

Chesapeake Bay Program: PCBs & Toxics Contaminants – Policy, Prevention, and Research

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Greg Allen
EPA Chesapeake Bay Program Office
Water Quality Goal Implementation Team
Toxic Contaminants Workgroup



Through the 2014 Chesapeake Bay Watershed Agreement, the Chesapeake Bay Program has committed to...

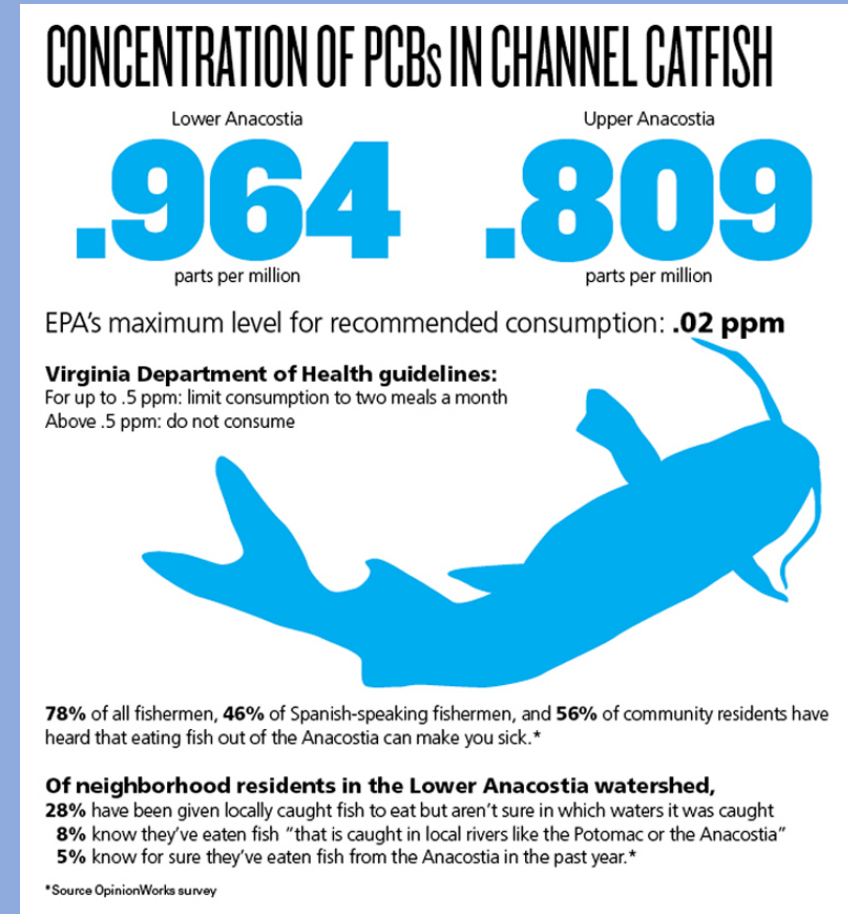
Goal: Ensure that the Bay and its rivers are free of effects of toxic contaminants on living resources and human health.

Outcome: Continually improve practices and controls that reduce and prevent the effects of toxic contaminants below levels that harm aquatic systems and humans. Build on existing programs to reduce the amount and effects of PCBs in the Bay and watershed. Use research findings to evaluate the implementation of additional policies, programs and practices for other contaminants that need to be further reduced or eliminated.



Toxic Contaminants Policy and Prevention Outcome Management Strategy – PCB Focus

- Widespread contamination of fish and extensive fish consumption advisories due to polychlorinated biphenyls (PCBs)
- Extensive impairments of both tidal and non-tidal waters
- Numerous existing PCB TMDLs across the Watershed as well as additional PCB TMDLs under development



Chesapeake Watershed PCB Story Map

<http://arcg.is/1MxTvgm>

- Panel 1 PCB Impairments
- Panel 2 PCB TMDLS
- Panel 3 PCB TMDLs in progress
- Panel 4 PCB Impairment – no TMDL in Progress

Concept for a Chesapeake-focused PCB TMDL Resource Center

- **Goal** - Establish a compilation of data, guidance documents, maps, mapping tools, modeling tools, lessons learned from within and outside the watershed to enhance the efficiency of PCB local TMDL implementation.
- ***How does it fill gap/need within Chesapeake watershed?*** A need exists for a central information source and gaps exist in specific parts of local PCB TMDL development and implementation process.

