



**HB729 Department of the Environment – Nontidal Wetlands – Protection of Vernal Pools
(Vernal Pool Wetlands Protection Act of 2024)**

TESTIMONY OF DR. MARK SOUTHERLAND -- Favorable

I received a Ph.D. and Smithsonian Fellowship in freshwater ecology and have consulted for federal, state, and local agencies on water resource issues for 30 years. I am the founder of Vernal Pool Partners and have served with the Maryland Academy of Sciences' Science Council, Maryland Water Monitoring Council, Howard County Environmental Sustainability Board, Howard County Conservancy, Patapsco Heritage Greenway, and Safe Skies Maryland.

Vernal pools are a type of freshwater wetland that are typically water-filled from early winter through mid-summer; have no fish populations; and provide habitat for species that cannot reproduce anywhere else, including fairy shrimp, wood frogs, and mole salamanders, such as the endangered eastern tiger salamander. Vernal pools provide disproportionately large amounts of ecosystem services, owing to their widespread occurrence throughout the landscape and ability to replenish groundwater and filter stormwater flows. They even occur in underserved communities, where these "backyard ecosystems" offer convenient connections to nature.

Two events brought me to conceiving and advocating for this bill:

1. Our Natural Waters are in Crisis. The wetlands and other waters of Maryland and the nation continue to be lost through development, pollution, and modification, and are consistently listed as the most endangered ecosystems in the U.S. and worldwide. The 2023 Sackett vs EPA Supreme Court decision removed federal protections from approximately 50% of U.S. waters, including all vernal pools. At the same time, under Maryland wetland regulations, many vernal pools are not protected because they do not possess the hydric soils or hydrophytic vegetation of other wetlands. The science is clear that all waters are connected hydrologically and that ephemeral wetlands, such as vernal pools, are critical to the health and utility of permanent waters. Therefore, it is incumbent on Maryland to take this simple step of protecting vernal pools so that we are good stewards of all our waters.
2. Vernal Pools are Little Understood in Maryland. In Maryland, as elsewhere, there is little understanding of what vernal pools are and how they contribute to biodiversity and human quality of life. However, the nearby states of Pennsylvania, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, Vermont, and Maine have already enacted protection or certification programs, while others have conducted inventories to better understand the abundance and distribution of vernal pools. In Maryland and elsewhere, vernal pools are being lost at a rapid rate because of the limited knowledge of their presence (they hold water only part of the year) and the gap in wetlands protections. Therefore, Maryland should develop a plan for identifying vernal pools using new remote technologies, so that the public is better informed and the state can improve protection and management. The Maryland Department of the Environment, Maryland Department of Natural Resources, University of Maryland Center for Environmental Science, University of Maryland Baltimore County, and U.S. Geological Survey have expertise to develop this plan.

The Time is Now. If we wait, we will continue to lose vernal pools every year and the biodiversity and environmental services they provide.