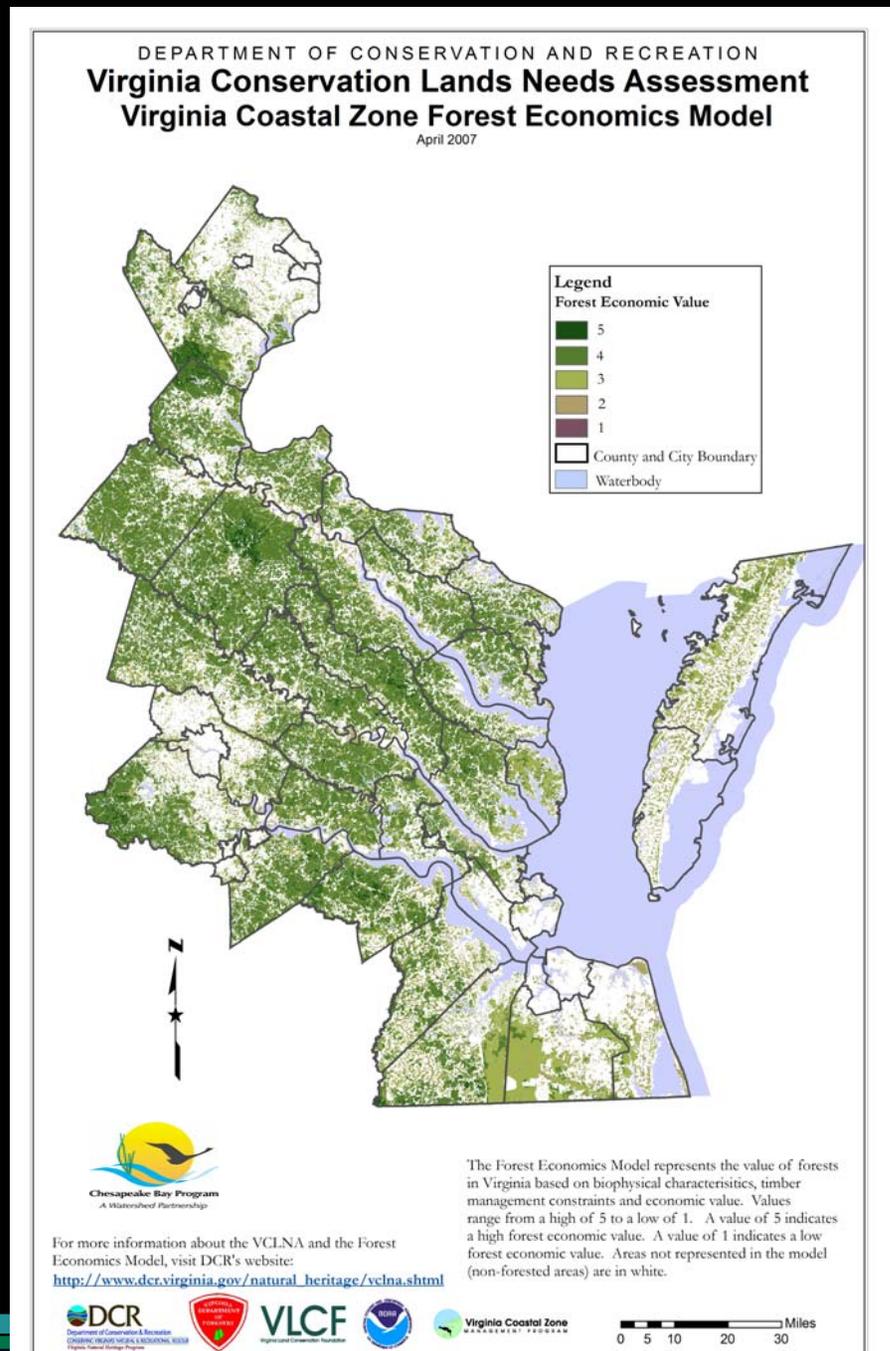
Forest Economics

Objective: To map the relative value of forest lands with economic value.

