



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 10, 2002

The Honorable Mayor Robert A. Baines
City of Manchester
227 Maple Street
Manchester, NH 03103-5596

Re: Manchester, NH
Modified Administrative Compliance Order (Docket No. 99-06)

Dear Mayor Baines:

Enclosed is the City of Manchester's copy of the modified combined sewer overflow ("CSO") compliance order (Docket # 99-06) which reflects the revisions that were necessary as a result of Permit reissuance in January of 2002. The Order modifications include: (1) an interim E. coli limit (i.e. report only) for CSO discharges; (2) a requirement that the revised LTCP and Phase II CSO abatement projects also address the recently discovered Ray Brook CSO (outfall serial number 054); and (3) substitution of Carbonaceous Biochemical Oxygen Demand monitoring and reporting requirements for Biochemical Oxygen Demand monitoring and reporting requirements of the Wastewater Treatment Facility discharges.

The CSO control projects that have been implemented and those that will be implemented over the next several years will bring important environmental and public health benefits. We look forward to continued progress.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ken Mann" or similar, with a small "for" written below it.

Samuel Silverman, Acting Director
Office of Environmental Stewardship

cc: Gretchen Rule - NH DES
Sharon Ducharme - NH DES
Tom Seigle - Manchester

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1**

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|-------------------------------------|---|------------------|
| IN THE MATTER OF |) | MODIFIED |
| |) | |
| THE CITY OF MANCHESTER |) | FINDINGS |
| NEW HAMPSHIRE |) | |
| NPDES No. NH0100447 |) | AND |
| |) | |
| Proceedings under Section 309(a)(3) |) | COMPLIANCE ORDER |
| of the Clean Water Act, as amended, |) | |
| 33 U.S.C. §1319(a)(3) |) | DOCKET # 99-06 |

I. STATUTORY AUTHORITY

The following Findings are made and ORDER issued pursuant to Section 309(a)(3) of the Clean Water Act, as amended (the "ACT"), 33 U.S.C. § 1319(a)(3). Section 309(a)(3) grants to the Administrator of the U.S. Environmental Protection Agency ("EPA") the authority to issue orders requiring persons to comply with Section 301, 302, 306, 307, 308, 318 and 405 of the Act and any permit condition or limitation implementing any of such sections in a National Pollutant Discharge Elimination System ("NPDES") permit issued under Section 402 of the Act, 33 U.S.C. § 1342. This authority has been delegated to EPA's Regional Administrators and further delegated to the Director of EPA, Region I's Office of Environmental Stewardship (the "Director").

The Order herein is based on findings pursuant to Section 301 of the Act, 33 U.S.C. § 1311, and the conditions of NPDES Permit No. NH0100447. Pursuant to Section 309(a)(5)(A) of the Act, 33 U.S.C. § 1319(a)(5)(A), the Order provides a schedule for compliance which the Director has determined to be reasonable.

II. DEFINITIONS

Unless otherwise defined herein, terms used in this Order shall have the meaning given those terms in the Clean Water Act, 33 U.S.C. § 1251 et seq., the regulations promulgated thereunder at 40 C.F.R. § 401.11, and any applicable NPDES permit. For purposes of this Order, "NPDES Permits" means the City's NPDES Permit Number NH0100447 and all amendments or modifications thereto and renewals thereof as are applicable, federally-approved and in effect at the time.

III. FINDINGS

The Regional Administrator makes the following findings of fact:

1. The City of Manchester, New Hampshire (the "Permittee") is a municipality under Section 502(4) of the Act.
2. The Permittee is a person under Section 502(5) of the Act, 33 U.S.C. § 1362(5). The Permittee is the owner and operator of a wastewater treatment facility (the "WWTF") and 26 combined sewer overflow discharge points ("CSOs"), which are point sources as defined in Sections 502(14) of the Act, 33 U.S.C. § 1362(6) and (12), to the Merrimack and Piscataquog Rivers. Both of these receiving waters are Class B waterways and navigable waters under Section 502(7) of the Act, 33 U.S.C. § 1362(7). The WWTF is a secondary treatment facility with a design capacity to treat and discharge an average daily flow of 34 million gallons per day ("mgd").
3. On September 28, 1990, the Permittee was reissued NPDES permit No. NH0100447 (the "1990 Permit") by the Director of the Water Management Division of EPA, Region 1, under the authority given to the Administrator of EPA by Section 402 of the Clean Water

Act, 33 U.S.C. § 1342. This authority has been delegated by the Administrator of EPA to the Regional Administrator of EPA, Region 1, who has in turn delegated this authority to the Director of the Water Management Division. The Permit became effective on October 28, 1990, was modified on May 25, 1993, and expired on September 28, 1995 but continued in full force and effect due to timely reapplication.

