Virginia's Wildlife Action Plan: Guiding Land Conservation & Recreational Access

CONSERVE. CONNECT. PROTECT.

Virginia Land Conservation & Greenways Conference
April 29, 2026

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CONSERVE

Conserve and manage wildlife populations and habitat for the benefit of current and future generations.

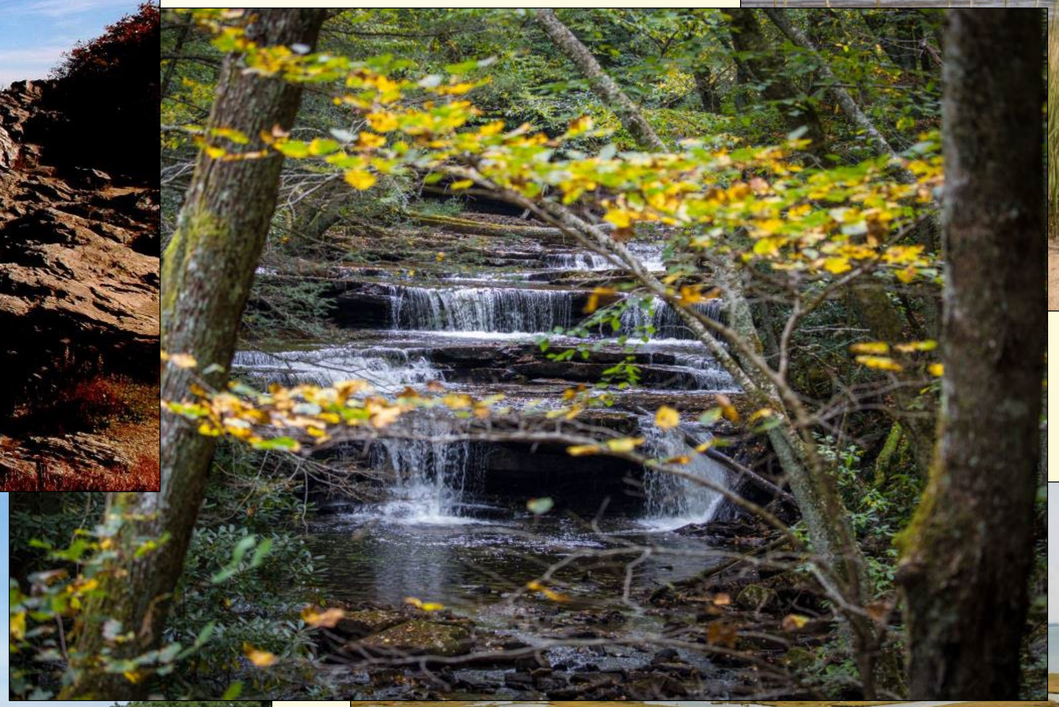
CONNECT

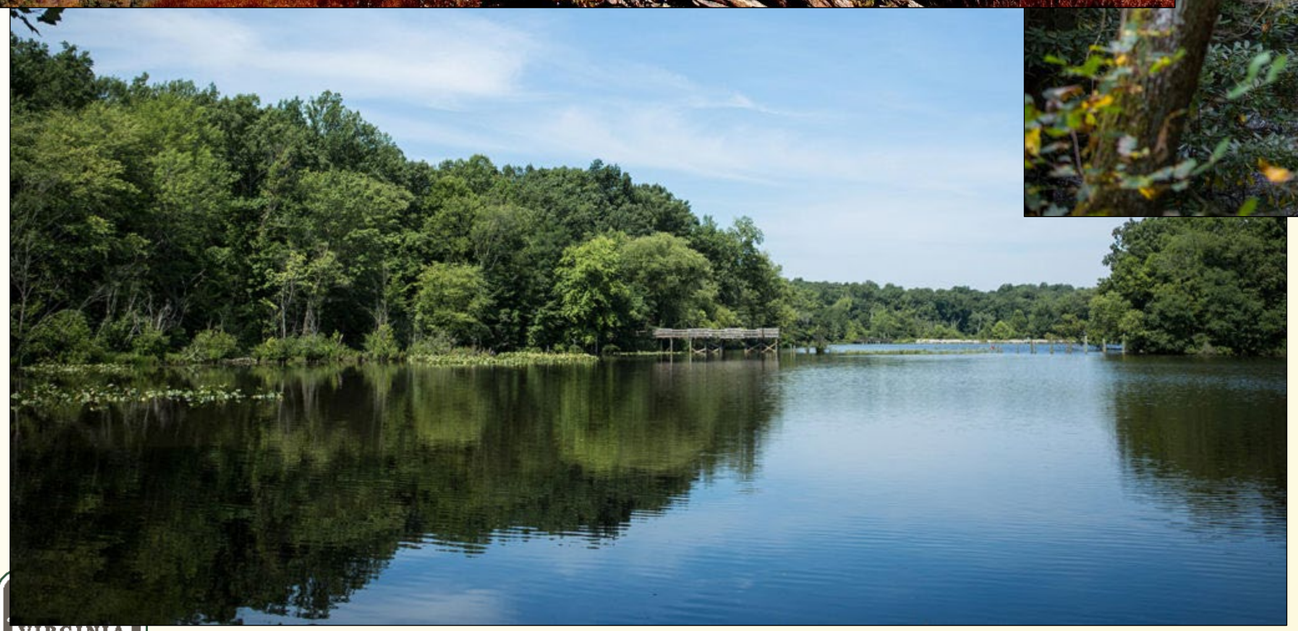
Connect people to Virginia's outdoors through a variety of wildlife-related activities.

PROTECT

Protect people and property by promoting safe outdoor experiences and managing human-wildlife conflicts.

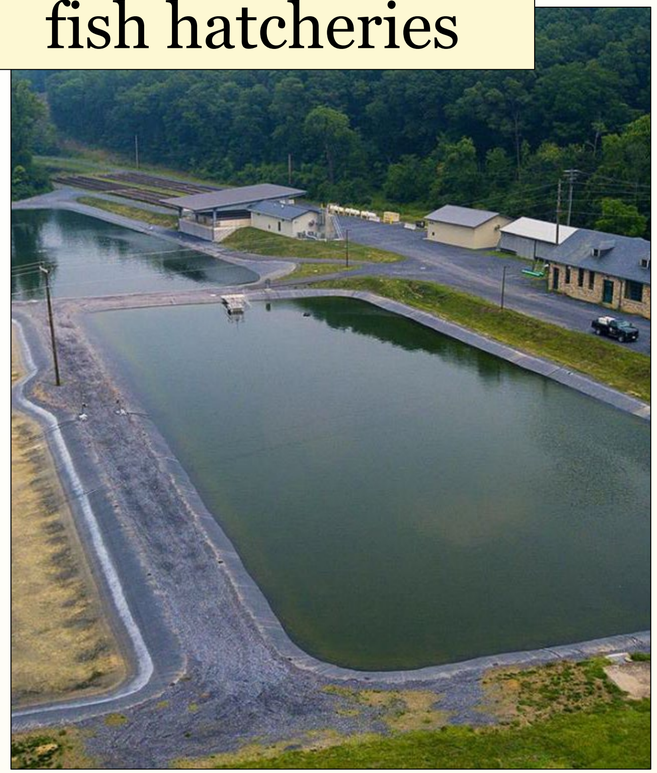
DWR owns 250,000+ acres across Virginia



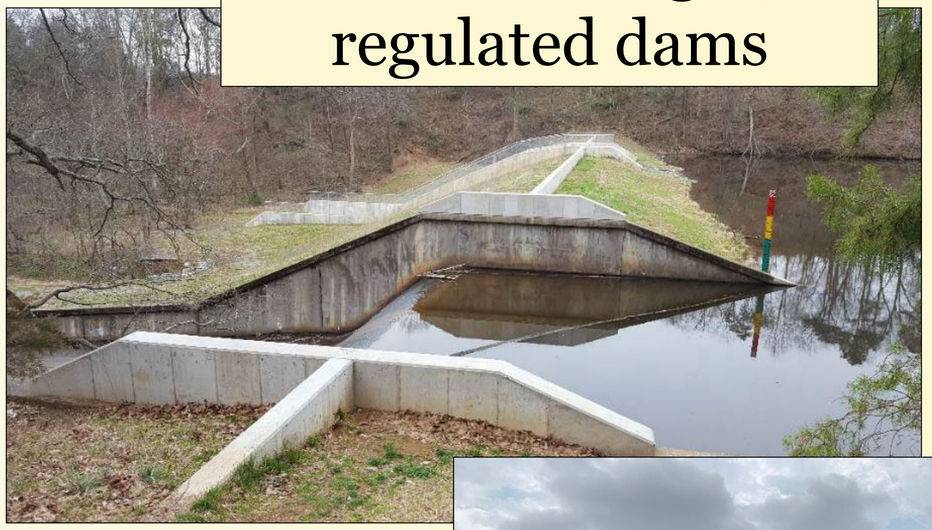


Infrastructure

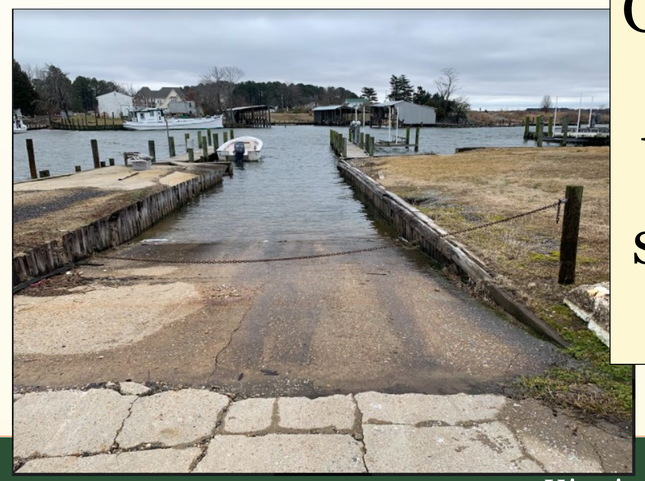
Own and operate 9 fish hatcheries



Own or manage 39 regulated dams



Own or manage 230 public boating access sites across the state



DWR is responsible for all of Virginia's wildlife

DWR connects people to wildlife

State Wildlife Action Plan

- A **conservation blueprint** developed by a state, territory or tribe that guides efforts to conserve plant, fish, wildlife, and their habitats
- A **non-regulatory** document
- A collection of **scientifically-based recommendations** from experts across the wildlife conservation community and representatives from local, state & federal government agencies (including DWR), conservation NGOs, and tribal governments
- A **requirement by Congress** for a state to be eligible to receive State Wildlife Grants, which funds most conservation and management of many of our nongame and imperiled species

2025 Revision

A robust, actionable plan to guide the wildlife conservation activities of DWR and our partners across the Commonwealth.

