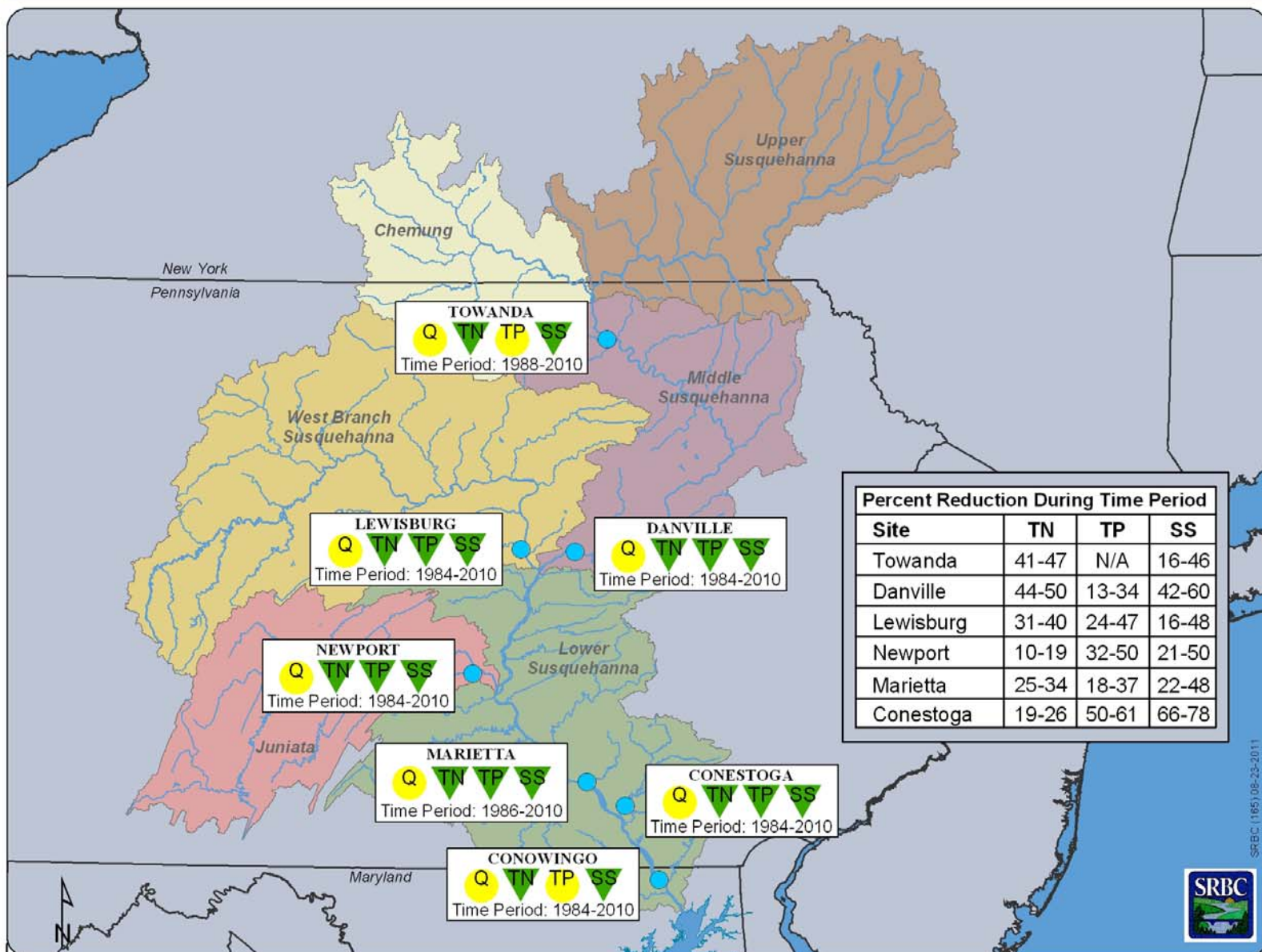


Susquehanna River Basin Commission

FLOW-ADJUSTED CONCENTRATION TRENDS THROUGH 2010



TRENDS IN FLOW, NITROGEN, PHOSPHORUS AND SUSPENDED SEDIMENT IN THE SUSQUEHANNA RIVER BASIN THROUGH 2010

The Susquehanna River Basin Commission estimates trends in nutrients, sediment, and flow as part of the Chesapeake Bay Program's annual trend update. Trends are calculated based on the USGS water year, October 1 to September 30, using the USGS 7-parameter, log-linear regression model (ESTIMATOR) for nutrient trends and the Seasonal Kendall test for trends in flow.

Trends in flow indicate the natural changes in hydrology. Changes in flow and the cumulative sources of flow (base flow and overland runoff) affect the observed concentrations and the estimated loads of nutrients and suspended sediment. The Flow Adjusted Concentration (FAC) is the concentration after the effects of flow are removed. Trends in FAC indicate that changes have occurred in the processes that deliver constituents to the stream system. This is the concentration that relates to the effects of nutrient-reduction activities and other actions taking place in the watershed.

FAC trends for 2010 remained unchanged from 2009 trends. The chart shows the range in percentage of reductions that have occurred at each site since the beginning of monitoring at the site. For example, TN values at Towanda for 2010 are between 41% and 47% less than 1989 values of TN.

<p>STATION LOCATION</p> <p>TREND CHANGE</p> <p> - No change over Dated Time Period</p> <p> - Decreasing Concentration over Dated Time Period</p> <p>0 30 60 Miles</p>	<p>TREND EXPLANATION</p> <p>Q - Flow</p> <p>TN - Total Nitrogen</p> <p>TP - Total Phosphorus</p> <p>SS - Suspended Sediment</p>	<p> MAJOR RIVER</p> <p> WATER BODY</p> <p> STATE BOUNDARY</p> <p> SUSQUEHANNA RIVER BASIN</p>
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Source: Susquehanna River Basin Commission and Conowingo results from USGS Baltimore, Maryland; DISCLAIMER: Intended for Educational Display Purposes Only.

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