



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Secretary of Natural Resources

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Robert G. Burnley
Director

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Regional Director

STATE WATER CONTROL BOARD ENFORCEMENT ACTION SPECIAL ORDER BY CONSENT ISSUED TO THE CITY OF SALEM

SECTION A: Purpose

This is a Consent Special Order issued under the authority of Va. Code §62.1-44.15(8a) by the State Water Control Board to the City of Salem, for the purpose of resolving certain alleged violations of the State Water Control Law and the Regulations. Goals of this Order include identifying sources of I&I that lead to system overflows and Plant bypasses, prioritizing and implementing interim actions to reduce I&I, developing and implementing a long-term corrective action plan including I&I reduction, and/or increased conveyance capacity, and performing those actions on an approved schedule.

SECTION B: Definitions

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 §§ 62.1-44.7 and 10.1-1184.
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. "Plant" means the Western Virginia Water Authority Water Pollution Control Plant, formerly known as the Roanoke Regional Water Pollution Control Plant, which operates under VPDES Permit No. VA0025020.

7. "WCRO" means the West Central Regional Office of DEQ, located in Roanoke, Virginia.
8. "Permit" means VPDES Permit No. VA0025020, which was reissued to the City of Roanoke to operate the Roanoke Regional Water Pollution Control Plant on May 14, 2004 and transferred to the Authority on July 21, 2004.
9. "Regulations" means the VPDES Permit Regulation, 9 VAC 25-31-10 *et seq.*
10. "Inflow and Infiltration" or "I&I" means non-sewage waters entering the sanitary sewer system.
11. "Bypass", as defined at 9 VAC 25-31-10, means the intentional diversion of waste streams from any portion of a treatment facility.
12. "Overflow" means a discharge of wastewater from a sanitary sewer collection or transmission system.
13. "City" means the City of Salem, Virginia, a political subdivision of the Commonwealth of Virginia.
14. "Authority" means the Western Virginia Water Authority, which was formed pursuant to the Virginia Water and Waste Authorities Act, Va. Code § 15.2-5100 *et seq.*, on March 3, 2004 by the City of Roanoke and the County of Roanoke for the purpose of managing water and wastewater for the City of Roanoke, the County of Roanoke, and other local users.

SECTION C: Findings of Fact and Conclusions of Law

1. The Plant provides advanced treatment for wastewater generated by citizens, businesses and institutions in the City of Salem, the Town of Vinton, and Botetourt County (collectively, the "Localities") as well as in the City of Roanoke and Roanoke County. Wastewater is collected in each of these jurisdictions and conveyed to the Plant by means of the Localities' satellite sanitary sewer collection and transmission systems and the Authority's collection system.
2. The Plant and the collection system are jointly used by the Authority and the Localities pursuant to the Regional Wastewater Collection and Treatment Contract, dated November 1, 2003, which establishes the rights and obligations of the parties with respect to the use of the aforementioned facilities.
3. I&I is believed to be occurring in some of the portions of the satellite collection system owned and operated by the Localities as well as the collection system owned and operated by the Authority. It is further believed that I&I leads to overflows in the collection system and it is also believed to be a significant contributing factor to bypasses and Permit effluent limit violations at the Plant. The Permit authorizes neither bypasses nor overflows. These issues

are expected to continue until completion of the actions specified in Appendix A of this Order, including the Corrective Action Plan.

4. During a meeting with DEQ on December 8, 2004, City staff stated that several manholes at different locations in Salem are known to have overflowed during wet weather in 2004. After the meeting, City staff showed DEQ staff many of those manholes, some of which showed evidence of recent overflows. The City has also submitted to DEQ a list of seventeen past overflow points. These past overflow points include: Hemlock Road and Bainbridge Drive; Ballfield behind the General Electric plant; Masons Creek at bridge on Main Street; Epperly Land (from motel); Broad Street at Carrolton Avenue; Hawthron Road and Broad Street; Second Street and Market Street; White Oak Alley; Ninth Street between Florida Street and Delaware Street; Chapman Street; Homeplace Salem (below pond on Diamond Road); Pump Station on Forest Drive; Franklin Street just past Upland Drive; Piedmont Avenue past Mulberry Street; McClelland Street (two manholes); Longview Avenue; On Riverside Drive in pasture.
5. The Board issued a consent special order to the Authority on March 15, 2005. Requirements of that order include submittal by the Authority to DEQ of a Final Collection System Evaluation and Study ("CSES") Report by July 30, 2006 and a Corrective Action Plan for the collection system by January 30, 2007.
6. The City timely reported an estimated 20,000 gallon overflow from a manhole on East Main Street to Mason Creek that occurred on March 28, 2005.
7. Va. Code § 62.1-44.5.A and 9 VAC 25-31-50.A prohibit the discharge of sewage or other wastes into State waters, by any person, except in compliance with a certificate or permit issued by the Board.

