

RRRC's WIP Implementation Efforts

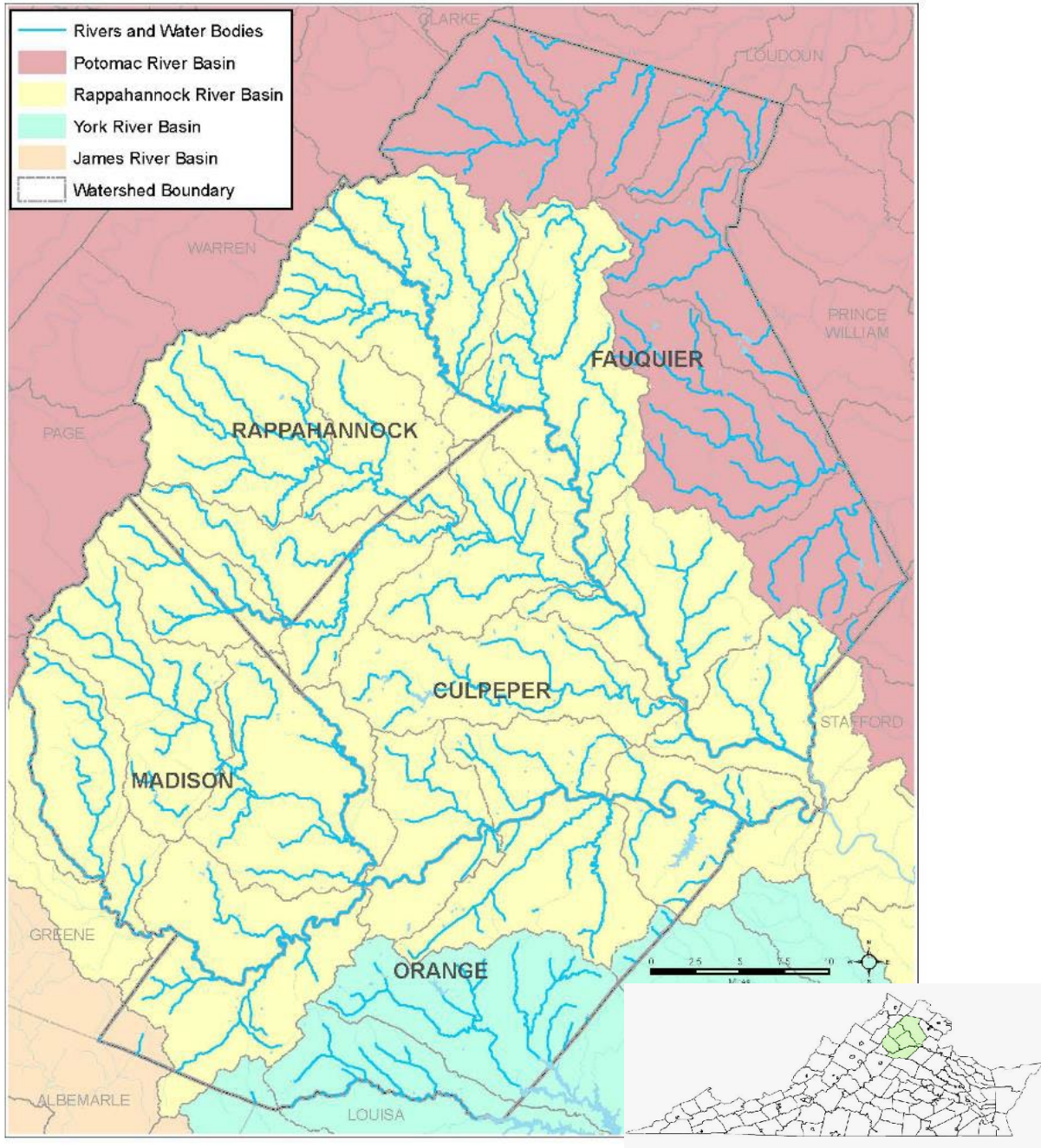
July 12, 2024

Michelle Edwards

Rappahannock-Rapidan Regional Commission



River Basins in the Rappahannock-Rapidan Region



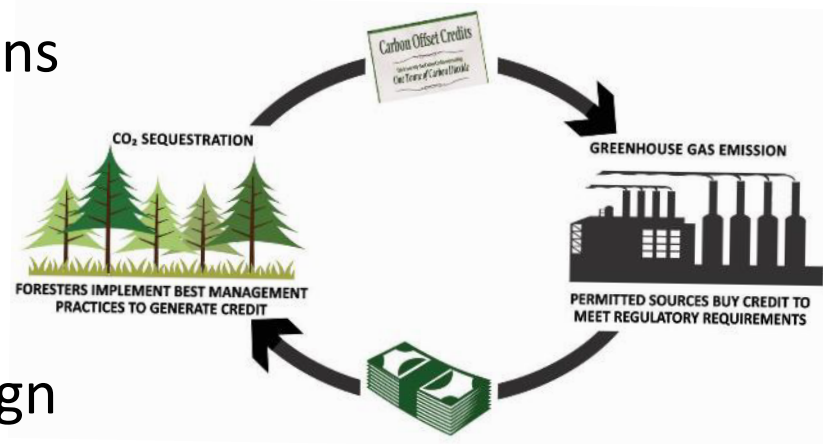
Chesapeake Bay TMDL

Watershed Implementation Plan Phase 3

RAPPAHANNOCK RAPIDAN REGION WIP 3 BMP INPUT DECK 04/09/19		
BMP	PDC Input Deck	DEQ WIP III
Nutrient Management Plan	20,000	34,722
Wet Ponds and Wetlands	10,506	16,979
Urban Stream Restoration	10,218	10,218
Dry Detention Ponds and Hydrodynamic Structures	2,998	3,935
Dry Extended Detention Ponds	2,998	4,726
Bioretention/raingardens	2,882	4,274
Tree Planting - Canopy	2,854	2,854
Bioswale	999	1,402
Filtering Practices	500	1,587
