

US EPA ARCHIVE DOCUMENT

1 City of Berkeley shall take one of the following actions with respect to the corresponding lower
2 lateral:

3 a) In areas where the sewer main and lower laterals have been
4 replaced since 1986 pursuant to the Sewer System Evaluation Study completed in 1985 by CDM
5 Jordan/Montgomery which was prepared in response to Order No. 86-17 issued by the California
6 Regional Water Quality Control Board, San Francisco Bay Region, and implementing plans
7 adopted by the City of Berkeley, no action need be taken solely as a result of the triggering
8 event.

9 b) In all other areas of the City of Berkeley, the City of
10 Berkeley shall include the corresponding lower lateral in the routine inspection program required
11 by subparagraph 40.B.1, and shall inspect the corresponding lower lateral within 30 days of
12 notice of the triggering event. The results of such inspections shall be used in planning and
13 scheduling as set forth in subparagraph 41.E.3.

14 42. Sub-Basin Flow Monitoring/I&I Assessment Plan

15 A. The City of Berkeley shall cooperate with EBMUD in the development of
16 the Regional Flow Monitoring/Data Assessment Program described in Section V.A. of the
17 EBMUD SO, and the Flow Modeling and Limits Report described in Section V.B. of the
18 EBMUD SO.

19 B. On **July 15, 2010**, the City submitted, and EPA has reviewed and
20 approved, a Sub-Basin Flow Monitoring/I&I Assessment Plan. The City shall take the actions
21 required by the Plan, in accordance with the schedules and requirements of the Plan as approved.

22 C. By December 1, 2012, the City of Berkeley shall submit a report to EPA
23 for review and approval pursuant to Section XIV on the activities performed under the Sub-Basin
24 Flow Monitoring/I&I Assessment Plan to provide the following:

25 1. Classification of Sub-Basins as high, medium, or low priority with
26 regard to the relative quantities of significant infiltration to the Collection System;

27 2. Classification of Sub-Basins as high, medium, or low priority with
28 regard to the relative quantities of significant inflow to the Collection System;

1 3. Identification of any bottlenecks in the Collection System which
2 lack sufficient capacity to convey sewage flows through the Collection System and to the
3 EBMUD interceptor during wet weather; and

4 4. A plan for using these results to identify and target high priority
5 areas for repair and rehabilitation work.

6 43. Inflow Identification and Reduction

7 A. On **July 15, 2010**, the City of Berkeley submitted, and EPA has reviewed
8 and approved, an Inflow Identification and Reduction Plan that describes how the City will
9 implement a program to identify and reduce sources of direct storm water inflow, including roof
10 leaders and drains directly connected to the Collection System, leaking manhole covers, and
11 cross connections with storm drains. The City shall take the actions required by the Plan, in
12 accordance with the schedules and requirements of the Plan as approved.

13 B. Beginning in 2012, as part of the Annual Report provided for in Section
14 XIII, the City of Berkeley shall submit the following information as it becomes available on
15 implementation of the Inflow Identification and Reduction Program:

16 1. Locations and results of inflow testing done the previous year
17 including the total number of illicit connections discovered;

18 2. Description of follow-up actions that were conducted including the
19 number of illicit connections which were disconnected;

20 3. Description of enforcement actions taken against any property
21 owner which did not comply with disconnection requirements;

22 4. Description of methods used to seal manhole covers in Collection
23 System areas prone to flooding, and list of locations at which this work was done; and

24 5. A schedule for locations to be tested in the next year.

25 44. Sewer Cleaning And Inspection Program

26 A. On **July 1, 2010**, the City of Berkeley submitted, and EPA has reviewed
27 and approved, a Sewer System Cleaning and Inspection Program Plan to ensure regular
28 inspection and cleaning of sewer pipes. The City shall take the actions required by the Plan, in

1 accordance with the schedules and requirements of the Plan as approved. This Plan may be
2 submitted in lieu of the Routine Inspection and Collection System Maintenance Protocols
3 required by subparagraphs 40.B.1 and 40.B.2 upon a determination by EPA that the Plan meets
4 or exceeds the criteria specified in subparagraphs 40.B.1 and 40.B.2.

5 B. Beginning in 2011, as part of the Annual Report provided for in Section
6 XIII, the City of Berkeley shall provide information to EPA documenting activities conducted
7 under its Sewer Cleaning and Inspection Program during the previous annual cycle, including
8 miles of pipe cleaned and/or inspected as part of the routine and hot spot cleaning programs, and
9 miles of pipe treated by each method used for controlling roots. The City shall include a
10 description of the success of the Sewer Cleaning and Inspection Program at preventing blockages
11 and SSOs as well as any changes to be made to the Program to further reduce SSOs. If EPA
12 approves the Sewer Cleaning and Inspection Program in lieu of the Routine Inspection and
13 Collection System Maintenance Protocols required by subparagraphs 40.B.1 and 40.B.2, the
14 reporting required by this subparagraph may be incorporated into the section of the Annual
15 Report pertaining to implementation of the Asset Management Plan provided for in subparagraph
16 40.C.

17 45. Computerized Maintenance Management System (MMS) On **October 15, 2010**,
18 the City of Berkeley certified to EPA that the City's MMS has been linked to a Geographic
19 Information System (GIS) map of the Collection System, which is linked to an inventory of
20 sewer Collection System assets that includes the available information on asset age, material,
21 dimensions, and capacities, and locations of SSOs, along with information on inspection history,
22 condition ratings and sewers repaired, rehabilitated, or replaced.

23 46. Sewer Repair, Rehabilitation and Replacement Beginning in 2011, as part of the
24 Annual Report provided for in Section XIII, the City of Berkeley shall submit information to
25 EPA documenting sewer repair, rehabilitation, or replacement activities completed in the
26 previous year; describing projects to be completed in the next year; and discussing the reductions
27 in flows and/or SSOs that have been achieved. Beginning in 2013, this information may be
28

1 incorporated into the section of the Annual Report pertaining to implementation of the Asset
2 Management Plan provided for in subparagraph 40.C .

3 47. Annual Overflow Reports. Beginning in 2010, as part of the Annual Report
4 provided for in Section XIII, the City of Berkeley shall submit a copy to EPA of the Annual
5 Report of Sanitary Sewer Overflows (“Annual Overflow Report”) required by the Regional
6 Water Board. To the extent that the information is not included in the Annual Overflow Report,
7 the City shall provide a listing of the number and location(s) of repeat SSOs a list of any SSOs in
8 areas in which the sewer pipes have been rehabilitated, and a description of measures that will be
9 taken to help prevent these SSOs in the future.

10 IX. WORK – CITY OF EMERYVILLE

11 48. Maintain Current Program. The City of Emeryville shall implement the programs
12 for controlling SSOs and reducing I&I set forth in its SSMP.

13 49. Implement Improvements. The City of Emeryville shall implement
14 improvements to its current programs needed to meet the requirements set out below in this
15 Section. To the extent that an existing program satisfies the requirements of this Section, the
16 City of Emeryville may submit a description of its program for review and approval by EPA
17 pursuant to Section XIV.

18 50. Asset Management Program

19 A. The City of Emeryville shall participate and cooperate with EBMUD in
20 the development of the EBMUD Template in accordance with the provisions of Section V.D.,
21 Paragraph 39 of the EBMUD SO. The City of Emeryville and Baykeeper reserve the right to
22 comment on the EBMUD Template, and/or to submit an Alternative Template to EBMUD, EPA
23 and the Regional Water Board, before the end of the ninety-day comment period set forth in the
24 EBMUD SO. Upon completion of the EBMUD Template, following review of it and any other
25 Alternative Template(s), EPA may provide comments for use as guidance by the City as the
26 basis for the Asset Management Implementation Plan (“AMIP”).

27 B. By July 15, 2012, the City shall submit to EPA for review and approval
28 pursuant to Section XIV an AMIP that uses the EPA comments provided pursuant to

1 subparagraph A above. The City may tailor the EPA comments, and may omit portions of the
2 EPA comments that do not apply to the City. The AMIP shall be updated as necessary to
3 incorporate any revisions to the initial inspection and maintenance schedules, and to ensure that
4 repair, renovation and replacement projects continue to be adequately identified and planned
5 beyond the initial time frames specified in subparagraph 49.B.3. At a minimum, the AMIP shall
6 include a description of the City of Emeryville's programs for:

7 1. **Routine inspection of the Collection System** according to a
8 specified schedule, and that includes the following:

9 a) Inspection methods to be used, including direct visual
10 inspection and CCTV inspection, and whether CCTV equipment is owned, purchased, leased, or
11 a combination;

12 b) An inspection schedule, and protocol for determining the
13 regular time interval on which repeat inspections will be performed; and

14 c) A system for timely evaluation of inspection findings and
15 documentation of the assessed condition.

