

# Implementing PCB TMDLs: Pollutant Minimization Plan (PMP) Status

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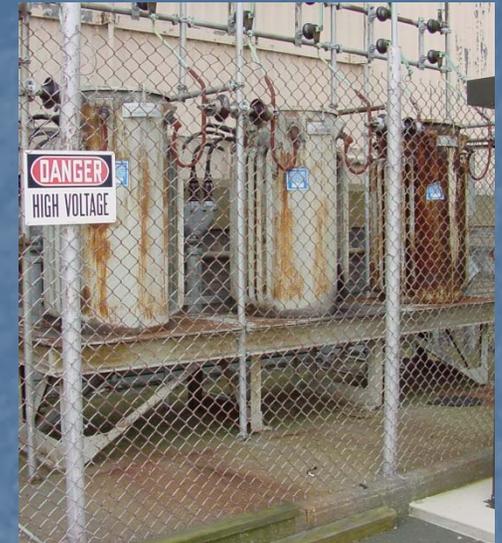


# Outline

- Background
  - PMP Supporting Activities
- PMP Key Elements/Approaches
- Industrial and Municipal Initiatives
- Point Sources
- Non-Point Sources
- Summary

# Polychlorinated Biphenyls (PCBs)

- They are a class of man-made organic chemicals consisting of 209 possible compounds.
- Potential sources:
  - ✓ Transformers and capacitors
  - ✓ Hydraulic systems, lubricants, gasket sealers, paints, light ballasts, adhesives, carbonless copy paper.
- Impact: PA, NJ and DE fish consumption advisories are in place for entire Delaware Estuary because of elevated levels of PCBs in the fish tissue.

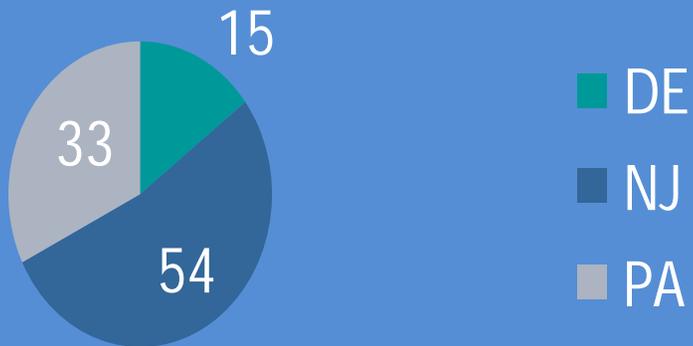


# Background

- The Commission developed and EPA established PCB TMDLs for the tidal Delaware River in 2003 and for the Delaware Bay in 2006.
- To implement the TMDLs, and to assist in the development and implementation of PMPs, specific monitoring requirements were developed for 102 PCB dischargers.
- PMP regulations were adopted in DRBC's WQR in 2005

# Dischargers Currently in PCB TMDL

## Number of Dischargers



Total number of dischargers = 102

## PMP Oversight



# Supporting Activities

- Effluent monitoring required by the Commission using a sensitive analytical method (EPA Method 1668A) in 2005 to better characterize discharges.
- A PCB database was developed which DRBC manages for dischargers for all three States.
- Workshops were provided for dischargers in 2005 and 2007 to assist in development of PMPs. Web page was developed to provide PMP resources.
- Training sessions were provided by DRBC for PADEP and NJDEP staff to foster a consistent approach for PMP evaluation.
- Quarterly conference calls among states, EPA and DRBC staff to coordinate PMP and monitoring requirements.

# PMP Key Elements

Goal: Reducing PCB Loadings to the Estuary

- Key PMP Elements
  - Source identification and reduction
  - Monitoring and progress report
  - Measuring effectiveness of initiatives
- PMP Approaches:
  - Remove PCB transformers and capacitors
  - Trackdown studies to identify and remove sources
  - Sediment control and removal