- 1,920 Species of Greatest Conservation Need
  - ✓ Habitats identified
  - ✓ Distribution and abundance understood
  - ✓ Threats identified, actions recommended

- 521 Assessment Priority Species
  - ✓ Research needs identified
  - ✓ Experts identified

- County and 12th order HUC attribution of SGCN

https://dwr.virginia.gov/wildlife/wildlife-action-plan/

Partners and Stakeholders

- **This is Virginia's Plan, not DWR's Plan.**
- It needs broad buy-in and support to ensure successful implementation.
- DWR cannot affect the necessary actions by itself to conserve Virginia's wildlife and habitats.
- Partners and stakeholders provide input to species, habitats, threats and conservation actions based on their visions and missions.
- Partners and stakeholders bring valuable resources – of all kinds – to conservation.

New for 2025

- More directed inclusion of **climate vulnerability and climate-smart actions.**
- Focus on **working lands** and unique threats and conservation opportunities available in these areas.
- Inclusion of **Assessment Priority species** (species we don't have enough information to rank at this time but still may require research.) (~520 species)
- Plan based on **smaller watersheds** (HUC12) instead of Planning District Commissions.
- Major part of the plan is online.

New for 2025

- Engagement and consultation with **Virginia's Sovereign nations and recognized tribes** and inclusion of culturally-important species, traditional ecological knowledge, priority actions.

- More comprehensive **inclusion of marine species** (beyond sea turtles, marine mammals). (~45 species)

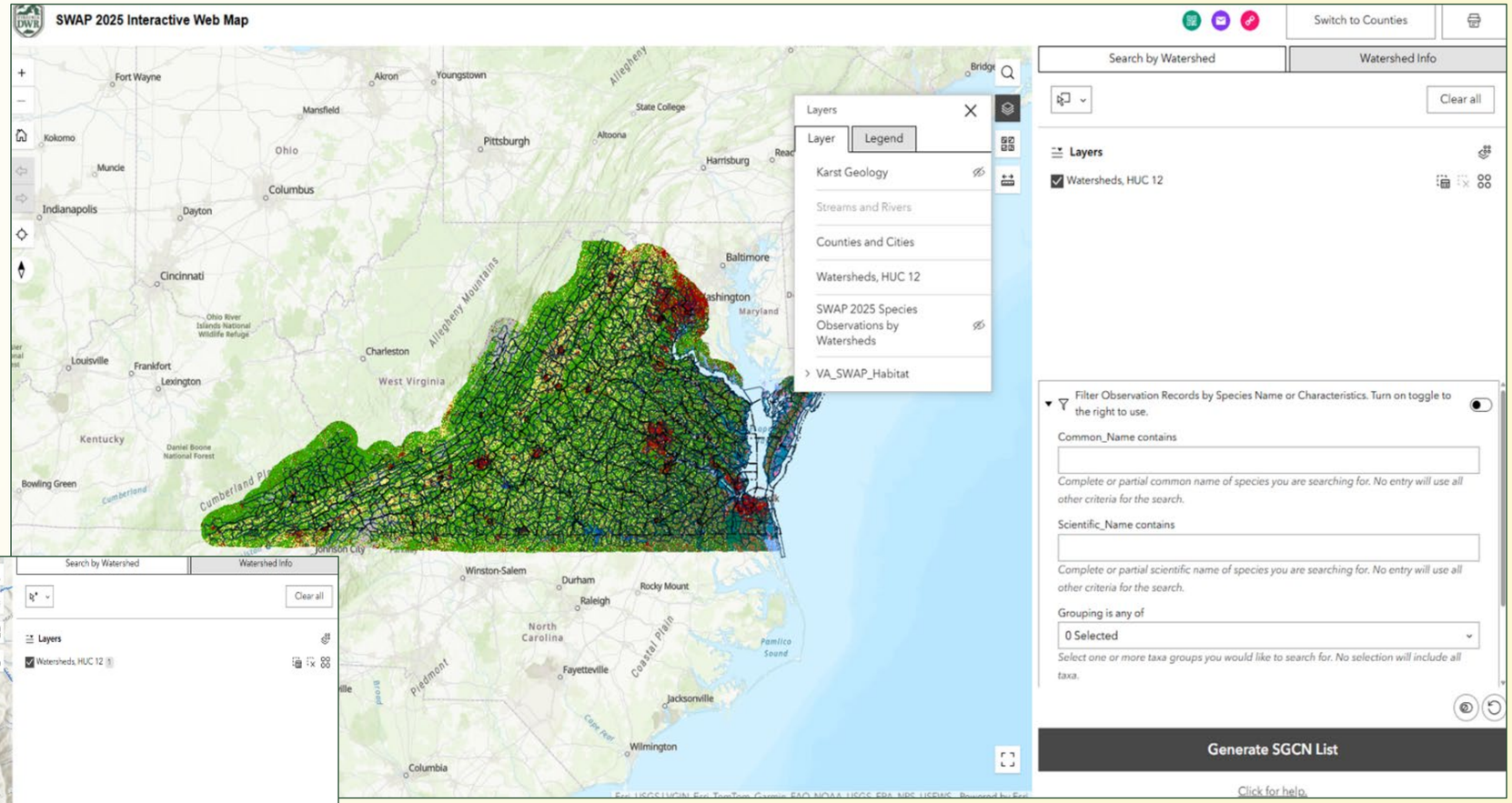
- Identification and **inclusion of plants** as SGCN. (~900 species)

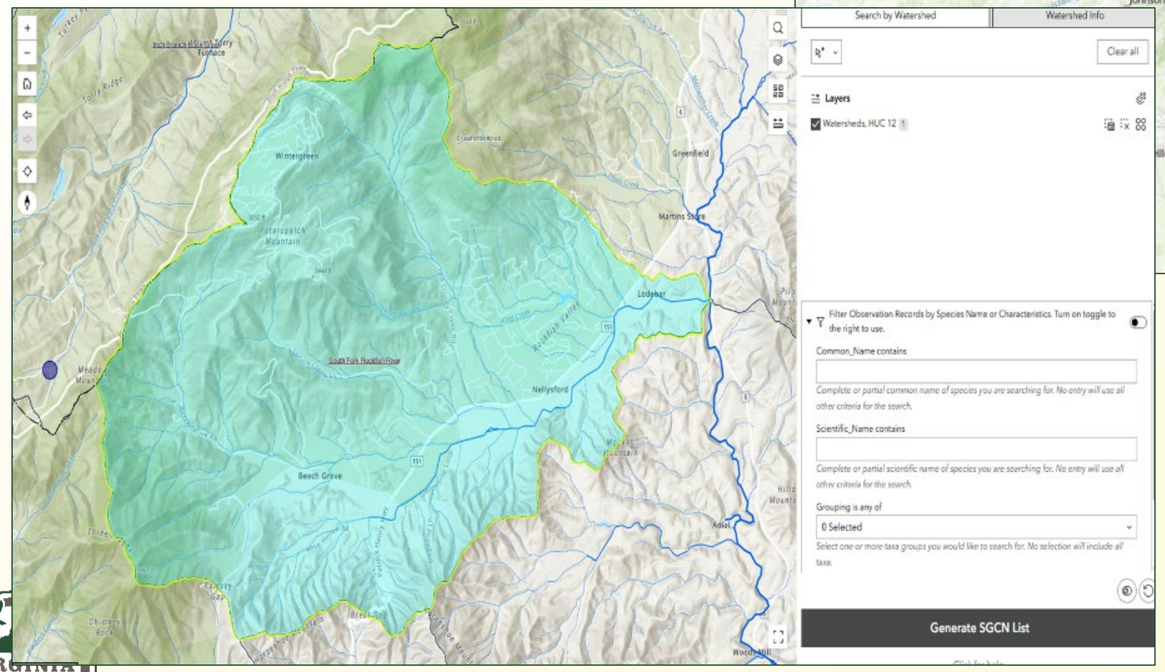
- Return to a broader array of important conservation actions, including **education, wildlife-related education, and law enforcement**.

New for 2025

Online Tool

- 12th order watersheds
- Zoom in and click on a specific watershed



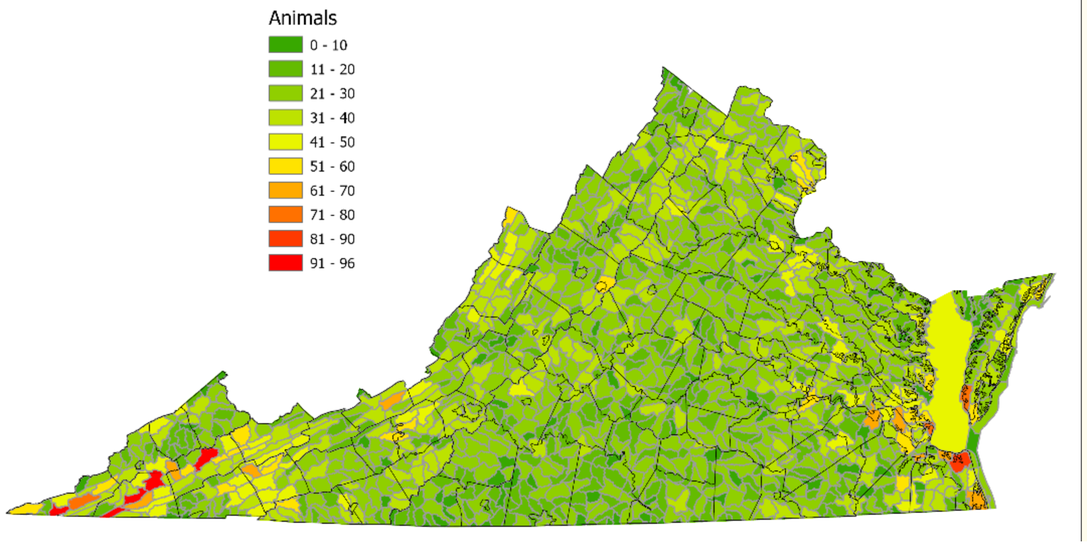


New for 2025 – Online Tool

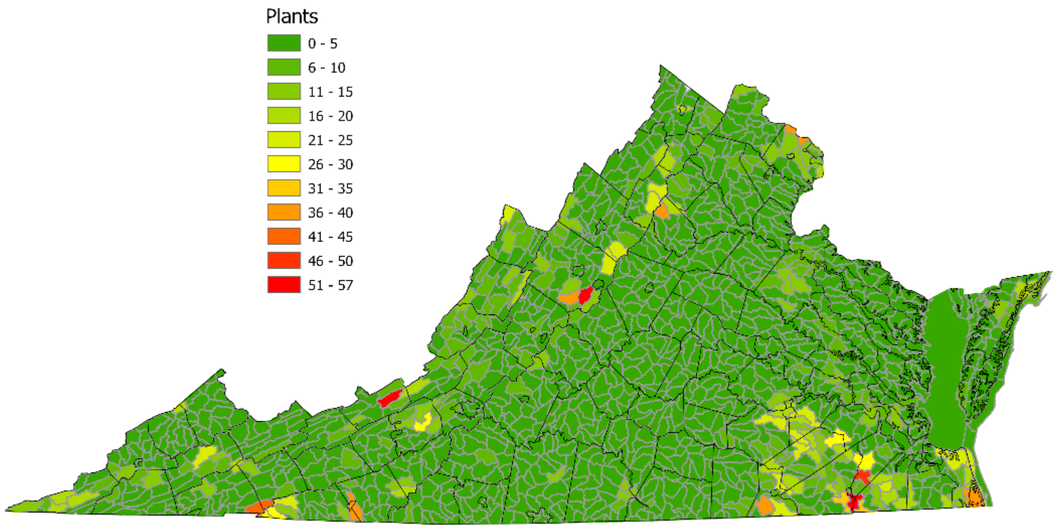
- SGCN list for watershed selected.

