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COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

PIEDMONT REGIONAL OFFICE

4949-A Cox Road
Glen Allen, Virginia 23060
(804) 527-5020
Fax (804) 527-5106
www.deq.state.va.us

Robert G. Burnley
Director

Gerard Seeley, Jr.
Piedmont Regional Director

**STATE WATER CONTROL BOARD ENFORCEMENT ACTION
SPECIAL ORDER BY CONSENT
ISSUED TO
THE CITY OF RICHMOND
Permit No. VA0063177**

SECTION A: Purpose

This is a Consent Special Order issued under the authority of Va. Code §§ 10.1-1185 and 62.1-44.15(8a), between the State Water Control Board and the City of Richmond. This Order supercedes and replaces the Consent Special Order issued to the City on October 8, 1999, regarding implementation of a plan to control combined sewer overflow discharges to the James River.

SECTION B: Definitions

Unless the context clearly indicates otherwise, the following words and terms have the meaning assigned to them below:

1. "Va. Code" means the Code of Virginia (1950), as amended.
2. "Board" means the State Water Control Board, a permanent citizens' board of the Commonwealth of Virginia as described in Va. Code §§ 10.1-1184 and 62.1-44.7.
3. "Department" or "DEQ" means the Department of Environmental Quality, an agency of the Commonwealth of Virginia as described in Va. Code § 10.1-1183.
4. "Director" means the Director of the Department of Environmental Quality.
5. "Order" means this document, also known as a Consent Special Order.
6. "City" means the City of Richmond, Virginia.

7. “Facility” means a component of the City of Richmond’s wastewater treatment works located in Richmond, Virginia.
8. “Functioning Element” means a component of a project that if constructed and placed in operation will provide some part of the overall beneficial function of the project.
9. “Place in Operation” or “Placing a Facility in Operation” means to achieve consistent operations following completion of a startup and test period in such a way as to accomplish the intended function, even though all construction activities (such as completion of a punch-list, resolution of contract disputes and other close-out items) may not be completed.
10. “PRO” means the Piedmont Regional Office of DEQ, located in Glen Allen, Virginia.
11. “Permit” means VPDES permit No. VA0063177, issued to the City and any future, extended, modified or reissued permit.
12. “O&M” means operations and maintenance.
13. “WWTP” means wastewater treatment plant.
14. “CSO” means combined sewer overflow, a term which is used to describe overflows from a combined sanitary and stormwater sewer system.
15. “CSS” means combined sewer system consisting of the pipelines, pumping stations, and treatment facilities in the City which are designed to convey wastewater and storm water through a single pipe system to a combined sewer overflow outfall and/or the WWTP.
16. “CSO Policy” means EPA’s April 19, 1994 CSO Control Policy, published at 59 Fed Reg 18688, and incorporated into the Clean Water Act pursuant to the Wet Weather Water Quality Act, Section 402(q) of the Clean Water Act, 33 U.S.C. § 1342.
17. “City Charter” means the Richmond Charter of 1948, as amended from time to time.
18. “Indenture” means the Master Indenture of Trust of April 1, 1998 between the City of Richmond and Crestar, now Suntrust, Bank, as amended from time to time.
19. LTCP” means Long Term Control Plan, which is the plan for controlling CSOs from the City’s CSS that has been prepared by the City pursuant to the CSO Policy and submitted to DEQ as a final report in January 2002 and all supplements thereto.

20. “CCF” means hundred cubic feet.
21. “Treatment Works” means those devices and systems described at 9VAC 25-31-10.

SECTION C: Findings of Fact and Conclusions of Law

1. The City of Richmond owns and operates a combined sanitary and stormwater sewer system which, during periods of rainfall, discharges pollutants from some or all of twenty-nine (29) CSO outfalls to the James River and its local tributaries. The City’s CSO discharges are authorized by VPDES Permit No. VA0063177.
2. The City has been cooperating with the State Water Control Board since the mid-1970s to address combined sewer overflow impacts on the James River. The City’s compliance with Consent Orders and Permits issued since that time have resulted in the implementation of best management practices and the completion of major construction projects that have significantly reduced the volume, frequency and impacts of combined sewer overflows during storm events.
3. The CSO Policy calls for localities with combined sewer systems to prepare LTCPs that meet certain minimum technical criteria and ultimately result in compliance with state water quality standards.
4. The most recent Consent Order; issued to the City on October 8, 1999; required the City to evaluate its progress with respect to the CSO Policy, and recommend a course of future actions to comply with that policy. The City prepared the evaluation, obtained public comment and submitted to DEQ an LTCP on January 2, 2002, which was presented to the Board on May 6, 2002. In its LTCP, the City identified several alternatives for future actions and recommended one that is referred to as CSO Control Plan E. This control plan is reflected in Appendix B of this Order and has been submitted by the City to satisfy the “Demonstration” approach criteria of Section II.C.4.b. of the CSO Policy. However, the Board has not completed the water quality standards coordination process provided in Section III of the CSO Policy, and, therefore, is unable to determine at this time that the recommended plan makes the water quality standards compliance demonstration called for in Section II.C.4.b.i and ii. of the CSO Policy. Accordingly, the water quality standards coordination process will continue until the Board makes such a determination.

