CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. R2-2004-0010
NPDES PERMIT NO. CA0038466

CITY OF BERKELEY
SANITARY SEWER COLLECTION SYSTEM
BERKELEY, ALAMEDA COUNTY

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. R2-2004-0010
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REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

CITY OF BERKELEY
SANITARY SEWER COLLECTION SYSTEM
BERKELEY, ALAMEDA COUNTY

FINDINGS

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

1. *Discharger and Permit Application.* The City of Berkeley (hereinafter called the Discharger) has applied to the Board for reissuance of waste discharge requirements and a permit under the National Pollutant Discharge Elimination System (NPDES).

Purpose of Order

2. This NPDES permit regulates Sanitary Sewer Overflows (SSOs) caused by Inflow and Infiltration (I/I) from the Discharger's wastewater collection system.

3. The U.S. EPA and the Board have classified this Discharger as a minor discharger.

Facility Description

4. *General.* The Discharger owns and maintains approximately 270 miles of sanitary sewer mains, and 130 miles of City owned sewer laterals. The Discharger's wastewater collection system is connected to the interceptor owned and operated by East Bay Municipal Utility District, Special District 1, or EBMUD. The Discharger's collection system serves a population of 104,600 people in the City of Berkeley.

5. *East Bay Communities.* The Discharger is a member of East Bay Communities, which include the Stege Sanitary District and the Cities of Alameda, Albany, Berkeley, Emeryville, Oakland and Piedmont. Wastewaters collected from East Bay Communities' service areas flow to EBMUD's interceptors, and are treated by EBMUD's wastewater treatment facilities.

Discharge Description

6. Wastewater overflows from the Discharger's collection system are discharged to various storm drain systems, and/or creeks, which are tributary to Central San Francisco Bay.

Background and History

7 *History.* The collection systems in the East Bay Communities were originally constructed in the early twentieth century. These systems originally included cross-connections to storm drain systems and, while not uncommon at the time of construction, some of the sewers were later characterized as having inferior materials, poor joints, and inadequate beddings for sewer pipes.

The construction of improvements and the growth of landscaping, particularly trees have damaged sewers and caused leaks. Poor construction techniques and aging sewer pipes resulted in significant infiltration/inflow (I/I) during the wet weather season. In the early 1980s, it was noted that during storms, the sewers might receive up to 20 times more flow than in dry weather. As a result, the East Bay Communities' sewers might overflow to streets, local watercourses, and the Bay, creating a risk to public health and impairing water quality.

8. *I/I Effect on EBMUD's Interceptor System.* The East Bay Communities' sewers are connected to EBMUD's interceptors. In the early 1980s, excessive I/I from the East Bay Communities' collection systems could force EBMUD's interceptors to overflow untreated wastewater at seven (7) designed overflow structures in EBMUD's interceptor along the shoreline of central San Francisco Bay.

9. *EBMUD wet weather permits.* The Board first issued an NPDES permit to EBMUD in 1976 for the wet weather discharges from EBMUD's interceptor. This permit required EBMUD to eliminate discharge of untreated overflows from its interceptors and to protect water quality in San Francisco Bay. This permit was reissued in 1984, 1987, 1992 and 1998. Additional requirements were incorporated into the renewed permits following construction of wet weather treatment facilities.

10. *Collection system permits to East Bay Communities.* Following issuance of the wet weather permit in 1976 to EBMUD, the Board issued similar permits in 1976 to all members of the East Bay Communities except the City of Emeryville. The Board reissued these permits in 1984, 1989 and 1994. Emeryville was not originally issued a permit because it was believed that no wet weather overflows occurred in Emeryville's service area. However, wet weather overflows were identified in the City of Emeryville after completion of the East Bay I/I Study and issuance of the Cease and Desist Orders (CDO) in 1986.