- Per Species - habitats, threats, conservation actions, working lands association

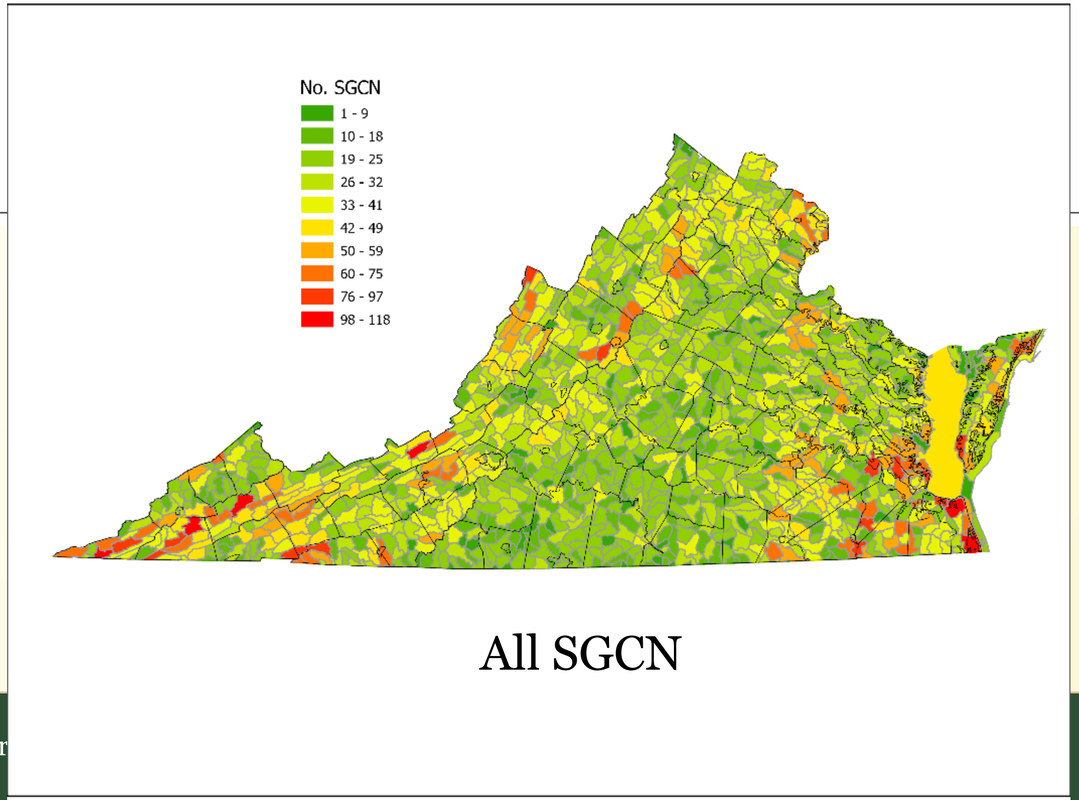
OI	HUC 12 ID	HUC Name	Scientific Name	Common Name	Grouping	Type	Tier	COR	Habitats	Threat Code	Threat Description	Threat Long	Actions	Notes
##	020802030	South Fork Roc	Ambystoma tigrinur	**Eastern tiger salamander**	Amphibian	Salama	I	a	Forest and Wood Lands, Savannah, Ponds, Artificial Impoundments	5.1.4., 1.1.1., 7.1.2.	Poaching/Persecution of Terrestrial Animals / Dense Housing & Urban Areas / Suppression in the Fire Regime	or harassment of wildlife. E.g., hunters killing coyotes or birds of prey, people deliberately harming snakes out of fear, illegal collection of seabirds or shorebird egg collection, illegal wildlife trade for skins, meat or the pet trade. / Medium- to high-density development for residential use and buildings for related services. Allows very little to no maintenance of ecological functions. E.g., urban areas, suburbs, villages, schools, libraries, seniors' housing, hospitals / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures.	Continue maintaining no possession regulations (5.1.4), Avoid residential or commercial development near known breeding sites. (1.1.1), When possible, restore the natural fire regime within occupied areas (7.1.2)	
##	020802030	South Fork Roc	Ammodramus sava	**Grasshopper Sparrow**	Bird	Bird	IV	b	Grass Lands, Transportation Networks	2.1.2, 9.3.3	Perennial Cropping Systems / Storm Surges /	Crops that are associated with less intensive agricultural practices that have less of an ecological impact than do annual crops. E.g., pastures, forage crops, hay, alfalfa, clover. / e.g., erosion of shorelines/beaches during storms. /	Coordinate with and support expansion of programs such as the Virginia Grassland Bird Initiative, which conduct research and provide financial incentives to private landowners to adopt BMPs to improve grassland bird productivity (2.1.2), Research the impacts of pesticides on prey base and impact on grassland bird communities (9.3.3)	The reasons for declines are not completely understood. Pursue collection of ecological and reproductive data in Virginia, as well as data on migratory connectivity via coordinated multi-state projects, as a path toward investigating geographic and temporal extent of limiting factors.
												Harvesting of aquatic species for commercial purposes that is governed by management measures		



SGCN Animals

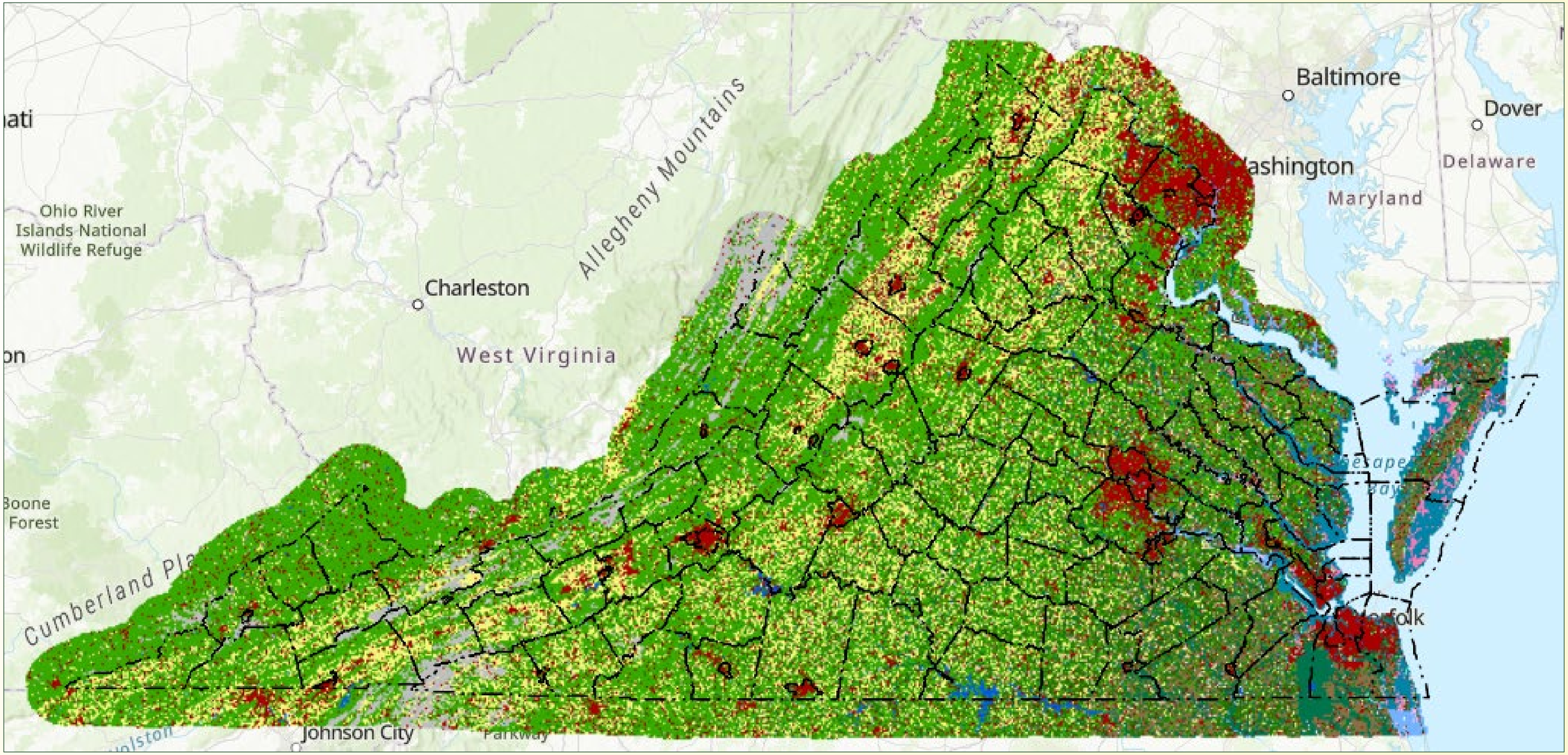


SGCN Plants



All SGCN

Virginia Habitats



Land & Water Conservation

First WMA: Havens
* Roanoke Co.
* 6,200 acres, $2.61/acres
* 1930

Latest WMA: Coastal Forest
* Accomack/Northampton Cos.
* ~8,500 acres, NOT $2.61/acre
* 2025

Considerations:
* Representation & redundancy
* Connectivity
* Key “stop over” habitats
* Areas at greatest risk
* Climate refugia, accessibility

Virginia Wetlands Action Plan

Wetlands Tracking

- Effective reporting an accounting system
- Define activities that count towards outcome
- Jurisdiction-specific targets for tidal and non-tidal wetlands

Strategic Planning

- DWR to lead diverse partnership focused on wetlands outcome
- Guided by existing plans and tools
- Acknowledge climate change and focus on at-risk areas
- Seek to restore/enhance habitat for SCGN species
- Implement on both private and public lands with emphasis on private lands