Conceptual Outline PCB TMDL Resource Center

- **Water Quality Standards**

- Link to all WQs in the watershed

- **Monitoring environmental condition**

- Types of data valid for 303d determinations
- Mapping tools to help target monitoring

- **Impairments identified**

- WQ standards

- **Developing TMDL (WLA + LA + ME = TMDL)**

- Map of impairments needing TMDL
- Data Sources - TRI, National Business Database
- Local watershed modeling tools

- **Sources**

- Map of likely source categories
- Pollution Minimization Plan guidance

- **Specific Targets in Local TMDL**

- Track-down guidance
- Desktop tools – Database of contaminated sites

- **Management Actions**

- Nutrient/Sediment BMP benefits (CSN report, WQ GIT co-benefit project, BMP scenario tools)
- Source-specific

- **Measuring Progress**

- Short term – Estimates of load reduction in local TMDLs
- Long term – Increased coverage of TMDLs for listed PCB impairments
- Monitoring/modeling

PCB Management Strategy – Work Themes

- Regulatory Approaches
- Education and Awareness
- Voluntary Programs
- Science

<http://www.chesapeakebay.net/managementstrategies>

Toxic Contaminants Policy and Prevention Outcome
Management Strategy



Introduction

The Chesapeake Bay Agreement has a goal to ensure that the Bay and its rivers are free of effects of toxic contaminants on living resources and human health. The two associated outcomes are (1) research and (2) policy and prevention. Toxic contaminants that enter the Chesapeake Bay and its watershed harm aquatic life, compromise the economic value of its living resources and present risk to human health. In the 2014 Chesapeake Watershed Agreement, the Chesapeake Bay Program identified a desired outcome to "Continually improve practices and controls that reduce and prevent the effects of toxic contaminants below levels that harm aquatic systems and humans." Because there are many contaminants of potential concern, the partners decided to identify a group of contaminants – polychlorinated biphenyls (PCBs) - for which to begin to develop a comprehensive strategy to reduce the amount that enters the Bay and watershed. PCBs are chemicals that accumulate in fish and are most often the primary reason for fish consumption advisories in the Bay. The outcome statement went on, therefore, to include "Build on existing programs to reduce the amount and effects of PCBs in the Bay and watershed." This strategy is the start of identifying management approaches that use regulatory and non-regulatory programs to advance the reduction of the amount of PCBs entering the Bay and watershed.

PCB Strategy - Regulatory Approaches

- Monitoring
- Jurisdiction TMDL Implementation
- EPA TMDL Support
- Program Integration
- Enhance TMDL Progress Monitoring
- Data Compilation for Enhanced Regulatory Programs
- Permits and Enforcement
- TSCA PCB Program and Enforcement
- PCB Clean-Ups and Middle River, MD
- Drinking Water Source Protection



PCB Strategy - Education and Awareness

- Guidance Development
 - Pollution Minimization Plan Guidance
 - Track-down Study Guidance
- Education and Awareness Activities
 - Inform the public regarding risks from consuming contaminated fish
 - Existing procedures and best practices for containment and prevention of release



