



# The SECAS Third Thursday Web Forum

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Collaborative conservation of coastal marsh systems:  
A science update from the Atlantic Coast Joint Venture



# Agenda

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- Introduction
- Monthly topic
- Q&A and discussion
- Preview of next webinar



# Collaborative conservation of coastal marsh systems: A science update from the Atlantic Coast Joint Venture

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Mo Correll, Atlantic Coast Joint Venture

6-16-2022



# COLLABORATIVE CONSERVATION OF COASTAL MARSH SYSTEMS:

A science update from the Atlantic Coast Joint Venture

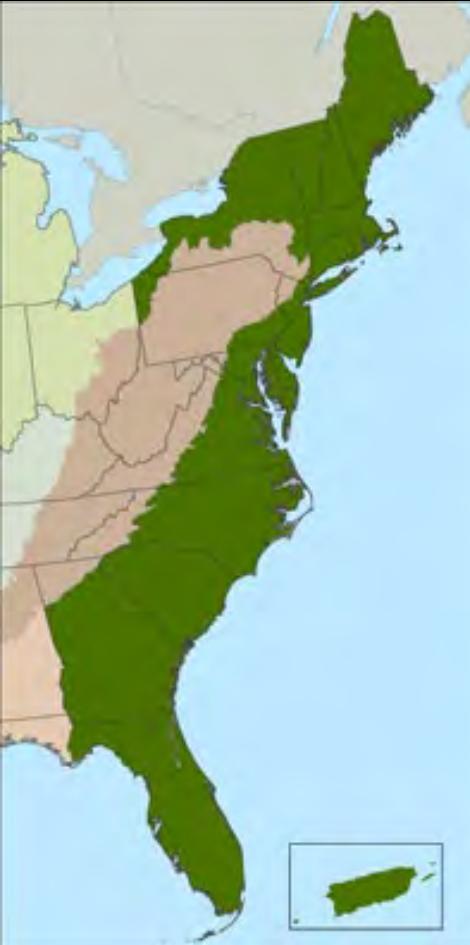


Mo Correll, Atlantic Coast Joint Venture  
[maureen\\_correll@fws.gov](mailto:maureen_correll@fws.gov)



Atlantic Coast  
**JOINT VENTURE**

# ATLANTIC COAST JOINT VENTURE: A CONSERVATION COLLABORATIVE



A regional partnership of state, federal, non-profit, and private conservation entities focused on conserving coastal marsh systems.

# ATLANTIC COAST JOINT VENTURE: A CONSERVATION COLLABORATIVE

Climate change is driving accelerated sea level rise along the Atlantic coastline.

Past marsh modifications impede existing natural mechanisms to help marshes keep up with sea level rise, resulting in additional marsh loss.



ditching



tidal  
restrictions

# ATLANTIC COAST JOINT VENTURE: A CONSERVATION COLLABORATIVE



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**Eastern Black Rail**

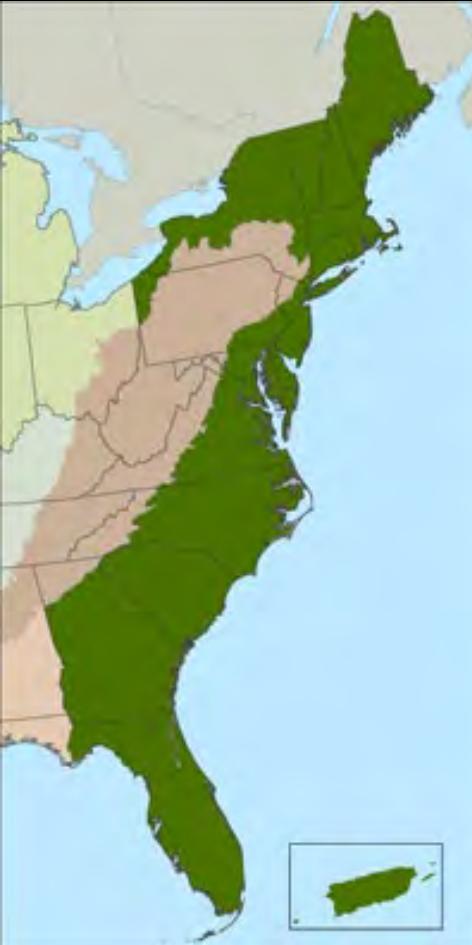


**American Black Duck**



**Saltmarsh Sparrow**

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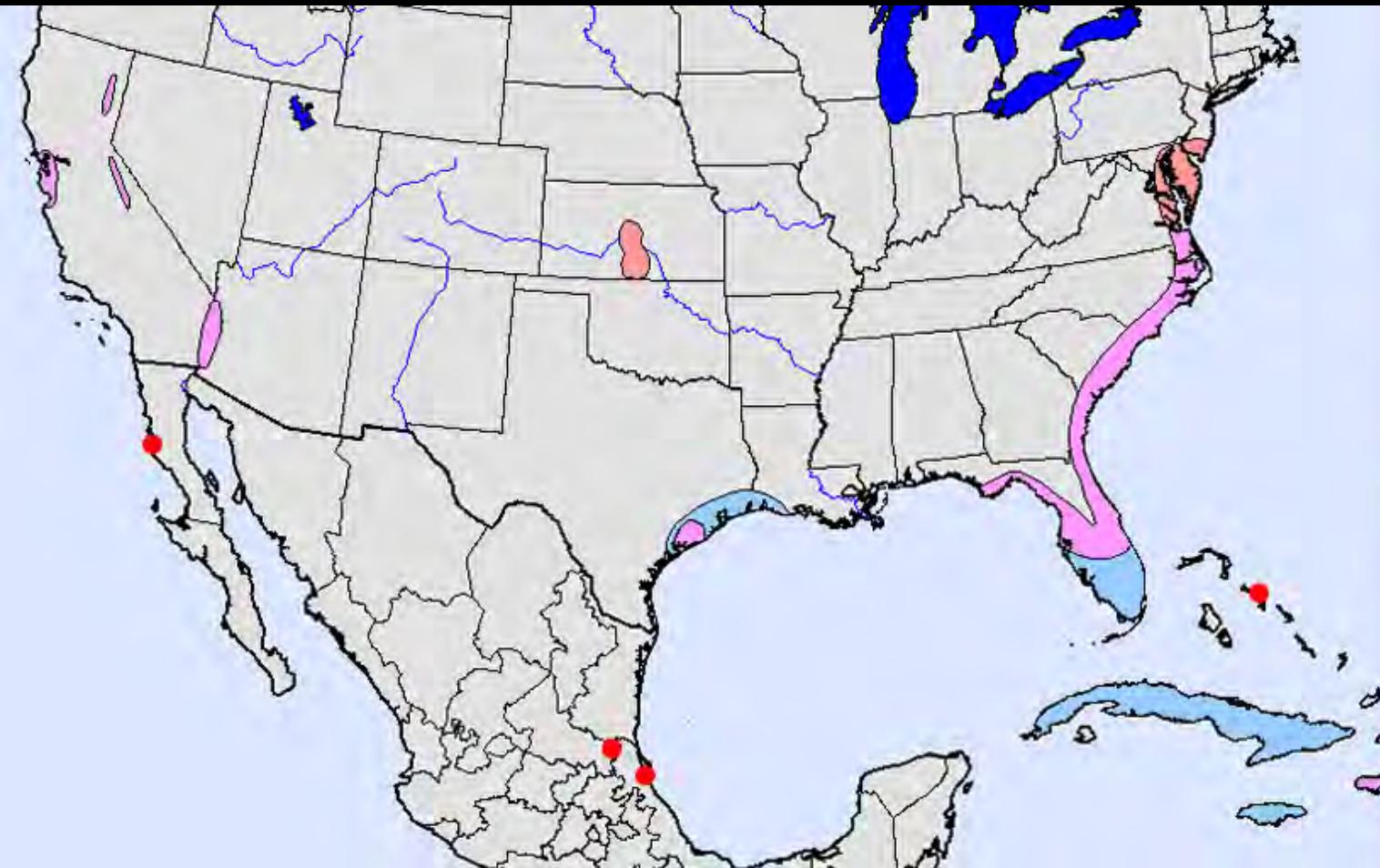
**American Black Duck**