16 2. **Collection system maintenance protocols, including:**

17 a) A schedule for routine cleaning of the City of Emeryville's
18 Collection System using standardized responses developed by the City to typical local problems
19 that cause blockages such as debris, grease and roots. The City shall develop its routine cleaning
20 schedule after evaluating the cleaning needs of the Collection System;

21 b) A list of locations where pipe blockages and SSOs have
22 frequently occurred (hot spots), a hot spot cleaning schedule, and procedures for adjusting the
23 hot spot cleaning schedule based on changing conditions;

24 c) Preventive measures to address blockage of sewer pipes by
25 roots, including a description of root control methods; locations where root control methods may
26 be used within the Collection System; and a schedule for application of root control methods;
27 and

28 d) A plan for staffing the sewer system cleaning and root

1 control programs, indicating whether staffing duties will be carried out by agency staff, by staff
 2 from other agencies, or by private contractor(s). To the extent that any sewer cleaning or root
 3 control duties conducted under this program will be carried out by private contractor(s), the City
 4 of Emeryville shall retain on file and make available for inspection for a period of three years
 5 after the completion of work a description of each contractor and a copy of each contract, or a
 6 description of the procurement process.

7 e) A Quality Assurance and Quality Control Program
 8 (“QA/QC Program”) to ensure proper sewer cleaning. The QA/QC Program shall include a plan
 9 for inspecting the cleaning quality, which specifies a minimum percentage of cleaned pipe to be
 10 inspected at regular intervals and a schedule for inspections, the procedures for conducting the
 11 inspections, the time interval for any necessary re-cleaning, and criteria for increasing and
 12 decreasing the frequency of inspection.

13 3. **Condition based repair and replacement of sewer pipe plan.**

14 This plan shall include elimination of known improper flow connections, according to a schedule
 15 informed by the inspection results, and address both short-term (repairs of Acute Defects to
 16 occur within one year of completion of inspection and assessment) and long term repair,
 17 rehabilitation and replacement of sewer pipes. The plan shall include the following:

18 a) A schedule and 10 year financial plan for repair,
 19 rehabilitation, and replacement of sewer pipes. This schedule shall identify pipe reaches
 20 presently planned as priorities for rehabilitation or replacement over the next three years, with
 21 the understanding that the identified priorities are likely to be further developed and revised
 22 through the inspection and assessment process, and as a result of changed conditions. The City
 23 shall develop its schedule for repair, rehabilitation and replacement of sewer pipes using
 24 standardized responses developed by the City to observed defects, taking into account available
 25 peak flow rate data;

26 b) Measures to control the inflow and infiltration as needed to
 27 reduce flows in the Collection System and reduce the frequency of SSOs; and

28 c) The budget allocated for emergency repair and replacement

1 of sewer pipe, the length of sewer pipe which underwent emergency repair and replacement
2 during the previous year, and the cost thereof.

3 C. Beginning in 2013, as part of its Annual Report provided for in Section
4 XIII, the City of Emeryville shall submit information to EPA summarizing the City's progress in
5 implementing each element of the AMIP, and must include any proposed revisions to the
6 maintenance and construction schedules along with any accompanying changes to the financial
7 plan. If any Acute Defect has not been addressed within one year of the inspection and
8 assessment identifying it, the City shall explain what new information or changed circumstances
9 warrant not addressing the Acute Defect.

10 51. Private Sewer Lateral Inspection and Repair or Replacement Program

11 A. Consistent with the requirements at Section V.C., Paragraph 29. of the
12 EBMUD SO, EBMUD adopted a Regional Private Sewer Lateral Ordinance (the "Regional
13 Ordinance") setting standards for the performance of sewer pipes that extend from privately-
14 owned structures to the Satellites' Collection Systems ("private sewer laterals"). The Regional
15 Ordinance requires that each owner of a private sewer lateral show proof that the lateral meets
16 the performance standards by obtaining (or already holding) a valid Compliance Certificate upon
17 transfer of title of the structure, prior to obtaining a permit or other approval authorizing
18 construction or significant modification of such structure at a cost in excess of \$100,000, and
19 prior to obtaining approval from EBMUD for a change in the size of the owner's water service.
20 The Regional Ordinance applies only to the portion of private sewer laterals that are on the
21 property of the owner of the privately-owned structure (the "upper lateral"). Portions of the
22 private sewer lateral connecting the upper lateral to the sewer main on public property, including
23 public streets, (the "lower lateral") are not addressed by the Regional Ordinance. The City of
24 Emeryville has the option of either submitting an application to EBMUD for a determination that
25 the City has a private lateral sewer lateral ordinance that is no less stringent than the Regional
26 Ordinance ("No Less Stringent Application")", but has chosen to be covered under the EBMUD
27 Regional Ordinance.

28

1 B. On **October 15, 2010**, the City of Emeryville submitted the following to
2 EPA for review and comment (these documents do not require EPA approval):

3 1. Procedures for cooperating with EBMUD in the implementation of
4 its private sewer lateral program within the City's service area, including a description of the
5 responsibilities that will be assigned to each City agency or department involved in the
6 implementation of this program;

7 2. A statement that the City will include, as part of the application
8 process for permits and approvals described in subparagraph 51.A, a requirement that the
9 applicant submit a valid EBMUD Compliance Certificate; and

10 3. A copy of an agreement, if any, between the City and EBMUD
11 regarding cooperation in the implementation of the private sewer lateral program, which may
12 include a description of the City building permit process that requires permittees to submit
13 compliance certificates prior to the City inspector's completion of the final inspection.

14 C. The City of Emeryville shall provide to EBMUD the information required
15 by and at the frequency determined necessary by EPA for implementation of the Regional
16 Ordinance program.

17 D. Lower Laterals

18 1. The City of Emeryville shall continue its existing practice of, when
19 replacing sewer mains, evaluating the condition of lower laterals connected to those sewer mains
20 and replacing or requiring replacement of defective lower laterals. The City of Emeryville may
21 issue a Compliance Certificate to the owner of any private sewer lateral whose lower lateral is
22 replaced pursuant to this practice covering the replaced portion of the private sewer lateral.

23 2. By April 20, 2011, the City of Emeryville shall enact an ordinance
24 which requires that each owner of a private sewer lateral show proof that the lower lateral meets
25 the performance standards by obtaining (or already holding) a valid Compliance Certificate upon
26 transfer of title of the structure, prior to obtaining a permit or other approval authorizing
27 construction or significant modification of such structure at a cost in excess of \$100,000, and
28 prior to obtaining approval from EBMUD for a change in the size of the owner's water service.

1 This ordinance shall be designed to extend the application of the Regional Ordinance to lower
2 laterals and Compliance Certificates for lower laterals shall have the same duration as
3 Compliance Certificates provided for in the Regional Ordinance.

4 52. Sub-Basin Flow Monitoring/I&I Assessment Plan

5 A. The City of Emeryville shall cooperate with EBMUD in the development
6 of the Regional Flow Monitoring/Data Assessment Program described in Section V.A. of the
7 EBMUD SO, and the Flow Modeling and Limits Report described in Section V.B. of the
8 EBMUD SO.

9 B. On **July 30, 2010**, the City of Emeryville submitted, and EPA has
10 reviewed and approved, a Sub-Basin Flow Monitoring/I&I Assessment Plan. The City shall take
11 the actions required by the Plan, in accordance with the schedules and requirements of the Plan
12 as approved.

13 C. On July 30, 2010, the City of Emeryville submitted, and EPA has
14 reviewed and approved, a report to EPA on the activities undertaken pursuant to the Sub-Basin
15 Flow Monitoring/I&I Assessment Plan, which includes the following:

16 1. Classification of Sub-Basins as high, medium, or low priority with
17 regard to the relative quantities of significant infiltration to the Collection System;

18 2. Classification of Sub-Basins as high, medium, or low priority with
19 regard to the relative quantities of significant inflow to the Collection System;

20 3. Identification of any bottlenecks in the Collection System which
21 lack sufficient capacity to convey sewage flows through the Collection System and to the
22 EBMUD interceptor during wet weather; and

23 4. A plan for using these results to identify and target high priority
24 areas for repair and rehabilitation work.

25 53. Inflow Identification and Reduction

26 A. On **July 30, 2010**, the City of Emeryville submitted, and EPA has
27 reviewed and approved, an Inflow Identification and Reduction Plan that describes how the City
28 will implement a program to identify and reduce sources of direct storm water inflow, including

1 roof leaders and drains directly connected to the Collection System, leaking manhole covers, and
 2 cross connections with storm drains. The City shall take the actions required by the Plan, in
 3 accordance with the schedules and requirements of the Plan as approved.

