

FY 2014 NWPG Measure Definitions Chesapeake Bay

Measure Code: CB-SP33.N11

Measure Language: Percent of Submerged Aquatic Vegetation goal of 185,000 acres achieved, based on annual monitoring from prior year. Type of Measure: Long-term Target Measure; cumulatively reported

Measure Contact: [Nita Sylvester](#), Chesapeake Bay Program Office, (410) 267-5711

Measure Definition

Terms and phrases: Submerged Aquatic Vegetation, also known as Underwater Bay Grasses, refers to the 16 species found in the Chesapeake Bay. Bay grasses are used as a measure of the Bay's overall condition because they are not under harvest pressure and their health is closely linked to the overall health of the Bay.

For more information, please refer to [Chesapeake Bay Program website](#).

Methodology for computation of results: The Submerged Aquatic Vegetation (SAV) measure is reported as the % of long term goal achievement of 185,000 acres of SAV in the tidal waters of Chesapeake Bay. The long term restoration goal of 185,000 acres is based upon historical Chesapeake Bay SAV abundance and distribution records dating back to late 1930's. The reported information is based on annual monitoring from the prior year.

Black-and-white aerial photography at a scale of 1:24,000 was the principal source of information used to assess distribution and abundance of SAV in Chesapeake Bay, its tributaries, and the Delmarva Peninsula coastal bays from Assawoman Bay to Magothy Bay in 2008. There were 173 flight lines that yielded aerial photography negatives that were scanned and orthorectified to create orthophoto mosaics. These mosaics were carefully examined on-screen and outlines were drawn to identify all SAV beds visible on the photography, providing a geographic information system (GIS) digital database for analysis of bed areas and locations. Ground survey information collected in 2008 was tabulated and entered into the VIMS SAV GIS digital database. Refer to [Chesapeake Bay Program website](#).

Units: Percent of goal achieved. Refer to [Chesapeake Bay Program website](#)

Universe: 185,000 acres is the long term goal. Refer to [Chesapeake Bay Program website](#).

Baseline: Annual percent of submerged aquatic vegetation achieved. 39% (72,945) in FY 2005. Refer to [Chesapeake Bay Program website](#).

Measure Code: CB-SP34

Measure Language: Percent of Dissolved Oxygen goal of 100% standards attainment achieved, based on annual monitoring from the previous calendar year and the preceding 2 years.

Type of Measure: Long-term Target measure; cumulatively reported

Measure Contact: [Nita Sylvester](#), Chesapeake Bay Program Office, (410) 267-5711

Measure Definition

Terms and phrases: Dissolved oxygen (DO) refers to the amount of oxygen that is present in the water. It is measured in units of milligrams per liter (mg/L), or the milligrams of oxygen dissolved in a liter of water. Refer to [Chesapeake Bay Program website on Dissolved Oxygen](#).

Methodology for computation of results: The dissolved oxygen (DO) measure is reported as % of long term goal achieved. The long term goal is 100 % of volume of the Chesapeake Bay tidal waters attaining the state water quality standards for dissolved oxygen over a 3 year assessment window for each designated use. The results are based on monitoring data from the previous calendar year (and the preceding 2 years). Refer to [Chesapeake Bay Program website on Dissolved Oxygen](#).

DO concentrations are measured in-situ at surface and depth profiles at fixed stations in the entire Bay. Raw data are processed by the Bay Program's interpolator program and, subsequently, interpolations are analyzed by a fortran program on a linux platform to determine the volumetric extent of compliance.

Refer to [Chesapeake Bay Program website on Dissolved Oxygen](#).

Units: Percent of goal achieved. Refer to [Chesapeake Bay Program website on Dissolved Oxygen](#).

Universe: 100% standards attainment achieved is the long term goal. This would equate to the total volume of the Bay and its tidal tributaries (74.8 cubic kilometers) achieving water quality standards for dissolved oxygen. Refer to [Chesapeake Bay Program website on Dissolved Oxygen](#).

Baseline: Percent of dissolved oxygen attainment goals achieved. 35.2% in FY 2006 Refer to [Chesapeake Bay Program website on Dissolved Oxygen](#).

Measure Code: CB-SP35

Measure Language: Percent of goal achieved for implementing nitrogen pollution reduction actions to achieve the final TMDL allocations, as measured through the phase 5.3 watershed model.

Type of Measure: Annual and Long-Term Target measure; Cumulatively reported

Measure Contact: [Nita Sylvester](#), Chesapeake Bay Program Office, (410) 267-5711

Measure Definition

Methodology for computation of results: The Chesapeake Bay Program Phase 5.3 Watershed Model is used to simulate pollution loads in any particular year, based on pollution reduction actions that have been implemented, and compare those loads to the Total Maximum Daily Load (TMDL) allocations. The difference in simulated loads between the baseline year and the TMDL is considered the goal. The difference in simulated loads between the baseline year and the most current year is considered the most recent progress. Dividing the progress by the goal provides "percent achievement of goal". For a

detailed description of the Phase 5.3 Watershed Model, refer to [chapter 5.8 of the TMDL \(pages 5–30 through 5–38\)](#).

Units: Percent of goal achieved.

Universe: Simulated load reductions from FY 2010 (2009 loads scenario) to the Total Maximum Daily Load (TMDL) load allocation. For a description of the 2009 Scenario and the simulated loads for 2009, refer to Appendix J of the [TMDL \(page J-1 and Tables J-2, J-4 and J-6\)](#). For the TMDL load allocations, refer to the [Executive Summary of the TMDL \(page E-7, table ES-1\)](#).

