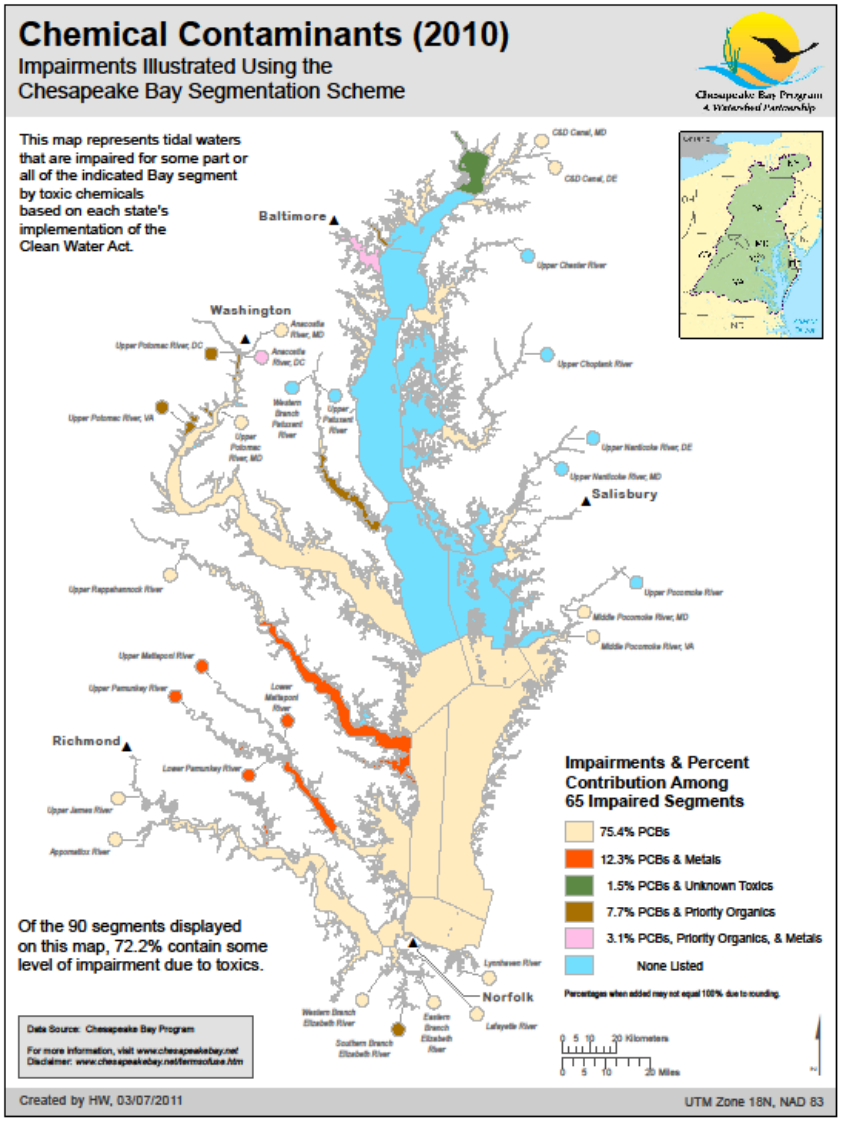
Addressing Toxic Contaminants in the New Chesapeake Bay Agreement

Greg Allen (EPA) and Scott Phillips (USGS)

Why Needed

- CBP authorization
- CBP Toxics 2000
- EO Strategy
- Still affecting fish and wildlife
  - Widespread extent and severity
  - Consumption advisors
  - Intersex
  - Fish kills

DNR PHOTO BY ANGEL BOLINGER



Contaminant Status

- Widespread:
  - **PCBs**, PAHs, **Mercury**
  - some herbicides (atrazine, simazine, metochlor, and their degradation products)
- Localized:
  - Dioxins/furans, petroleum hydrocarbons
  - Insecticides (aldrin, chlordane, dieldrin, DDT/DDE, heptachlor epoxide, mirex)
  - Metals: Al, Cr, Fe, Pb, Mn, Zn
- Uncertain: pharmaceuticals, care products, flame retardants, some pesticides, hormones

Biological Effects

- Degraded fish health
  - Infections and parasites
  - Feminization
  - Reduced reproduction
  - Tumors
- Wildlife: Reproductive impairment in water birds
  - Eggshell thinning (DDE)
  - Embryo lethality (pesticides)
  - Hatching success (PCBs)

New CBP Agreement

- Goals and outcomes
- MB recommendation:
  - Have water-quality goal address Bay TMDL and include contaminants
    - "Restore water quality necessary to restore living resources and protect human health"
  - Develop contaminant specific outcomes
    - "SMART"
- Ad hoc group

Options for outcomes

- Option 1: **Focused only on enhanced monitoring and research**
  - *Improve knowledge of the effects of contaminants of emerging concern on the health of fish and wildlife so future strategies can be considered*
- Option 2: **A broad contaminant reduction outcome**
  - *Identify and implement practices to reduce loadings of persistent bio-accumulative and toxic (PBT) contaminants and non-(PBT) contaminants that have an effect on ecosystem resources and human health.*

Options for outcomes

- Option 3: **targets a limited number of priority contaminants**
  - *Identify and implement practices to reduce loadings of PCBs and mercury to the Bay and watershed*
- Option 4: **geographically-focused**
  - *Identify and implement practices to reduce loadings of contaminants in areas they have degraded fisheries, wildlife, and water-quality conditions.*

Next Steps

- Next steps
  - Proposed outcomes for IRC
  - Interact with WQ GIT, Fisheries GIT, others
  - MB and PSC discussion/feedback
  - Revisions and interaction until October
- Benefits to CBP
  - Improve fish and wildlife conditions and consumption for people
  - Learn from different management approaches
  - Enhance science to address gaps in monitoring and research