4. The Permit was reissued on January 23, 2002 (the "2002 Permit"). On February 25, 2002, the Permittee filed a timely Petition for Review with the Environmental Appeals Board, seeking review of the 2002 Permit's contested E. coli limitations on CSO discharges. EPA issued a notice of contested and uncontested conditions on March 27, 2002, which put all of the permit conditions except for the E. coli limitations into effect on April 26, 2002. On April 3, 2002, the Permittee withdrew its Petition for Review. On April 12, 2002, EPA issued a notice which acknowledged the withdrawal of the Petition for Review and put the E. coli limitations into effect on April 26, 2002. The 2002 Permit will expire on April 1, 2007.
5. The Permit authorizes the Permittee to discharge pollutants from specific point sources from the combined sewer system (i.e. CSOs) to the Merrimack and Piscataquog Rivers provided the discharge(s) do not cause violations of State Water Quality Standards.
6. Section 301(a) of the Act, 33 U.S.C. § 1311(a), makes unlawful the discharge of pollutants to waters of the United States except in compliance with, among other things, the terms and conditions of an NPDES permit issued pursuant to Section 402 of the Act, 33 U.S.C. § 1342.
7. EPA finds that the Permittee submitted CSO monitoring data to EPA and the New

- Hampshire Department of Environmental Services ("NH DES") demonstrating that the
- water quality standards for E. coli bacteria were exceeded due to CSO discharges from the Permittee's combined sewer system (See: CDM LTCP (May 1995) Section 2.6 (page 2-26)).
8. EPA finds that the discharges of wastewater that caused levels of bacteria to exceed State Water Quality Standards in the receiving water had occurred in violation of the 1990 Permit and Section 301(a) of the Act. EPA anticipates that until facilities required under paragraphs IV.1-14 are completed, future CSO wastewater discharges will violate the limits of the 2002 Permit, future NPDES permits and Section 301(a) of the Act.
 9. The Permittee makes no admission with respect to the matters alleged in Paragraphs Nos. 7 and 8 above.

IV. COMPLIANCE ORDER

Accordingly, pursuant to Section 309(a)(3) of the Clean Water Act, EPA hereby orders and the Permittee agrees, that it shall:

WWTF MODIFICATIONS TO ACCOMMODATE WET WEATHER TREATMENT CAPACITY

1. By September 15, 1999, submit to EPA for review and to the NH DES for review and approval design plans for WWTF modifications to allow up to 50 mgd of wet weather flows to pass through the existing primary treatment facilities (grit removal, primary sedimentation, plus disinfection) and bypass the existing secondary treatment facilities (aeration and final clarification).
2. Within 12 months of approval of the plans and designs by NH DES, sufficient to preserve

full eligibility for all available State and federal funding, complete bidding, obtain NH DES approval of award, execute contract and complete construction consistent with Paragraph 1 above.

LTCP PHASE I CSO ABATEMENT PROJECTS

3. By September 15, 1999, submit to EPA and the NH DES a collection system flow monitoring program plan for review and comment. The plan shall include a proposed implementation schedule. The purpose of the Flow Monitoring Program is to determine the effectiveness of the sewer separation projects listed in Paragraph 4 below in reducing CSO discharges, as well as to further characterize the overflows from the remaining CSOs.
4. By September 15, 1999, submit to EPA and the NH DES a schedule for the design and construction (include proposed tasks, and task completion dates) of each of the following LTCP Phase I Piscataquog River CSO abatement projects: Electric Street (#032) sewer separation; Theophile Street (#033) sewer separation; Sullivan Street (#034) sewer separation; Varney Street (#036) sewer separation; South Main (North) (#037) sewer separation; South Main (South) (#038) sewer separation; Third Street (#039) sewer separation; and West Hancock (#013) sewer separation. For each of these sewer separation projects, the Permittee shall submit to EPA and NH DES an engineering analysis that determines whether sanitary or storm lines are to be constructed for each.
5. By March 15, 2004, submit to EPA and the NH DES a schedule for the design and construction (include proposed tasks, and task completion dates) of each of the following LTCP Phase I Merrimack River CSO Abatement Projects: West Bridge (#022) sewer

separation; Bremer (#024) sewer separation; Schiller (#011) sewer separation; Victoria (#030) sewer separation; Crescent Road (#042) sewer separation; and Poor (#009) partial separation. For each of these sewer separation projects, the Permittee shall submit to EPA and NH DES an engineering analysis that determines whether sanitary or storm lines are to be constructed for each.

