

SETTLEMENT AGREEMENT

1 This Settlement Agreement (or "Agreement") is entered into between Plaintiffs Baykeeper
2 and West County Toxics Coalition (collectively referred to as "Plaintiffs"), and Defendants City of
3 Richmond ("Richmond"), Veolia Water North America Operating Services ("Veolia"), and West
4 County Wastewater District ("WCWD") (Defendants Richmond, Veolia and WCWD are
5 collectively referred to as "Defendants," and Plaintiffs and Defendants are collectively referred to
6 as the "Settling Parties") with respect to the following facts, objectives and commitments:

7 **WHEREAS**, Plaintiffs are non-profit corporations dedicated to, among other things, the
8 protection and enhancement of the water quality of the San Francisco Bay-Delta Estuary and to
9 protect the communities of West Contra Costa County against toxic threats in the area;

10 **WHEREAS**, Richmond and WCWD each owns and/or operates a publicly-owned
11 treatment works and collection system that collects, treats, and discharges wastewater generated by
12 residential, commercial, and industrial sources, pursuant to California Regional Water Quality
13 Control Board, San Francisco Bay Region, ("Regional Board") Order No. 01-144, National
14 Pollutant Discharge Elimination System ("NPDES") permit No. CA0038539 (the "2001 Joint
15 Permit"). Prior to 2001, Richmond and WCWD were regulated by Order No. 94-014 (the "1994
16 Joint Permit"). Richmond is also a co-permittee to a regional municipal storm water permit, Order
17 No. R2-2003-0022, NPDES permit No. CA0029912, as amended by Order No. R2-2003-0022 (the
18 "MS4 Permit");

19 **WHEREAS**, Veolia has entered into a contract to operate or assist in the operation of the
20 Richmond publicly-owned treatment works, sanitary sewer collection system, and the municipal
21 separate storm water system;

22 **WHEREAS**, on July 14, 2005, Plaintiffs provided Defendants, the Administrator and the
23 Regional Administrator for Region IX of the United States Environmental Protection Agency
24 ("EPA"), and the Executive Director of the California State Water Resources Control Board ("State
25 Board") with a Notice of Violation and Intent to File Suit ("60-Day Notice") under Section 505(a)
26 of the Clean Water Act, 33 U.S.C. § 1365(a)(1) and (f). The 60-Day Notice alleged, and Plaintiffs
27 contend, that Defendants have violated and continue to violate the Act, along with the terms and
28 conditions of the 1994 and 2001 Joint Permits and the MS4 Permit;

1 **WHEREAS**, on September 22, 2005, Plaintiffs filed their Complaint in the United States
2 District Court for the Northern District of California (“District Court”) against Defendants (Case
3 No. C 05-03829 MMC);

4 **WHEREAS**, the purpose of Plaintiffs’ Complaint is, *inter alia*, to facilitate the prevention
5 of sanitary sewer overflows that have historically occurred and are occurring from the Richmond
6 and WCWD collection systems and facilitate the prevention of sewage discharges to the Richmond
7 municipal separate storm sewer system;

8 **WHEREAS**, the Settling Parties, through their authorized representatives and without
9 either adjudication of the Complaint’s claims or admission by the Defendants of any alleged
10 violation or other wrongdoing, have chosen to resolve this action through settlement and avoid the
11 costs and uncertainties of further litigation;

12 **NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of
13 which is hereby acknowledged, the Settling Parties each hereby agree as follows:

14 **I. GENERAL OBJECTIVES**

15 1. The objectives of this Settlement Agreement are:

- 16 a. To ensure that the Defendants continue to improve efforts to comply with
17 the Clean Water Act;
- 18 b. To ensure that the Defendants continue to use, implement, and improve
19 ways, means, and methods to prevent or reduce sanitary sewer overflows; and
- 20 c. To further the goals and objectives of the CWA.

21 **II. DEFINITIONS**

22 2. Unless otherwise expressly defined herein, terms used in this Settlement
23 Agreement, which are defined in the CWA or in regulations or rules promulgated under the CWA,
24 have the meaning assigned to them in the applicable statutes, regulations, or rules. Whenever terms
25 listed below are used in this Settlement Agreement, the following definitions apply:

- 26 a. “FOG” means fats, oil, and grease.
- 27 b. “Settlement Agreement” means this Settlement Agreement and any
28 attachments or documents incorporated by reference into this Settlement Agreement.

1 c. "Richmond Collection System" means the sewer pipes and lines, manholes
2 or maintenance holes, pump stations, and all appurtenances thereto under ownership of Richmond
3 Municipal Sewer District No. 1 that are used to convey wastewater generated by residential,
4 commercial, and industrial sources to the Richmond Wastewater Treatment Plant. Richmond's
5 Collection System is currently operated and maintained by Veolia.

6 d. "WCWD Collection System" means the sewer pipes and lines, manholes or
7 maintenance holes, pump stations, and all appurtenances thereto under ownership or operation of
8 WCWD or any contractor to WCWD designed or used to convey wastewater generated by
9 residential, commercial, and industrial sources to the WCWD Wastewater Treatment Plant.

10 e. "Sewer line segment" means any section of publicly owned sewer line or
11 pipe located between: (1) two manholes/maintenance holes; (2) a pump station and a
12 manhole/maintenance hole; (3) a pump station or a manhole/maintenance hole and a headworks
13 structure; or (4) a sewer line or pipe otherwise identifiable as a discrete section.

14 f. "SSMP" means the Sewer System Management Program implemented by
15 Richmond and/or Veolia for the Richmond Collection System and by WCWD for the WCWD
16 Collection System to monitor the condition, maintenance, and repair of the collection system.

17 g. "MS4" means Richmond's municipal separate storm sewer system.

18 h. "MS4 Permit" means NPDES Permit No. CA0029912, Order No. 99-058,
19 as amended by Order No. R2-2003-0022.

20 i. "Day" means a calendar day. In computing any period of time under this
21 Settlement Agreement, where the last day of such period is a Saturday, Sunday, or Federal or State
22 Holiday, the period runs until the close of business on the next day that is not a Saturday, Sunday,
23 or Federal or State Holiday.

24 j. "Design Storm" means the storm event utilized by Richmond and/or Veolia
25 or WCWD in designing sewer lines for their respective Collection Systems, which, for Richmond
26 and Veolia, shall be a 10-year, 24-hour storm event occurring simultaneously across Richmond's
27 sewersheds with wet antecedent soil conditions and, for WCWD, a 5-year, 24-hour storm event
28 occurring simultaneously across WCWD's sewersheds with wet antecedent soil conditions.

1 k. "Sanitary Sewer Overflows," "overflow," or "SSO" has the same meaning
2 as that term is defined in Section A.1. of the Statewide General Waste Discharge Requirements for
3 Sanitary Sewer Systems, State Water Resources Control Board Order No. 2006-0003 (hereinafter
4 the "SSO General WDR"), or any amendment thereto, and which currently means: "any overflow,
5 spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary
6 sewer system. SSOs include (i) overflows or releases of untreated or partially treated wastewater
7 that reach waters of the United States; (ii) overflows or releases of untreated or partially treated
8 wastewater that do not reach waters of the United States; and (iii) wastewater backups into
9 buildings and on private property that are caused by blockages or flow conditions within the
10 publicly owned portion of a sanitary sewer system." For purposes of this definition, the term
11 "waters of the United States" has the meaning as set forth in 40 C.F.R. section 122.2.

12 l. "2001 Joint Permit" means NPDES Permit CA0038539, Order No. 01-144,
13 as presently constituted and/or as subsequently revised or renewed.

14 m. "1994 Joint Permit" means NPDES Permit CA0038539, Order No. 94-014.

15 n. "Inflow" means wastewater or water that may enter a collection system
16 through unpermitted connections, drains, or manholes.

17 o. "Infiltration" means groundwater, rainwater, or other surface water that
18 may enter a collection system through its pipes, joints, or cracks.

19 p. "System Evaluation and Capacity Assurance Plan" or "SECAP" means one
20 or more documents or databases containing the information required by Sections VIII.B. or VIII.C.
21 of this Settlement Agreement.

22 III. JURISDICTION AND VENUE

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24 3. This Court has jurisdiction over the subject matter of the claims asserted by
25 Plaintiffs pursuant to CWA section 505(a), 33 U.S.C. § 1365(a), and 28 U.S.C. §§ 1331, 1355, and
26 1367. Venue is proper in this judicial district pursuant to CWA sections 309(b), 505(c), 33 U.S.C.
27 §§ 1319(b), 1365(c), and 28 U.S.C. §§ 1391(b) and (c). The parties waive all objections that they
28 may have to the Court's jurisdiction to enter and enforce this Settlement Agreement.

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IV. EFFECT OF SETTLEMENT AGREEMENT

4. Plaintiffs do not, by their consent to this Settlement Agreement, warrant or aver in any manner that the Defendants' compliance with this Settlement Agreement will constitute or result in compliance with any Federal or State law or regulation. Nothing in this Settlement Agreement shall be construed to affect or limit in any way the obligation of the Defendants to comply with all Federal, State and local laws and regulations governing any activity required by this Settlement Agreement.

5. Neither this Settlement Agreement, nor any payment pursuant to the Settlement Agreement, shall constitute evidence or be construed as a finding, adjudication, or acknowledgement of any fact, law, or liability, nor shall it be construed as an admission of violation of any law, rule, regulation, permit, or administrative order by Defendants. However, this Settlement Agreement and/or any payment pursuant to the Settlement Agreement may constitute evidence in actions seeking to enforce compliance with this Settlement Agreement. The Defendants maintain and reserve all defenses they may have to any alleged violations that may be raised in the future.

V. APPLICABILITY

6. This Settlement Agreement and the July 5, 2006 Order address all violations alleged by the Plaintiffs in Civil Case No. 05-03829 MMC from July 14, 2000, up to and through the Termination Date of the Settlement Agreement.

7. The Settling Parties certify that their undersigned representatives are fully authorized to enter into this Settlement Agreement, to execute it on behalf of the Settling Parties, and to legally bind the Settling Parties to its terms.

8. The Settling Parties, including any successors or assigns, agree to be bound by this Settlement Agreement and not to contest its validity in any subsequent proceeding to implement and enforce its terms. Except as provided in Paragraph 11, no change in ownership or corporate or other legal status of the Defendants or any transfer of the Defendants' assets or liabilities shall in any way alter the responsibilities of the Defendants or any of its successors or assigns thereof, under this Settlement Agreement.

1 **VI. EFFECTIVE DATE AND TERMINATION DATE**

2 9. The term "Effective Date," as used in this Settlement Agreement, shall mean the
3 last day for the U.S. Department of Justice or the U.S. Environmental Protection Agency to provide
4 comment on the lodged Settlement Agreement, *i.e.*, the 45th day following the U.S. Department of
5 Justice's receipt of the lodged Settlement Agreement, as provided in Section X of this Settlement
6 Agreement.

7 10. This Settlement Agreement shall terminate as to all of the Defendants ten (10)
8 years from the Effective Date so long as all payments, fees, and costs due under or pursuant to this
9 Settlement Agreement, including, but not limited to, provisions governing Supplemental
10 Environmental Projects, Attorney's Fees and Costs, and Dispute Resolution, have been paid in full.

11 11. Notwithstanding Paragraph 10 of this Settlement Agreement, in the event Veolia
12 ceases to operate and maintain Richmond's Collection System and/or MS4, Veolia shall send a
13 letter to Plaintiffs stating facts justifying full or partial termination of Veolia (full for both
14 Collection System or MS4, or partial for either the Collection System or the MS4) from the
15 Settlement Agreement and requesting a stipulation to dismiss Veolia either fully or partially.
16 Plaintiffs shall respond to Veolia's request within ten (10) days, and shall not unreasonably
17 withhold approval of a stipulation. The stipulation shall be substantially in the following form:
18 "Plaintiffs and Veolia hereby stipulate and agree that Veolia is hereby released from all (or part of
19 the) obligations under the Settlement Agreement and that Plaintiffs shall not seek to enforce any
20 term of this Settlement Agreement against Veolia whether or not the District Court approves this
21 stipulation." If Plaintiffs do not agree to stipulate to Veolia's request, Plaintiffs or Veolia may
22 invoke the Formal Dispute Resolution process pursuant to Section XIII.

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24 **VII. SSO REDUCTION PERFORMANCE GOALS**

25 12. SSO Reduction Performance Goals are prescribed for WCWD and Richmond as
26 follows:
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a. WCWD Collection System SSO Reduction Performance Goals.