4 B. Beginning in 2012, as part of the Annual Report provided for in Section
 5 XIII, the City of Emeryville shall submit the following information as it becomes available on
 6 implementation of the Inflow Identification and Reduction Program:

7 1. Locations and results of inflow testing done the previous year
 8 including the total number of illicit connections discovered;

9 2. Description of follow-up actions that were conducted including the
 10 number of illicit connections which were disconnected;

11 3. Description of enforcement actions taken against any property
 12 owner which did not comply with disconnection requirements;

13 4. Description of methods used to seal manhole covers in Collection
 14 System areas prone to flooding, and list of locations at which this work was done; and

15 5. A schedule for locations to be tested in the next year.

16 54. SSO Response, Recordkeeping, Notification, & Reporting

17 A. On April 15, 2010, the City of Emeryville submitted, and EPA has
 18 reviewed and approved, a Sanitary Sewer Overflow Response Plan that describes the following:
 19 (1) emergency response and contingency procedures to address SSOs from its Collection
 20 System; (2) recordkeeping procedures for maintaining SSO reports, including a procedure for
 21 linking the SSOs to the MMS; (3) procedures for notifying members of the public who may be
 22 impacted by the SSO; (4) procedures for reporting to and notifying appropriate regulatory
 23 agencies. The City of Emeryville shall ensure that agency staff and responders are adequately
 24 trained to perform the procedures outlined in the SSO response plan, and shall implement the
 25 Plan in accordance with the procedures specified in the Plan, as approved. The City shall retain
 26 appropriate records and evaluate on an annual basis agency staff's and responders' adherence to
 27 the Plan as approved, and report findings of its evaluation in the Annual Report required in
 28 Section XIII.

1 55. Maintenance Management System (MMS)

2 A. On **July 30, 2010**, the City of Emeryville submitted, and EPA has
3 reviewed and approved, a Plan for obtaining and implementing computerized sewer maintenance
4 management systems capable of scheduling work assignments and tracking completion of sewer
5 cleaning, maintenance, repairs, and SSOs (“MMS Plan”). The City shall take the actions
6 required by the Plan, in accordance with the schedules and requirements of the Plan as approved.

7 B. By October 15, 2011, the City of Emeryville shall certify to EPA that the
8 City’s MMS has been fully implemented, and has been linked to a Geographic Information
9 System (GIS) map of the Collection Systems, which is linked to an inventory of sewer Collection
10 System assets that includes the information on asset age, material, dimensions, and capacities,
11 along with information on inspection history, condition ratings and sewers repaired,
12 rehabilitated, or replaced.

13 56. Sewer Pipe and Maintenance Hole Inspection

14 A. On April 15, 2010, the City of Emeryville submitted, and EPA reviewed
15 and approved, a Sewer Pipe and Maintenance Hole Inspection Plan. The City shall take the
16 actions required by the Plan, in accordance with the schedules and requirements of the Plan as
17 approved. The Plan may be submitted in lieu of the Routine Inspection provisions required by
18 subparagraph 50.B.1 upon a determination by EPA that the Plan meets or exceeds the criteria
19 specified in subparagraph 50.B.1.

20 B. Beginning in 2011, as part of the Annual Report provided for in Section
21 XIII, the City of Emeryville shall submit information to EPA summarizing inspection methods
22 and findings of the sewer pipe and maintenance hole condition assessment conducted during the
23 previous year and the estimated miles of sewer pipe and number of maintenance holes to be
24 inspected during the current year, along with a description of how the findings are being used to
25 prioritize rehabilitation projects. If EPA determines that the Sewer Pipe and Maintenance Hole
26 Inspection Plan meets or exceeds the requirements of subparagraph 50.B.1 the reporting required
27 under this subparagraph may be incorporated into the section of the Annual Report pertaining to
28 implementation of the AMIP provided for in subparagraph 50.C.

1 57. Annual SSO Reports. Beginning in 2011, as part of the Annual Report provided
2 for in Section XIII, the City of Emeryville shall submit a copy to EPA of the Annual Report of
3 Sanitary Sewer Overflows required by the Regional Water Board (“Annual Overflow Report”).
4 To the extent that the information is not included in the Annual Overflow Report, the City shall
5 provide a listing of the number and location of any repeat SSOs, a list of any SSOs in areas in
6 which the sewer pipes have been rehabilitated, and a description of measures that will be taken to
7 help prevent these SSOs in the future.

8 X. WORK – CITY OF OAKLAND

9 58. Maintain Current Program. The City of Oakland shall implement the programs
10 for controlling SSOs and reducing I&I set forth in its SSMP.

11 59. Implement Improvements. The City of Oakland shall implement any
12 improvements to its current programs needed to meet the requirements set out below in this
13 Section. To the extent that an existing program satisfies the requirements of this Section, the
14 City of Oakland may submit a description of its program for review and approval by EPA
15 pursuant to Section XIV.

16 60. Asset Management Program

17 A. The City of Oakland shall participate and cooperate with EBMUD in the
18 development of the EBMUD Template in accordance with the provisions of Section V.D.,
19 Paragraph 39 of the EBMUD SO. The City of Oakland and Baykeeper reserve the right to
20 comment on the EBMUD Template, and/or to submit an Alternative Template to EBMUD, EPA
21 and the Regional Water Board, before the end of the ninety-day comment period set forth in the
22 EBMUD SO. Upon completion of the EBMUD Template, following review of it and any other
23 Alternative Template(s), EPA may provide comments for use as guidance by the City as the
24 basis for the Asset Management Implementation Plan (“AMIP”).

25 B. By July 15, 2012, the City shall submit to EPA for review and approval
26 pursuant to Section XIV an AMIP that uses the EPA comments provided pursuant to
27 subparagraph A above. The City may tailor the EPA comments, and may omit portions of the
28 EPA comments that do not apply to the City. The AMIP shall be updated as necessary to

1 incorporate any revisions to the initial inspection and maintenance schedules, and to ensure that
2 repair, renovation and replacement projects continue to be adequately identified and planned
3 beyond the initial time frames specified in subparagraph 60.B.3. At a minimum, the AMIP shall
4 include a description of the City of Oakland's programs for:

5 1. **Routine inspection of the Collection System** according to a
6 specified schedule, and that includes the following:

7 a) Inspection methods to be used, including direct visual
8 inspection and CCTV inspection, and whether CCTV equipment is owned, purchased, leased, or
9 a combination;

10 b) An inspection schedule, and protocol for determining the
11 regular time interval on which repeat inspections will be performed; and

12 c) A system for timely evaluation of inspection findings and
13 documentation of the assessed condition.

14 2. **Collection system maintenance protocols, including:**

15 a) A schedule for routine cleaning of the City of Oakland's
16 Collection System using standardized responses developed by the City to typical local problems
17 that cause blockages such as debris, grease and roots. The City shall develop its routine cleaning
18 schedule after evaluating the cleaning needs of the Collection System;

19 b) A list of locations where pipe blockages and SSOs have
20 frequently occurred (hot spots), a hot spot cleaning schedule, and procedures for adjusting the
21 hot spot cleaning schedule based on changing conditions;

22 c) Preventive measures to address blockage of sewer pipes by
23 roots, including a description of root control methods; locations where root control methods may
24 be used within the Collection System; and a schedule for application of root control methods;
25 and

26 d) A plan for staffing the sewer system cleaning and root
27 control programs, indicating whether staffing duties will be carried out by agency staff, by staff
28 from other agencies, or by private contractor(s). To the extent that any sewer cleaning or root

1 control duties conducted under this program will be carried out by private contractor(s), the City
2 of Oakland shall retain on file and make available for inspection for a period of three years after
3 the completion of work a description of each contractor and a copy of each contract, or a
4 description of the procurement process.

5 e) A Quality Assurance and Quality Control Program
6 (“QA/QC Program”) to ensure proper sewer cleaning. The QA/QC Program shall include a plan
7 for inspecting the cleaning quality, which specifies a minimum percentage of cleaned pipe to be
8 inspected at regular intervals and a schedule for inspections, the procedures for conducting the
9 inspections, the time interval for any necessary re-cleaning, and criteria for increasing and
10 decreasing the frequency of inspection.

11 3. **Condition based repair and replacement of sewer pipe plan.**

12 This plan shall include elimination of known improper flow connections, according to a schedule
13 informed by the inspection results, and address both short-term (repairs of Acute Defects to
14 occur within one year of completion of inspection and assessment) and long term repair,
15 rehabilitation and replacement of sewer pipes. The plan shall include the following:

16 a) A schedule and 10 year financial plan for repair,
17 rehabilitation, and replacement of sewer pipes. This schedule shall identify pipe reaches
18 presently planned as priorities for rehabilitation or replacement over the next three years, with
19 the understanding that the identified priorities are likely to be further developed and revised
20 through the inspection and assessment process, and as a result of changed conditions. The City
21 shall develop its schedule for repair, rehabilitation and replacement of sewer pipes using
22 standardized responses developed by the City to observed defects, taking into account available
23 peak flow rate data;

24 b) Measures to control the inflow and infiltration as needed to
25 reduce flows in the Collection System and reduce the frequency of SSOs; and

26 c) The budget allocated for emergency repair and replacement
27 of sewer pipe, the length of sewer pipe which underwent emergency repair and replacement
28 during the previous year, and the cost thereof.