Vegetated Open Channels - A/B soils, no underdrain	500	712
Impervious Surface Reduction	200	1,142
Forest Planting	200	200
Infiltration Practices w/o Sand, Veg. - A/B soils, no underdrain	180	1,162
Forest Buffer	50	56
Wetland Enhancement	24	24
Wetland Rehabilitation	24	24
Permeable Pavement w/ Sand, Veg. - A/B soils, underdrain	6	7
Floating Treatment Wetland 30% Coverage of Pond	5	6
Stormwater Performance Standard-Runoff Reduction	5	5
Stormwater Performance Standard-Stormwater Treatment	1	1
Infiltration Practices w/ Sand, Veg. - A/B soils, no underdrain		0
Permeable Pavement w/o Sand, Veg. - A/B soils, underdrain		0

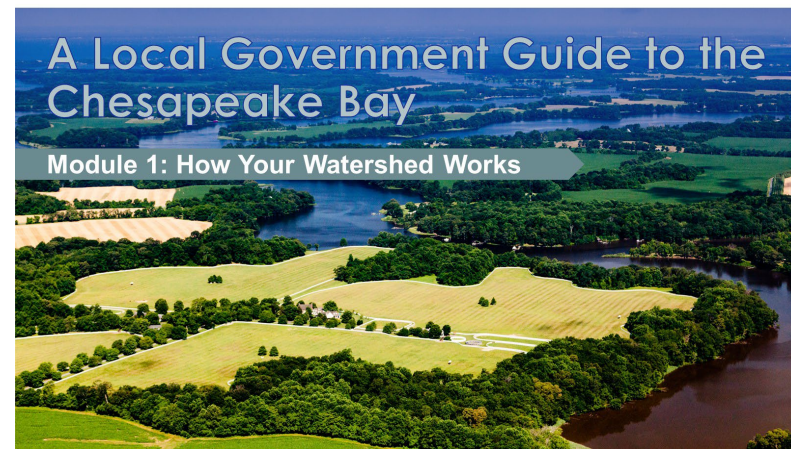
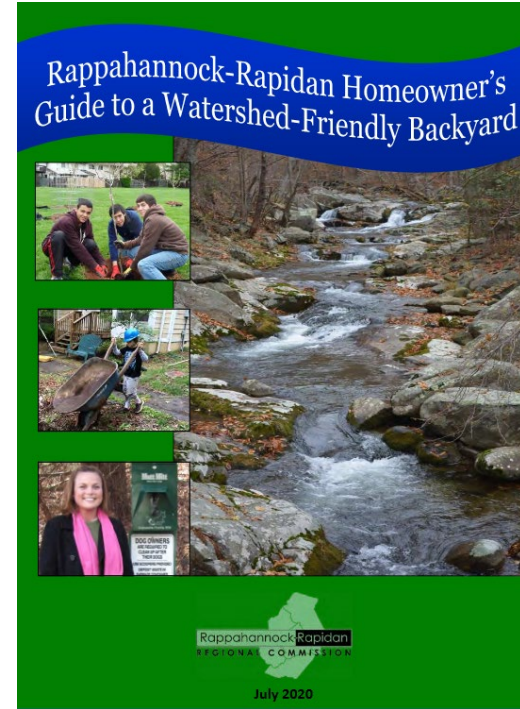
Implementation Strategies