Calendar Year	Maximum Number of SSOs Per 100 Miles of Sewer Line/Year
2007	15
2008	14
2009	13
2010	12
2011	11
2012	10
2013	9
2014	8
2015	7
2016	5

b. Richmond Collection System SSO Reduction Performance Goals:

Calendar Year	Maximum Number of SSOs Per 100 Miles of Sewer Line/Year
2007	58
2008	52
2009	44
2010	38
2011	33
2012	25
2013	17
2014	13
2015	8
2016	5

c. For purposes of determining compliance with the SSO Reduction Performance Goals, the maximum number of SSOs per 100 miles of sewer line per calendar year can be averaged over the entire Collection System, and SSOs caused by storm events exceeding the Design Storm shall not be counted.

1 d. As additional performance goals, WCWD shall not have any capacity-
2 related SSOs from the WCWD Collection System after September 1, 2012 except such SSOs
3 caused by storm events exceeding the WCWD Collection System Design Storm, and Richmond
4 shall not have any capacity-related SSOs from the Richmond Collection System after September 1,
5 2014 except such SSOs caused by storm events exceeding the Richmond Collection System Design
6 Storm.

7 e. As an additional performance goal, Richmond and/or WCWD shall not
8 have more than two sewage spills from any two of the same sewer line segments or
9 manhole/maintenance holes within any calendar year beginning January 1, 2011.

10 f. For purposes of initially calculating the SSO Reduction Performance Goals,
11 the Settling Parties assume Richmond currently has 197 miles of sewer line in its Collection
12 System, and WCWD currently has 242 miles of sewer line in its Collection System. For purposes
13 of calculating the SSO Reduction Performance Goals, the total allowable SSO Reduction Goals for
14 the year shall be rounded using standard rounding as follows: 16.1 through 16.4 is considered 16,
15 and 16.5 through 16.9 is considered 17. For example, for the year 2016, using the current sewer
16 line mileage of 197 for Richmond and 242 for WCWD, Richmond would be allowed 10 SSOs
17 $[(1.97 \times 5 = 9.85) (9.85 \Rightarrow 10)]$ and WCWD 12 SSOs $[(2.42 \times 5 = 12.10) (12.10 \Rightarrow 12)]$.

18 g. At any time after January 1, 2011, any Defendant can request in writing that
19 Plaintiffs meet and confer with Defendant(s) to discuss modification of the SSO Reduction
20 Performance Goals based on at least three (3) years of data from the comprehensive State Board
21 database on performance of collection systems in California. If such full set of performance data is
22 unavailable for purposes of the meet and confer, Defendant(s) may provide a statistically valid,
23 representative sample of SSO rates per 100 miles of sewer line experienced by collection systems
24 in Northern California (*i.e.*, North of the Tehachapi Mountain Range) that includes at least three (3)
25 years of data to support the Defendant(s) suggested modification of the SSO Reduction
26 Performance Goals. If Defendant(s) request Plaintiffs to meet and confer, Defendant(s) shall
27 provide Plaintiffs within ten (10) days a document setting forth all pertinent information regarding
28 the requested modified SSO Reduction Performance Goals, which shall be set at the 63rd percentile

1 (*i.e.*, the point in the data set with thirty-seven (37) percent of the collection systems having lower
2 SSO rates per 100 miles of sewer line and sixty-three (63) percent of the collection systems having
3 higher SSO rates per 100 miles) with standard rounding applied. Defendant(s) shall concurrently
4 provide Plaintiffs payment of \$5,000 for Plaintiffs' review of the submitted performance data.
5 Within forty-five (45) days of receipt of the performance data, Plaintiffs shall either agree to the
6 modifications to the SSO Reduction Performance Goals in writing or provide comments. If
7 Plaintiffs do not agree to the modifications, the Defendant(s) and Plaintiffs shall meet to discuss the
8 issue further. Should Defendant(s) and Plaintiffs be unable to agree as to any suggested
9 modifications to the SSO Reduction Performance Goals, Defendant(s) may invoke the Formal
10 Dispute Resolution process pursuant to Section XIII so long as Defendant(s) provide Plaintiffs a
11 payment of \$10,000 for Plaintiffs' fees concurrent with filing a Motion. In any prevailing party
12 fee/cost request, Defendant(s) shall not seek from Plaintiffs reimbursement of the \$15,000 paid
13 pursuant to this paragraph, and Plaintiffs shall not seek any fees/costs incurred and already paid for
14 by the \$15,000 payment made by the Defendant(s). Any payments made hereto shall be made
15 payable to "Lawyers for Clean Water Attorney Client Trust Account" addressed to 1004 O'Reilly
16 Avenue, San Francisco, CA 94129, and sent by overnight delivery.

17 **VIII. SEWER SYSTEM MANAGEMENT PROGRAM AND** 18 **CAPITAL IMPROVEMENT COMMITMENT**

19 WCWD and Richmond shall each develop and implement an SSMP for their respective
20 Collection Systems that meets the requirements of the SSO General WDR.

21 **A. RICHMOND AND WCWD CAPITAL IMPROVEMENT COMMITMENT**

22 13. RICHMOND CAPITAL PROGRAM. Richmond shall spend at least \$20 million
23 dollars solely on Collection System capital improvements (*i.e.*, physical repairs, rehabilitation, or
24 replacement, as described in Richmond's Collection System Capital Improvement Program) to the
25 Richmond Collection System over the five (5) calendar years following July 1, 2006. Those
26 portions of the Richmond Collection System that experience higher levels of Infiltration and Inflow
27 will receive a higher priority within Richmond's Capital Improvement Program. Richmond shall
28 not be required to raise its sewer service rates in the current fiscal year any more than the

1 compound eight percent per fiscal year for five (5) years increase Richmond has already approved.
2 Richmond shall not, however, rescind its currently approved sewer service rate increases. However,
3 Richmond shall re-evaluate funding of capital improvements in fiscal year 2008-2009 to determine
4 if additional funding beyond the \$20 million dollars already committed is required for capital
5 improvements for purposes of compliance with the 2001 Joint Permit, SSO General WDR, or any
6 SSO Reduction Action Plan. Richmond shall provide Plaintiffs a copy (to the addresses and via the
7 methods set forth in Section XVI, Notices and Submissions) of all Invitations to Bid for capital
8 improvements described in Richmond's Collection System Capital Improvement Program in
9 accordance with Section VIII.A. and B.

10 14. WCWD CAPITAL PROGRAM. WCWD shall spend at least \$5 million dollars on
11 Collection System capital improvements (*i.e.*, physical repairs, rehabilitation, or replacement, as
12 described in WCWD's Collection System Capital Improvement Program) over the ten (10)
13 calendar years following July 1, 2006. WCWD shall not, in any case, be required to spend more
14 than \$5 million dollars on Collection System capital improvements prior to July 1, 2016 unless
15 necessary for purposes of compliance with the 2001 Joint Permit, SSO General WDR, or any SSO
16 Reduction Action Plan. WCWD shall provide Plaintiffs (to the addresses and via the methods set
17 forth in Section XVI, Notices and Submissions) a copy of all Invitations to Bid for capital
18 improvements described in WCWD's Collection System Capital Improvement Program in
19 accordance with Section VIII.A. and C.

20 **B. RICHMOND SSMP COMMITMENTS**

21 15. SECAP. Richmond shall complete a System Evaluation and Capacity Assurance
22 Plan ("SECAP") within 18 months of the Effective Date of this Settlement Agreement.
23 Richmond's SECAP shall provide that Richmond shall institute all measures needed to attain the
24 Richmond Collection System capacity needed to convey the 10-year, 24-hour storm with wet
25 antecedent soil conditions without capacity-related SSOs by September 1, 2014. Capacity-related
26 SSOs (including discharges from Richmond's overflow weirs) do not include SSOs resulting from
27 a storm event exceeding the Richmond Collection System's Design Storm. If additional flow
28 monitoring is required to obtain data needed to finalize planning for all Richmond Collection

1 System improvements needed to assure the system capacity required by this paragraph, Richmond
2 shall conduct such monitoring during the 2006/2007 rainy season.

3 16. The SECAP shall analyze and address the impact of tidal inflow into the Richmond
4 Collection System on system capacity needs and shortfalls.

5 17. Richmond's SECAP shall set forth a priority ranking for capital improvement
6 projects needed to address Richmond Collection System capacity needs and shortfalls and an
7 implementation schedule for such projects.

8 18. The SECAP shall include a hydraulic analysis that includes calculation for all
9 sewer lines and all pump stations of estimated dry weather wastewater flow, estimated peak wet
10 weather wastewater flow under the Richmond Collection System's Design Storm and other storm
11 event scenarios, and total wastewater flow capacity when flowing full. Findings of the hydraulic
12 analysis shall be presented on a GIS system map, where feasible, or other database.

13 19. To aid the hydraulic analysis, Richmond shall maintain an updated, accurate
14 inventory of the Richmond Collection System in a GIS system map, where feasible, or other
15 database. The GIS system map, where feasible, or other database shall include all Richmond
16 Collection System attributes required for the hydraulic modeling and further, to the extent
17 available, shall include system attributes that will facilitate Richmond Collection System operation
18 and maintenance. Such system attributes include: sewer line diameters and lengths, sewer line
19 slope, service area covered by line segment, sewer line year of construction (if available),
20 inspection history, cleaning history, repair history, conflicting utilities, whether a sewer line is
21 located in a right-of-way or an easement; manhole locations, depth, and other attributes where
22 available, such as lid size, manhole diameter, rim elevation, and invert elevation; and pump station
23 mechanical, electrical, and instrument data.

24 20. The SECAP shall further provide for reevaluation and updating of hydraulic
25 analysis of the Richmond Collection System to reflect any changes in Richmond Collection System
26 conditions, conditions or factors relevant to volumes of system rainfall-derived Infiltration and
27 Inflow (RDI/I), dry weather infiltration, added service connections, or land-use patterns that would
28 affect the Richmond Collection System peak wet weather flows and effective system flow capacity

1 at least once every five (5) calendar years.

2 21. Within thirty (30) days of the Effective Date of this Settlement Agreement,
3 Richmond shall commence an investigation of cross connections between its MS4 and the
4 Richmond Collection System. Richmond shall complete this investigation in sufficient time to
5 include analysis of such cross connections and a plan for eliminating such connections in its
6 SECAP.

7 22. Richmond shall finalize its pump station upgrades and ensure that each of the pump
8 stations has back-up power by December 2007. Further, Richmond shall finalize its Supervisory
9 Control And Data Acquisition (“SCADA”) by December 2007. Richmond shall include its pump
10 station upgrades, back-up power installations, and SCADA information in its SECAP.

11 23. CONDITION ASSESSMENT. Richmond shall complete a condition assessment
12 of all its gravity sewer main lines and force main sewer lines by October 14, 2006. Condition
13 assessment of gravity sewer mains shall be based on Closed Circuit Television (“CCTV”)
14 inspection and shall employ the Sewer Line Condition Grading Matrix attached as Exhibit 1.
15 Richmond shall repair or replace gravity sewer main lines and force mains as required by the Sewer
16 Line Condition Grading Matrix. Richmond shall thereafter continue to implement a Condition
17 Assessment Program that employs a minimum ten (10) year CCTV re-inspection cycle for all
18 gravity sewer lines and more frequent CCTV inspection of gravity lines as mandated by the Sewer
19 Line Condition Grading Matrix defect score for the sewer line in issue. For force mains, the
20 Condition Assessment shall be completed no later than December 1, 2015.

21 24. SEWER LINE CLEANING. Richmond shall clean all gravity sewer lines in the
22 Richmond Collection System at least once every four (4) calendar years and clean designated
23 gravity sewer lines more frequently as warranted by its Hot Spot Cleaning Program set forth in
24 Exhibit 2.

25 25. FOG PROGRAM. Within thirty (30) days of the Effective Date of this Settlement
26 Agreement, Richmond shall update its FOG Inspection Procedures to reduce the timeframe for re-
27 inspection of food service establishments (FSEs) as follows: (a) reduce re-inspection of FSEs that
28 receive a score of 3 or greater from three (3) calendar years to one (1) calendar year; (b) reduce re-

1 inspection of FSEs that receive a score of 2 from one (1) calendar year to three (3) months, and
2 every three (3) months thereafter, until the facility achieves a score of 4 or greater; and (c) reduce
3 re-inspection of FSEs that receive a score of 1 from one (1) calendar year to one (1) month, and
4 every month thereafter, until the facility achieves a score of 4 or greater.

5 26. Within sixty (60) days of the Effective Date of this Settlement Agreement,
6 Richmond shall develop an educational outreach program to residents of Richmond (for example,
7 public school presentations, flyers or other public advertisements, or provision of free FOG
8 disposal receptacles) designed to curtail the discharge of FOG from residences to the Richmond
9 Collection System, and Richmond will thereafter continue to implement the educational outreach
10 program.

