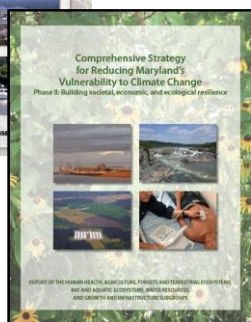
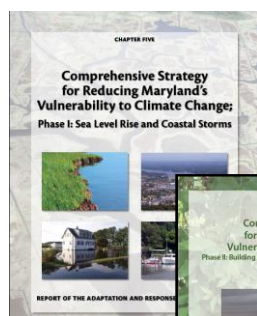


Maryland Department of Natural Resources Policy *Building Resilience to Climate Change*

Maryland's people, wildlife, land and public investments are becoming increasingly vulnerable to the impacts of a change in climate. Impacts such as sea level rise, increased storm intensity, extreme drought, heat waves, and intensified wind and rainfall will affect many facets of the State's society, economy and environment. The agriculture industry, forestry and fishery resources, freshwater supply, aquatic and terrestrial ecosystems, and the health of Maryland citizens will all be impacted. To plan ahead, the State is working on two fronts to plan for climate change: reducing greenhouse gas emissions - the drivers behind climate change; and taking action to address the likely impacts – to adapt to change.

Adaptation Planning Guidance



Under the leadership of Governor Martin O'Malley, the Maryland Commission on Climate Change developed two climate change adaptation strategies that are currently being

used to guide state-level planning efforts. The first strategy, released in 2008, addressed the serious impacts associated with sea level

rise and coastal storms; and, the second strategy, released in early 2011, addressed changes in precipitation patterns and increased temperature and the likely impacts to human health; agriculture; bay, aquatic, forest and terrestrial ecosystems; and built-infrastructure. John R. Griffin, Secretary of Maryland's Department of Natural Resources, co-chairs the Commission's Adaptation and Response Working Group which

facilitated the planning process to develop both strategies.

Leading by Example – Institutionalizing Consideration of Climate Change

Using both the State's 2008 and 2011 adaptation strategies as a guide, DNR issued a policy, "*Building Resilience to Climate Change*" to guide its investments in and management of land, resources and assets in order to better understand, mitigate and adapt to climate change. The policy addresses both land and infrastructure investments, habitat restoration projects, government operations, research and monitoring programs, and natural resource management efforts. The intent of the policy is to lead by example; and along the way encourage and educate others in the methods for managing natural resources and designing facilities in light of a changing climate. DNR's climate change policy has been instrumental in institutionalizing the following agency practices.

First and Foremost - Reducing our Carbon Footprint

DNR's climate change policy requires that the agency conduct its operations in furtherance of Maryland's existing greenhouse gas and energy efficiency and reduction goals and statutes. This component of the policy is not new - DNR has long been committed to doing its part to reduce the drivers behind climate change. In 2009, DNR calculated its carbon footprint and implemented a number of reduction strategies to reduce energy consumption and improve efficiency. The agency also planted 186.5 acres of forest on non-forested land to offset a significant portion of its 2006 calendar year emissions. The accounting of overall resource consumption for the agency currently includes waste discharge and greenhouse gas emissions produced through electricity, fuel consumption and vehicle emissions.



Building Resilience – Protecting and Restoring Ecosystems At-Risk

As directed by the policy, DNR expanded its land protection efforts in 2011 to strategically acquire key pieces of land that provide an “ecosystem service” in light of climate change, such as a storm surge buffer or wetland or habitat migration corridor. Protecting and restoring Maryland’s natural shoreline and its natural resources, including its tidal wetlands and marshes, vegetated buffers, and bay islands is critically important as these areas shield Maryland’s shoreline and interior from the impacts of sea level rise and coastal storms.

Avoiding Future Impact - Making Sound Investments

The policy commits the agency to site and design all new facilities and infrastructure so as to avoid or minimize anticipated climate change impacts, particularly sea level rise. As a result, the new visitor center at Harriet Tubman State Park will be elevated 2 feet above the existing 100-year base flood elevation to account for future sea level rise.



Proposed Harriet Tubman State Park Visitor Center:
Source: GWWO Architects

Managing Natural Resources – Planning for the Future

The policy requires the agency to develop and integrate both adaptation and mitigation reduction strategies into all natural resource management plans and programs. The agency is taking this element of the policy to heart. Recently, climate change considerations have been integrated into the State’s GreenPrint Program, Maryland’s Coastal and Estuarine Land Conservation Plan, the State Forest Resource Assessment and Strategy, Maryland’s Long-term Electricity Report, Maryland’s State Hazard Mitigation Plan, and the State Development Plan, *PlanMaryland*.

Helping Others - Building Coast-Smart Communities

The policy also directs the agency to work with others to encourage sound investments in land and facilities, and to promote the management of natural resources with an understanding of climate change. One such effort is DNR’s Coast-Smart Communities Initiative which is helping to ensure that Maryland’s local communities can become more adaptive and resilient to climate impacts. Under the initiative, DNR’s Chesapeake and Coastal Program administers a competitive grant program to provide financial and technical assistance to local governments that wish to reduce their vulnerability to the effects of climate change and sea level rise through planning and permitting activities. Grants of up to \$75,000, drawn from the federal Coastal Zone Management Act funds, are awarded on an annual basis.

For more information on Maryland’s climate change adaptation planning efforts or the DNR climate change policy, contact:

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