SECTION D: Agreement and Order

By virtue of the authority granted it pursuant to Va. Code §62.1-44.15, the Board orders the City, and the City agrees, to perform the actions described in Appendix A of this Order.

SECTION E: Administrative Provisions

1. The Board may modify, rewrite, or amend the Order with the consent of the City, for good cause shown by the City or on its own motion after notice and opportunity to be heard.
2. This Order only addresses and resolves the issues specifically identified herein. This Order shall not preclude the Board or the Director from taking any action authorized by law,

including but not limited to: (a) taking any action authorized by law regarding any additional, subsequent, or subsequently discovered violations; (b) seeking subsequent remediation of the Plant and/or the Collection System as may be authorized by law; or (c) 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. For purposes of this Order and subsequent actions with respect to this Order, the City admits the jurisdictional allegations in this Order, but does not admit the factual allegations or legal conclusions contained herein. The Board and the City agree that the actions undertaken by the City in accordance with this Order do not constitute an admission of any liability by the City. The City does not admit, and retains the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Order, the validity of the Findings of Fact and Conclusions of Law contained in Section C of this Order.
4. The City declares that it has received fair and due process under the Administrative Process Act, Va. Code §§ 2.2-4000 *et seq.* and 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 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 or the Director to enforce this Order.
5. 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.
6. 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.
7. 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 such occurrences beyond the City's control. 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 WCRO 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 this Order. Such notice shall set forth: (a) the reasons for the delay or noncompliance; (b) the projected duration of any such delay or noncompliance; (c) the measures taken and to be taken to prevent or minimize such delay or noncompliance; and (d) the timetable by which such measures will be implemented and the date full compliance will be achieved. Failure to so notify the WCRO

Regional Director within seventy-two hours of learning of any condition above, 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.

8. This Order is binding on the parties hereto, their successors in interest, designees and assigns, jointly and severally.
9. 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 that precedes the effective date of this Order.
10. Any plans, reports, schedules or specifications attached hereto or submitted by the City and approved by the Department pursuant to this Order are incorporated into this Order. Any non-compliance with such approved documents shall be considered a violation of this Order.
11. This Order shall continue in effect until either: a) the City petitions the Director or his designee to terminate the Order after it has completed all of the requirements of the Order and the Director or his designee approves the termination of this Order, or b) the Director or Board terminates this Order in his or its sole discretion upon 30 days written notice to the City. Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve the City from its obligations to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.
12. By the signature of an authorized official below, the City voluntarily agrees to the issuance of this Order.
13. The undersigned representative of the City certifies that he or she is a responsible official authorized to enter into the terms and conditions of this Order and to execute and legally bind the City to this document. Any documents to be submitted pursuant to this Order shall also be submitted by a responsible official of the City.

And it is so ORDERED this 8th day of DECEMBER, 2005

FOR Steven A. Dietrich
Robert G. Burnley, Director
Department of Environmental Quality

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Special Order by Consent
City of Salem

The City of Salem voluntarily agrees to the issuance of this Order.

By: Carl E. Tarpley Jr.

Commonwealth of Virginia

City/County of Salem

The foregoing instrument was acknowledged before me this 13th day of September, 2005,

by Carl E. Tarpley Jr., who is Mayor of the
City of Salem, on behalf of said City.

Jayne C. Bailey
Notary Public

My commission expires: 10-31-05

APPENDIX A

1. Initial Interim I&I Corrective Action Projects.

- a. Not later than June 30, 2006, the City shall complete the following repairs or replacements of its sewage collection system (hereinafter "Collection System").

Location of Repairs	Line Size (inches)	Linear Feet of Repair Or Replacement
151 Red Lane	18	Leaking manhole
Longview – relief sewer	8	260
Poplar and Starview St. – relief sewer	8	263
Pomeroy Rd. – relief sewer	8	200
Glendon Rd. – relief sewer	8	230

- b. Additional Interim I&I Corrective Action Projects due by 2007. Not later than December 31, 2005, the City shall submit to DEQ for review and approval a schedule with construction completion deadlines for additional interim I&I reduction or line capacity projects to be performed by January 30, 2007, which upon approval shall become a part of and enforceable under the terms of this Order.