**Saltmarsh Sparrow**



Photo: C. Hand, SCDNR

# BLACK RAIL DISTRIBUTION



- Permanent Resident
- Breeding Resident
- Nonbreeding Resident
- Passage Migrant
- Introduced
- Uncertain Status
- Vagrant

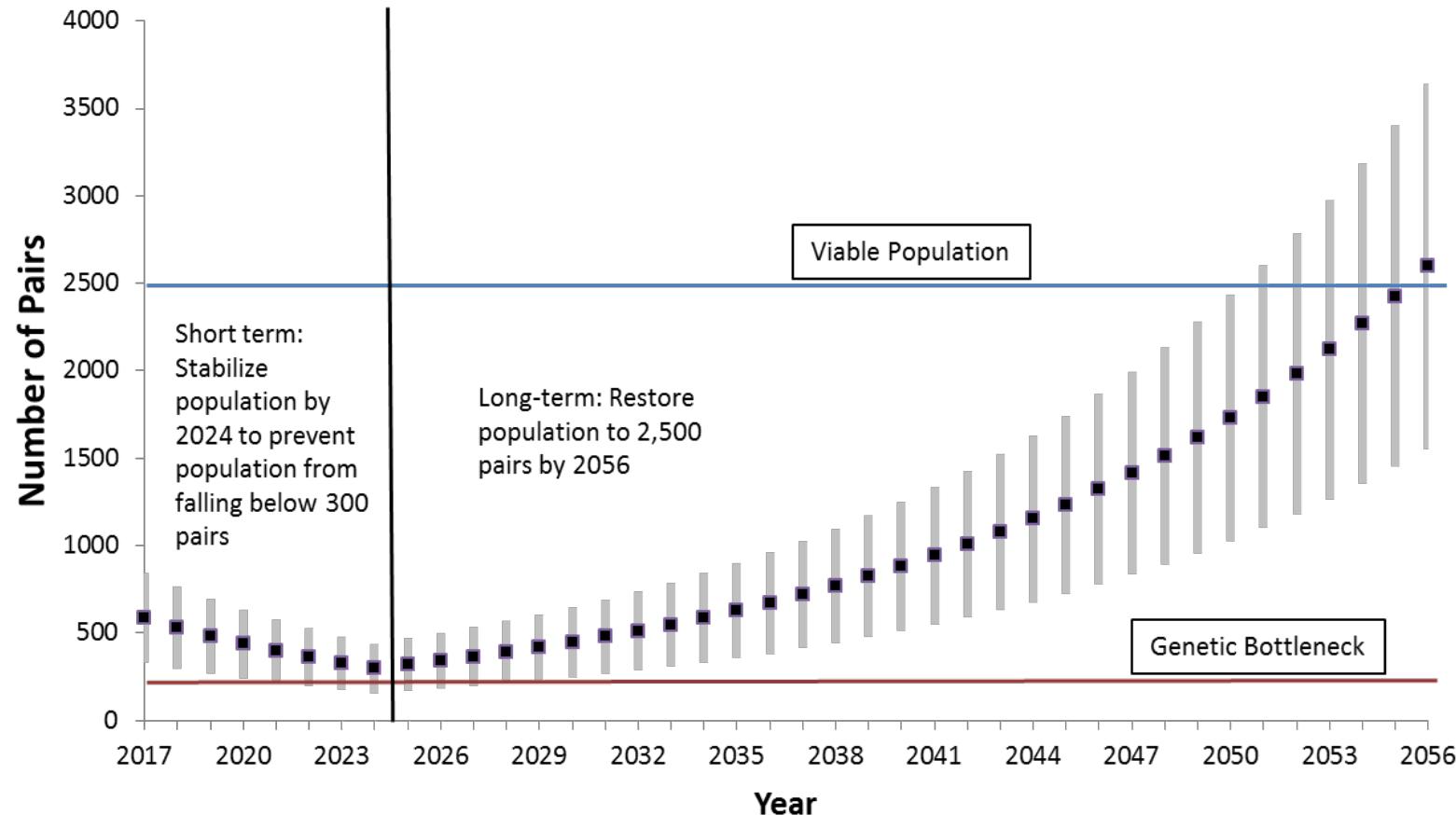
# Black Rail Conservation Plan

*Atlantic Coast Joint Venture partners  
working to conserve an imperiled species.*



ATLANTIC COAST JOINT VENTURE

# POPULATION OBJECTIVES FOR THE EASTERN BLACK RAIL



# WHAT WILL IT TAKE TO REACH POPULATION GOALS?



Conservation Region	State	Non-tidal population objectives (pairs)	Tidal population objectives (pairs)	Total (pairs)	Non-tidal habitat objectives (acres)	Tidal habitat objectives (acres)	Total (acres)
Florida	Florida	725	725	1,450	4,168	4,168	8,336
South-Atlantic/Piedmont	North Carolina	313	313	625	1,800	1,800	3,600
	South Carolina						
	Georgia						
Mid-Atlantic	Pennsylvania	163	163	325	935	935	1,870
	New Jersey						
	Delaware						
	Maryland						
	Virginia						



