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Wetlands & Waterfowl

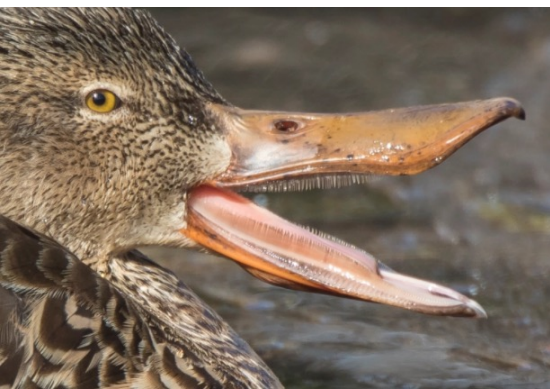
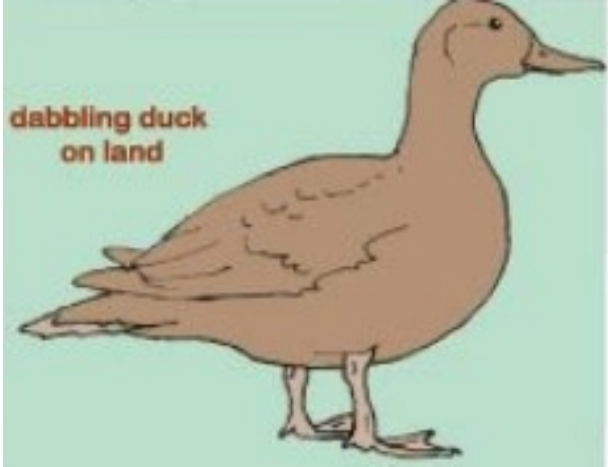
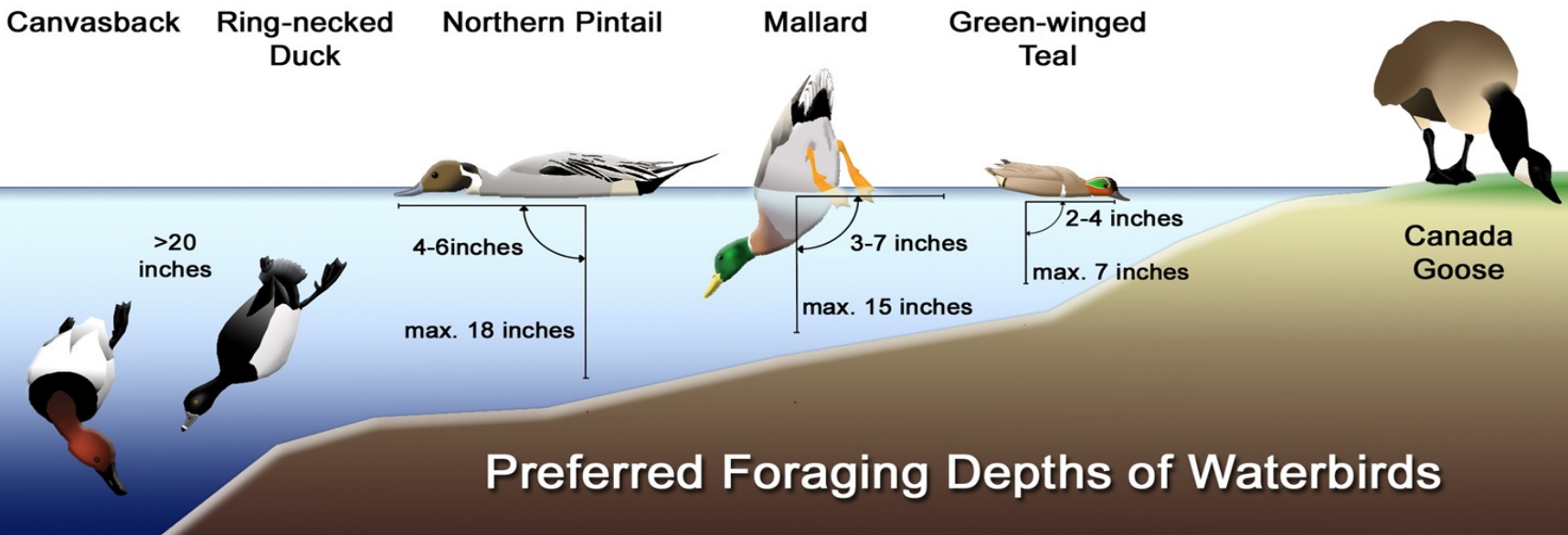
Chesapeake Bay Program – Scientific Technical Advisory Committee Meeting
22-23 March 2022 – Annapolis, MD