11. *East Bay I/I Study and I/ICP.* In response to the requirements in the Board permits and CDOs regarding the control of untreated overflows from EBMUD's interceptors and the East Bay Communities' collection systems, EBMUD and the East Bay Communities coordinated their efforts to develop a comprehensive program to comply with these permit requirements. In 1980, the East Bay Communities, including the Discharger, and EBMUD initiated a 6-year East Bay I/I Study. The I/I Study outlined recommendations for a long-range sewer improvement program called the East Bay Infiltration/Inflow Correction Program (I/ICP). The I/I Study also specified schedules, which are called Compliance Plans, for each member of the East Bay Communities to complete various sewer rehabilitation projects specified in the I/ICP. These Compliance Plans were later incorporated into the CDO for East Bay Communities as compliance schedules.

    The $16.5 million I/I Study was funded under the Clean Water Grant Program with state and federal support paying about 87.5% of the costs. The original Compliance Plans dated October 8, 1985, proposed a 20-year plan to implement the I/ICP to eliminate wet weather overflows from the East Bay Communities' sewer system up to the 5-year storm event. The total program cost was estimated at $304 million in 1985 dollars.

12. *Joint Powers Agreement (JPA).* In order to address I/I problems in the East Bay Communities' wastewater collection systems, on February 13, 1979, the East Bay Communities and EBMUD entered into a JPA under which EBMUD serves as administrative lead agency to conduct the East

Bay I/I Study. The JPA was amended on January 17, 1986 to designate EBMUD as the lead agency during the initial five-year implementation phase of the East Bay I/I Study recommendations. The amended JPA also delegated authority to EBMUD to apply for and administer grant funds, to award contracts for mutually agreed upon wet weather programs, and to perform other related tasks. Programs developed under the JPA are directed by a Technical Advisory Board (TAB) composed of one voting representative from each of the East Bay Communities and EBMUD. In addition, one non-voting staff member of the Board, State Water Resources Control Board (State Board), and U.S. EPA may participate in the TAB.

13. *Cease and Desist Order (CDO).* In 1986, the Board issued a CDO to the East Bay Communities including the City of Emeryville (Order No. 86-17, reissued with Order No. 93-134). This CDO requires East Bay Communities to cease and desist discharging wet weather overflows from their wastewater collection systems. In this enforcement order, the Board accepted the proposed approach in the I/ICP and directed the I/ICP to focus on conducting activities that reduce impacts to public health.

    The Board also issued a separate CDO to EBMUD (Order No. 87-19, reissued with Order No. 92-96) requiring EBMUD to eliminate discharge of untreated overflows from its interceptors. The CDO for EBMUD (Order No. 92-96) was rescinded following construction of storage and increased treatment capacity at EBMUD's Main Wastewater Treatment Plant, of interceptor hydraulic improvements, of increased storage at Pump Station C, and of three (3) wet weather treatment facilities, which remove floatable material and disinfect peak excess flows that are directed to them.

14. *EBMUD's Wet Weather Program.* From 1975 to 1987, EBMUD underwent its own wet weather program planning, and developed a comprehensive Wet Weather Program. The objective of the Wet Weather Program is that EBMUD's wet weather facilities have the capacity to convey peak flows to EBMUD's system by the East Bay Communities' trunk sewers at the end of the I/ICP implementing period. EBMUD started implementing its Wet Weather Program in 1987. Since then, EBMUD has spent about $310 million on the wet weather program. This includes construction of three (3) wet weather treatment facilities, and two (2) wet weather interceptors, new storage basins and pumping facilities, expansion of the main wastewater treatment plant, and elimination of two (2) out of the seven (7) designed wet weather overflow structures.

15. *Updates to original I/ICP.* After receiving a notice from the Board for issuing a new CDO in 1993, the East Bay Communities requested the opportunity to revise their Compliance Plans. The impetus of this revision stemmed from increased costs for implementing the original Compliance Plans. New technological developments and the inadequacy of other methods previously thought viable for sewer rehabilitation and relief line installation have increased the cost of the I/ICP from original cost estimates. The revised Compliance Plans incorporated the experience gained from the implementation of I/ICP for the past six (6) years from 1987 to 1993 in order to better address the remaining I/ICP projects.