6. Within twelve (12) months after the Bremer Street (#024) and West Bridge Street (#022) separation projects are completed, complete modifications to raise weir elevations at the Lorraine (#025) and Turner (#018) CSOs to reduce the frequency of discharges at these outfalls. Provide the EPA/NH DES with notification of the final weir modifications and estimated CSO reduction achieved.
7. By March 15, 2009, complete the LTCP CSO abatement projects implementation.
8. Revisions, if any, to the schedules described in Paragraphs Nos. 4 and 5 must be made in writing and agreed to in writing by both EPA (after consultation with NH DES) and the Permittee.

PHASE I CSO ABATEMENT SCHEDULES FOR DISCRETE TASKS

9. Upon the Permittee's receipt of EPA's written approval (after consultation with NH DES) of a schedule for the projects described in Order Paragraphs 4 and 5, the schedule(s) shall be deemed incorporated into this Order and enforceable hereunder. If there is any delay in the implementation or completion of those projects due to having to obtain Federal, State and/or local permits, the Force Majeure provisions of this Order shall apply if the requirements for Force Majeure are met. Revision to the schedules must be made in writing and agreed to in writing by EPA, after consultation with NH DES.

LTCP UPDATE AND PHASE II CSO ABATEMENT PROJECTS DETERMINATION

10. By March 15, 2001, submit to EPA and NH DES a scope of work for a Cemetery Brook Basin (CSO #44) Study (the "Study") for further evaluation of that CSO. This Study will identify and characterize the flow patterns and quantities basin, and evaluate the alternate control options available in the basin in order to determine CSO control solutions. One of the alternatives for control of CSOs in the Cemetery Brook Basin is the use of swirl concentrator technologies. The Study will include a determination of the need to implement a pilot or demonstration project for evaluation of this technology as well as any other alternative technology that is appropriate and cost effective.
11. ^{EXTENDED TO 3/15/05} By March 15, 2004, complete the Cemetery Brook Basin Study in accordance with the scope of work submitted to EPA and NH DES.
12. If it is determined through the Study that pilot testing of treatment technologies is required for the Cemetery Brook Basin, within one (1) year after the Permittee's receipt of EPA's and NH DES's written approval of the Cemetery Brook Basin Study, submit to EPA and NH DES a scope of work for a Cemetery Brook Basin Pilot Testing Project ("Pilot Project"). The Pilot Project, if required, will include the construction, operation and data gathering for the technologies being evaluated in accordance with the scope of work for the Pilot Project. The objective of the Pilot Project, if required, will be to determine the effectiveness of the technologies to adequately treat CSOs.
13. If recommended by the Study described above, within four (4) years after the Permittee's receipt of EPA's and NH DES's written approval of the scope of work for the Pilot Project, complete the Pilot Project.

14. By March 15, 2010, submit to EPA and NH DES a revised LTCP for CSO abatement.

The revised plan shall evaluate the effectiveness of the Phase I LTCP projects, include an updated alternatives analysis for each of the remaining CSOs (Cemetery Brook, Lorraine Street, Turner Street, Stark Brook, Penacook Street, Ray Brook, Bridge Street, Granite Street, Poor Street, Tannery Brook, WWTF MH#1, West Side Pump Station Emergency Outlet, WWTF MH#2, and Walnut/North Streets/Canal/W. Penacook Street), a financial capability analysis, and recommend Phase II CSO abatement projects and a proposed implementation schedule (including completion dates). The revised LTCP shall be designed to comply with the requirements of the Clean Water Act and State and Federal CSO policies. In preparing the revised LTCP, EPA and the Permittee shall work together with NH DES to determine the appropriateness at that time of a water quality standard variance, redesignation of uses or adoption of temporary partial uses in addition to taking into consideration any changes in the law, and/or State and Federal CSO policies.

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\$5.6 MILLION SUPPLEMENTAL ENVIRONMENTAL PROJECTS PROGRAM

15. Pursuant to Section 309 of the Act, 33 U.S.C. §1319, as amended, by March 15, 2004, the Permittee shall complete implementation of the Supplemental Environmental Projects Program ("SEPP") in accordance with the provisions of Attachment 1 which is attached hereto and a part hereof. If there is any delay in the implementation or completion of the SEPP projects due to having to obtain Federal, State and/or local permits, the Force Majeure provisions of this Order apply if the requirements for Force Majeure are met. EPA shall not require Manchester to expend more than \$5.6M total on the SEPP. The SEPP activities are as follows: Storm Water Control; Land Preservation; Stream Bank

Stabilization and Erosion Control Along the Merrimack River and Tributaries; Restoration of Urban Ponds; Environmental Education and Volunteer Monitoring; and Reduction of Childhood Lead Poisoning and Asthma Prevention. Any and all changes or substitutions for these activities listed above must be mutually agreed to in accordance with the procedures set forth in Attachment 1. Any substitutions for the activities listed above, once approved in accordance with the procedures set forth in Attachment 1, will be deemed incorporated into this Order.

