Black Duck

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What is our Outlook and Recent Progress?

Wetlands Outcome Recent Progress:
Between 2010 and 2021, 16,000 acres of wetlands were established (created), rehabilitated or reestablished (restored) on agricultural lands. While this outcome includes a target to restore 85,000 acres of tidal and non-tidal wetlands in the watershed, 83,000 of these restored acres should take place primarily on agricultural lands. The wetlands restored between 2010 and 2017 mark an 18.8% achievement of the 85,000-acre goal.
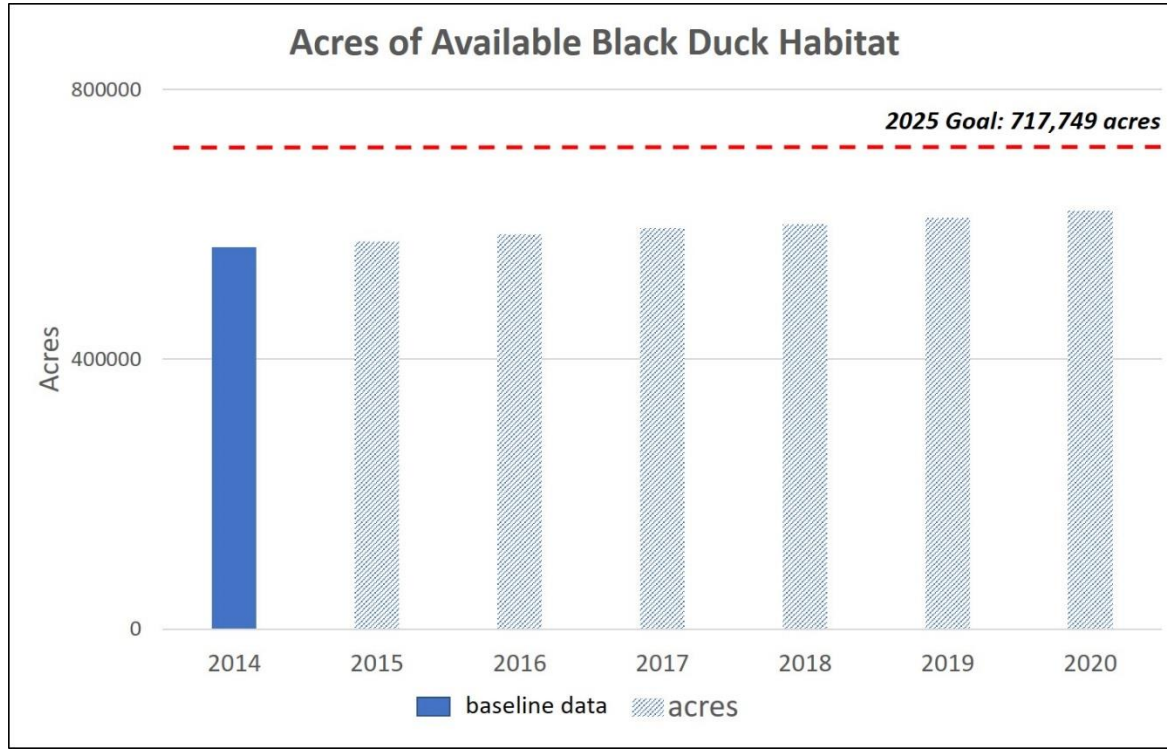
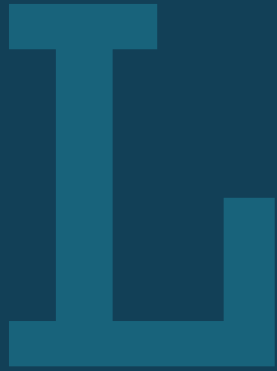# What is our Expected and Actual Progress?