- Develop a Watershed Management Plan for the Upper Rappahannock River
 - Gather and map data to fill data gaps
 - Goal: Better prioritize BMP implementation
- Healthy Watershed Forest Initiative
 - Ordinance/policy revisions
 - Carbon trading
- Tree Planting App
- No Nutrient Pledge Campaign



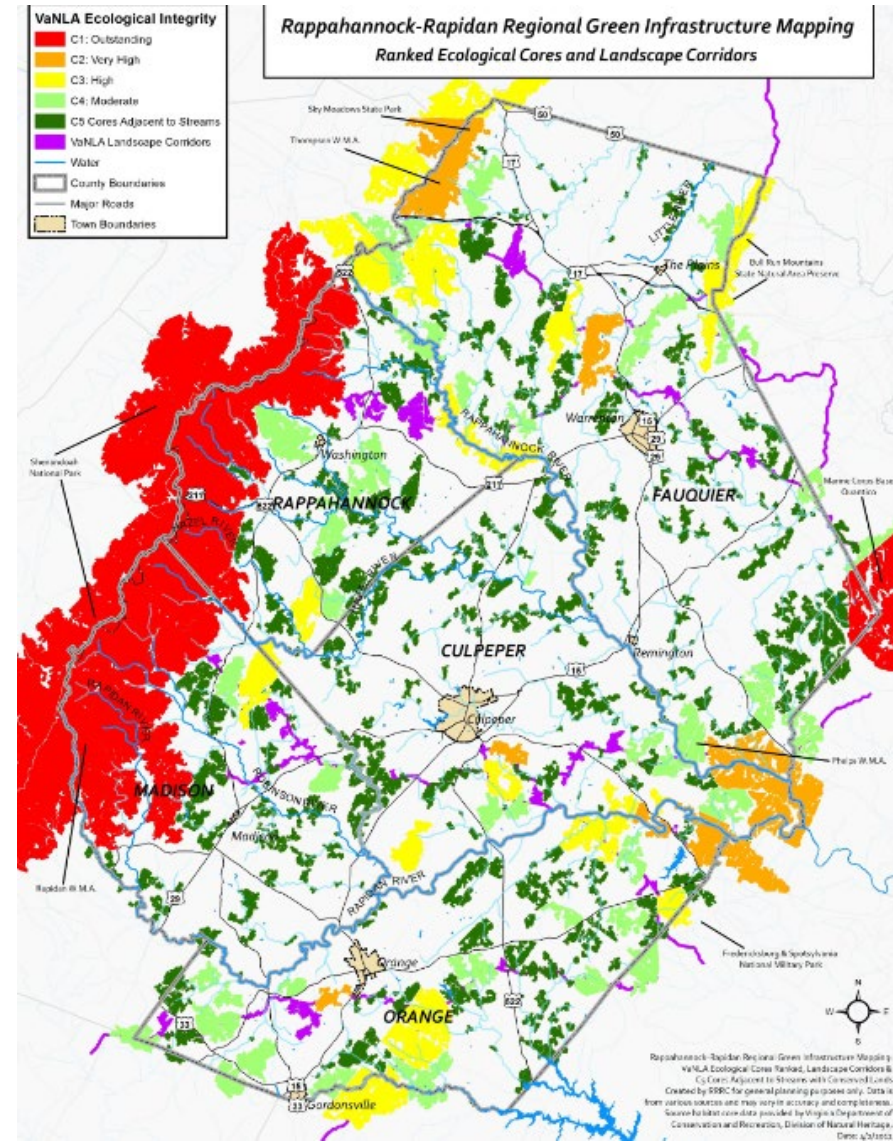
Outreach & Technical Assistance

- [Homeowners Guide to Watershed-Friendly Backyard](#)
- [Local Government Guide to the Chesapeake Bay \(11 Modules\)](#)
- Grant writing and administration
- Ordinance and policy development
- RRRC Land Use & Environment Committee: *Aug 15, 10am*
- VA Chesapeake Bay SAG
- Chesapeake Bay Program Local Leadership Workgroup