Baseline: 0% in FY 2010 (based on 2009 Scenario). Percent of goal achieved for implementation of nitrogen reduction actions to achieve final TMDL allocations, as measured through the phase 5.3 watershed model. Tracking began in FY 2010 with zero percent of goal achieved. For a description of the 2009 Scenario and the simulated loads for 2009, refer to [Appendix J of the TMDL \(page J-1 and Tables J-2, J-4 and J-6\)](#).

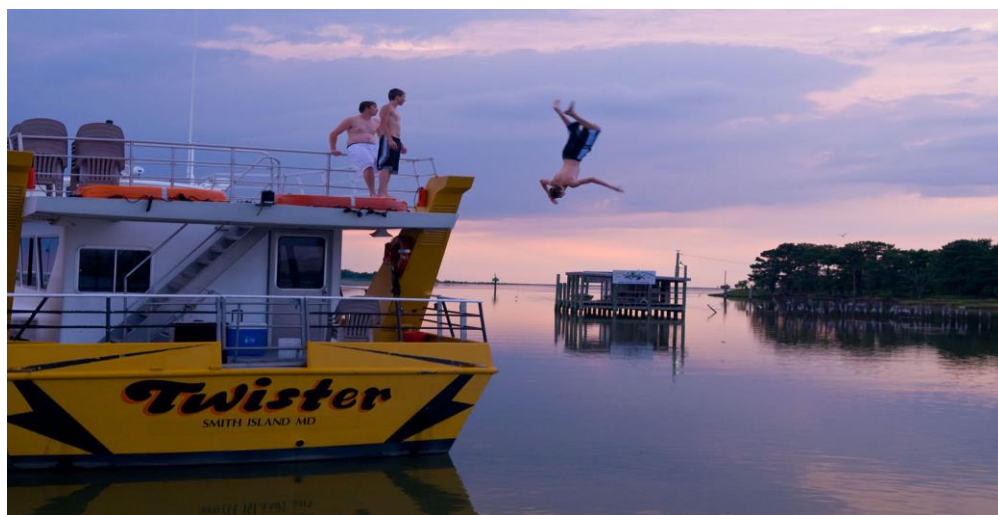


Figure 1; Picture of a children jumping off a boat

Measure Code: CB-SP36

Measure Language: Percent of goal achieved for implementation of phosphorus pollution reduction actions to achieve final TMDL allocations, as measured through the phase 5.3 watershed model.

Type of Measure: Annual and Long-Term Target measure; Cumulatively reported

Measure Contact: [Nita Sylvester](#), Chesapeake Bay Program Office, | (410) 267-5711

Measure Definition

Methodology for computation of results: The Chesapeake Bay Program Phase 5.3 Watershed Model is used to simulate pollution loads in any particular year, based on pollution reduction actions that have

been implemented, and compare those loads to the Total Maximum Daily Load (TMDL) allocations. The difference in simulated loads between the baseline year and the TMDL is considered the goal. The difference in simulated loads between the baseline year and the most current year is considered the most recent progress. Dividing the progress by the goal provides "percent achievement of goal". For a detailed description of the Phase 5.3 Watershed Model, refer to chapter 5.8 of the [TMDL \(pages 5-30 through 5-38\)](#).

Units: Percent of goal achieved.

Universe: Simulated load reductions from FY 2010 (2009 loads scenario) to the Total Maximum Daily Load (TMDL) load allocation. For a description of the 2009 Scenario and the simulated loads for 2009, refer to Appendix J of the [TMDL \(page J-1 and Tables J-2, J-4 and J-6\)](#). For the TMDL load allocations, refer to the [Executive Summary of the TMDL \(page E-7, table ES-1\)](#).

Baseline: 0% in FY 2010 (based on 2009 Scenario). Percent of goal achieved for implementation of phosphorus reduction actions to achieve final TMDL allocations, as measured through the phase 5.3 watershed model. Tracking began in FY 2010 with zero percent of goal achieved. For a description of the 2009 Scenario and the simulated loads for 2009, refer to [Appendix J of the TMDL \(page J-1 and Tables J-2, J-4 and J-6\)](#).

Measure Code: CB-SP37

Measure Language: Percent of goal achieved for implementation of sediment pollution reduction actions to achieve final TMDL allocations, as measured through the phase 5.3 watershed model.

Type of Measure: Annual and Long-Term Target measure; Cumulatively reported

Measure Contact: [Nita Sylvester](#), Chesapeake Bay Program Office, (410) 267-5711

Measure Definition

Methodology for computation of results: The Chesapeake Bay Program Phase 5.3 Watershed Model is used to simulate pollution loads in any particular year, based on pollution reduction actions that have been implemented, and compare those loads to the Total Maximum Daily Load (TMDL) allocations. The difference in simulated loads between the baseline year and the TMDL is considered the goal. The difference in simulated loads between the baseline year and the most current year is considered the most recent progress. Dividing the progress by the goal provides "percent achievement of goal". For a detailed description of the Phase 5.3 Watershed Model, refer to chapter 5.8 of the [TMDL \(pages 5-30 through 5-38\)](#).

Units: Percent of goal achieved

Universe: Simulated load reductions from FY 2010 (2009 loads scenario) to the Total Maximum Daily Load (TMDL) load allocation. For a description of the 2009 Scenario and the simulated loads for 2009, refer to Appendix J of the [TMDL \(page J-1 and Tables J-2, J-4 and J-6\)](#). For the TMDL load allocations, refer to the [Executive Summary of the TMDL \(page E-7, table ES-1\)](#).

Baseline: 0% in FY 2010 (based on 2009 Scenario). Percent of goal achieved for implementation of sediment reduction actions to achieve final TMDL allocations, as measured through the phase 5.3 watershed model. Tracking began in FY 2010 with zero percent of goal achieved. For a description of the 2009 Scenario and the simulated loads for 2009, refer to Appendix J of the [TMDL \(page J-1 and Tables J-2, J-4 and J-6\)](#).