Evaluation of PCB TMDL Efforts in the Delaware Estuary

2015 Delaware Estuary Science & Environmental Summit

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Outline

- TMDL Background
- Pollutant Minimization Plan (PMP) Key Elements
- Update on PCB Point and non-point Sources
- Summary
- Ongoing Efforts

PCB TMDLs Background

- Delaware Estuary 303d listed as impaired for PCBs in fish
- Stage 1 PCB TMDLs established for Zones 2-5 in 2003 and in 2006 for Zone 6:
  - Monitoring using 1668 Revision A
  - Development of Pollutant Minimization Plans (PMPs)
  - Implementation of minimization measures identified by PMPs

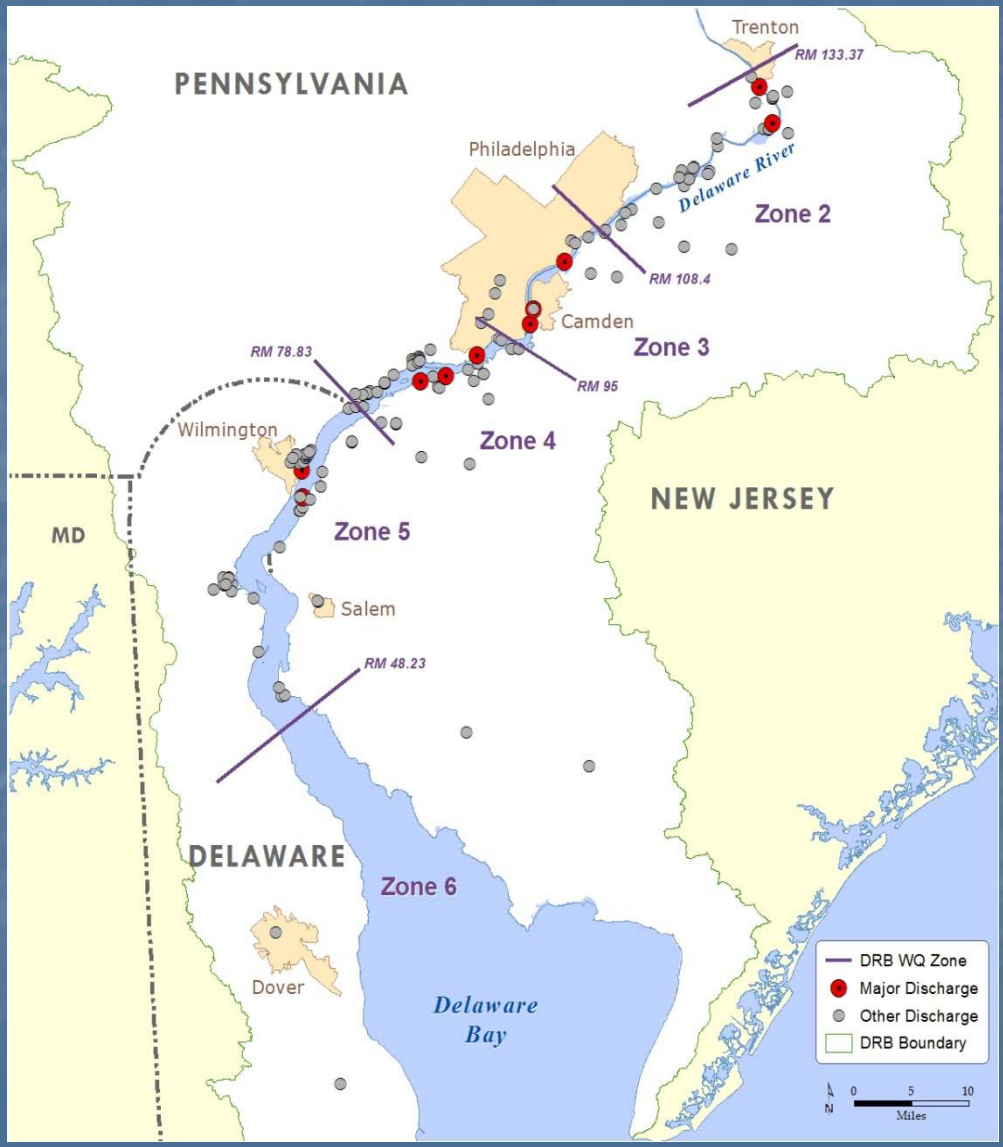
Delaware Estuary

Delaware Estuary portion of the Basin is 133 and consists of 5 water quality management units called Zones

