East Bay Municipal Utility District

"When the Rules Change"

David Williams
Director of Wastewater, EBMUD

November 8, 2007

NACWA
A Clear Commitment to America's Waters

EBMUD Wastewater Service Area

- **Serves nine cities and communities with a population of ~650,000**
  - Alameda
  - Albany
  - Berkeley
  - Emeryville
  - Oakland
  - Piedmont
  - Stege Sanitary District (El Cerrito, Kensington, and part of Richmond)

EBMUD Wastewater Service Area (Pre 1990's)

- **EBMUD collects and treats wastewater**
  - **2,900 miles of sewers (owned by communities)**
  - **29 miles of interceptors**
  - **14 pump stations**
  - **Main Wastewater Treatment Plant**

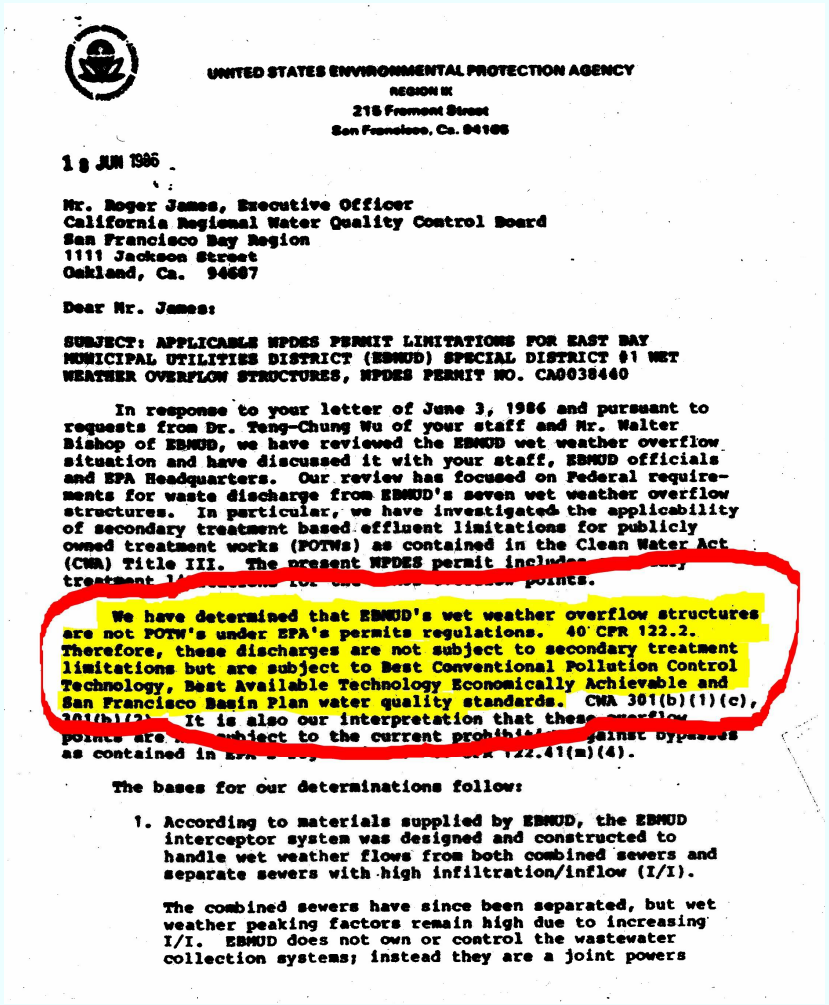
East Bay Wet Weather Program

- Beginning in late 1970s, stakeholders recognized the need to eliminate raw sewage overflows during storm events
- Extensive studies conducted during 1980s
  - $18 million spent on studies (local, state and federal funding)
- Active participation by EPA, SWRCB, and RWQCB from inception, through design and construction, to present
- Comprehensive program approach was developed

Wet Weather Program Elements

- **EBMUD Program (Completed in 1998)**
  - Spent $325 million on Wet Weather Program
  - Constructed three wet weather facilities, two wet weather interceptors, and system storage and pumping facilities
  - Wet weather treatment facilities were designed to address major public health concerns
- **Communities' Program**
  - Spent $335 million to date on I/I Correction Program
  - Rehabilitating collection systems (~ 80% complete)
  - Constructing relief sewers (~ 88% complete)

June 18, 1986 Letter from RWQCB



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

18 JUN 1986

Mr. Roger James, Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street
Oakland, Ca. 94607

Dear Mr. James:

