

Map Sources Reference

Most maps included in the Maryland State Wildlife Action Plan were created by MD DNR using ESRI’s ArcGIS 10.2 software. Many were created over a standard basemap format containing the shaded relief map from The National Map (TNM) provided by U.S. Geological Survey (USGS). Surrounding state outlines were derived from the U.S. Census Bureau. Maryland county outlines and major water bodies were developed by MD Department of Planning (MDP) and MD Department of Natural Resources (MD DNR). Data sources for additional features displayed within individual maps are listed in the table below. Abbreviations can be found in Supplemental Materials “Acronyms” and citations can be found in the chapter in which they appear.

Figure Number	Title	Data Source(s)
1.1	Land conserved by MD DNR	MD DNR
1.2	Cross-border map of northeastern U.S. and Atlantic Canada terrestrial habitats	The Nature Conservancy, Eastern Division
2.1	Maryland	USGS TNM, National Geographic, MD DNR
2.2	Physiographic Provinces of Maryland	MD DNR
2.3	Maryland’s geology	MD DNR
2.4	Annual precipitation in Maryland, 1961-1990	NRCS Water and Climate Center
2.5	Maryland’s land use/land cover	MDP
2.6	Maryland’s watersheds	MD DNR
2.7	Maryland’s streams and rivers	Versar, Inc., MD DNR
2.8	Chesapeake Bay watershed	Wikimedia Commons
2.9	Salinity of the Chesapeake Bay during typical autumn	Pyzik et al. 2004 (Chesapeake Bay Program)
2.10	Maryland Coastal Bays	MD Coastal Bays Program
3.3	Regional importance of fall migration stopover sites for birds from the analysis of weather surveillance radar data	Buler & Dawson 2014
3.4	New Jersey chorus frog distribution map comparison	MD DNR, Harris 1975
4.1	Stand age in years in the Northeastern United States	Anderson et al. 2013
4.2	Old growth forests on public land in Maryland	MD DNR
4.4	Location of High Elevation Ridge Forests in Maryland	MD DNR
4.5	Location of Hemlock-Northern Hardwood Forests in Maryland	MD DNR, Delaware Department of Natural Resources and Environmental Control
4.6	Location of Cove Forests in Maryland	MD DNR, NatureServe’s Terrestrial Ecological Systems of



Figure Number	Title	Data Source(s)
		U.S. (TESUS)
4.7	Location of Montane-Piedmont Oak-Pine Forests in Maryland	TESUS
4.8	Location of Oak-Hickory Forests in Maryland	TNC's Northeastern Terrestrial Wildlife Habitat Classification System (NETWHCS)
4.9	Location of Mesic Mixed Hardwood Forests in Maryland	MD DNR
4.10	Location of Coastal Plain Oak-Pine Forests in Maryland	MD DNR
4.11	Location of Coastal Plain Pitch Pine Forests in Maryland	MD DNR, TESUS, USFWS
4.12	Location of Maritime Forests and Shrublands in Maryland	MD DNR, NETWHCS, USFWS
4.13	Location of Serpentine Barrens in Maryland	MD DNR
4.14	Location of Shale Barrens in Maryland	MD DNR
4.15	Location of Acidic Glades and Barrens in Maryland	MD DNR, TESUS
4.16	Location of Basic Glades and Barrens in Maryland	MD DNR
4.17	Location of Cliff and Rock Outcrops in Maryland	MD DNR, NETWHCS
4.18	Location of Coastal Bluffs in Maryland	MD DNR
4.19	Location of Coastal Beaches in Maryland	MD DNR, NPS, USGS
4.20	Location of Maritime Dunes and Grasslands in Maryland	MD DNR, NPS
4.21	Location of Montane-Piedmont Floodplains in Maryland	FEMA, MD DNR
4.22	Location of Coastal Plain Floodplains in Maryland	FEMA, MD DNR
4.23	Location of Montane Bogs and Fens in Maryland	MD DNR, USFWS
4.24	Location of Montane-Piedmont Acidic Seepage Swamps in Maryland	MD DNR, NETWHCS, TESUS, USFWS
4.25	Location of Montane-Piedmont Basic Seepage Swamps in Maryland	MD DNR, USFWS
4.26	Location of Piedmont Seepage Wetlands in Maryland	MD DNR, NETWHCS
4.27	Location of Piedmont Upland Depression Swamps in Maryland	MD DNR
4.28	Location of Coastal Plain Flatwoods and Depression Swamps in Maryland	MD DNR
4.29	Location of Coastal Plain Seepage Swamps in Maryland	MD DNR, USFWS