SECTION D: Agreement and Order

Accordingly, the Board, by virtue of the authority granted it in Va. Code § 62.1- 4.15(8a), orders the City, and the City agrees, that:

1. The previous Order issued on October 8, 1999 is terminated.

2. The Board accepts the City's January 2002 LTCP and approves CSO Control Plan E, as described in the LTCP subject to the Board completing its ongoing water quality standards coordination process pursuant to Section III of the CSO Policy and the Board's determination that the recommended plan makes the water quality standards compliance demonstration called for in Section II.C.4.b.i and ii of the CSO Policy.
3. The City shall implement CSO Control Plan E in accordance with the schedule in Appendix A of this Order.
4. If at any time prior to the termination of this order, the Clean Water Act, 33 U.S.C. § 1251 et seq., is modified, or EPA duly promulgates new regulations to establish requirements for the control of CSO's in conflict with one or more provisions of this Order, the City and the Board agree to modify or terminate this order to comply with such federal requirements.
5. New, more cost effective technologies or improvements in the performance of the LTCP, are expected during implementation. At any time the City or Department becomes aware of such new technology or performance improvements, a joint evaluation of the new technology or proposed modification will be undertaken to determine if the LTCP and this Order should be modified.

SECTION E: Administrative Provisions

1. The Board may modify or amend this Order with the consent of the City, or for good cause shown by the City, or on its own motion after notice and opportunity to be heard.
2. This Order only addresses the matters specified herein. This Order shall not preclude the Board or the Director from taking any action authorized by law, including but not limited to: (1) taking any action authorized by law regarding any violations not specifically addressed herein; or (2) taking subsequent action to enforce this Order. This Order shall not preclude appropriate enforcement actions by other federal, state, or local regulatory authorities for matters not addressed herein.
3. Nothing herein shall be construed as altering, modifying or amending any term or condition contained in VPDES Permit No. VA0063177.
4. For purposes of this Order and subsequent actions with respect to this Order, the City admits the jurisdictional allegations, factual findings, and conclusions of law contained herein. In agreeing to this Order however, the City shall not be deemed to have admitted that it is violating any federal or state law, rule, regulation, standard or criterion.

5. The City consents to venue in the Circuit Court of the City of Richmond for any civil action taken to enforce the terms of this Order.
6. The City acknowledges it has received fair and due process under the Administrative Process Act, Va. Code §§ 2.2-4000 et seq., and the State Water Control Law and it waives the right to any hearing or other administrative proceeding authorized or required by law or regulation, and to any judicial review of any issue of fact or law contained herein. Nothing herein shall be construed as a waiver of the right to any administrative proceeding for, or to judicial review of, any action taken by the Board to enforce this Order.
7. Failure by the City to comply with any of the terms of this Order shall constitute a violation of an order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Board or the Director as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.
8. If any provision of this Order is found to be unenforceable for any reason, the remainder of the Order shall remain in full force and effect.
9. The City shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or other event beyond the control of the City, or its contractors or agents that will delay or prevent the performance on any obligation under this Order. The City shall show that such circumstances were beyond its control and not due to a lack of good faith or diligence on its part. The City shall notify the PRO Regional Director in writing when circumstances are anticipated to occur, are occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of the Order. Such notice shall set forth the reasons for the delay or noncompliance, the projected duration of any such delay or noncompliance, the measures taken and to be taken to prevent or minimize such delay or noncompliance and the timetable by which such measures will be implemented and the date full compliance will be achieved. Failure to so notify the Regional Director within 30 days of learning of any condition, which the City intends to assert will result in the impossibility of compliance, shall constitute a waiver of any claim of inability to comply with a requirement of this Order. The City may assert and it shall be a defense to any enforcement action for alleged violation of this Order that the alleged violation was beyond the control of the City.
10. This Order is binding on the parties hereto, their successors in interest, designees and assigns, jointly and severally.
11. This Order shall become effective upon execution by both the Director or his designee and the City. Notwithstanding the foregoing, the City agrees to be bound by any compliance date, which precedes the effective date of this Order.

