Chesapeake Bay Watershed Agreegment Goal	Outcome	CBP Strategy Review System Cohort
Vital Habitats	Wetlands	Climate Change and Resiliency
Vital Habitats	Wetlands	Climate Change and Resiliency

Vital Habitats	Wetlands	Climate Change and Resiliency
Vital Habitats	Wetlands	Climate Change and Resiliency
Vital Habitats	Wetlands	Climate Change and Resiliency
Vital Habitats	Wetlands	Climate Change and Resiliency

Vital Habitats	Wetlands	Climate Change and Resiliency
Vital Habitats	Wetlands	Climate Change and Resiliency

Need	Completed?
Identify areas where wetland restoration would greatly benefit water quality and habitat.	N
Coordinate with Black Duck and Fish Habitat Action Teams to identify wetland areas that are suitable black duck and fish habitat and would be ideal for restoration.	N

Make recommendations to improve the form and process of inputting NEIEN data collection for each State, as well as confirm the accuracy of information reported.	N
Impacts on wetland extent, distribution and function due to climate change. Particularly non-tidal wetlands that are isolated.	N
Understanding the extent and amount of tile and open ditch drainage within the major 10 digit HUC watersheds would be useful for understand the impacts of wetland loss and the affect on watershed functions that factor into nutrient processing.	N
Identifying the amount of stream network incising in small to headwater streams.	N

Identifying the amount of legacy sediment present along small to headwater streams.	N
Evaluate how to assess water storage opportunities for existing and future restoration opportunities.	N

More specific detail	**Why is this needed?**
The Virginia Wetland Condition Assessment Tool (WetCAT) assesses wetland capacity to perform ecosystem services. An expansion of WetCat for states besides Virginia or development of similar tool would help to develop prioritization criteria and identify priority areas for each state. Or perhaps before performing additional analysis or tool development, we should do an inventory of the all the available targeting tools and resources in the Chesapeake. When we discussed this topic previously, we heard the there isn't necessarily a lack of tools and resources to target but rather how these are implemented and being used to guide efforts/ funding.	Understanding the relative level of stress from human disturbance on a wetland's capacity to perform valued ecosystem services is often part of a cumulative impact analysis associated with wetlands conservation. The ability to rapidly census wetland condition at multiple scales is attractive to resource managers, planners, and other stakeholders.
	Identifying wetland areas that are also suitable black duck and/or fish habitat can help prioritize restoration and resources in these areas and would make progress towards these other outcomes.

We have identified a few issues with tracking wetland restoration data through NEIEN: 1) Projects that are being completed through programs focused on habitat improvement and wetland/ community resilience are not necessarily being counted in NEIEN since the focus has been on water quality programs. 2) In urban landscapes, wetlands projects fall under stormwater BMP accounting. In the NEIEN system, the critical accounting metric is acres treated, not areal extent of the project. This means that we are not counting the wetlands acres created in urban landscapes. 3) Related to this concern is the lack of attributing areal extent to created tidal marshes under the shoreline BMP protocol. While these numbers are likely to be small relative to the outcomes, we are missing these numbers due to the emphasis on the WIP accounting process.	The Wetlands Outcome is falling short of its 2025 goal. In order to make progress towards the outcome, we first need to ensure that all wetland restoration and enhancement projects are being accurately reported and counted in the model.
	A better understanding of the effects of climate change on wetlands will help prioritize areas for conservation and restoration.
An ongoing National Agricultural Statistical Service (NASS) report that provides the current (annual) amounts of tile drainage and ditching practices installed in each 10 digit HUC watershed. This data is compiled regularly through the agricultural census.	This data provides two pieces of important information: 1) how much of a watershed is hydrologically altered on an ongoing basis, converting groundwater into surface water moving groundwater nutrient pools into active surface water systems and 2) provide important information on the potential loss of wetland are within the watersheds and the reduced role that they play in geochemistry.
Identification these areas will help understand the impact that these conditions have on altering groundwater hydrologic and geochemistry watershed functions. Use of FACET and other stream LIDAR tools under development to estimate the amount of headcuts, incised or entrenched streams.	The amount of water discharged through small-headwater streams that should be stored but is discharged due to lowered groundwater or short-circuited hillslope conditions is substantial and plays a critical role in denitrification, water volume storage and geochemistry all of which impact nutrient transformation functions.

Identification these areas will help understand the impact that these conditions have on altering groundwater hydrologic and geochemistry watershed functions. Use of FACET and other stream LIDAR tools under development to estimate the amount of headcuts, incised or entrenched streams.	The amount of sediment discharged through these small-headwater streams that is present in the legacy sediments is significant and plays a critical role in pollutant loading.
In our finance discussions there was a lot of discussion around the benefits wetlands provide related to water storage and flooding. This is also a critical benefit for building climate resiliency related to the increased precip and delivery of nutrients.	More research on the benefits wetlands provide for flood resiliency will be crucial for understanding their role in managing climate impacts and restoration opportunities.

Category	Other Goals/Outcomes This Addresses	Engaged resources
Analysis		
Analysis	Black Duck,Fish Habitat	

Data collection/reporting	Black Duck, Brook Trout	
Research/modeling	Climate Resiliency/Black Duck	
Analysis	Climate Resiliency/Modeling/Targeting	
Analysis/Research/Modeling	Climate Resiliency/Modeling/Targeting	

Analysis/Research/Modeling	Climate Resiliency/Modeling/Targeting	
Research	Climate Resiliency	

Potential resources	Priority	Related STAC recommendations (under development)
Black Duck Decision Support Tool; GIT-funded project that TNC led did work in this on Delmarva that could be used as a starting point and to determine how to build on in other regions.		

CBPO is exploring the possibility of designating a Living Resource Data Manager position through a short-term contract to specifically: 1) Identify where the NEIEN system is underrepresenting progress towards the wetland and black duck outcomes, and ultimately, all other living resources outcomes. 2) Streamline the process for the states such that they are incentivized to enter the data in the fields to support living resources outcomes, particularly black duck and wetlands goals. In addition, each of the states developed flow charts on how wetland data is reported for their state that could use to be updated and a good starting point to identify where the barriers are.	High	
The FY20 GIT-funded project "Synthesis of Shoreline, Sea Level Rise, and Marsh Migration Data for Wetland Restoration Targeting" will compile data related to this for tidal areas of the CB watershed.		
NASS, data is already compiled for all jurisdictions, just needs transformation toa watershed basis.	High	
	High	