Green Infrastructure Plan

- Released December 2015
- Based on DCR Natural Heritage Models
- 6 GIS maps and fact sheets
 - Ecological Cores Base Model
 - Forest Economics Model
 - Cultural Assets Model
 - Agricultural Model
 - Watershed Model
 - Protected Lands Layer





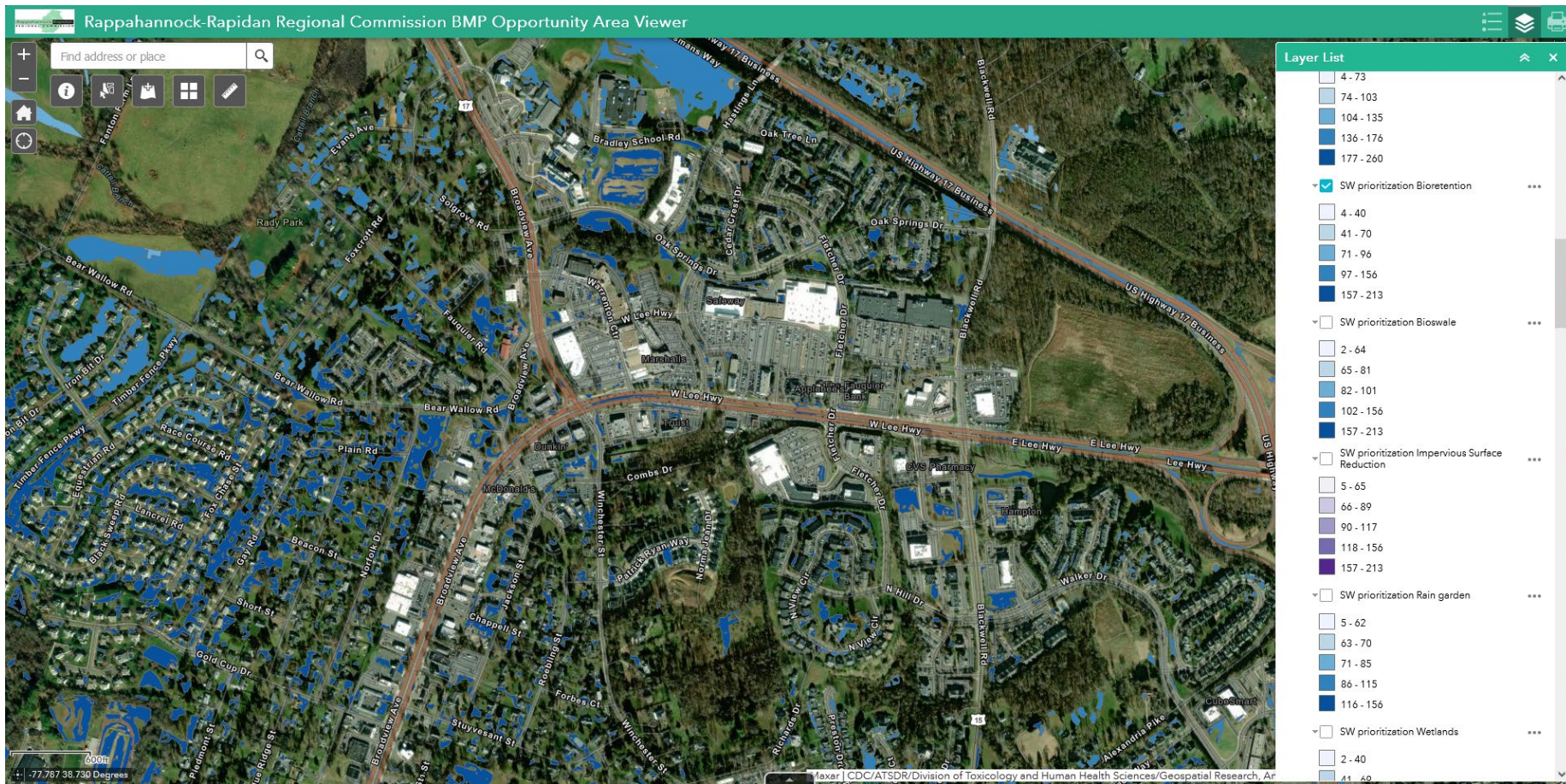
Upper Rappahannock Watershed Plan (GIS Data Clearinghouse for the Region)