Capacity Building

- Build on existing diverse regional partnerships
- Increase staff focused on wetland restoration
- Low barrier applications for voluntary efforts
- Expand native nursery / other restoration capacity

Outreach

- Landowner interest is critical
- Identify and promote demonstration sites
- Target grant funding focal areas
- Coordinate with PDCs and SWCDs

Sustainable Funding

- Current funding increases for private and public
- Match is limiting factor
- Need to established dedicated funding source

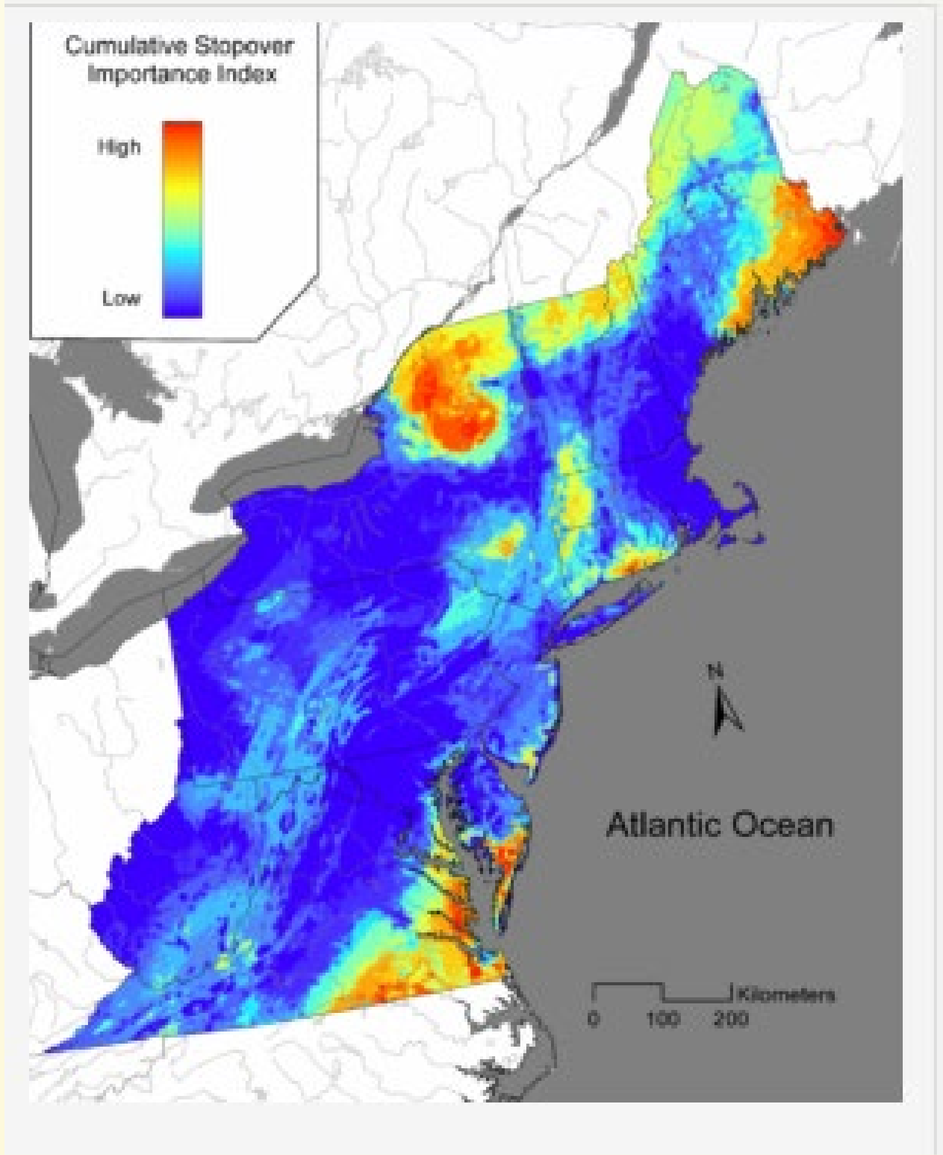
DWR Wetlands Outcomes

- Protection of existing marshes
- Reduce nutrient and sediment loading
- Enhance marsh resiliency; flood mitigation
- Provide habitat for wide variety of fish and wildlife, including priority species
- Facilitate natural marsh migration
- Support wildlife-related recreation and ecotourism
- Sustain and improve wetlands and marsh carbon capture capabilities and sequestration

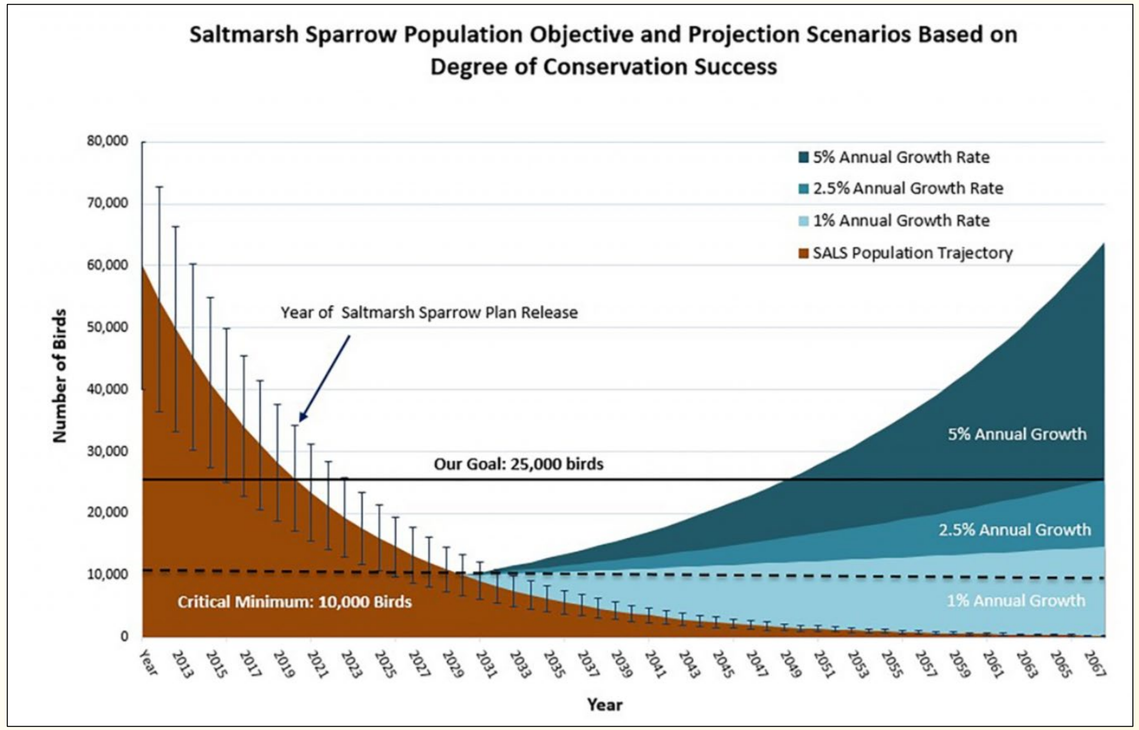
DWR Coastal Marsh Properties

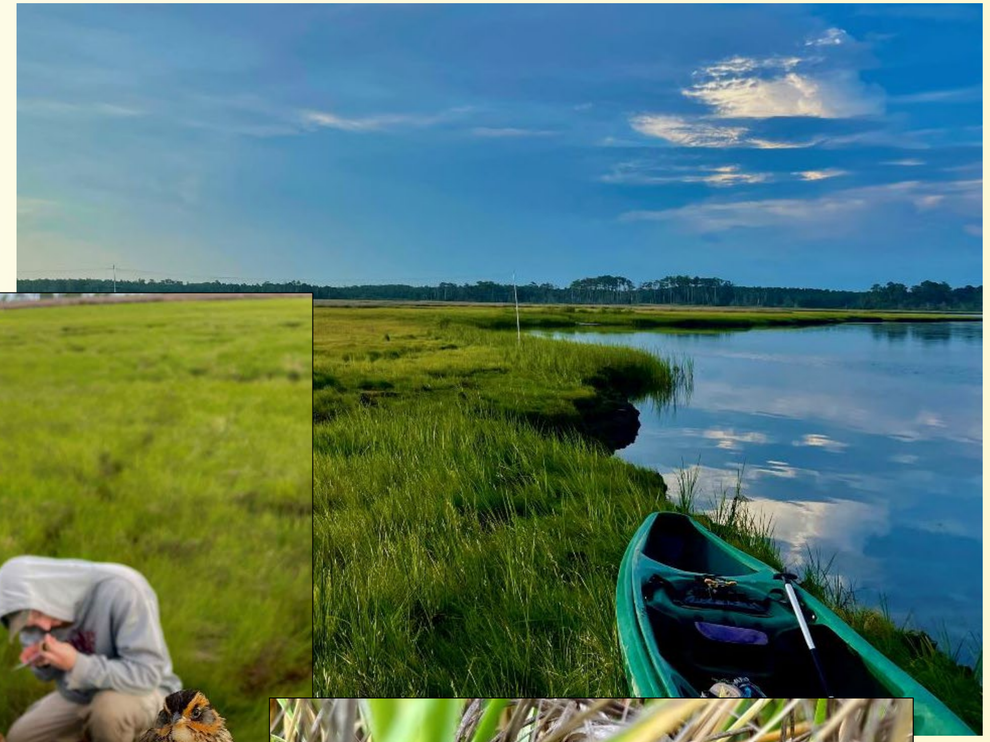
Region of Hemispheric Importance

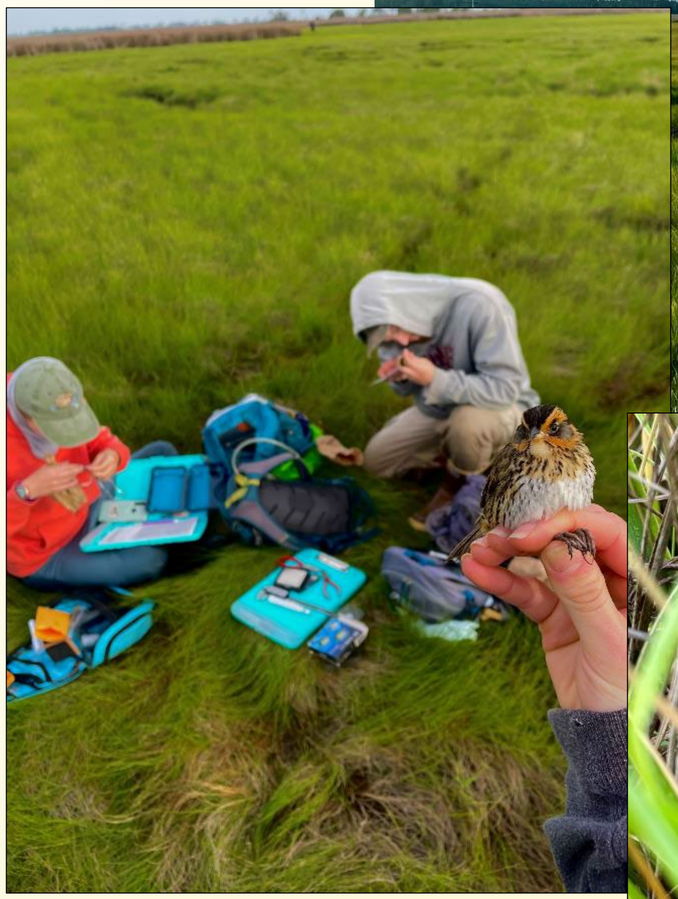
- 7-10 million birds migrate down the Delmarva Peninsula annually in the fall
- Birds pause in Virginia prior to continuing journey across Chesapeake Bay
- Virginia Eastern Shore habitats currently lack significant resources necessary to sustain these birds in their migration and in residency.