RECENT PROGRESS INCREASE

OUTLOOK OFF COURSE

Acres of Available Black Duck Habitat

2014 Baseline: 566,477 acres
2022 Progress: *Still Unknown*
2025 Goal: 717,749 acres

Restoration goal: 151,272 additional acres

*based on results from the Decision Support Tool (DST)*

Learn

*What have we learned in the last two years?*

Successes and Challenges

- Uses remotely sensed wetland inventory maps to determine the energetic carrying capacity of HUC12 watersheds and compares this to energy demand.
- The model indicates areas where there is sufficient and insufficient wetland quantity and quality to support the desired number of Black Ducks in each HUC12 watershed.
- Indicates how much of the habitat is in conservation status, to show areas sufficiently protected and areas needing additional land protection, as well as the areas where wetland habitat needs to be restored or enhanced.
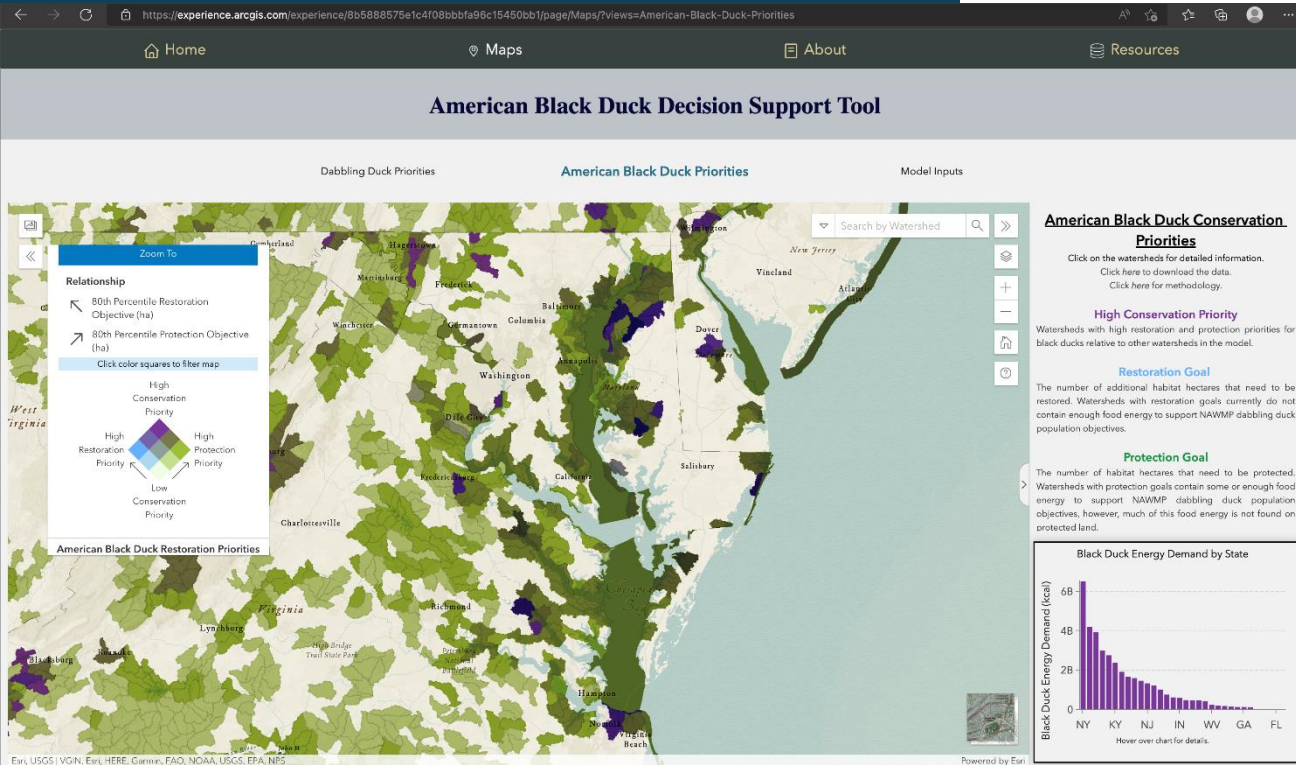
Successes and Challenges
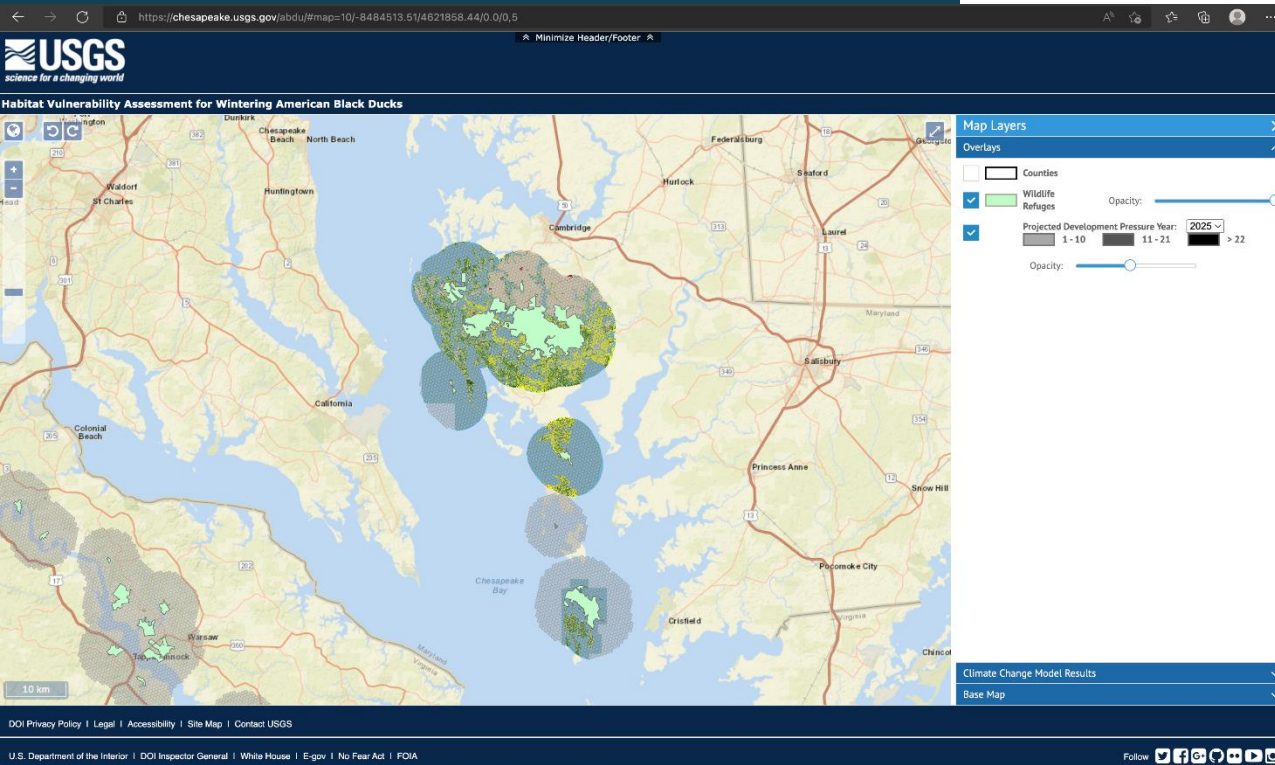
- We estimated food availability among five main wetland cover types used by overwintering American Black Ducks: subtidal, fresh water, high marsh, low marsh, and mudflat.
- Bioenergetics models used can be simplified into two major components: energetic demand and energetic supply.
- Then modeled how sea-level rise using SLAMM and WARMER and land-use change impact available habitat over time.