1 C. Beginning in 2013, as part of its Annual Report provided for in Section
2 XIII , the City of Oakland shall submit information to EPA summarizing the City's progress in
3 implementing each element of the AMIP, and must include any proposed revisions to the
4 maintenance and construction schedules along with any accompanying changes to the financial
5 plan. If any Acute Defect has not been addressed within one year of the inspection and
6 assessment identifying it, the City shall explain what new information or changed circumstances
7 warrant not addressing the Acute Defect.

8 61. Private Sewer Lateral Inspection and Repair or Replacement Program

9 A. Consistent with the requirements at Section V.C., Paragraph 29 of the
10 EBMUD SO, EBMUD adopted a Regional Private Sewer Lateral Ordinance (the "Regional
11 Ordinance") setting standards for the performance of sewer pipes that extend from privately-
12 owned structures to the Satellites' Collection Systems ("private sewer laterals"). The Regional
13 Ordinance requires that each owner of a private sewer lateral show proof that the lateral meets
14 the performance standards by obtaining (or already holding) a valid Compliance Certificate upon
15 transfer of title of the structure, prior to obtaining a permit or other approval authorizing
16 construction or significant modification of such structure at a cost in excess of \$100,000, and
17 prior to obtaining approval from EBMUD for a change in the size of the owner's water service.
18 The Regional Ordinance applies only to the portion of private sewer laterals that are on the
19 property of the owner of the privately-owned structure (the "upper lateral"). Portions of the
20 private sewer lateral connecting the upper lateral to the sewer main on public property, including
21 public streets, (the "lower lateral") are not addressed by the Regional Ordinance. The City of
22 Oakland has the option of submitting an application to EBMUD for a determination that the City
23 has a private sewer lateral ordinance that is no less stringent than the Regional Ordinance ("No
24 Less Stringent Application"), but has elected to be covered under the EBMUD Regional
25 Ordinance.

26 B. On **October 15, 2010**, the City of Oakland submitted the following to
27 EPA for review and comment (these documents do not require EPA approval):
28

1 1. A description of how the City of Oakland will cooperate with
2 EBMUD in the implementation of its private sewer lateral program within its service area,
3 including a description of the responsibilities that will be assigned to each City agency or
4 department involved in the implementation of this program;

5 2. A statement that the City will include, as part of the application
6 process for permits and approvals described in subparagraph 61.A, a requirement that the
7 applicant submit a valid EBMUD Compliance Certificate; and

8 3. A copy of an agreement, if any, between the City and EBMUD
9 regarding cooperation in the implementation of the private sewer lateral program, which may
10 include a description of the City building permit process that requires permittees to submit
11 compliance certificates prior to the City inspector's completion of the final inspection.

12 C. The City of Oakland shall provide to EBMUD the information required by
13 and at the frequency determined necessary by EPA for implementation of the Regional
14 Ordinance program. If the City implements a building permit process that requires permittees to
15 submit Compliance Certificates before the City completes its final inspection of a building
16 remodel project as the approval triggering the Compliance Certificate requirement in the
17 EBMUD Ordinance, the City, to satisfy the requirements of this subparagraph, shall:

18 1. beginning January 31, 2012, before issuing a permit or other
19 authorization for construction or significant modification of a structure at a cost in excess of
20 \$100,000, require every recipient of such a permit or authorization to submit information, on a
21 postcard or other format chosen by the City, to the City of Oakland including, at a minimum, the
22 following information: property parcel number, the name and phone number of the property
23 owner, the name, address, phone number and contractor license number (if any) of the person
24 issued the permit, the address of the building for which the permit is issued, whether a
25 Compliance Certificate has been issued for the property;

26 2. submit to EBMUD, by copies of such postcards or other means
27 chosen by the City, the information submitted to the City pursuant to subparagraph 1 in a timely
28 manner, and also maintain records or copies of such postcards or other submittals sent to

1 EBMUD under this subsection, in a segregated notebook or electronic location for inspection by
2 EPA or other regulating agency;

3 3. beginning July 1, 2012, submit to EBMUD, in either electronic
4 or hard copy format as the City chooses, a monthly log of all remodel permits for jobs greater
5 than \$100,000 where a final inspection has been completed to finalize the project; and

6 4. maintain records available for inspection by EBMUD or Plaintiffs,
7 beginning January 31, 2012, of all such permits or other authorization for construction or
8 significant modification of a structure at a cost in excess of \$100,000, as well as records of all the
9 final inspections completed for such work. Upon request of EBMUD or Plaintiffs, the City
10 shall verify whether any particular permittee had a final inspection conducted on their remodel
11 project.

12 D. Lower Laterals

13 1. The City of Oakland shall continue its existing practice of, when
14 replacing sewer mains, evaluating the condition of lower laterals connected to those sewer mains
15 and replacing or requiring replacement of defective lower laterals. The City of Oakland may
16 establish a process to notify homeowners and/or EBMUD regarding improvements it may make
17 to lower laterals.

18 2. By August 19, 2011, the City of Oakland shall enact an ordinance
19 which extends EBMUD's Regional Ordinance to apply to lower sewer laterals. The owner of a
20 lower sewer lateral (unless already holding a valid Compliance Certificate) shall be required to
21 obtain a Compliance Certificate from EBMUD (a) prior to transferring title to the residential,
22 commercial, or industrial structure, (b) prior to obtaining final inspection on any permit or other
23 approval needed for the construction or significant modification of such structure at a cost in
24 excess of \$100,000, or (c) prior to obtaining approval from EBMUD for an increase or decrease
25 in size of the owner's water service. It is anticipated that, in January 2012 (after a city ordinance
26 is passed as described above), EBMUD will extend the administration of the Regional Ordinance
27 to lower laterals in the same way as upper laterals, under its Stipulated Order with the United
28

1 States, and that EBMUD's Compliance Certificates shall cover lower laterals as well as upper
2 laterals.

3 62. Sub-Basin Flow Monitoring/I&I Assessment Plan

4 A. The City of Oakland shall cooperate with EBMUD in the development
5 and implementation of the Regional Flow Monitoring/Data Assessment Program described in
6 Section V.A. of the EBMUD SO, and the Flow Modeling and Limits Report described in Section
7 V.B. of the EBMUD SO.

8 B. On **September 30, 2010**, the City of Oakland submitted, and EPA has
9 reviewed and approved, a Sub-Basin Flow Monitoring/Data Assessment Plan. The City shall
10 take the actions required by the Plan, in accordance with the schedules and requirements of the
11 Plan as approved.

12 C. By December 1, 2012, the City of Oakland shall submit a report to EPA
13 for review and approval pursuant to Section XIV on the activities undertaken pursuant to the
14 Sub-Basin Flow Monitoring/Data Assessment Plan. The report shall assess Sub-Basin flows and
15 hydraulic capacity within the Sub-Basins. The assessments shall include the results of flow
16 measurements, visual observations of flow levels and predictive flow modeling as needed to
17 complete the report such that the report:

- 18 1. Identifies areas, sources and quantities of significant inflow to the
19 sanitary sewer Collection System;
- 20 2. Identifies areas, sources, and quantities of significant infiltration to
21 the Collection System;
- 22 3. Identifies any bottlenecks in the Collection System which lack
23 sufficient capacity to convey sewage flows through the Collection System and to the EBMUD
24 interceptor during wet weather; and
- 25 4. Provides a plan for using these results to identify and target high
26 priority areas for repair and rehabilitation work.

27 D. If the work described in Subsections B and C of this Paragraph has been
28 completed within the past ten years, the City may, by **September 30, 2010**, submit a summary of

1 the work and recommendations to EPA in lieu of the requirements of Subsections B and C of this
2 Paragraph.

3 63. Inflow Identification and Reduction

4 A. On **September 30, 2010**, the City of Oakland submitted, and EPA has
5 reviewed and approved, an Inflow Identification and Reduction Plan that describes how the City
6 will implement a program to identify and reduce sources of direct storm water inflow, including
7 roof leaders and drains directly connected to the Collection System, leaking manhole covers, and
8 cross connections with storm drains. The City shall take the actions required by the Plan, in
9 accordance with the schedules and requirements of the Plan as approved.

10 B. Beginning in 2012, as part of the Annual Report provided for in Section
11 XIII, the City of Oakland shall submit the following information as it becomes available on
12 implementation of the Inflow Identification and Reduction Program:

- 13 1. Locations and results of inflow testing done the previous year
14 including the total number of illicit connections discovered;
- 15 2. Description of follow-up actions that were conducted including the
16 number of illicit connections which were disconnected;
- 17 3. Description of enforcement actions taken against any property
18 owner which did not comply with disconnection requirements;
- 19 4. Description of methods used to seal manhole covers in Collection
20 System areas prone to flooding, and list of locations at which this work was done; and
- 21 5. A schedule for locations to be tested in the next year.

