Adapting to Climate Change

Maryland has the fourth longest tidal coastline in the continental United States and has experienced more than one foot of sea level rise over the last century. Since 1990, sea-level in the region has risen three to four times faster than the global average. Predictions issued by the Maryland Commission on Climate Change expect an additional 1.3 feet of sea-level rise by 2050 and 3.4 feet by 2100[48] with local land subsidence exacerbating the problem. The state is currently losing about 580 acres every year to shoreline erosion, and rising waters have submerged 13 mapped islands in the Chesapeake Bay.

Maryland is a progressive state in addressing climate change, and one of the first in the country to develop a Climate Adaptation Plan (2008). The Maryland Commission on Climate Change and Department of Natural Resources (DNR) staff led the planning effort. In 2010 DNR adopted its own policy, "Building Resilience to Climate Change." The policy included a provision to guide investments in and management of land in order to better mitigate and adapt to climate change. As a result, DNR began integrating climate change considerations into its land conservation programs.

The earlier GreenPrint discussion detailed how sea level rise considerations were reflected in the Targeted Ecological Areas and also highlighted a new dataset that delineated wetland migration corridors, those areas where wetlands will move inland as sea-level rises. This dataset was developed using the EPA's Sea Level Affecting Marshes Model (SLAMM) and parameters specific to Maryland. The model identified low, medium, and high priority Wetland Adaptation Areas (see ***Figure 23***) and is integrated into the ecological scoring process that prioritizes properties for conservation.

Figure 23: Wetland Adaptation Areas

[48] U.S. Climate Change Science Program and Subcommittee on Global Change Research. 2009. *Coastal Sensitivity to Sea-Level Rise: A Focus. on the Mid-Atlantic Region*. Synthesis and Assessment Product 4.1. J.G. Titus., lead author. U.S. Environmental Protection Agency. Washington D.C.