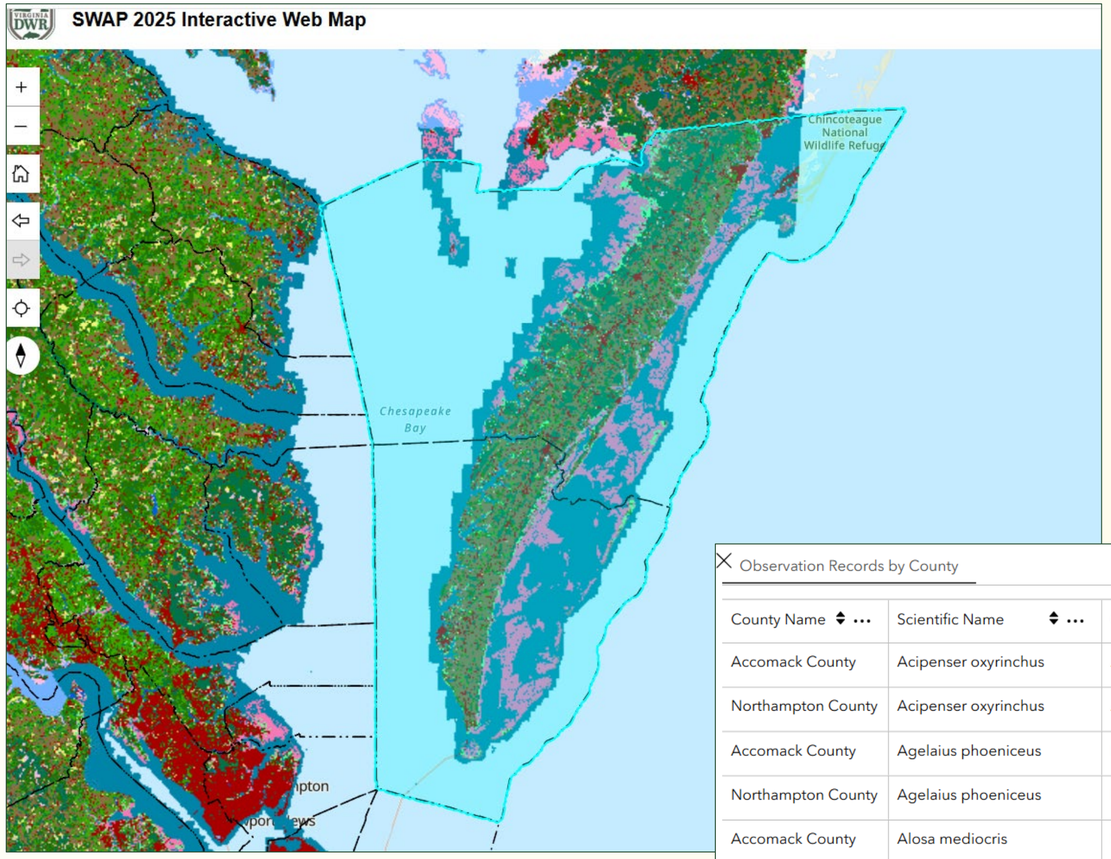


Saltmarsh Habitat Protection & Restoration









Observation Records by County

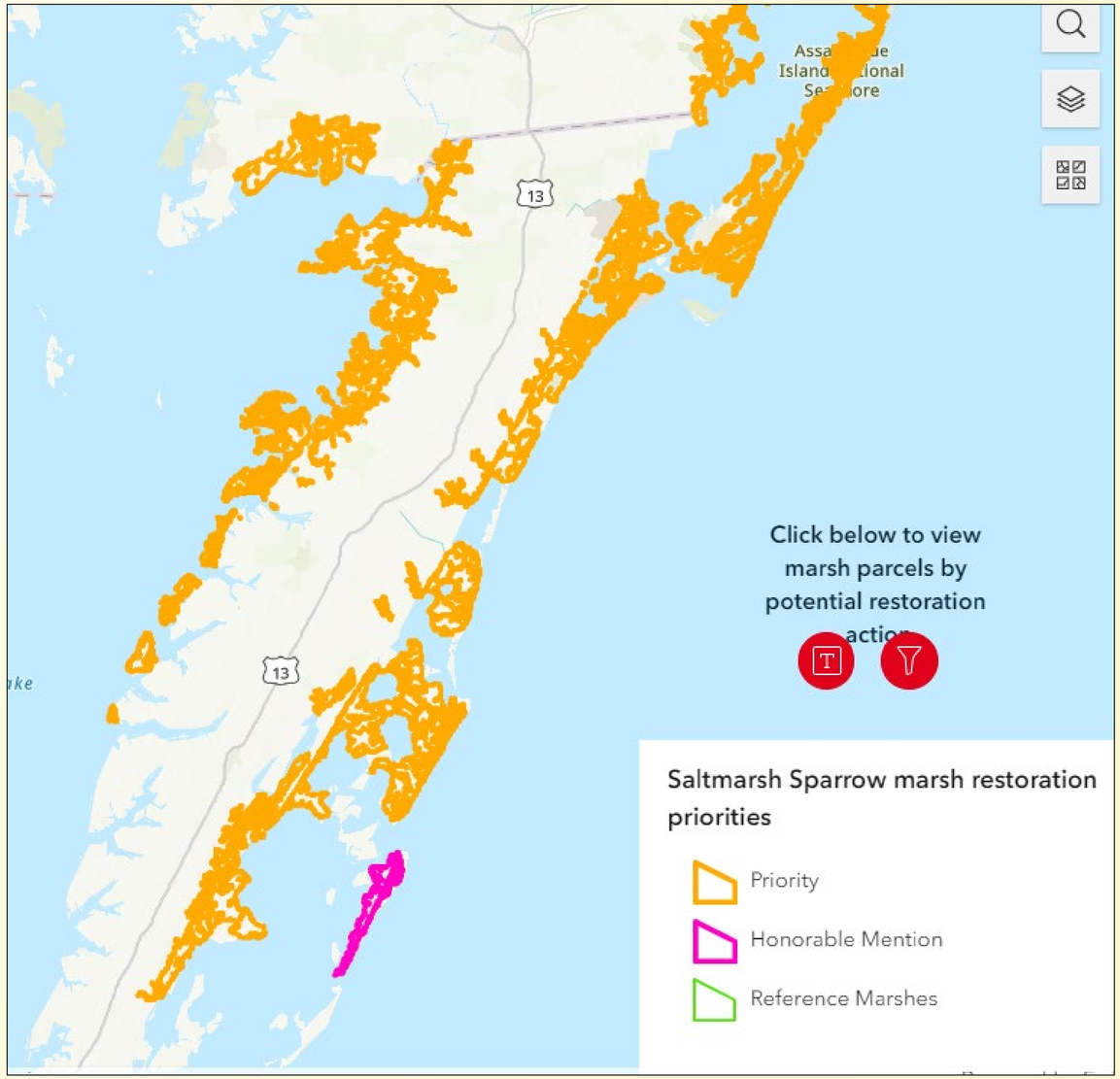
County Name	Scientific Name	Common_Name	Grouping	Type	Tier		
Accomack County	Acipenser oxyrinchus	Atlantic sturgeon	Freshwater Fish	Fish	I		
Northampton County	Acipenser oxyrinchus	Atlantic sturgeon	Freshwater Fish	Fish	I		
Accomack County	Agelaius phoeniceus	Red-winged Blackbird	Bird	Bird	IV		
Northampton County	Agelaius phoeniceus	Red-winged Blackbird	Bird	Bird	IV		
Accomack County	Alosa mediocris	Hickory shad	Freshwater Fish	Fish	IV		
Northampton County	Alosa mediocris	Hickory shad	Freshwater Fish	Fish	IV		
Accomack County	Amaranthus pumilus	Seabeach amaranth	Plant	Plant	I		
Northampton County	Amaranthus pumilus	Seabeach amaranth	Plant	Plant	I		
Accomack County	Ammodramus caudacutus	Saltmarsh Sparrow	Bird	Bird	II	a	Tidal wetlands
Accomack County	Ammodramus savannarum	Grasshopper Sparrow	Bird	Bird	IV	b	Grasslands, Transportation Networks
Northampton County	Ammodramus savannarum	Grasshopper Sparrow	Bird	Bird	IV	b	Grasslands, Transportation Networks
Accomack County	Ammospiza nelsoni	Nelson's Sparrow (winter)	Bird	Bird	III	b	Tidal wetlands
Northampton County	Ammospiza nelsoni	Nelson's Sparrow (winter)	Bird	Bird	III	b	Tidal wetlands
Accomack County	Amphicarpum amphicarpon	Pine-barrens peanut grass	Plant	Plant	I	a	Non-tidal Wetlands, Croplands
Accomack County	Anas rubripes	American Black Duck (winter)	Bird	Bird	II	a	Forest and Woodlands, Riparian and Floodplains, Headwater Streams, Creeks

V	W	
or Threat_Lor	Actions	No
	Address impacts of sea level rise as follows: 1. purchase and conserve properties in marsh migration zones where upland habitats have a high probablity of transforming into suitable Saltmarsh Sparrow (SALS) breeding habitat. 2. Manage coastal WMAs that encompass suitable marsh habitats for breeding SALS. 3. Conduct regular SALS occupancy and breeding productivity monitoring on DWR WMAs that are managed for SALS to evaluate the effectiveness of management strategies. NOTE: This benefit Forster's Tern, Laughing Gull and other marsh nesting species. (11.1.1), 1. Improve existing SALS breeding habitat by conducting regular control of phragmites and other invasive plant species at coastal DWR WMAs with suitable SALS breeding habitat. NOTE: this will benefit all marsh nesting birds. (8.1.4)	
ecosystem re		Ot
ecosystem re	Address impacts of sea level rise as follows: 1. purc	Co

Saltmarsh Habitat Restoration

- Need to restore, create or enhance 30,875 acres of high marsh to achieve the 2069 goal.