22 64. SSO Response, Recordkeeping, Notification and Reporting

23 A. On **March 1, 2010**, the City of Oakland submitted, and EPA has reviewed
24 and approved, a Sanitary Sewer Overflow Response Plan that describes the following: (1)
25 emergency response and contingency procedures to address SSOs from its Collection System;
26 (2) recordkeeping procedures for maintaining SSO reports, including a procedure for linking the
27 SSOs to the MMS; (3) procedures for notifying members of the public who may be impacted by
28 the SSOs; and (4) procedures for reporting to and notifying appropriate regulatory agencies. The

1 City of Oakland shall ensure that agency staff and responders are adequately trained to perform
2 the procedures outlined in the SSO Response Plan, and shall take the actions required by the
3 Plan, in accordance with the schedules and requirements of the Plan as approved. The City shall
4 retain appropriate records and evaluate on an annual basis agency staff's and responders'
5 adherence to the Plan as approved, and report findings of its evaluation in the Annual Report
6 required in Section XIII.

7 65. Pump Station and Force Main Reliability

8 A. By July 15, 2012, the City of Oakland shall submit a plan to EPA for
9 review and approval pursuant to Section XIV, including a schedule and financial plan, for
10 completing the necessary repairs, renovations, and upgrades on each pump station and force
11 main. The improvements shall be designed to ensure adequate capacity for peak weather flows,
12 and to provide an automatic alarm system with SCADA communications and backup or
13 redundant equipment (pumps and power supply) so that pump station operations can be restored
14 in a timely manner in the event of electrical failure, mechanical failure, or power outage. The
15 schedule and financial plan shall be sufficient to ensure completion of the upgrades by October
16 15, 2022.

17 B. Beginning in 2013, as part of the Annual Report provided for in Section
18 XIII, the City of Oakland shall submit information to EPA documenting pump station and force
19 main renovations and upgrades during the previous year, and describing projects to be completed
20 in the next year.

21 66. Data Management – Maintenance Management System

22 A. By January 15, 2011, the City of Oakland shall submit to EPA for review
23 and approval pursuant to Section XIV a plan for obtaining and implementing computerized
24 sewer maintenance management systems (MMS) capable of scheduling work assignments and
25 tracking completion of sewer cleaning, maintenance, repairs and SSOs. The City shall record
26 information on Collection System inspections, condition ratings, and sewers repaired,
27 rehabilitated, and replaced. The MMS shall have the capability to be used to generate reports
28 summarizing SSOs and to identify hot spots.

1 B. By October 15, 2011, the City of Oakland shall certify to EPA that the
2 City's MMS is being fully implemented, and has been linked to a Geographic Information
3 System (GIS) map of the Collection Systems, which is linked to an inventory of Collection
4 System assets that includes information on asset age, material, dimensions and capacities, where
5 available, along with information on inspection history, condition ratings and sewers repaired,
6 rehabilitated, or replaced, where available.

7 67. Sewer Cleaning and Root Control Program

8 A. By July 15, 2011 the City of Oakland shall submit a plan to implement a
9 Sewer Cleaning and Root Control Plan to ensure regular cleaning of sewer pipes. The Sewer
10 Cleaning and Root Control Plan shall include a schedule for routine cleaning which ensures that
11 the highest priority Collection System locations are cleaned at least once every 10 years, except
12 that hot spot locations must be cleaned on a more frequent basis. The frequency of hot spot
13 cleaning shall be based on a rationale, and supported by data. Records of pipe mileage cleaned
14 shall be based on the unique length of each pipe section that was cleaned, and shall not include
15 multiple passes through that same length of pipe. The Plan must be sufficient to eliminate or
16 reduce blockage-related SSOs. EPA review of this Plan shall consider whether it meets or
17 exceeds the requirements of subparagraph 60.B.2. If EPA determines that the Plan meets or
18 exceeds the requirements of subparagraph 60.B.2, the Plan shall be deemed to satisfy the
19 requirements of subparagraph 60.B.2. To the extent practical, EPA's review of this Plan will
20 take into consideration any EPA comments provided pursuant to subparagraph 60.A. with regard
21 to these criteria so that the City has the opportunity to tailor this Plan to the pertinent provisions
22 required to be included in the AMIP.

23 B. Beginning in 2012, as part of its Annual Report provided for in Section
24 XIII, the City of Oakland shall document the activities conducted under its Sewer Cleaning and
25 Root Control Program during the previous year, including miles of pipe cleaned as part of the
26 routine and hot spot cleaning programs, and miles of pipe treated by each method for controlling
27 roots. The City of Oakland shall include a description of the success of the Sewer Cleaning and
28 Root Control Program at preventing blockages and SSOs as well as any changes to be made to

1 the Program to further reduce SSOs. If EPA determines that the Sewer Cleaning and Root
2 Control Plan meets or exceeds the requirements of subparagraph 60.B.2, the reporting required
3 under this subparagraph may be incorporated into the section of the Annual Report pertaining to
4 implementation of the AMIP provided for in subparagraph 60.C.

5 68. Sewer Pipe and Maintenance Hole Inspection

6 A. By July 15, 2011, the City of Oakland shall submit a Sewer Pipe and
7 Maintenance Hole Inspection Plan to EPA for review and approval pursuant to Section XIV for
8 periodic inspection and assessment of the condition of gravity sewers and maintenance holes
9 throughout the City's Collection System. The Plan shall be sufficient to evaluate the condition of
10 pipes and maintenance holes following blockage related SSOs, identify pipes and maintenance
11 holes in need of emergency repair, and shall contain a schedule which initiates the inspection of
12 the high priority Collection System locations at a rate of no less than 10 percent per year. The
13 universe of high priority locations and the rate of inspection shall be based on a rationale, and
14 supported by data. EPA's review of this Plan shall consider whether it meets or exceeds the
15 requirements of subparagraph 60.B.1. If EPA determines that this Plan meets or exceeds the
16 requirements of subparagraph 60.B.1, the Plan shall be deemed to satisfy the requirements of
17 subparagraph 60.B.1. To the extent practical, EPA's review of this Plan will take into
18 consideration any EPA comments provided pursuant to subparagraph 60.A. with regard to these
19 criteria so that the City has the opportunity to tailor this Plan to the pertinent provisions required
20 to be included in the AMIP.

21 B. Beginning in 2012, as part of the Annual Report provided for in Section
22 XIII, the City of Oakland shall submit information to EPA summarizing inspection methods and
23 findings of the sewer pipe and maintenance hole condition assessment conducted during the
24 previous year and the estimated miles of sewer pipe and number of maintenance holes to be
25 inspected during the current year, along with a description of how the findings are being used to
26 prioritize rehabilitation projects. If EPA determines that the Sewer Pipe and Maintenance Hole
27 Inspection Program meets or exceeds the requirements of subparagraph 60.B.1, the reporting
28

1 required under this subparagraph may be incorporated into the section of the Annual Report
2 pertaining to implementation of the AMIP provided for in subparagraph 60.C.

3 69. Sewer Repair, Rehabilitation and Replacement Beginning in 2011, as part of the
4 Annual Report provided for in Section XIII, the City of Oakland shall submit information to
5 EPA documenting sewer repair, rehabilitation, and/or replacement activities completed in the
6 previous year; describing projects to be completed in the coming year; and discussing the
7 reductions in flows and/or SSOs that have been achieved. Beginning in 2013, the reporting
8 required under this Paragraph may be incorporated into the section of the Annual Report
9 pertaining to implementation of the Asset Management Plan provided for in subparagraph 60.C.

10 70. Annual SSO Reports. Beginning in 2011, as part of the Annual Report submitted
11 pursuant to Section XIII, the City of Oakland shall submit a copy to EPA of the Annual Report
12 of Sanitary Sewer Overflows required by the Regional Water Board (“Annual Overflow
13 Report”). To the extent that the information is not included in the Annual Overflow Report, the
14 City shall provide a listing of the number and location of any repeat SSOs, a list of SSOs in any
15 areas in which the sewer pipes have been rehabilitated, and a description of measures that will be
16 taken to help prevent these SSOs in the future.

17 XI. WORK – CITY OF PIEDMONT

18 71. Maintain Current Program. The City of Piedmont shall implement the programs
19 for controlling SSOs and reducing I&I set forth in its SSMP.

20 72. Implement Improvements. The City of Piedmont shall implement any
21 improvements to its current programs needed to meet the requirements set out below in this
22 Section. To the extent that an existing program satisfies the requirements of this Section, the
23 City of Piedmont may submit a description of its program for review and approval by EPA
24 pursuant to Section XIV.