11 **C. WCWD SSMP COMMITMENTS**

12 27. SECAP. WCWD shall revise its SECAP within 18 months of the Effective Date
13 of this Settlement Agreement. The revised SECAP shall provide that WCWD shall institute all
14 measures needed to attain the Collection System capacity needed to convey the 5-year, 24-hour
15 storm with wet antecedent soil conditions without capacity-related SSOs by September 1, 2012.
16 Capacity-related SSOs do not include SSOs resulting from a storm event exceeding the WCWD
17 Collection System's Design Storm. If additional flow monitoring is required to obtain data needed
18 to finalize planning for all Collection System improvements needed to assure the system capacity
19 required by this paragraph, WCWD shall conduct such monitoring during the 2006/2007 rainy
20 season and incorporate this information in its SECAP revision to reflect the results of this
21 additional flow monitoring.

22 28. The SECAP shall include a hydraulic analysis that includes calculation for all
23 sewer lines and all pump stations of estimated dry weather wastewater flow, estimated peak wet
24 weather wastewater flow under the Design Storm and other storm event scenarios, and total
25 wastewater flow capacity when flowing full. Findings of the hydraulic analysis shall be presented
26 on a GIS system map or other database.

27 29. To aid the hydraulic analysis, WCWD shall maintain an updated, accurate
28 inventory of the WCWD Collection System in a GIS system map or other database. The GIS

1 system map or other database shall include all Collection System attributes required for the
2 hydraulic modeling and further shall include system attributes that will facilitate Collection System
3 operation and maintenance. Such system attributes include: sewer line diameters and lengths,
4 sewer line slope, service area covered by line segment, sewer line year of construction, if available,
5 inspection history, cleaning history, repair history, conflicting utilities, whether a sewer line is
6 located in a right-of-way or an easement; manhole locations, depth, and other attributes where
7 available, such as lid size, manhole diameter, rim elevation, and invert elevation; and pump station
8 mechanical, electrical, and instrument data.

9 30. The SECAP shall further provide for reevaluation and updating of hydraulic
10 analysis of the Collection System to reflect any changes in Collection System condition, conditions
11 or factors relevant to volumes of system RDI/I, dry weather infiltration, added service connections,
12 or land-use patterns that would affect Collection System peak wet weather flows and effective
13 system flow capacity by December 1, 2015.

14 31. SEWER LINE REPAIR AND REHABILITATION. Based on review of CCTV
15 tapes, WCWD shall assess and rank the condition of Collection System sewer lines and manholes
16 according to the Sewer Condition Grade Definition criteria in Exhibit 3. WCWD shall continue to
17 implement its pipeline repair and replacement program as set forth in WCWD's Capital
18 Improvement Program (CIP).

19 32. SEWER LINE CLEANING. WCWD shall implement its Hot Spot Cleaning
20 Program, including scheduling and adjusting cleaning frequencies via application of the Sewer Hot
21 Spot Cleaning Program set forth as Exhibit 4. In addition, WCWD shall complete cleaning of
22 sewer lines twelve inches or less at least once every four (4) calendar years, and sewer lines larger
23 than twelve inches every ten (10) calendar years.

24 33. FATS, OIL AND GREASE CONTROL. WCWD shall continue to implement the
25 FOG program stipulated under Ordinance of the Board of Directors of West County Wastewater
26 District, County of Contra Costa, California, No. 11-7-00 and shall further update this FOG
27 program to ensure that it includes and reflects the following elements:

28 a. the adoption of a revised ordinance requiring all FSEs within WCWD's

1 jurisdiction to install a grease trap or grease interceptor and to properly operate and maintain the
2 grease trap or grease interceptor, including performing periodic cleaning out of grease
3 accumulations in such traps or interceptors. The revised sewer ordinance shall further require all
4 FSEs lacking grease interceptors to upgrade, where feasible, to grease interceptors if two or more
5 WCWD inspections have shown that the FSE is not complying with the ordinance's operation and
6 maintenance requirements or if WCWD becomes aware of information demonstrating that the
7 grease trap alone is ineffective at preventing the discharge of FOG to the Collection System;

8 b. periodic, at least once every two (2) calendar years, inspection of FSEs for
9 compliance with applicable ordinances regarding installation and maintenance of grease traps and
10 interceptors, with annual inspections of FSEs shown to be in violation of WCWD FOG ordinances
11 or in an area experiencing SSOs caused by grease; and

12 c. appropriate public outreach and education (including elementary school
13 education programs) targeted at reducing both commercial and residential discharges of FOG to
14 WCWD Collection System.

15 **D. SSO REPORTING AND RESPONSE**

16 34. The Defendants shall provide Annual SSO Summary Reports to Plaintiffs during
17 the life of the Settlement Agreement. Such reports shall be due by March 31st of each calendar
18 year, setting forth a narrative summary, a table of SSOs for the calendar year prior, and a
19 comparison to that calendar year's SSO Reduction Performance Goals. The reports shall provide
20 the information for SSOs required by State Board Monitoring and Reporting Program No. 2006-
21 0003, which includes:

- 22 a. Location of SSO by GPS coordinates (if available) or street address;
23 b. Whether or not the SSO entered a drainage channel and/or surface water;
24 c. Whether or not the SSO was discharged to a storm drain pipe that was not
25 fully captured and returned to the sanitary sewer system;
26 d. Estimated SSO volume in gallons;
27 e. SSO source (manhole, cleanout, etc.);
28 f. SSO cause (mainline blockage, roots, etc.);

- 1 g. Time of SSO notification or discovery;
- 2 h. Estimated operator arrival time;
- 3 i. SSO destination;
- 4 j. Estimated SSO end time; and
- 5 k. Final SSO Identification (ID) Number.

6 For SSOs that equal or exceed 1000 gallons, which result in a discharge to a drainage
7 channel and/or surface water, or discharge to a storm drainpipe that was not fully captured and
8 returned to the sanitary sewer system, the Annual SSO Summary Reports shall include all
9 information listed above as well as:

- 10 a. Estimated SSO volume that reached surface water, drainage channel, or not
11 recovered from a storm drain;
- 12 b. Estimated SSO amount recovered;
- 13 c. Response and corrective action taken;
- 14 d. If samples were taken, identify which regulatory agencies received sample
15 results (if applicable). If no samples were taken, N/A must be indicated.
- 16 e. Parameters that samples were analyzed for (if applicable);
- 17 f. Identification of whether or not health warnings were posted;
- 18 g. Beaches impacted (if applicable). If no beach was impacted, N/A must be
19 indicated;
- 20 h. Whether or not there is an ongoing investigation;
- 21 i. Steps taken or planned to reduce, eliminate, and prevent recurrence of the
22 overflow and a schedule of major milestones for those steps;
- 23 j. Office of Emergency Services (“OES”) control number (if applicable);
- 24 k. Date OES was called (if applicable);
- 25 l. Time OES was called (if applicable);
- 26 m. Identification of whether or not County Health Officers were called;
- 27 n. Date County Health Officer was called (if applicable); and
- 28 o. Time County Health Officer was called (if applicable).

1 The Annual SSO Summary Reports shall also include a summary of the capital
2 improvements completed in the respective Collection Systems during the calendar year, and the
3 total cost associated with each capital expenditure. In addition, the Annual SSO Summary Reports
4 shall include any changes to the total amount of sewer line that will affect calculation of the
5 allowable SSO Performance Goals in each respective Collection System.

6 **E. SSO REDUCTION ACTION PLAN**

7 35. Within one hundred and twenty (120) days of submitting any Annual SSO
8 Summary Report to Plaintiffs documenting SSOs in excess of the SSO Reduction Performance
9 Goals of this Settlement Agreement, WCWD and/or Richmond shall submit to Plaintiffs an SSO
10 Reduction Action Plan that specifies the actions taken in the prior calendar year pursuant to the
11 Settlement Agreement and additional measures to be taken, which are designed to achieve
12 compliance with the SSO Reduction Performance Goals in future years. The SSO Reduction
13 Action Plan shall include a schedule for implementation of all actions proposed.

14 36. Plaintiffs shall provide WCWD and/or Richmond with all recommended revisions
15 to the SSO Reduction Action Plan within thirty (30) days of receipt of such Plan. WCWD and/or
16 Richmond shall indicate within thirty (30) days of receipt of Plaintiffs' recommended revisions
17 whether WCWD and/or Richmond accepts any such recommendations for revision, and if so,
18 WCWD and/or Richmond shall within thirty (30) days revise the SSO Reduction Action Plan in
19 accordance with Plaintiffs' recommendations. If WCWD and/or Richmond do not accept
20 Plaintiffs' recommendations, any party may seek Formal Dispute Resolution process pursuant to
21 Section XIII. To the extent the Settling Parties do not dispute original provisions or recommended
22 revisions, Richmond or WCWD shall implement all undisputed provisions or revisions. After the
23 Settling Parties have reached agreement on the SSO Reduction Action Plan or after Formal Dispute
24 Resolution resolves any dispute concerning the SSO Reduction Action Plan, WCWD and/or
25 Richmond shall implement the SSO Reduction Action Plan as a requirement of this Settlement
26 Agreement.

27 37. WCWD and/or Richmond shall address in the SSO Reduction Action Plan, as
28 necessary, the following elements, in addition to any other elements identified by WCWD and/or

1 Richmond needed to meet the Spill Reduction Performance Goals:

2 a. the need for a revised sewer line condition assessment program that

3 includes more frequent CCTV inspection and follow-up assessment of sewer lines;

4 b. the need for an optimized sewer line cleaning and de-rooting program that

5 includes both increasing the frequency of regularly scheduled sewer line cleaning and de-rooting

6 and a Hot Spot Cleaning Program, revised as necessary to ensure adequate cleaning and/or de-

7 rooting of sewer lines subject to FOG build-up and root intrusion;

8 c. equipment and staffing needs;

9 d. revisions to WCWD and/or Richmond's Collection System information

10 management system (*e.g.*, the Hansen system) as needed to ensure adequate tracking and

11 scheduling of Collection System performance and related operation and maintenance;

12 e. pump station maintenance, repair, and rehabilitation needs and associated

13 costs, including, but not be limited to, evaluation of the need to acquire spare pumps, spare parts,

14 backup power sources, and expanded capacity for pump stations;

15 f. a sewer line spot repair program that includes identification of sewer lines

16 and manholes needing spot repairs to correct defects such as bad joints, faulty lateral connections,

17 broken pipe, or situations where piping intersections were constructed in such a manner as to

18 prevent the passage of rodding, televising, or other equipment, and any other problem or defect that

19 could interfere with effective performance of the Collection System. The SSO Reduction Action

20 Plan shall specify that WCWD and/or Richmond shall complete such repair or replacement within

21 an expeditious time commensurate with how urgently the repair or replacement is needed;

22 g. modification of the CIP's repair, replacement, or rehabilitation schedule for

23 those sewer lines that cannot be kept free of stoppages by a reasonable program of maintenance, to

24 add new sewer lines or install larger sewer lines as needed to address inadequate capacity of any

25 existing sewer line to handle peak wet weather flows, and to build other capital improvements

26 (such as new or replacement manholes or improved or expanded pump stations) as needed to avoid

27 line breakages or collapse, reduce RDI/I and dry weather infiltration, ensure adequate Collection

28 System flow conveyance capacity, and attain SSO Reduction Performance Goals.

1 h. If additional funding to accomplish the elements above is unnecessary, then
2 WCWD and/or Richmond shall explain in the SSO Reduction Action Plan why it is unnecessary.
3 If additional funding is necessary, WCWD and/or Richmond shall seek such funding and set forth
4 in the SSO Reduction Action Plan any potential funding sources to be used or sought. If WCWD
5 and/or Richmond seek financing, but are unsuccessful, WCWD and/or Richmond will disclose in
6 the SSO Reduction Action Plan the extent of their efforts (*e.g.*, copies of applications, amount
7 sought, from whom, reasons for rejection).

8 **IX. OVERSIGHT COSTS FOR PLAINTIFFS' MONITORING OF**
9 **SETTLEMENT AGREEMENT COMPLIANCE**

10 38. To compensate Plaintiffs for all time spent by legal staff or technical consultants
11 reviewing compliance reports and any other documents, or participating in any meet and confer
12 process under this Settlement Agreement, Defendants shall pay Plaintiffs' counsel the sum of
13 \$100,000 no later than August 1, 2007, provided the Settlement Agreement is not rendered null and
14 void in accordance with Section X. Payment shall be made in the form of a single check (either
15 alone, or in combination with, the second attorneys fees payment pursuant to Section XIV) payable
16 to "Lawyers for Clean Water Attorney Client Trust Account" addressed to 1004 O'Reilly Avenue,
17 San Francisco, CA 94129, sent overnight delivery.