12. This Order shall continue in effect until the Director or Board terminates the Order upon 30 days written notice to the City. Such termination shall be a case decision within the meaning of Virginia Code § 2.2 – 4019 and Rule 2A:2 of the rules of the Supreme Court of Virginia. Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve the City from its obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

13. Communications regarding this Order, and its requirements shall be addressed as follows:

Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060
Attn. Water Enforcement Specialist

And it is so ORDERED this day of March 17, 2005.

Gerald Feeley Jr. (for)
Robert G. Burnley, Director
Department of Environmental Quality

The City voluntarily agrees to the issuance of this Order.

By: [Signature]
William E. Harrell,
Interim Chief Administrative Officer
City of Richmond, Virginia

Date: 2/8/05

Approved As To Form

By: [Signature]
David W. Seitz, Assistant City Attorney

Date: 2/7/05

Commonwealth of Virginia
City/County of Richmond

The foregoing document was signed and acknowledged before me this 8th day of February, 2005, by William E. Harrell, who is Interim Chief Administrative Officer of the City, on behalf of the City.

Mildred D. Kennedy
Notary Public

My commission expires: October 31, 2005

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APPENDIX A

Implementation Schedule for Richmond's CSO Long Term Control Plan (LTCP)

SECTION A.1.

The City shall implement the CSO Control Plan E projects set forth in Appendix B to this Order on the following schedule.

The City shall raise revenue for implementation of CSO Control Plan E to the limit of its financial capability. The City shall be deemed to be raising CSO control project funds to the limit of its financial capability if the following criteria are met:

1. At least bi-annually the City adjusts its sewer rates so that within five years of the effective date of this Order:
 - a The annual sewer bill for typical residential customers (i.e. 7 ccf of average monthly use) will be at least 1.25% of median household income¹; and
 - b The sewer volume rate for customers identified as industrial users in the City's utility billing records will equal the rate charged to the City's residential customers.
2. The City periodically borrows funds for Treatment Works related projects, including CSO control projects, according to City Charter and Indenture and maintains a Wastewater Utility debt coverage ratio, as defined in the indenture, below 1.75.
3. The City annually seeks grant funding for CSO control projects in the LTCP from all applicable federal and state sources.

SECTION A.2.

Each fiscal year following the effective date of this order the City shall allocate and spend available funds on appropriated CSO control projects in Appendix B in accordance with the schedule in this Appendix A. The City shall, however, not be required to spend funds to construct part of a project unless that part will provide a Functioning Element. Available funds for CSO control projects shall include annual sewer revenues remaining after deducting from those revenues the monies required for the following:

- Operating expenses,
- Non-operating expenses,

¹ As reflected in the 2000 and any subsequent census. In the years between each census, the median household income (MHI) shall be adjusted based on the percent increase in the consumer price index – all urban consumers U.S. city average (CPI-U) for that year.

- Any other expenditures required to comply with any federal, state or local water quality related requirements associated with the City’s combined sewer system and Treatment Works.

Available funds for CSO control projects also include any loan and grant funds obtained for the purpose of implementing CSO projects identified in the LTCP.

SECTION A.3.

The City shall plan, design, construct, startup, test and place in operation the CSO Control Plan E projects in Appendix B, in accordance with the following schedule:

REQUIREMENTS	MILESTONES
1. <u>CSO Disinfection Study</u> : Submit to the Department a final report on a disinfection pilot study to determine the most effective method of disinfecting CSO discharges at the Shockoe retention basin and the City’s WWTP	Not Later Than (NLT) June 30, 2005
2. <u>Phase III Program Project Plan</u> : Submit to the Department, for it’s review and approval, a program project plan(s) for implementing the elements of the CSO Control Plan E.	NLT December 31, 2006
3. Solids and Floatable Control Regulator for CSO Outfall No. 024:	
a. Submit to the Department for its approval the Preliminary Design Report for the Solids and Floatable Control Regulator for CSO Outfall No. 024	NLT 3 months after issuance of this Order.
b. Submit to the Department for its approval the final drawings and specifications for Solids and Floatable Control Regulator for CSO Outfall No. 024	NLT 6 months after approval of activities under Requirement 3.a.
c. Construct, startup, and test the Solids and Floatable Control Regulator for CSO Outfall No. 024	NLT 20 months after approval of the final drawings and specifications under Requirement 3.b.
d. Place in Operation the Solids and Floatable Control Regulator for CSO Outfall No. 024	NLT 1 month after completion of activities under Requirement 3.c.