SEMI-ANNUAL PROGRESS REPORTS AND WORK PROJECTIONS

16. Progress reports on CSO abatement projects implementation shall be submitted to EPA and the NH DES by January 15 and July 15 each year. The report shall describe the work performed during the previous 6 months and include a projection of the work to be performed during the next 6 month period. The feasibility of raising the weirs at the Lorraine (#025) a Turner (#018) CSOs as an interim CSO reduction project shall be evaluated. The Lorraine (#025) and Turner (#18) CSO projects shall be implemented as soon as practicable given the combined sewer system hydraulics.

WWTF WET WEATHER MONITORING AND

REPORTING REQUIREMENTS

17. Interim CSO-Related Bypass - Current Conditions
 - a. During wet weather events, the Permittee shall process as much flow through the WWTF as practicable. Prior to initiating a bypass, the flow through the secondary treatment facilities (aeration and final clarification) shall be maximized. The maximum secondary treatment flow is defined as approximately 1.7 times the

average daily dry weather flow. Once WWTF modifications are completed as discussed in Paragraphs 1 and 2, the Permittee shall provide primary treatment to the practical limit of the primary facilities (grit removal and primary sedimentation) of 85 mgd under normal operating conditions. Until such time as the Permittee has completed the requirements of Paragraphs 1 and 2, a total of approximately 50-60 mgd will be processed in accordance with the terms of this Paragraph 17a (unless prohibited by equipment related issues). The Permittee shall submit a high flow management plan with the design of the WWTF modifications described in Paragraph 1.

- b. While this "CSO-related bypass" is occurring, the flows receiving secondary treatment shall achieve the Permittee's NPDES effluent limitations. The Permittee is not required to use BOD and TSS data from days with CSO-related bypass events when calculating average monthly percent removal of these pollutants. During CSO-related bypass events, the blended final effluent shall achieve the E. coli, pH and total chlorine residual limits as set forth in the Permittee's then current NPDES permit and the monitoring and reporting requirements detailed in Attachment 2. Should the statutory or regulatory E. coli bacteria limit applicable to this type of discharge change, the Permittee shall be required to meet the then current E. coli bacteria limit. When the CSO-related bypass is not active, the facility shall achieve all the Permit effluent limitations.

CSO DISCHARGES INTERIM EFFLUENT LIMIT

18. The Permittee shall achieve compliance with the applicable E. coli effluent limitations on its CSO discharges in accordance with the schedule set forth in paragraphs IV.1-14 and 16, above. In the interim, the Permittee shall monitor and report the results for E. coli in the manner and at the frequency identified in the applicable Permit. The "report only" interim effluent limitation contained in this paragraph does not constitute a waiver or a modification of the Permit. The Permit remains in full force and effect.

V. NOTIFICATION PROCEDURES

1. Where this Order requires a specific action to be performed within a certain time frame, the Permittee shall submit a written notice of compliance or noncompliance to EPA and NH DES with each deadline. Notification must be mailed within twenty-one (21) days after each required deadline. The timely submission of a required report shall satisfy the requirement that a notice of compliance be submitted.
2. If noncompliance is reported, whether due to a Force Majeure event as addressed in Section VI of this Order or otherwise, notification should include the following information:
 - a. A description of the noncompliance;
 - b. A description of any actions taken or proposed by the Permittee to comply with the lapsed schedule requirements;
 - c. A description of any factors which tend to explain or mitigate the noncompliance;
 - d. An approximate date by which the Permittee will perform the required action.

3. Once the Permittee has returned to compliance, that compliance shall be reported by submitting any required documents or providing EPA and NH DES with a written report indicating that the required action has been achieved. Submissions required by this Order shall be in writing and should be mailed to the following addresses:

Joy Hilton
U.S. Environmental Protection Agency-Region I
1 Congress St., Suite 1100 (SEW)
Boston, MA 02114-2023

and

George Berlandi
New Hampshire Department of Environmental Services
Water Division
P.O. Box 95, 6 Hazen Drive
Concord, NH 03302-0095

VI. FORCE MAJEURE

1. The Permittee agrees that if the Permittee or any entity controlled by the Permittee, including its consultants, fails to comply with any provision of this Compliance Order, the Permittee shall notify EPA Region I and NH DES in writing, within 14 days of the Permittee learning of such noncompliance. This notice shall describe in detail:
 - a. The reason for and anticipated length of time the noncompliance is expected to persist.
 - b. The measures taken and to be taken by the Permittee to minimize the noncompliance.
 - c. The timetable by which such measures will be implemented.The Permittee shall adopt all reasonably feasible measures to avoid and minimize any noncompliance.