# PREDICTING HABITAT FOR BLACK RAILS: EASIER SAID THAN DONE

Too Wet

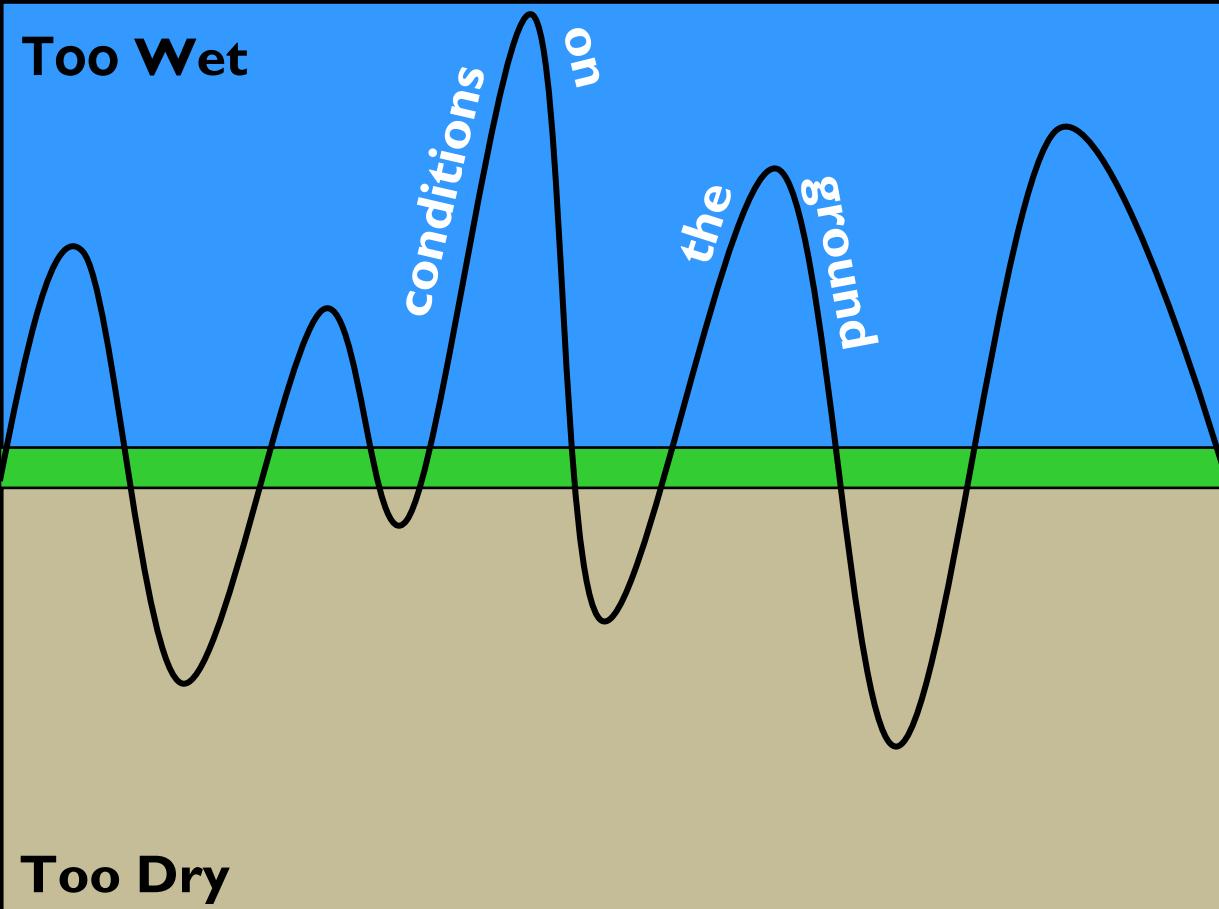
Too Dry



What rails like



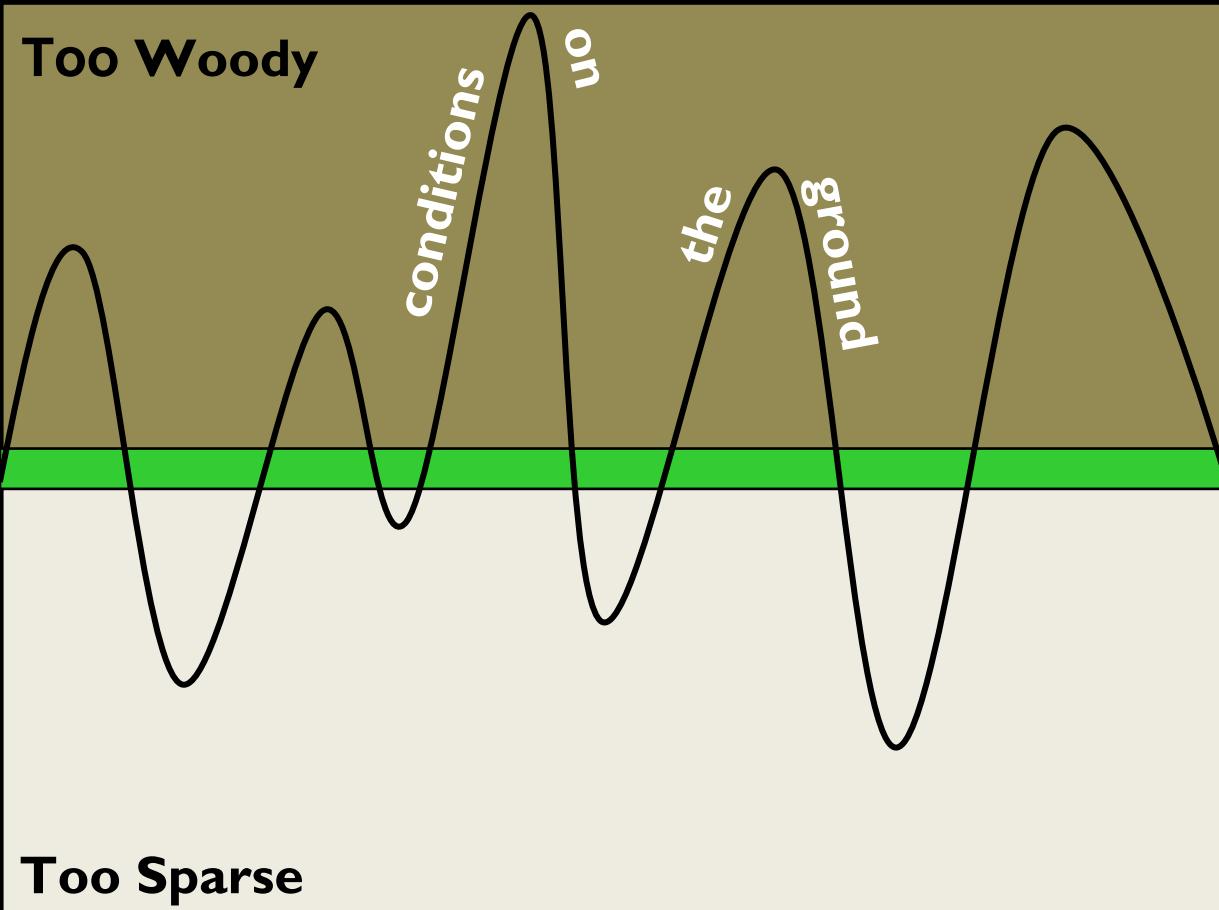
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What rails like



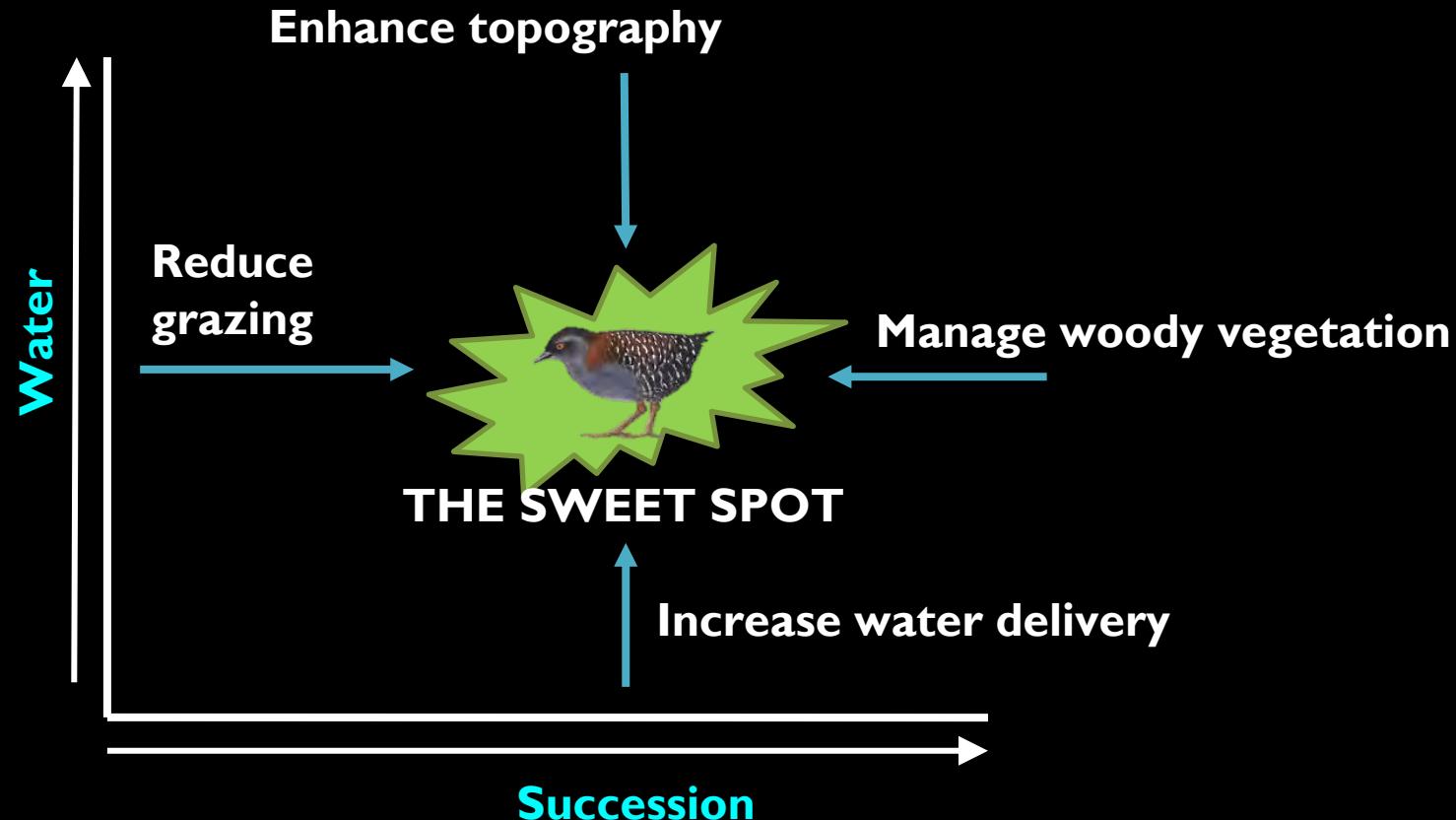
# PREDICTING HABITAT FOR BLACK RAILS: EASIER SAID THAN DONE



