

Assessing Benefits of Wastewater Treatment Plant Nutrient Control Upgrades on Toxic Contaminants

Objectives:

- Identify, define, quantify, and incorporate nutrient, sediment, and chemical pollutant reduction and conservation practices into the Chesapeake Bay Program (CBP) decision support system
- Evaluate potential toxic reduction benefits that could be achieved through upgrades at wastewater treatment plants in addition to the implementation of traditional nutrient and sediment nonpoint source BMPs examined in 2015
- Better quantify the potential toxic contaminant reductions, with a focus on PCBs that can be achieved through the installation of nutrient control upgrades at WWTPs

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Phase I: Develop a work plan to include quality assurance; perform a literature search, assess availability of data reported by permitted WWTPs before and after plant upgrades; and present on findings of the volume of available data to the Toxic Contaminants Workgroup prior to performing analysis

Phase II: Analyze available data and report on pre and post-upgrade performance including categorizing changes in performance by the type of upgrade; include descriptive statistics and statistics that determine whether there is a statistically significant difference both within and across- groups of upgrade types; and estimate the amount of PCB that is retained in solids and describe the methods of solids disposal

Phase III: Report preliminary findings to the Toxic Contaminants Workgroup; revise as needed and submit final report