RRRC Green Infrastructure Planning

Phase II Updates
February 14, 2013

Phase I Overview

- Phase I
  - VCLNA Ecological Cores Update
    - Ecological Cores updated to account for development since initial VCLNA release

Phase I Overview

⦿ Phase I Results

Acres of intact cores before buffer & clip: 740,700
Acres after buffer & clip: 734,373
Acreage in cores <10 acres: 16.4

Total core acreage change(since 2000):   6,343.4 (-0.86%)

Total Number of Cores:Before buffer & clip: 1,155
After buffer & clip: 1,576
# of cores <10 acres: 420

Note that cores which lost more than 20% in land area were C5, thus cores were not reclassified since only lowest ranked cores lost area. The largest % drop in a higher-ranked core was 3.4% in one C4 area. This is good news for conservation of the largest habitat and forest cores.

Phase II Overview

- Phase II of the regional green infrastructure mapping effort will focus on updates and analysis of the VCLNA Forest Economics and Cultural Assets data layers. RRRC will update the layers to account for development and to incorporate new data sets, as available and necessary

- RRRC will also utilize DCR and local data sources to develop a protected lands layer for the region to be used in conjunction with the Forest Economics and Cultural Assets layers

- The ultimate objective of this proposed project is to provide local governments and non-profit organizations with maps of the critical natural and cultural assets within the region to be used as a tool in planning, zoning and land conservation.

Phase II Progress

- Cultural Assets: Updates in final stages; New easement and historic data incorporated

- Protected Lands: Using DCR protected lands data set with checks against local parcel database information, as available; layer to be used primarily for overlay analysis

- Forest Economics: Update in progress; Removing areas based on Department of Forestry land cover data and local growth patterns

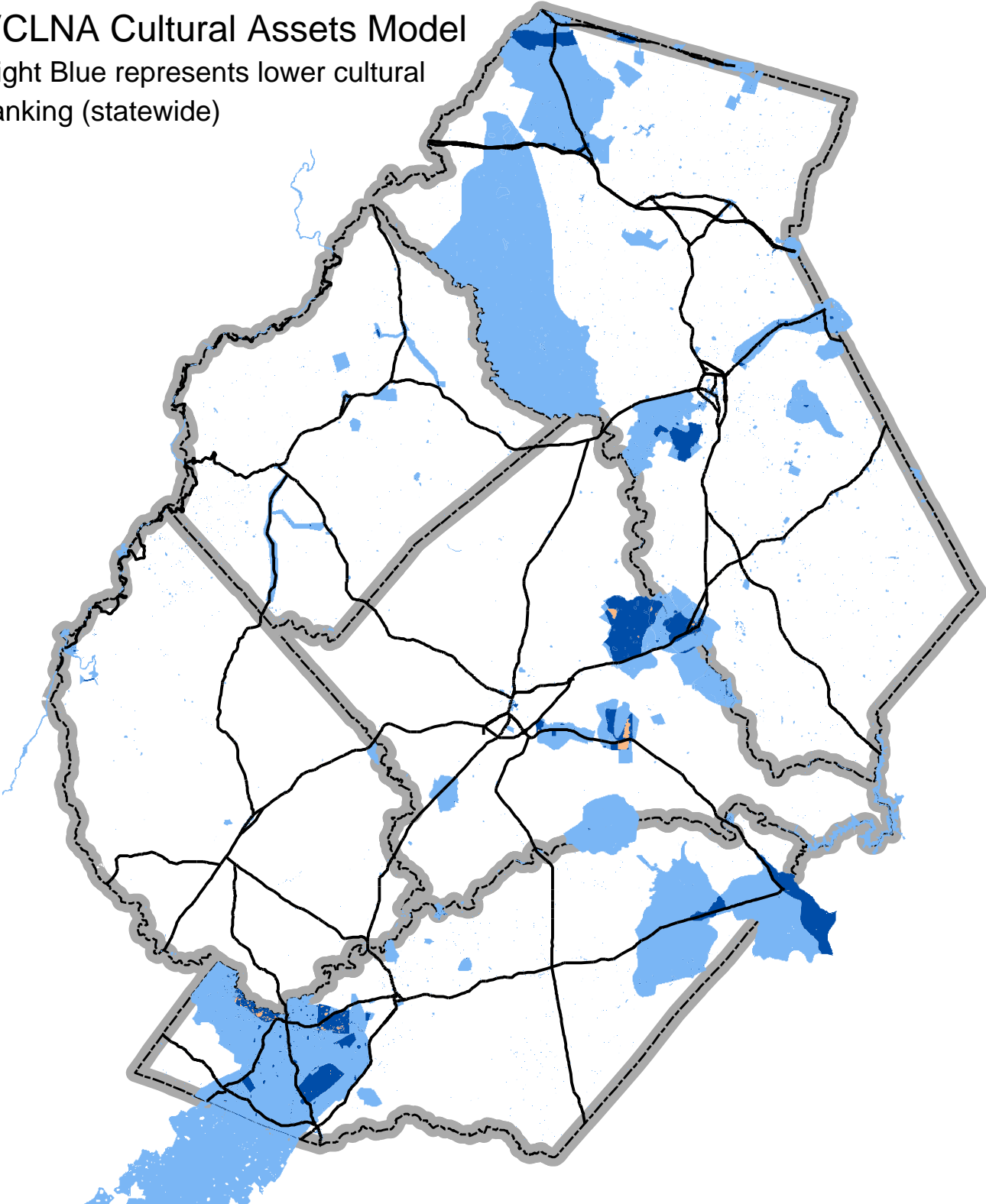# Phase II: Cultural Assets

- From the VCLNA Cultural Assets Report:

The Virginia Cultural Asset Model was developed in an effort to map the existing (and potential) culturally valuable lands in Virginia as defined by the presence of Historic Resources and / or American Indian Lands. As development pressure continues across the state, remaining resources are being irretrievably lost to development. The development of a GIS model to delineate where culturally valuable lands exist may serve as a guide to local government, consultants, and developers as to the location of culturally rich areas in Virginia. The model also serves as part of a larger green infrastructure plan, which aims to model where Virginia's conservation priorities are located to facilitate an integrated approach to planning and development.

Phase II: Cultural Assets

- VCLNA Cultural Assets Report also includes methodology for incorporating new data into the Cultural Assets model

- New data incorporated with Phase II updates
  - Easement data: Parcels under easement that are owned by Virginia Department of Historic Resources, Civil War Trust, etc.
  - National Register of Historic Places point data incorporated