REQUIREMENTS	MILESTONES
4. Solids and Floatable Control Regulator for CSO Outfall No. 026:	
a. Submit to the Department for its approval the Preliminary Design Report for the Solids and Floatable Control Regulator for CSO Outfall No. 026	NLT 3 months after issuance of this Order.
b. Submit to the Department for its approval the final drawings and specifications for Solids and Floatable Control Regulator for CSO Outfall No. 026	NLT 6 months after approval of activities under Requirement 4.a.
c. Construct, startup, and test the Solids and Floatable Control Regulator for CSO Outfall No. 026	NLT 20 months after approval of the final drawings and specifications under Requirement 4.b.
d. Place in Operation the Solids and Floatable Control Regulator for CSO Outfall No. 026	NLT 1 month after completion of activities under Requirement 4.c.
5. Solids and Floatable Control Regulator for CSO Outfall No. 025:	
a. Submit to the Department for its approval the Preliminary Design Report for the Solids and Floatable Control Regulator for CSO Outfall No. 025	NLT 3 months after issuance of this Order.
b. Submit to the Department for its approval the final drawings and specifications for Solids and Floatable Control Regulator for CSO Outfall No. 025	NLT 6 months after approval of activities under Requirement 5.a.
c. Construct, startup, and test the Solids and Floatable Control Regulator for CSO Outfall No. 025	NLT 20 months after approval of the final drawings and specifications under Requirement 5.b.
d. Place in Operation the Solids and Floatable Control Regulator for CSO Outfall No. 025	NLT 1 month after completion of activities under Requirement 5.c.

REQUIREMENTS	MILESTONES
6. Fulton Bottom Urban Renewal Separation Project:	
a. Submit to the Department for its approval the Preliminary Design Report for the Fulton Bottom Urban Renewal Separation Project	NLT 3 months after the Phase III Program Project Plan under Requirement 2.
b. Submit to the Department for its approval the final drawings and specifications for the Fulton Bottom Urban Renewal Separation Project	NLT 6 months after approval of activities under Requirement 6.a.
c. Construct, startup, and test the Fulton Bottom Urban Renewal Separation Project	NLT 36 months after approval of the final drawings and specifications under Requirement 6.b.
d. Place in Operation the Fulton Bottom Urban Renewal Separation Project	NLT 1 month after completion of activities under Requirement 6.c.
7. Maury Street Separation Project:	
a. Submit to the Department for its approval the Preliminary Design Report for the Maury Street Separation Project	NLT 3 months after the Phase III Program Project Plan under Requirement 2.
b. Submit to the Department for its approval the final drawings and specifications for the Maury Street Separation Project	NLT 6 months after approval of activities under Requirement 7.a.
c. Construct, startup, and test the Maury Street Separation Project	NLT 48 months after approval of the final drawings and specifications under Requirement 7.b.
d. Place in Operation the Maury Street Separation Project	NLT 1 month after completion of activities under Requirement 7.c.

REQUIREMENTS	MILESTONES
8. Orleans and Nicholson Streets Separation Project:	
a. Submit to the Department for its approval the Preliminary Design Report for the Orleans and Nicholson Streets Separation Project	NLT 3 months after the Phase III Program Project Plan under Requirement 2.
b. Submit to the Department for its approval the final drawings and specifications for the Orleans and Nicholson Streets Separation Project	NLT 6 months after approval of activities under Requirement 8.a.
c. Construct, startup, and test the Orleans and Nicholson Streets Separation Project	NLT 60 months after approval of the final drawings and specifications under Requirement 7.b.
d. Place in Operation the Orleans and Nicholson Streets Separation Project	NLT 1 month after completion of activities under Requirement 8.c.
9. Oakwood Peripheral In-Line Flow Equalization:	
a. Submit to the Department for its approval the Preliminary Design Report for the Oakwood Peripheral In-Line Flow Equalization	NLT 3 months after the Phase III Program Project Plan under Requirement 2.
b. Submit to the Department for its approval the final drawings and specifications for the Oakwood Peripheral In-Line Flow Equalization	NLT 6 months after approval activities under Requirement 9.a.
c. Construct, startup, and test the Oakwood Peripheral In-Line Flow Equalization	NLT 72 months after approval of the final drawings and specifications under Requirement 9.b.
d. Place in Operation the Oakwood Peripheral In-Line Flow Equalization	NLT 1 month after completion of activities under Requirement 9.c.