Partner: VA Dept of Forestry

Data Layers

- Soil Productivity
- Forest Land Fragmentation
- Riparian and Wetland features
- Steep Slopes - NHD
- Rare, T and E Species
- Census Data – Geography Network / US Gov't
- Forest Land Use Taxation Values (socioeconomic data)
 - o Stumpage value
 - o Historic Timber Harvests
 - o Distance to Mills



Recreation Model

Objective:

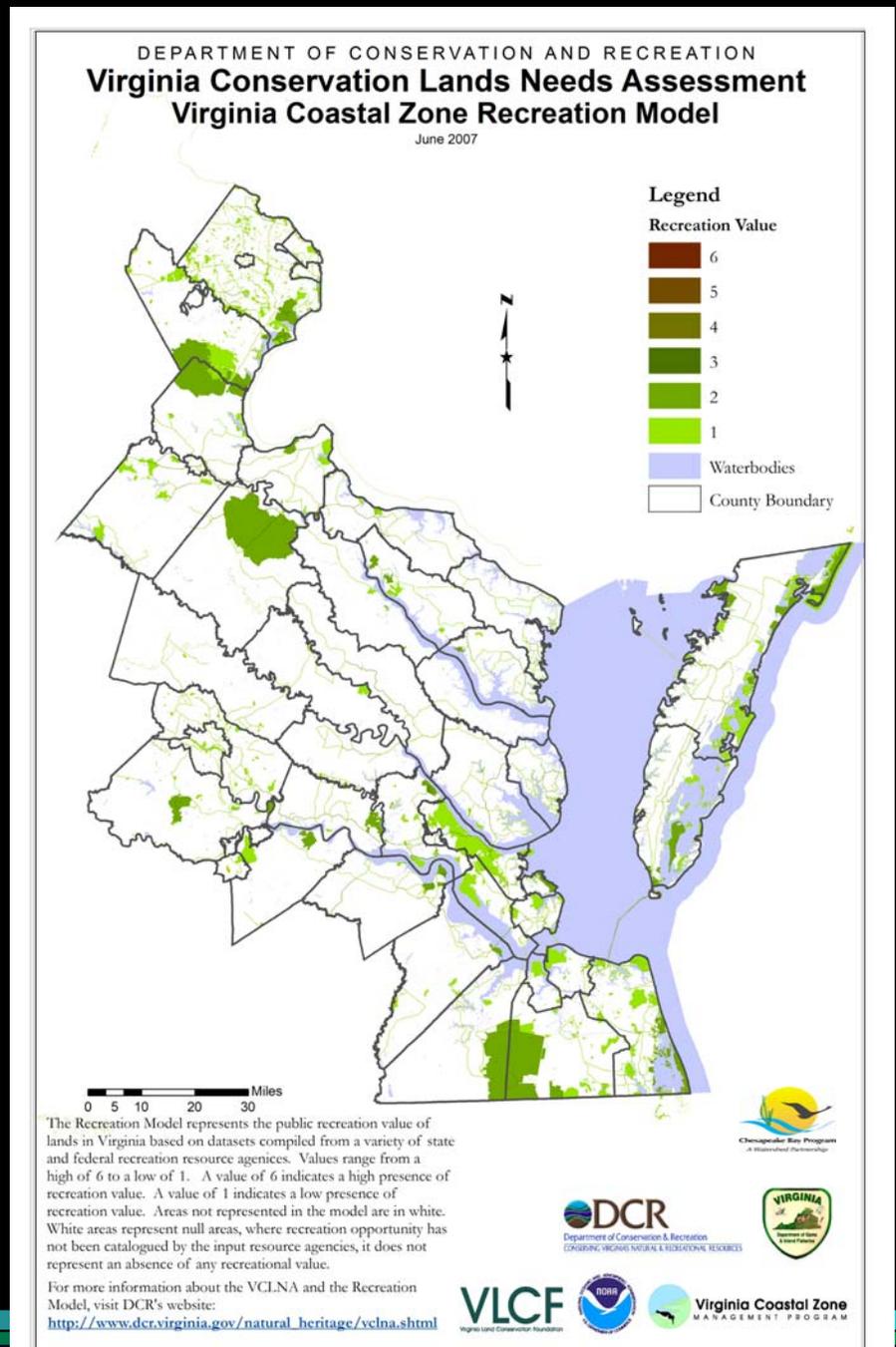
To map the relative recreation value of lands in Virginia based on input model parameters.

