

Black Duck Logic Table and Work Plan (2018-2020)

Long-term Target: (the metric for success of Outcome): By 2025, restore, enhance, and preserve wetland habitats that support a wintering population of 100,000 black ducks, a species representative of the health of tidal marshes across the watershed.

Two-year Target: (increment of metric for success): Determine a habitat-based acreage conservation goal to meet long term objectives.

Factor	Current Efforts	Gap	Actions (critical actions in bold)	Metrics	Expected Response and Application	Learn/Adapt
<i>What is impacting our ability to achieve our outcome?</i>	<i>What current efforts are addressing this factor?</i>	<i>What further efforts or information are needed to fully address this factor?</i>	<i>What actions are essential to achieve our outcome?</i>	<i>Optional: Do we have a measure of progress? How do we know if we have achieved the intended result?</i>	<i>Optional: What effects do we expect to see as a result of this action, when, and what is the anticipated application of these changes?</i>	<i>Optional: What did we learn from taking this action? How will this lesson impact our work?</i>
Use Conflict/Habitat Condition: Habitat loss (degradation, fragmentation, etc.)	<i>Habitat loss, degradation and fragmentation through changes in land use (development, agriculture, etc.) and climate change affect the ability of land to offer sufficient food and shelter for black ducks. Black ducks prefer undisturbed habitat. Participating state and partner agencies work to restore (restoring hydrology, etc.), enhance, and protect (land acquisition, etc.) this vital habitat.</i>	<ul style="list-style-type: none"> - Complete development and implementation of Black Duck DST on state specific basis. - Funding for on the ground conservation work. 	<u>1.1</u>	<ul style="list-style-type: none"> - Completed bioenergetics model/DST. - Monitoring of mid-winter survey numbers. - Monitor acres of black duck habitat (coastal land, etc.) protected. - Key areas Black Duck habitat restoration/protection defined. 		
			<u>1.2</u>			
			<u>3.1</u>			
			<u>4.2</u>			
Biota: Food availability	<i>Competition for food with other waterfowl and loss of food through habitat degradation poses issues for wintering black ducks, limits the number that can successfully utilize the CBW portion of the Atlantic Flyway. Food availability factors are being studied by USGS and incorporated into DST.</i>	<ul style="list-style-type: none"> - Complete development of DST. -Need for refuge specific bioenergetics model (Berlin). 	<u>1.1</u>	<ul style="list-style-type: none"> - Completed bioenergetics model/DST. 		

Factor	Current Efforts	Gap	Actions (critical actions in bold)	Metrics	Expected Response and Application	Learn/Adapt
Habitat Condition: Shoreline disturbance	<i>Disturbance from development and climate change impedes the use (food source, shelter, etc.) of the marshy shoreline habitat preferred by black ducks.</i>	<i>- As development and sea level rise rates increase, shorelines must be left natural for marshy habitat migration.</i>	<u>3.1</u>	- Monitor acres of black duck habitat (coastal land, etc.) protected.		
Partner Coordination/Scientific and Technical Understanding: Monitoring efforts	<i>The Atlantic Coast Joint Venture's Black Duck bioenergetics model and DST allow for the Black Duck Outcome to switch to a habitat-basedF indicator.</i>	<i>- Need technical assistance to implement bioenergetics model/DST as new outcome indicator. -Need for formal method with which to track/monitor partner outcome progress.</i>	<u>4.2</u>	- Development of habitat based indicator. - Development of outcome progress reporting/monitoring method.		
			<u>4.3</u>	- BDAT partners meet and coordinate on indicator, workplan actions. - Workplan, Logic Table, and Management Strategy updates as necessary.		
Climate Change: Climate impacts (SLR, flooding, marsh migration, large storms, migration shifts)	<i>Sea level rise causes marsh habitat to flood. Marshes kept from migrating by development, hardened shorelines.</i>	<i>- Need for land protection to allow for inland marsh migration.</i>	<u>3.1</u>	- Monitor acres of black duck habitat (coastal land, etc.) protected.		
Partner Coordination/Scientific and Technical Understanding: Habitat restoration	<i>ACJV modeling team is working to develop an enhancement/restoration prioritization scheme for HUC12 watersheds. A 2017 GIT Funding Project will increase capacity, land conservation program outreach efforts on Delmarva.</i>	<i>- Ability to choose appropriate sites. - Lack of capacity (funding, personnel) for restoration efforts.</i>	<u>1.2</u>	- Key areas Black Duck habitat restoration/protection defined. - Monitor acres of black duck habitat enhanced and/or restored.		
			<u>1.3</u>			
			<u>4.4</u>			
Partner Coordination/Scientific and Technical Understanding: Habitat enhancement and management	<i>ACJV modeling team is working to develop an enhancement/restoration prioritization scheme for HUC12 watersheds (expected</i>	<i>- Ability to choose appropriate sites. - Lack of capacity (funding, personnel) for</i>	<u>1.2</u>	- Key areas Black Duck habitat restoration/protection defined.		
			<u>2.1</u>			