- Viewshed Analysis
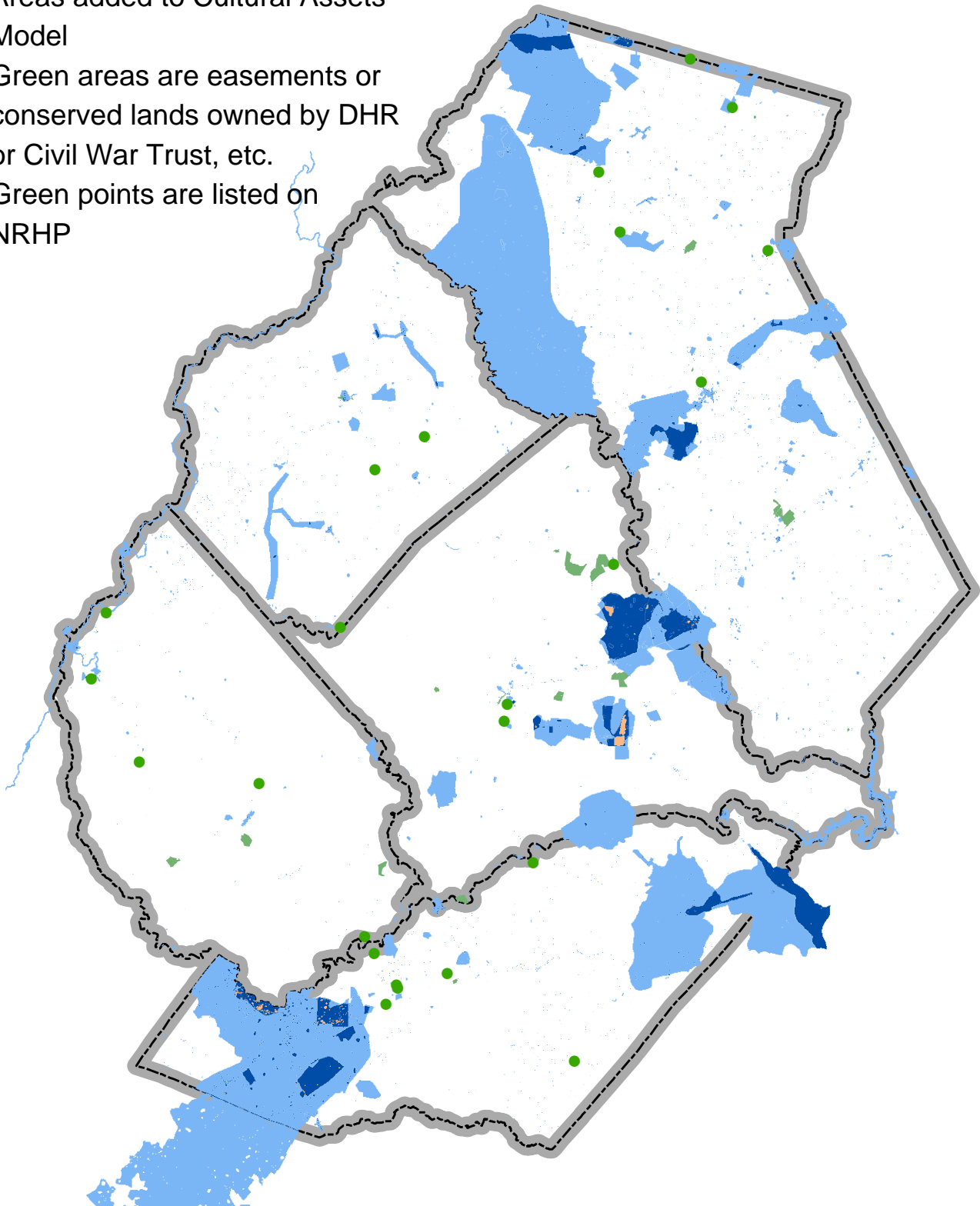 - Region-wide based on NRHP data
  - Montpelier example

VCLNA Cultural Assets Model

Light Blue represents lower cultural
ranking (statewide)

Areas added to Cultural Assets
Model
Green areas are easements or
conserved lands owned by DHR
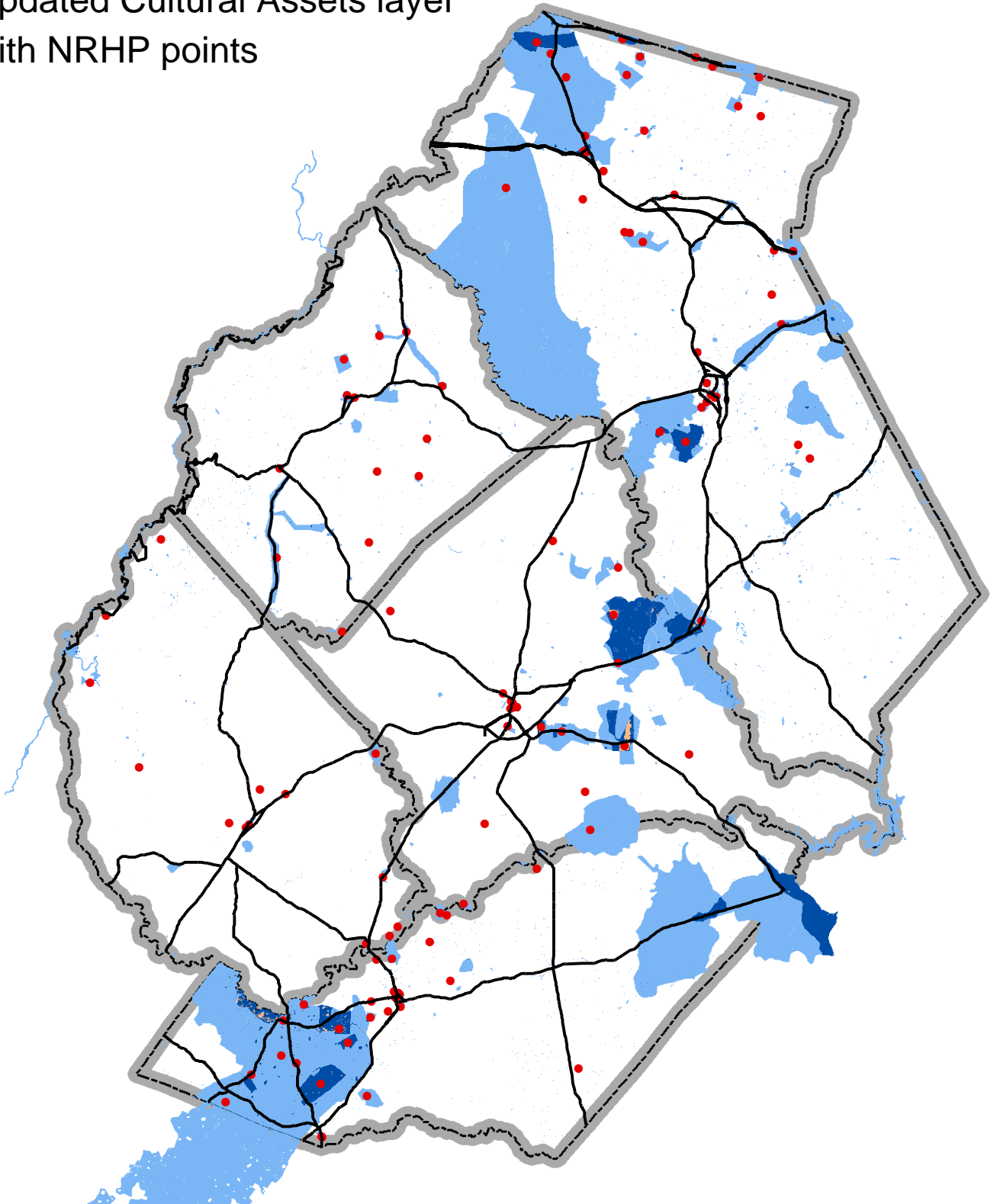or Civil War Trust, etc.
Green points are listed on
NRHP