- Parcels
- Building footprints
- Street centerlines
- Sewer service area
- Houses with plumbing facilities
- Zoning data
- Population projections/ land cover implications
- Federal, State, Municipal Lands
- Conservation Easements
- Recreation Sites & River Access
- Soils (including steep slopes & highly erodible)
- Land Cover (including wetlands & impervious surfaces)
- Rivers, Streams and Watersheds
- Floodplain
- Impaired streams
- Permitted point source discharges
- Stormwater BMPs
- Septic BMPs
- Tree Planting/Forest BMPs
- Agriculture Sector BMPs
- Wetland Mitigation Banks
- Nutrient Credit Banks
- Riparian Buffers
- Monitoring Stations
- Biological monitoring
- Water chemistry (monitoring)
- Stream Flow (monitoring)
- Threatened & Endangered Species
- Anadromous Fish Use Areas
- Fish Passages
- Trout Streams

BMP Prioritization Tool

- 9 Stormwater BMP Opportunity Layers
- 9 Agricultural BMP Opportunity Layers
- Overlays (i.e. parcels, demographics, land cover, impaired streams)

[Website Link](#)



Recent BMP Implementation Projects

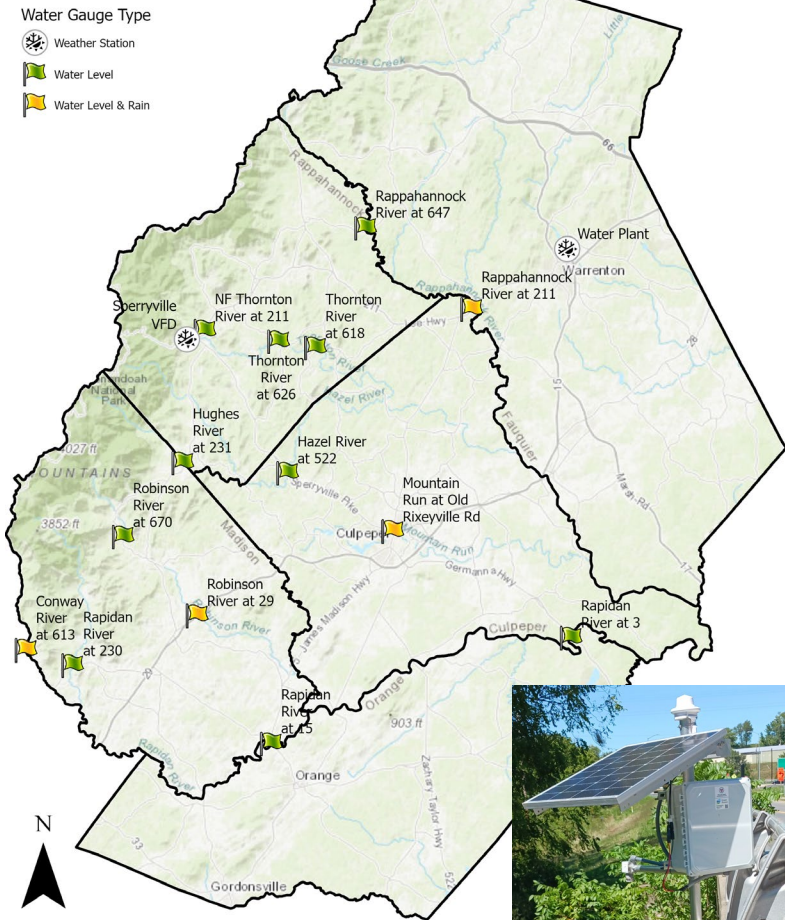
- VDOF Tree for Clean Water Grants: Tree plantings in partnership with Friends of the Rappahannock
- NFWF Grant
 - Cost-share matching funds for 5 BMPs via John Marshall SWCD's VCAP Program
 - Converted wetland and bioswale projects in Warrenton
 - Permeable pavers and bioswale project in Culpeper County



Hazard Mitigation/Flood Resiliency

- Regional Hazard Mitigation Plan update underway
 - Will now incorporate a Resiliency Plan
 - Draft Regional Mitigation Actions include assisting localities with stormwater BMPs, tree planting, impervious surface removal & water supply plans
 - Public meeting planned for September
 - Plan adoption anticipated end of 2024
- Rappahannock River Stream Gauge project
 - Measures precipitation and water level
 - RRRC assisted VDEM with outreach and coordination
 - Gauges are now active and [data is available online](#) in real time.