SUBJECT: APPLICABLE NPDES PERMIT LIMITATIONS FOR EAST BAY MUNICIPAL UTILITIES DISTRICT (EBMUD) SPECIAL DISTRICT #1 WET WEATHER OVERFLOW STRUCTURES, NPDES PERMIT NO. CA0038440

In response to your letter of June 3, 1986 and pursuant to requests from Dr. Teng-Chung Wu of your staff and Mr. Walter Bishop of EBMUD, we have reviewed the EBMUD wet weather overflow situation and have discussed it with your staff, EBMUD officials and EPA Headquarters. Our review has focused on Federal requirements for waste discharge from EBMUD's seven wet weather overflow structures. In particular, we have investigated the applicability of secondary treatment based effluent limitations for publicly owned treatment works (POTWs) as contained in the Clean Water Act (CWA) Title III. The present NPDES permit includes

We have determined that EBMUD's wet weather overflow structures are not POTW's under EPA's permits regulations. 40 CFR 122.2. Therefore, these discharges are not subject to secondary treatment limitations but are subject to Best Conventional Pollution Control Technology, Best Available Technology Economically Achievable and San Francisco Basin Plan water quality standards. CWA 301(b)(1)(c), 301(b)(2). It is also our interpretation that these overflow points are subject to the current prohibition against bypasses as contained in EPA's [illegible] 122.41(m)(4).

The bases for our determinations follow:

1. According to materials supplied by EBMUD, the EBMUD interceptor system was designed and constructed to handle wet weather flows from both combined sewers and separate sewers with high infiltration/inflow (I/I).

   The combined sewers have since been separated, but wet weather peaking factors remain high due to increasing I/I. EBMUD does not own or control the wastewater collection systems; instead they are a joint powers

"We have determined that EBMUD's wet weather overflow structures are not POTWs under EPA's permits…these discharges are NOT subject to secondary treatment…"

NPDES Permits

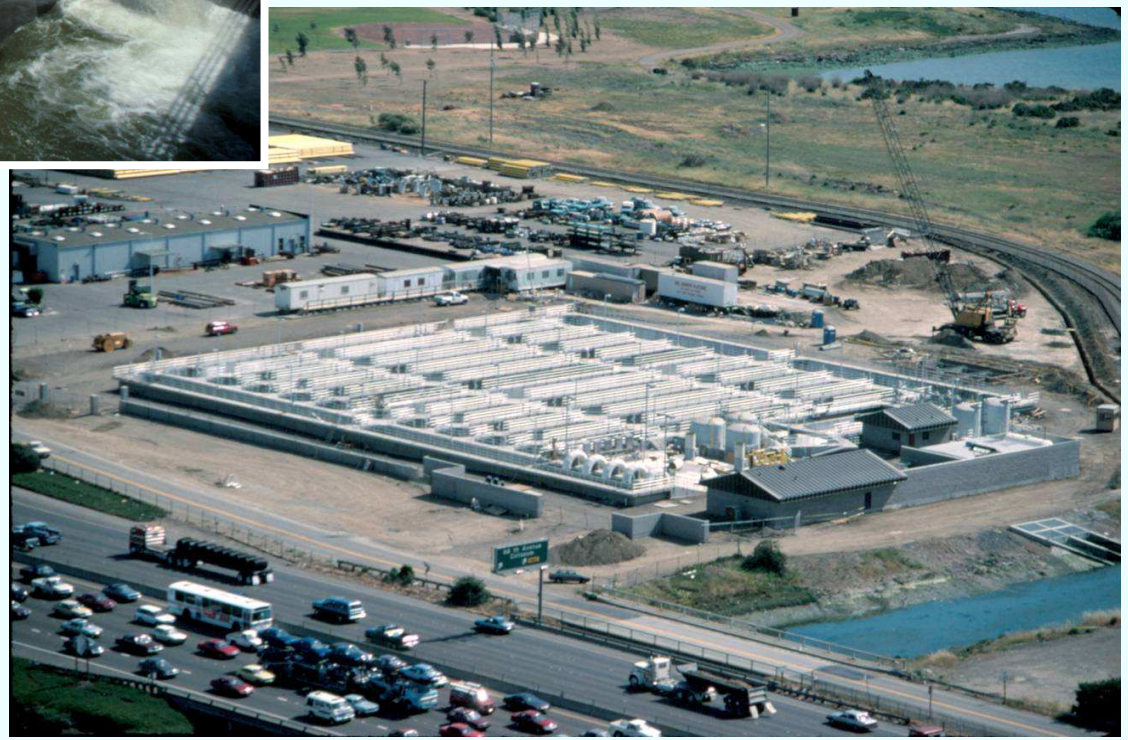
- EBMUD
  - Permit first issued in 1987
    - Compliance with construction of facilities required by the Wet Weather Program Master Plan
    - Monitoring and reporting for effluent compliance
  - Permit reissued in 1992, 1998
  - Began permit renewal discussions in 2003

NPDES Permits (cont.)