REQUIREMENTS	MILESTONES
10. Solids and Floatable Control Regulator for CSO Outfall No. 012:	
a. Submit to the Department for its approval the Preliminary Design Report for the Solids and Floatable Control Regulator for CSO Outfall No. 012	NLT 3 months after the Phase III Program Project Plan under Requirement 2.
b. Submit to the Department for its approval the final drawings and specifications for Solids and Floatable Control Regulator for CSO Outfall No. 012	NLT 6 months after approval of activities under Requirement 10.a.
c. Construct, startup, and test the Solids and Floatable Control Regulator for CSO Outfall No. 012	NLT 84 months after approval of the final drawings and specifications under Requirement 10.b.
d. Place in Operation the Solids and Floatable Control Regulator for CSO Outfall No. 012	NLT 1 month after completion of activities under Requirement 10.c.
11. Solids and Floatable Control Regulator for CSO Outfall No. 014:	
a. Submit to the Department for its approval the Preliminary Design Report for the Solids and Floatable Control Regulator for CSO Outfall No. 014	NLT 3 months after the Phase III Program Project Plan under Requirement 2.
b. Submit to the Department for its approval the final drawings and specifications for Solids and Floatable Control Regulator for CSO Outfall No. 014	NLT 6 months after approval of activities under Requirement 11.a.
c. Construct, startup, and test the Solids and Floatable Control Regulator for CSO Outfall No. 014	NLT 96 months after approval of the final drawings and specifications under Requirement 11.b.
d. Place in Operation the Solids and Floatable Control Regulator for CSO Outfall No. 014	NLT 1 month after completion of activities under Requirement 11.c.

REQUIREMENTS	MILESTONES
12. Solids and Floatable Control Regulator for CSO Outfall No. 039:	
a. Submit to the Department for its approval the Preliminary Design Report for the Solids and Floatable Control Regulator for CSO Outfall No. 039	NLT 3 months after of the Phase III Program Project Plan under Requirement 2.
b. Submit to the Department for its approval the final drawings and specifications for Solids and Floatable Control Regulator for CSO Outfall No. 039	NLT 6 months after approval of activities under Requirement 12.a.
c. Construct, startup, and test the Solids and Floatable Control Regulator for CSO Outfall No. 039	NLT 108 months after approval of the final drawings and specifications under Requirement 12.b.
d. Place in Operation the Solids and Floatable Control Regulator for CSO Outfall No. 039	NLT 1 month after completion of activities under Requirement 12.c.
13. Lower Gillies Creek Conveyance System Project:	
a. Submit to the Department for its approval the Preliminary Design Report for the Lower Gillies Creek Conveyance System Project	NLT 3 months after the Board or the Department determines that (1) Plan E satisfies all the criteria under Section II.C.4.b.i and ii of the CSO Policy, and (2) approval of the Phase III Program Project Plan under Requirement 2.
b. Submit to the Department for its approval the final drawings and specifications for the Lower Gillies Creek Conveyance System Project	NLT 9 months after completion or approval of activities under Requirement 13.a.
c. Construct, startup, and test the Lower Gillies Creek Conveyance System Project	At such time as the combined affordability and spending measures under Sections A.1. and A.2. produce revenue to proceed with construction of a Functioning Element or; if sufficient funds are available at the time of completion of final drawings and specifications, NLT 26 months after approval of the final drawings and specifications under Requirement 13.b.
d. Place in Operation the Lower Gillies Creek Conveyance System Project	NLT 1 month after completion of activities under Requirement 13.c.

REQUIREMENTS	MILESTONES
14. Wet Weather Flow Improvements at the WWTP: Solids Removal Improvements Project	
a. Submit to the Department for its approval the Preliminary Design Report for the Solids Removal Improvements Project	NLT 3 months after starting construction of the project under Requirement 13.c.
b. Submit to the Department for its approval the final drawings and specifications for the Solids Removal Improvements Project	NLT 9 months after completion or approval of activities under Requirement 14.a. (1)
c. Construct, startup, and test the Solids Removal Improvements Project	At such time as the combined affordability and spending measures under Sections A.1. and A.2. produce revenue to proceed with construction of a Functioning Element or; if sufficient funds are available at the time of completion of final drawings and specifications, NLT 26 months after approval of the final drawings and specifications under Requirement 14.a.(2)
d. Place in Operation for the Solids Removal Improvements Project	NLT 1 month after completion of activities under Requirement 14.a.(3)
15. Wet Weather Flow Improvements at the WWTP: Wet Weather Disinfection Facilities Project	
a. Submit to the Department for its approval the Preliminary Design Report for the Wet Weather Disinfection Facilities Project	NLT 3 months after starting construction of the project under Requirement 14.a.(3)
b. Submit to the Department for its approval the final drawings and specifications for the Wet Weather Disinfection Facilities Project	NLT 9 months after completion or approval of activities under Requirement 14.b.(1)
c. Construct, startup, and test the Wet Weather Disinfection Facilities Project	At such time as the combined affordability and spending measures under Sections A.1. and A.2. produce revenue to proceed with construction of a Functioning Element or; if sufficient funds are available at the time of completion of final drawings and specifications, NLT 26 months after approval of the final drawings and specifications under Requirement 14.b.(2)
d. Place in Operation for Wet Weather Disinfection Facilities Project	NLT 1 month after completion of activities under Requirement 14.b.(3)