16. *Extension to Original Compliance Plans.* The increase in project costs necessitated extensions of the schedules in the original Compliance Plans in order to minimize the impact on rate-payers. As a result, all members of the East Bay Communities except the Stege Sanitary District and Emeryville submitted a revised Compliance Plan and Schedule in October 1993. In light of the increased costs, the Board granted the Discharger and the Cities of Alameda, Albany, Oakland,

and Piedmont a five (5) to ten (10) year extension to the original compliance schedules in the CDO reissuance in October 1993.

Design Goal of East Bay I/ICP

17. *Cost analysis of sewer rehabilitation program.* It is cost prohibitive to eliminate all I/I into a sewer system. The East Bay Communities performed a cost analysis during the I/I Study to determine the cost-effective level of rehabilitation. The cost-effective level of rehabilitation involves balancing the cost of rehabilitation of the East Bay Communities' sewer systems and the cost for increasing the capacity of EBMUD's interceptors, wastewater treatment facilities. A sensitivity analysis was performed to study cost effects of various levels of rehabilitation on various wet weather alternatives. Cost-Effective Ratios[1](C-E-Ratio) for various drainage basins were calculated. A C-E Ratio greater than one (1) indicates that I/I rehabilitation is cost effective. The analysis was performed by using a computer program supported by the Corps of Engineers Hydrologic Engineering Center, called STORM. This analysis derived a regional least-cost solution, which involves both East Bay Communities' sewer rehabilitation cost and transportation/treatment cost by EBMUD. The study results were described in the Wet Weather Facilities Update. It was concluded that the most cost effective solution was to rehabilitate the cost effective collection systems and provide relief sewers, interceptor hydraulic capacity, and storage basins to handle wet weather flows up to a 5-year storm event.

18. *Design goal of I/ICP.* The design goal of East Bay I/ICP is to eliminate overflows from the East Bay Communities' collection systems and EBMUD's interceptor unless the rainfall exceeds a 5-year design storm event. Overflows may continue to occur for events less than the 5-year design storm until the Discharger completes its I/ICP. However, the occurrence of overflows will decrease as more of the East Bay I/ICP projects are completed.

19. *5-year Design Storm Event Definition.* The 5-year design storm event is a storm event that meets the following criteria: a 6-hour duration, and a maximum 1-hour rainfall intensity of a storm with return period of five (5) years. The storm is assumed to occur during saturated soil conditions, and to coincide with the peak 3-hour ultimate Base Wastewater Flow (BWF) condition. BWF consists of domestic wastewater flow from residential, commercial, and institutional sources plus industrial wastewater. BWF specifically excludes infiltration and inflow (I/I) from groundwater or storm water. Due to these conservative assumptions, the Wet Weather Facilities Pre-design Report concluded that the estimated peak flow produced by this event has a return period of approximately 13 years. The peak I/I flow from a 5-year storm was selected as the basis of design for the treatment level intended to protect beneficial uses as defined by the San Francisco Bay Basin Plan (Basin Plan), Maintenance Level C. Maintenance Level C requires secondary treatment to the half-year recurrence interval, primary treatment to the 5-year recurrence interval, and above the 5-year interval, overflows are allowed.