Cultural Assets Model
with added areas
(statewide ranking)
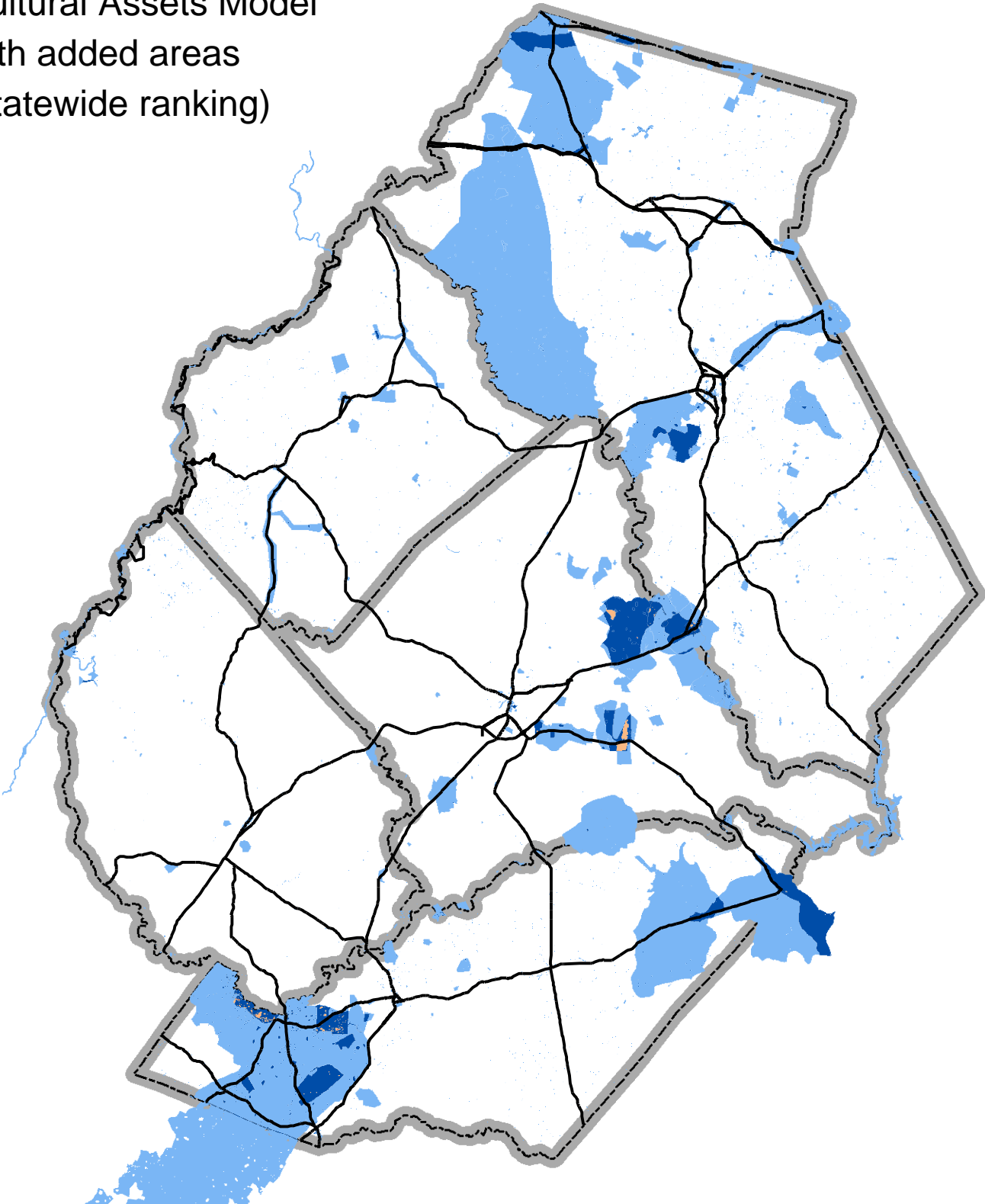
Updated Cultural Assets