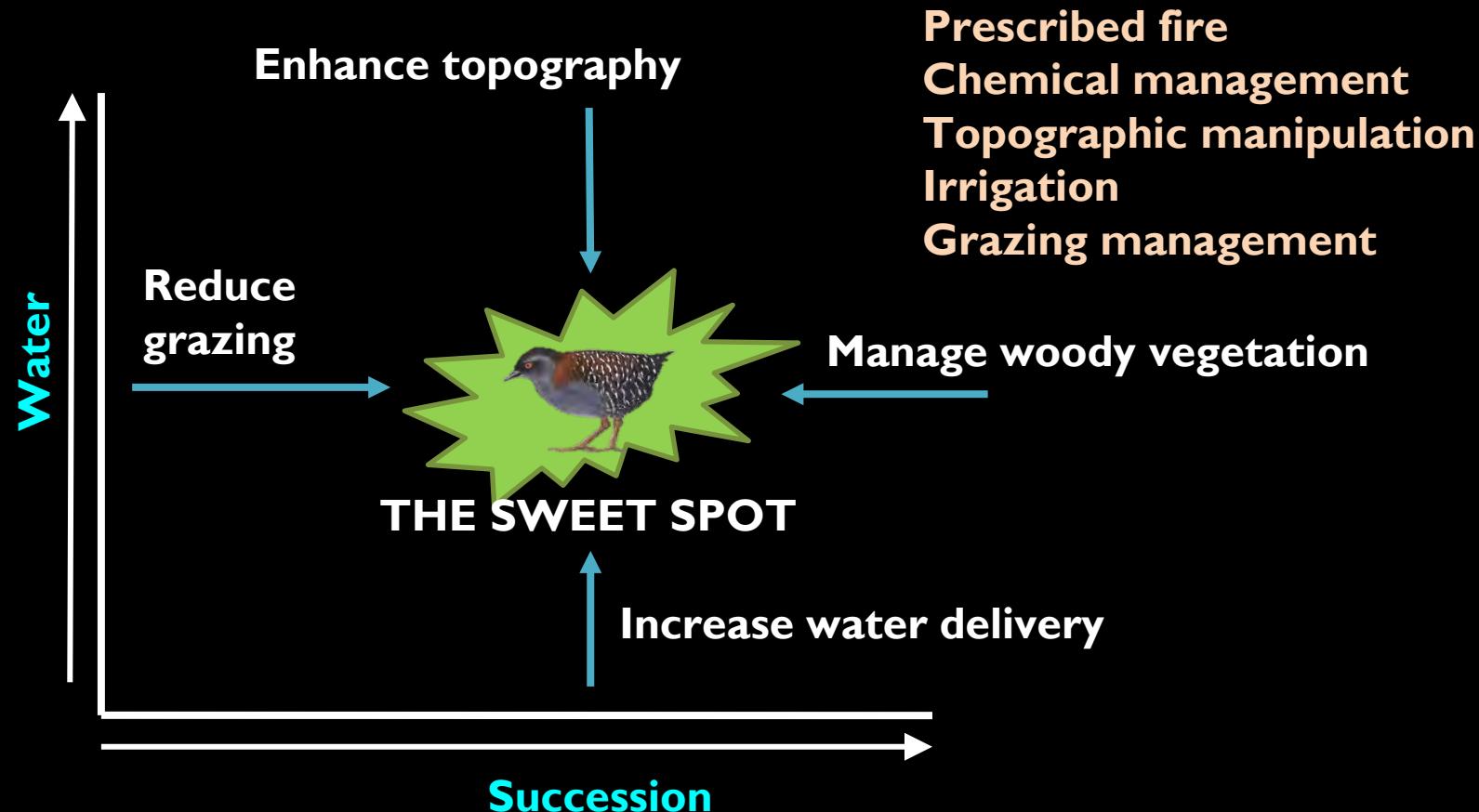
What rails like



# MANAGING FOR BLACK RAILS: EASIER SAID THAN DONE



# MANAGING FOR BLACK RAILS: EASIER SAID THAN DONE



# PARTNERSHIP DRIVES CHANGE



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- Regional monitoring and regulatory protocols for the Black Rail



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- Regional monitoring and regulatory protocols
- Partnership with USGS on Adaptive Management for Black Rails

*Structured Decision-making process*

*Bayesian belief networks*

*Evaluating two partner-derived hypotheses*



# PARTNERSHIP DRIVES CHANGE



- Regional monitoring and regulatory protocols
- Partnership with USGS on Adaptive Management for Black Rails

*Structured Decision-making process*

*Bayesian belief networks*

*Evaluating two partner-derived hypotheses*

*Irrigation*

*Fire vs. Herbicide*





- Regional monitoring and regulatory protocols
- Partnership with USGS on Adaptive Management for Black Rails
- Multi-state effort to create Black Rail habitat in the Southeast (cSWG)



# PARTNERSHIP DRIVES CHANGE

- Regional monitoring and regulatory protocols
- Partnership with USGS on Adaptive Management for Black Rails
- Multi-state effort to create Black Rail habitat in the Southeast (cSWG)
- Buffer tool to identify locations for future Black Rail habitat creation





- Based on occupancy model for eastern Black Rail in tidal systems (Stevens and Conway, in press)
- Identifies areas within 30 km of areas with predicted occupancy
- Removes land cover types not suitable for restoration