25 73. Asset Management Program

26 A. The City of Piedmont shall participate and cooperate with EBMUD in the
27 development of the EBMUD Template in accordance with the provisions of Section V.D.,
28 Paragraph 39 of the EBMUD SO. The City of Piedmont and Baykeeper reserve the right to

1 comment on the EBMUD Template, and/or to submit an Alternative Template to EBMUD, EPA
2 and the Regional Water Board, before the end of the ninety-day comment period set forth in the
3 EBMUD SO. Upon completion of the EBMUD Template, following review of it and any other
4 Alternative Template(s), EPA may provide comments for use as guidance by the City as the
5 basis for the Asset Management Implementation Plan (“AMIP”).

6 B. By July 15, 2012, the City shall submit to EPA for review and approval
7 pursuant to Section XIV an AMIP that uses the EPA comments provided pursuant to
8 subparagraph A above. The City may tailor the EPA comments, and may omit portions of the
9 EPA comments that do not apply to the City. The AMIP shall be updated as necessary to
10 incorporate any revisions to the initial inspection and maintenance schedules, and to ensure that
11 repair, renovation and replacement projects continue to be adequately identified and planned
12 beyond the initial time frames specified in subparagraph 72.B.3. At a minimum, the AMIP shall
13 include a description of the City of Piedmont’s programs for:

14 1. **Routine inspection of the Collection System** according to a
15 specified schedule, and that includes the following:

16 a) Inspection methods to be used, including direct visual
17 inspection and CCTV inspection, and whether CCTV equipment is owned, purchased, leased, or
18 a combination;

19 b) An inspection schedule, and protocol for determining the
20 regular time interval on which repeat inspections will be performed; and

21 c) A system for timely evaluation of inspection findings and
22 documentation of the assessed condition.

23 2. **Collection system maintenance protocols, including:**

24 a) A schedule for routine cleaning of the City of Piedmont’s
25 Collection System using standardized responses developed by the City to typical local problems
26 that cause blockages such as debris, grease and roots. The City shall develop its routine cleaning
27 schedule after evaluating the cleaning needs of the Collection System;

28 b) A list of locations where pipe blockages and SSOs have

1 frequently occurred (hot spots), a hot spot cleaning schedule, and procedures for adjusting the
2 hot spot cleaning schedule based on changing conditions;

3 c) Preventive measures to address blockage of sewer pipes by
4 roots, including a description of root control methods; locations where root control methods may
5 be used within the Collection System; and a schedule for application of root control methods;
6 and

7 d) A plan for staffing the sewer system cleaning and root
8 control programs, indicating whether staffing duties will be carried out by agency staff, by staff
9 from other agencies, or by private contractor(s). To the extent that any sewer cleaning or root
10 control duties conducted under this program will be carried out by private contractor(s), the City
11 of Piedmont shall retain on file and make available for inspection for a period of three years after
12 the completion of work a description of each contractor and a copy of each contract, or a
13 description of the procurement process.

14 e) A Quality Assurance and Quality Control Program
15 (“QA/QC Program”) to ensure proper sewer cleaning. The QA/QC Program shall include a plan
16 for inspecting the cleaning quality, which specifies a minimum percentage of cleaned pipe to be
17 inspected at regular intervals and a schedule for inspections, the procedures for conducting the
18 inspections, the time interval for any necessary re-cleaning, and criteria for increasing and
19 decreasing the frequency of inspection.

20 3. **Condition based repair and replacement of sewer pipe plan.**

21 This plan shall include elimination of known improper flow connections, according to a schedule
22 informed by the inspection results, and address both short-term (repairs of Acute Defects to
23 occur within one year of completion of inspection and assessment) and long term repair,
24 rehabilitation and replacement of sewer pipes. The plan shall include the following:

25 a) A schedule and 10 year financial plan for repair,
26 rehabilitation, and replacement of sewer pipes. This schedule shall identify pipe reaches
27 presently planned as priorities for rehabilitation or replacement over the next three years, with
28 the understanding that the identified priorities are likely to be further developed and revised

1 through the inspection and assessment process, and as a result of changed conditions. The City
2 shall develop its schedule for repair, rehabilitation and replacement of sewer pipes using
3 standardized responses developed by the City to observed defects, taking into account available
4 peak flow rate data;

5 b) Measures to control the inflow and infiltration as needed to
6 reduce flows in the Collection System and reduce the frequency of SSOs; and

7 c) The budget allocated for emergency repair and replacement
8 of sewer pipe, the length of sewer pipe which underwent emergency repair and replacement
9 during the previous year, and the cost thereof.

10 C. Beginning in 2013, as part of its Annual Report provided for in Section
11 XIII, the City of Piedmont shall submit information to EPA summarizing the City's progress in
12 implementing each element of the AMIP, and must include any proposed revisions to the
13 maintenance and construction schedules along with any accompanying changes to the financial
14 plan. If any Acute Defect has not been addressed within one year of the inspection and
15 assessment identifying it, the City shall explain what new information or changed circumstances
16 warrant not addressing the Acute Defect.

17 74. Private Sewer Lateral Inspection and Repair or Replacement Program

18 A. Consistent with the requirements at Section V.C., Paragraph 29 of the
19 EBMUD SO, EBMUD adopted a Regional Private Sewer Lateral Ordinance (the "Regional
20 Ordinance") setting standards for the performance of sewer pipes that extend from privately-
21 owned structures to the Satellites' Collection Systems ("private sewer laterals"). The Regional
22 Ordinance requires that each owner of a private sewer lateral show proof that the lateral meets
23 the performance standards by obtaining (or already holding) a valid Compliance Certificate upon
24 transfer of title of the structure, prior to obtaining a permit or other approval authorizing
25 construction or significant modification of such structure at a cost in excess of \$100,000, and
26 prior to obtaining approval from EBMUD for a change in the size of the owner's water service.
27 The Regional Ordinance applies only to the portion of private sewer laterals that are on the
28 property of the owner of the privately-owned structure (the "upper lateral"). Portions of the

1 private sewer lateral connecting the upper lateral to the sewer main on public property, including
2 public streets, (the “lower lateral”) are not addressed by the Regional Ordinance. The City of
3 Piedmont has the option of submitting an application to EBMUD for a determination that the
4 City has a private sewer lateral ordinance that is no less stringent than the Regional Ordinance
5 (“No Less Stringent Application”), but has elected to be covered under the EBMUD Regional
6 Ordinance.

7 B. On **October 15, 2010**, the City of Piedmont submitted the following to
8 EPA for review and comment (these documents do not require EPA approval):

9 1. A description of how the City of Piedmont will cooperate with
10 EBMUD in the implementation of its private sewer lateral program within its service area,
11 including a description of the responsibilities that will be assigned to each City agency or
12 department involved in the implementation of this program;

13 2. A statement that the City will include, as part of the application
14 process for permits and approvals described in subparagraph 74.A, a requirement that the
15 applicant submit a valid EBMUD Compliance Certificate; and

16 3. A copy of an agreement, if any, between the City and EBMUD
17 regarding cooperation in the implementation of the private sewer lateral program, which may
18 include a description of the City building permit process that requires permittees to submit
19 compliance certificates prior to the City inspector’s completion of the final inspection.

20 C. The City of Piedmont shall provide to EBMUD the information required
21 by and at the frequency determined necessary by EPA for implementation of the Regional
22 Ordinance program. If the City implements a building permit process that requires permittees to
23 submit compliance certificates before being issued certificates of occupancy, the City, to satisfy
24 the requirements of this subparagraph, shall annually document, in spreadsheet format, the
25 building permits issued, the certificates of occupancy issued, and whether a compliance
26 certificate was submitted prior to issuance of the certificate of occupancy.

27 D. Lower Laterals

28

1 1. The City of Piedmont shall continue its existing practice of, when
2 replacing sewer mains, evaluating the condition of lower laterals connected to those sewer mains
3 and replacing or requiring replacement of defective lower laterals. The City of Piedmont may
4 issue a Compliance Certificate to the owner of any private sewer lateral whose lower lateral is
5 replaced pursuant to this practice covering the replaced portion of the private sewer lateral.

6 2. By February 25, 2011, the City of Piedmont shall enact an
7 ordinance which requires that each owner of a private sewer lateral show proof that the lower
8 lateral meets the performance standards by obtaining (or already holding) a valid Compliance
9 Certificate upon transfer of title of the structure, prior to obtaining a permit or other approval
10 authorizing construction or significant modification of such structure at a cost in excess of
11 \$100,000, and prior to obtaining approval from EBMUD for a change in the size of the owner's
12 water service. This ordinance shall be designed to extend the application of the Regional
13 Ordinance to lower laterals and Compliance Certificates for lower laterals shall have the same
14 duration as Compliance Certificates provided for in the Regional Ordinance.

