Goal and Outcomes

- Toxic Contaminants: one of 10 goals in Watershed Agreement

- Goal: Ensure that the Bay and its rivers are free of effects of toxic contaminants on living resources and fish

- Two outcomes
  - Policy and Prevention
  - Research
  - **http://www.chesapeakebay.net/managementstrategies**

PCB Management Strategy – Work Themes

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

http://www.chesapeakebay.net/managementstrategies

Toxic Contaminants Policy and Prevention Outcome

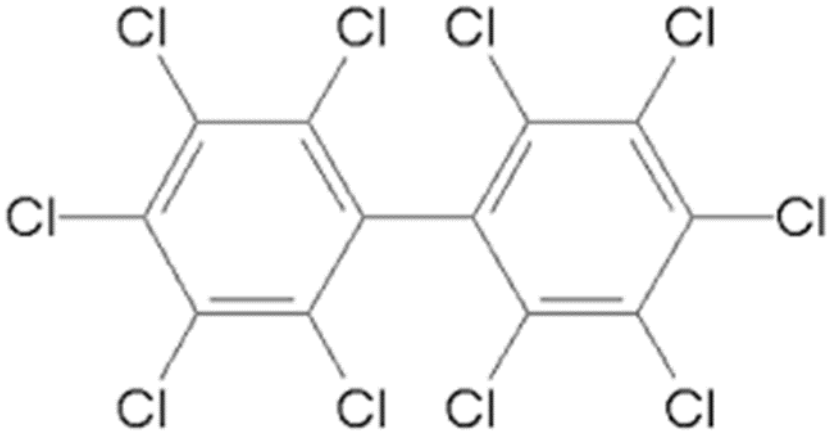
Management Strategy

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.

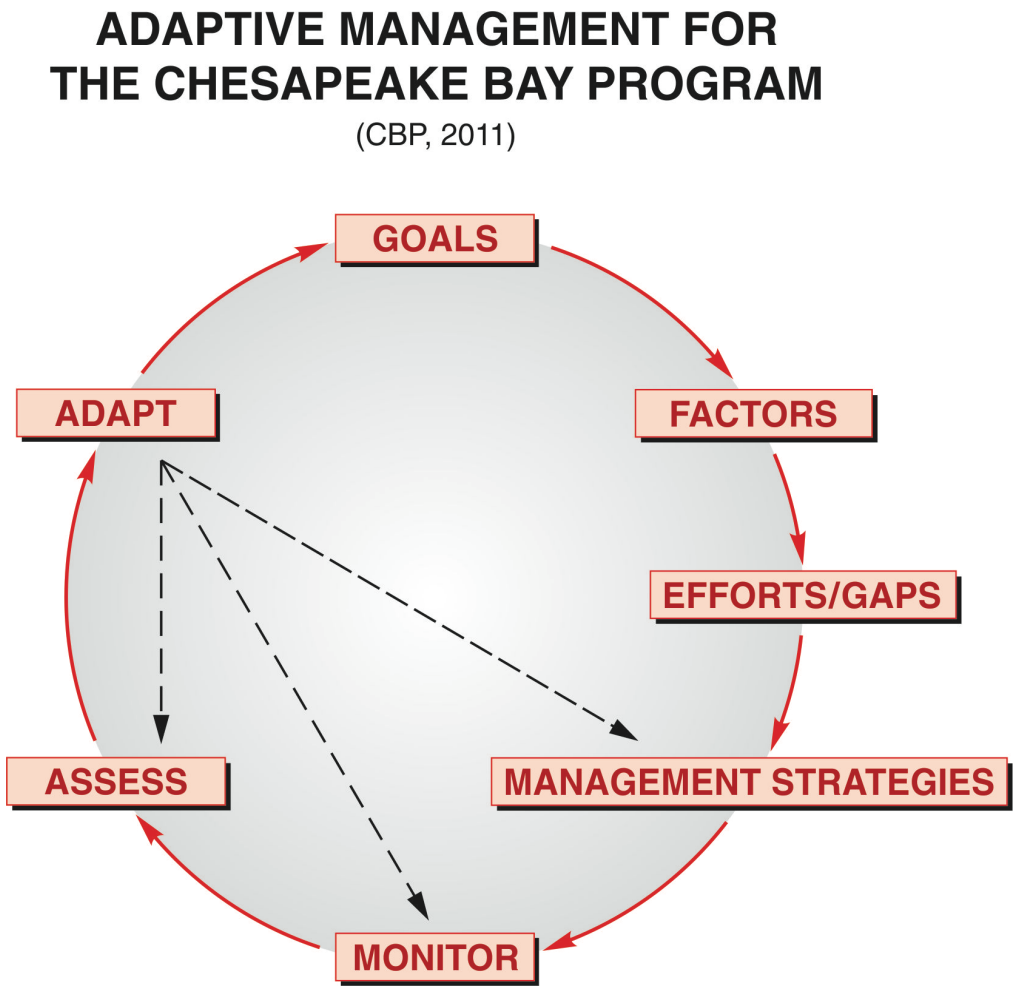
PCB Strategy - Science

- 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



Research Outcome

- Findings from “Summary Report”
  - Used to help identify research needs
- Research outcome
  - increase our understanding of the impacts and migration options
  - further characterize the occurrence, concentrations, sources and effects
    - Hg, PCBs and contaminants of emerging and widespread concern.
  - identify which best management practices might provide multiple benefits



Chesapeake Bay Program

Concept for Determining Highest Priorities for Research to Increase Understanding Impacts and Mitigation Options for Toxic Contaminants (Color codes are examples)

Contaminant Groups	Occurrence	Concentrations	Sources	Effects
PCBs				
Dioxins/Furans				
PAHs				
Petroleum Hydrocarbons				
Pesticides				
Bio. Hormones				
Pharms.				
HPCP				
PBDEs				
Metals				
Mixtures				

Uncertainty

Small

Mid

Large

Priorities for an agenda to increase certainty?

Research Strategy: Themes

- Fish and shellfish safer for human consumption;
- Contaminants degrading the health, and contributing to mortality, of fish and wildlife;
- Occurrence, concentrations and sources;
- Assess relative risk of contaminants, and options for mitigation, to inform policy and prevention strategies,
- Issues of emerging concern