

S2: Management Approaches Addressing Threats to Human Health

What are the main scientific findings relating to management approaches and their documented effectiveness to address threats to human health?

Science and Effectiveness: Categories & Examples of Management

- **Source Reduction:** Up-front actions to prevent or reduce the creation of contaminants, the existence of threats.
- **Management of Threat Exposure:** Actions to reduce or eliminate contaminants, their entry into the environment, and human exposure.
- **Cleanup:** Actions to remove contaminants and threats from the environment.

Table S2-1: Examples of Management Approaches

Management Approach	Source Reduction	Manage Threat	Cleanup
Sewage, Industrial, Stormwater Permits		X	
State Onsite Sewage Rules		X	
State Sediment Quality Standards			X
State MTCA Cleanup Standards			X
State PBT Initiative	X	X	
Shellfish/Fish Harvest and Sale Rules		X	
Local Development Regulations (e.g., SW)	X	X	
Fish/Shellfish Consumption Advisories		X	
Swimming/Shellfish Beach Closures		X	
Biotoxin Advisories and Closures		X	

Science and Effectiveness: How Effectiveness Is Measured & Documented

- Shellfish closures.
- Swimming beach closures.
- Reported illnesses connected to pathogens and biotoxins.
- Trends in water quality data relative to water quality and pollution prevention standards.
- Trends in concentrations of chemical toxics in fish tissue .

Science and Effectiveness: Which Approaches Have Proven Most Effective?

Management Approach	Source Reduction	Manage Threat	Cleanup
State Mercury Chemical Action Plan based on reductions in mercury levels in 2005-06 data.	X	X	
Fish consumption advisories based on awareness of advisories and outreach; limited data reducing human health risks.		X	
Biotoxin advisories and closures based on contaminant levels and reported illnesses.		X	

Effective Approaches *Cont'd*

Management Approach	Source Reduction	Manage Threat	Cleanup
Classifying shellfish growing areas based on sanitary surveys and reported illnesses.		X	
Targeted efforts in shellfish areas that have been downgraded based on reported illnesses.		X	
Improvements to wastewater systems that have reduced toxics based on NPDES monitoring.		X	
Improvements to industrial pre-treatment programs based on NPDES monitoring.		X	