18 **X. COMMITMENTS OF PLAINTIFFS**

19 39. STIPULATED DISMISSAL. Within five (5) days of receiving all of the Settling
20 Parties' signatures to this Settlement Agreement, Plaintiffs shall file the Stipulation to Dismiss
21 Plaintiffs' Claims With Prejudice and this Settlement Agreement with the District Court.

22 40. SUBMISSION OF SETTLEMENT AGREEMENT TO FEDERAL AGENCIES.
23 Plaintiffs shall submit this Agreement to the U.S. EPA and the U.S. Department of Justice ("DOJ")
24 within three (3) days of filing this Settlement Agreement with the District Court for agency review
25 consistent with 40 C.F.R. § 135.5. The agency review period expires forty-five (45) days after
26 receipt by both agencies, as evidenced by the certified return receipts, copies of which shall be
27 provided to the Defendants upon receipt by Plaintiffs. In the event that EPA or DOJ comment
28 negatively on the provisions of this Agreement, the Settling Parties agree to meet and confer to

1 attempt to resolve the issue(s) raised by EPA or DOJ. If the Settling Parties cannot resolve the
2 issue(s), and the District Court chooses not to enter the Order, this Settlement Agreement is null
3 and void.

4 **XI. SUPPLEMENTAL ENVIRONMENTAL PROJECTS AND**
5 **SEWER RATE INCREASE ASSISTANCE PROGRAM**

6 41. The Defendants shall fund and implement the following Supplemental
7 Environmental Projects (Supplemental Projects I-IV), and the Sewer Rate Increase Assistance
8 Program, which the Settling Parties agree are intended to secure significant benefits to the local
9 ratepayers and environment potentially impacted by Collection System SSOs.

10 42. SUPPLEMENTAL ENVIRONMENTAL PROJECT I: Within forty-five (45) days
11 of the Effective Date of this Settlement Agreement, WCWD shall fund a Private Lateral Sewer
12 Replacement Program for residents or businesses residing within the service area of the WCWD
13 Collection System in the amount of \$250,000 per fiscal year for ten (10) years, for a total of
14 \$2,500,000. The Private Lateral Sewer Replacement Program will allow residents and businesses
15 in WCWD's service area to apply for up to \$3,000 towards the replacement or rehabilitation of a
16 private sewer lateral. Any funds remaining at the end of each fiscal year shall roll over into the
17 next fiscal year.

18 43. SUPPLEMENTAL ENVIRONMENTAL PROJECT II: Within one hundred and
19 twenty (120) days of the Effective Date of this Settlement Agreement, Richmond shall fund a
20 Private Lateral Sewer Replacement Program for residents or businesses residing within the service
21 area of the Richmond Collection System in the amount of \$100,000 per fiscal year for ten (10)
22 years, for a total of \$1,000,000. The Private Lateral Sewer Replacement Program will allow
23 residents and businesses in Richmond's service area to apply for up to \$3,000 towards the
24 replacement or rehabilitation of a private sewer lateral. Any funds remaining at the end of each
25 fiscal year shall roll over into the next fiscal year.

26 44. SUPPLEMENTAL ENVIRONMENTAL PROJECT III: Within sixty (60) days of
27 the Effective Date of this Settlement Agreement, Richmond shall pay to the Rose Foundation, a
28 501(c)(3) non-profit California corporation, an initial sum of \$225,000 for the sole purpose of

1 environmentally beneficial activities that will enhance water quality in the San Francisco Bay Area,
2 with first consideration to be given to projects that benefit the watershed or communities within the
3 jurisdictional boundaries of Richmond. On August 1 of years 2007, 2008, 2009, and 2010,
4 Richmond shall pay to the Rose Foundation a sum of \$25,000, for an additional total amount of
5 \$100,000, for the sole purpose of environmentally beneficial activities that will enhance water
6 quality in the San Francisco Bay Area, with first consideration to be given to projects that benefit
7 the watershed or communities within the jurisdictional boundaries of Richmond. All payments to
8 the Rose Foundation shall be sent via overnight mail to: 6008 College Avenue, Oakland, CA
9 94618, Attn: Tim Little. Copies and/or notice of payment shall be sent concurrently to Plaintiffs to
10 the addresses and via the methods set forth in Section XVI, Notices and Submissions. Plaintiffs
11 shall ensure Defendants receive an annual accounting from the Rose Foundation specifying how
12 the Rose Foundation dispersed any of the SEP payment(s). Such accounting shall indicate the
13 recipient organization(s) of the SEP payment(s) and describe the project(s) funded. In any case,
14 Plaintiffs shall not receive any of the SEP payment to use for any purpose.

15 45. SUPPLEMENTAL ENVIRONMENTAL PROJECT IV: Within forty-five (45)
16 days of the Effective Date of this Settlement Agreement, Richmond shall pay to East Brother Light
17 Station, Inc. ("EBLS"), a 501(c)(3) non-profit California corporation, a sum of \$20,000 for the sole
18 purpose of purchasing, installing and operating desalinization equipment for the purpose of
19 removing salinity from seawater prior to use for sinks, lavatories, showers, and water closets at the
20 East Brother Light Station so as to improve the treatment efficiency and longevity of the East
21 Brother Light Station's sand filter, thereby improving water quality in the San Francisco Bay. One
22 hundred percent of the funds provided by Richmond will be used for capital and operation costs.
23 EBLS shall provide a report to Richmond by January 15th of each calendar year for the previous
24 year of the project until the project is complete that details the work performed and an accounting
25 of how funds were spent. EBLS will not use any funds provided by Richmond to institute litigation
26 against Richmond.

27 46. SEWER RATE INCREASE ASSISTANCE PROGRAM: The Settling Parties
28 recognize that for Richmond to reduce its SSOs, comply with the SSO General WDR, and to

1 comply with the Settlement Agreement, Richmond will have to substantially increase its sewer
2 service charges imposed on Richmond residents and businesses over the next several years. The
3 Settling Parties further recognize that many of Richmond's residents have low or limited incomes
4 and that these sewer service charge increases may impose financial hardships on such residents. To
5 offset these hardships, Richmond shall establish a Richmond Low Income Sewer Rate Increase
6 Assistance Program ("Sewer Rate Increase Assistance Program") that shall provide a rebate to
7 qualifying low income residents over the next five (5) years, beginning fiscal year 2007, to assist
8 such residents in paying their increased sewer service bills. A description of the Sewer Rate
9 Increase Assistance Program is attached as Exhibit 5. Richmond shall commit up to \$311,000 for
10 implementation of the Sewer Rate Increase Assistance Program and shall distribute such funds to
11 eligible applicants.

12 47. If any remaining SEP funds exist at the end of the committed time frames above,
13 Richmond and/or WCWD agree to continue funding those programs until such committed funds
14 are depleted.

15 48. REPORTING. During the life of the Settlement Agreement, the Defendants shall
16 submit Annual Supplemental Environmental Project and Sewer Rate Increase Assistance Program
17 Reports to Plaintiffs summarizing implementation of the Supplemental Environmental Projects.
18 Such reports shall be due by March 31st of each calendar year that this Settlement Agreement is in
19 effect.

20 **XII. MUNICIPAL STORM SEWER SYSTEM POLLUTION** 21 **DISCHARGE MINIMIZATION**

22 49. To help protect the San Francisco Bay ecosystem from pollutants that may be
23 present in storm water discharges from Richmond's MS4, Richmond shall take the following
24 actions:

25 a. INTER-JURISDICTIONAL PARTNERING. Within thirty (30) days of the
26 Effective Date of this Settlement Agreement, Richmond shall memorialize in writing Richmond's
27 commitment to continue its voluntary, inter-jurisdictional partnership with the City of El Cerrito to
28 manage storm water flows efficiently and effectively.

1 b. LOW IMPACT DEVELOPMENT PRINCIPLES. The Contra Costa Clean
2 Water Program, of which Richmond is a member, recommends low-impact development (“LID”)
3 principles and methods for new development in the Storm Water C.3. Guidebook. Within sixty
4 (60) days of the Effective Date of Settlement Agreement, Richmond shall provide to Plaintiffs in
5 writing proposed modifications to Richmond’s building code, ordinances, or other municipal legal
6 requirements relating to new development and redevelopment (the “LID Modifications”). The LID
7 Modifications shall require that new development and redevelopment projects implement LID
8 principles and methods as set out in the Storm Water C.3. Guidebook, and where LID is infeasible,
9 implement the best available conventional structural, operational, and treatment Best Management
10 Practices (“BMPs”). LID shall be considered infeasible only when precluded by hydraulic
11 constraints or lack of sufficient physical space anywhere within areas owned or controlled by the
12 City, or where applicable, within areas owned or controlled by project proponents and property
13 owners, including street rights of way, public property, or common areas.

14 c. Within thirty (30) days of receipt of the proposed LID Modifications,
15 Plaintiffs shall either agree to the LID Modifications to Richmond’s legal requirements in writing,
16 or provide written comments suggesting recommended changes. Within one hundred and twenty
17 (120) days of receipt of Plaintiffs’ agreement to the LID Modifications, Richmond shall duly adopt
18 the LID Modifications. If Plaintiffs have suggested changes to the proposed LID Modifications,
19 Richmond shall within thirty (30) days submit to Plaintiffs either a revised proposed LID
20 Modifications adopting Plaintiffs’ recommended changes or a written explanation why Richmond
21 is not adopting Plaintiffs’ recommended changes. Should Richmond and Plaintiffs thereafter be
22 unable to agree as to the content of the LID Modifications, Richmond or Plaintiffs may invoke the
23 Formal Dispute Resolution process pursuant to Section XIII.

24 d. Within one hundred and twenty (120) days of either agreement by
25 Richmond and Plaintiffs on the LID Modifications, or a Formal Dispute Resolution determination
26 resolving the content of the LID Modifications, Richmond shall amend any building codes,
27 ordinances, or other legal documents as necessary, to implement the LID Modifications.

28 e. STORM WATER ENFORCEMENT RESPONSE PLAN. Within ninety

1 (90) days of the Effective Date of this Settlement Agreement, Richmond shall provide to Plaintiffs
2 a draft Storm Water Enforcement Response Plan (“SWERP”) to target compliance by residences
3 and commercial and industrial businesses within Richmond’s MS4 with the MS4 Permit and
4 Richmond’s storm water ordinances and policies. The SWERP shall be modeled after the
5 enforcement and response plan requirements set forth in 40 C.F.R. Part 403 applicable to
6 pretreatment programs. The SWERP shall include: (1) an Inspection Plan which details inspection
7 activities and frequency (emphasizing those sub-basins with high pollutant production potential),
8 (2) directives for enforcement response for various degrees of non-compliance, and (3) an Illicit
9 Discharge Plan that specifies actions to target illicit discharges, including inspection activities and
10 frequency and the enforcement response for illicit discharges discovered by Richmond, including
11 monetary penalties and appropriate compulsory remedial relief.

12 f. Within thirty (30) days of receipt of the proposed SWERP, Plaintiffs shall
13 either agree to the SWERP in writing or provide comments recommending changes. Within sixty
14 (60) days of receipt of Plaintiffs’ agreement to the SWERP, Richmond shall adopt the SWERP. If
15 Plaintiffs have suggested changes to the proposed SWERP, Richmond shall within thirty (30) days
16 submit to Plaintiffs either a revised proposed SWERP adopting Plaintiffs’ recommended changes or
17 a written explanation why Richmond is not adopting Plaintiffs’ recommended changes. Should
18 Richmond and Plaintiffs thereafter be unable to agree as to the content of the SWERP, Richmond
19 or Plaintiffs may invoke the Formal Dispute Resolution process pursuant to Section XIII. Within
20 sixty (60) days of either agreement by Richmond and Plaintiffs on the SWERP, or a Dispute
21 Resolution ruling resolving the contents of the SWERP, Richmond shall adopt the SWERP.

22 g. STORM WATER STUDY. Within ninety (90) days of the Effective Date
23 of this Settlement Agreement, Richmond shall provide to Plaintiffs a scope proposal for a study
24 designed to determine the sub-basins in Richmond’s MS4 with the highest potential pollutant
25 production (“the Scope Study”). The Scope Study shall include Richmond’s formal drainage
26 system (*i.e.*, the piped portions of the MS4) and areas within Richmond’s city limits near San
27 Francisco Bay that flow directly into the Bay and do not enter the formal drainage system (*i.e.*,
28 creeks or unlined channels that convey Richmond storm water). The Scope Study shall also assess

1 the benefits, detriments, costs, and feasibility of installing additional detention ponds, or modifying
2 Richmond's existing detention ponds, to provide infiltration or further water quality treatment.
3 Furthermore, the Scope Study shall assess the benefits, detriments, costs, and feasibility of
4 installing other types of storm water treatment (e.g., sand filters), especially in sub-basins with high
5 pollutant production potential. Once complete, the study will be used by Richmond staff as part of
6 the implementation of the above-described SWERP. The proposed Scope Study shall include a
7 schedule for completing the study within two (2) years of commencement.

