Maryland State Wildlife Action Plan







Required Elements of a State Wildlife Action Plan



- & Species of Greatest Conservation Need
- & Key Wildlife Habitats
- & Threats
- & Conservation Actions
- Monitoring Plans and Effectiveness
 Measures
- & Collaboration with Partners

Species of Greatest Conservation Need Native aquatic and terrestrial animals that are at risk or declining in Maryland.



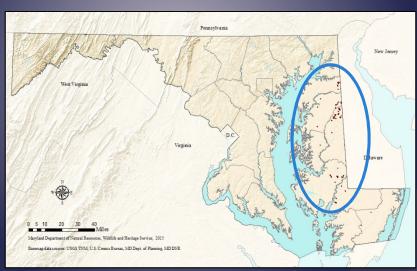
- List includes 610 total species: 43 mammals, 143 birds, 26 reptiles, 19 amphibians, 31 fish, 272 insects, 78 other invertebrates
 - State listed species
 - > Species of regional concern
 - > Species in decline or at risk
 - > Includes American Black Duck and Brook Trout

Key Wildlife Habitats

Habitats that support Species of Greatest

Conservation Need





Location of Delmarva Bays in Maryland.

- > 59 Key Wildlife Habitats described (terrestrial and aquatic, includes some surrogates)
- Species of Greatest Conservation Need listed for each habitat type, also plants and plant communities of interest

Threat Categories in Revised Plan

International Union for Conservation of Nature (IUCN) Threat Categories (used by all NE States):

- 1. Potential impacts from land use, energy production, transportation
- 2. Modifications of natural systems; biological resource use
- 3. Invasive species
- 4. Pollution
- 5. Climate change
- 6. Resource management needs
- 7. Recreation Needs
- 8. Education/Outreach Needs
- 9. Administrative Needs



An excluder device, pictured here, fits into the entrance funnel on crab pots to reduce diamond-backed terrapin bycatch (MD DNR)

Invasive Rusty crayfish (MD DNR)



&Linked to Threats

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URGENCY	COST	CHANCE OF SUCCESS	BENEFIT	COLLATERAL BENEFIT (to other species/habitat)	FEASIBILITY/ LIKELIHOOD OF IMPLEMENTATION	PUBLIC SUPPORT
High: Initiate immediately or within 2 years	High: Relatively expensive (>\$500,000)	High: >90% chance of success	High: Highly beneficial Medium:	High: Highly beneficial Medium: Moderately beneficial	High: >90% Medium: 30-90%	High: Very important/well supported
Medium: Initiate within 2-5 years Low: Initiate 5+ years	Medium: Moderately costly (\$50k-500k) Low: Relatively inexpensive (<\$50k)	Medium: 30-90% chance of success Low: <30% chance of success	Moderately beneficial Low: Unclear benefits	Low: Unclear benefits	Low: <30%	Medium: Moderately important/somewhat supported Low: Less important, much outreach

- ♥ Organized by Key Wildlife Habitats and by Taxa Groups; focus on habitat
- □ Upland Habitats including Forests
- & Subterranean Habitats
- & Wetland Habitats:
 - র Floodplain
 - g Groundwater
 - g Tidal
- - ø Streams and Rivers
 - ន Bays and Ocean



Baltimore Checkerspot, Jen Frye

For Species of Greatest Conservation Need, listed by Taxa Groups for all species in group and for subgroups:



Bottlenose dolphin, George Jett

- Mammals: insectivores, lagomorphs and rodents, carnivores, bats, marine mammals
- Reptiles and Amphibians: salamanders, frogs and toads, sea turtles, turtles, lizards, snakes
- ছ Fish: estuarine and large river, Piedmont/Coastal Plain, highland
- Insects: ash-dependent, tiger beetles, other beetles, bees, ants, moths and butterflies, dragonflies and damselflies, stoneflies
- ø Crayfish and Freshwater Mussels

