

# Maryland Wildlife Diversity Conservation Plan

## What is a wildlife action plan?

Congress asked each state to develop a wildlife action plan, known technically as a comprehensive wildlife conservation strategy. These proactive plans examine the health of wildlife and prescribe actions to conserve wildlife and vital habitat before they become more rare and more costly to protect.

## Maryland snapshot

**Geography:** Maryland's diverse landscape is dominated by the Chesapeake Bay, the nation's largest estuary. With nearly 8,800 miles of rivers and streams and ecoregions ranging from the Atlantic Ocean to the Appalachian Mountains, Maryland harbors a broad species and habitat diversity for a state of its size.

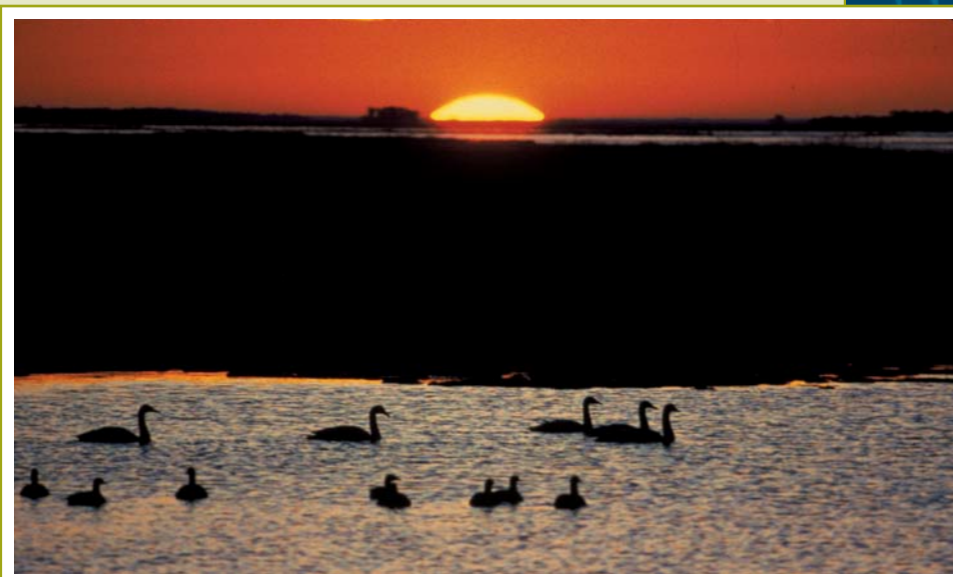
**Landscape:** Maryland's natural landscape has been significantly altered by the population increase and associated human activities. By the 1990s both the state's

forests and wetlands had been reduced by half. Human development currently drives land cover changes in Maryland. Federal, state, or local governments manage approximately 12% of Maryland's land area, including such areas as Assateague Island National Seashore and Blackwater National Wildlife Refuge.

**Wildlife:** Delmarva fox squirrels grace Eastern Shore forests. Bald eagles depend on forests and open water. Brook trout inhabit clear, coldwater streams.

## Maryland's planning approach

Maryland's Wildlife Diversity Conservation Plan lays the groundwork for con-



Blackwater Refuge/USFWS

serving Maryland's full array of terrestrial and aquatic wildlife by focusing on its more vulnerable species and the lands and waters they require for survival. The action plan reviews the status and conservation needs of 502 "at risk" wildlife species and further summarizes these into 35 "key wildlife habitats," such as carolina bays, tidal marshes, grasslands,

and old growth forests. Threats and conservation actions, as well as inventory, research and monitoring needs, are recommended for each of the key wildlife habitats. Because both species and habitat-based needs have been considered, Maryland's action plan will help guide the conservation of all wildlife species.



Swainson's warbler/G. Jett

directly, such as filling wetlands for development, or indirectly, such as through pesticide contamination or through deer overbrowse impacting the structural diversity within a forest. Habitat loss can be very obvious, such as a new housing development where an old growth forest formerly stood, or it can be insidious, such as an unfor-ested stream buffer increasing the erosion of stream banks and the amount of sediment within the stream.

**Habitat fragmentation** results from breaking up larger landscapes into smaller patches. Housing development, new roads, stream diversions, and dams can isolate animal populations, create barriers to wildlife move-

## Primary challenges to conserving wildlife in Maryland

Maryland's action plan outlines 24 overarching statewide conservation actions. Habitat loss and fragmentation are common themes among the many significant threats.