Progress Made Since Implementation of I/ICP

20. The Discharger started implementing its I/ICP in 1987. Since 1987, the City has spent approximately the $104 million dollars on sewer replacement and rehabilitation construction projects. Among the $104 million dollars spent, about $50 million dollars were spent on projects required by I/ICP. As part of I/ICP, the Discharger has replaced, repaired or rehabilitated 190 miles of its sewer main and city owned laterals. On average, ten (10) miles of existing sewer

[1] C-E Ratio = (East Bay Communities Cost Savings + EBMUD Cost Savings)/(Rehabilitation Cost)

lines are inspected by television camera every year. As a result of the rehabilitation program, the Discharger received significant reduction on sewer service calls on city owned sewer mains. However, problems on private laterals still exist and on raise. There has been no I/I related SSO in the past three (3) years. The Discharger is on schedule to complete the remaining I/ICP projects within the next six (6) years. The Discharger also plans to implement policies and programs to enforce repairs and maintenance of private-owned laterals, enact a long-term flow monitoring program to verify I/I reduction goals specified in the Discharger's Compliance Plan, and perform ongoing condition assessment of its sewer systems.

21. *Elimination of overflows points and storm drain cross connections.* The I/ICP Compliance Plan dated October 1993, identified 18 overflow locations as high threats to public health within the Discharger's service area. The Discharger has eliminated all these overflow locations. The Compliance Plan also identified 29 known cross connections between the sewer system and the storm drain systems. The Discharger has removed all 29 known cross connections.

The Board SSO Resolution No. 2003-R2-0095

22. In October 2003, the Board adopted a Resolution in support of collaboration between the Board and the Bay Area Clean Water Agencies (BACWA) to report and manage SSOs in this Region. The Board staff and BACWA will develop a web-based region-wide SSO reporting system, and an outline for the necessary elements for a Sewer System Management Plan (SSMP). The Board will require wastewater collection system owners and operators to report all SSOs through the web-based SSO reporting system and develop site-specific SSMPs for wastewater collection systems. This Order is consistent with the SSO Resolution No. 2003-R2-0095.

Applicable Plans, Policies and Regulations

Federal Water Pollution Control Act (Clean Water Act)

23. The Clean Water Act (CWA) Section 301(a) prohibits discharge to waters of the United States except in compliance with other provisions of the CWA. For publicly owned treatment works, all discharges must meet effluent limitations based upon secondary treatment requirements. The secondary treatment standards are specified in 40CFR Part 133. The CWA Section 308 provides the basis for SSO reporting requirements. This section requires establishing, maintaining, and reporting records for determining whether there has been a violation of the CWA.

California Water Code Sections that Apply to SSOs

24. *California Water Code Section 13243.* California Water Code Section 13243 provides that a Board, in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, is not permitted.

25. Section 13193 of the California Water Code requires the State Board, after funding has been appropriated, to develop a form for reporting of SSOs. Subsequently, it requires sanitary sewer agencies to report specific information for SSOs greater than 1,000 gallons[2] to the Board. Water Code Section 13376 also requires any person discharging pollutants or proposing to discharge pollutants to waters of the State to file a report of waste discharge.

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[2] However, the Board SSO Resolution No. 2003-R2-0095 requires dischargers report all SSOs including those SSOs that are below 1,000 gallons. See Finding No. 22 for discussion on SSO Resolution.

26. Section 13377 of the California Water Code authorizes the Board to prescribe effluent standards and limitations to ensure compliance with the CWA, and the Water Quality Control Plan or Basin Plan.

Basin Plan

27. *Water Quality Control Plan.* The Board, on June 21, 1995, adopted, in accordance with Section 13240 et seq. of the CWC, a revised Water Quality Control Plan, San Francisco Bay Basin (Basin Plan). This updated and revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of revisions to regulatory provisions is contained in California Code of Regulations, Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and ground waters. This Order is in compliance with the Basin Plan.

28. *Basin Plan Prohibition.* The Basin Plan prohibits discharge of raw sewage or any waste failing to meet waste discharge requirements to any waters of the Basin. The intent of this prohibition is to protect the public and the aquatic environment from the effects of raw or inadequately treated waste discharges.