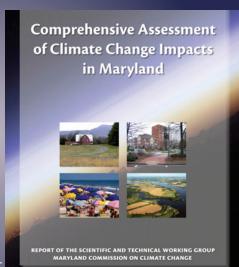
- For bird Species of Greatest Conservation Need, conservation actions are organized as:
 - mature upland forest birds
 - grassland early successional birds
 - colonial and coastal birds
 - wetland birds
 - aquatic birds
 - miscellaneous





Other Chapters of Interest

- & Climate Change
- & Summary of Monitoring Programs in Maryland
 - ø 125 species focused and 99 habitat focused
 - ন্দ Regional efforts including for climate change
 - g Data gaps
- Rerformance Monitoring Framework (Effectiveness Measures)



Geographic Priorities



A Focus for Directing Land Conservation Funds

A sampling of Chesapeake Bay Specific Actions

Streams and Rivers	
Dams and water management/use: small dams	Promote removal of dams and implement Executive Order 13508 that prompted the adoption of the 2014 Chesapeake Bay Watershed Agreement that included an outcome for opening 1000 miles of migratory fish passage by 2025.
Domestic and urban wastewater; industrial and military effluents; agricultural and forestry effluents	Reduce pollution from urban, industrial and agricultural sources by promoting activities that effectively lower TMDL's and meet water quality standards, as agreed upon in the 2014 Chesapeake Bay Watershed Agreement.
Air-borne pollutants: acid rain	Increase efforts to continue research and monitoring for impacts and causes of acidic atmospheric deposition into Chesapeake Bay with specific restoration goals established in the 2014 Chesapeake Bay Watershed Agreement.
Need for coordination for effective program/project management	Coordinate efforts with various programs including the Chesapeake Bay Foundation, Alliance for the Chesapeake Bay, Chesapeake Bay Program, etc. to initiate measures to protect, maintain and improve all species habitats and populations.

Specific species actions	
Need to answer research question	Determine life history requirements of black rails in Chesapeake Bay marshlands.
Need to provide technical assistance	Establish a cooperative barn owl nest box program in Chesapeake Bay salt marsh habitats.

How has the 2005 Plan been used?

- Inventory, monitoring and research
- Technical assistance
- Habitat restoration
- GIS, database, and information services
- Conservation planning

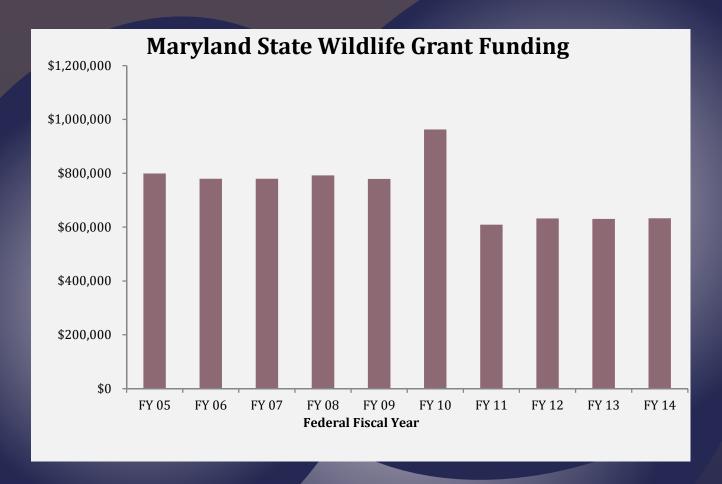


Surveying for cave species



Invasive Species Management: Phragmites

State Wildlife Grant Funding



FY 13 =(State FY July 1, 2013 – June 30th, 2014) \$ 630, 508

FY 14 = (State FY July 1, 2014 – June 30, 2015) \$ 632, 480

Funded Projects include

- Estimating space requirements and extinction risk for Maryland brook trout
- Re-inventory of targeted brook trout populations in western Maryland
- Recommunity-level inventory of Upper Coastal Plain seepage and headwater wetlands

- & Statewide breeding distribution of rails and other marshbirds

Public Comment Period Open Until May 8!

- Look for weblink under DNR Wildlife section
 - Comments may be submitted by mail, email (mdswap.dnr@maryland.gov), or online comment form