Partners:

VA Dept of Game and Inland Fisheries
DCR Division of Planning and Recreation Resources

Data Layers:

- Access points
- Trails
 - ❖ Blueways
 - ❖ Greenways
 - ❖ Birding Trails
- Parks
 - ❖ Federal
 - ❖ State
 - ❖ Local
- Department of Game and Inland Fisheries Hunting and Fishing Data
- Beaches - VIMS
- Analyses
 - ❖ Service Radii
 - ❖ Travel Time



Agricultural Model

Objective: To identify the relative agricultural productivity and sustainability value of lands in Virginia.

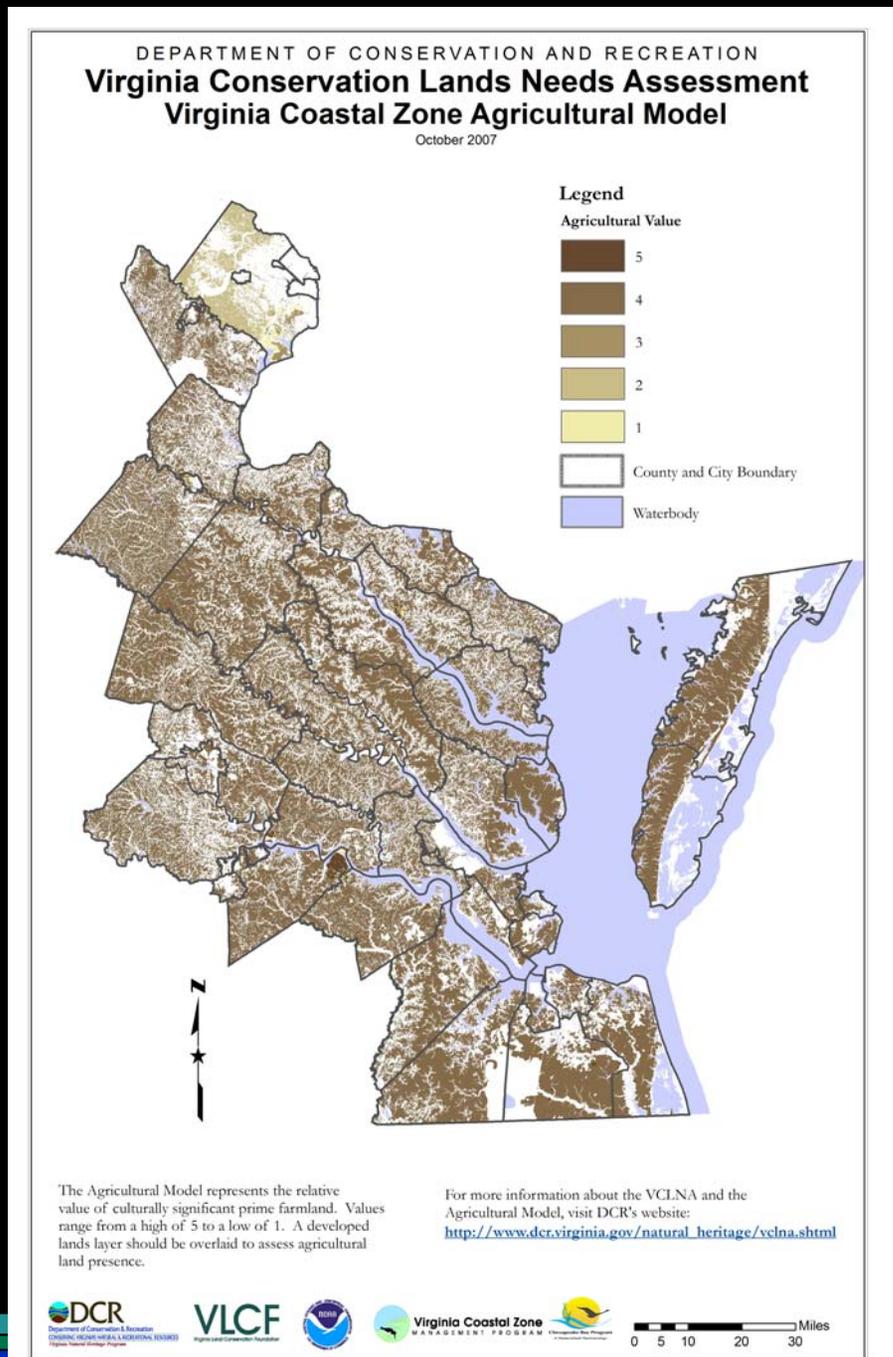
Partners:

- o VA Dept of Agriculture
- o American Farmland Trust
- o VA Tech

Data Layers:

- Soils data
- RESAC 2000 Land Cover
- National Elevation Dataset (Slope)
- DGIF Wildlife Action Plan

Derivatives



Watershed Integrity

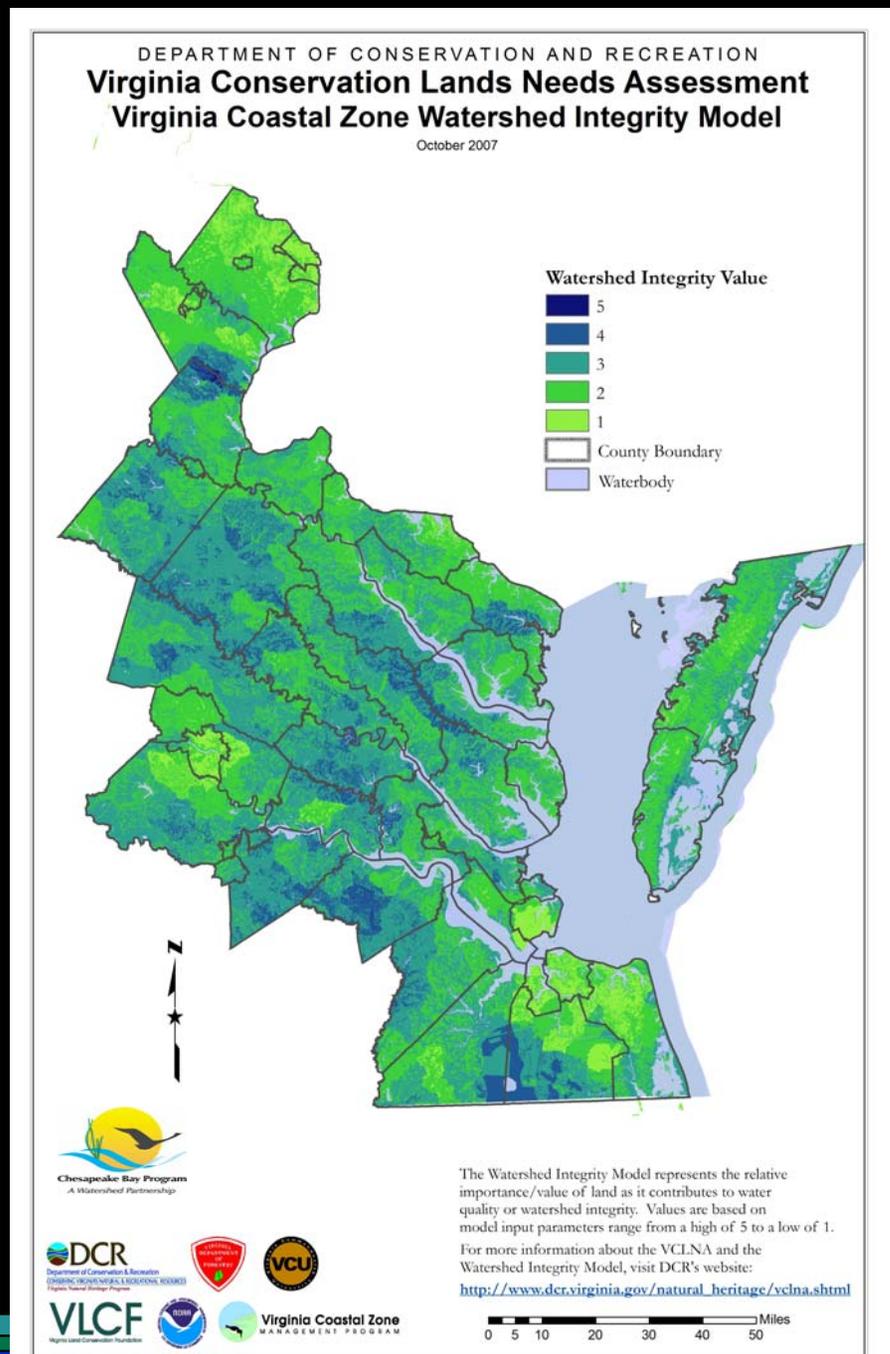
Objective: To identify the relative value of lands as they contribute to water quality and watershed integrity.