Factor	Current Efforts	Gap	Actions (critical actions in bold)	Metrics	Expected Response and Application	Learn/Adapt
	<i>fall 2017). A 2017 GIT Funding Project will increase capacity, land conservation program outreach efforts on Delmarva.</i>	<i>management/enhancement efforts.</i>	4.4	- Monitor acres of black duck habitat enhanced and/or restored.		
Partner Coordination/ Scientific and Technical Understanding: Habitat protection	<i>A 2017 GIT Funding Project will increase NRCS capacity, land conservation program outreach efforts on Delmarva. NFWF grant to USFWS and DU to implement private land protection.</i>	- Ability to choose appropriate sites. - Need for sustained capacity (funding, personnel) for protection efforts.	1.2	- Key areas of Black Duck habitat restoration/protection defined. - Monitor acres of black duck habitat (coastal land, etc.) protected.		
			3.1			
			4.4			
Government Agency Engagement: Adequate financial resources (administration, for incentives, etc.)	<i>Funding is made available through the NFWF-Chesapeake Bay Stewardship Fund, NAWCA grant programs, USFWS Coastal Wetland grants, USFWS Partners for Fish and Wildlife Program grants, and cooperative agreements and NRCS Farm Bill incentives.</i>	<i>- Lack of funding available for black duck habitat adequate restoration, enhancement, and protection measures.</i>	3.1			
Partner Coordination: Adequate extension infrastructure (outreach and technical assistance)	<i>A 2017 GIT Funding Project will increase NRCS capacity, land conservation program outreach efforts on Delmarva.</i>	<i>- Land easements increasing while state managers remain the same/decrease, capacity issue.</i>	4.1	- Number of local decision makers engaged. - Informational communication materials created and distributed.		

KEY: Use the following colors to indicate whether a Metric and Expected Response have been identified.

Metric	Specific metrics have not been identified
	Metrics have been identified
Expected Response	No timeline for progress for this action has been specified
	Timeline has been specified

WORK PLAN ACTIONS

Green – action has been completed or is moving forward as planned

Yellow – action has encountered minor obstacles

Red – action has not been taken or has encountered a serious barrier

Action	Description	Performance Target(s)	Responsible Party & Geographic Location	Metrics	Expected Timeline
Management Approach 1: Support efforts to restore Degraded Wetlands or Vegetation in Areas Where Black Ducks Have Historically Bred or Wintered.					
1.1	Develop a decision support tool (DST) to estimate wintering black duck habitat needs under current and future landscape conditions throughout the ACJV and the Atlantic Flyway and scale it to the Chesapeake Bay Watershed and incorporate maps to show target areas.	a. Determine location and acreage of black duck winter habitat within respective jurisdictions for acquisition.	USGS, USFWS, BDJV, ACJV, DU, State Partners, etc.	- Completed bioenergetics model/DST.	2019
		b. Prioritize black duck winter habitat based on profitability and vulnerability.			
1.2	Use the DST to determine best places to do restoration, enhancement, and management of key wetland or upland habitat for wintering, breeding, or migrating black ducks.	a. Identify 3-4 key areas for partners to concentrate acquisition/restoration efforts.	USGS, USFWS, BDJV, ACJV, DU, State Partners, etc.	- Key areas Black Duck habitat restoration/protection defined.	2019
1.3	Support efforts to restore tidal wetland hydrology and restore key habitat for breeding, migration routes, and wintering grounds.	a. Support restoration efforts in know black duck areas.	USFWS, State Agencies, DU, etc.	- Monitor acres of black duck habitat enhanced and/or restored.	Ongoing
		b. Continue to use DST to identify new priority locations for habitat restoration.			
Management Approach 2: Support efforts to Enhance and Manage Wetlands or Vegetation in Areas Where Black Ducks Have Historically Bred or Wintered.					
2.1	Support partner efforts to improve water level management on managed wetlands (replace compromised water control structures, leaking levees, etc. to improve management capability), restore SAV or converted wetlands, manage open marsh (to restore non-tidal waters back to salt marsh, for example), restore and manage riparian buffers, etc.	a. Support efforts to enhance and manage priority habitats as identified by the DST (how many water control structures replaced or installed, acres of habitat made available/enhanced, etc.)	USFWS, State Agencies, DU, etc.	- Monitor acres of black duck habitat enhanced and/or restored.	Ongoing
Management Approach 3: Support efforts to Protect Wetlands or Vegetation in Areas Where Black Ducks Have Historically Bred or Wintered.					
3.1	Support the protection of key black duck habitats via long term protection actions such as fee title acquisition, conservation easements, cooperative agreements, or leases.	a. Prioritize known black duck areas for protection using DST.	USFWS, State Agencies, DU, etc.	- Monitor acres of black duck habitat (coastal land, etc.) protected.	2019
		b. Support the protection of priority habitats as identified by the DST (acres of coastal marsh, forested wetlands, etc. protected).			Ongoing
		c. Encourage funding partners to prioritize use of Decision Support Tool			
Management Approach 4: Support Other Conservation Actions Benefitting Waterfowl Habitats					
4.1	Keep local officials engaged in and aware of black duck habitat protection efforts and ways to	a. Work with Local Leadership Workgroup, Local Government Advisory Committee, Communications Team to distribute DST and	Conservation organizations, local governments, state agencies, etc.	- Number of local decision makers engaged.	2019

	incorporate protection efforts into local decision making.	accompanying informational documents to local officials/decision makers.		- Informational communication materials created and distributed.	
4.2	Improve methods of monitoring outcome progress.	a. Develop and formally adopt habitat based indicator using bioenergetics model/DST.	USFWS, State Agencies, DU, etc.	- Development of habitat based indicator. - Development of outcome progress reporting/monitoring method. - Monitoring of mid-winter survey numbers.	2019
		b. Develop and adopt progress reporting/monitoring process.			
4.3	Partner coordination; review and refine Black Duck guiding documents with new restoration/monitoring knowledge.	a. BDAT meets annually to revise Workplan, Logic Table, and Management Strategy as necessary.	Black Duck Action Team	- BDAT partners meet and coordinate on indicator, workplan actions. - Workplan, Logic Table, and Management Strategy updates as necessary.	2019 and 2020
4.4	Support scientific research efforts to remain up to date on Black Duck habitat needs	a. Explore including SAV habitat in development of new Outcome indicator	Black Duck Action Team, USGS	- Report on the exploration of including SAV habitat in the development of new Outcome indicator	2020