2. If EPA, in consultation with NH DES, agrees that the Permittee's failure or inability to comply with any provision of this Order has been or will be caused by circumstances beyond the control of and without the fault of the Permittee, including its consultants, and that the Permittee or any such entity controlled by the Permittee could not have reasonably foreseen and prevented such noncompliance, the Permittee shall in writing be excused as to the failure or inability to comply for the period of time the noncompliance or inability to comply continues due to the actual unavoidable delay resulting from such circumstances, not to exceed the amount of time lost due to the actual unavoidable delay resulting from such circumstances, or to the amount of time necessary to remove or resolve the inability to comply.

VII. MODIFICATION

Schedules and tasks specified in studies or plans approved by EPA under this Order may be modified by written agreement of the Permittee and EPA (after consultation with NH DES). There shall be no other modifications of this Order without the written approval of EPA (after consultation with NH DES) and the Permittee.

VIII. SEVERABILITY

It is the intent of the parties that the clauses in this Order are severable. If a Court of competent jurisdiction declares any provision to be unenforceable, the remaining provisions of this Order shall remain in full force and effect.

IX. GENERAL PROVISIONS

1. If EPA (after consultation with NH DES) believes the Permittee has violated any requirement of this Order, EPA shall provide the Permittee with notice of that alleged

violation and with the opportunity to (1) discuss the alleged violation with EPA officials; (2) explain the circumstances surrounding the alleged violation; (3) provide EPA with any information which may help resolve the issue and/or otherwise demonstrate that an administrative action and/or imposition of penalties is not appropriate under the circumstances; and/or (4) present information supporting the applicability of the Force Majeure provisions of this Order. EPA shall send a copy of the notice to NH DES.

2. The Permittee may, if it desires, assert a business confidentiality claim covering part or all of the information requested in the manner described by 40 C.F.R. § 2.203(b).

Information covered by such a claim will be disclosed by EPA only to the extent, and by means of the procedures, set forth in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when it is received by EPA, the information may be made available to the public by EPA without further notice to the Permittee. The Permittee should read the above-cited regulations carefully before asserting a business confidentiality claim since certain categories of information are not properly the subject of such a claim. For example, the Clean Water Act provides that "effluent data" shall in all cases be made available to the public. See Section 308(b) of the Act, 33 U.S.C. § 1318(b).

3. This Order does not constitute a waiver or a modification of the terms and conditions of the NPDES Permit. The NPDES Permit remains in full force and effect, and EPA reserves the right to seek any and all available remedies for violations of that permit.
4. This Order shall become effective upon receipt by the Permittee.
5. The Permittee may request, and EPA will consider (in consultation with NH DES), a modification of this Order if subsequent to its issuance there is a significant change in the

Clean Water Act or its implementing regulations and further implementation of the activities required by this Order would be contrary to such change.

X. TERMINATION

This Order shall terminate when the Permittee has completed the Phase I CSO abatement projects as provided for in this Order and otherwise complied with all aspects of this Order.

5/10/02
Date

Ken Murray
Samuel Silverman, Acting Chief
Office of Environmental Stewardship
EPA-New England

4.30.02
Date

Robert A. Baines
Robert A. Baines, Mayor
City of Manchester, NH

Attachment 1

Supplemental Environmental Projects Program

INTRODUCTION

The Supplemental Environmental Projects Program (SEPP) is a cooperative effort among the City of Manchester (the "City"), the New Hampshire Department of Environmental Services (NHDES), and the U.S. Environmental Protection Agency, Region I-New England (EPA), to provide environmental benefits to the people of Manchester in addition to the benefits to be gained from combined sewer overflow abatement. The City must fund and implement the SEPP in accordance with this agreement. An effort will be made by those involved to increase and leverage funding for individual projects through matching programs and coordination with established efforts by citizen groups, agencies and private interests. An executive committee, the SEPP Executive Committee, will monitor implementation of the program.

SEPP EXECUTIVE COMMITTEE

The SEPP Executive Committee will oversee program implementation and rate of expenditures. The SEPP Executive Committee will consist of the Mayor of the City of Manchester, the Commissioner of NHDES and the Regional Administrator of EPA Region I - New England. The SEPP Executive Committee will make decisions, including the approval of any changes to the SEPP, by a unanimous decision of its three members.