2. Collection System Evaluation Study

- a. Preliminary Evaluation. Not later than October 31, 2005, the City shall provide to DEQ a listing and summary of previous studies and records, field reports, and other pertinent information generated from previous studies in the possession of the City that the City proposed to use in the development of the final CSES. Not later than March 31, 2006, the City shall also provide to DEQ, for its review and approval, a listing and summary of projects it intends to perform to investigate peak flows within its collection system.
- b. Collection System Evaluation and Study Report Outline. Not later than October 31, 2006, the City shall submit to DEQ, for its review and approval, a proposed outline for the final Collection System Evaluation Study ("CSES") Report using the data and materials from significant studies of the Collection System and field activities performed prior to issuance of this Order. The CSES Report Outline shall provide adequate information to identify the primary information expected to be contained in the final CSES as well as any necessary discussion regarding activities that may be undertaken for formation of the final report. The CSES

Report Outline shall describe all significant sources of I&I identified as of December 31, 2005 and shall include a discussion of alternatives and recommendations for further I&I reduction.

- c. Final Collection System Evaluation and Study Report. Not later than June 30, 2007, the City shall submit to DEQ, for its review and approval, a Final CSES Report describing the results of all studies, projects, and flow metering performed as of December 31, 2006. The Final CSES Report shall specify and prioritize, in view of the treatment and equalization capacity of the Plant and conveyance capacity of existing lines, recommended levels of I&I reduction in specific portions of the City's sewershed that would be necessary to eliminate overflows from the City's collection system, bypasses at the Plant, and overflows at joint use lines downstream from the City's collection system for which peak flows conveyed from the City are significant contributing factors. If the City determines that there are combined sewers within the collection system, then the Final CSES Report shall include a description of how the City will comply with EPA's Combined Sewer Overflow Control Policy. The Final CSES report shall include an evaluation of ongoing I&I reduction measures and any equalization projects. The Final CSES Report shall also include a schedule for any I&I reduction and/or construction of equalization capacity necessary to comply with the recommended peak flows for the City specified in the Authority's Final CSES Report.
3. Corrective Action Plan. Based upon the conclusions and recommendations of the Final CSES Report, as approved by DEQ, the City shall not later than September 30, 2007 submit to DEQ for review and approval a Corrective Action Plan ("CAP") with a prioritized schedule of completion of projects to minimize I&I-related overflows and bypasses. The CAP shall include provisions for elimination or proper management of any peak flows originating in the City that significantly contribute to bypasses at the Plant or overflows in the collection and/or transmission systems of the City and/or the Authority. The CAP shall include a justification of its priorities and a plan to finance the identified I&I elimination projects. The CAP shall consist of phases, with the first phase corresponding to the remaining term of the Permit and subsequent 5-year phases corresponding to the Permit renewal terms. Upon its review and approval by DEQ, the CAP shall become a part of and enforceable under the terms of this Order.
4. Revenue. The City shall raise the revenue necessary to implement the approved CAP within four years of CAP approval, or to the limit of its financial capabilities. The City shall be deemed to be raising CAP funds to the limit of its financial capability if the following criteria are met:
 - a. At least bi-annually the City adjusts its sewer rates so that within five years of the date DEQ approves the CAP:

- (1) The annual sewer bill² for typical residential customers (i.e. 5,000 gallons of average monthly use) will be at least 1.25% of median household income³ in the City of Roanoke; and
 - (2) 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.
 - b. Beginning with the twelve month period following CAP approval, the City annually adjusts unobligated sewer system reserve funds to equal no more than 25% of the subsequent year's budgeted operating expenditures.
 - c. Beginning with the year in which this Order is effective, the City shall annually seek grant and low interest loan funding for the CAP from federal, state, and other sources offering such funding for sewer or water quality improvements projects.
5. Spending. Each fiscal year following the effective date of this Order the City shall allocate and spend all available funds on I&I corrective action projects identified in this Order. Available funds for I&I corrective action projects shall include annual sewer revenues remaining after ordinary expenditures required to administer, operate and maintain the Collection System and the Plant in accordance with federal and state water quality related requirements, expenditures required under the CMOM Plan and capital allocations and expenditures to procure, maintain and replace capital funds and equipment consistent with a prudent asset management program. Available funds for I&I corrective action projects also include any loan and grant funds obtained for the purpose of implementing the CAP.
6. Continuing Capacity, Management, Operation and Maintenance Program. By December 31, 2006, the City shall provide DEQ for review and approval, a Capacity, Management, Operation and Maintenance ("CMOM") Plan. Upon its review and approval by DEQ, the CMOM Plan shall become a part of and enforceable under the terms of this Order. The CMOM Plan shall include the following:
- a. Specification of major goals of the program;

¹ Defined as revenue from rates, fees, assessments or charges that sewer customers must pay.