8 h. Within thirty (30) days of receipt of the Scope Study, Plaintiffs shall either
9 agree to the proposed Scope Study, or provide comments recommending changes. Within thirty
10 (30) days of receipt of Plaintiffs' agreement to the Scope Study, Richmond shall adopt the Scope
11 Study. If Plaintiffs have suggested changes to the proposed Scope Study, Richmond shall within
12 thirty days submit to Plaintiffs either a revised proposed Scope Study adopting Plaintiffs'
13 recommended changes or a written explanation why Richmond is not adopting Plaintiffs'
14 recommended changes. Should Richmond and Plaintiffs thereafter be unable to agree as to the
15 content of the Scope Study, Richmond or Plaintiffs may invoke the Formal Dispute Resolution
16 process pursuant to Section XIII.

17 i. Within sixty (60) days of either agreement by Richmond and Plaintiffs on
18 the Scope Study or a Formal Dispute Resolution ruling resolving the content of the Scope Study,
19 Richmond shall commence and thereafter timely complete the Scope Study according to the
20 schedule set forth in the Scope Study document.

21 **XIII. BREACH OF AGREEMENT AND DISPUTE** 22 **RESOLUTION PROCEDURES**

23 50. FORCE MAJEURE. The Defendants shall notify Plaintiffs pursuant to the terms
24 of this paragraph, where implementation of the requirements set forth in this Settlement
25 Agreement, within the deadlines set forth in those paragraphs, becomes impossible, despite the
26 timely good-faith efforts of the Defendants, due to circumstances beyond the control of the
27 Defendants or its agents, and which could not have been reasonably foreseen and prevented by the
28 exercise of due diligence by the Defendants. Any delays due to Defendants' failure to make timely

1 and bona fide applications and to exercise diligent efforts to obtain permits, or normal inclement
2 weather shall not, in any event, be considered to be circumstances beyond the Defendants' control.

3 a. If any Defendant claims impossibility, it shall notify Plaintiffs in writing
4 within ten (10) days of the date that the Defendant first knew of the event or circumstance or should
5 have known of the event or circumstance by the exercise of due diligence and shall describe the
6 reason for the non-performance. The Defendant's notice shall specifically refer to this Part of this
7 Settlement Agreement and describe the anticipated length of time the delay may persist, the cause
8 or causes of the delay, the measures taken or to be taken by the Defendant to prevent or minimize
9 the delay, the schedule by which the measures will be implemented, and the anticipated date of
10 compliance. The Defendant shall adopt all reasonable measures to avoid and minimize such
11 delays.

12 b. The Settling Parties shall meet and confer in good-faith concerning the non-
13 performance and, where the Settling Parties concur that the non-performance was or is impossible,
14 despite the timely good faith efforts of the Defendant, due to circumstances beyond the control of
15 the Defendant that could not have been reasonably foreseen and prevented by the exercise of due
16 diligence by the Defendant, new performance deadlines shall be established.

17 c. If Plaintiffs disagree with the Defendant's notice, or in the event that the
18 Settling Parties cannot timely agree on the terms of new performance deadlines or requirements,
19 either party shall have the right to invoke the Formal Dispute Resolution process pursuant to
20 Section XIII. In such proceeding, the Defendant shall bear the burden of proving that any delay of
21 any requirement of this Settlement Agreement was caused or will be caused by force majeure and
22 the extent of any delay attributable to such circumstances.

23 51. ALTERNATIVE DISPUTE RESOLUTION. The dispute-resolution procedure set
24 forth below shall be the exclusive mechanism for resolving disputes between the Settling Parties
25 with regard to any aspect of this Settlement Agreement.

26 52. The Settling Parties agree to engage in informal dispute resolution pursuant to the
27 terms of this paragraph:

28 a. Meet and Confer. If a dispute under this Settlement Agreement arises, or

1 VIII.B. or C., SSO Reports under Section VIII.D., SEP Reports under Section XI, the Scope Study
2 under Section XII, and SSO Reduction Action Plans under Section VIII.E.

3 55. Richmond or WCWD shall pay the following stipulated payments in the event that
4 Richmond or WCWD files a late report covered herein:

- 5 a. For the third report submitted beyond the due date in a five (5) year period,
6 Richmond or WCWD shall pay \$100 per day until the report is filed, up to
7 thirty (30) days for a maximum amount of \$3,000.
- 8 b. For any report more than thirty (30) days late, Richmond or WCWD shall
9 pay \$5,000.
- 10 c. For any report more than ninety (90) days late, Richmond or WCWD shall
11 pay \$10,000.
- 12 d. The above penalties are cumulative, as applicable, to a maximum penalty of
13 \$18,000.

14 56. Plaintiffs will notify Richmond or WCWD if Plaintiffs believe that Richmond or
15 WCWD failed to meet any requirement of its SSO Reduction Action Plan. Richmond or WCWD
16 will have thirty (30) days after receipt of Plaintiffs' written notification to cure any such failure.
17 Defendants will notify Plaintiffs in writing of actions taken to cure. If Richmond or WCWD do not
18 cure the alleged failure within thirty (30) days after Plaintiffs' notice under this paragraph,
19 Richmond or WCWD shall accrue a \$5,000 penalty on the 31st day, and \$15,000 penalty on the 91st
20 day. Either WCWD or Richmond may request a meet and confer or other proceedings set forth in
21 Section XIII herein in relation to any alleged failure to meet any such requirement or the accrual of
22 these penalties.

23 57. In the case of a late report, Richmond or WCWD shall send Plaintiffs the report
24 per Section XVI. Plaintiffs shall notify Richmond or WCWD of receipt of the late report or failure
25 to ultimately meet any requirement of the SSO Reduction Action Plan, and shall include an invoice
26 for the amount of the Stipulated Penalty, if any, due and payable. Richmond or WCWD shall
27 contact Plaintiffs within two (2) business days if Richmond or WCWD disagree with Plaintiffs'
28 stipulated penalty calculation and may meet and confer with Plaintiffs or invoke other proceedings

1 regarding the penalties pursuant to Section XIII. Richmond or WCWD shall pay any stipulated
2 payments due pursuant to this Settlement Agreement within thirty (30) days after receipt of the
3 Plaintiffs' invoice itemizing the stipulated payment liability.

4 58. All payments of Stipulated Penalties described above shall be paid by WCWD or
5 Richmond via overnight mail to: Rose Foundation 6008 College Avenue, Oakland, CA 94618,
6 Attn: Tim Little. Copies and/or notice of payment shall be sent concurrently to Plaintiffs to the
7 addresses and via the methods set forth in Section XVI, Notices and Submissions.

8 **XV. FEES, COSTS AND EXPENSES**

9 59. To help defray Plaintiffs' attorneys, consultant, and expert fees and costs, and any
10 other costs incurred as a result of investigating, bringing this matter to the Defendants' attention,
11 and negotiating a settlement, the Defendants shall pay Plaintiffs' counsel the sum of \$538,000, in
12 two equal payments of \$269,000. The first payment shall be made within ten (10) days of the
13 Effective Date of this Settlement Agreement, provided the Settlement Agreement is not rendered
14 null and void in accordance with Section X. The second payment will be due no later than August
15 1, 2007, provided the Settlement Agreement is not rendered null and void in accordance with
16 Section X. Each payment shall be made in the form of a single check payable to "Lawyers for
17 Clean Water Attorney Client Trust Account" addressed to 1004 O'Reilly Avenue, San Francisco,
18 CA 94129, sent overnight delivery, and shall constitute full payment for all costs of litigation
19 incurred by Plaintiffs that have or could have been claimed in connection with or arising out of
20 Plaintiffs' lawsuit, up to and including the Effective Date.

21 **XVI. NOTICES AND SUBMISSIONS**

22 60. The Defendants agree to provide Plaintiffs with all documents or reports required
23 by this Settlement Agreement. All documents shall be directed to the following individuals at the
24 addresses specified below unless specifically stated otherwise herein. Any change in the
25 individuals designated by any party must be made in writing to all Settling Parties.

26 If to the Plaintiffs:

27 Layne Friedrich or Daniel Cooper
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LAWYERS FOR CLEAN WATER, INC.
1004 O'Reilly Avenue
San Francisco, California 94129
Telephone: (415) 440-6520
cleanwater@sfo.com
layne@lawyersforcleanwater.com

Christopher Sproul
ENVIRONMENTAL ADVOCATES
5135 Anza Street
San Francisco, California 94121
Telephone: (415) 533-3376
cssproul@enviroadvocates.com (Email Only is preferred)

If to the Defendants:

Melissa Thorne or Nicole Granquist
Downey Brand LLP
555 Capitol Mall, 10th Floor
Sacramento, CA 95814
mthorne@downeybrand.com

AND

If the correspondence pertains to Richmond:

Rich Davidson, Public Works Department
1401 Marina Way South
Richmond, CA 94804-3746
Rich_Davidson@ci.richmond.ca.us

Everett Jenkins
City of Richmond
City Attorney's Office
1401 Marina Way South
Richmond, CA 94804-3746
Everett_Jenkins@ci.richmond.ca.us

If the correspondence pertains to WCWD:

E.J. Shalaby
District Manager
West County Wastewater District
2910 Hilltop Drive
Richmond, CA 94806
eshalaby@wccd.org
Alfred Cabral
Pelletreau, Alderson & Cabral

1 3620 Blume Drive, Suite 410
2 Richmond, CA 94806
3 mcabral@pacbell.net

4 If the correspondence pertains to Veolia:

5 James Good
6 Regional Vice President
7 Veolia Water North America
8 2300 Contra Costa Blvd., #350
9 Pleasant Hill, CA 94523
10 james.good@veoliawaterna.com

11 61. The Defendants also agree to make available to Plaintiffs at Plaintiffs' cost any
12 documents reasonably necessary to evaluate system performance and/or compliance with this
13 Settlement Agreement within thirty (30) days of written request by the Plaintiffs.

14 62. During the life of this Settlement Agreement, the Defendants shall preserve at least
15 one legible copy of all records and documents, including computer-stored information, in its
16 possession, which relate to its performance of its obligations under this Settlement Agreement.

17 63. Any notice, report, certification, data presentation or other document submitted by
18 the Defendants to Plaintiffs pursuant to this Settlement Agreement, which discusses, describes,
19 demonstrates, or supports any finding or makes any representation concerning compliance or non-
20 compliance with any requirement(s) of this Settlement Agreement, shall contain the following
21 certification, signed by a responsible official:

22 I certify that this document and all attachments were prepared under my direction or
23 supervision in accordance with a system designed to assure that qualified personnel
24 properly gather and evaluate the information submitted and is, to the best of my
25 knowledge and belief, true, accurate and complete.

26 XVII. MUTUAL RELEASE OF LIABILITY

27 64. Except for violations of this Settlement Agreement, which shall be addressed in
28 accordance with this Settlement Agreement, in consideration of the above, upon the Effective Date
of this Agreement, the Settling Parties hereby fully release each other and their respective
successors, assigns, officers, agents, employees, and all persons, firms and corporations having an

1 interest in them, from any and all alleged violations of the Clean Water Act, 1994 Joint Permit,
2 2001 Joint Permit and Richmond's MS4 Permit claimed in Plaintiffs' Complaint against the
3 Defendants up to and including the Effective Date of this Settlement Agreement. For the period
4 beginning with the Effective Date and ending on the Termination Date of this Settlement
5 Agreement, the parties covenant not to sue for any and all violations of the Clean Water Act, 1994
6 Joint Permit, 2001 Joint Permit, and Richmond's MS4 Permit claimed in the Plaintiffs' Complaint.

7 65. Nothing in this Settlement Agreement limits or otherwise affects Plaintiffs' right to
8 address or take any position Plaintiffs deem necessary or appropriate in any formal or informal
9 proceeding before the Regional Board, EPA, or any other judicial or administrative body on any
10 other matter relating to the Defendants.

11 **XVIII. GENERAL PROVISIONS**

12 66. CONTINUING JURISDICTION. The Court shall retain jurisdiction to enforce the
13 terms and conditions of this Settlement Agreement and to resolve disputes arising hereunder as
14 may be necessary or appropriate for the construction or execution of the Settlement Agreement up
15 to and including the Termination Date.

16 67. CONSTRUCTION. The language in all parts of this Settlement Agreement shall
17 be construed according to its plain and ordinary meaning, except as to those terms defined in the
18 2001 Joint Permit, the 1994 Joint Permit, Richmond's MS4 Permit, the Clean Water Act, or
19 specifically herein.