Partners:

- o VA Dept of Forestry
- o Virginia Commonwealth University

Data Layers:

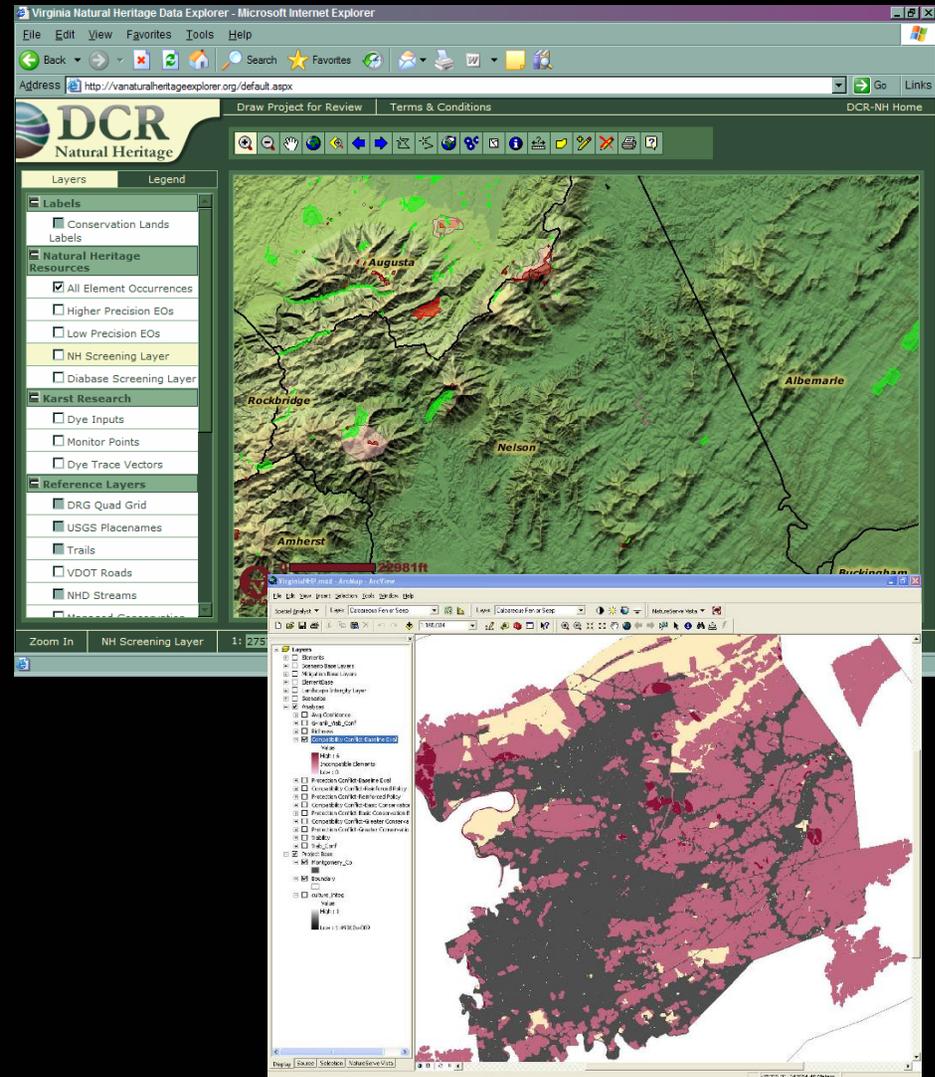
- DOF Chesapeake Bay Directive - areas where retention and expansion of forests is needed
- mIBI (VCU CES) – “universal metrics” to classify watersheds based on ecological health of streams: native species richness, RTE species richness, % pollution tolerant species, non-native species richness
- Erodible Soils and Slope
- Forest Fragmentation
- Impervious Surfaces