² 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 change in the 2-year moving average for Virginia's MHI as regularly published by the U.S. Census Bureau. If that data is not available, MHI adjustments shall be based upon adjusted gross income (AGI) since the date of the last census as reflected in data published by the Virginia Department of Taxation, or, if that information is not available, the MHI shall be adjusted based on 75% of the percent increase in the consumer price index for that year.

- b. Identification of administrative and maintenance positions responsible for implementing CMOM program measures, including identification of lines of authority by organization chart or similar document and the chain of communication for reporting overflows;
- c. A description of legal authority, through sewer use ordinance, service agreements or other legally binding documents, to:
 - (1) Control infiltration and connections from inflow sources;
 - (2) Require that sewers and connections be properly designed and constructed;
 - (3) Ensure proper installation, testing, and inspection of all new and rehabilitated portions of the Collection System;
- d. Identification of certain Plan elements, specifying the person or position within the City responsible for each element and indicating current staffing and resource commitments to carry out each element, including, but not limited to:
 - (1) Maintenance of facilities and equipment;
 - (2) Maintenance of a map of the Collection System;
 - (3) Management of information and use of timely, relevant information to establish and prioritize appropriate CMOM activities, and identify and illustrate trends in overflows, such as frequency and volume;
 - (4) Routine preventative operation and maintenance activities.
 - (5) A schedule of preventive maintenance activities, which shall include, but not be limited to, the following:
 - A. Periodic service and calibration of all instrumentation, including flow meters, liquid level sensors, alarm systems, elapsed time meters, and remote monitoring equipment;
 - B. Routine inspection and service of each pump station, including engines, motors, generators, pumps, wet wells, valves, and related equipment;
 - C. Periodic inspection and testing and, if necessary, servicing of all pumps including impellers, seals, and bearings, wear clearances, couplings, drives and motors; and

- D. Routine inspection and service for mainlines sewers, manholes, siphons, and other appurtenances.
- e. Design and performance provisions, which shall include, but not be limited to the following:
 - (1) Requirements and standards for the installation of new sewers, pumps, and other appurtenances; and rehabilitation and repair projects; and
 - (2) Procedures and specifications for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.
- f. Monitoring, measurement, and program modification provisions, which shall include, but not be limited to the following:
 - (1) Monitoring the implementation and measuring the effectiveness of each element of the City's CMOM program;
 - (2) Updating program elements as appropriate based on monitoring or performance evaluations;
 - (3) Updating the City's CMOM program, as appropriate, to keep it updated and accurate; and
 - (4) Visual observation and estimation of flows at each Collection System pump station during periods of both dry weather and wet weather to verify the continued effectiveness of the CMOM program and the continued adequacy of the Collection System and pump stations.
- g. An Overflow Emergency Response Plan that identifies measures to protect public health and the environment. The plan must include mechanisms to:
 - (1) Ensure that overflows (including those that do not discharge to state waters) are addressed appropriately, including ensuring that reports of overflows are immediately dispatched to appropriate personnel for investigation and appropriate response;
 - (2) Ensure appropriate immediate notification to the public, health agencies, other impacted entities (e.g. water suppliers) and DEQ. The CMOM program shall identify the public health and other officials who will receive immediate notification;

- (3) Ensure that appropriate personnel are aware of and follow the plan and are appropriately trained; and
 - (4) Provide for emergency operations.
 - h. If final federal CMOM regulations are promulgated after the CMOM Plan is approved, the City may amend the CMOM Plan to make it consistent with the applicable federal regulations.
- 7. Semi-Annual Report. Beginning January 10, 2006, the City shall submit semi-annual progress reports to DEQ. Semi-annual reports shall be due on January 10 and July 10 of each year. Semi-annual reports shall include a description of progress in completing the requirements of Appendix A of this Order, including the status of any required construction or rehabilitation projects and whether such activities are on schedule for completion within required timeframes.

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