- COMMUNITIES
  - Permits first issued in 1987
    - Compliance with sewer rehabilitation program required by the I/I Correction Program Master Plan
  - Permits reissued in 1992, 1997, 2002

OAKPORT PEAK WET WEATHER TREATMENT FACILITY

IN SERVICE SINCE 1990



Design Flow: 158 MGD
Storage: 3 MG

Sedimentation → Chlorination → Dechlorination

PT. ISABEL PEAK WET WEATHER TREATMENT FACILITY

IN SERVICE SINCE 1993

Design Flow: 100 MGD
Storage: 3 MG

Screening → Sedimen. → Chlor./Dechlor.

SAN ANTONIO CREEK PEAK WET WEATHER TREATMENT FACILITY

IN SERVICE SINCE 1996

Design Flow: 51 MGD

Screening → Chlorination → Dechlorination

Wet Weather Program Results

	Before	After
Treatment Capacity	290 MGD	724 MGD*
Storage	0 MG	18 MG
Untreated Overflow Events per Year	~ 10	0.20

* 415 MGD at Main Wastewater Treatment Plant

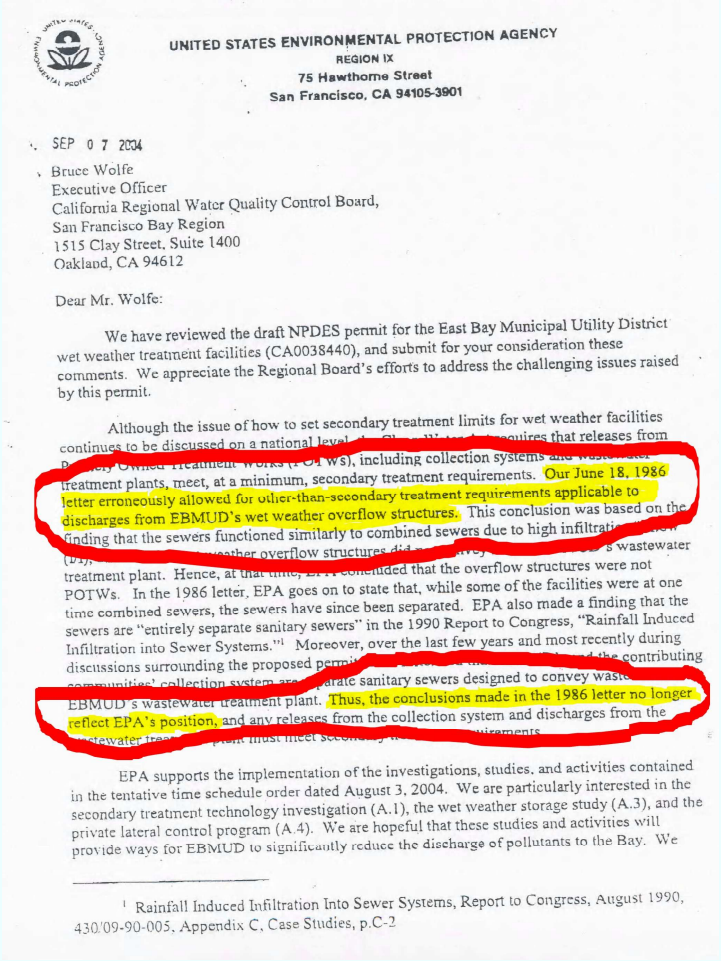
309 MGD at wet weather facilities

2003 Wet Weather Permit

- **2003/04: Series of meetings with stakeholders for permit renewal**
  - **EPA**
  - **RWQCB**
  - **Communities**

- **But the Rules Changed….**

Sep 7, 2004 Letter from RWQCB



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

SEP 07 2004

Bruce Wolfe
Executive Officer
California Regional Water Quality Control Board,
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Dear Mr. Wolfe:

We have reviewed the draft NPDES permit for the East Bay Municipal Utility District wet weather treatment facilities (CA0038440), and submit for your consideration these comments. We appreciate the Regional Board's efforts to address the challenging issues raised by this permit.