SEPP ADVISORY COMMITTEE

A SEPP Advisory Committee may advise the Executive Committee, comment on the work plan and assist at the request of the Executive Committee in the development of projects. The core membership of the SEPP Advisory Committee will consist of a representative of the City, EPA, NHDES, and the Manchester Conservation Commission. Other agencies and groups will be consulted for input as required by the core committee.

SEPP WORK PLAN

Within 180 days of the date of this Agreement, the City, with assistance from the NHDES and EPA, shall submit a detailed Work Plan for implementation of the SEPP to the EPA and NHDES. The Work Plan shall include sufficient detail to adequately describe the implementation of each of the Supplemental Environmental Projects (A-G) described below. EPA and NHDES may approve the Work Plan in whole or in part. Once approved by EPA and NHDES, the work plan may not be significantly modified without a unanimous decision of the SEPP Executive Committee.

STATUS REPORTS

Every six months after approval of the SEPP Work Plan, the City will submit to the EPA and NHDES a status report describing progress over the previous six months and activities expected over the next six months for all matters under this SEPP. This progress report will review environmental results and discuss the effectiveness of project activities.

SCHEDULE

The City must complete the SEPP within 5 (five) years of the date of this Agreement. Each individual SEPP project (A-G) described below will be completed in accordance with a schedule set forth in the SEPP Work Plan developed by the City and approved by the EPA and the NHDES. The land preservation project will be implemented as expeditiously as practicable.

SUPPLEMENTAL ENVIRONMENTAL PROJECTS

The City will spend \$5.6 million over a five year period to implement projects (A-G) described below. The dollar amounts shown for each project are approximate. Actual circumstances during implementation, particularly in the preservation of the Atlantic White Cedar Swamp, may make it appropriate to reallocate funding among the respective projects, provided the total for all SEPP projects is \$5.6 million. Such reallocation shall be approved by the Executive Committee.

A) Land Preservation - \$2 million

The following sections (1-7) specify required measures to satisfy the land preservation requirements of this SEPP. Specifically, this document and a map titled "Hackett Hill Preserve and Development Plan" and dated February 26, 1999, describe the boundaries of the Atlantic White Cedar preserve on Hackett Hill and the management measures required in designated "sensitive development" areas. It is the goal of this agreement to preserve the integrity of the Atlantic White Cedar/Giant Rhododendron/Black Gum ecosystem in perpetuity while allowing for reasonable economic development on the balance of the property purchased

from The University of New Hampshire outside the Preserve so long as such development is otherwise permitted pursuant to applicable local, State and Federal law.

1. Land Acquisition Phasing

The Land Preservation project shall be implemented in phases as described below. If, during any phase of land acquisition the City reaches the \$2M allotment for land preservation, the Executive Committee shall, within 30 days, decide whether to reallocate funds from other SEPP projects (B-G) to complete acquisition of the Preserve, which is the highest priority SEPP project.

Phase 1

The City shall acquire from the University of New Hampshire those lands delineated on the Preserve Map as areas P-1, D-1, D-2, D-3, D-4, D-5, D-6, and D-7.

Phase 2

The City shall convey to The Nature Conservancy (TNC) Preserve Map areas P-1a, P-1b, P-1c, and P-1d. This shall be counted as a credit, equal to the appraised value of the land, against the \$2M the City is required to spend pursuant to Section 5 below.

Until such time as those parcels are conveyed, the City shall hold those areas as undeveloped open space under the stewardship of the Manchester Conservation Commission.

Phase 3

If , after completing Phases 1-2, the City has not spent the total \$2M allotted for the Land Preservation Project, or in the event the City has reached the \$2M allotment, provided the Executive Committee agrees to reallocate funds from other SEPP projects, the City shall purchase and convey to The Nature Conservancy the Alliance Resources portion (Tax Map 766, Lot 4B) of the Additional Preserve Area (Preserve Map area P-2) consistent with Paragraph 3 below. If, after purchase of the Alliance Resources parcel, the City still has not exhausted the \$2M allotment, or in the event the City has reached the \$2M allotment, provided the Executive Committee agrees to reallocate funds from other SEPP projects, the City shall purchase and convey to The Nature Conservancy the Pichette portion (Tax Map 766, Lot 5) of the Additional Preserve Area consistent with Section 3 below.

Phase 4

To the extent the City has not expended \$2M at the conclusion of Phases 1-3, or in the event the City has reached the \$2M allotment, provided the Executive Committee agrees to reallocate funds from other SEPP projects, the City shall convey to the Nature Conservancy parcel P-1e.

