

Restoring Wetlands in Maryland:

Achieving Cleaner Water and Climate Benefits by Investing in Wetland Restoration in the Chesapeake Bay

Healthy and abundant wetlands are vital to keeping our Bay water and rivers clean while also mitigating and adapting to climate change in Maryland. Wetlands protect the Bay by acting like a sponge, soaking up polluted runoff and slowing the flow of nutrients, sediment and chemical contaminants into the watershed. In relation to climate change, the plant matter and continual sediment buildup in tidal wetlands enable these unique systems to sequester, or suck, carbon out of the atmosphere all while protecting shorelines from extreme flooding events and subsequent erosion. Yet these habitats continue to face mounting pressure from ongoing development and other land-use changes. As the third most vulnerable state to sea-level rise driven by climate change, Maryland legislators need to act quickly to protect and expand these water-cleaning and climate-fighting natural resources. That starts by including and prioritizing wetland restoration in Maryland's efforts to protect the Bay and reduce climate pollution and impacts across the state. This can be done by allocating \$2 million from Maryland's Strategic Energy Investment Fund to be used exclusively for the purpose of wetland restoration.



Policy at Hand

In 2014 Maryland was one of seven jurisdictions that signed a new Chesapeake Bay Watershed Agreement. This agreement set a goal of creating or re-establishing 85,000 acres of tidal and nontidal wetlands by 2025. Currently, the program is not on track to meet its goal. The program reports that just over 7% of its goal has been met in 2014 across the Bay watershed. At the same time, Maryland's Chesapeake and Atlantic Coastal Bays Trust Fund (herein Trust Fund), one of the primary fiscal resources used to

implement these restoration goals, reported just 307 acres of wetlands restored between 2009 and 2015. Within the Chesapeake Bay Program, a lack of funding and sub-optimal reporting are identified as key barriers to meeting the established goals. And there's a way to fix that.

Prioritizing Wetland Restoration by Leveraging Funding

Maryland has a special non-lapsing fund, called the Strategic Energy Investment Fund, which was established to "invest in the promotion, development, and implementation of....climate change programs directly related to reducing or mitigating the effects of climate change." This

fund now has \$40 million of unallocated contributions as a result of a 2014 order by the Maryland Public Service Commission (PSC) that required Dominion Resources to pay into the fund as a condition for permitting its Cove Point natural gas export facility. By allocating just \$2 million of this capital to the Trust Fund

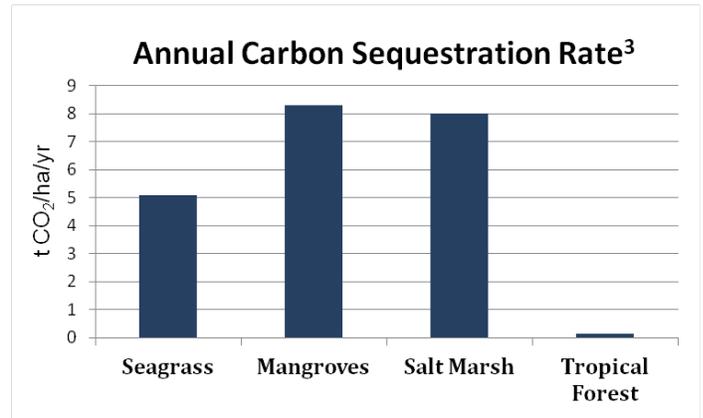
exclusively for wetland restoration projects across Maryland's portion of the Chesapeake Bay, the state can ensure that wetland restoration is prioritized at the same level as other water quality improvement projects.

Climate Benefits

By leveraging funding for wetland restoration and rehabilitation, Maryland can better prepare resilient and climate-ready coastal communities. Wetlands are exceptional climate adaptation and mitigation tools. By storing excess water and dissipating storm surges, they serve as a protective barrier to shoreline properties and constant erosion. They also are known to be the most effective carbon sinks on earth. Wetlands serving as carbon sinks are referred to as "coastal blue carbon" systems, as blue carbon refers to all of the carbon that is captured and stored in marine habitats. Wetlands are able to store four times more carbon on average than their terrestrial counterparts due to their high rates of photosynthesis and low rates of decomposition. Tidal wetlands are particularly special in this sense, as they are able to continuously vertically accrete over time - storing away layers of carbon-rich sediment. Their ability to do this also allows them to adapt to sea-level rise.

Restoring the Right Kind of Wetlands

Not all wetlands are created equal in terms of carbon storage. Estuarine wetlands have the highest rates for carbon storage, but they are also known to release methane. Saltwater and brackish marshes are not as productive in carbon sequestration as their freshwater counterparts, but the higher salinity concentration of the water prevents and can even eliminate the release of methane. Degraded and drained wetlands are also particularly effective at sequestering carbon once restored. When wetlands are drained or degraded, enormous amounts of carbon dioxide are released. By targeting wetlands that are higher in salinity and drained or degraded, the state can strategically stop greenhouse gas release from land-use change while also sequestering carbon out of the atmosphere. For this reason, wetland restoration for the purpose of carbon sequestration must be approached on a case by case basis. The infrastructure to accommodate such a mechanism already exists in Maryland's Chesapeake and Atlantic Coastal Bays Trust Fund, lending a pragmatic solution to speeding up wetland restoration progress while mitigating the impacts of climate change.



Wetlands: We Can Invest in Cleaner Water and Carbon Sequestration

As Maryland lawmakers push forward with climate progress across the state, they can and should simultaneously catalyze cleaner water and carbon sequestration by investing in wetland restoration. By allocating \$2 million from the SEIF to Maryland's Chesapeake and Atlantic Coastal Bays Trust Fund, lawmakers can ensure that Maryland's precious coastal resources are being proactively protected and restored all while mitigating the impacts of climate change.



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