# ATLANTIC COAST JOINT VENTURE: A CONSERVATION COLLABORATIVE



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## **Eastern Black Rail**

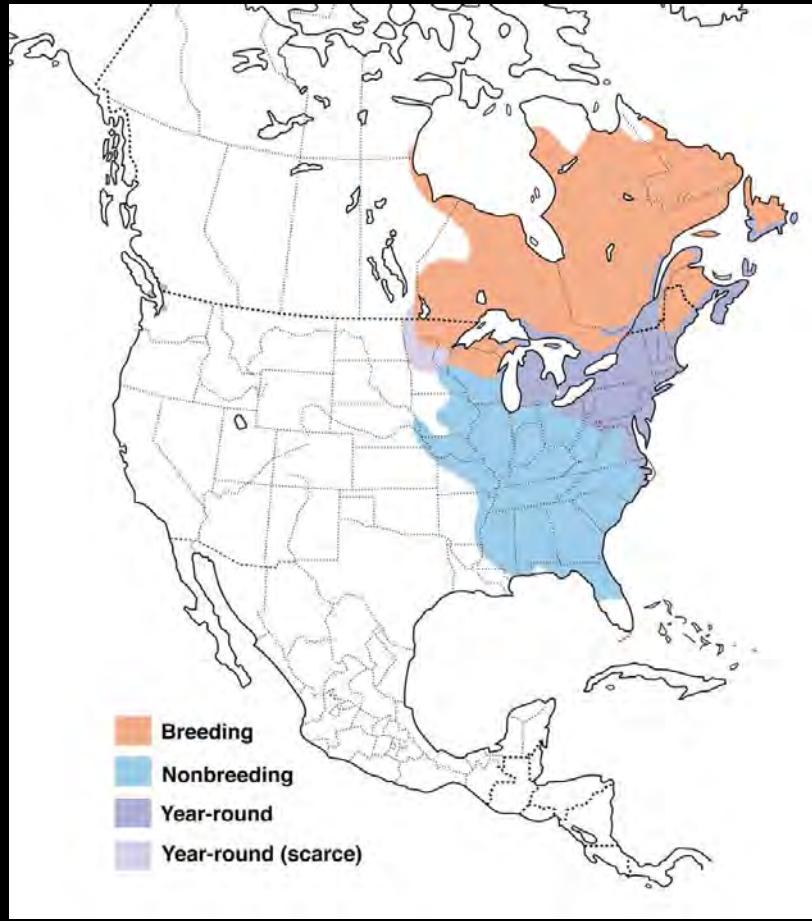


## **American Black Duck**

## **Saltmarsh Sparrow**



# AMERICAN BLACK DUCK DISTRIBUTION



# AMERICAN BLACK DUCK CONSERVATION PLAN

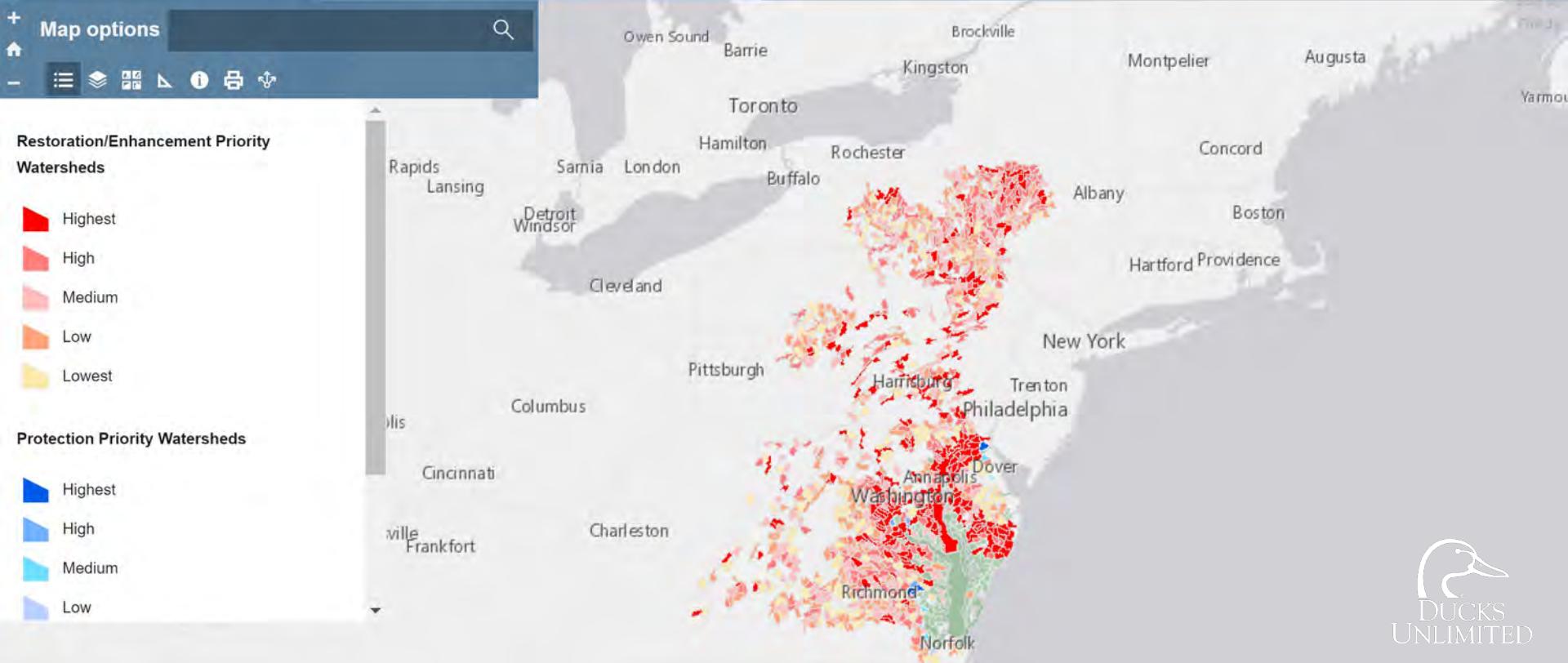
*Partners working to conserve coastal marshes  
and the birds that depend on them.*



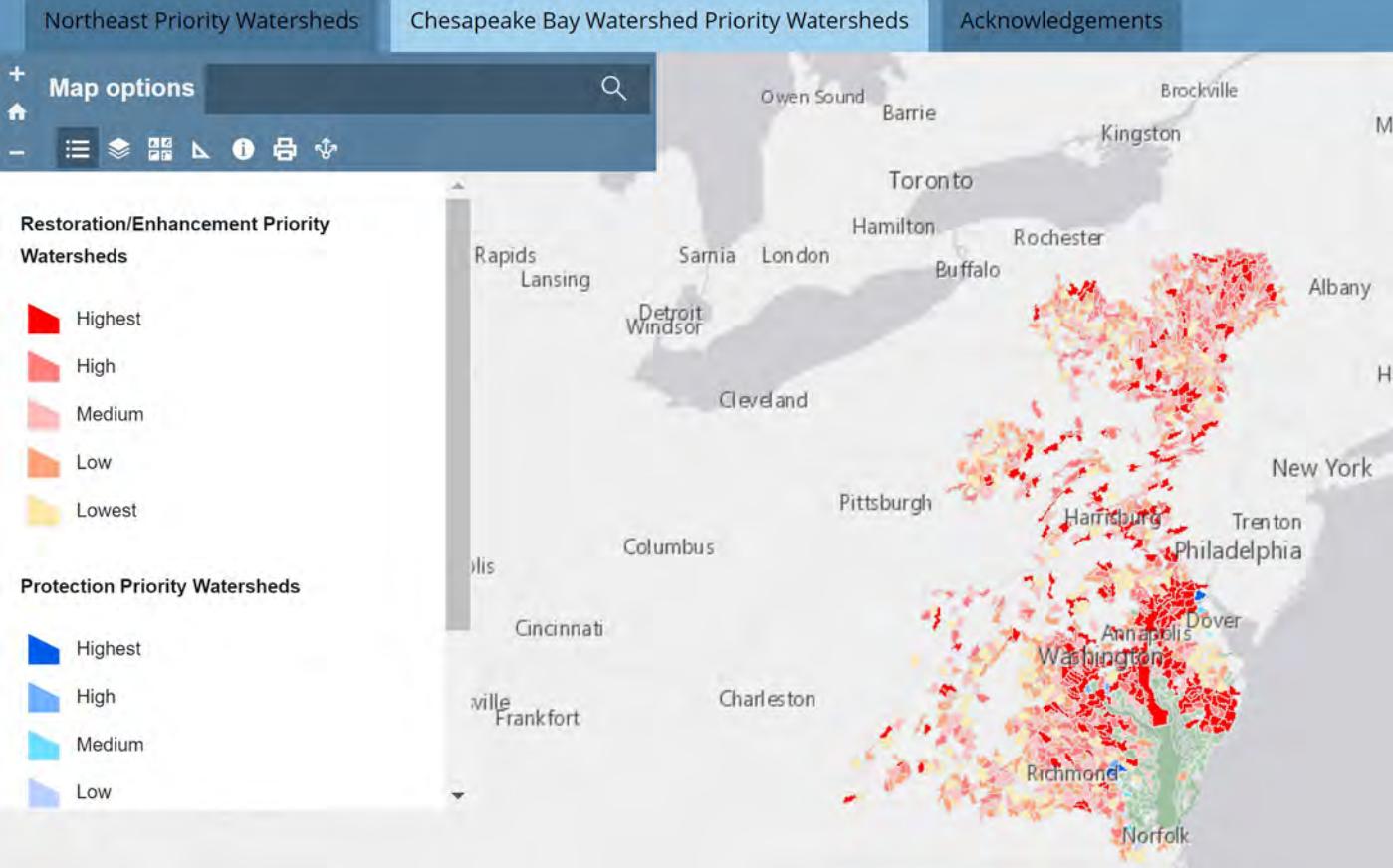
*Atlantic Coast Joint Venture  
April 2022*

<b>State</b>	<b>80% Population Objective</b>	<b>Protection Goal (ac)</b>	<b>Restoration Goal (ac)</b>
Connecticut	29,126	18,372	4,300
Delaware	56,237	69,691	30,372
Florida	402	21,849	62
Georgia	6,869	206,217	28,210
Maine	41,900	46,231	1,974
Maryland	112,167	304,475	109,645
Massachusetts	30,571	5,048	2,137
New Hampshire	13,277	16,035	895
New Jersey	91,424	30,073	10,630
New York	145,894	685,568	158,681
North Carolina	71,101	535,224	119,950
Pennsylvania	59,193	537,359	286,269
Rhode Island	9,736	3,749	2,202
South Carolina	12,444	289,063	56,454
Vermont	13,664	86,635	37,441
Virginia	90,384	274,756	50,738
<b>Grand Total</b>	<b>788,387</b>	<b>3,130,346</b>	<b>899,959</b>

# American Black Duck Non-breeding Watershed Prioritization

[Northeast Priority Watersheds](#)[Chesapeake Bay Watershed Priority Watersheds](#)[Acknowledgements](#)

# American Black Duck Non-breeding Watershed Prioritization



- Based on bioenergetics models and harvest data, developed by Ducks Unlimited
- Identifies restoration and protection priority watersheds
- Updated tool ~August 2022