Phase 5

The Preserve Map delineates a potential future development area in the northern portion of the preserve (area D-7). This area may be developed by the City only if an engineering analysis by the City shows the site to be developable. The site analysis shall delineate and buffer all vernal pools, and shall be reviewed by EPA and NHDES.

If the engineering analysis determines the area to be unsuitable for development,

ownership of the potential future development area shall be conveyed to The Nature Conservancy provided the City has not reached the \$2M allotment for land preservation, or in the event the City has reached the \$2M allotment, provided the Executive Committee agrees to reallocate funds from other SEPP projects. If the \$2M allotment for land preservation is reached, and the Executive Committee does not agree to allocate additional funds for land preservation, then rights of first refusal on the property shall be conveyed to the Nature Conservancy.

Phase 6

The City shall be permitted to sell and/or develop Preserve Map parcels D-1, D-2, D-3, D-4, D-5, D-6 and D-7 consistent with Phase 5 above and Section 4 below.

2. Preserve Boundary

The Preserve Map identifies a Preserve boundary, within which no development will take place and ownership with deeded rights of access will be conveyed to The Nature Conservancy within 2 years of the date of this Agreement, pursuant to Section 1 above. The TNC will be responsible for the stewardship of ecological resources within the Preserve. Limited trail development for educational purposes is allowed within the preserve. Motorized vehicles are prohibited.

3. Additional Preserve

The Preserve Map identifies an Additional Preserve Boundary (P-2). The City shall make a committed good faith effort to purchase the land within the Additional Preserve. For acquisition of the Additional Preserve lands, fee ownership or conservation easements conveyed to The Nature Conservancy are acceptable. If, upon completion of Phases 1-5 of the Land Preservation Project and within 2 years of the date of this Agreement, the \$2M allocated for Land Preservation have not yet been exhausted, then the balance of funds allocated by this Agreement to Land Preservation shall be used for the purchase of ecologically significant lands in Manchester as approved by the Executive Committee.

4. Sensitive Development Areas

Four areas on the Preserve Map labeled "Sensitive Development" are within the watersheds of the Atlantic White Cedar Swamp and Black Gum communities. These areas are not included within the Preserve in recognition of the City's need for reasonable economic gain from disposition of the property. The hilltop area is served by roads and utilities and includes favorable development sites. Due to the potential for irreparable harm to the ecological integrity of the swamp complex from development in these areas, the following sensitive development measures are required for building sites within the Sensitive Development zone (these requirements will be implemented as deed restrictions and run with the land):

- a) All drainage shall be either piped out of the watershed of the sensitive swamp complex or, if approved by NHDES and EPA, retained in such a manner as to mitigate impacts on the complex. All drainage structures, pumps, and piping shall be owned, operated, and maintained in perpetuity by the City of Manchester. Undisturbed areas

which receive no runoff from impervious areas may continue to drain within the watershed.

b) There shall be no salt applied to roadways and parking lots for winter road maintenance.

c) Designated snow storage areas shall be created for deposit of plowed snow. Such snow storage areas shall be designed to trap all sediment for collection and proper disposal.

d) All trash storage areas shall be covered and protected from the weather.

e) Roadways and parking lots shall be vacuum swept at least bi-weekly except as winter conditions may prohibit and shall otherwise be kept in a clean manner.

f) Existing parking lots shall only be used as parking lots, unless alternate site development configurations which minimize environmental and visual impacts are approved by the mutual consent of NHDES and EPA.

g) There shall be no cutting of trees outside of designated building sites except for routine maintenance of dead or overhanging limbs.

h) All development sites shall be actively managed to prevent contamination of sensitive areas. All lessees and landowners within the park shall be subject to annual property inspections by the City for the purpose of educating site operators about pollution prevention and the significance of the local ecological resources. NHDES staff shall be available to train inspectors. Inspections shall focus on stormwater management, parking lot maintenance, lighting, landscaping, herbicides, fertilizers, and storage of regulated substances. Copies of annual inspection reports shall be provided to EPA and NHDES.

- i) All development, including buildings, parking lots, and utilities, shall be sited as far away from sensitive ecological resources as possible.

5. Cost Accounting

The City shall hire an independent appraiser, and NHDES and EPA shall also jointly hire an appraiser, to appraise the preserve land to be conveyed for purposes of determining the value of that land and the credit to be given to the City toward the \$2M allotted for the land preservation projects. The City, EPA and NHDES agree that they shall provide both appraisers with all of the information they have relating to the subject property. If the two appraisals are within 15% of each other, they shall be averaged to determine the value and credit. If they are not within 15%, following an exchange of the two appraisals, the City, NHDES and EPA shall attempt to agree upon a stipulated value and credit toward the \$2M. If, after 21 days, the parties are unable to agree, the City, NHDES and EPA shall jointly appoint a third appraiser who shall, after reviewing the two appraisals, propose a stipulated value. The cost of this third appraisal will be split so that the City shall pay half and the EPA/NHDES shall pay half. The values of privately held lands acquired by the City (area P-2) shall be determined by independent appraisal.