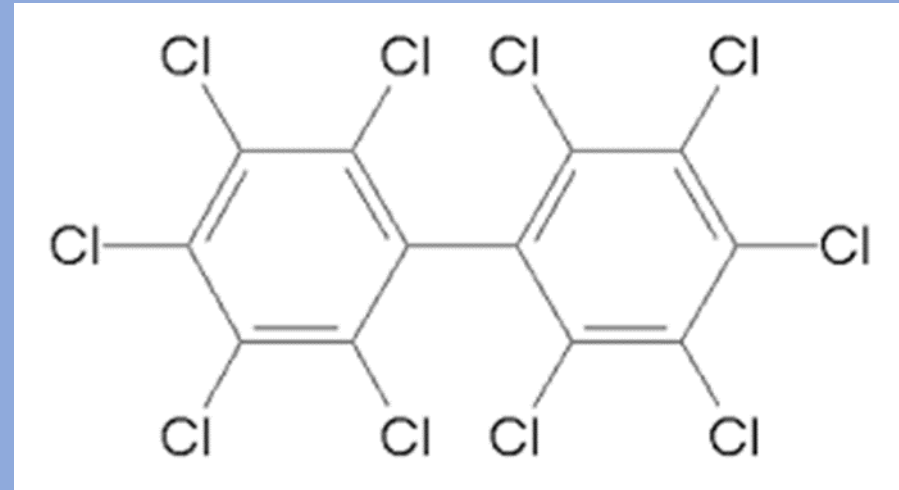
PCB Strategy -Voluntary Programs

- Program to reduce transformers and other PCB containing equipment (e.g., fluorescent light ballasts).
- Include those classified as PCB free (less than 50 ppm) Provide information on remediating PCB contamination historical releases of these transformers
- Use EPA's EJ SCREEN tool to help identify where such equipment is located in areas with diverse populations.



PCB Strategy - Science

- Identify barriers and opportunities related to more frequent use of high-sensitivity test methods
- Determine the relative amount of PCB reduction that might occur across the range of BMPs implemented for the Chesapeake Bay nutrient and sediment TMDL
- Review the 2015 EPA report to determine the need for further investigation of atmospheric sources of PCBs



Toxic Contaminants Policy and Prevention

The story the map tells ...

- PCB impairments are widespread
- Many PCB TMDLs are in place
- Significant additional TMDLs are in progress
- Some impaired areas not yet active with a TMDL

Chesapeake PCB Story Map

<http://arcg.is/10ObWG>

Toxic Contaminants Policy and Prevention

*Changes to PCB reduction strategy
based on our learning ...*

New Factor Affecting Success

The extent of collaboration and coordination among the science and management communities at a scale that is commensurate with the extent of PCB impairments and TMDLs

New Management Approach

- **PCB Consortium**
 - ✓ Explore feasibility, value and sustainability
 - ✓ CBP Partnership decision on whether and how to support
 - ✓ If supported, map-out and launch

Chesapeake PCB Consortium

Example Issues for the Chesapeake PCB Consortium

Science

- Fate, transport, sampling and analysis of PCBs in environmental media and fish tissue
- Modeling

Management and Policy

- Achieving reductions through MS4 programs; source id and track-down

Interstate Coordination

- Sharing of best practices
- Possible coordination of loads in interstate basins, e.g., Potomac, Susquehanna, Conowingo Pool

Chesapeake PCB Consortium

Elements of the Explore Phase

Form an exploration team, consisting of representatives from USGS, EPA, and watershed jurisdictions, to complete the following tasks:

1. Gather and synthesize feedback from prospective members
2. Identify and prioritize outcomes and their potential value
3. Identify and assess options including costs and recommend appropriate structure to “house” or host
4. Develop options for governance and operation
5. Identify and recommend sustainable funding options

The exploration team will summarize its findings and report back to the Management Board approximately December 2018.

Chesapeake PCB Consortium

Exploration Team

- Volunteer basis!
- July 2018 – December 2018

Membership

- EPA Bay Program and Region 3
- USGS
- Jurisdictions – TMDL leads
- PCB researchers
- Local govt
- Local watershed restoration
- Industry stakeholders



Discussion Questions

- Thoughts on the value that would result from a regional consortium to achieve greater coordination and collaboration?
- What are the important issues related to the management and research of PCBs and other contaminants?

Greg Allen, EPA

Allen.greg@epa.gov

410-267-5746