



*Continually monitor and assess the trends and likely impacts of changing climatic and sea level conditions on the Chesapeake Bay ecosystem, including the effectiveness of restoration and protection policies, programs and projects.*

**Why is this outcome important?**

Monitoring and assessing changing climatic and sea level conditions and trends are vital and essential components of the Chesapeake Bay Program's climate resiliency goal. Documenting observed changes in sea level, precipitation patterns, Bay temperature and the resulting ecosystem response will inform the development and prioritization of on-the-ground projects and programmatic management strategies.

**Current Conditions:**

The Chesapeake Bay watershed has experienced changes in its climate over the last century. On the whole, the watershed is experiencing stronger and more frequent storms, an increase in heavy precipitation events, an increase in water temperatures and a rise in sea level. Over the next century, scientists expect these trends to continue, increasing the vulnerability of the Bay ecosystem to impacts that include the inundation of low-lying lands and a significant loss of marsh and wetland habitats.

**How was the outcome derived? Who came up with it?**

The Chesapeake Bay Program, as a whole, recognizes that building climate resilience and adapting to changing climatic and sea level conditions is a top priority for the restoration and protection of the watershed. The 2010 Strategy for Protecting and Restoring the Chesapeake Bay Watershed notes that changing climatic conditions are a significant challenge to the successful restoration and protection of the Bay and its watershed. This outcome builds off the strategy's recommended actions to improve the monitoring of climate change impacts in the Bay and watershed and ensure that monitoring results are integrated and available to assess effectiveness and adjust management actions as necessary.

**What was the basis or baseline?**

Monitoring and assessing the impacts of changing climatic and sea level conditions has been a concerted effort among several federal, state, regional, local and academic partners over the past decade. The findings of past assessments, such as those provided by the Scientific and Technical Advisory Committee in its report *Climate Change and the Chesapeake Bay, State-of-the-Science-Review and Recommendations*, provide a sound basis for what it is envisioned will be a continuous effort to monitor and assess changing climatic conditions and resulting impacts within the Chesapeake Bay watershed.

**For More Information:**

[http://www.chesapeakebay.net/issues/issue/climate\\_change](http://www.chesapeakebay.net/issues/issue/climate_change)

<http://www.chesapeake.org/stac/Pubs/climchangereport.pdf>

<http://executiveorder.chesapeakebay.net/file.axd?file=2010%2F5%2FChesapeake+EO+Strategy%20.pdf>

<http://www.epa.gov/climatechange/>



*Continually pursue, design, and construct restoration and protection projects to enhance the resiliency of bay and aquatic ecosystems from the impacts of coastal erosion, coastal flooding, more intense and more frequent storms and sea level rise.*

**Why is this outcome important?**

To increase the climate resiliency of the Chesapeake Bay watershed, it is important to consider changing climatic conditions and sea-level rise in the pursuit, design, implementation and long-term maintenance of restoration and protection best management practices (BMPs). This may mean using specific BMPs to address certain environmental needs, like restoring areas that would facilitate the inland migration of wetlands or planting vegetative buffers in areas that experience coastal floods or storm surges. In other cases, it may involve factoring climatic and sea-level rise considerations into the design of on-the-ground restoration work, for example by using drought- or heat-tolerant species in plantings.

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The Chesapeake Bay Program, as a whole, recognizes that building climate resilience and adapting to changing climatic and sea level conditions is a top priority for the restoration and protection of the watershed. The 2010 Strategy for Protecting and Restoring the Chesapeake Bay Watershed notes that changing climatic conditions are a significant challenge to the successful restoration and protection of the Bay and its watershed. This outcome builds off the strategy's objectives to: minimize the vulnerability of the watershed, including its habitats, public infrastructure and human communities, to adverse impacts from climate change; and demonstrate and implement effective restoration planning.

**What was the basis or baseline?**

The 2010 Strategy for Protecting and Restoring the Chesapeake Bay Watershed and the findings and recommendations of the Scientific and Technical Advisory Committee report, "Climate Change and the Chesapeake Bay, State-of-the-Science-Review and Recommendations," provide a sound basis for pursuing, designing and constructing restoration and protection projects to enhance the resiliency to the impacts of changing climatic conditions within the Chesapeake Bay watershed.

**For More Information:**

[http://www.chesapeakebay.net/issues/issue/climate\\_change](http://www.chesapeakebay.net/issues/issue/climate_change)

<http://www.chesapeake.org/stac/Pubs/climchangereport.pdf>

<http://executiveorder.chesapeakebay.net/file.axd?file=2010%2F5%2FChesapeake+EO+Strategy%20.pdf>

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