# Industrial PMP Initiatives

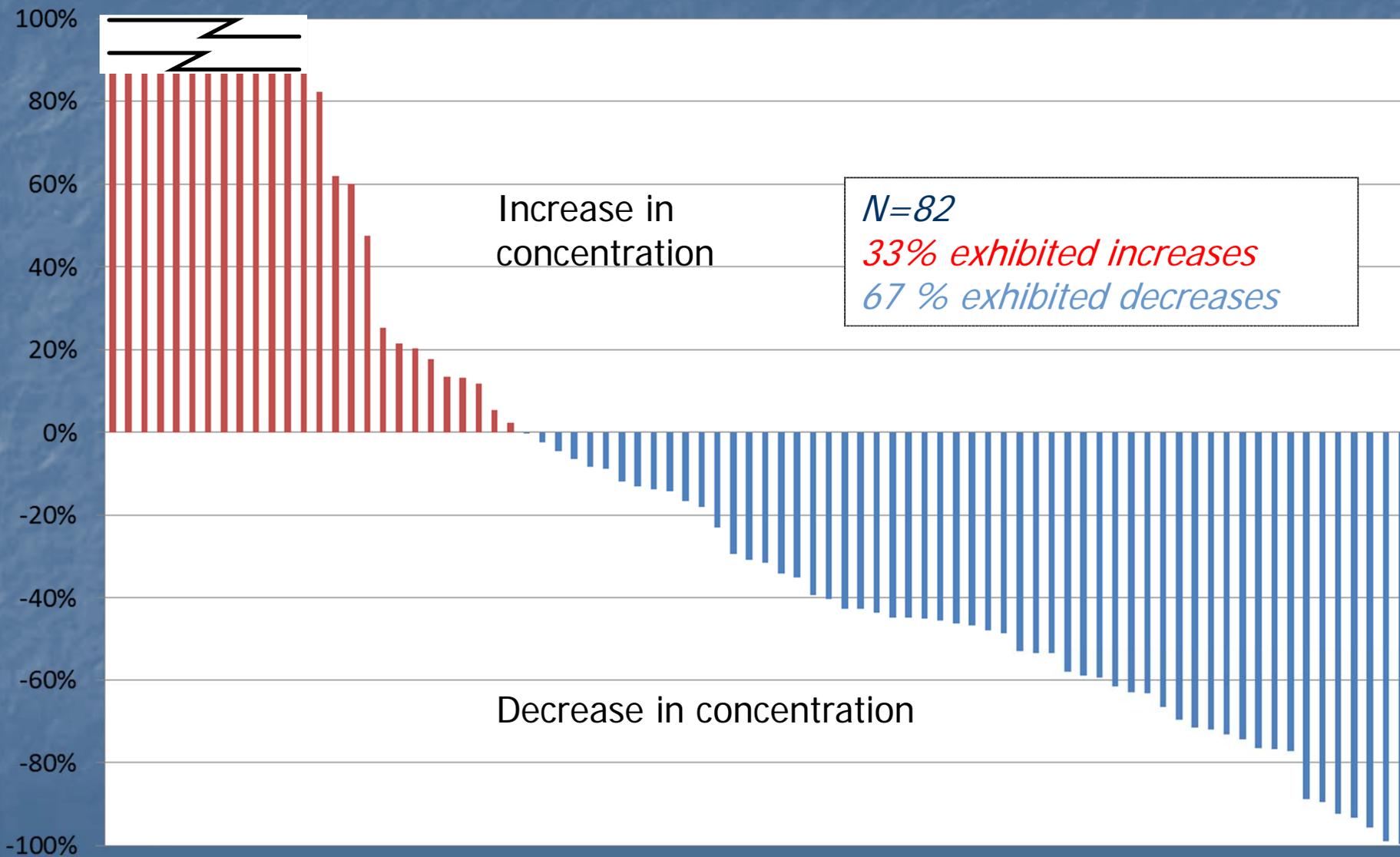
- USX Steel Fairless Hills, PA
  - Removed 700,000 lbs. of PCB transformer oil
  - Removed 440,000 lbs. of PCB debris and capacitors
  - Performed contaminated sediment removal and stormwater control
- Amtrak Wilmington, DE
  - Sediment removal from sewer lines (60 tons)
  - Redesigned stormwater system to reduce flows
  - Considering additional sediment removal