20 68. CHOICE OF LAW. The laws of the United States shall govern this Settlement
21 Agreement.

22 69. SEVERABILITY. In the event that any provision, paragraph, section, or sentence
23 of this Settlement Agreement is held by a Court to be unenforceable, the validity of the enforceable
24 provisions shall not be adversely affected.

25 70. COUNTERPARTS. This Settlement Agreement may be executed in any number
26 of counterparts, all of which together shall constitute one original document. Telecopy, emailed,
27 and/or facsimile copies of original signature shall be deemed to be originally executed counterparts
28 of this Settlement Agreement.

1 71. MODIFICATION OF THE SETTLEMENT AGREEMENT. This Settlement
2 Agreement, and any provisions herein, may not be changed, waived, discharged, or terminated
3 unless by a written instrument, signed by the Settling Parties.

4 72. FULL SETTLEMENT. This Settlement Agreement constitutes a full and final
5 settlement of this matter.

6 73. INTEGRATION CLAUSE. This is an integrated Settlement Agreement. This
7 Settlement Agreement is intended to be a full and complete statement of the terms of the agreement
8 between the Settling Parties and expressly supersedes any and all prior oral or written agreements
9 covenants, representations, and warranties (express or implied) concerning the subject matter of
10 this Settlement Agreement.

11 74. AUTHORITY. The undersigned representatives for Plaintiffs and the Defendants
12 each certify that he/she is fully authorized by the party whom he/she represents to enter into the
13 terms and conditions of this Settlement Agreement.

14 The Settling Parties hereby enter into this Settlement Agreement.

15 Date: 10-17-06

CITY OF RICHMOND



By: IRMA ANDERSON, MAYOR

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19 Date: 10-18-2006

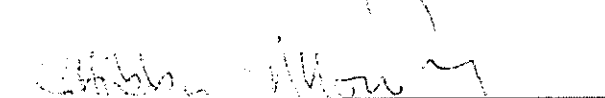
WEST COUNTY WASTEWATER DISTRICT



By: E.J. SHALABY, DISTRICT MANAGER

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23 Date: 11/11/06

VEOLIA WATER NORTH AMERICA OPERATING
SERVICES, LLC

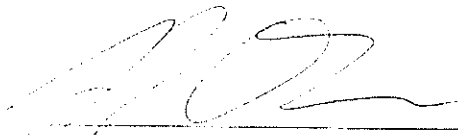

By: CHIBBY ALLOWAY, PRESIDENT, VEOLIA
WATER NORTH AMERICA-WEST, LLC

24
25
26
27
28 Date: 10/13/06

BAYKEEPER

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10/13/06



By: LEO P. O'BRIEN

Date: _____

WEST COUNTY TOXICS COALITION

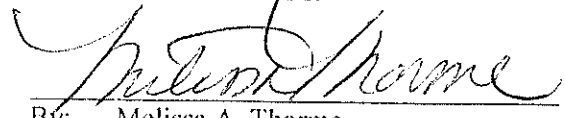
By: HENRY CLARK

APPROVED AS TO FORM:

For THE DEFENDANTS:

Date: 10/17/06

DOWNEY BRAND LLP



By: Melissa A. Thorne

For THE PLAINTIFFS:

Date: _____

LAWYERS FOR CLEAN WATER INC.

By: Layne Friedrich

Date: _____

ENVIRONMENTAL ADVOCATES

By: Christopher Sproul

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By: LEO P. O'BRIEN

WEST COUNTY TOXICS COALITION

Date: October 10, 06

Henry Clark
By: HENRY CLARK

APPROVED AS TO FORM:

For THE DEFENDANTS:

Date: _____

DOWNEY BRAND LLP

By: Melissa A. Thorne

For THE PLAINTIFFS:

Date: _____

LAWYERS FOR CLEAN WATER INC.

By: Layne Friedrich

Date: October 11, 2006

ENVIRONMENTAL ADVOCATES

Christopher Sproul
By: Christopher Sproul

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By: LEO P. O'BRIEN

Date: _____

WEST COUNTY TOXICS COALITION

By: HENRY CLARK

APPROVED AS TO FORM:

For THE DEFENDANTS:

Date: _____


DOWNEY BRAND LLP

By: Melissa A. Thorne

For THE PLAINTIFFS:

Date: 10-11-06

LAWYERS FOR CLEAN WATER INC.


By: Layne Friedrich

Date: _____

ENVIRONMENTAL ADVOCATES

By: Christopher Sproul

Exhibit 1
City of Richmond
Pipeline Condition Grading System

The Pipeline Assessment and Certification Program (“PACP”) used by the City of Richmond (“City”) (developed by NASSCO) provides a mechanism for creating reliable descriptions of pipe conditions. The City has also developed a system based on the PACP codes to assign a condition rating to pipelines. Requirements of the grading system were as follows:

1. The grading system should be direct and objective; and
2. Provide the ability to quantitatively measure the difference in pip condition between one inspection and subsequent inspections, and to prioritize among different pipe segments.

APPROACH

Using the PACP Code Matrix, each PACP defect code is assigned a condition grade of from 1 to 5. Grades are assigned based on potential for further deterioration or pipe failure. Pipe failure is defined as when the pipe can no longer convey the pipe design capacity.

Grades are assigned for two categories: Structural Defect, and Operating and Maintenance (“O&M”) Defects.

Grades are as follows:

5 – Immediate Attention	Defects requiring immediate attention
4 – Poor	Severe defects that will become Grade 5 defects within the foreseeable future
3 – Fair	Moderate defects that will continue to deteriorate
2 – Good	Defects that have not begun to deteriorate
1 – Excellent	Minor defects

The mechanisms and rates of pipeline deterioration are highly dependent on local conditions. However the following general guidelines are provided to estimate the amount of time before the defect causes complete line failure.

- 5 – Pipe has failed or will likely fail within the next five years
- 4 – Pipe will probably fail in 5 to 10 years
- 3 – Pipe may fail in 10 to 20 years
- 2 – Pipe unlikely to fail for at least 20 years

1 – Failure unlikely in the foreseeable future

Grading of Continuous Defects

The PACP continuous defect feature is used to denote where long portions of a sewer pipe are affected by the same defect, without the City having to repetitively enter point defects. However, to develop a grade for the pipe segment, a mechanism is needed to translate a continuous defect into an equivalent number of point defects. The equivalent number (quantity) of “truly” and “repeating” continuous defects is calculated by dividing the length of the continuous defect by 5. Example, a 20-foot long continuous defect, grade 3, should equate to four Grade 3 defects. Fractions are rounded to the nearest whole number.

Pipe Ratings

The pipe rating is based on the number of occurrences for each condition grade. Ratings are calculated separately for **Structural Defects** and **O&M Defects**. Several ways of expressing pipe segment condition are used by the PACP Condition Grading System as follows:

Segment Grade Scores – Each pipe segment will have a Segment Grade Score for each of the five grades. The number of occurrences of each pipe grade is multiplied by the pipe grade to calculate the segment grade score. Example, six Grade 5 defects would be 6 times 5 and equates to a Segment Grade 5 Score of 30. If a pipe segment had no defects of a particular grade, then the Segment Grade Score for that grade would be 0.

Overall Pipe Rating – The five Segment Grade Scores are added together to calculate the Overall Pipe Rating. **Structural Pipe Ratings** are calculated using only Structural Defect grades, while **O&M Pipe Ratings** are calculated using only O&M Defect grades.

PACP Quick Rating – The PACP Quick Rating is a shorthand way of expressing the number of occurrences for the two highest severity grades. The PACP Quick Rating is a four character score as follows:

1. The first character is the highest severity grade occurring along the pipe length.
2. The second character is the total number of occurrences of the highest severity grade. If the total number exceeds 9, then alphabetic characters are used as follows- 10 to 14 – A; 15 to 19 – B; 20 to 24 – C; etc.
3. The third character is the next highest severity grade occurring along the pipe length.
4. The fourth character is the total number of the second highest severity grade occurrences, derived as in item 2 above.

For Example

4B27

This immediately shows 15 to 19 grade 4 defects and seven grade 2 defects were found.

Another Example

3224

Two grade 3 defects and four grade 2 defects were found.

If a pipe segment only has defects of one grade, the first two characters are the grade and the quantity of the defects, and the last two characters are 00 (denoting no other defect grades). A pipe segment with no defects would have a Quick Score of 0000 (all zeros).

The PACP Quick Rating provides the ability to summarize the number and severity of defects found within a pipe segment. As with the Pipe Rating, Quick Structural Ratings are calculated using only Structural Defect Grades, and Quick O&M Ratings are calculated using only O&M Defect Grades.

Pipe Ratings Index – This is an indicator of the distribution of defect severity. The Pipe Ratings Index is calculated by dividing the Pipe Rating by the number of defects. For example, the Structural Pipe Ratings Index would be the Structural Pipe Rating divided by the number of structural defects. Pipe Ratings Indexes are calculated for Structural, O&M, and Overall. A pipe segment with a Pipe Rating of zero (0) would have a Pipe Rating Index of zero (0).

Summary

The following procedures are used to calculate pipe segment ratings using the PACP Condition Grading System:

1. Determine the number of occurrences for each condition grade within the pipe segment. Calculate separately for Structural Defect Grades and O&M Defect Grades.
2. Calculate the Segment Grade Score by multiplying the number of occurrences by the respective grade 1 through 5. Calculate the Structural Segment Grade Score and the O&M Segment Grade Score separately, then add together for the Overall Segment Grade Score.
3. Calculate the Pipe Rating for the pipe segment by adding the Segment Grade Scores. Add all five Structural Segment Grade Scores for the O&M Pipe Rating. Add all five Overall Segment Grade Scores for the Overall Pipe Rating.
4. Determine the PACP Quick Rating by calculating the number of occurrences of the two highest severity grades.
5. Calculate the Pipe Ratings Index by dividing the Pipe Rating by the number of defects. If the pipe has no defects, the Pipe Rating Index is zero.

**PACP Condition Grading System
Code Matrix**

Family	Group	Description	Modifier	Code	Structural Grade	O&M Grade	
Structural	Crack (C)	Circumferential (C)		CC	1		
		Longitudinal (L)		CL	2		
		Multiple (M)		CM	3		
		Spiral (S)		CS	2		
					FC	2	
Structural	Fracture (F)	Circumferential (C)		FL	3		
		Longitudinal (L)		FM	4		
		Multiple (M)		FS	3		
		Spiral (S)				clock pos - 4, >= 3	
						clock pos - 5	
Structural	Pipe Failures (Silent)	Broken (B)		B			
		Broken (B)	Soil Visible (SV)	BSV	5		
		Broken (B)	Void Visible (VV)	BVV	5		
		Hole (H)		H		clock pos - 4, >= 3	
		Hole (H)	Soil Visible (SV)	HSV	5		clock pos - 5
Structural	Collapse (X)	Hole (H)	Void Visible (VV)	HVV	5		
		Pipe (P)		XP	5		
		Brick (B)		XB	5		
		(Pipe) (P)		D		<=10% - 4, >10% - 5	
		Brick (B)	Horizontally (H)	DH	5		
Structural	Deformed (D)	Brick (B)	Vertically (V)	DV	5		
		Offset (displaced) (O)	Med (M)	JOM	1		
			Large (L)	JOL	2		
		Separated (open) (S)	Med (M)	JSM	1		
			Large (L)	JSL	2		
Structural	Joint (J)	Angular (A)	Med (M)	JAM	1		
			Large (L)	JAL	2		
		Surface Damage Chemical (S)	Roughness Increased (RI)	C	SRIC	1	
			Surface Spalling (SS)	C	SSSC	2	
			Aggregate Visible (AV)	C	SAVC	3	
Aggregate Projecting (AP)	C		SAPC	3			
Aggregate Missing (AM)	C		SAMC	4			
Structural	Surface Damage Mechanical (M)	Reinforcement Visible (RV)	C	SRVC	5		
		Reinforcement Corroded (RC)	C	SRCC	5		
		Missing Wall (MW)	C	SMWC	5		
		Other (Z)	C	SZC			
		Roughness Increased (R)	M	SRIM	1		
Structural	Surface Damage Not Evident (Z)	Surface Spalling (SS)	M	SSSM	2		
		Aggregate Visible (AV)	M	SAVM	3		
		Aggregate Projecting (AP)	M	SAPM	3		
		Aggregate Missing (AM)	M	SAMM	4		
		Reinforcement Visible (RV)	M	SRVM	5		
Structural	Surface Damage (Metal Pipes)	Reinforcement Corroded (RC)	M	SRCM	5		
		Missing Wall (MW)	M	SMWM	5		
		Other (Z)	M	SZM		N/A	
		Roughness Increased (RI)	Z	SRIZ	1		
		Surface Spalling (SS)	Z	SSSZ	2		
Structural	Lining Failure (LF)	Aggregate Visible (AV)	Z	SAVZ	3		
		Aggregate Projecting (AP)	Z	SAPZ	3		
		Aggregate Missing (AM)	Z	SAMZ	4		
		Reinforcement Visible (RV)	Z	SRVZ	5		
		Reinforcement Corroded (RC)	Z	SRCZ	5		
Structural	Weld Failure (WF)	Missing Wall (MW)	Z	SMWZ	5		
		Other (Z)	Z	SZZ		N/A	
		Corrosion (CP)		SCP	3		
		Detached (D)		LFD	3		
		Defective End (DE)		LFDE	3		
Structural	Point Repair (RP)	Blistered (B)		LFB	3		
		Service Cut Shifted (CS)		LFCS	3		
		Abandoned Connection (AC)		LFAC			
		Overcut Service (OC)		LFOC	3		
		Undercut Service (UC)		LFUC	3		
Structural	Lining Failure (LF)	Buckled (BK)		LFBK	3		
		Wrinkled (W)		LFW	3		
		Other (Z)		LFZ			
		Circumferential (C)		WFC	2		
		Longitudinal (L)		WFL	2		
Structural	Point Repair (RP)	Multiple (M)		WFM	3		
		Spiral (S)		WFS	2		
		Localized Lining (L)		RPL			
		Localized Lining (L)	Defective (D)	RPLD	4		
		Patch Repair (P)		RPP			