Monitoring and PMPs were required either through NPDES permits or directly through Commission regulations

The Commission coordinates TMDL activates between EPA Regions 2 and 3 and the States of DE, NJ and PA

DRBC developed PCB Database

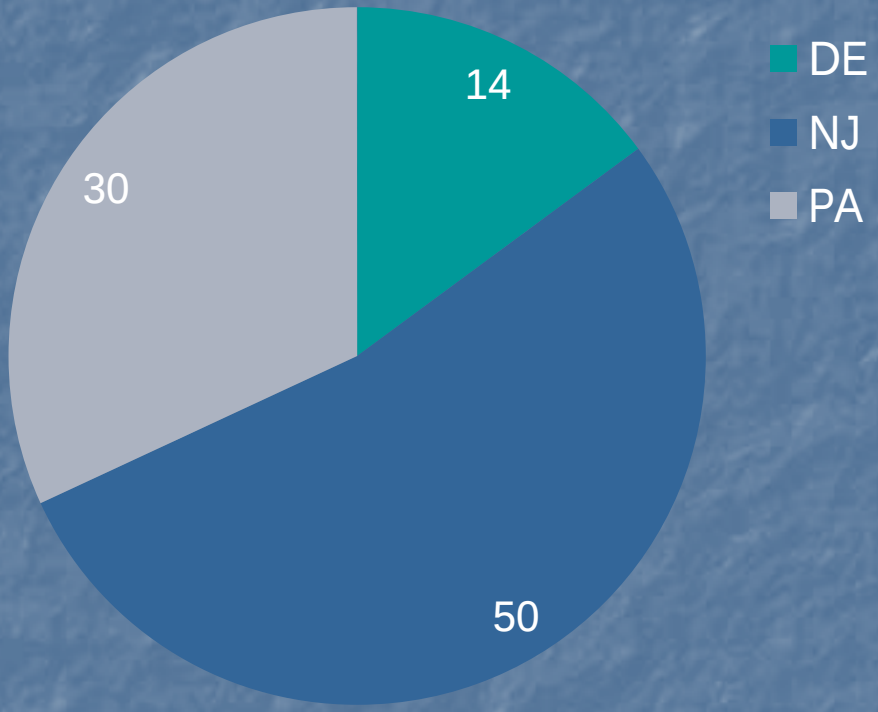


Pollutant Minimization Plans (PMPs)

Goal: Reduction of PCB Loadings to the Estuary

- Key PMP Elements
  - Source identification and reduction
  - Monitoring and progress report
  - Remediation activities
- PMP Approaches:
  - Perform trackdown studies to identify sources
  - Remove PCB transformers and capacitors
  - Contaminated sediment control and/or removal

Dischargers Currently in PCB TMDL (n=94)