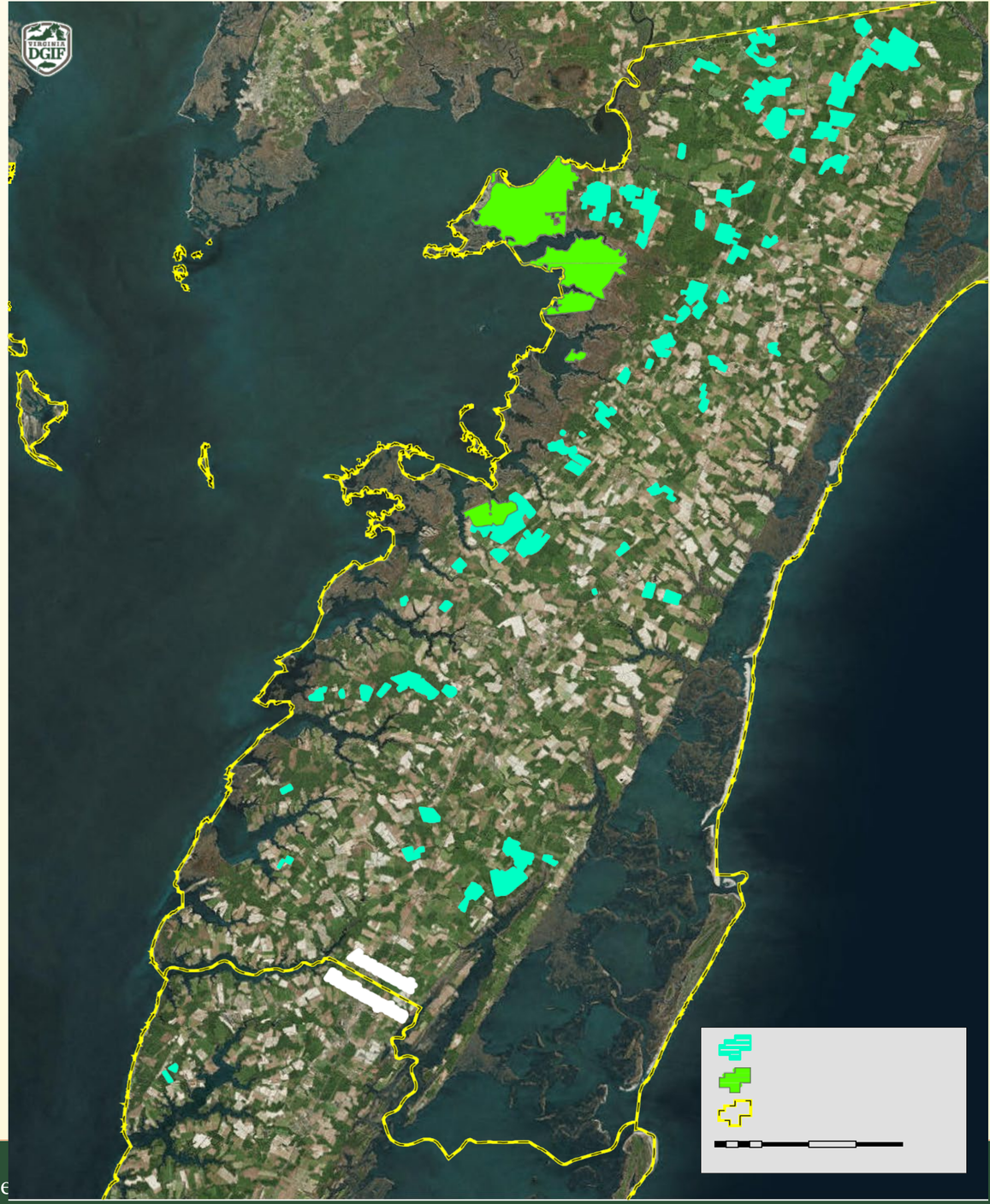
- Bayside Eastern Shore and new DWR lands ripe opportunity for this work.



Coastal Forest WMA:
Migratory Birds, Marsh Migration, Public Access

Conservation & Recreation Opportunities

- Improved sustainable habitat for migratory birds in an area of hemispheric importance
- Public access, especially for hunting and wildlife viewing, which is nearly non-existent on the Eastern Shore
- Significant wetlands restoration
- Facilitation of natural marsh migration
- Targeted habitat development for at-risk species (e.g., black rail, northern diamondback terrapin, saltmarsh sparrow, black duck)

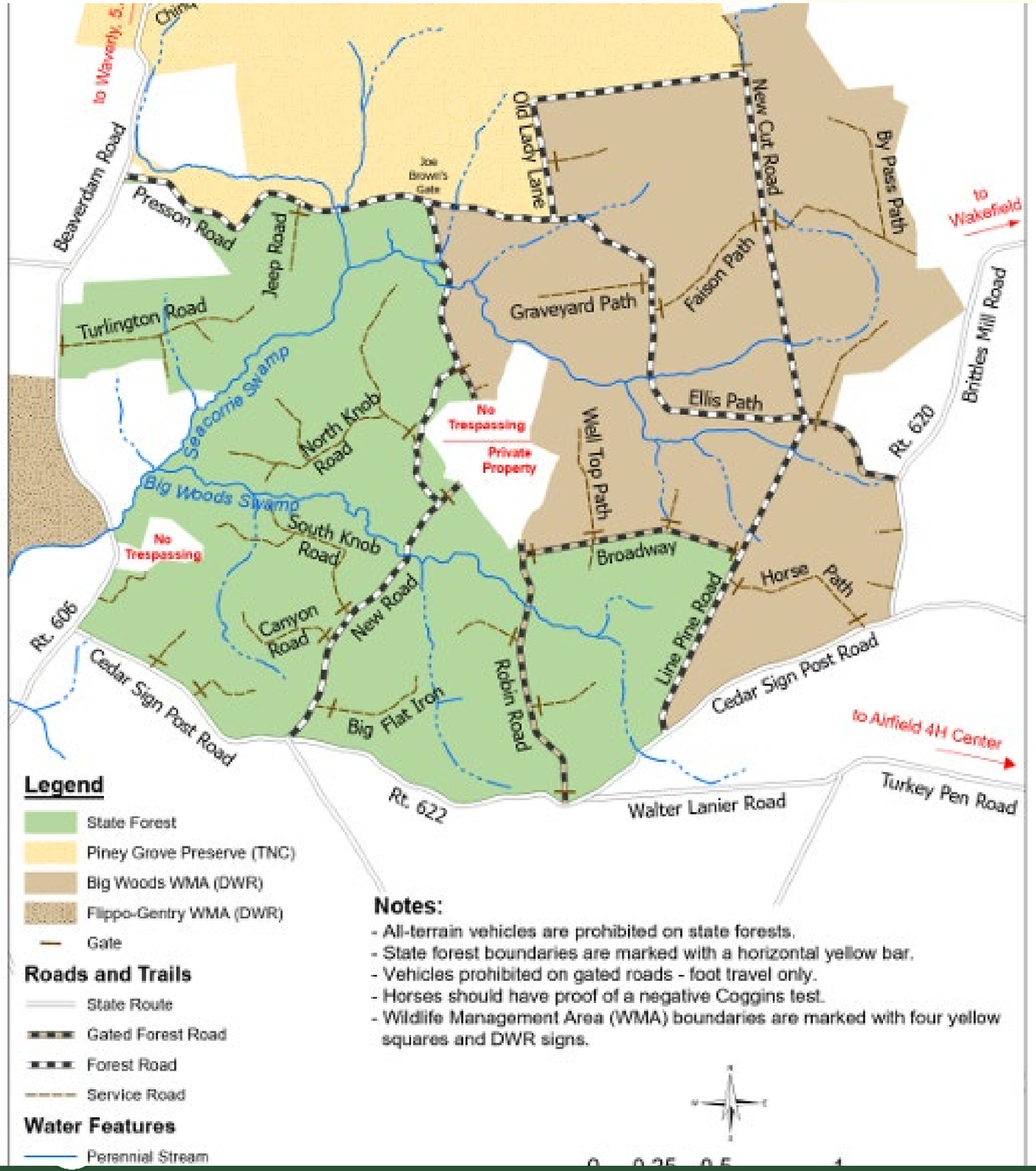


Wildlife-Related Recreation

- Wildlife watching
  - 7.1 million Virginians and visitors
  - $654 million annually on wildlife-watching related expenditures
- Recreational fishing
  - 1.4 million Virginians and visitors
  - $350 million annually on fishing-related equipment expenditures
- Hunting
  - 510,000 Virginians and visitors
  - $409 million annually on hunting-related equipment expenditures

- Access is key!

Big Woods WMA:
Red-cockaded Woodpecker Recovery and So Much More!


to Waverly, 5...
Beaverdam Road
Presson Road
Jeep Road
Turlington Road
Joe Brown's Gate
Old Lady Lane
New Cut Road
By Pass Path
to Wakefield
Graveyard Path
Faison Path
Bribles Mill Road
Rt. 620
Ellis Path
Seacornie Swamp
North Knob Road
No Trespassing
Private Property
Well Top Path
Big Woods Swamp
South Knob Road
No Trespassing
Broadway
Horse Path
Rt. 605
Canyon Road
New Road
Line Pine Road
Cedar Sign Post Road
Big Flat Iron
Robin Road
Cedar Sign Post Road
to Airfield 4H Center
Turkey Pen Road
Rt. 622
Walter Lanier Road
Legend
State Forest
Piney Grove Preserve (TNC)
Big Woods WMA (DWR)
Flippo-Gentry WMA (DWR)
Gate
Roads and Trails
State Route
Gated Forest Road
Forest Road
Service Road
Water Features
Perennial Stream
Notes:
- All-terrain vehicles are prohibited on state forests.
- State forest boundaries are marked with a horizontal yellow bar.
- Vehicles prohibited on gated roads - foot travel only.
- Horses should have proof of a negative Coggins test.
- Wildlife Management Area (WMA) boundaries are marked with four yellow squares and DWR signs.