15 75. Sub-Basin Flow Monitoring/I&I Assessment Plan

16 A. The City of Piedmont shall cooperate with EBMUD in the development of
17 the Regional Flow Monitoring/Data Assessment Program described in Section V.A. of the
18 EBMUD SO, and the Flow Modeling and Limits Report described in Section V.B. of the
19 EBMUD SO.

20 B. On **August 31, 2010**, the City of Piedmont submitted, and EPA has
21 reviewed and approved, a Sub-Basin Flow Monitoring/I&I Assessment Plan. The City shall take
22 the actions required by the Plan, in accordance with the schedules and requirements of the Plan
23 as approved.

24 C. By December 1, 2012, the City of Piedmont shall submit a report to EPA
25 for review and approval pursuant to Section XIV on the activities undertaken pursuant to the
26 Sub-Basin Flow Monitoring/I&I Assessment Plan to provide the following:

27 1. Classification of Sub-Basins as high, medium, or low priority with
28 regard to the relative quantities of significant infiltration to the Collection System;

1 2. Classification of Sub-Basins as high, medium, or low priority with
2 regard to the relative quantities of significant inflow to the Collection System;

3 3. Identification of any bottlenecks in the Collection System which
4 lack sufficient capacity to convey sewage flows through the Collection System and to the
5 EBMUD interceptor during wet weather; and

6 4. A plan for using these results to identify and target high priority
7 areas for repair and rehabilitation work.

8 76. Inflow Identification and Reduction

9 A. On **August 31, 2010**, the City of Piedmont submitted, and EPA has
10 reviewed and approved, an Inflow Identification and Reduction Plan that describes how the City
11 will implement a program to identify and reduce sources of direct storm water inflow, including
12 roof leaders and drains directly connected to the Collection System, leaking manhole covers, and
13 cross connections with storm drains. The City shall take the actions required by the Plan, in
14 accordance with the schedules and requirements of the Plan as approved.

15 B. Beginning in 2012, as part of the Annual Report provided for in Section
16 XIII, the City of Piedmont shall submit the following information as it becomes available on
17 implementation of the Inflow Identification and Reduction Program:

18 1. Locations and results of inflow testing done the previous year
19 including the total number of illicit connections discovered;

20 2. Description of follow-up actions that were conducted including the
21 number of illicit connections which were disconnected;

22 3. Description of enforcement actions taken against any property
23 owner which did not comply with disconnection requirements;

24 4. Description of methods used to seal manhole covers in Collection
25 System areas prone to flooding, and list of locations at which this work was done; and

26 5. A schedule for locations to be tested in the next year.

27 77. Computerized Maintenance Management System (MMS)

1 A. On **August 31, 2010**, the City of Piedmont submitted, and EPA has
2 reviewed and approved, a Plan for improving its computerized sewer maintenance management
3 system so that it is capable of scheduling work assignments and tracking completion of sewer
4 cleaning, maintenance, repairs, and SSOs (“MMS Plan”). The City shall take the actions
5 required by the Plan, in accordance with the schedules and requirements of the Plan as approved.

6 B. By October 15, 2011, the City of Piedmont shall certify to EPA that the
7 City’s MMS is being fully implemented and has been linked to a Geographic Information
8 System (GIS) map of the Collection Systems, which is linked to an inventory of sewer Collection
9 System assets that includes the information on asset age, material, dimensions, and capacities,
10 along with information on inspection history, condition ratings and sewers repaired,
11 rehabilitated, or replaced.

12 78. Sewer Repair, Rehabilitation and Replacement Beginning in 2011, as part of the
13 Annual Report provided for in Section XIII, the City of Piedmont shall submit information to
14 EPA documenting sewer repair, rehabilitation, or replacement activities completed in the
15 previous year; describing projects to be completed in the next year; and discussing the reductions
16 in flows and/or SSOs that have been achieved. Beginning in 2013, the reporting required under
17 this Paragraph may be incorporated into the section of the Annual Report pertaining to
18 implementation of the Asset Management Plan provided for in subparagraph 69.C.

19 79. Annual Overflow Reports. Beginning in 2010, as part of the Annual Report
20 provided for in Section XIII, the City of Piedmont shall submit a copy to EPA of the Annual
21 Report of Sanitary Sewer Overflows (“Annual Overflow Report”) required by the Regional
22 Water Board. To the extent that the information is not included in the Annual Overflow Report,
23 the City of Piedmont shall provide a listing of the number and location(s) of repeat SSOs, a list
24 of any SSOs in areas in which the sewer pipes have been rehabilitated, and a description of
25 measures that will be taken to help prevent these SSOs in the future. The City shall also review
26 the Annual Spill Report to determine whether the utilization of a vector truck could have helped
27 to mitigate the impact of the SSOs and include a summary of the review and provide a summary
28 of the evaluation results.

1 XII. WORK – STEGE SANITARY DISTRICT

2 80. Maintain Current Program. The Stege Sanitary District shall implement the
3 programs for controlling SSOs and reducing I&I set forth in its SSMP.

4 81. Implement Improvements. The Stege Sanitary District shall implement any
5 improvements to its current programs needed to meet the requirements set out below in this
6 Section. To the extent that an existing program satisfies the requirements of this Section, the
7 Stege Sanitary District may submit a description of its program for review and approval by EPA
8 pursuant to Section XIV.

9 82. Asset Management Program

10 A. The Stege Sanitary District shall participate and cooperate with EBMUD
11 in the development of the EBMUD Template in accordance with the provisions of Section V.D.,
12 Paragraph 39 of the EBMUD SO. The District and Baykeeper reserve the right to comment on
13 the EBMUD Template, and/or to submit an Alternative Template to EBMUD, EPA and the
14 Regional Water Board, before the end of the ninety-day comment period set forth in the EBMUD
15 SO. Upon completion of the EBMUD Template, following review of it and any other
16 Alternative Template(s), EPA may provide comments for use as guidance by the District as the
17 basis for the Asset Management Implementation Plan (“AMIP”).

18 B. By July 15, 2012, the District shall submit to EPA for review and approval
19 pursuant to Section XIV an AMIP that uses the EPA comments provided pursuant to
20 subparagraph A above. The District may tailor the EPA comments, and may omit portions of the
21 EPA comments that do not apply to the District. The AMIP shall be updated as necessary to
22 incorporate any revisions to the initial inspection and maintenance schedules, and to ensure that
23 repair, renovation and replacement projects continue to be adequately identified and planned
24 beyond the initial time frames specified in subparagraph 81.B.3. At a minimum, the AMIP shall
25 include a description of the District’s programs for:

26 1. **Routine inspection of the Collection System** according to a
27 specified schedule, and that includes the following:

28 a) Inspection methods to be used, including direct visual

1 inspection and CCTV inspection, and whether CCTV equipment is owned, purchased, leased, or
 2 a combination;

3 b) An inspection schedule, and protocol for determining the
 4 regular time interval on which repeat inspections will be performed; and

5 c) A system for timely evaluation of inspection findings and
 6 documentation of the assessed condition.

7 **2. Collection system maintenance protocols, including:**

8 a) A schedule for routine cleaning of the Stege Sanitary
 9 District's Collection System using standardized responses developed by the District to typical
 10 local problems that cause blockages such as debris, grease and roots. The District shall develop
 11 its routine cleaning schedule after evaluating the cleaning needs of the Collection System;

12 b) A list of locations where pipe blockages and SSOs have
 13 frequently occurred (hot spots), a hot spot cleaning schedule, and procedures for adjusting the
 14 hot spot cleaning schedule based on changing conditions;

15 c) Preventive measures to address blockage of sewer pipes by
 16 roots, including a description of root control methods; locations where root control methods may
 17 be used within the Collection System; and a schedule for application of root control methods;
 18 and

19 d) A plan for staffing the sewer system cleaning and root
 20 control programs, indicating whether staffing duties will be carried out by agency staff, by staff
 21 from other agencies, or by private contractor(s). To the extent that any sewer cleaning or root
 22 control duties conducted under this program will be carried out by private contractor(s), the
 23 Stege Sanitary District shall retain on file and make available for inspection for a period of three
 24 years after the completion of work a description of each contractor and a copy of each contract,
 25 or a description of the procurement process.

26 e) A Quality Assurance and Quality Control Program
 27 ("QA/QC Program") to ensure proper sewer cleaning. The QA/QC Program shall include a plan
 28 for inspecting the cleaning quality, which specifies a minimum percentage of cleaned pipe to be

1 inspected at regular intervals and a schedule for inspections, the procedures for conducting the
2 inspections, the time interval for any necessary re-cleaning, and criteria for increasing and
3 decreasing the frequency of inspection.