Figure Number	Title	Data Source(s)
4.30	Location of Coastal Plain Seepage Bogs and Fens in Maryland	MD DNR, USFWS
4.31	Location of Delmarva Bays in Maryland	MD DNR, USFWS
4.32	Location of Maritime Swamps in Maryland	MD DNR, NETWHCS, USFWS
4.33	Location of Vernal Pools in Maryland	MD DNR
4.34	Location of Springs in Maryland	MD DNR, Geographic Names Information System (USGS)
4.35	Location of Tidal Forests in Maryland.	MD DNR
4.36	Location of Tidal Freshwater Marshes and Shrublands in Maryland	MD DNR, TESUS
4.37	Location of Tidal Brackish Marshes and Shrublands in Maryland	MD DNR, TESUS
4.38	Location of Tidal Salt Marshes and Shrublands in Maryland	MD DNR, TESUS
4.39	Location of Intertidal Mudflats and Sandflats in Maryland	USFWS, USGS, MD DNR
4.40.	Location of Coldwater Streams in Maryland	Versar, Inc, USGS, MD DNR
4.41	Location of Limestone Streams in Maryland	Versar, Inc, USGS, MD DNR
4.42	Location of Highland Streams in Maryland	Versar, Inc, USGS, MD DNR
4.43	Location of Piedmont Streams in Maryland	Versar, Inc, USGS, MD DNR
4.44	Location of Coastal Plain Streams in Maryland	Versar, Inc, USGS, MD DNR
4.45	Location of Blackwater Streams in Maryland	Versar, Inc, USGS, MD DNR
4.46	Location of Highland Rivers in Maryland	Versar, Inc, USGS, MD DNR
4.47	Location of Piedmont Rivers in Maryland	Versar, Inc, USGS, MD DNR
4.48	Location of Coastal Plain Rivers in Maryland	Versar, Inc, USGS, MD DNR
4.49	Location of Shellfish Beds in Maryland	MD DNR
4.50	Location of Hard Bottom Habitats in Maryland	MD DNR, MGS, NOAA, MD Artificial Reef Initiative
4.51	Location of Submerged Aquatic Vegetation in Maryland	VA Institute of Marine Science, MD DNR
4.52	Location of Pelagic - Open Water Areas in Maryland	MD DNR
4.53	Location of Caves and Karsts in Maryland	MD DNR
4.54	Location of Managed Montane Conifer Forests in Maryland	MD DNR
4.55	Location of Managed Successional Forests in Maryland	MDP's Land Use / Land Cover 2010
4.56	Location of Managed Grasslands in Maryland	MD DNR, MDP's Land Use / Land Cover 2010



Figure Number	Title	Data Source(s)
4.57	Location of Roadsides and Utility Rights-of-Way in Maryland	MD DNR
4.58	Location of Artificial Impoundments and Artificial Wetlands in Maryland	MD DNR
4.59	Location of Buildings and Other Structures in Maryland	MD DNR
4.60	Location of Mines and Tunnels in Maryland	MD DNR, MDE, USGS
5.2	Forest loss 2000-2012	North Atlantic Landscape Conservation Cooperative, USGS
5.3	Change in development in Maryland 1973-2010	MDP
5.5	Maryland's roads	MDP, State Highway Administration, USGS
5.6	Fish passage blockages in Maryland	MD DNR
5.7	Over-stream road crossings in Maryland	State Highway Administration, USGS
5.8	Percent of impervious surface area across Maryland	National Land Cover Database, USGS, MD DNR
5.10	Spread of zebra mussels in the Chesapeake Bay and its tributaries	MD DNR
5.11	Spread of the virile and rusty crayfishes in Maryland	MD DNR
5.12	Dead zones in the Chesapeake Bay	MD DNR, USGS
5.13	Sources of point source pollution in Maryland	MDE
6.1	Geographical footprint and sub-regions of the DOI Northeast Climate Science Center	Bryan et al. 2015
6.2	Sea level rise map showing land inundation under current conditions, under 2 feet of sea-level rise, under 4 feet of sea-level rise, and under 6 feet of sea-level rise	NOAA, Boesch et al. 2013
6.4	Latitudinal zones used in the Manomet and NWF model	Manomet & NWF 2013a
6.5	The twelve Chesapeake Bay output sites	Glick et al. 2008
6.8	Change in landscape capability from 2010 to 2080 for the blackburnian warbler	Northeast Landscape Capability Dataset 2010
6.9	Change in landscape capability from 2010 to 2080 for the eastern meadowlark	Northeast Landscape Capability Dataset 2010
7.1	Protected land in Maryland	MD DNR, MDP
7.2	Maryland's Targeted Ecological Areas	MD DNR
7.3	Maryland's BioNet Priority Tiers	MD DNR
7.6	Maryland's Green Infrastructure	MD DNR



Figure Number	Title	Data Source(s)
7.7	Maryland's Blue Infrastructure	MD DNR
7.8	Maryland's Stronghold Watersheds	MD DNR
7.9	Maryland's Natural Areas	MD DNR
9.1	Landscape Conservation Cooperative boundaries in the northeast United States	USFWS