# Municipal PMP Initiatives

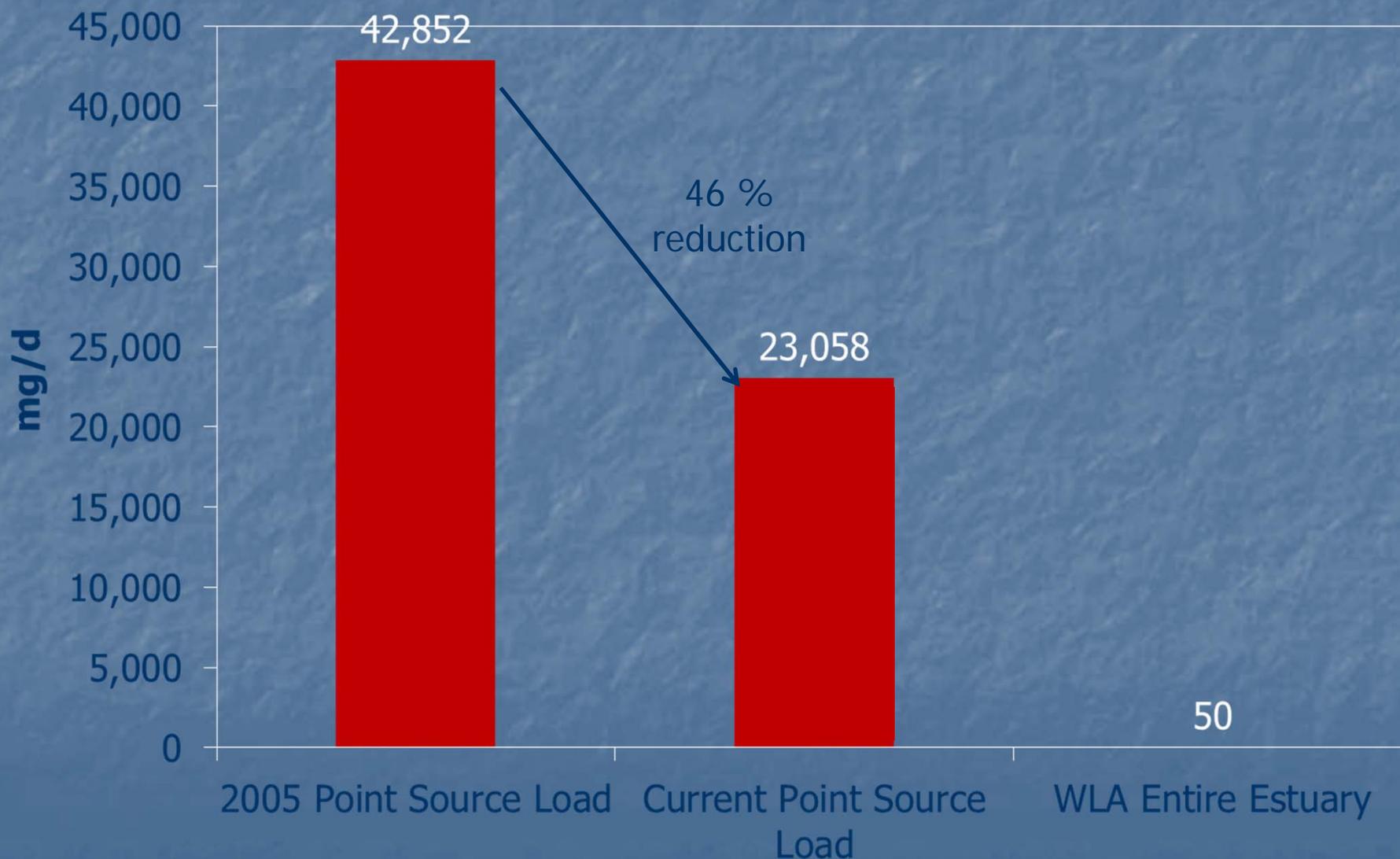
- Camden County Municipal Authority (CCMUA)
  - Increased solids removal efficiency at WWTP
  - PCB transformer inventory
  - Conducted trackdown studies which:
    - Identified sewer interceptors with elevated PCB sediment concentrations
    - Identified additional existing and abandoned industries contributing PCBs.
  - Engaging USEPA, NJDEP and the City of Camden in remedial efforts
- City of Wilmington
  - Conducted inventory of existing PCB transformers in their system
  - Completed two trackdown studies in cooperation with DNREC
  - Confirmed a major source of PCBs and identified areas of interest