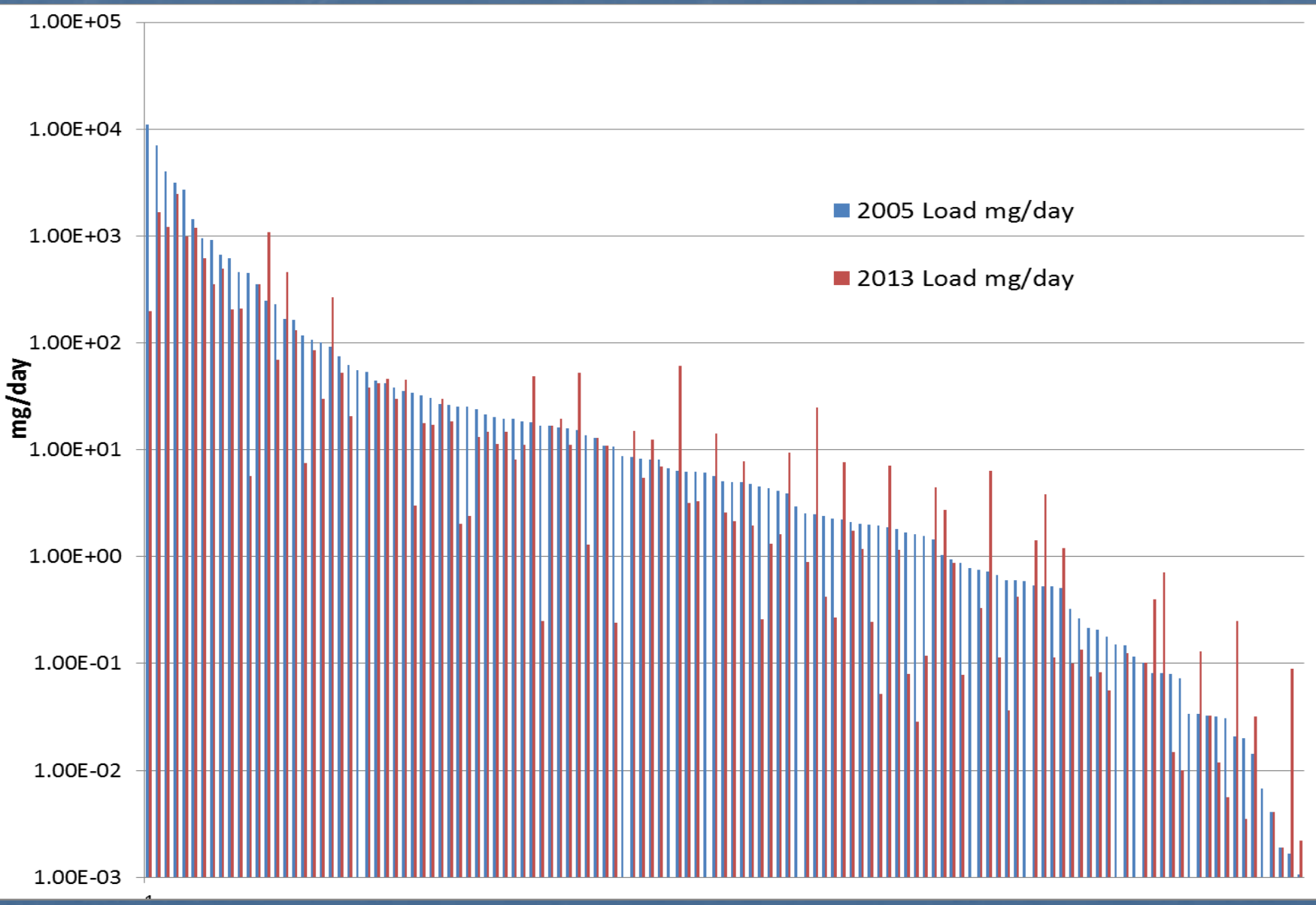


PA. All dischargers have initiated PMPs

DE. All but three dischargers have initiated PMPs

NJ. All but six dischargers have initiated PMPs

Ranked Point Sources by PCB Loadings



Top Ten PCB Point Source Loading Revisited

2005 Top 90% of all Point Source Loadings

Valero Refining

U.S. Steel

PWD-NE

City of Wilmington

CCMUA

Dupont-Repauno

Dupont-ChamberWorks

Trenton

PWD-SW

PWD-SE