layer with easement and conserved lands overlay
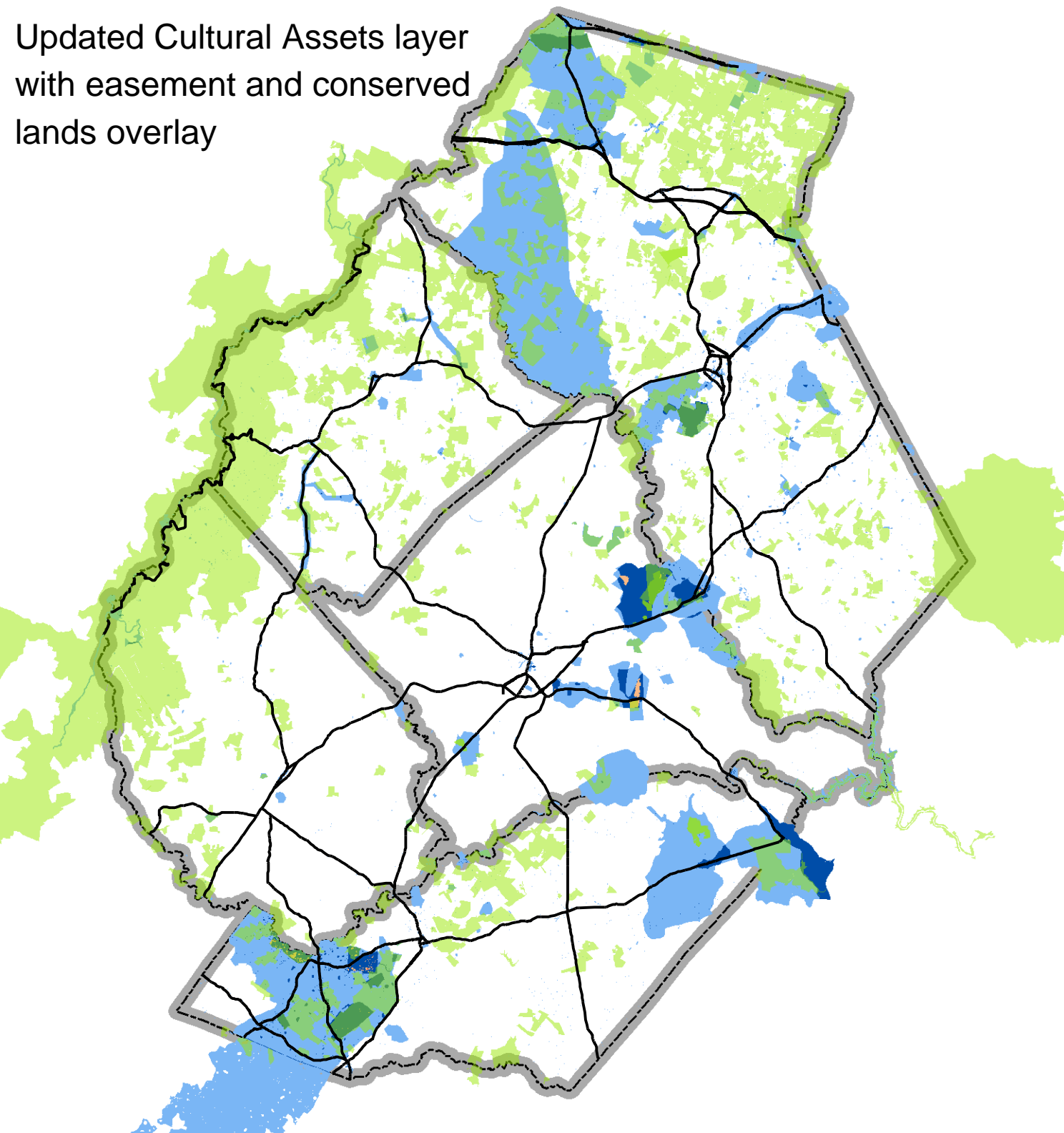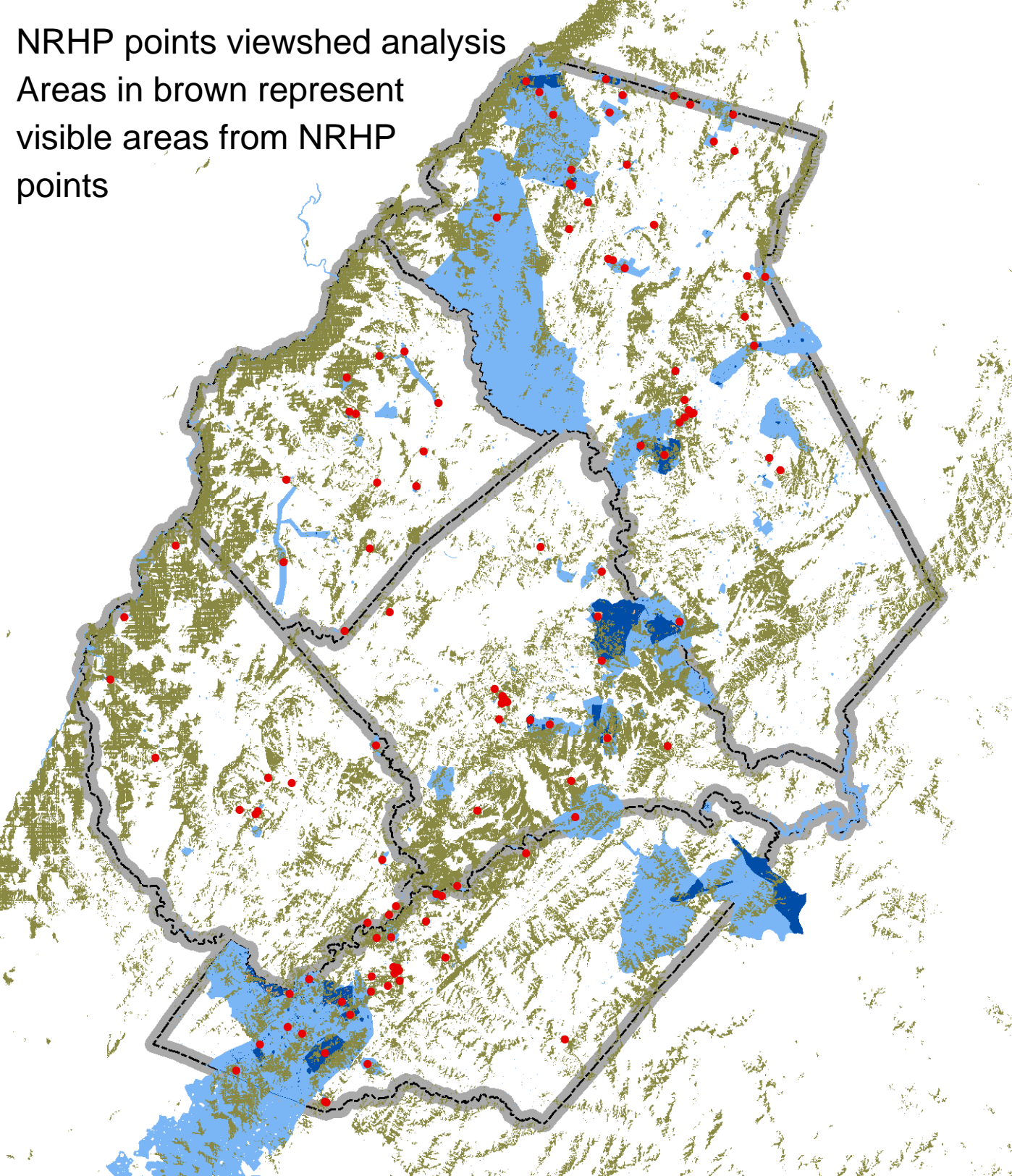