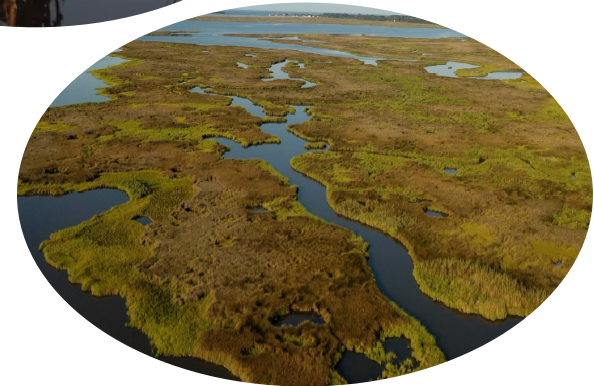
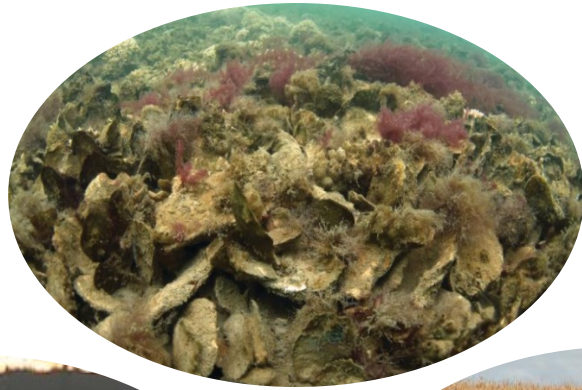
Wetlands & Waterfowl