4 **3. Condition based repair and replacement of sewer pipe plan.**

5 This plan shall include elimination of known improper flow connections, according to a schedule
6 informed by the inspection results, and address both short-term (repairs of Acute Defects to
7 occur within one year of completion of inspection and assessment) and long term repair,
8 rehabilitation and replacement of sewer pipes. The plan shall include the following:

9 a) A schedule and 10 year financial plan for repair,
10 rehabilitation, and replacement of sewer pipes. This schedule shall identify pipe reaches
11 presently planned as priorities for rehabilitation or replacement over the next three years, with
12 the understanding that the identified priorities are likely to be further developed and revised
13 through the inspection and assessment process, and as a result of changed conditions. The
14 District shall develop its schedule for repair, rehabilitation and replacement of sewer pipes using
15 standardized responses developed by the District to observed defects, taking into account
16 available peak flow rate data;

17 b) Measures to control the inflow and infiltration as needed to
18 reduce flows in the Collection System, and to reduce the frequency of SSOs; and

19 c) The budget allocated for emergency repair and replacement
20 of sewer pipe, the length of sewer pipe which underwent emergency repair and replacement
21 during the previous year, and the cost thereof.

22 C. Beginning in 2013, as part of its Annual Report provided for in Section
23 XIII , the Stege Sanitary District shall submit information to EPA summarizing the District's
24 progress in implementing each element of the AMIP, and must include any proposed revisions to
25 the maintenance and construction schedules along with any accompanying changes to the
26 financial plan. If any Acute Defect has not been addressed within one year of the inspection and
27 assessment identifying it, the District shall explain what new information or changed
28 circumstances warrant not addressing the Acute Defect.

1 83. Private Sewer Lateral Inspection and Repair or Replacement Program

2 A. Consistent with the requirements at Section V.C., Paragraph 29 of the
3 EBMUD SO, EBMUD adopted a Regional Private Sewer Lateral Ordinance (the “Regional
4 Ordinance”) setting standards for the performance of sewer pipes that extend from privately-
5 owned structures to the Satellites’ Collection Systems (“private sewer laterals”). The Regional
6 Ordinance requires that each owner of a private sewer lateral show proof that the lateral meets
7 the performance standards by obtaining (or already holding) a valid Compliance Certificate upon
8 transfer of title of the structure, prior to obtaining a permit or other approval authorizing
9 construction or significant modification of such structure at a cost in excess of \$100,000, and
10 prior to obtaining approval from EBMUD for a change in the size of the owner’s water service.
11 The Regional Ordinance applies only to the portion of private sewer laterals that are on the
12 property of the owner of the privately-owned structure (the “upper lateral”). Portions of the
13 private sewer lateral connecting the upper lateral to the sewer main on public property, including
14 public streets, (the “lower lateral”) are not addressed by the Regional Ordinance. The District
15 has the option of submitting an application to EBMUD for a determination that the District has a
16 private sewer lateral ordinance that is no less stringent than the Regional Ordinance (“No Less
17 Stringent Application”), but has elected to be covered by the EBMUD Regional Ordinance.

18 B. On **October 15, 2010**, the Stege Sanitary District submitted the following
19 to EPA for review and comment (these documents do not require EPA approval):

20 1. Procedures for cooperating with EBMUD in the implementation of
21 its private sewer lateral program within the District’s service area, including a description of the
22 responsibilities that will be assigned to each District department involved in the implementation
23 of this program;

24 2. A statement that the District will coordinate with the entities who
25 are responsible for issuing the permits and approvals described above in subparagraph 83.A to
26 the District’s customers to insure that such permits and approvals are issued only upon
27 presentation by the District’s customers of a valid EBMUD Compliance Certificate; and
28

1 3. A copy of an agreement, if any, between the District and EBMUD
2 regarding cooperation in the implementation of the private sewer lateral program, which may
3 include a description of the building permit processes that require the District's customers to
4 submit compliance certificates prior to the City inspector's completion of the final inspection.

5 C. The District shall provide to EBMUD the information required by and at
6 the frequency determined necessary by EPA for implementation of the Regional Ordinance
7 program.

8 D. Lower Laterals. The District's Ordinances provide that the property
9 owner is the owner of the lower lateral and has full responsibility for its maintenance. By June
10 20, 2011, the District shall enact an ordinance which extends EBMUD's Regional Ordinance to
11 apply to lower sewer laterals. Unless the property owner already has a valid Compliance
12 Certificate, the property owner shall be required to obtain a Compliance Certificate from
13 EBMUD (a) prior to transferring title to the residential, commercial, or industrial structure, (b)
14 prior to obtaining any permit or other approval needed for the construction or significant
15 modification of such structure at a cost in excess of \$100,000, or (c) prior to obtaining approval
16 from EBMUD for an increase or decrease in size of the owner's water service. It is anticipated
17 that, in January 2012 (after a District ordinance is passed as described above), EBMUD will
18 extend the administration of the Regional Ordinance to lower laterals in the same way as upper
19 laterals, under its Stipulated Order with the United States, and that EBMUD's Compliance
20 Certificates shall cover lower laterals as well as upper laterals.

21 84. Sub-Basin Flow Monitoring/I&I Assessment Plan

22 A. The Stege Sanitary District shall cooperate with EBMUD in the
23 development of the Regional Flow Monitoring/Data Assessment Program described in Section
24 V.A. of the EBMUD SO, and the Flow Modeling and Limits Report described in Section V.B. of
25 the EBMUD SO.

26 B. On **July 15, 2010**, the Stege Sanitary District submitted, and EPA has
27 reviewed and approved, a Sub-Basin Flow Monitoring/I&I Assessment Plan. The District shall
28

1 take the actions required by the Plan, in accordance with the schedules and requirements of the
2 Plan as approved.

3 C. By December 1, 2012, the Stege Sanitary District shall submit a report to
4 EPA for review and approval pursuant to Section XIV on the activities undertaken pursuant to
5 the Sub-Basin Flow Monitoring/I&I Assessment Plan to provide the following:

6 1. Classification of Sub-Basins as high, medium, or low priority with
7 regard to the relative quantities of significant infiltration to the Collection System;

8 2. Classification of Sub-Basins as high, medium, or low priority with
9 regard to the relative quantities of significant inflow to the Collection System;

10 3. Identification of any bottlenecks in the Collection System which
11 lack sufficient capacity to convey sewage flows through the Collection System and to the
12 EBMUD interceptor during wet weather; and

13 4. A plan for using these results to identify and target high priority
14 areas for repair and rehabilitation work.

15 85. Inflow Identification and Reduction

16 A. On **July 15, 2010**, the Stege Sanitary District submitted, and EPA has
17 reviewed and approved, an Inflow Identification and Reduction Plan that describes how the
18 Stege Sanitary District will implement a program to identify and reduce sources of direct storm
19 water inflow, including roof leaders and drains directly connected to the Collection System,
20 leaking manhole covers, and cross connections with storm drains. The District shall take the
21 actions required by the Plan, in accordance with the schedules and requirements of the Plan as
22 approved.

23 B. Beginning in 2012, as part of the Annual Report provided for in Section
24 XIII, the Stege Sanitary District shall submit the following information as it becomes available
25 on implementation of the Inflow Identification and Reduction Program:

26 1. Locations and results of inflow testing done the previous year
27 including the total number of illicit connections discovered;

28

1 2. Description of follow-up actions that were conducted, including
2 the number of illicit connections which were disconnected;

3 3. Description of enforcement actions taken against any property
4 owner who did not comply with disconnection requirements;

5 4. Description of methods used to seal manhole covers in Collection
6 System areas prone to flooding, and list of locations at which this work was done; and

7 5. A schedule for locations to be tested in the next year.

8 86. Documentation of SSO Response Procedures

9 A. On **April 15, 2010**, Stege Sanitary District submitted, and EPA has
10 reviewed and approved, written procedures for the following:

11 1. Procedures to notify those who respond to SSOs during normal
12 business hours and after business hours. The responders shall have a response goal of 60
13 minutes.

14 2. Procedures to estimate SSO volume that include more than one
15 estimation method to be used for different SSO scenarios.

16 3. Procedures to determine the SSO start time. The start time shall be
17 no later than the time at which the initial report of the SSO is made.

18 These procedures are enforceable under this Stipulated Order as if set forth herein.

19 B. Stege Sanitary District shall ensure that agency staff and responders are
20 adequately trained to perform the SSO response procedures, and shall maintain records of
21 training. The District shall retain appropriate records and evaluate on an annual basis agency
22 staff's and responders' adherence to the Plan as approved, and report findings of its evaluation in
23 the Annual Report required in Section XIII.

24 87. Annual SSO Reports. Beginning in 2011, as part of the Annual Report provided
25 for in Section XIII, the Stege Sanitary District shall submit a copy to EPA of the Annual Report
26 of Sanitary Sewer Overflows (“Annual Overflow Report”) required by the Regional Water
27 Board. To the extent that the information is not included in the Annual Overflow Report, the
28 Stege Sanitary District shall provide a listing of the number and location(s) of repeat SSOs, a list