Rappahannock-Rapidan Regional Commission
Stream Water Monitoring Gauges

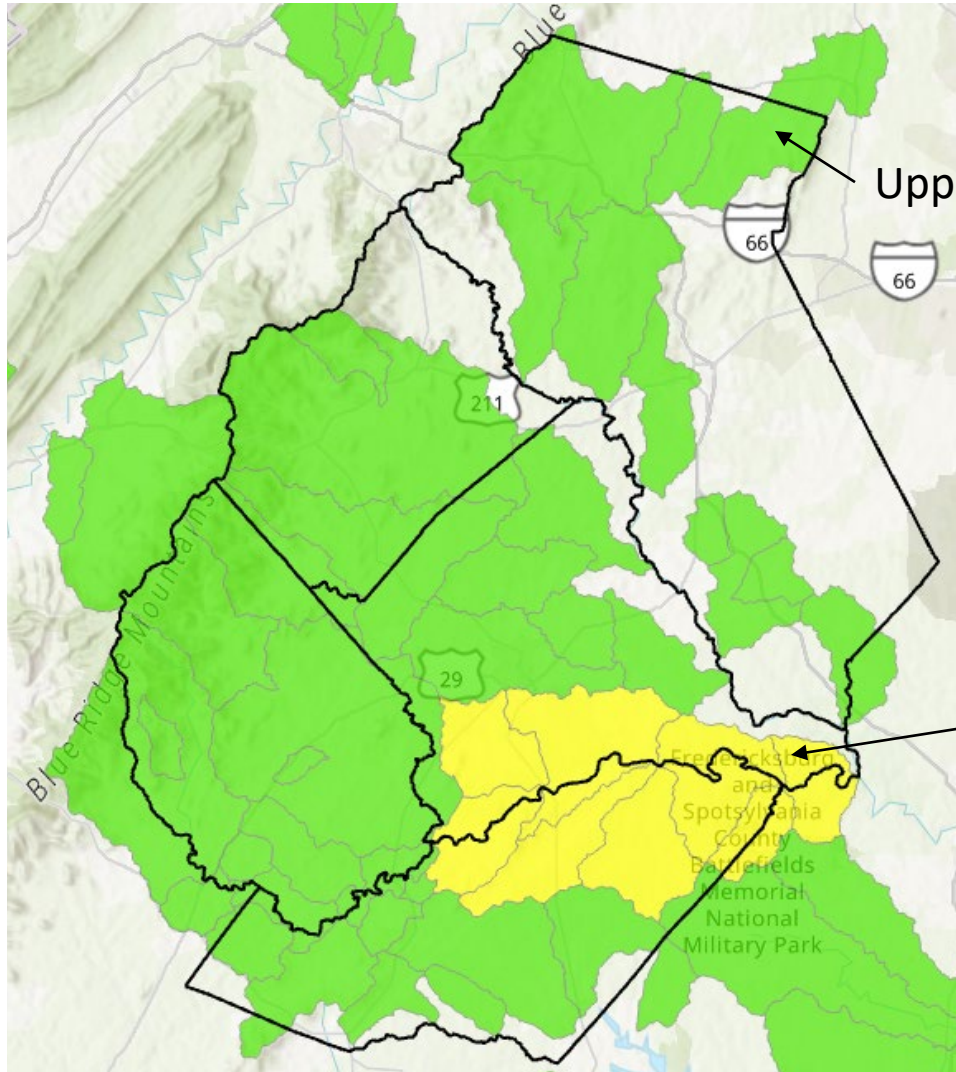




Urban Heat Island Analysis

- Combines citizen science and GIS to identify hot spots
- Goal: Raise public awareness and develop implementation strategies to address hotspots found through projects such as tree planting and impervious surface removal
- [Volunteer](#) July 20th from 3-4pm (Rain Date July 21st)
 - Volunteers will sample temperature levels across the region.
 - Each volunteer will be assigned a thermometer to record the air temperature and coordinates of their sample site, taking 10-15 samples
- Funded by VDOF Urban & Community Forestry Grant

Local TMDL Implementation Plans



Upper Goose Creek in 2018

Currently participating in development of Mine Run, Mountain Run, & Lower Rapidan River TMDL Implementation Plan



Water Supply Planning

- Previously assisted localities with local water supply plans
- New regional water supply plan requirement
 - Localities are required to “participate in cross-jurisdictional, coordinated water resource planning, and develop and submit, with the other local governments within a regional planning area, a single jointly produced regional water plan to the board.”
- Planning process to be coordinated by PDCs
- RRRC boundary coincides with the designated regional planning area for this region
- Waiting for further guidance from DEQ
 - Amendments to regulations pending governor’s office review/approval)



Rappahannock-Rapidan
REGIONAL COMMISSION

Questions?

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