29. *Basin Plan Beneficial Uses.* Beneficial uses for central San Francisco Bay and its tributaries, as identified in the Basin Plan, are:

    a. Commercial and sport fishing
    b. Estuarine habitat
    c. Industrial service supply
    d. Fish migration
    e. Navigation
    f. Preservation of rare and endangered species
    g. Water contact and non-contact recreation
    h. Shellfish harvesting
    i. Fish spawning
    j. Wildlife habitat

Anti-degradation Policy

30. *State Board Resolution.* The prohibition on discharge, and receiving water limitation in this Order is consistent with the State Board Resolution 68-16 (Anti-degradation Policy). Compliance with these requirements will result in the use of best practicable treatment or control of the discharge.

CEQA Exemption and Public Hearing

31. *NPDES Permit.* This Order serves as an NPDES permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code [California Environmental Quality Act (CEQA)] pursuant to Section 13389 of the California Water Code.

32. *Notification.* The Discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharges and have been provided an opportunity to submit their written views and recommendations. Board staff prepared a Fact

Sheet and Response to Comments, which are hereby incorporated by reference as part of this Order.

33. *Public Hearing.* The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code, regulations, and plans and policies adopted thereunder, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, that the Discharger shall comply with the following:

A. PROHIBITIONS

1. The discharge of untreated or partially treated wastewater to any surface water stream, natural or man-made, or to any drainage system intended to convey storm water runoff to surface waters, is prohibited.

2. The discharge of chlorine, or any other toxic substance used for disinfection and cleanup of wastewater spills, to any surface water body is prohibited.

B. IMPLEMENTATION AND ENFORCEMENT OF PROHIBITION A.1

1. *Enforcement consideration.* In any enforcement action, the Board will consider the Discharger's efforts in containing, controlling, and cleaning up SSOs. The Board will also consider the Discharger's efforts in sewer rehabilitation as well as implementation of the East Bay I/I Correction Program (I/ICP). These considerations are part of the factors required by Section 13327 of the California Water Code.

   The Discharger shall make every practicable effort to contain SSOs and to prevent the wastewater from entering storm drains and surface water bodies.

   Prohibition A.1. is not violated under either of the following:

   a. If the SSO does not enter a storm drain or surface water body, or

   b. If the Discharger contains the SSO within the storm drain system pipes, and fully recovers and cleans up the spilled wastewater.

   However these incidents of SSOs shall be reported to the Board as SSOs as stipulated in Section D.2.

2. *Discharges caused by severe natural conditions.* The Board may take enforcement action against the Discharger for any sanitary sewer system discharge caused by natural conditions, unless the Discharger demonstrates through properly signed, contemporaneous operating logs, or other relevant evidence that,

   a. The discharge was caused by severe natural conditions (such as hurricanes, tornadoes, flooding, earthquakes, landslides, tsunamis, and other similar natural conditions);

b. There were no feasible alternatives for the discharge, such as retention of untreated wastewater, reduction of inflow and infiltration, and use of adequate backup equipment;

c. The Discharger submitted a claim to the Board's staff within 10 working days of the date of the discharge that the discharge meets the conditions of this provision. Additional information to substantiate such claim shall be submitted upon request of the Board staff; and

d. The Discharger took all reasonable steps to stop, and mitigate the impact of the discharge within 24 hours after the Discharger became aware of the SSO.

3. *Discharges caused by other factors.* For SSOs other than those covered under this section, the Discharger may establish an affirmative defense to an action brought for noncompliance if the Discharger demonstrates through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. The Discharger can identify the cause or likely cause of the discharge event;

   b. The discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Discharger;

   c. The discharge could not have been prevented by the exercise of reasonable control, such as proper management, operation and maintenance; adequate treatment facilities or collection system facilities or components (e.g., adequately enlarging treatment or collection facilities to accommodate growth or adequately controlling and preventing infiltration and inflow); preventive maintenance; installation of adequate backup equipment; or in compliance with East Bay I/ICP.

   d. The Discharger submitted a claim to the Board's Executive Officer within 10 working days of the date of the discharge that the discharge meets the conditions of this provision; and

   e. The Discharger took all reasonable steps to stop, and mitigate the impact of, the discharge as soon as possible.