Although the issue of how to set secondary treatment limits for wet weather facilities continues to be discussed on a national level [illegible] requires that releases from [illegible] Owned Treatment Works (POTWs), including collection systems and [illegible] treatment plants, meet, at a minimum, secondary treatment requirements. Our June 18, 1986 letter erroneously allowed for other-than-secondary treatment requirements applicable to discharges from EBMUD's wet weather overflow structures. This conclusion was based on the finding that the sewers functioned similarly to combined sewers due to high infiltrati[illegible] wastewater [illegible] weather overflow structures did [illegible] wastewater treatment plant. Hence, at that time, EPA concluded that the overflow structures were not POTWs. In the 1986 letter, EPA goes on to state that, while some of the facilities were at one time combined sewers, the sewers have since been separated. EPA also made a finding that the sewers are "entirely separate sanitary sewers" in the 1990 Report to Congress, "Rainfall Induced Infiltration into Sewer Systems."[1] Moreover, over the last few years and most recently during discussions surrounding the proposed permit [illegible] and the contributing communities' collection system are [illegible]arate sanitary sewers designed to convey wastewater to EBMUD's wastewater treatment plant. Thus, the conclusions made in the 1986 letter no longer reflect EPA's position, and any releases from the collection system and discharges from the wastewater treatment plant must meet secondary [illegible] requirements.

EPA supports the implementation of the investigations, studies, and activities contained in the tentative time schedule order dated August 3, 2004. We are particularly interested in the secondary treatment technology investigation (A.1), the wet weather storage study (A.3), and the private lateral control program (A.4). We are hopeful that these studies and activities will provide ways for EBMUD to significantly reduce the discharge of pollutants to the Bay. We

[1] Rainfall Induced Infiltration Into Sewer Systems, Report to Congress, August 1990, 430/09-90-005, Appendix C, Case Studies, p.C-2

"Our June 18, 1986 letter erroneously allowed for other than secondary treatment requirements applicable to discharges from EBMUD's wet weather overflow structures…the conclusions in the 1986 letter no longer reflect EPA's position"

2000 California Toxics Rule (CTR)

- CTR
  - Numeric criteria for priority pollutants
  - Promulgated in April 2000 by EPA
  - Followed court-ordered recinding of a 1991 State Inland Surface Water and Enclosed Estuary & Bay Plans
  - Includes criteria for human health & aquatic life
  - California also remains in NTR for certain water & pollutants

2001 State Implementation Plan (SIP)

- SIP
  - Implementation of the CTR
  - Adopted by SWRCB in 2001
  - Applies to all point sources (except for CSOs)
  - SIP reasonable potential analysis results in numerous (10-15) pollutants in excess of allowed limits from wet weather facilities

