

INTRODUCTION

This 2008 water quality assessment report provides a summary of the Susquehanna River Basin Commission's (Commission's) assessment of the water quality, physical habitat, and biological status of its basin's rivers and streams. These assessments are based on monitoring activities from subbasin surveys and interstate stream projects. This report was prepared to meet the requirements of Section 305(b) of the Clean Water Act.

In accordance with the guidelines, this report involves the use of water quality, biological, and physical habitat evaluations to determine the degree of use support. The assessments made in this water quality assessment report provide updates to the previous assessments: "The 2004 Susquehanna River Basin Water Quality Assessment 305(b) Report," "The 2006 Susquehanna River Basin Water Quality Assessment 305(b) Report," and the 2005 and 2007 305(b) Electronic Updates.

PART I: EXECUTIVE SUMMARY

The Susquehanna River drains 27,510 square miles in parts of New York, Pennsylvania, and Maryland and has one of the largest river basins on the East Coast of the United States. It originates at Otsego Lake in New York State and flows 444 miles to the Chesapeake Bay (Bay) at Havre de Grace, Maryland, where it contributes over half of the freshwater inflow to the Bay. Of the basin's 31,193 total stream miles (USEPA, 1993), 5,015.26 are assessed in this report. Over 81 percent of the assessed streams (4,084.31 stream miles) fully support designated uses.

The major causes of stream impairment for this water quality assessment report are elevated metals and sulfate concentrations and depressed pH due to abandoned mine drainage (AMD). Excess sediment and nutrient enrichment also are important causes of stream impairment in the Susquehanna River Basin. Other sources of impairment include habitat alteration, loss of riparian habitat, channelization, and increased nutrients due to agricultural and urban runoff problems, as well as some limited impacts from sewage treatment plants.

The Commission developed its monitoring program in order to fulfill its responsibilities and jurisdiction in interstate and Susquehanna River basinwide issues. To support the goals of the Chesapeake Bay Program (CBP), the Commission monitors nitrogen, phosphorus, sediment, and total suspended solids in the mainstem Susquehanna River and its major tributaries. The Commission established an interstate water quality network in 1986 to assess compliance with water quality standards for streams that cross state lines. Regional water quality, physical habitat, and biological conditions throughout the basin are addressed through subbasin surveys. Additionally, the Commission undertakes small scale studies as the need warrants. Commission staff also has developed a Large River Assessment program. These monitoring networks not only help Commission staff meet program objectives, but also provide information to assess streams for the water quality assessment report.

PART II: BACKGROUND

The Susquehanna River drains the largest basin on the Atlantic Coast of the United States and is the nation's 16th largest river. It originates at Otsego Lake, New York, and flows 444 miles to the Bay at Havre de Grace, Maryland. The 27,510-square-mile Susquehanna River Basin drains portions of New York, Pennsylvania, and Maryland and provides over half of the freshwater inflow to the Bay. Although relatively undeveloped, some of the basin's water resources have experienced degradation and overuse.

Total Waters

The information presented in Table 1 and Figure 1 provides a general perspective of the Susquehanna River Basin's water and land resources.

Summary of Classified Uses

The streams in the Susquehanna River Basin are classified (Appendix A) separately for the three basin states, since each state has its own classification system. Stream classifications are based on a combination of aquatic life, water supply, and recreational uses.

PART III: SURFACE WATER QUALITY ASSESSMENT

Surface Water Monitoring Program

The Commission operates under the general authority of the Susquehanna River Basin Compact, the broad objectives of the Commission's Comprehensive Plan, which the Commission currently is revising. The Commission's Watershed Assessment and Protection Division has developed its own strategic plan (<http://www.srbc.net/programs/docs/WAPStrategicPlan.pdf>) to complement the overall strategy and focus on specific goals, objectives, and actions to help the Commission more effectively manage water quality in the Susquehanna River Basin. Additionally, staff developed a monitoring strategy document, which was reviewed and approved by the U.S. Environmental Protection Agency (USEPA) (<http://www.srbc.net/programs/docs/Monitoring%20Strategy1204.pdf>).

Commission staff obtains stream assessment information through a variety of water quality programs. The Commission's monitoring program supports the Commission's responsibilities and jurisdiction in interstate and regional issues. To support the goals of the CBP, staff monitors nitrogen, phosphorus, and suspended sediment in the mainstem Susquehanna River and its major tributaries. The Commission also established an interstate water quality network to assess compliance with state water quality standards for streams that cross state lines. Regional water quality and biological conditions in the basin are addressed through six subbasin surveys. The Commission also has implemented a large river assessment program. These monitoring networks not only help the Commission meet each program objective, but also provide information to assess streams for the water quality assessment report and for local interests. The stream assessments provided in this 2008 305(b) report were obtained from the FY-2005 Interstate Streams Water Quality Network survey; the Middle Susquehanna Subbasin Survey, Year 1; the Middle Susquehanna Subbasin Survey, Year 2; the West Branch Susquehanna Subbasin Survey, Year 1; the West Branch Susquehanna Subbasin Survey, Year 2; the Juniata Subbasin Survey, Year 1; the Juniata Subbasin Survey, Year 2; the Lower Susquehanna Subbasin Survey, Year 1; the Chemung Subbasin Survey, Year 1; the 2002 River Assessment Pilot Project; and the 2005 Large River Assessment Project.