Big Woods WMA

* purchased in 2008
* 2,208 acres

Burning for Birds
VIRGINIA DGIF
The Virginia Department of Game & Inland Fisheries [DGIF] conducts controlled burns at Big Woods Wildlife Management Area (WMA) to help restore this former pine plantation to an open pine woodland, called "pine savanna." Pine savannas are sunny woodlands with a canopy of widely spaced pine trees and a lush groundcover of diverse grasses and wildflowers. Pine seedlers can vary in making holistic panel and longleaf pine. Fire has a natural and historic presence in these ecosystems and played an integral role in their evolution
"Longleaf pine savannas once dominated landscapes of the southeastern United States, but over time, deforestation and fire suppression drastically reduced these ecosys. This area lost to fire formation was a habitat essential for supporting open savanna pine savannas for recovering. To recovery this important habitat, the DGIF partners with The Nature Conservancy and Fort Virginia Department of Forestry, which own
Red-cockaded Woodpecker

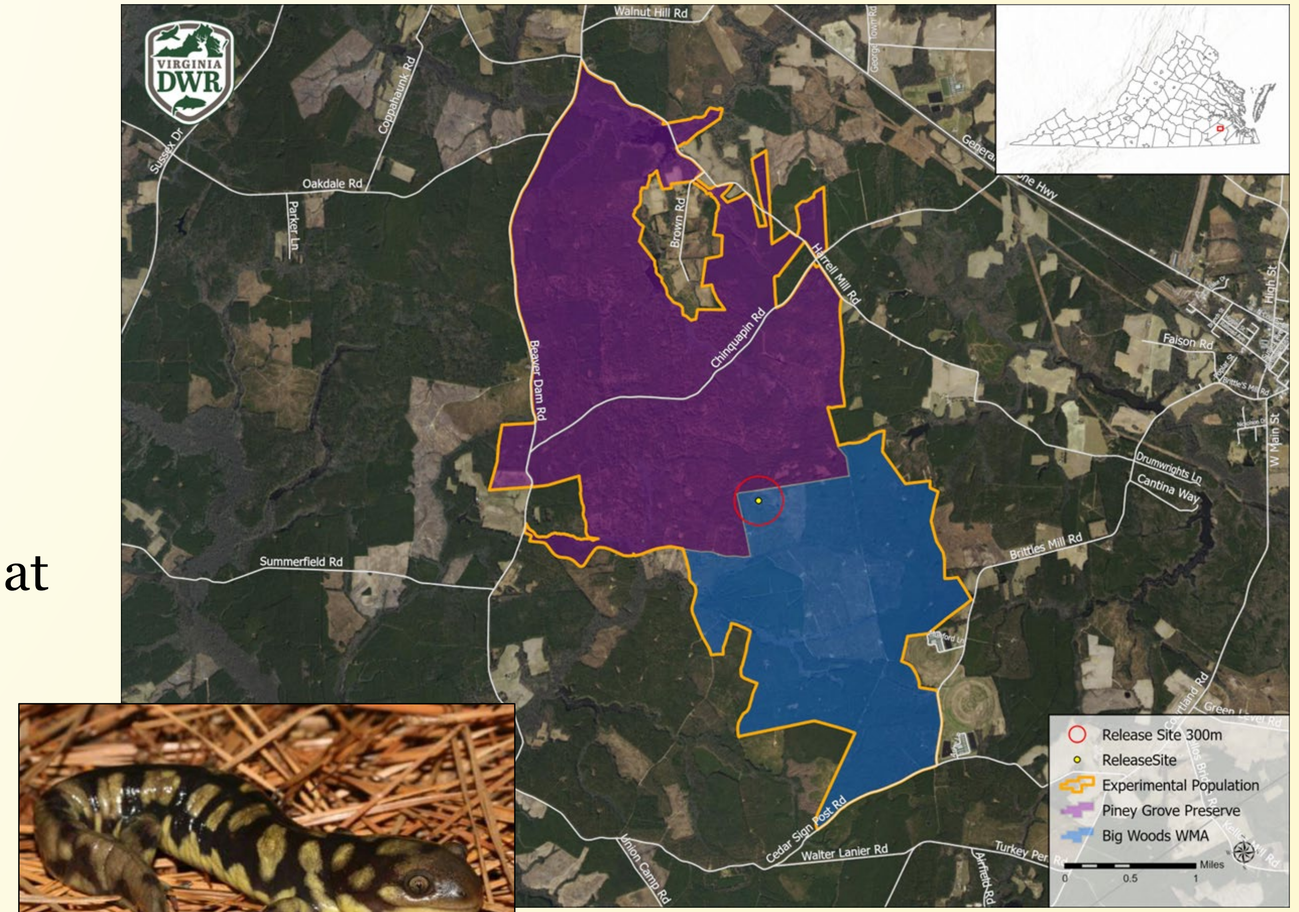
It Takes Family
The Red-cockaded Woodpecker
The endangered red-cockaded woodpecker is a social species that lives in family groups with a highly developed, cooperative breeding system. This behavior makes them unique from most other woodpecker species and amongst all birds — only 3% of all bird species breed in this specialized manner. Family groups nest and roost in a group of trees, known as a "cluster." The group generally consists of 2 - 6 birds with one monogamous breeding pair and 1 - 4 helpers. The helpers are typically the pair's male offspring from previous breeding seasons, who have delayed their own reproduction in order to help their parents in raising their siblings.
Who's Who in The Cluster
Male and female red-cockaded woodpeckers are difficult to distinguish from a distance; they both have black backs with white ladder like markings, white bellies with black spots down their sides, and large white "cheek patches." Above the white cheek patch, the males have a tiny red streak, called a "cockade," which gives the species its name, but this feature is seldom visible. Juvenile males have a red crown patch on the top of their heads, but they lose this marking only a few months after leaving the nest.
Nests
Like other woodpeckers, red-cockaded woodpeckers are cavity nesters, but they are unique in that they excavate their nesting and roosting cavities only in live pine trees. Other woodpecker species build their cavities in dead or decaying trees. Red-cockaded woodpeckers also peck tiny holes around their cavities, causing pine resin to flow out and down the tree's trunk. This behavior helps protect their nests because the resin deters climbing snakes. The pine resin looks like dripping white candle wax. See if you can spot a cavity tree!
Lending a Helping Hand
The Virginia Department of Game & Inland Fisheries [DGIF] and partner organizations work hard towards the recovery of this endangered species. In addition to protecting and managing habitat for red-cockaded woodpeckers, the DGIF also installs artificial nest cavities because it can take these birds several years to excavate a new cavity in a live pine tree. This conservation strategy has been vital to recovering red-cockaded woodpecker populations nationally and in Virginia by enhancing clusters and establishing new groups. The DGIF hopes it will have the same effect here at Big Woods Wildlife Management Area.
VIRGINIA
DGIF

SWAP Implementation: New Partnerships, New Approaches

Eastern Tiger Salamander Translocation / Designation of Experimental Population

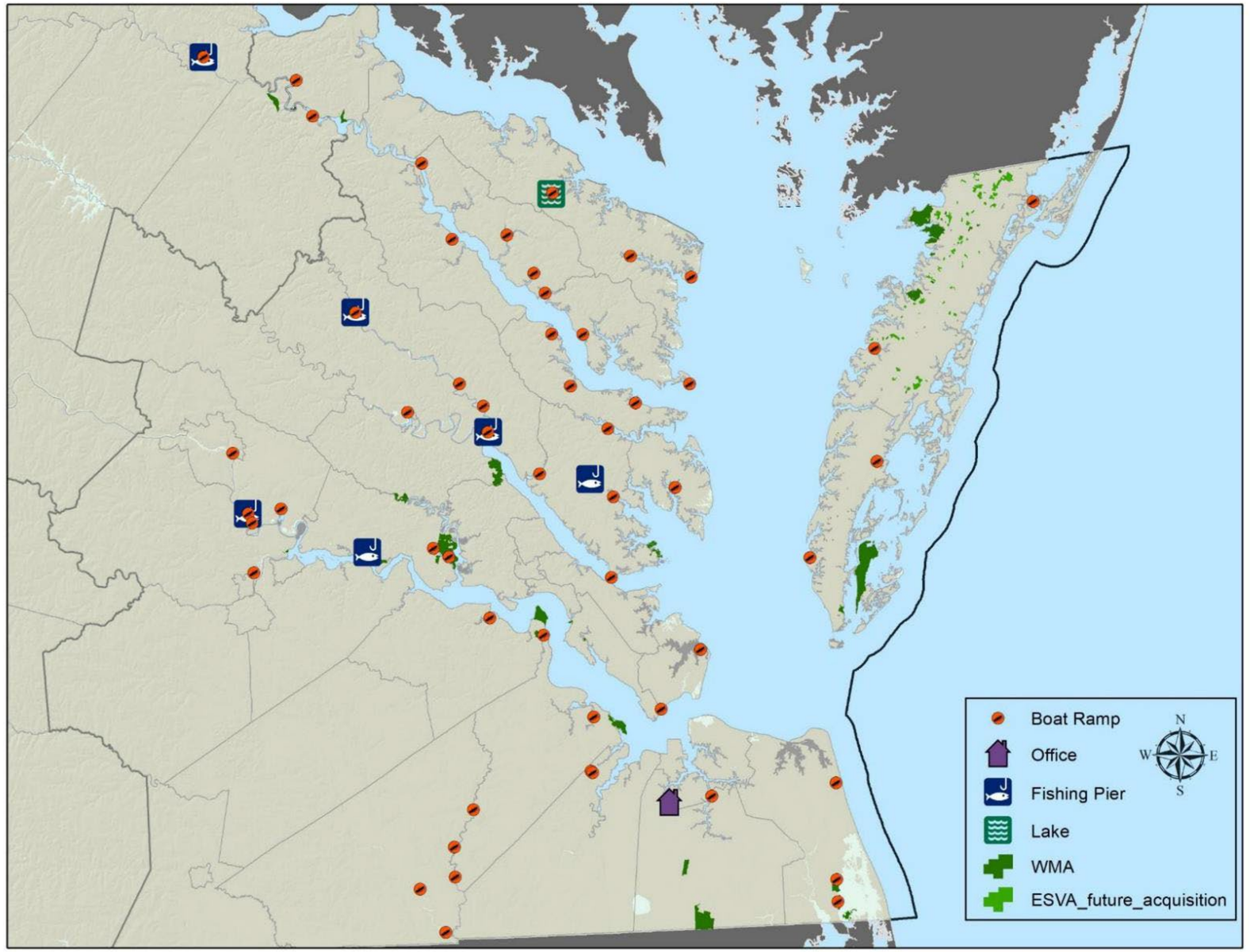
- Public/Private Partnership
- Partners:
  - North Carolina Zoo
  - The Nature Conservancy
  - NC Wildlife Resources Commission
  - DWR

- Larvae sourced from the Sandhills of North Carolina.
- Raised to the appropriate size and health status at the North Carolina Zoo.
- Proposed to be a 7-year project, with success being achieved upon documentation of a reproducing population by year 5 post release.