# ATLANTIC COAST JOINT VENTURE: A CONSERVATION COLLABORATIVE



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**Eastern Black Rail**

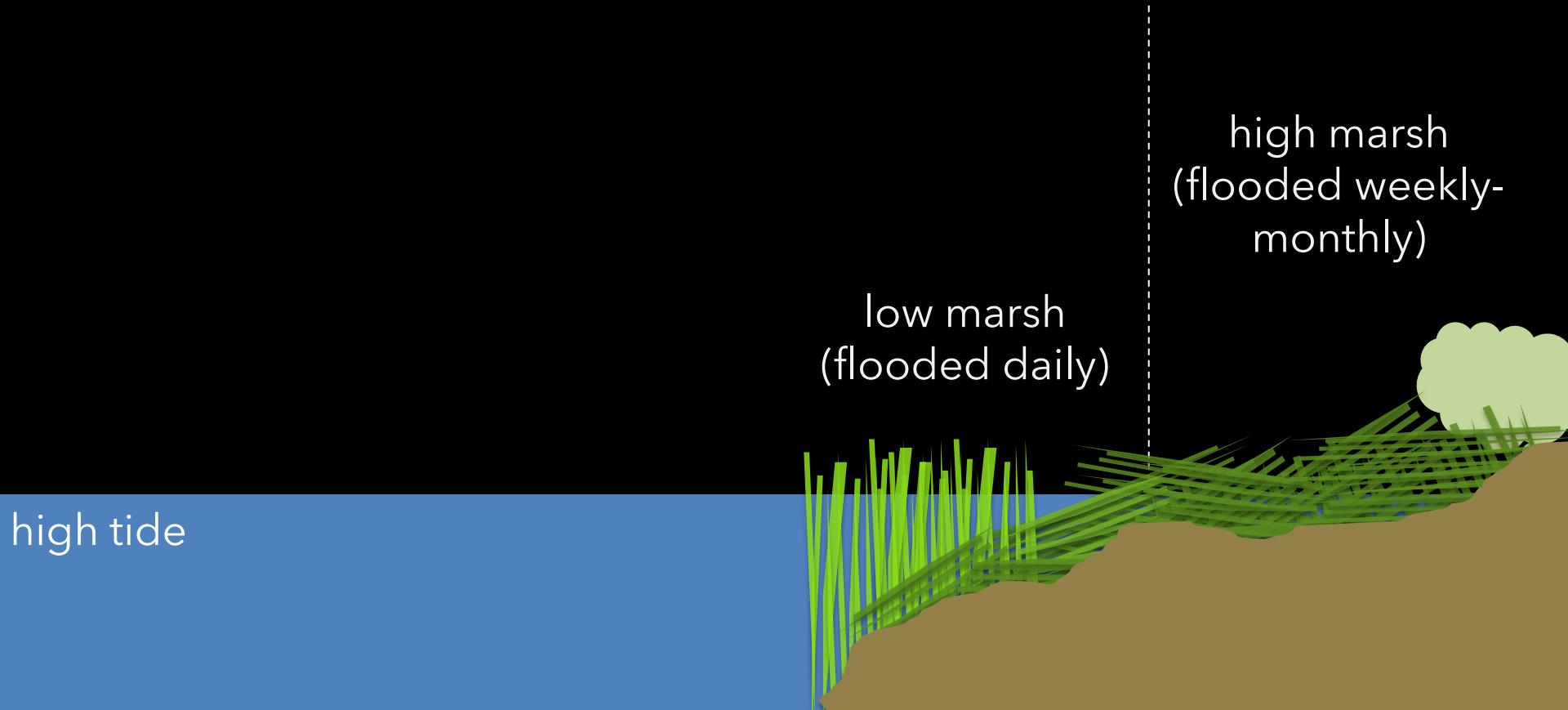
**American Black Duck**



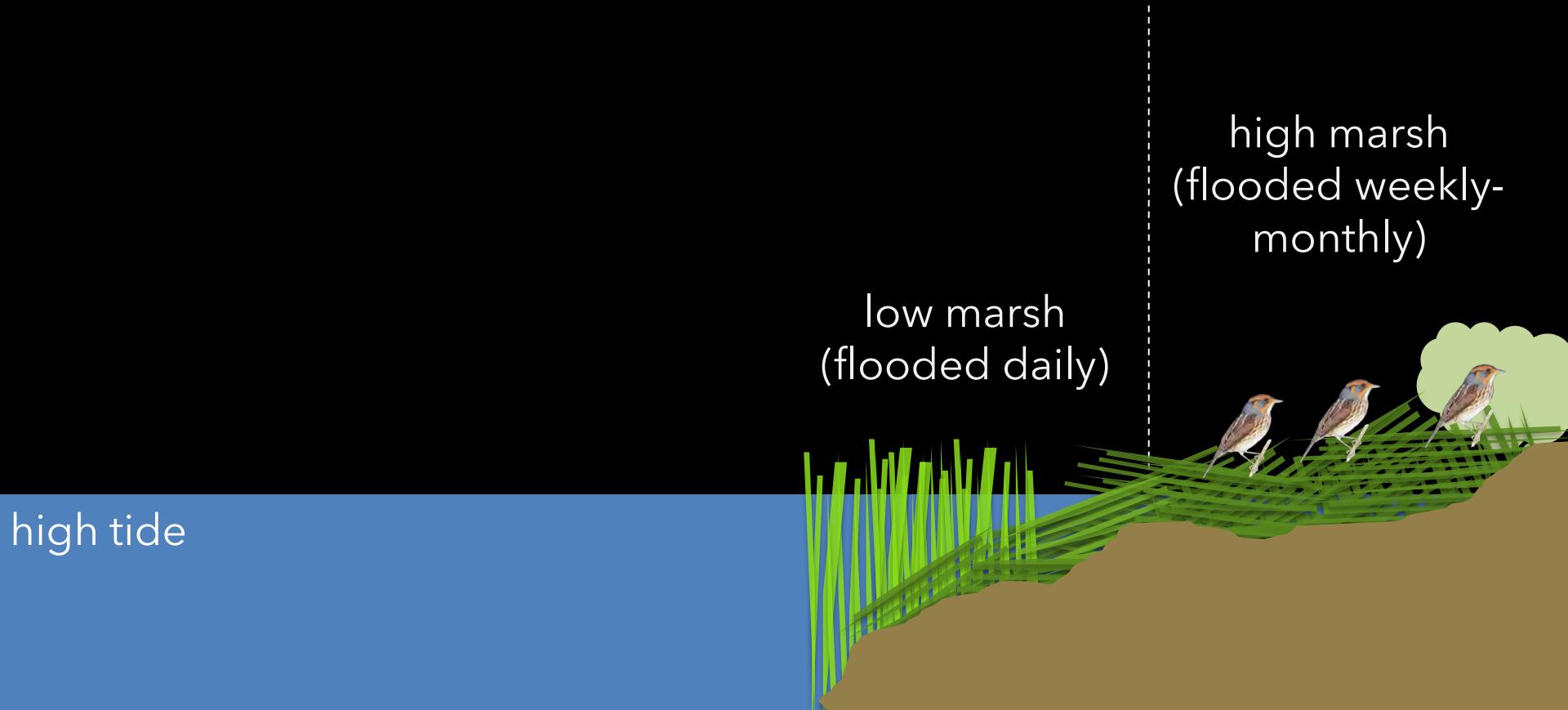
**Saltmarsh Sparrow**



# SALTMARSH SPARROW HABITAT IS LINKED TO THE LUNAR CYCLE



# SALTMARSH SPARROW HABITAT IS LINKED TO THE LUNAR CYCLE



# SALTMARSH SPARROW DISTRIBUTION



# Saltmarsh Sparrow Conservation Plan

*Partners working to conserve salt marshes and  
the birds that depend on them.*



# POPULATION AND HABITAT GOALS

	2011/2012 Population Estimate	Confidence Interval	State's %	Population Goal (Indiv)	Short-term Habitat Goal (ac)	Long-term Habitat Goal (ac)	Current High Marsh (ac)
New York	5,300	(+/- 1,300)	8.7%	2,170	<b>1,338*</b>	4,286*	11,892**
Regional	60,000			25,000	23,000	79,605	