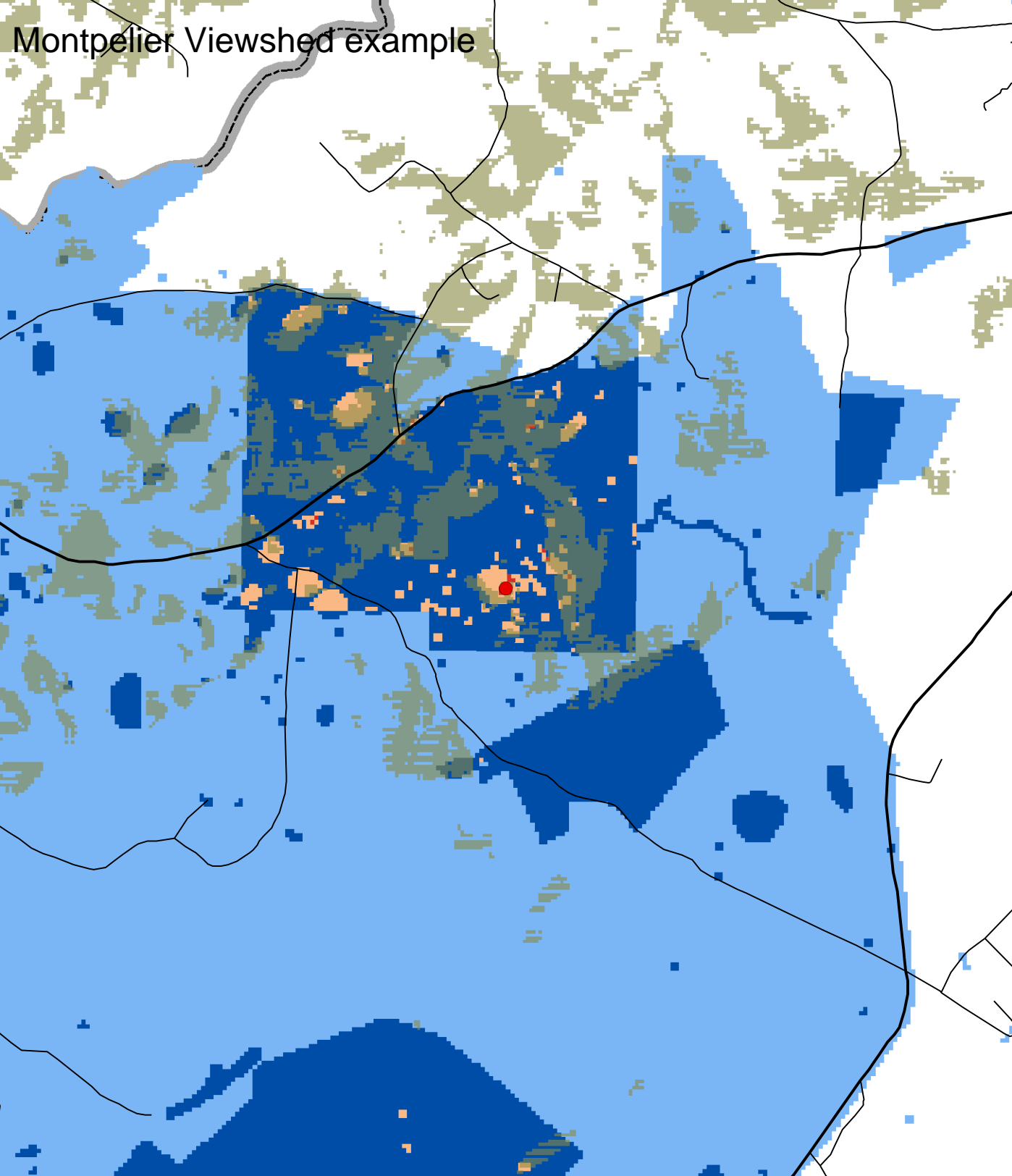
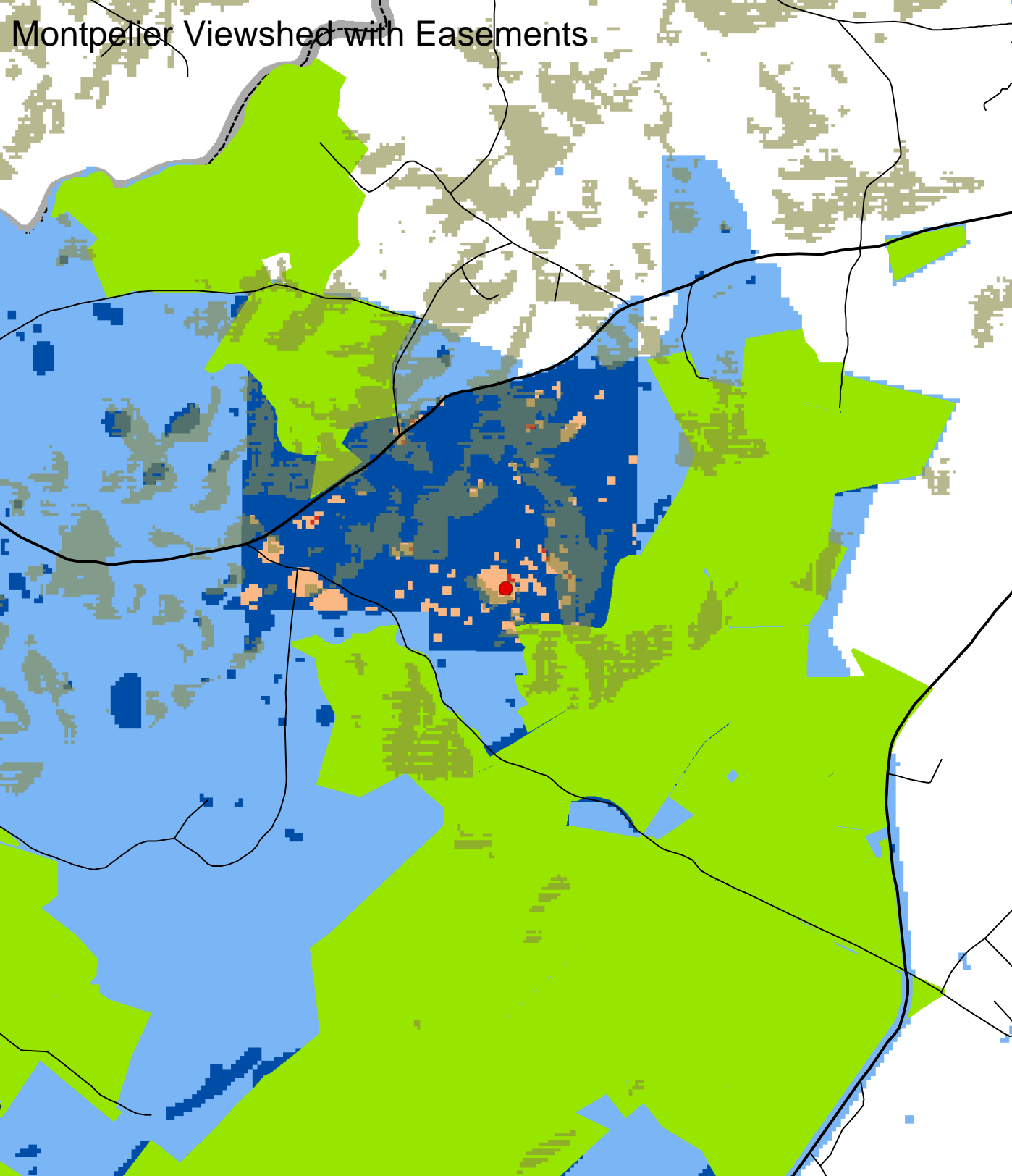Updated Cultural Assets layer
with NRHP points