REQUIREMENTS	MILESTONES
16. Wet Weather Flow Improvements at the WWTP: Expand Secondary Wet Weather Flow Treatment Project	
a. Submit to the Department for its approval the Preliminary Design Report for the Expand Secondary Wet Weather Flow Treatment Project	NLT 3 months after starting construction of the project under Requirement 14.b.(3)
b. Submit to the Department for its approval the final drawings and specifications for the Expand Secondary Wet Weather Flow Treatment Project	NLT 9 months after completion or approval of activities under Requirement 14.c.(1)
c. Construct, startup, and test the Expand Secondary Wet Weather Flow Treatment Project	At such time as the combined affordability and spending measures under Sections A.1. and A.2. produce revenue to proceed with construction of a Functioning Element or; if sufficient funds are available at the time of completion of final drawings and specifications, NLT 26 months after approval of the final drawings and specifications under Requirement 14.c.(2)
d. Place in Operation for Wet Weather Disinfection Facilities Project	NLT 1 month after completion of activities under Requirement 14.c.(3)
17. Shockoe Retention Basin: Adapt Existing Basin for Pass Through Wet Weather Flow Project	
a. Submit to the Department for its approval the Preliminary Design Report for the Adapt Existing Basin for Pass Through Wet Weather Flow Project	NLT 3 months after starting construction of the project under Requirement 14.c.(3)
b. Submit to the Department for its approval the final drawings and specifications for the Adapt Existing Basin for Pass Through Wet Weather Flow Project	NLT 9 months after completion or approval of activities under Requirement 15.a.(1)

REQUIREMENTS	MILESTONES
c. Construct, startup, and test the Adapt Existing Basin for Pass Through Wet Weather Flow Project	At such time as the combined affordability and spending measures under Sections A.1. and A.2. produce revenue to proceed with construction of a Functioning Element or; if sufficient funds are available at the time of completion of final drawings and specifications, NLT 26 months after approval of the final drawings and specifications under Requirement 15.a.(2)
d. Place in Operation for Adapt Existing Basin for Pass Through Wet Weather Flow Project	NLT 1 month after completion of activities under Requirement 15.a.(3)
18. Shockoe Retention Basin: Shockoe Retention Basin 15 MG Expansion Project	
a. Submit to the Department for its approval the Preliminary Design Report for the Shockoe Retention Basin 15 MG Expansion Project	NLT 3 months after starting construction of the project under Requirement 15.a.(3)
b. Submit to the Department for its approval the final drawings and specifications for the Shockoe Retention Basin 15 MG Expansion Project	NLT 9 months after completion or approval of activities under Requirement 15.b.(1)
c. Construct, startup, and test the Shockoe Retention Basin 15 MG Expansion Project	At such time as the combined affordability and spending measures under Sections A.1. and A.2. produce revenue to proceed with construction of a Functioning Element or; if sufficient funds are available at the time of completion of final drawings and specifications, NLT 38 months after approval of the final drawings and specifications under Requirement 15.b.(2)
d. Place in Operation for Shockoe Retention Basin 15 MG Expansion Project	NLT 1 month after completion of activities under Requirement 15.b.(3)

REQUIREMENTS	MILESTONES
19. Shockoe Retention Basin: Shockoe Wet Weather Disinfection Facility Project	
a. Submit to the Department for its approval the Preliminary Design Report for the Shockoe Wet Weather Disinfection Facility Project	NLT 3 months after starting construction of the project under Requirement 15.b.(3)
b. Submit to the Department for its approval the final drawings and specifications for the Shockoe Wet Weather Disinfection Facility Project	NLT 9 months after completion or approval of activities under Requirement 15.c.(1)
c. Construct, startup, and test the Shockoe Wet Weather Disinfection Facility Project	At such time as the combined affordability and spending measures under Sections A.1. and A.2. produce revenue to proceed with construction of a Functioning Element or; if sufficient funds are available at the time of completion of final drawings and specifications, NLT 26 months after approval of the final drawings and specifications under Requirement 15.c.(2)
d. Place in Operation for Shockoe Wet Weather Disinfection Facility Project	NLT 1 month after completion of activities under Requirement 15.c.(3)

SECTION A.4.