SWAP Implementation: Success Stories

Simon Thomas Farm, Floyd County, VA - Habitat Acquisition

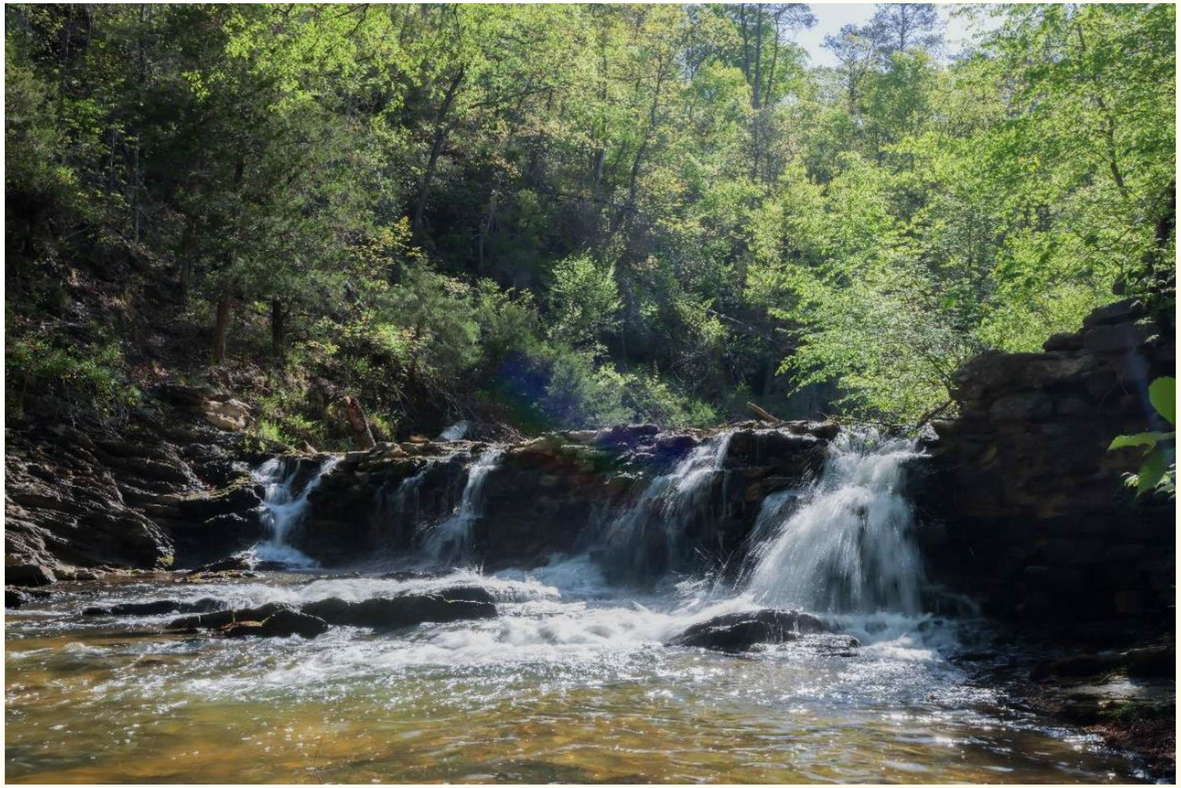


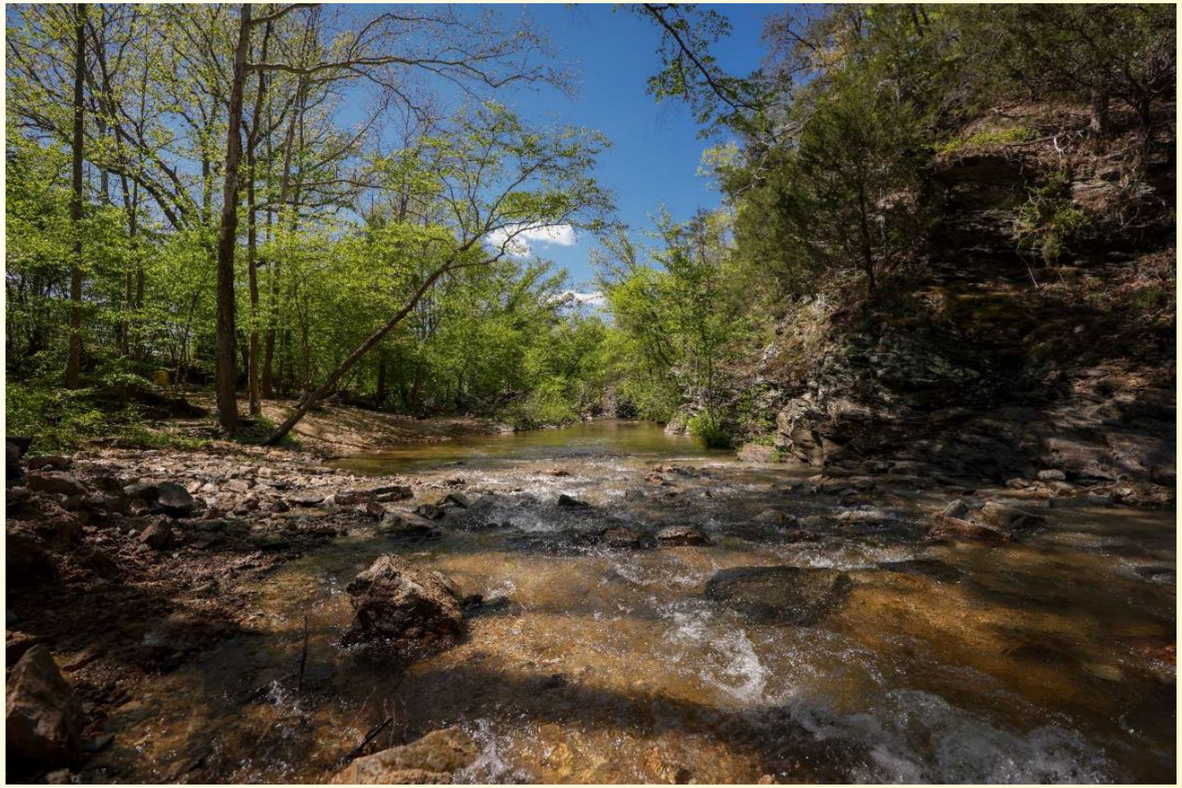
Infrastructure

- Vulnerability assessment
- Determine assets in need of future decommissioning vs. adapting
- Especially critical in coastal Virginia, 2080
  - 53 boat ramps
  - 7 fishing piers
  - 18 WMAs
  - 1 lake
- By 2080:
  - 32 ramps unusable
  - 59.5% (21,238 acres) of the 16 WMAs submerged by 2080; 10% of all statewide WMA acreage

SWAP Implementation: Success Stories

Baber Mill Dam Removal





Appreciable benefits to: freshwater mussels, sea lamprey, American eel

SWAP Implementation: Success Stories

Jordan's Point Dam Removal Lexington, VA

- Opened the river for safe recreational use
- Benefits to 8 SGCN
- Opened access to 22 miles of habitat for aquatic wildlife
- Partners:
  - DWR
  - USFWS
  - City of Lexington
  - Shenandoah Valley SWCD
  - James River Association
  - Washington & Lee University
  - Rockbridge Area Conservation Coalition

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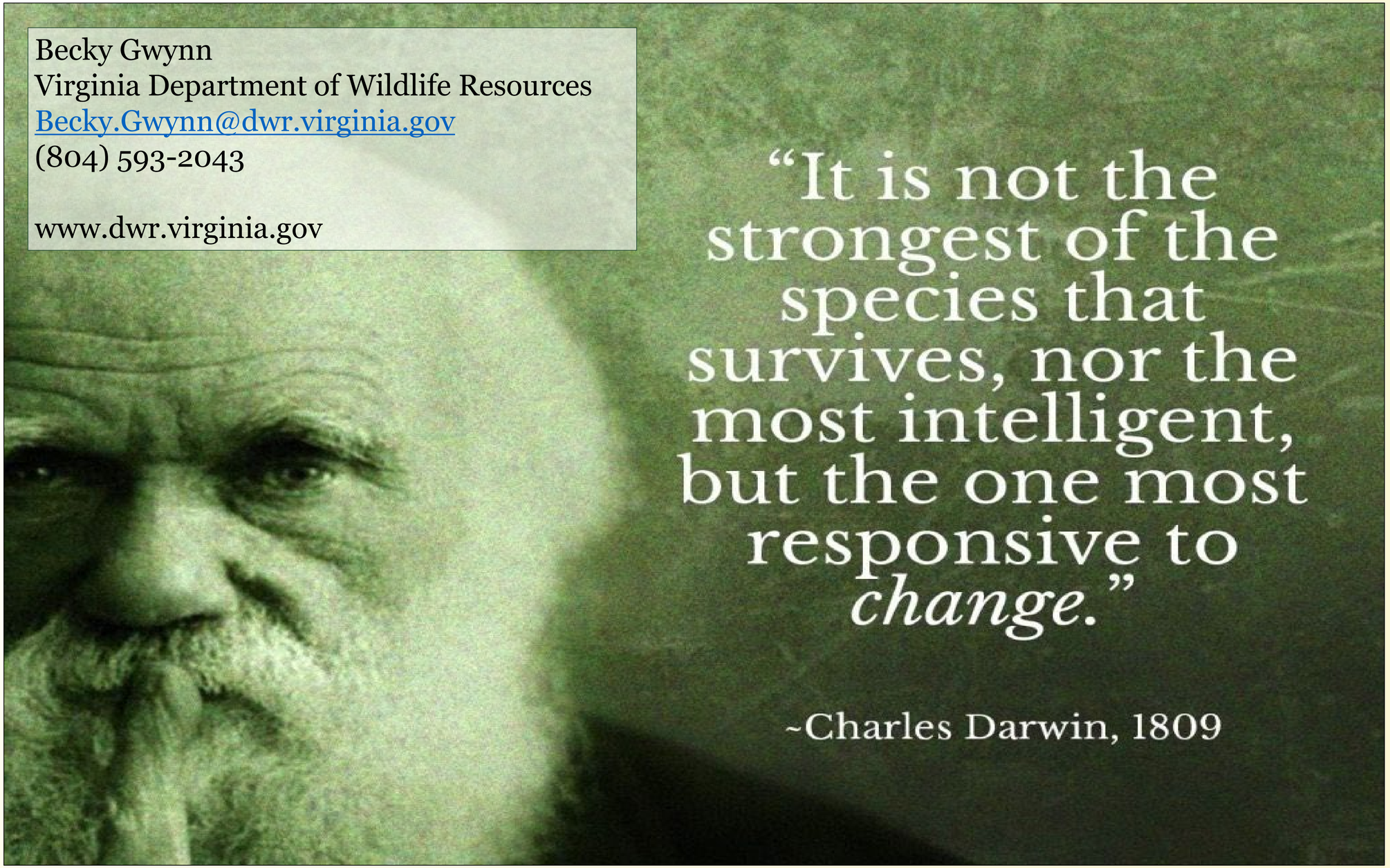
(804) 593-2043

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