

# **SFBRWQCB PCB TMDL**

or

**How I learned to stop worrying about arithmetic and  
love acronyms (with apologies to Stanley Kubrick)**

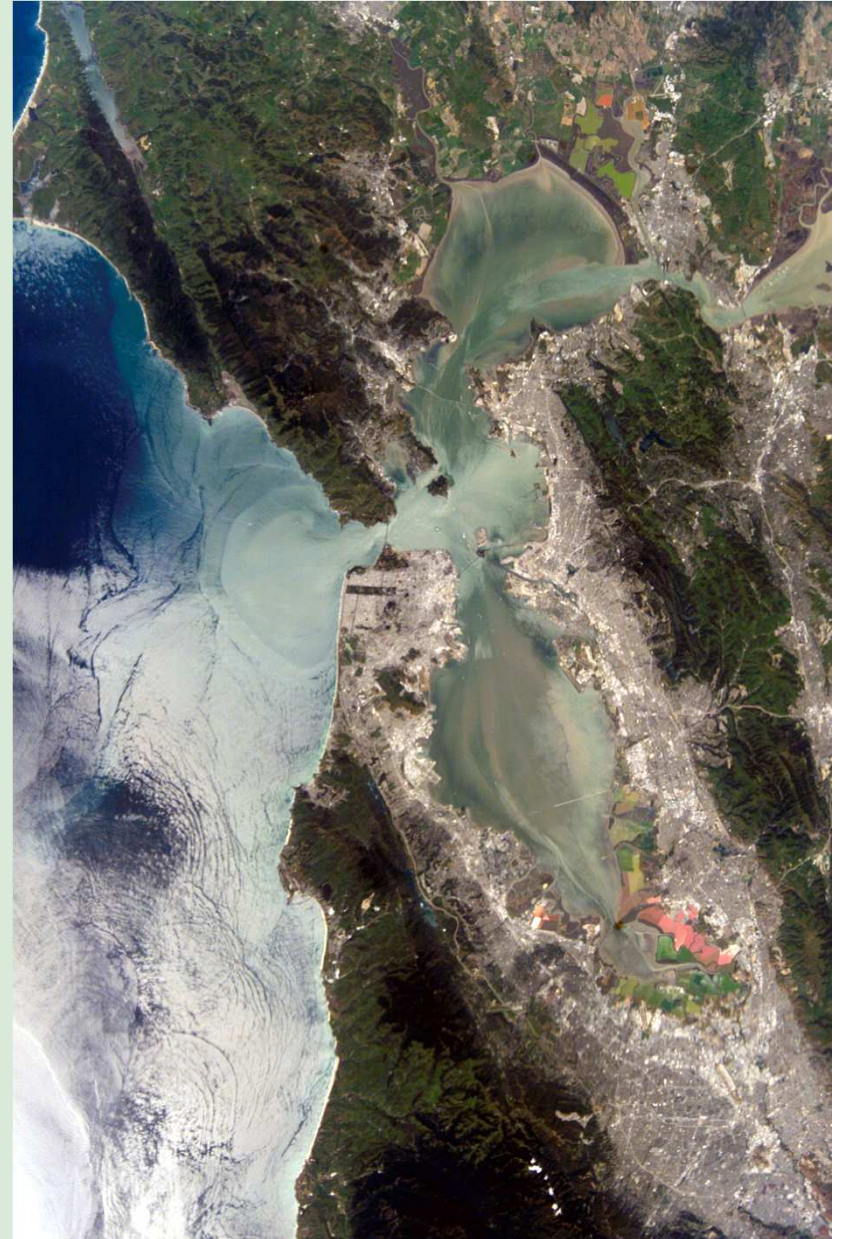


**BRIAN S. HAUGHTON**

July 20, 2010

San Francisco, California

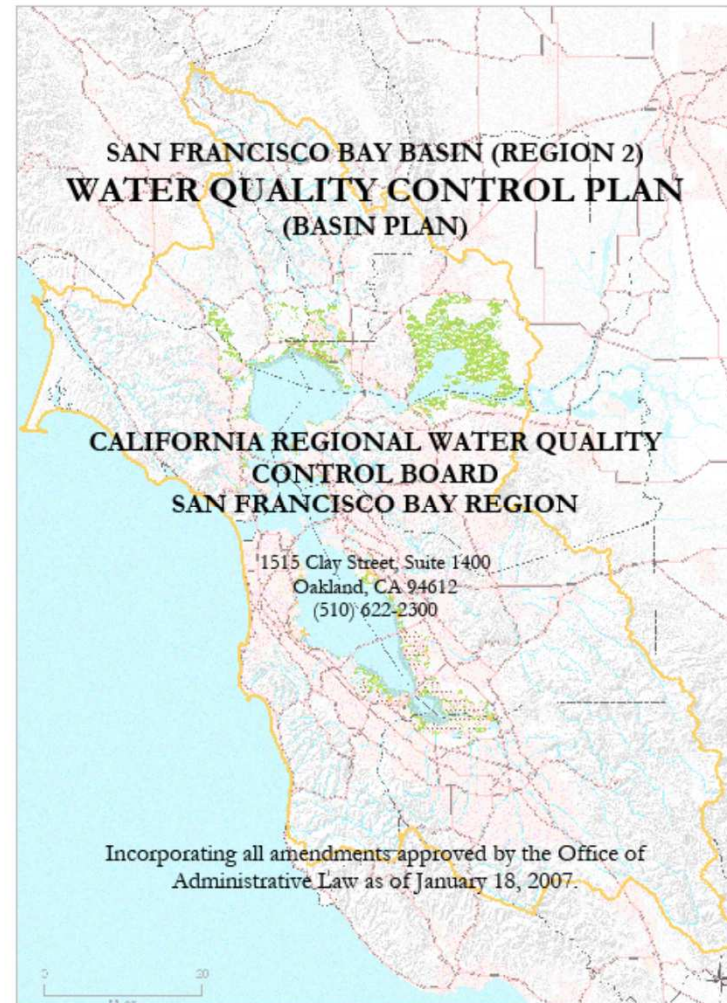
# San Francisco Bay



# SFBRWQCB

- **San Francisco Bay Regional Water Quality Control Board**
- **Responsible for:**
  - **Issuing National Pollutant Discharge Elimination System (NPDES) permits**
  - **Preparing and maintaining Basin Plan**

# 2007 Basin Plan



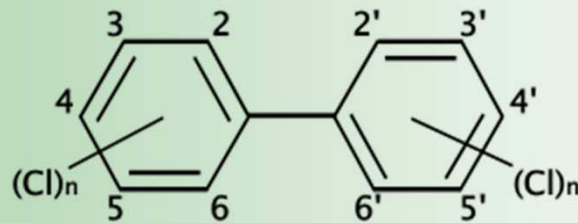
# TMDLs

- Clean Water Act (CWA) section 303(d) requires States to:
  - Identify impaired waters
  - List the impairing pollutants
  - Set Total Maximum Daily Loads (TMDLs) for impairing pollutants
- In California, TMDLs are promulgated by RWQCBs as Basin Plan amendments (BPAs)



## PCBs

- Polychlorinated biphenyls (PCBs)
  - Chemical structure: the possible positions of chlorine atoms on the benzene rings are denoted by numbers assigned to the carbon atoms.



- Toxicology: endocrine disruptors; probable human carcinogens; also linked to low birth weight and poor cognitive development in children, including where mothers ate large amounts of fish contaminated with PCBs.

## SFRWQCB PCB TMDL Process

- 2/13/08: SFRWQCB passed Resolution R2-2008-0012, amending the Basin Plan to establish a PCB TMDL and implementation plan for the Bay.
- The BPA included waste load allocations (WLAs), specific numerical shares of the TMDL assigned to named dischargers.