Beginning December 1, 2005, and no later than December 1st of each year thereafter, the City shall submit a compliance and progress report to the Department. The report shall describe progress made in the previous fiscal year in controlling CSO's and plans for further implementation of the LTCP in the near and long term future. The report shall include, at a minimum, the following elements:

1. An independent rate consultant report that includes schedules and other material designed to demonstrate compliance with the above funding and spending criteria. At a minimum, the independent rate consultant's report will include:
 - a. A schedule of sewer rates and charges in effect during the year and an explanation of any changes in the sewer rates and charges during the year;
 - b. A schedule that calculates the current year annual sewer bill for a residential customer with a 7 ccf average monthly sewer use and the percentage of such bill to median household income in the City;
 - c. A schedule detailing sewer related revenues, operation and maintenance expenses, net revenues, debt service, reserve funds and the sewer debt service coverage ratio for the previous year;

- d A schedule detailing amounts borrowed, grants, and other sources of capital funds, and the amount of capital funds obligated for water quality projects during the previous year; and,
 - e A schedule displaying the industrial rate structure and progress toward the goal of parity between industrial and residential rates.
2. An accounting of all sums expended on implementation of specific CSO projects contained in the LTCP in the previous fiscal year and in each fiscal year since the effective date of this Order.
 3. An accounting of all sums obligated in the current fiscal year, and funds projected to be obligated within the next five years for implementation of specific CSO projects contained in the LTCP.
 4. A narrative report of the status of each CSO project identified in the LTCP including projected completion dates contingent upon funding availability.
 5. A status report of progress being made in procuring state and federal grants and low interest loans for the purpose of implementing specific elements of the LTCP.

The City agrees to accommodate requests by the Department for changes in annual report format and additional information. The City also agrees to meet with the Department in December, 2005, and every December thereafter, to discuss the status of the CSO projects required under this Order.

APPENDIX B

Description of the Elements in Richmond’s CSO Control Plan E

The City’s Long-Term Control Plan (LTCP) components of the CSO Control Plan E are described in the following table:

PROJECTS	DESCRIPTION
1. CSO Disinfection Study	Determines the most cost effective method of disinfecting CSO discharges at the Shockoe retention basin and the City’s WWTP
2. Phase III Program Project Plan	Develops program project plan(s) for implementing the elements of the CSO Control Plan E.
3. Solids and Floatable Control Regulator for CSO Outfall No. 024	Provides solids and floatables treatment for CSO Outfall 024 prior to discharge to Gillies Creek and the James River. Part of the project for Solids and Floatable Control Regulators (#III-7) in the City’s Long Term Control Plan.
4. Solids and Floatable Control Regulator for CSO Outfall No. 026	Provides solids and floatables treatment for CSO Outfall 026 prior to discharge to Gillies Creek and the James River. Part of the project for Solids and Floatable Control Regulators (#III-7) in the City’s Long Term Control Plan.
5. Solids and Floatable Control Regulator for CSO Outfall No. 025	Provides solids and floatables treatment for CSO Outfall 025 prior to discharge to Gillies Creek and the James River. Part of the project for Solids and Floatable Control Regulators (#III-7) in the City’s Long Term Control Plan.
6. Fulton Bottom Urban Renewal Separation Project	Separates combined sewers into separate sewers for the conveyance of sanitary sewage and storm water to eliminate discharges of combined sewer overflows from this CSO area into Gillies Creek and the James River. Part of the project for Separation of Select CSO Basins (#III-5) in the City’s Long Term Control Plan.
7. Maury Street Separation Project	Separates combined sewers into separate sewers for the conveyance of sanitary sewage and storm water to eliminate discharges of combined sewer overflows from this CSO area into the James River. Part of the project for Separation of Select CSO Basins (#III-5) in the City’s Long Term Control Plan.
8. Orleans and Nicholson Street Separation Project	Separates combined sewers into separate sewers for the conveyance of sanitary sewage and storm water to eliminate discharges of combined sewer overflows from this CSO area into the James River. Part of the project for Separation of Select CSO Basins (#III-5) in the City’s Long Term Control Plan.