Overall Loading Reductions

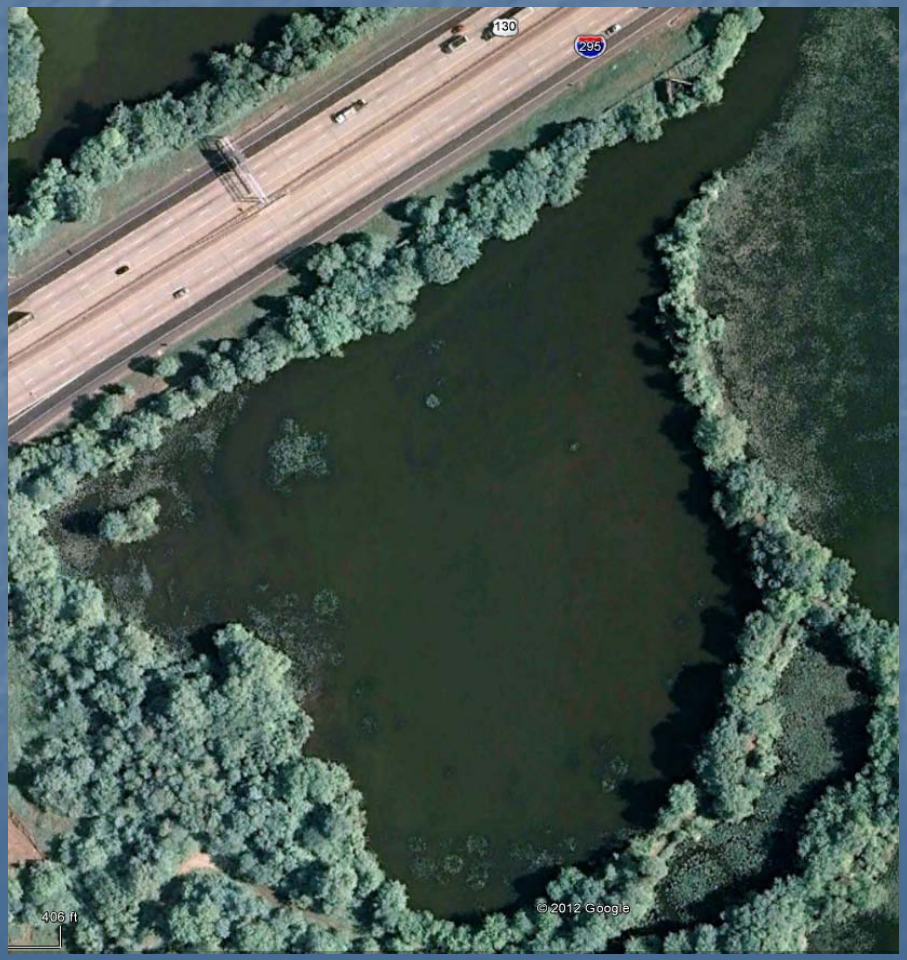
Overall PCB Point Source Loadings Reductions

- PCB reductions were observed in municipal and industrial discharges across the entire Estuary
- The 10 largest point sources reduced loadings by 71% between 2005-2013
- All point sources reduced loadings by 64% 2005-2013
- Selected dischargers have achieved a total (blank corrected) PCB concentrations in the 10's of pg/L