Waterfowl of the Chesapeake



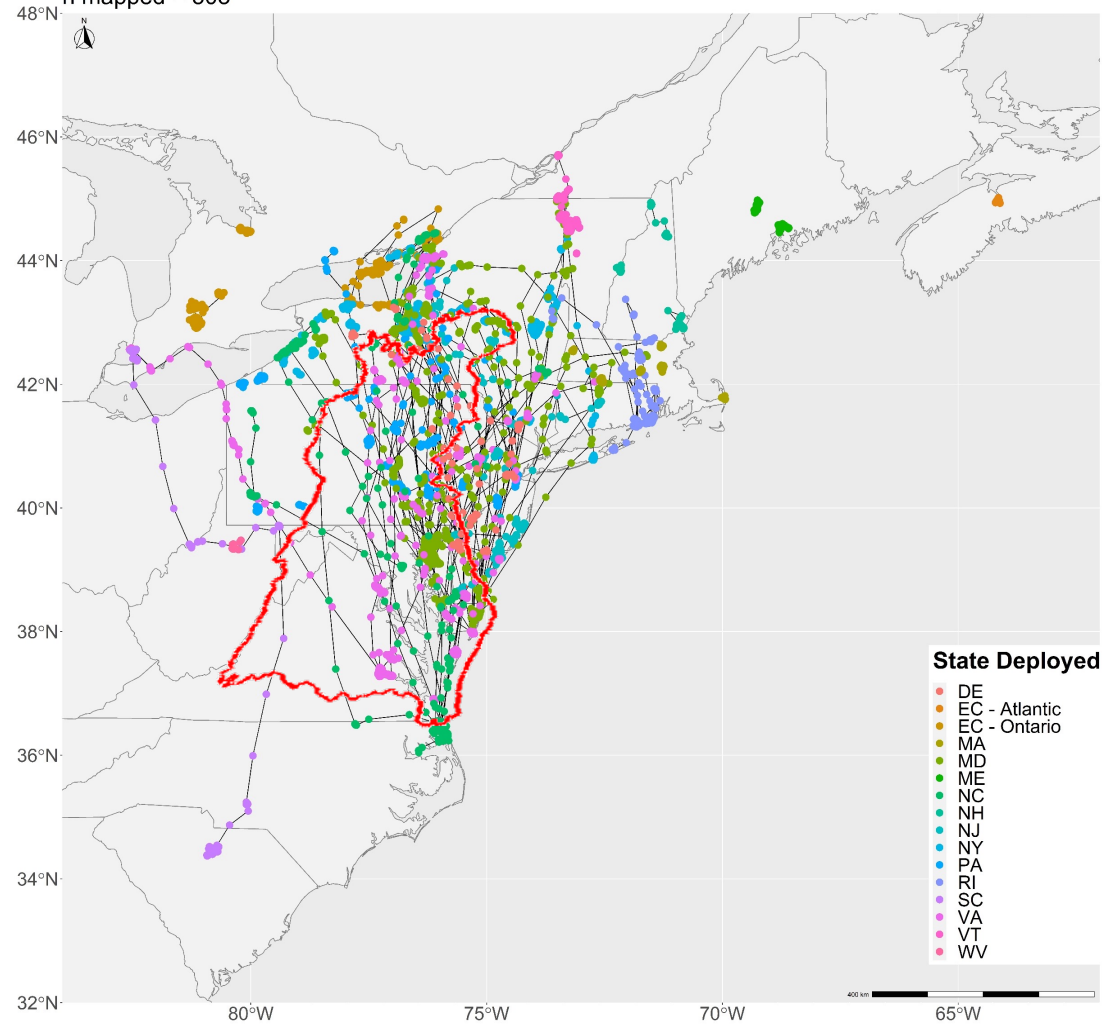
Waterfowl of the Chesapeake



Habitat Prioritization for Waterfowl Conservation

Eastern Mallard Spring Migration

n mapped = 303

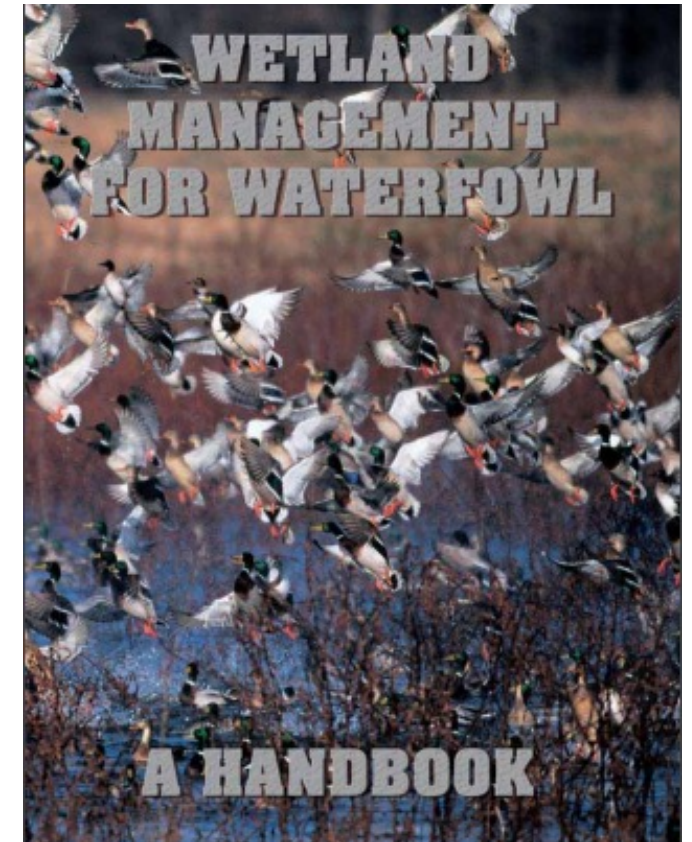
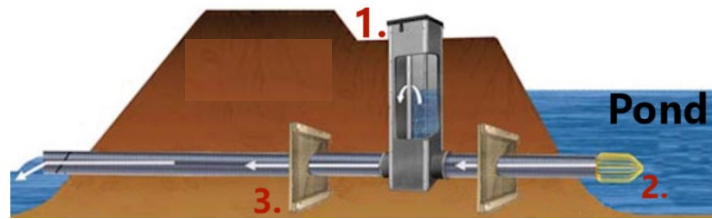