Implementation

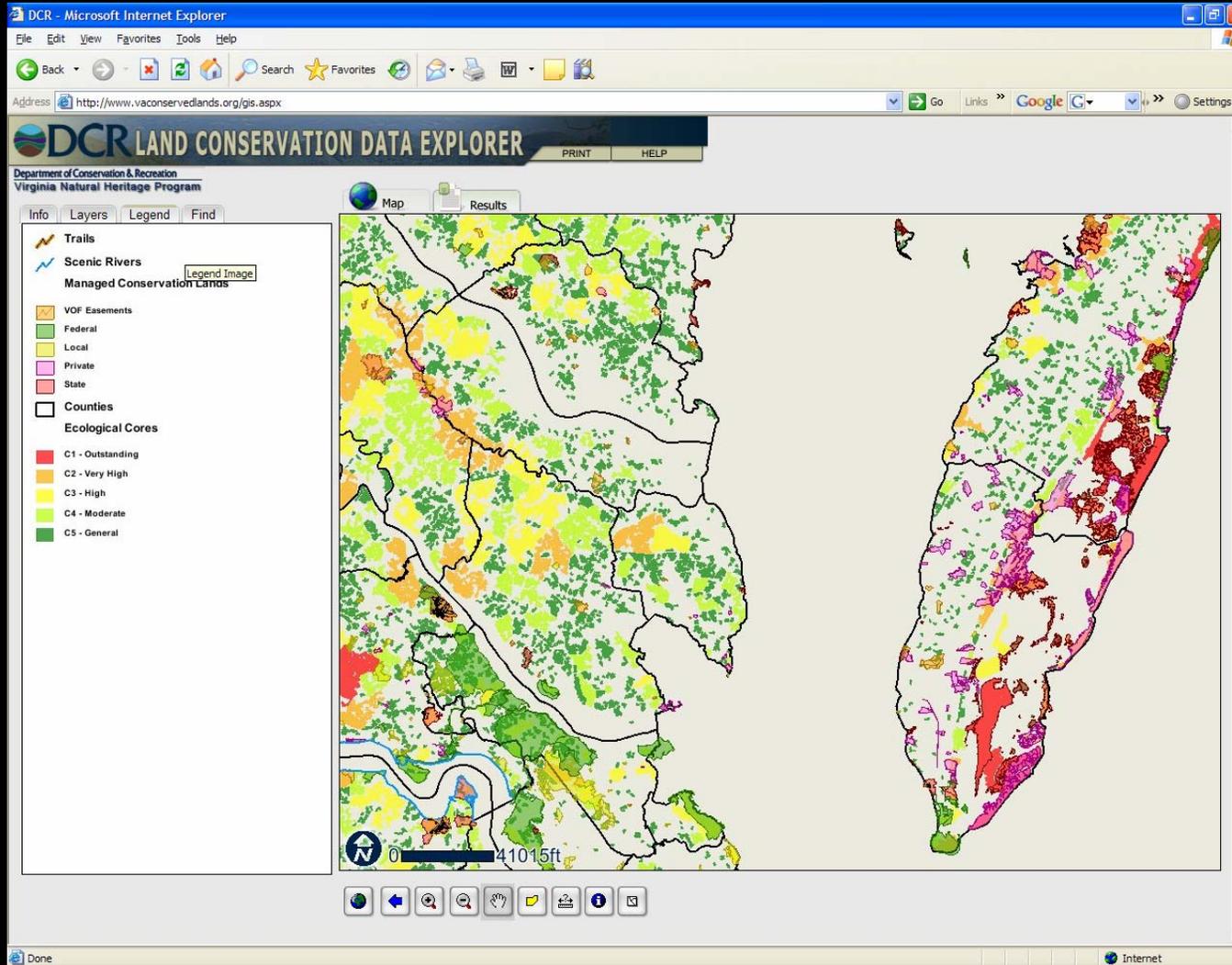
Potential avenues include:

- o Land Conservation Data Explorer Public Portal ArcIMS site
- o Hardcopy reference materials and/or bundled ArcExplorer or ArcReader packages to localities and conservation partners
- o Accessible by request to anyone
 - o GIS Model data
 - o Hard copy maps
 - o Technical reports



Virginia Land Conservation Data Explorer

www.vaconservedlands.org



-conserved lands
and VCLNA

-reference layers
including
jurisdictional
boundaries,
VDOT roads,
rivers and streams,
hiking trails,
High-res aerial
photography,
topo maps...

-ability to search
all layers by feature
names or values



Data and Information Sharing, Guidance and Support...thus far

GREEN
INFRASTRUCTURE
CENTER

Capital Region Land Conservan



Wind Scoring Criteria Development



QUESTIONS?



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http://www.dcr.virginia.gov/natural_heritage/vclna.shtml

