Piedmont Whole Basin Program
Preliminary Assessment Revisited

Summary prepared by the Watershed Assessment and Management Section
February, 2014

Background and Overview

Between 1997 and 2005, the Delaware Department of Natural Resources and Environmental Control published preliminary assessment reports for each of Delaware's four major drainage basins: the Piedmont, Chesapeake, Delaware Estuary, and Inland Bays. Each of these assessment reports contained recommendations for steps that should be taken to improve Delaware's environment and recreational resources and gather critical data and information. This "Whole Basin" approach used drainage basins as the chief management unit, and sought to bring together the expertise of all DNREC Divisions to create a comprehensive and coordinated management effort. In 2013, Division of Watershed Stewardship staff met to evaluate progress towards implementing recommendations that had been laid out in the Whole Basin Assessment Reports. The main objective of this task was to determine the status of the recommendations and highlight areas for further progress or evaluation. To accomplish this objective, staff evaluated each recommendation and determined the percentage of recommendations that had been addressed in each of the four reports. The Piedmont Basin report was analyzed by category (Figure 1). A more in-depth assessment of recommendations can be found in Figure 2.

Category	Score
Air Quality	100 %
Contaminants	100 %
Geology, Soils, Sediments	100%
Water Resources	68%

Figure 1. Percentage of recommendations addressed by category from the Piedmont Whole Basin Preliminary Assessment Report.

Methodology

Each recommendation was given a status of "complete," "ongoing," "partially addressed," or "not addressed" based on research and correspondence with Department staff. Recommendations were then grouped into categories from the Piedmont Whole Basin Preliminary Assessment Report: Contaminants; Geology, Soils, Sediments; Air Quality; and Water Resources. A score was determined for each category by dividing the number of completed and ongoing recommendations by the total number of recommendations. Scores above 75% received a "thumbs up" scoring, scores between 50% and 75% were scored as "thumbs sideways—neutral," and scores below 50% received a "thumbs down" score.

Category	Implemented/Ongoing	Not Implemented
Air Quality	• Wilmington is monitored for air toxics (12 chemical compounds) to develop baseline concentrations and detect trends. • Releases of regulated chemicals continue to be tracked through the Toxics Release Inventory.	All recommendations from this section were addressed.
Contaminants	• Zinc TMDLs have been promulgated and zinc sources known to impact the Red and White Clay Creeks have been or are being remediated. • Zinc-contaminated surface waters have been identified and mapped using water quality data.	All recommendations from this section were addressed.
Geology, Sediments, Soils	• Potential urban sources have been identified by establishing statewide GIS coverage of active construction sites with the Mudtracker database. • Additional funding for updating statewide soil survey maps through Web Soil Survey.	All recommendations from this section were addressed.
Water Resources	• Development of depth to groundwater maps were created that highlight areas with an extremely shallow water table. • Stream Inventories performed throughout the Piedmont basin have identified areas in need of restoration.	• Identify areas with a concentration of individual domestic drinking water wells. The wells should be evaluated for quality and vulnerability.

Figure 2. Examples of recommendations from the Piedmont Whole Basin Preliminary Assessment Report.

Moving Forward

Overall, 81% of the Piedmont Basin recommendations have been or are being implemented. Additional progress could be achieved by investigating why certain recommendations were not implemented and determining if future action is warranted.