*Saltmarsh Sparrow Conservation Plan, Hartley and Weldon eds. 2020*

# STATE PRIORITIZATION DOCUMENTS

**Goal**

Create document for each state outlining priority marshes for restoration to benefit the Saltmarsh Sparrow in the next 10-15 years



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Create document for each state outlining priority marshes for restoration to benefit the Saltmarsh Sparrow in the next 10-15 years

## Process

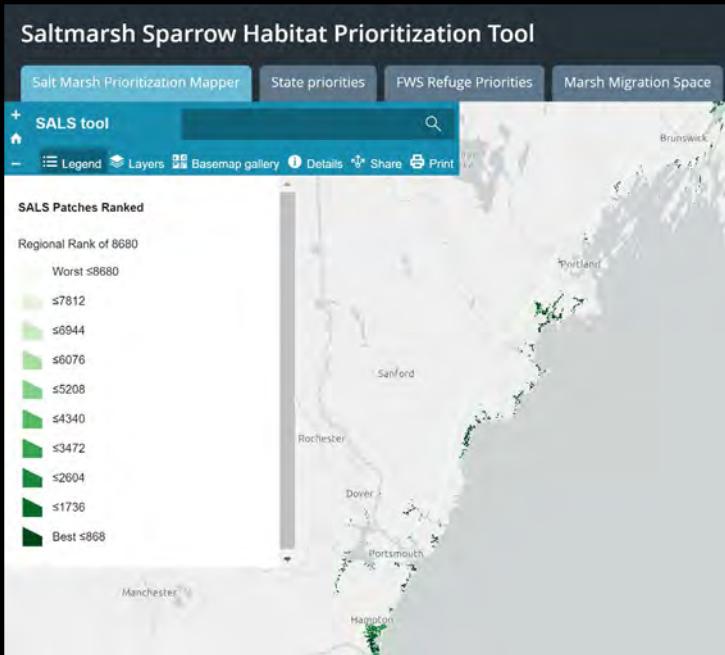
Create or join working groups with state partners

Develop prioritization process to **fit each states' existing efforts, data, and needs**

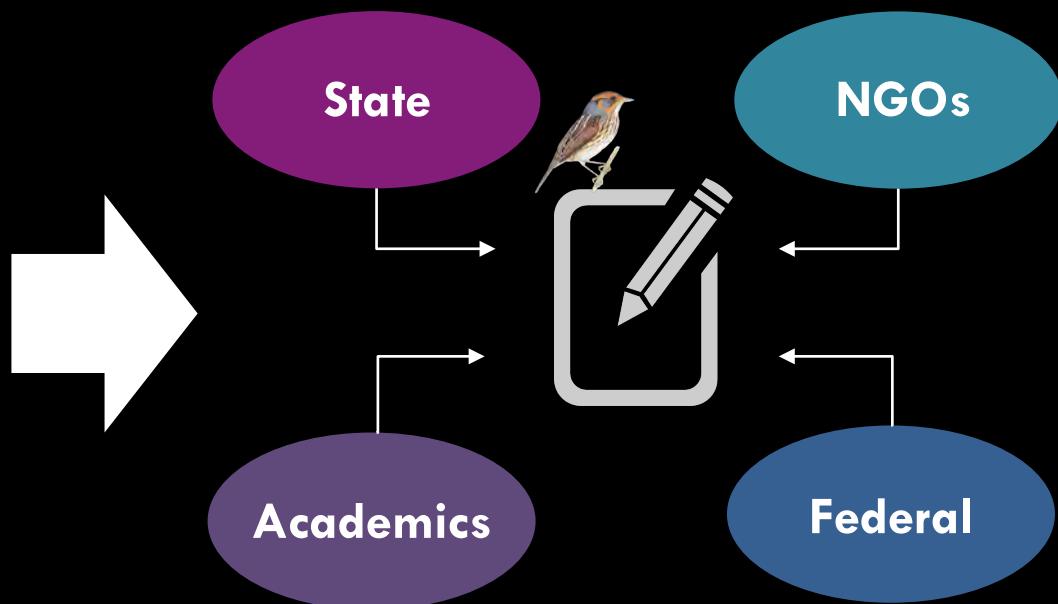


# PROCESS

## Step 1 top 10% using habitat prioritization tool

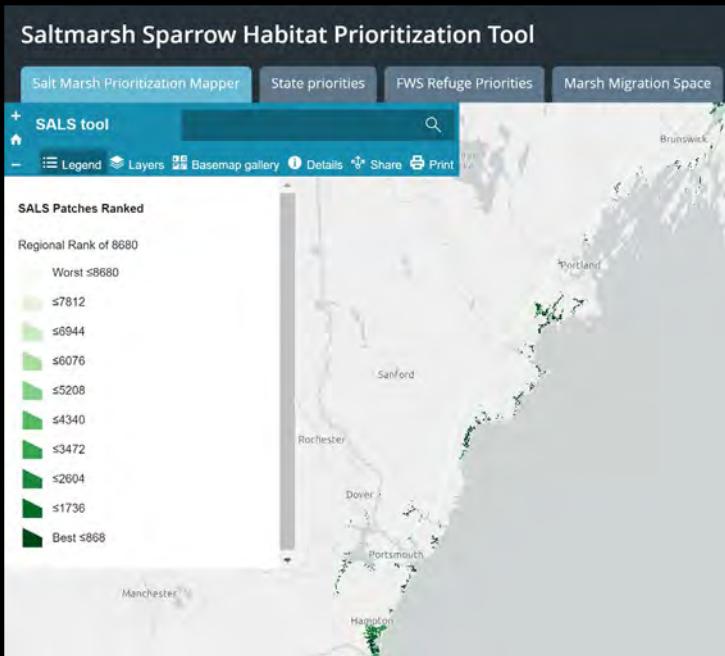


## Step 2 marsh-by-marsh review by expert panel

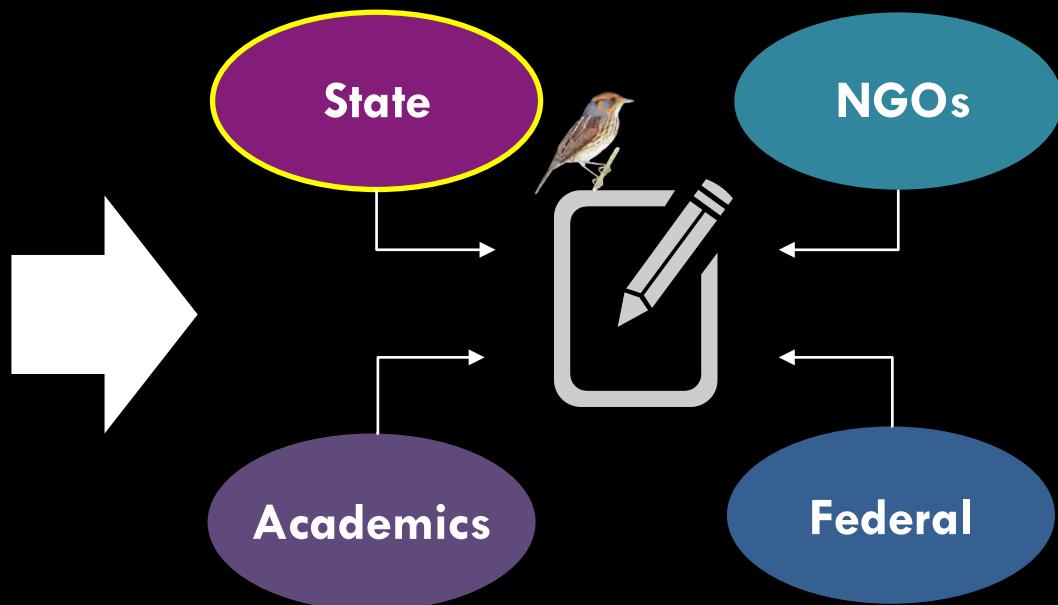


# PROCESS

## Step 1 top 10% using habitat prioritization tool



## Step 2 marsh-by-marsh review by expert panel



Available at:

[www.acjv.org/saltmarsh-sparrow/](http://www.acjv.org/saltmarsh-sparrow/)