4. *Burden of proof.* In any enforcement proceeding, the Discharger has the burden of proof to establish that the criteria in this section have been met. A claim to be submitted under Sections B.2.c. and B.3.d. above may also be provided in the space allocated for claims in the web-based SSO reporting system (when the system becomes available), which currently is being developed pursuant to the Board SSO Resolution No. 2003-R2-0095. The Discharger shall provide additional available information pertaining to the SSO upon request by the Board's staff. The information may include:

   a. Relevant sewer maintenance/repair logs including the associated costs of sewer rehabilitation, cleaning/flushing, inspection, and replacement for the pipe section where the SSO occurred; and

b. Information relating to storm event, such as size of the storm, length of such storm during the SSO.

C. RECEIVING WATER LIMITATION

1. The discharges shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible floating, suspended, or deposited oil or other products of petroleum origin; and

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

2. The discharges shall not cause nuisance, or adversely affect the beneficial uses of the receiving water.

3. The discharges of waste shall not cause the following limits to be violated in waters of the State at any one place within one foot of the water surface:

   a. Dissolved Oxygen: 5.0 mg/L, minimum

   b. Un-ionized ammonia: 0.16 mg/L as N, maximum

D. PROVISIONS

1. **Controlling and containing SSO**
   In a Sanitary Sewer Overflow (SSO) event, the Discharger shall make every practicable effort to contain the SSO and prevent the SSO from entering storm drains and surface water bodies. However, if it is not feasible, the Discharger may use storm drains to contain the SSO by blocking the drain, and recovering and cleaning up the SSO in order to prevent the SSO from being discharged to an open surface water body.

   The Discharger shall, to the maximum extent possible, take remedial action to

   a. Control or limit the volume of wastewater discharged to the State water;

   b. Terminate the wastewater discharge as rapidly as possible; and

c. Recover as much of the wastewater discharged as possible for proper disposal, including any wash down water.

2. **SSO Reporting**

The Discharger shall report SSOs in accordance with Standard Provisions and Reporting Requirements with the exception of items, B., C., D.2., D.3., E.5., E.6.c., and E.6.d(ii). In the event that there is a discrepancy between requirements of this permit, and the Standard Provision and Reporting Requirements and Part A of Self-Monitoring Program, the permit requirements prevail. After the development of an SSO Monitoring and Reporting Program by Bay Area Clean Water Agencies (BACWA) and the Board, pursuant to the Board's SSO Resolution No. 2003-R2-0095, the Discharger shall report SSOs using the SSO electronic reporting system in accordance with the SSO Monitoring and Reporting Program.

3. **Sewer System Management Plan (SSMP)**

The Discharger shall develop an SSMP and implement the SSMP in according with the requirements and schedule developed by BACWA and Board staff pursuant to SSO Resolution No. 2003-R2-0095.

4. **Change in ownership**

This Order is not transferable to any person, except after notice to the Board's Executive Officer. The Discharger shall submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new Discharger containing a specific date for the transfer of this Order's responsibility and coverage between the existing Discharger and the new Discharger. This agreement shall include an acknowledgement that the existing Discharger is liable for violations up to the transfer date and that the new Discharger is liable from the transfer date on.

5. **Permit Compliance and Rescission of Previous Waste Discharge Requirements**

The Discharger shall comply with all sections of this Order beginning on the effective date stated in a later provision. Upon the effective date, the requirements prescribed by this Order supersede the requirements prescribed by Order No. 94-115, and Order No. 94-115 is hereby rescinded.

6. **NPDES Permit**

This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective on March 17, 2004, provided the U.S. EPA Regional Administrator has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

7. **Order Expiration and Reapplication**

a. This Order expires on March 16, 2009

b. In accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code, the Discharger must file a report of waste discharge no later than 180 days before the expiration date of this Order as application for reissurance of this permit and waste discharge requirements.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 17, 2004.