## SFRWQCB PCB TMDL Process (cont'd)

- 10/20/09: The State Water Resources Control Board (SWRCB) adopted Resolution 2009-0076 approving the BPA.
- 3/29/10: The United States Environmental Protection Agency (EPA) approved.
- 4/28/10: East Bay Municipal Utility District (EBMUD) et al. filed suit.
- Superior Court hearing expected 1Q2011.



# What the RWQCB said they were doing

- “NPDES permits [for municipal wastewater dischargers] shall include effluent limits based on current performance ....” BPA p. A-7.
- “It is the [RWQCB’s] intent to implement individual [WLAs] by numerical water quality effluent limitations for PCBs in NPDES permits. These limits shall represent individual dischargers’ PCBs loads...” BPA p. A-7.

## What the RWQCB said they were doing (cont'd)

- “Wasteload allocations for municipal ... wastewater discharges reflect current PCBs loads.” RWQCB Staff Report, p. 78.
- “...the proposed individual wasteload allocations for municipal wastewater dischargers reflect current performance levels ....” Staff Report, pp. 71-72.
- “Effluent limits in NPDES permits will be based on current performance.” Staff Report, p. 78.

## Why they said they were doing it

- “Municipal ... wastewater NPDES permitted facilities ... discharge a small fraction of the total PCBs load to the Bay.” Staff Report, p. 65.
- “In general, municipal ... wastewater dischargers operate at a high level of performance and remove PCBs via solids reduction treatment processes.” Staff Report, p. 65.

# What they did (part 1)

- For municipal wastewater dischargers (POTWs) collectively:
  - Found current actual loading was 2.3 kg/yr.
  - Assigned a WLA of 2.0 kg/yr (a 13% reduction from current performance).

## How did this happen (part 1)?

- For POTWs, the RWQCB's staff report said:
  - “The wasteload allocations for municipal wastewater dischargers total 2 kg/yr, which reflects the current estimated aggregate load to the nearest kg/yr.” Staff Report, p. 65.
  - “Although this [2 kg/yr] is lower than our actual estimate of 2.3 kg/yr, [it] reflects anticipated decreases in current loadings expected from implementation actions and degradation of PCBs in sources to wastewater systems.” Staff Report, p. 65.

## But (part 1) ...

- None of the other group WLAs was rounded.
- None of the other group WLAs was reduced to account for anticipated future improvements.
- No evidence was cited for the anticipated future improvements.



## What they did (part 2)

- For EBMUD:
  - Assigned a WLA of 0.3 kg/yr, while ...
  - The best available data indicated EBMUD's current actual loading was 0.72 kg/yr.

## How did this happen (part 2)?

- This was done by multiplying EBMUD's flow rate times the average PCB concentration (3,556 pg/L) of the nine data points for municipal dischargers with secondary treatment. Response to Comments , p. 177.

## But (part 2) ...

- Using the average of the nine secondary-treatment POTW data points is guaranteed to understate some – and overstate other – POTWs' current loading.
- We know that it understates EBMUD's current loading because two of the nine data points were taken at EBMUD.

## What did the RWQCB say when we pointed this out?

- “We acknowledge that this might not reflect the current loading of PCBs to the Bay from the EBMUD discharge.” Responses to Comments, p. 177.
- “The resulting individual [WLAs] do not represent individual facility actual discharge performance and do not account for variability in discharge performance.” Responses to Comments, p. 3.

## But don't worry about compliance jeopardy because ...

- "... there will be no regulatory consequence since the TMDL implementation requirements call for EBMUD to collect additional data on PCBs in effluent [using] low detection methods and for permit limits based on actual performance. We expect these data will result in recalculation of individual [WLAs] and consideration of Basin Plan revisions." Responses to Comments, p. 177.
- "Also, if individual performance data result in effluent limits that are not consistent with individual [WLAs] established with this TMDL, then the [RWQCB] will take action to revise the individual allocations as part of the adaptive implementation plan." Staff Report, p. 72.

# Translation:

- Trust us.
- We'll fix the errors later.
- Meanwhile, we'll protect you by writing NPDES permits that are inconsistent with the WLAs in the Basin Plan.



# Questions?