# Point Sources

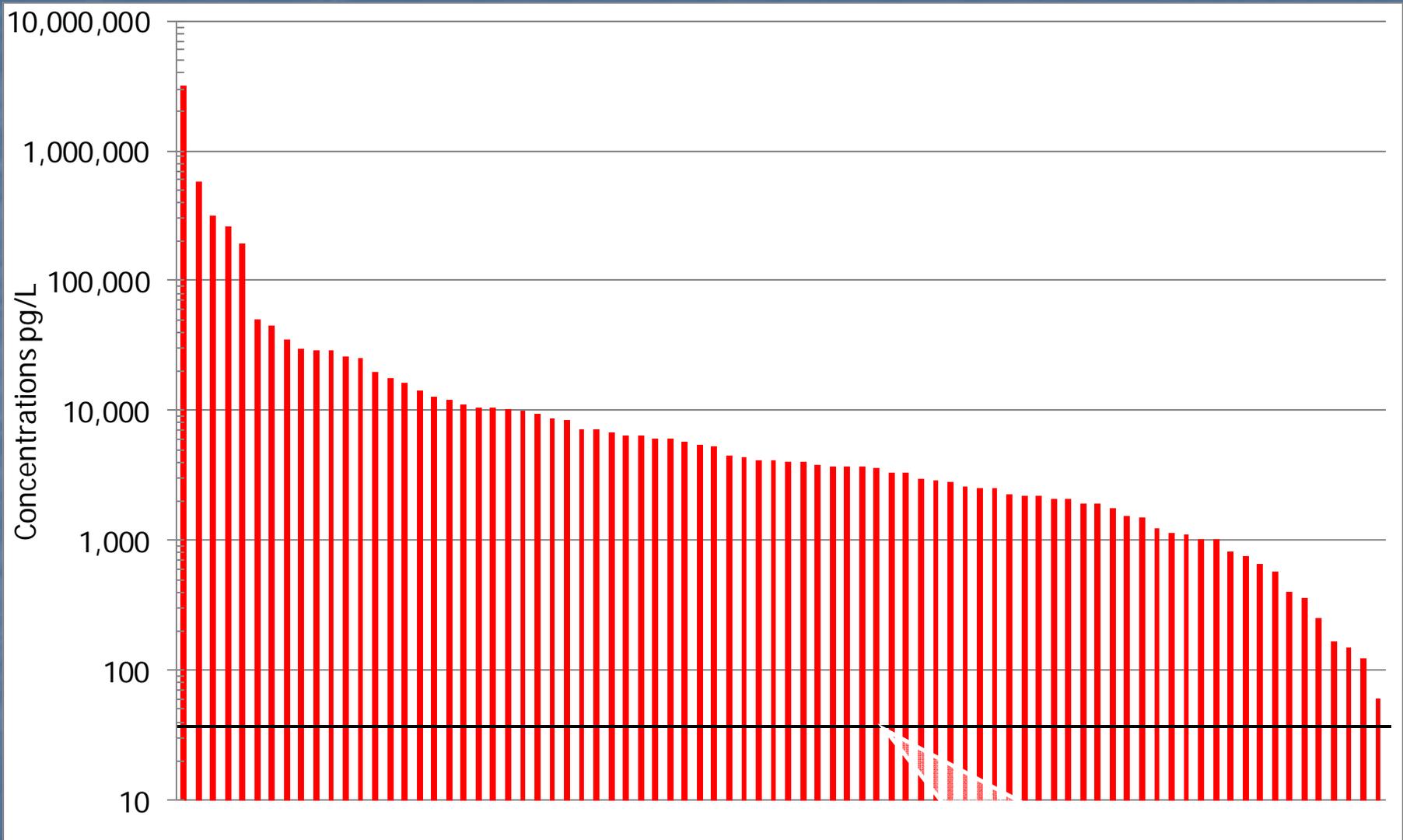
Difference in PCB Concentrations Between 2005 and 2009-11



# 10 Dischargers Representing 90% of Point Source PCB Loadings in the Estuary



# Current Point Source PCB Concentrations



**Water Quality  
Criteria**

## Non-Point Sources

- Exxon Mobil                      Paulsboro, NJ
  - 16 acre wetland contaminated with PCBs
  - Excavated 120,000 tons of material
  - Approximately 40,000 lbs. of PCBs removed
  
- Metal Bank                      Philadelphia, PA
  - 10 acre industrial site (NPL listed)
  - Excavated 1,500 tons of material
  - Approximately 800 lbs. of PCBs removed

# Exxon/Mobil Property, Paulsboro NJ





Mantua Creek 2004

## Remedial Efforts 2008-09



Slides Courtesy of Alan  
Motter NJDEP



Gloucester Co. • East Greenwich Twp

130

295

18

295

M a n t u a

C r e e k

Approximately  
40,000 lbs. of  
PCBs Removed

Mantua Creek Today



# Summary

- Commission, States, and EPA have coordinated efforts to require point source dischargers to develop and implement PMPs, a key component of the PCB TMDLs.
- The majority of facilities that are implementing a PMP are reporting lower concentrations of total PCBs in their discharges.
- The top ten dischargers that contribute 90% of the point source PCB loading have reduced their loadings by 46% since 2005.
- The PMP approach is demonstrating progress in reducing PCB loadings from point source discharges.
- Continuation of this cooperative approach is an essential component of a long-term strategy to achieve the PCB TMDLs.