BRUCE H. WOLFE
Executive Officer

Attachment:
Standard Provisions and Reporting Requirements, August 1993
(Not attached, see our website at http://www.swrcb.ca.gov/rwqcb2/Download.htm for document)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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FACT SHEET

FOR
NPDES PERMIT and WASTE DISCHARGE REQUIREMENTS for
City of Berkeley, Alameda County

NPDES Permit No. CA0038466

PUBLIC NOTICE:

Written Comments

- Interested persons are invited to submit written comments concerning this draft permit.
- Comments must be received by the Regional Board no later than 5:00 p.m. on February 16, 2004.
- Send comments to the ATTN: Jenny Chen

Public Hearing

- The draft permit will be considered for adoption by the Board at a public hearing during the Board's regular monthly meeting at: Elihu Harris State Office Building, 1515 Clay Street, Oakland, CA; 1st floor Auditorium.
- This meeting will be held on: March 17, 2004, starting at 9:00 am.

Additional Information

- For additional information about this matter, interested persons should contact Regional Board staff member: Ms. Jenny Chen, Phone: (510) 622-2405; email: jc@rb2.swrcb.ca.gov

This Fact Sheet contains information regarding an application for waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permit for the City of Berkeley for controlling sanitary sewer overflows (SSOs) during wet weather condition. The Fact Sheet describes the factual, legal, and methodological basis for the proposed permit and provides supporting documentation to explain the rationale and assumptions used in deriving the limits.

I. INTRODUCTION

The Discharger owns and maintains approximately 270 miles of sanitary sewer mains and 130 miles of City owned sewer laterals. The Discharger's sewer systems are connected to interceptors owned by East Bay Municipal Utility District, Special District 1, or EBMUD. The Discharger's collection system serves a population of 104,600 in the City of Berkeley. The wastewater collected from the Discharger's service area is treated by EBMUD's wastewater treatment facilities. The collection system was originally constructed in the early twentieth century with cross connections to storm drain systems. In the 1970s and 1980s, overflows occurred frequently due to these storm drain cross connections as well as to infiltration into the Discharger's collection system. These overflows resulted in untreated wastewater overflows (also called SSOs) to streams, creeks or the Bay during storm events.

II. BACKGROUND INFORMATION ON EAST BAY I/ICP

The Discharger is a member of the East Bay Communities, which include the Stege Sanitary District and the Cities of Alameda, Albany, Berkeley, Emeryville, Oakland and Piedmont. Wastewater collected from the East Bay Communities flow to EBMUD's interceptors, and is treated by EBMUD's wastewater treatment plant.

The East Bay Communities and EBMUD initiated a 6-year East Bay Sewer System Evaluation Survey (SSES) in 1980. The SSES outlined recommendations for a sewer improvement program called the I/I Correction Program (I/ICP). Schedules to complete the I/ICP, which are called Compliance Plans, were developed for each member of the East Bay Communities. The East Bay Communities and EBMUD started implementing the I/ICP in 1987. Since then, the East Bay Communities have eliminated all known cross connections between sewer and storm drain systems, and 113 out of 115 sewer overflow points identified in the SSES as high threats to public health from the East Bay Communities' wastewater collection systems.

In conjunction with the SSES, EBMUD conducted its own wet weather program planning from 1975 to 1987, and developed a comprehensive East Bay Wet Weather Program. This East Bay Wet Weather Program combined the results of the I/I Studies and the EBMUD facility planning and developed a cohesive approach to reducing sanitary sewer overflows in the East Bay. EBMUD started implementing its component of the East Bay Wet Weather Program in 1987. Since then, EBMUD has spent about $310 million on the East Bay Wet Weather Program. EBMUD has constructed three (3) wet weather treatment facilities, two (2) wet weather interceptors, improvements at its Main Wastewater Treatment Plant, system storage and pumping facilities and has eliminated two designed wet weather overflow structures. As a result, EBMUD's interceptor and treatment facilities will be able to treat all wet weather flows up to a 5-year design storm from the East Bay Communities after the East Bay Communities complete their I/ICP.