Non-Point Sources Success

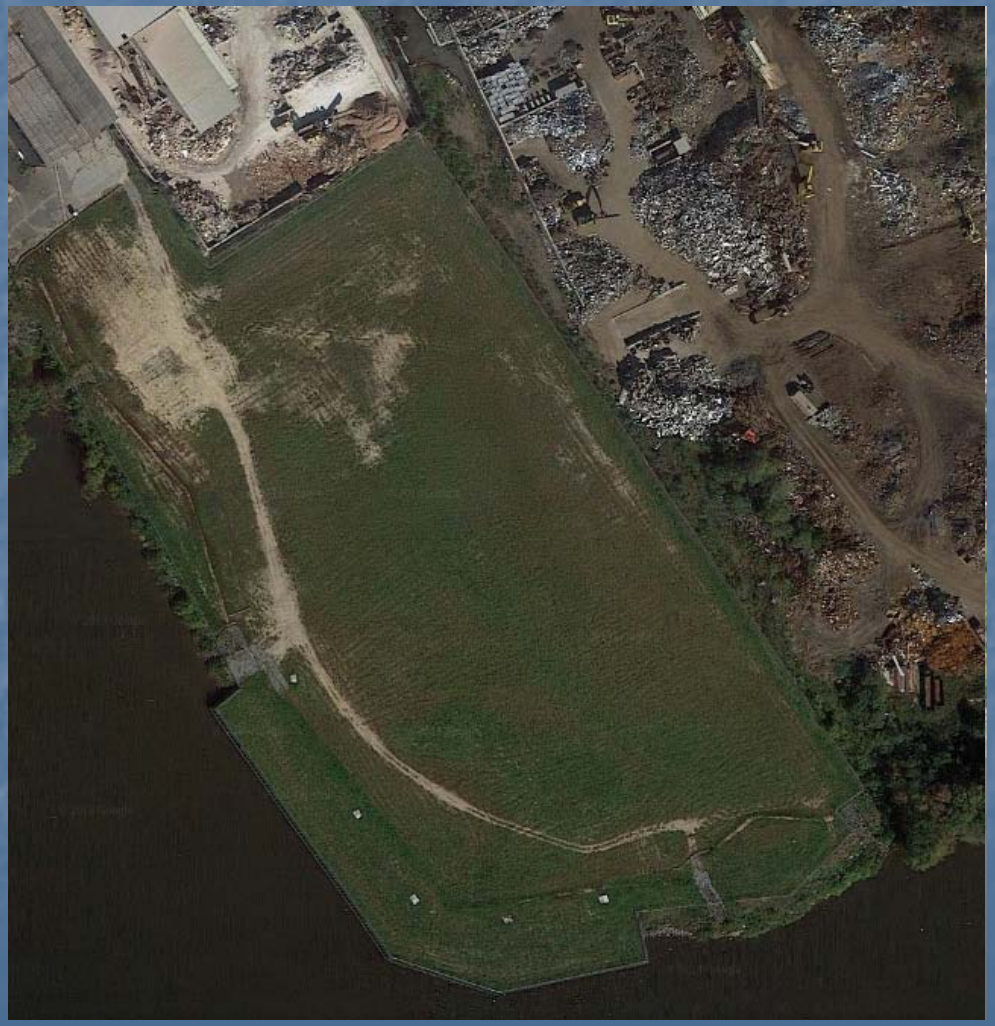
Exxon Mobil-Paulsboro, NJ

- 16 acre tidal wetland containing PCB contaminated pellets
- Estimated 30-40,000 lbs. PCBs removed



Metal Bank, Philadelphia PA

- 10 acre industrial site (NPL listed)
- Approximately 800 lbs. of PCBs removed



Fish Consumption Advisory Change

NEWS for immediate release

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DHSS: Rita Landgraf, Secretary; Jill Fredel, Director of Communications, 302-255-9047

Delaware issues updated fish consumption advisory

Updated advisory for the tidal Delaware River reflects long-term environmental improvements

DOVER (Oct. 23, 2013) – The Department of Natural Resources and Environmental Control and the Department of Health and Social Services' Division of Public Health today updated the fish consumption advisory for fish caught in the tidal Delaware River. The updated advisory is a result of analysis of chemical contaminants in fish caught in the tidal Delaware River and elsewhere throughout the state. The change reflects long-term environmental improvements in the tidal Delaware River.

The fish consumption advisory for the tidal Delaware River from the Delaware/Pennsylvania/New Jersey border to the C&D Canal has been updated to a less restrictive advisory due to falling levels of polychlorinated biphenyls (PCBs), dioxins and furans, chlorinated pesticides, and mercury. For the general adult population, the current advice has been changed from "eat no finfish caught in the tidal Delaware River north of the C&D Canal" to "eat no more than one eight ounce meal of finfish per year," while retaining the "do not eat" advice for women of childbearing age and young children. This advisory is being issued today in collaboration with the New Jersey Toxics in Biota Committee and the Delaware River Basin Commission.

For the general adult population, the current advice has been changed from "eat no finfish caught in the tidal Delaware River north of the C&D Canal" to "eat no more than one eight ounce meal of finfish per year,"

Summary

- Effective reduction strategies include:
  - Enhanced treatment measures
  - Successful track down and source removal
- >90% of dischargers have initiated PMPs
- Implementation of PCB TMDLs is achieving significant loadings reductions from point source dischargers in the Delaware Estuary

Ongoing Efforts

- Continued coordination by the Commission between EPA Regions 2 and 3 and the States of DE, NJ and PA is providing an effective mechanism in implementing the TMDLs
- Monitoring of PCBs in ambient water, sediment and fish tissue in 2015
- Stage 2 PCB TMDLs
- 10-year Progress Report

Questions?

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