On the Horizon

- Development of tracking system for wetlands and black ducks:
  - Includes tidal and non-tidal wetlands
  - Includes SAV
- Blackwater 2100 is a collaborative, multi-agency project that has implemented several projects focused on piloting innovative climate adaptation strategies for increasing tidal marsh resilience, including tree removal and Phragmites control in marsh migration corridors, thin-layer deposition of sediments on disintegrating marsh, and tidal creek extension at a waterlogged transitional marsh site.
- USGS continues to model the relationships between changing food resources, water quality, and climate impacts on waterbird use of the Chesapeake Bay.
- Explore merging BDAT with the wetlands workgroup

On the Horizon

- Contributing to the Wetland Crediting STAC workshop & report
- Supported GIT proposal on monitoring vegetation condition throughout the DelMarva peninsula using multi-spectral imagery.
  - Important for tidal marshes because available high-res image sources (NAIP and LiDAR) are not acquired in coordination with tidal stage. Hyper-temporal imagery will represent conditions at all levels of tidal stage and therefore enable the identification of trends outside those caused by the expected range of tidal fluctuations.

Challenges

Challenges are:

- **Tracking of restoration acres** toward the outcome – present restoration efforts on agricultural lands may not necessarily be viable black duck habitat.
- Reconciling black duck outcome (151,272 acres) of primarily tidal marsh and wetlands outcome (85,000 acres) of primarily restored **agricultural land**.
- Can we use **DST** to guide restoration efforts to align these two outcomes? Will it work given climate change and land change pressures?
- Do we decrease the number of black ducks supported in the black duck outcome or do we increase the acreage of quality wetlands restored in the wetland outcome?
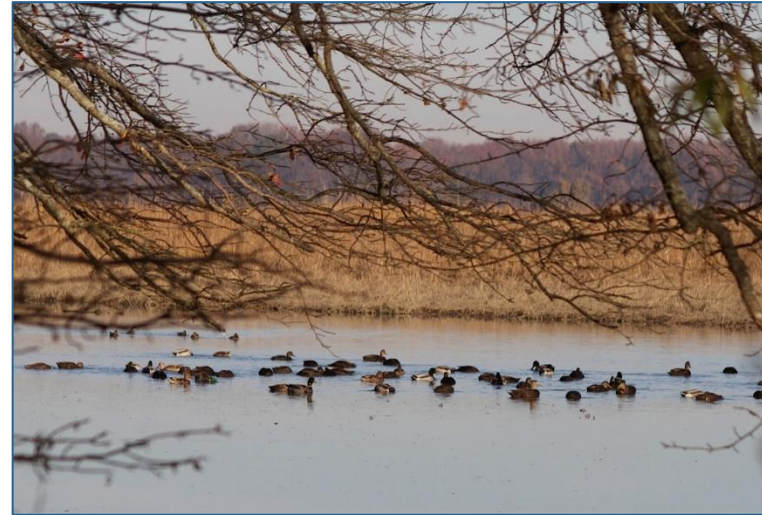
Based on what we learned, we plan to …

- Continue ongoing habitat restoration work.
- Improve our understanding of wetland loss and gain for wintering black ducks and other waterfowl.
- Continue to determine best restoration techniques to create quality black duck habitat in priority areas.

Equitable and inclusive restoration ...

- HGIT is working with BDAT to infuse DEIJ into all of our management actions.

Filling the Gap

The updated DST provides habitat prioritization for wintering black ducks and the bioenergetics modeling showcased the importance of SAV,

BUT the restoration efforts as reported by the wetlands outcome are not focused on quality black duck habitat…

Over the next 2 years, we PLAN to:
- Merge BDAT with Wetlands Workgroup to provide efficiencies and collaboration towards achieving both outcomes simultaneously
- Determine whether SAV outcome can be indicator for the black duck outcome
- Identify additional HGIT support for us
- More will be covered in 12/8 Management Board meeting

Filling the Gap

We need your help with...
- **Increasing staffing support:** One of the greatest limitations to accomplishing more action items is the lack of capacity in workgroup members and staff. If greater staffing support was provided to the BDAT and Wetlands workgroup, specifically filling the vacant HGIT staffer, achievement of these action items will become more feasible.
- **Increase support for wetlands outcome** through the wetlands workshop and action plan (12/8 management board meeting).

Discussion