**PACP Condition Grading System
Code Matrix**

Family	Group	Description	Modifier	Code	Structural Grade	O&M Grade
		Patch Repair (P)	Defective (D)	RPPD	4	
		Pipe Replaced (R)		RPR		
		Pipe Replaced (R)	Defective (D)	RPRD	4	
		Other (Z)		RPRZ		
		Other (Z)		RPRZD		
Structural	Brickwork (Silent)	Displaced (DB)		DB	3	
		Missing (MB)		MB	4	
		Dropped Invert (DI)		DI	5	
		Missing Mortar	Slight	MMS	2	
			Medium	MMM	3	
			Large	MML	3	
O&M	Deposits Attached (DA)	Encrustation (E)		DAE		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Grease (G)		DAGS		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Ragging (R)		DAR		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Other (Z)		DAZ		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
	Deposits Settled (DS)	Hard/Compacted (C)		DSC		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Fine (F)		DSF		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Gravel (G)		DSGV		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Other (Z)		DSZ		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
	Deposits Ingress (DN)	Fines silt/sand (F)		DNF		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Gravel (GV)		DNGV		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Other (Z)		DNZ		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
O&M	Roots (R)	Fine (F)	Barrel (B)	RFB		2
			Lateral (L)	RFL		1
			Connection (C)	RFC		1
	Roots (R) at a Joint		N/A	RF		1
		Tap (T)	Barrel (B)	RTB		3
			Lateral (L)	RTL		2
			Connection (C)	RTC		2
	Roots (R) at a Joint		N/A	RT		2
		Medium (M)	Barrel (B)	RMB		4
			Lateral (L)	RML		3
			Connection (C)	RMC		3
	Roots (R) at a Joint		N/A	RM		3
		Ball (B)	Barrel (B)	RBB		5
			Lateral (L)	RBL		4
			Connection (C)	RBC		4
	Roots (R) at a Joint		N/A	RB		4
O&M	Infiltration (I)	Weeper (W)		IW		2
		Dipper (D)		ID		3
		Runner (R)		IR		4
		Gusher (G)		IG		5
O&M	Obstacles/Obstructions (OB)	Brick or Masonry (B)		OBB		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Pipe Material in Invert (M)		OBM		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Object Protruding Thru Wall (I)		OBI		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Object Wedged in Joint (J)		OBJ		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Object Thru Connection (C)		OBC		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		External Pipe or Cable in Sewer (P)		OBP		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Built Into Structure (S)		OBS		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Construction Debris (N)		OBN		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5

PACP Condition Grading System
Code Matrix

Family	Group	Description	Modifier	Code	Structural Grade	O&M Grade
		Rocks (R)		OBR		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Other Objects (Z)		OBZ		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
O&M	Vermin (V)	Rat (R)		VR		2
		Cockroach (C)		VC		1
		Other (Z)		VZ		1
Construction Features	Tap (T)	Factory Made (F)		TF		
			Capped (C)	TFC		
			Defective (D)	TFD		2
			Intruding (I)	TFI		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
			Active (A)	TFA		
		Break-In/Hammer (B)		TB		
			Capped (C)	TBC		2
			Defective (D)	TBD		3
			Intruding (I)	TBI		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
			Active (A)	TBA		
		Saddle (S)		TS		
			Capped (C)	TSC		
			Defective (D)	TSD		2
			Intruding (I)	TSI		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
			Active (A)	TSA		
Construction Features	Intruding Seal Material (IS)			IS		
		Sealing Ring (SR)		ISSR		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
			Hanging	ISSRH		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
			Broken	ISSRB		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Grout (GT)		ISGT		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
		Other (Z)		ISZ		<=10% - 2, <=20% - 3, <=30% - 4, >30% - 5
Construction Features	Line (L)	Left (L)		LL		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Left/Up (LU)		LLU		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Left/Down (LD)		LLD		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Right (R)		LR		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Right/Up (RU)		LRU		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Right/Down (RD)		LRD		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Up (U)		LU		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
		Down (D)		LD		<=10 Deg - 1, <=20 Deg 2, >20 Deg - 4
Construction	Access Points (A)	Cleanout (CO)		ACO		
			Mainline (M)	ACOM		
			Property (P)	ACOP		
			House (H)	ACOH		
		Discharge Point (DP)		ADP		
		Junction Box (JB)		AJB		
		Meter (M)		AM		
		Manhole (MH)		AMH		
		Other Special Chamber (OC)		AOC		
		Tee Connection (TC)		ATC		
		WW Access Device (WA)		AWA		
		Wet Well (WW)		AWW		
Other	Miscellaneous (M)	Camera Underwater (CU)		MCU		4
		Dimension/Diam/Shape Change (SC)		MSC		
		General Observation (GO)		MGO		

**PACP Condition Grading System
Code Matrix**

Family	Group	Description	Modifier	Code	Structural Grade	O&M Grade
		General Photograph (GP)		MGP		
		Material Change (MC)		MMC		
		Lining Change (LC)		MLC		
		Joint Length Change (JL)		MJL		
		Survey Abandoned (SA)		MSA		
		Water Level (WL)		MWL		
		Water Level (WL)	(S)	MWLS		<=30% - 2, <=50% - 3, >50% - 4
		Water Mark (WM)		MWM		>=50% 4, >=75% 5
		Dye Test (Y)		MY		
			Visible (V)	MYV		5
			Not Visible (N)	MYN		3

Exhibit 2
VWNA/City of Richmond Hot Spot Program (Collection System, Sanitary Sewer)

Preface

This document outlines the identification of, and management of the VWNA sanitary sewer "Hot Spot" program for the City of Richmond's sanitary sewer collection system.

"Hot Spots" are defined as a specific line segment, or section of sanitary sewer line that requires more frequent maintenance due to its O&M rating (amount of, severity and frequency of build up, of grease, roots, settled deposits or other materials that interferes with the normal operation of that line). By establishing a tailored, more aggressive cleaning frequency for these trouble spots, and monitoring the ongoing condition of these lines, you can prevent overflows and unwanted interruption in adequate service.

Identification of and Management of Hot Spots

Hot Spots are identified through 3 primary mechanisms:

1. An SSO or back-up.
2. Through observations and grading using the PACP template during CCTV inspection.
3. Field observation during regular scheduled maintenance.

After a line segment has been identified for more frequent cleaning and inspection (Hot Spot Program) it will be evaluated using both the PACP grading system, intimate knowledge of the system from Field Operators, and a risk assessment to assign a cleaning frequency.

There are 4 main levels, dependant on the O&M severity of the line segment:

1. Bi-monthly
2. Monthly
3. Every 3 Months
4. Every 6 Months

When a line segment is determined to be put on the Hot Spot list, for more frequent cleaning and observation, it will remain on that list until its condition has been observed satisfactory (Not in need of more frequent cleaning) during no less than 3 consecutive inspections while on the Hot Spot Program.

HOT SPOT LINE HISTORY MATRIX

PROJECT: Richmond Collections
 LOCATION: Richmond, California

Notes: This Assessment Matrix is intended to identify the severity (O&M) and frequency of cleaning of a high maintenance risk line segment.

Legend: *Observations*
 R ROOTS
 G GREASE
 S SETTLED SOLIDS

Legend: *Severity*
 L LIGHT
 M MEDIUM
 H HEAVY

FL	Flow lite	FL	FN	ROOTS	L	M	H	GREASE	L	M	H	SETTLED SOLIDS	L	M	H	CCTV	SUBCONTRACTORS
FN	Flow normal																

Date last cleaned	Schedule	Location Description	Recommended cleaning cycle change	FL	FN	ROOTS	L	M	H	GREASE	L	M	H	SETTLED SOLIDS	L	M	H	CCTV	SUBCONTRACTORS
		San Pablo and Macdonald																	
		35th and Wall																	
		Western and Lobos, North on Lobos																	
		Western and Marine, south on western																	
8/5/2006	Monthly	Potrero, 20th to 15th																	
		800 block Amador																	
		23rd and Clinton, east on Clinton																	
		Maricopa, 23rd to 29th																	
		Rheem, 23rd to 29th																	
		Lowell, 23rd to 29th																	
		Maine and 20th																	
		Humphrey, 23rd to 29th																	
		Andrade, 23rd to 29th																	
		Visalia, 13th to 15th																	
		23rd, Grant to Lowell																	
		Liberty Village																	
8/14/2006	3month	McBryde and San Pablo, east on McBryde to Humbolt																	
8/14/2006	3month	Potrero, 40th to 45th																	
8/14/2006	3month	737 Yuba																	
8/14/2006	3month	Burbeck 16th to 20th																	
8/16/2006	3month	Grant 23rd to 16th																	
8/16/2006	Monthly	Chanslor, 15th to 20th																	
8/16/2006	Monthly	Bissell, 15th to 20th																	
8/16/2006	3month	Washington and Tewksbury, west on Washington																	
8/16/2006	3month	Creely, 55th to Eils																	
8/17/2006	3month	Fallon, 55th to Eils																	
8/17/2006	3month	Flemming, 55th to Campell																	
8/17/2006	3month	800 block Kern																	
8/17/2006	3month	Pennsylvania, from 20th west to Harbour																	
		37th and Cutting																	
8/17/2006	3month	Maine, between Marina way and 12th, under cmplx																	
8/17/2006	3month	Harbour wy, between Cutting and Florida																	

Hot Spot Parameters

Line Segments that receive a total (quick) O&M score of 4 or higher on the PACP ranking, or a high O&M segment score during CCTV inspections are placed on the hot spot list. They remain on the list until the scores drop to below those limits.

Line Segments that are observed to have a high amount of Grease, Roots, or debris are put on the list and re-visited monthly to adjust cleaning frequency. Lines that are observed to have medium amounts of roots, grease, debris 3 times consecutively (3 normal cleaning cycle visits) will be put on the list until the observed amounts decrease (3 consecutive visits).

WEST COUNTY WASTEWATER DISTRICT (WCWD)
PIPELINES REPAIR / REPLACEMENT PROGRAM

DEFECT RATING (500 TO ZERO)

<u>DEFECT RATING</u>	<u>DESCRIPTION</u>
500 TO 300	REPLACE / REPAIR WITHIN 6 MONTHS
300 TO 100	REPLACE / REPAIR IN 6-18 MONTHS
100 TO 40	SCHEDULE FOR REPLACEMENT / REPAIR IN 5 YEAR PLAN
40 TO 0	VIDEO INSPECT EVERY 10 YEARS

CURRENT PIPE RATINGS

<u>DEFECT RATING</u>	<u>DESCRIPTION</u>
500 TO 100	7,500 FEET - REPLACED AND NO PIPES REMAIN WITH THIS RATING
99 TO 61	4,050 FEET - REPLACED AND 9,500 FEET UNDER DESIGN FOR REPLACEMENT IN FY2006-07
60 TO 32	3,270 FEET - REPLACED AND 25,700 FEET - SCHEDULED FOR REPLACEMENT IN 5 YEAR PLAN.
31 TO 0	4,500 FEET - REPLACED AND 1,193,700 FEET - VIDEO INSPECT EVERY 10 YEAR.

