Summary of USGS Chesapeake Bay Accomplishments for 2014

A new Chesapeake Bay agreement, to guide the restoration and conservation of the Nation's largest estuary, was signed by 6 states, District of Columbia, and 7 federal agencies in June 2014. The Department of Interior has a leadership role to carry out 7 of the 10 goals in the Agreement with USGS providing science to enhance ecosystem management. The agreement expands activities to sustain fish and wildlife, improve water quality, recover habitat, conserve lands, and increase stewardship and public access. New challenges are also being addressed including climate change and toxic contaminants.

The USGS is building from its accomplishments in 2014 to support the new Agreement, which included:

- The USGS discovered the highest occurrence of intersex conditions in fish in the Chesapeake watershed when compared to the Delaware and Ohio basins. Enhanced studies of the sources and effects of the chemicals degrading fish and wildlife were begun to better understand causes of intersex conditions.
- To support management of waterfowl by USFWS and other partners, USGS is developing models of the capacity of wetlands to support Black Duck populations in the Bay region. The modeling on six FWS refuges in the Chesapeake is being coordinated with efforts of the Black Duck Joint Venture to look at the carrying capacity of wetlands along the East Coast.
- The USGS released a report with academic partners summarizing the water-quality management practices showing the greatest improvements in nutrient and sediment in the Bay watershed. The report concluded that upgrades in wastewater treatment plants, air emissions reductions, and some agricultural practices are providing the greatest water-quality benefit. However, the effects of development and increasing amounts of intensive animal agricultural are offsetting some of the improvements. The information is being used by the 6 states in the watershed and EPA to revise plans to meet the Bay TMDL—the Nation's largest water-quality improvement effort.
- The USGS improved its Land Change model to forecast the effects of development on vital lands. The NPS,FWS, USFS, and land conservation agencies are using the projections to help identify areas for land and habitat protection.