**Habitat loss** can occur either



Bog turtle/MD DNR

Wildlife	Total number of species	Species of greatest conservation need*	Threatened/ endangered**
Invertebrates	20,000+	245	58
Fish	635	40	26
Amphibians	41	17	9
Reptiles	49	25	11
Birds	410***	141	33
Mammals	97	34	24
<b>Totals</b>		<b>502</b>	<b>161</b>

\* Each state is using its own criteria for this category. Maryland focuses on wildlife species with small or declining populations or other characteristics that may make them vulnerable (this includes legally recognized state-listed species)

\*\* Threatened/endangered includes species listed under Maryland's endangered species act as endangered, threatened, or species in need of conservation (which is a legal category).

\*\*\* Includes about 206 species known to breed in Maryland, as well as migratory birds.

## Wildlife highlights

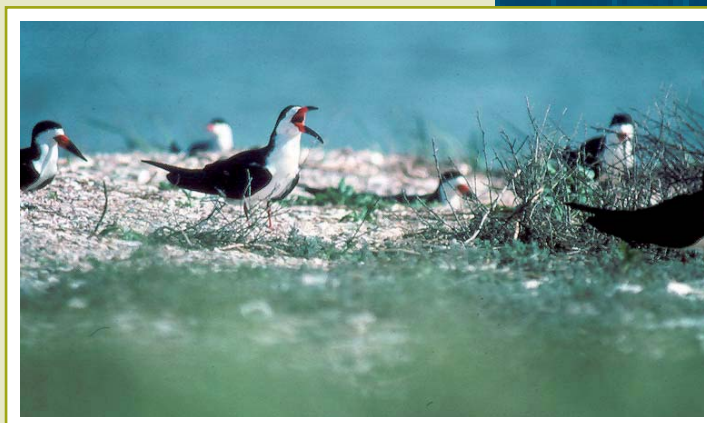
Highlight habitats	Wildlife (examples)	Issue (examples)	Action (examples)
<b>Carolina Bays</b>  <b>Ownership: mix of private/public</b>	<ul style="list-style-type: none"> <li>Barking treefrog</li> <li>Tiger salamander</li> <li>Aurora damselfly</li> </ul>	<ul style="list-style-type: none"> <li>Habitat loss</li> <li>Altered natural water cycles</li> </ul>	<ul style="list-style-type: none"> <li>Protect wetlands from drainage, ditching, filling, water withdrawal, and other damaging practices.</li> <li>Restore wetlands through plugging ditches or other appropriate techniques.</li> </ul>
<b>Tidal Marshes</b>  <b>Ownership: mix of private/public</b>	<ul style="list-style-type: none"> <li>Snowy egret</li> <li>Am. black duck</li> <li>Diamond-backed terrapin</li> </ul>	<ul style="list-style-type: none"> <li>Ditching, channelization, pond construction, and inadequate buffers.</li> <li>Invasive plants and animals</li> </ul>	<ul style="list-style-type: none"> <li>Work with local agencies to promote planning and zoning that protects marshes on privately-owned lands.</li> <li>Control invasive plants and animals and prevent new introductions.</li> </ul>
<b>Floodplain Forests</b>  <b>Ownership: mix of private/public</b>	<ul style="list-style-type: none"> <li>Bald eagle</li> <li>Hooded warbler</li> <li>Eastern box turtle</li> </ul>	<ul style="list-style-type: none"> <li>Conversion to other land uses or forest types that result in habitat loss.</li> <li>Forest pest species that may cause landscape level effects</li> </ul>	<ul style="list-style-type: none"> <li>Conserve large blocks of contiguous forest and maintain movement corridors.</li> <li>Implement appropriate IPM practices to minimize effects of serious forest pests</li> </ul>

### Recommended actions to conserve Maryland's wildlife

ment, and lead to wildlife declines. Fragmentation can be especially harmful to aquatic wildlife, such as freshwater mussels, and to animals that need large habitats, including songbirds like scarlet tanagers and meadowlarks.

### Working together for Maryland's wildlife

The Maryland Department of Natural Resources invited more than 400 conservation partners to assist in the development of the action plan. Partners included resource professionals from governmental agencies, colleges and universities, and conservation organizations, such as National Audu-



Black skimmers/MD DNR

bon Society, The Nature Conservancy, U.S. Fish and Wildlife Service, and the Maryland Farm Bureau. Advice and input were sought by various means, including surveys, personal contact and

correspondence, meetings and presentations. Stakeholders and the public were also kept informed of the plan's progress and allowed to comment through an online forum.



Bald eagle at nest/MD DNR



Least tern and chick/MD DNR

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