ENCLOSURES:

- 1 MAINLINE TV INSPECTION CODE
- 2 MAINLINE TV INSPECTION CODE FORMULA
- 3 FIVE YEAR CAPITAL PROJECT PLAN
- 4 HANSON PIPELINE RATING OF ALL PIPELINES

NOTE: WCWD ALSO BUDGETED \$300,000 PER YEAR FOR EMERGENCY REPLACEMENT / REPAIR

Mainline TV Inspection Codes

L	Lateral	1	A	Tap Protruding 0" - 1"	
		1	B	Tap Protruding 1" - 2"	
		2	C	Tap Protruding 2" - 3"	
		3	D	Tap Protruding 3" +	
		7	E	Defect - Service Connection	
		1	F	Dead/Unused Service Connection	
		0	T	Tee Connection	
		0	Y	Wye Connection	

R	Roots	1	A	Roots - Light	
		3	B	Roots - Medium	
		6	C	Roots - Heavy	
		1	D	Lateral - Light	
		5	E	Lateral - Heavy	

D	Debris	0	A	Debris - Light	
		0	B	Debris - Medium	
		0	C	Debris - Heavy	
		0	D	Grease - Light	
		0	E	Grease - Medium	
		0	F	Grease - Heavy	

RC	Radial	2	A	Under 1/2" Wide, Under 1' long	
	Crack	3	B	Under 1/2" Wide, 1' - 2' long	
		4	C	Under 1/2" Wide, Over 2' long	
		5	D	Over 1/2" Wide, Under 1' Long	
		6	E	Over 1/2" Wide, 1' to 2' Long	
		7	F	Over 1/2" Wide, Over 2' Long	Give Beginning and End Footage
		8	G	Hole in Pipe - Small	
		9	H	Pipe Missing - Under 60 Degrees	Give Beginning and End Footage
		9	I	Pipe Missing - Over 60 Degrees	Give Beginning and End Footage

LC	Longitudinal	2	A	Under 1/2" Wide, Under 1' long	
	Crack	3	B	Under 1/2" Wide, 1' - 2' long	
		4	C	Under 1/2" Wide, Over 2' long	
		5	D	Over 1/2" Wide, Under 1' Long	
		6	E	Over 1/2" Wide, 1' to 2' Long	
		7	F	Over 1/2" Wide, Over 2' Long	Give Beginning and End Footage
		8	G	Hole in Pipe - Small	
		9	H	Pipe Missing - Under 60 Degrees	Give Beginning and End Footage
		9	I	Pipe Missing - Over 60 Degrees	Give Beginning and End Footage

A	Alignment	1	A	1/4 Pipe Water	Give Beginning and End Footage
		1	B	1/2 Pipe Water	Give Beginning and End Footage
		0	C	Camera Underwater	Give Beginning and End Footage
		0	E	End 1/4 Pipe Water	
		0	F	End 1/2 Pipe Water	
		0	G	End Camera Under Water	

MJ

Misaligned Joint	1	A	Drop Joint Over 90% Clear	
	2	B	Drop Joint 80% - 90% Clear	
	3	C	Drop Joint Under 80% Clear	
	1	D	Shifted Joint Over 90% Clear	
	2	E	Shifted Joint 80% - 90% Clear	
	3	F	Shifted Joint Under 80% Clear	
	3	G	Separated Joints 2" - 3"	
	3	H	Separated Joints 3" - 4"	
	4	I	Separated Joints Over 4"	
	2	J	Broken Joint - Minor	
	3	K	Broken Joint - Moderate	
	5	L	Broken Joint - Severe	
	0	M	Typical Joint	
	2	N	Visible Gasket	
	4	O	Leaking At Joint	

BJ

Broken Joint	1	A	Drop Joint Over 90% Clear	
	2	B	Drop Joint 80% - 90% Clear	
	3	C	Drop Joint Under 80% Clear	
	1	D	Shifted Joint Over 90% Clear	
	2	E	Shifted Joint 80% - 90% Clear	
	3	F	Shifted Joint Under 80% Clear	
	3	G	Separated Joints 2" - 3"	
	3	H	Separated Joints 3" - 4"	
	4	I	Separated Joints Over 4"	
	2	J	Broken Joint - Minor	
	3	K	Broken Joint - Moderate	
	5	L	Broken Joint - Severe	
	0	M	Typical Joint	
	2	N	Visible Gasket	
	4	O	Leaking At Joint	

CS

Structural Collapsed	9	A	Pipe Deterioration - Light	
	9	B	Pipe Deterioration - Medium	
	9	C	Pipe Deterioration - Heavy	
	9	D	Oval Under 5%	
	9	E	Oval Over 5%, Under 10%	
	9	F	Oval Over 10%	
	9	G	Collapsed	Give Beginning and End Footage
	9	L	Light overall Pipe Deterioration	
	9	M	Medium overall Pipe Deterioration	
9	H	Heavy overall Pipe Deterioration		

DS

Structural Deterioration	1	A	Pipe Deterioration - Light	Give Beginning and End Footage
	2	B	Pipe Deterioration - Medium	Give Beginning and End Footage
	3	C	Pipe Deterioration - Heavy	Give Beginning and End Footage
	1	D	Oval Under 5%	
	2	E	Oval Over 5%, Under 10%	
	3	F	Oval Over 10%	
	9	G	Collapsed	
	2	L	Light overall Pipe Deterioration	
	3	M	Medium overall Pipe Deterioration	
5	H	Heavy overall Pipe Deterioration		

I	Inflow /	1	A	Light (0-1 GPM)	
	Infiltration	2	B	Medium (1-5 GPM)	
		3	C	Heavy (Over 5 GPM)	
		1	D	Some Evidence	
		2	E	Considerable Evidence	
		3	F	Great Evidence	
		0	G	No Evidence	

OS	Structural	1	A	Pipe Deterioration - Light	
	Ovality	2	B	Pipe Deterioration - Medium	
		3	C	Pipe Deterioration - Heavy	
		1	D	Oval Under 5%	Give Beginning and End Footage
		2	E	Oval Over 5%, Under 10%	Give Beginning and End Footage
		3	F	Oval Over 10%	Give Beginning and End Footage
		9	G	Collapsed	
		2	L	Light overall Pipe Deterioration	
		3	M	Medium overall Pipe Deterioration	
		5	H	Heavy overall Pipe Deterioration	

STRUCTURAL

$$\frac{300[\text{Sum (RCs) + Sum(LCs) + Sum(MJs) + Sum (Sum (BJs) + Sum (Ls) + 2Sum (OSs) + 4Sum + 4Sum (CSs)]}{\text{(main length)}} + 4\text{Sum (DSs)}$$

ROOT

$$\text{Root Rating} = \frac{300 \text{ Sum (Rs)}}{\text{main line length}}$$

OVERALL

$$\frac{A \text{ (Structural Rating)} + B \text{ (IT Rating)} + C \text{ (Root Rating)}}{(A + B + C)}$$

West County Wastewater District Collection System Hot Spot Management Program

Introduction

This policy memorializes the District's Collection System Hot Spot Management Program.

On average, the District has historically treated approximately 40 miles of "Hot Spot" sewer lines in the collection system annually. Last year, the District had 33.8 miles of pipe cleaned every 6 months, 6.8 miles of pipe cleaned every 3 months, and 276 ft of pipe cleaned every month. Total pipeline in collection system is approximately 240 miles.

Definition

A "Hot Spot" is a location in the collection system where an irregular situation has been identified that may subject that area of pipe to more spills, or require a higher level of maintenance than routine maintenance, or both. Hot Spots are pipelines cleaned on a frequency of at least every six months.

Procedure

Hot Spots are identified through the District's general ranking criteria along with information obtained using the Hanson system. A pipe placed on the Hot Spot list will get additional maintenance attention and more frequent cleaning.

When a Hot Spot location is identified, the collections crew will clean at the designated frequency (e.g., every month, every three months, or every six months) and observe the results at the downstream manhole. The crew will document the cleaning and the results on a specific Work Order and classify the observation as light, medium, or heavy as to the amount of cleaned roots, debris, grease, or other materials.

A number of factors are considered when determining the predictive maintenance schedule for pipelines. The following factors are included in the general order of importance, but any one of the items, if severe enough, could override the others on the decision to increase the cleaning frequency:

Pipe size and slope.

A ten-inch diameter pipe with 1% slope would be cleaned at least once every 4 years.

A six-inch diameter pipe with slope less than 0.5 ft of rise in 100 foot in length (0.5% slope) would be cleaned at least once per year.

Pipelines with no slope/siphons under creeks regardless of pipe size would be scheduled for cleaning at least every 6 months.

Findings from previous pipeline cleanings.

If heavy grease (3 out of a scale of 0 to 3) is flushed out when cleaned, the cause of the grease will try to be determined, particularly if commercial facilities are nearby, and/or the cleaning frequency will be shortened to remove grease before it becomes severe.

If pieces of pipe are found in the flow during cleaning, a video inspection will be scheduled and a repair will then be scheduled to repair any significant defects found in pipe.

Findings from video inspections of pipelines.

If a heavy amount of roots are found in a six-inch diameter pipeline, a 3-month cleaning schedule would be warranted until repairs/replacement of the pipeline could be constructed.

Number and types of customers flowing in the pipeline.

If a six-inch diameter line has nursing homes or large restaurants connected, a cleaning schedule of every 6 months or more frequent may be warranted.

Hot spot cleaning frequency will be adjusted to need over time as follows:

- A. Repeated observations of "light" cleaning debris equal to the intervening period will lengthen the cleaning frequency.

Example: A quarterly hot spot cleaned every three months, which exhibits two "light" cleanings, will be moved to semi-annual.

- B. Repeated observations of "medium" cleaning debris will be an indication that the interval is correctly established.
- C. Two repeated observations of "heavy" cleaning debris will cause the cleaning frequency to be shortened to the next higher cleaning frequency.
- D. Any spill attributed to any pipeline segment, whether designated as a Hot Spot or not, will shorten the cleaning frequency one level and/or be followed by video inspection and evaluation of the Sewer Condition Grade (for repair, pretreatment follow-up, or increased cleaning frequency), unless the spill was caused by vandalism or other reason not affected by the cleaning frequency.

Identification for Increasing Cleaning Schedules for Other Pipelines

In addition to those pipes cleaned twice or more per year, pipe segment cleaning schedules will be adjusted by two main processes:

- A. The routine cleaning and CCTV of the Collection System indicates a need for more frequent cleaning, and
- B. A spill for which the cause is identified as one that could be minimized by more frequent cleaning. (However, if vandalism results in a spill, more frequent cleaning may not lower the potential for an overflow.)

Removal from Hot Spot Program

Once a pipeline has been repaired, replaced or rehabilitated, the sewer segment will be removed from the Hot Spot Program and be placed back on the general, regular cleaning schedule unless one of the Hot Spot indication factors becomes present again.

EXHIBIT 5

SUBJECT: Sewer Rate Increase Assistance Program – Richmond
Municipal Sewer District 1

Eligibility Terms for Sewer Rate Rebate:

Eligible households will include:

- Only owner occupied, Single Residential Units
- Very low income home owners as defined by the U.S. Department of Housing and Urban Development (HUD), for the San Francisco Oakland Metropolitan Statistical Area (which includes the City of Richmond.) *See Table Below:*

	1 Person	2 Person	3 Person	4 Person	5 Person	6 Person	7 Person	8 Person
Income Limit	\$29,350	\$33,500	\$37,700	\$41,900	\$45,250	\$48,600	\$51,950	\$55,300

-Claimants must provide (1) a copy of their Income Tax Return for the subject year as proof of income; and (2) a copy of their Property Tax Bill which shows the line item sewer fee.

Funding and Financial Impact to Richmond:

Sewer rates and revenue generated thereby are governed by the State of California's Constitution, which provides that fees assessed be fair and equitable. Pursuant to guidelines and caselaw pertaining to the use of revenue generated by sewer rates, the Sewer Rate Increase Assistance Program cannot be funded with revenue from sewer rates. The Program must be General Fund supported.

- Of the 14,000 single residential units in the District, it is estimated that there are 1,554 households that are eligible for the rebate.
- The rebate is \$30 per household for the first year of the five year program, which is the entire amount of the fee increase.
- This rebate will increase at approximately 8% per year and max out at year five. The financial impact to Richmond is set forth in the table below.

FY 2007	FY2008	FY2009	FY2010	FY2011	Total
\$46,620	\$50,350	\$54,378	\$58,728	\$63,426	\$273,500

Implementation:

The program will be administered by Richmond's Finance Department.

- Notices will be sent to all Single Residential Unit rate payers in the District specifying the program eligibility requirements, guidelines, and deadlines.
- The administrative cost to implement the program is approximately \$7,500 per year (for a total of \$37,500.00). This includes personnel costs, office supplies and sundry items.