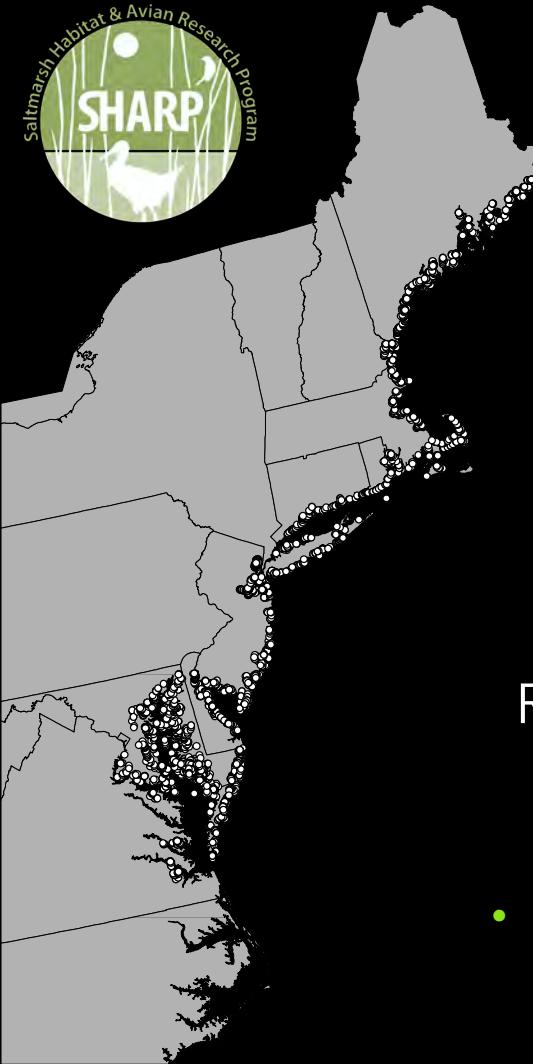
Maine  
New Hampshire  
Massachusetts  
Rhode Island  
Connecticut  
New York  
New Jersey  
Delaware  
Maryland  
Virginia



# WHAT'S NEXT?

- Where are they, and in what numbers?





## Region-wide bird surveys from Maine - Virginia (2011 - 2012)

- 1770 locations visited 2-3 times a season
- North American Marshbird Monitoring Protocol (Conway 2011)
- Generalized Random Tessellated Stratified (GRTS) survey site selection  
(Johnson *et al* 2009, Wiest 2015)



## Region-wide bird surveys from Maine - Virginia (2021 - 2022)

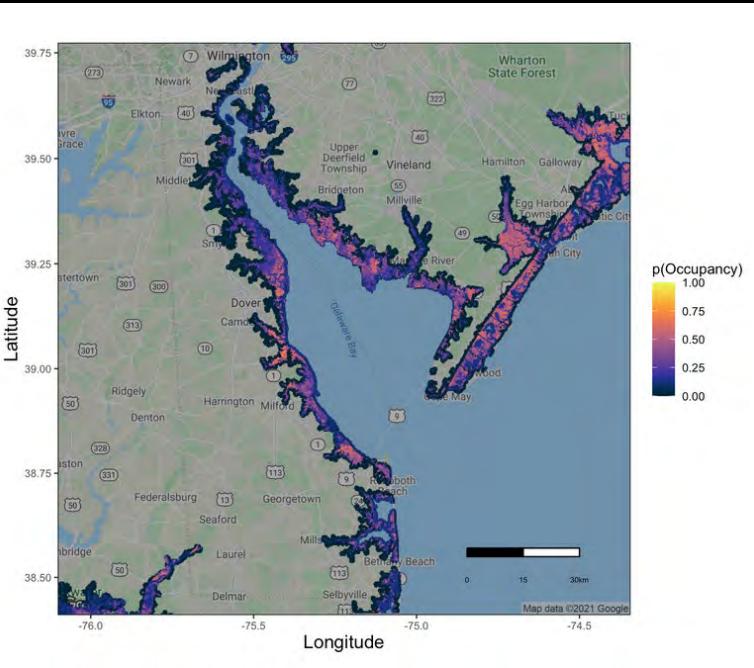
- Goal of 1770 locations revisited 2 times a season in 2021 and 2022
- Coordinated by the Saltmarsh Habitat and Avian Research Program (SHARP)

# WHAT'S NEXT?

- Where are they, and in what numbers?

## *Density and occupancy rasters: Maine to Virginia (~August 2022)*

# *Exploring vegetation community distribution and change using remote sensing (TBD)*



# WHAT'S NEXT?

- Where are they, and in what numbers?
- Coordinated monitoring across restoration sites



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- Where are they, and in what numbers?
- Coordinated monitoring across restoration sites
- Improved data to guide restoration on the ground



# WHAT'S NEXT?

- Where are they, and in what numbers?
- Coordinated monitoring across restoration sites
- Improved data to guide restoration on the ground
- Continue collaboration for on-the-ground action and funding among partners (e.g. ACOE, NOAA, DOT)



# THANK YOU!

Mo Correll

maureen\_correll@fws.gov

Tools and plans available at:  
[www.acjv.org](http://www.acjv.org)





Next Third Thursday  
Web Forum

7-21-2022

10:00 am

Wes Boone

NC State University

**Register for Zoom  
meeting:** <https://ncsu.zoom.us/j/98049057178>

[secassoutheast.org](http://secassoutheast.org)

## Brooding over climate change: Implications for eastern wild turkey reproduction



# How to get involved in SECAS

- Sign up for the SECAS newsletter

[secassoutheast.org](http://secassoutheast.org)

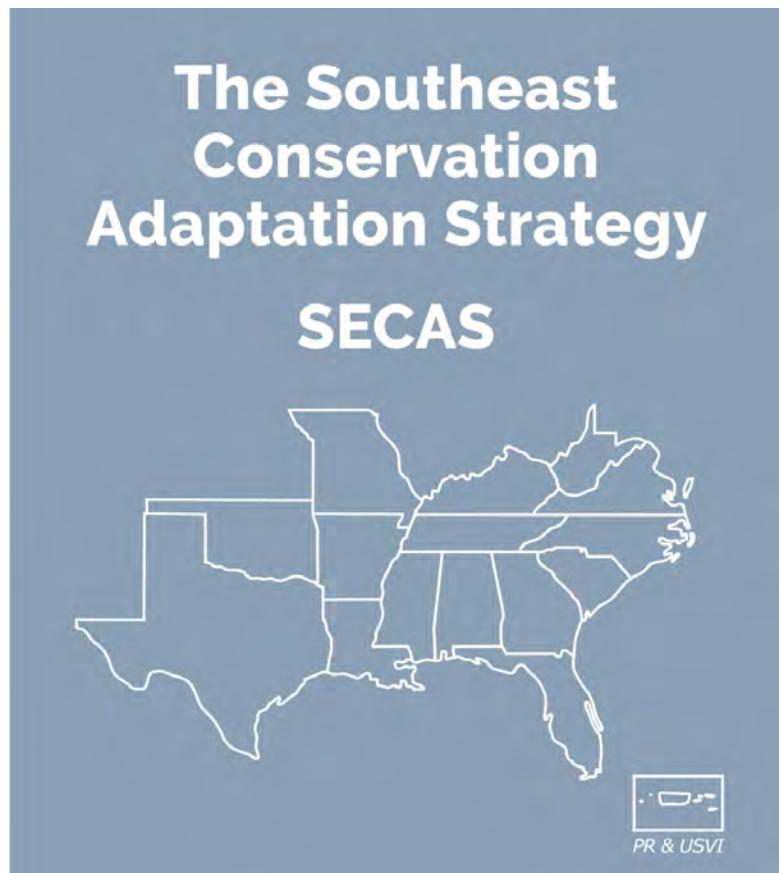
- Connect with SECAS staff or partners

[secassoutheast.org/staff](http://secassoutheast.org/staff)

[secassoutheast.org/partners](http://secassoutheast.org/partners)

- Explore the Southeast Conservation Blueprint

[secassoutheast.org/blueprint](http://secassoutheast.org/blueprint)



The background of the slide is a photograph of a sunset or sunrise over a body of water. The sky is filled with wispy clouds colored in shades of orange, yellow, and blue. On the right side of the image, a white lighthouse stands on a grassy, slightly elevated hill. The foreground is dark, out-of-focus vegetation, likely tall grass or reeds, which provides a strong contrast to the bright sky.

# Questions?