NRHP points viewshed analysis
Areas in brown represent
visible areas from NRHP
points

Montpelier Viewshed example

Montpelier Viewshed with Easements

Phase II: Forest Economics

- From the VCLNA Forest Economics Report:

The development of a GIS model to delineate where valuable forest land exists may serve as a guide to local government, consultants, and developers as to the location of valuable forest land in Virginia. The model also serves as part of a larger green infrastructure plan, which aims to model where Virginia's conservation priorities are located to facilitate an integrated approach to planning and development.

Phase II: Forest Economics

- From the Virginia Department of Forestry *Statewide Assessment of Forest Resources 2010*:

  - Critical Issues Facing Virginia's Forests (selected)
    - Promote a larger, connected forest landscape
    - Enhance the role of forests in maintaining water quantity and quality
    - Conserve and restore diminished species
    - Protect woodland homes communities from fire

Phase II: Forest Economics

- Forest Economics Layer Update Plan

  - Update layer to reflect changes in land cover/development
    - DOF land cover data; other sources?
    - Follow similar methodology as with Phase I Ecological core update

  - Addition of new overlay data sets
    - Forest Conservation Value
    - Priority Conservation Areas
    - DOF Forest Legacy Areas
    - Others?

VCLNA Forest Economics layer
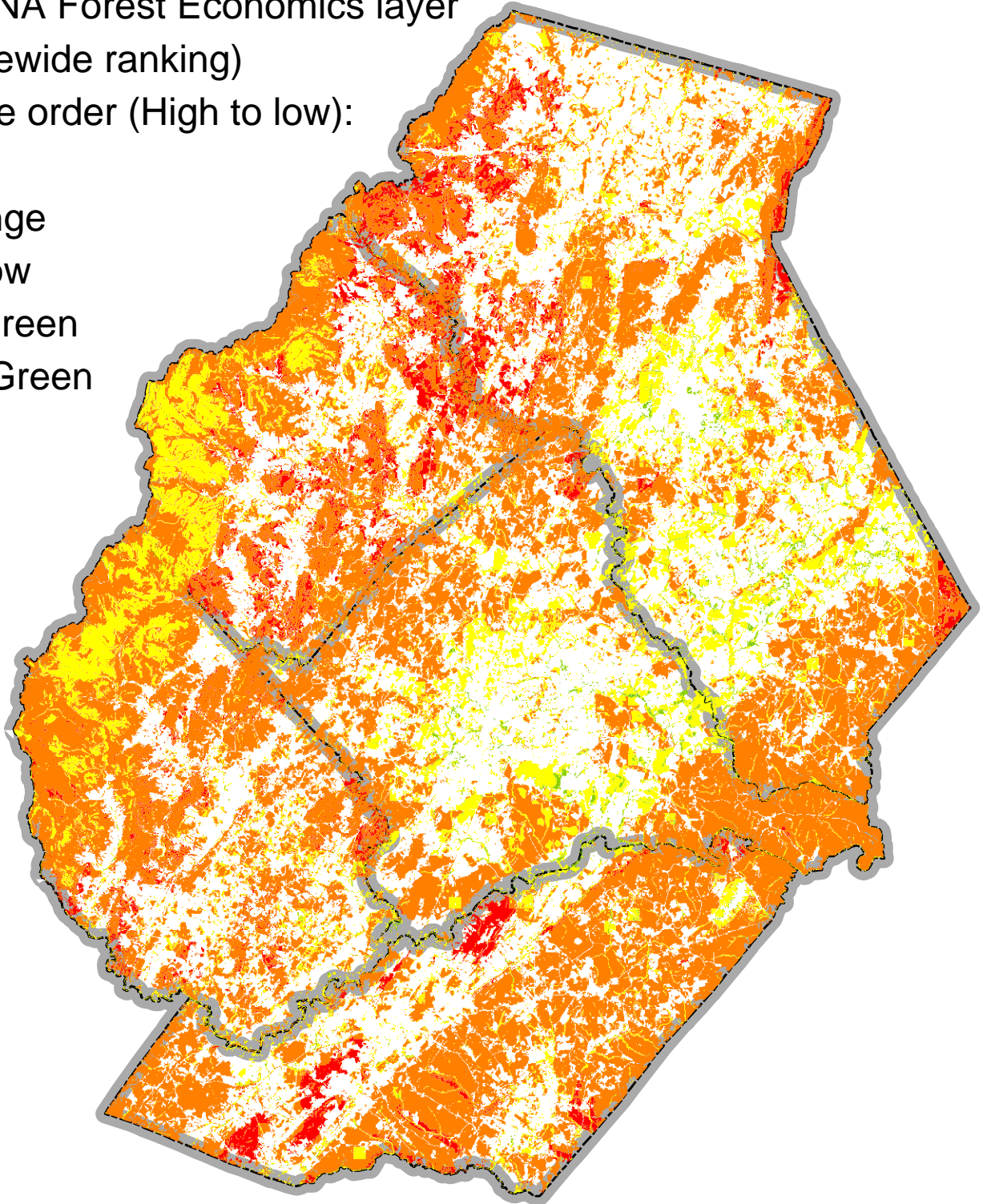(statewide ranking)
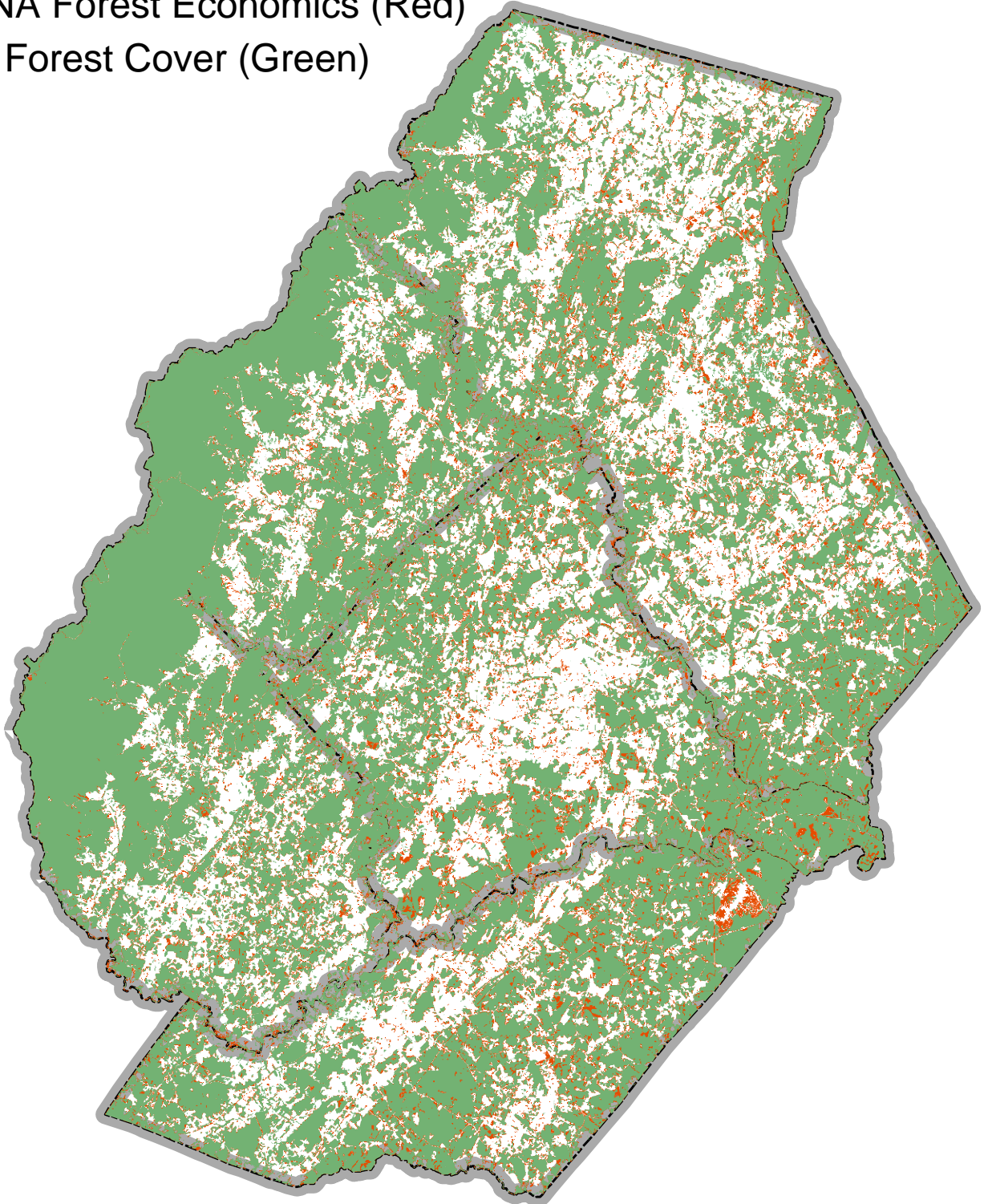Value order (High to low):
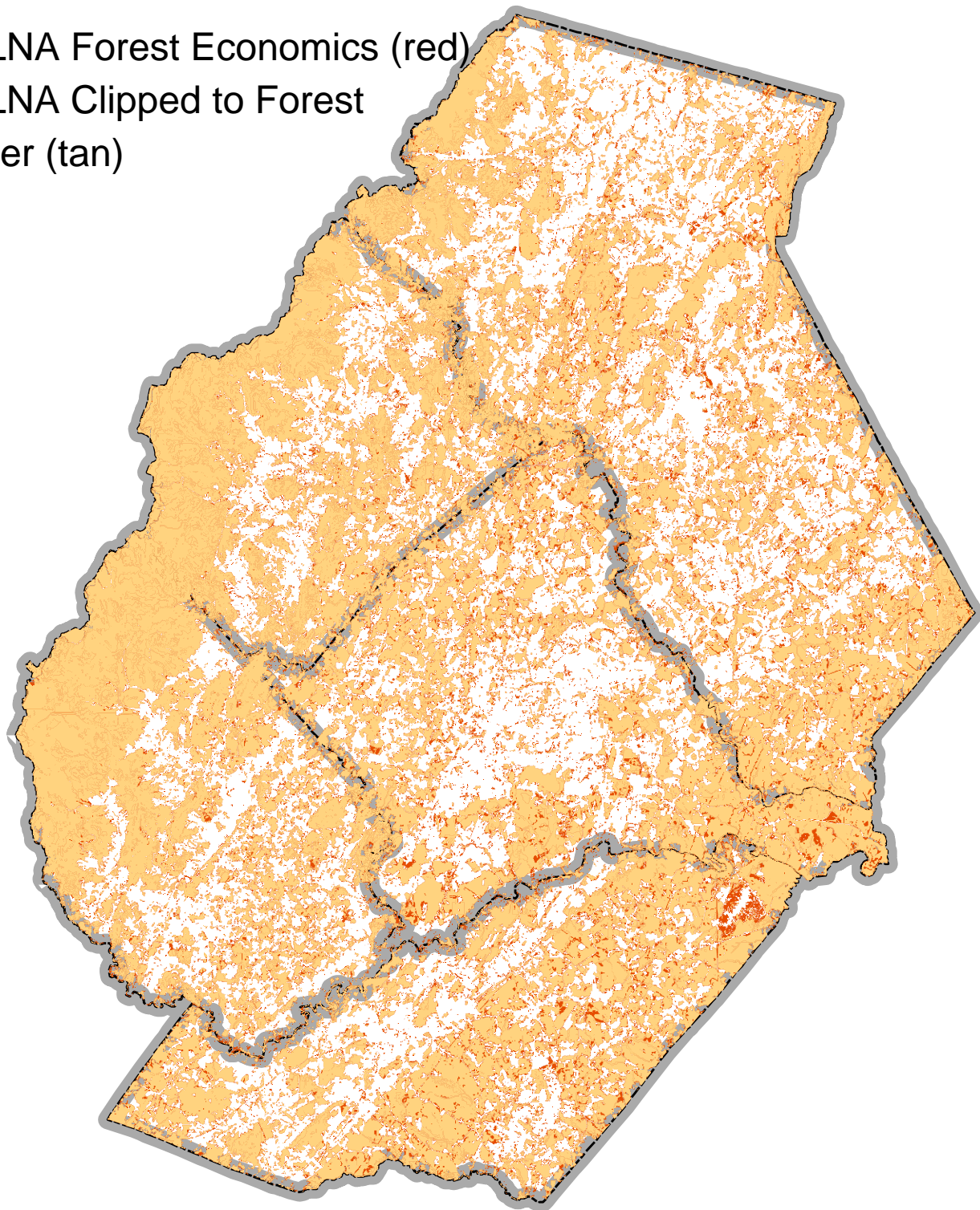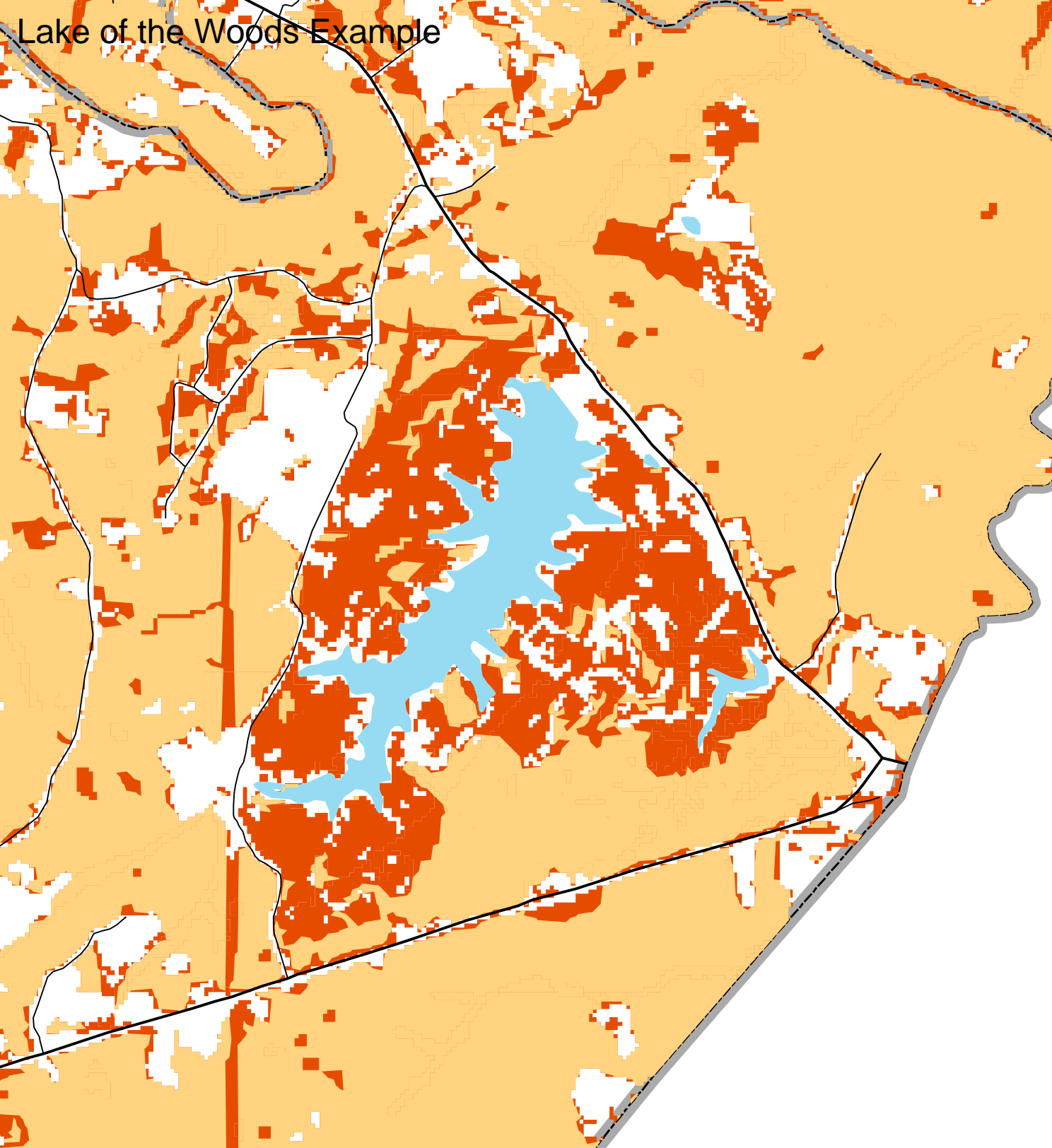Red
Orange
Yellow
Lt. Green
Dk. Green