<https://atlantic-flyway-waterfowl-gps.weebly.com/>

Habitat Prioritization for Waterfowl Conservation



Level Control Structure



Moist Soil Management for Waterfowl



Co-Benefits and Tradeoffs

Is what's good for waterfowl bad for other wildlife and/or ecosystem services?

Waterfowl Metrics: Quantifying Outcomes

Bioenergetics Modeling

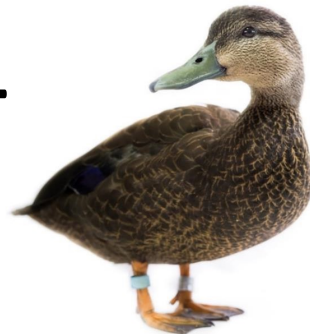
$$\frac{\text{Total Metabolizable Energy (TME)}}{\text{Daily Energetic Requirements (DER)}} = \text{Duck Use Days (DUD)}$$

380,000 kcal/acre
tidal low marsh TME



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330 kcal/day
Black Duck DER



=

1,150 DUDs
for one day



OR

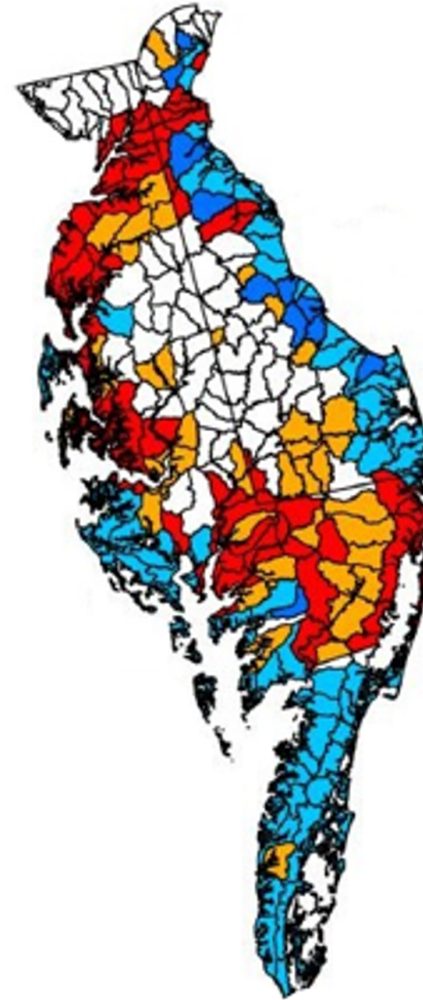
8 DUDs
for 150-day
wintering period



Waterfowl Metrics: Quantifying Outcomes

Bioenergetics Modeling

<u>Wetland Type</u>	<u>Wetland Subtype</u>	<u>Energy Density Estimate (kcal/acre)</u>
PEM	Passive	99,438
PEM	Managed (Moist Soil)	599,488
PFO	-	99,438
E2Veg	High Marsh	147,257
E2Veg	Low Marsh	380,569
E1	-	26,502
L	-	24,940
R	-	24,940
M2	-	26,502
PSS	-	99,438
PUB	-	24,940
E2US	-	29,305
PML	-	0
PRB	-	0
E2AB	-	26,502



A partnership

These data show priority watersheds important for meeting American Black Duck population objectives in the Chesapeake Bay Watershed.



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