III. GENERAL RATIONALE

The following documents are the bases for the requirements contained in the proposed Order, and are referred to under the specific rationale section of this Fact Sheet.

- Federal Water Pollution Control Act, as amended (hereinafter the CWA).
- Federal Code of Regulations, Title 40 (40 CFR)- Protection of Environment, Chapter 1, Environmental Protection Agency, Subchapter D, Water Programs, Parts 122-129 (hereinafter referred to as 40 CFR specific part number).
- Porter-Cologne Water Quality Control Act, or California Water Code.
- The Board, on June 21, 1995, adopted, in accordance with Section 13240 et seq. of the CWC, a revised Water Quality Control Plan, San Francisco Bay Basin (Basin Plan). This updated and revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of revisions to regulatory provisions is contained in California Code of Regulations, Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and ground waters. This Order is in compliance with the Basin Plan.

IV. SPECIFIC RATIONALE

1. Basis for Prohibitions

a. Prohibition A.1 (no discharges of untreated or partially treated sewage to State water):

This prohibition is based on the Clean Water Act, which prohibits discharges of wastewater that does not meet secondary treatment standards as specified in 40CFR Part 133. Additionally, the Basin Plan prohibits discharge of raw sewage or any waste failing to meet waste discharge requirements to any waters of the Basin Plan.

b. Prohibition A.2 (no discharge of chlorine, or any other toxic substance used for disinfection and cleanup of sewage spill to any surface water body):

The Basin Plan contains a toxicity objective stating, "All waters shall be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses to aquatic organisms." Chlorine is lethal to aquatic life.

c. Implementation and enforcement of Prohibition A.1.

This provision is based on 40 CFR 122.41 (n) regarding treatment facility upset and affirmative defense.

4. Basis for Receiving Water Limitations

a. Receiving water limitations C.1 and C.2 (conditions to be avoided):

These limits are based on the previous permit and the narrative/numerical objectives contained in Chapters 2 and 3 of the Basin Plan.

b. Receiving water limitations C.3 and C.4 (Dissolved Oxygen and un-ionized ammonia limitations):

This requirement is based on the Basin Plan receiving water objectives.

5. Basis for Provisions

a. Provision D.1. (Controlling and containing SSO)

This requirement is based on available practices for addressing SSOs commonly used by some collection system operators.

b. Provision D.2. (SSO Reporting)

This requirement is based on California Water Code Section 13193, 40CFR 122.48, and the Board's Resolution No. 2003-R2-0095.

c. Provision D.3. (Sewer System Management Plan)

This requirement is based on 40 CFR 122.41(e) for proper operation and maintenance, and (d) for Duty to mitigate. These two standard NPDES requirements require dischargers to properly operate and maintain their collection systems as well as take all reasonable steps to minimize or prevent SSO discharges to waters of the United States, and waters of the State that have a reasonable likelihood of adversely affecting human health or the environment. These requirements, along with prohibition on SSOs discharge to waters of the State are the basis for requiring dischargers to provide adequate sanitary sewer collection system capacity. It is also consistent with the Board's SSO Resolution No. 2003-R2-0095, which was developed collaboratively with the Bay Area Clean Water Agencies.

d. Provision D.4. (Change in Control or Ownership):

This provision is based on 40 CFR 122.61.

e. Provisions D.5 and D.6. (Permit compliance and rescission of previous permit):

Timeframes are consistent with the State's Memorandum of Agreement with the U.S. EPA.

f. Provision D.7 (Permit Expiration and Reapplication):

The term of the permit is five (5) years, which is consistent with 40 CFR 122.46 (a).

V. WASTE DISCHARGE REQUIREMENT APPEALS

Any person may petition the State Water Resources Control Board to review the decision of the Board regarding the Waste Discharge Requirements. A petition must be made within 30 days of the Board public hearing.