VCLNA Forest Economics (Red)
DOF Forest Cover (Green)

VCLNA Forest Economics (red)
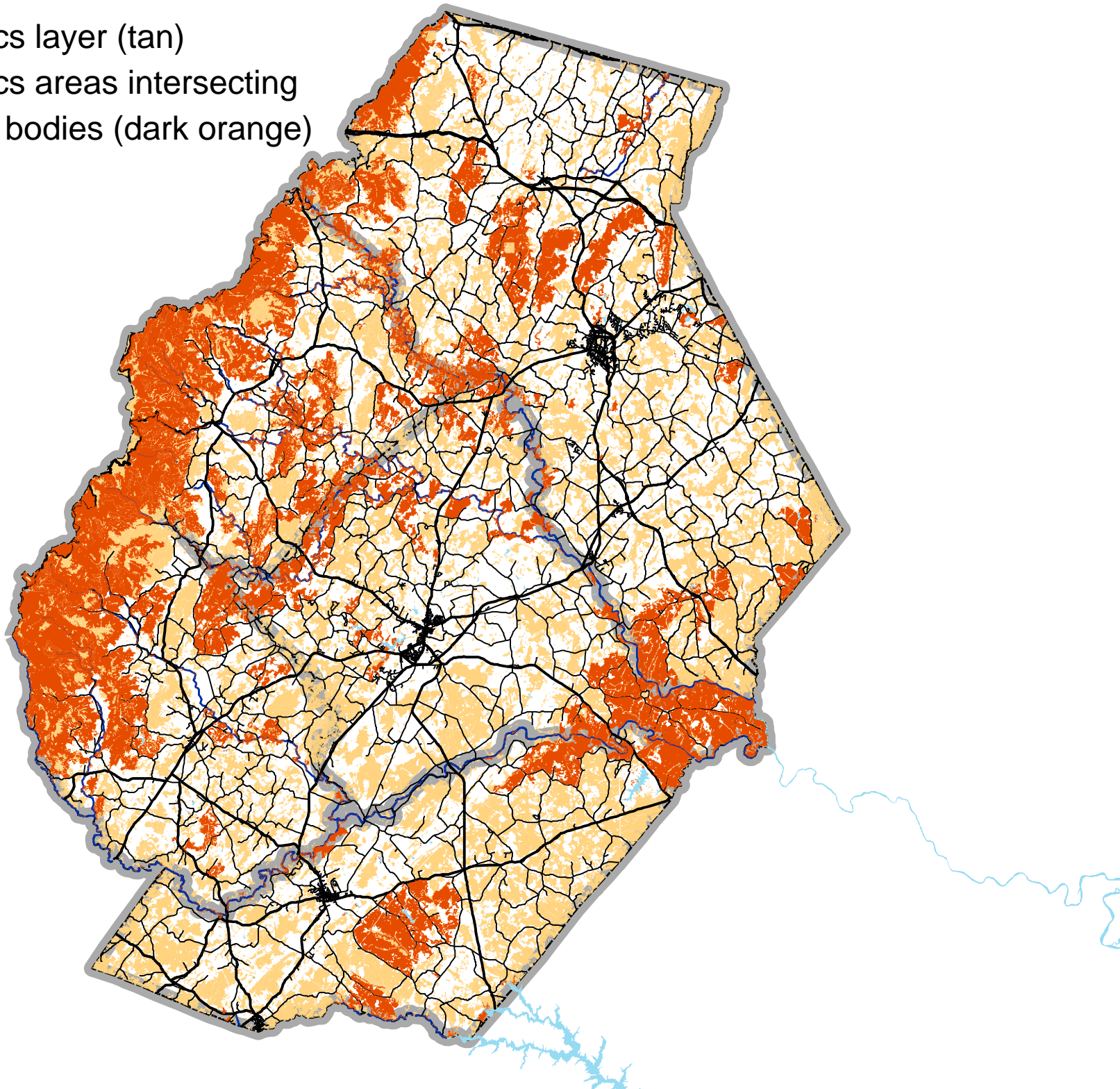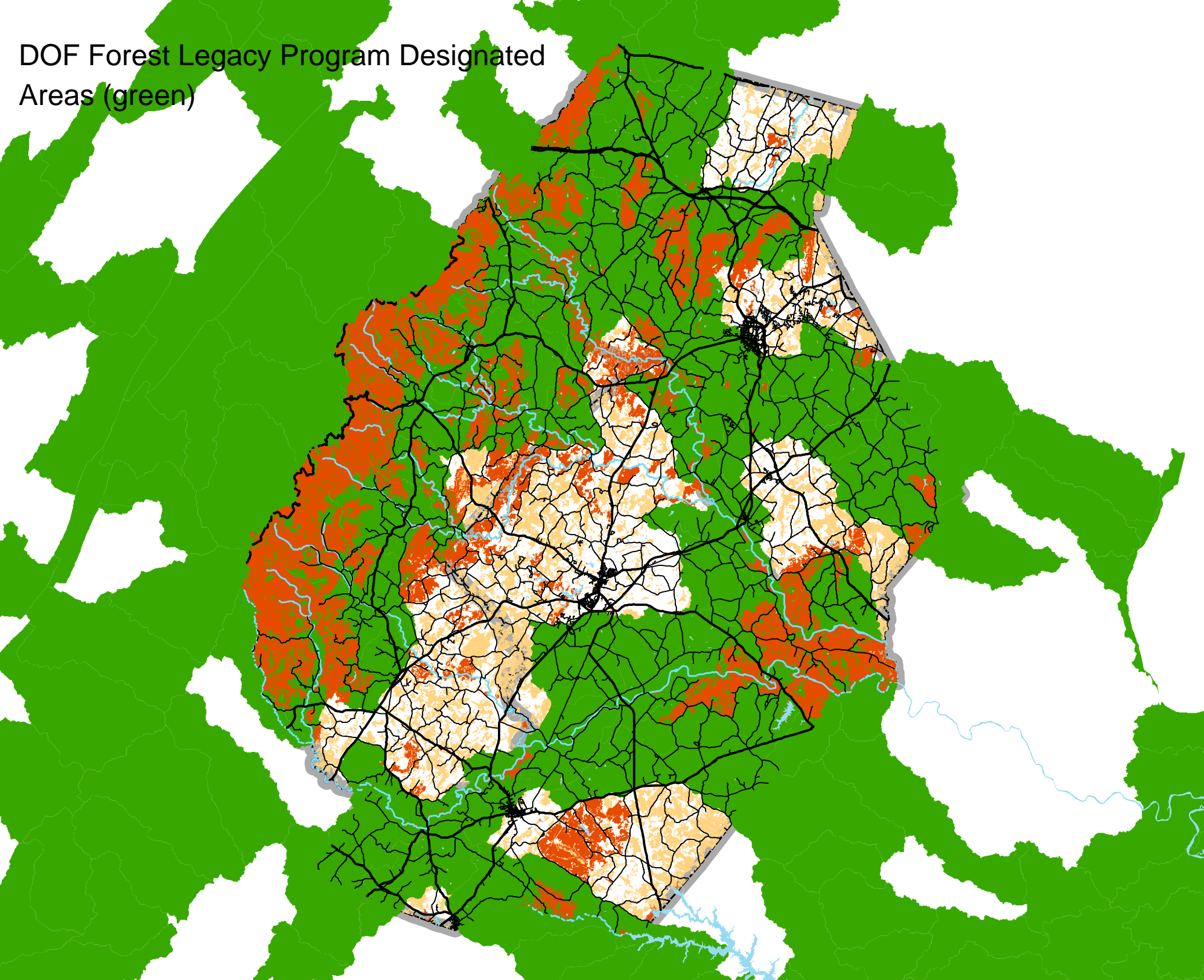VCLNA Clipped to Forest
Cover (tan)

Lake of the Woods Example

Forest Economics layer (tan)
Forest Economics areas intersecting
rivers and water bodies (dark orange)

DOF Forest Legacy Program Designated
Areas (green)

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