

# A Plan of Action for the Chesapeake Bay: Managing our Coastline and Habitats in the Face of Global Warming

Sea-level rise needs to be a major consideration in the region's coastal management and ecological restoration plans. Maryland has taken an important first step by establishing a state-wide *Sea-level Rise Response Strategy*, which has laid out a number of recommended actions.<sup>38</sup> Virginia's newly formed Governor's Commission on Climate Change is considering sea-level rise impacts on the state's coastal areas and has the opportunity to develop a similar strategy. These strategies need to be accompanied by federal, state, and local policies (see page 10) to ensure that the recommended actions are achieved.

Local, state, and federal agencies will need to identify appropriate response strategies on a site-specific basis. By identifying which locations and habitats in the bay region are especially vulnerable, this summary and the accompanying technical report will be an important tool for informing the development of these strategies. In particular, NWF's modeling results can help resource managers identify locations around the Chesapeake Bay region where the following actions should be undertaken to protect coastal habitats:

- **Preserve the ability of habitats to migrate inland as sea levels rise.**

We need to identify and protect expanded "buffers" along coasts and rivers, capitalizing on locations with little or no development, such as marginal agricultural lands, and where land acquisition and rolling easements might make sense. To protect both people and habitats, state and local agencies must also develop specific measures to

discourage development in vulnerable areas, such as those identified in this study.

- **Facilitate natural sediment build-up and artificial replenishment of sediments in coastal wetlands and beaches.**

We may be able to preserve habitats in some areas by restoring natural replenishment of sediments, for example, by removing seawalls, reforesting riparian areas, or reconsidering the use of river dams. Other areas may benefit from beach re-nourishment and the use of dredged materials to replenish coastal marshes, but only if rigorous environmental standards are in place to ensure that the projects do not use contaminated sediments, introduce invasive species, erode too quickly, or cause other ecological harm.

- **Improve the resiliency of fish and wildlife species by maintaining a diverse array of habitats.**

This study underscores how the Chesapeake Bay's coastal habitats are interconnected and how their interdependencies will become more

critical as sea-level rise forces habitat migration. Ultimately, we need to manage our coasts as functioning ecosystems with multiple linkages among habitats and species, rather than focusing separately on individual habitat types and species. These model results identify several places—like Blackwater National Wildlife Refuge and Virginia's Eastern Shore—that could experience significant shifts to less-diverse habitats, and therefore should be priority candidates for ecological restoration and protection projects.

Fortunately, we have the opportunity to act now to ensure that the Chesapeake Bay's precious coastal habitats, and the ecological and economic benefits they provide, will endure for our children and grandchildren. By taking sea-level rise into consideration when making decisions about the future of the Chesapeake Bay's coastal communities and resources, we can avoid costly and irreversible consequences for bay residents and the area's natural wonders.