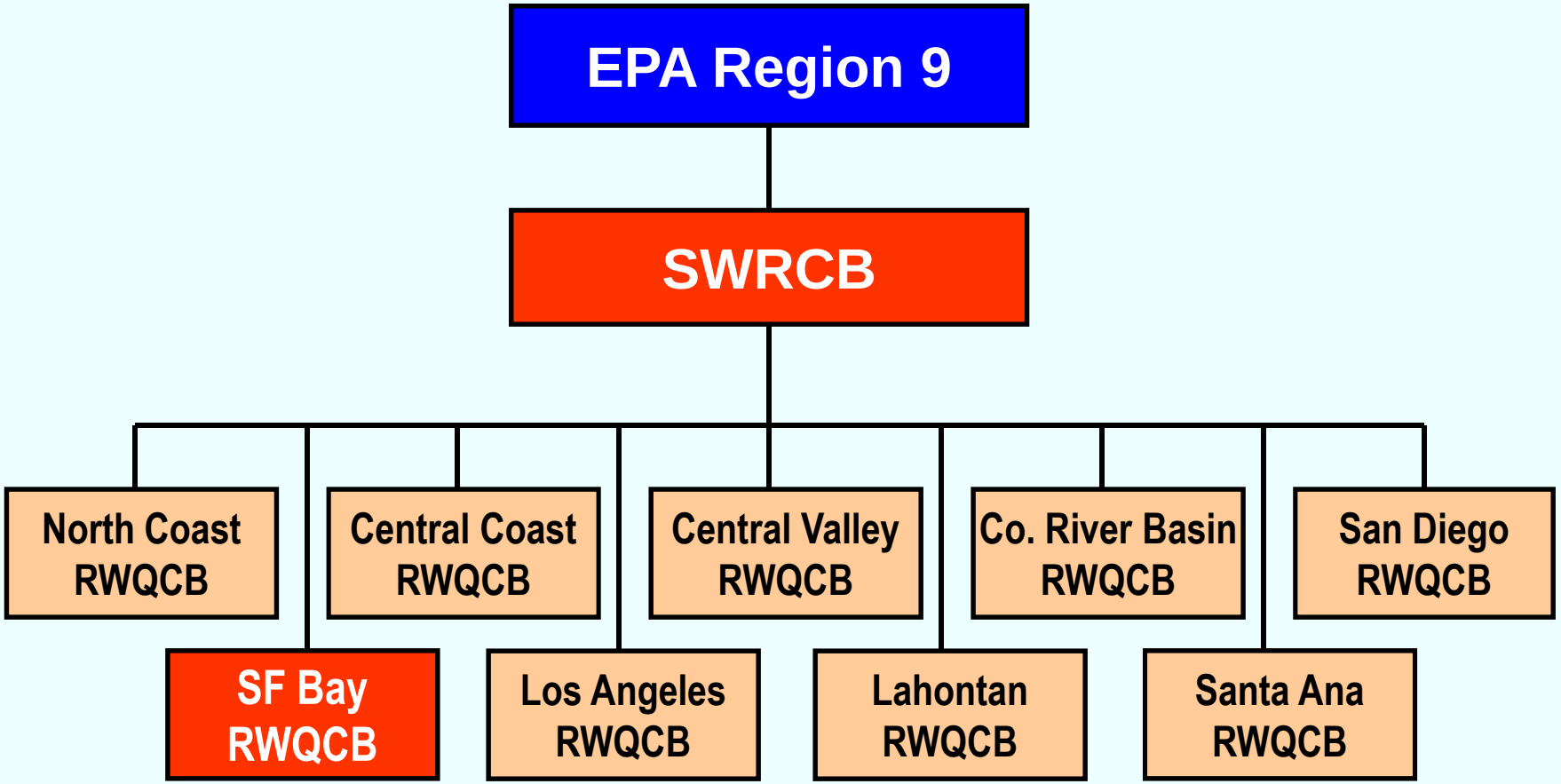
The Time Schedule Order Approach

- Before any new treatment requirements were imposed, information would need to be developed that assessed feasibility
- Conduct investigations on regulatory alternatives
- Develop a comprehensive strategy and timing for regulatory compliance

Time Schedule Order

- **TSO Requirements**
  - Evaluation of secondary treatment technologies
  - Development and implementation of I/I program
  - Evaluate wet weather flow storage and transport
  - Investigate watershed-based or “bubble” permit for conventional pollutants/toxic pollutants
  - Water quality studies
  - Source control identification, toxics reduction plan
  - Five years to complete TSO studies
- **Comments received from EPA, NGOs**
- **September 2005: Final permit issued with TSO**

CA Regulatory Structure



SWRCB Remand Order

- Draft Issued January 12, 2007
- Remanded permit to RWQCB in May 2007
- Key Issues
  - Secondary treatment requirements should apply
  - Final enforceable limits on toxic (water quality) pollutants should be in permit
  - End points of TSO studies should be meeting secondary and water quality standards or zero discharges
  - Recognition that inflow/infiltration is the major cause of the wet weather issue

Now What?

- RWQCB moved to quickly reissue permit
- EBMUD sued SWRCB
- Began discussions with EPA, SWRCB, RWQCB, NGOs
- Developing response strategy
  - Accept permit
  - Litigate
  - Consent Decree

Rule #1 – "*At the end of the day, the Law rules…"*

- **EPA's "informal interpretation" of the law relating to WWF discharges in 1986**
- **"Oops, we made a mistake" ➡ EPA's reversal of the interpretation in 2004**

Rule #2 – "*Even if you follow Rule #1, the Law can change…*"

- **Following the issuance of the permit in 1997, the California Toxics Rule was issued**
- **This was a significant change to potential discharge requirements from EBMUD's wet weather facilities**

Rule #3 – "*A stakeholder process for permit negotiations can be successful if…*"

- **Make it a collaborative process**
- **Include NGOs**
- **KEY LESSON LEARNED: Need to involve ALL stakeholders during the process, including SWRCB**

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Questions?

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