PROJECTS	DESCRIPTION
9. Peripheral In-Line Flow Equalization at Oakwood	Captures and stores combined sewage in excess of the capacity of existing conveyance system, and conveys it to the WWTP once the conveyance and treatment capacities are restored. It attenuates peak combined sewer flows, provides a relatively constant flow into the WWTP and thus reduces the size and cost of treatment facilities.
10. Solids and Floatable Control Regulator for CSO Outfall No. 012	Provides solids and floatables treatment for CSO Outfall 012 prior to discharge to Almond Creek and the James River. Part of the project for Solids and Floatable Control Regulators (#III-7) in the City's Long Term Control Plan.
11. Solids and Floatable Control Regulator for CSO Outfall No. 014	Provides solids and floatables treatment for CSO Outfall 014 prior to discharge to Manchester Canal and the James River. Part of the project for Solids and Floatable Control Regulators (#III-7) in the City's Long Term Control Plan.
12. Solids and Floatable Control Regulator for CSO Outfall No. 039	Provides solids and floatables treatment for CSO Outfall 039 prior to discharge to Gillies Creek and the James River. Part of the project for Solids and Floatable Control Regulators (#III-7) in the City's Long Term Control Plan.
13. Lower Gillies Creek Conveyance System Project	Conveys combined sewer flows from the lower portion of the Gillies Creek CSO district to WWTP, and control these CSOs to 4 overflows per year. Conveys combined sewer flows from CSO Outfall 034 to Shockoe Retention Basin to reduce discharges of combined sewer overflows from this CSO area into the James River.
14. Wet Weather Flow Improvements at the WWTP: Solids Removal Improvements Project	Upgrades the primary treatment facilities to provide reliable treatment of up to 140 MGD wet weather flow; upgrades solids handling facilities to handle an increased solids loading associated with the increased CSO wet weather flow treatment.
15. Wet Weather Flow Improvements at the WWTP: Wet Weather Disinfection Facilities Project	Maximizes the wet weather treatment capacity to 300 MGD at WWTP; controls Gordon Avenue (CSO 021) outfall to 4 overflows per year. Upgrades the coarse screens, primary grit removal facilities, Main Pumping Station, and fine screens to provide reliable treatment of up to 300 MGD wet weather flow; Constructs a new wet weather disinfection facility at WWTP to treat flows up to 215 MGD (55 MGD primary effluent plus 160 MGD wet weather flow)
16. Wet Weather Flow Improvements at the WWTP: Expand Secondary Wet Weather Flow Treatment Project	Installs sedimentation enhancing technologies such as inclined plate settlers in the Final Sedimentation Tanks to increase the solids capture efficiency for up to 85 MGD wet weather flow; upgrades the return sludge and sludge withdrawals to increase the capacity of this facility.

PROJECTS	DESCRIPTION
17. Shockoe Retention Basin: Adapt Existing Basin for Pass Through Wet Weather Flow Project	Modifies Shockoe Diversion Structures, including trash rack improvement, solids removal and cleaning of Shockoe retention basin and diversion structure; Reconfigures aeration piping; Modifies retention basin bottom to slope to drain gates; Provides potential flushing system to clean the retention basin and diversion structures after every storm event.
18. Shockoe Retention Basin: Shockoe Retention Basin 15 MG Expansion Project	Expands the Shockoe Retention Basin by 15 MG; Provides flushing system; Relocates outfall to east end of retention basin; Provides access for servicing and mechanically cleaning the retention basin.
19. Shockoe Retention Basin: Shockoe Wet Weather Disinfection Facility Project	Provides disinfection for the new Shockoe outfall CSOs to decrease bacterial loading to the James River by an 80% event mean reduction

APPENDIX C

Wastewater Treatment During Wet Weather: The City shall operate and maintain its treatment works to treat as much flow as possible during combined sewer overflow treatment conditions. The City shall prepare an operating and reporting plan for maximizing treatment during combined sewer overflow treatment conditions and submit that plan to DEQ within 90 days of the effective date of this Order. The following annual average concentration limits shall apply for flow rates above 75 mgd during any calendar year:

Flow Rates	Effluent Limit mg/L ⁽¹⁾	
	CBOD5	TSS
Greater than 75 mgd less than or equal to 80 mgd	15	26
Greater than 80 mgd less than or equal to 85 mgd	18	35
Greater than 85 mgd less than or equal to 90 mgd	20	42
Greater than 90 mgd	21	51

(1) Annual average (i.e. average over the number of days in any flow tier)