6. Stewardship

The City shall match, up to \$100,000, funds raised by public and private sources to endow The Nature Conservancy with a stewardship and education fund for the preserve. The City's contribution to the fund may be counted towards its commitment to land preservation under this SEPP.

7. Management

The City's Conservation Commission shall be consulted by The Nature Conservancy on any major policy or management issues dealing with the preserve areas. Parcels designated by the City for later transfer to The Nature Conservancy will be placed under the ownership of the City and management care of the Conservation Commission.

B) Storm Water control - \$1 million

The City will develop a comprehensive program to control storm water. The storm water program should include, but not be limited to the following:

- Make all reasonable efforts to find and remove illicit sewer connections
- Implementation of a street sweeping/catch basin cleaning program
- Inventory of storm drains and adjacent land users to see if lands are available to act as catchment basins
- Clean up programs along the banks of Piscataquog River and other rivers, ponds and streams in the City
- Storm drain stenciling and outreach and education program to business and homeowners
- Good housekeeping measures for municipal operations
- Development of GIS for the drainage system

The City shall describe the methods used and the effectiveness of the measures listed above in enough detail to support an evaluation of the efforts. To the extent reasonably practicable, results should be presented in a fashion that will allow transfer of successful approaches to other cities and towns in New Hampshire and the Region.

C) Streambank Stabilization and Erosion Control - \$1 million

The City will use up to \$1 million to restore specified unstable or eroding banks along the Merrimack and its tributaries affecting water quality within the City of Manchester. River and stream banks shall be restored with a combination of structural devices and vegetation sufficient to hold the banks in place during normal flooding and ice scour events. The City shall use the list in Table C-1 and consult with the Natural Resources Conservation Service (NRCS) and the Army Corps of Engineers to identify locations yielding the most cost effective measures for erosion control actions resulting in improved water quality and protection of instream and riparian habitat. NRCS shall also be consulted for design assistance at individual sites. Site selection and designs shall be approved by the Executive Committee prior to construction. This effort shall include an educational program for students.

Table C-1 Description of Erosion Control Sites

| Erosion Site Number | River | Description |
|---------------------|-----------------------------|--|
| 1 | Merrimack River (east bank) | Devon Street; bank erosion; 2000 foot length; 25 foot bank height; 1:1 slope; primary source of erosion is due to removal of forest buffer and urban runoff |
| 2 | Merrimack River (east bank) | Olmstead Ave.; gully erosion; 2 gullies; 5 to 10 feet in depth; 50 feet in length (each); primary source of erosion is due to removal of forest buffer and urban runoff |
| 3 | Merrimack River (east bank) | Hazelon Street; bank erosion; 300 foot length; 30 foot bank height; 1:1 slope; primary source of erosion is due to urban runoff and a residential area which is very close to the edge of the stream bank. |

| Erosion Site Number | River | Description |
|------------------------|--------------------------------|--|
| 4 | Merrimack River (east bank) | Riverdale Avenue; gully erosion; one gully; 100 foot length, 10 foot depth; 30 feet wide; primary source of erosion is due to street runoff |
| 5 | Merrimack River (west bank) | Daniel Webster Highway; bank erosion; 300 foot length, 12 foot bank height; primary source of erosion is due to the river undercutting the toe of the river bank and highway runoff |
| | | Gully erosion; one gully; 50 foot length; 10 foot depth; primary source of erosion is due to highway runoff |
| 6 | Merrimack River (west bank) | Daniel Webster Highway; gully erosion; one gully; 70 foot length; 5 foot depth; primary source of erosion is due to highway runoff |
| 7 | Piscataquog River | Piscataquog River Park and Bass Island Parks; bank erosion; various lengths throughout the parks not greater than 25 to 50 feet in length; total length of approximately 300 feet; primary source of erosion is due to removal of forest buffer and urban runoff |
| 8 | Merrimack River (west bank) | Intervale Country Club; bank erosion; 2000 feet in length remains to be done (750 feet has already been stabilized by the country club); 12 foot bank height; 1:1 or less slope; primary cause of erosion is due to the removal of forest buffer and undercutting the toe of the slope |

D) Restoration of Urban Ponds - \$1 million

The City will use up to \$1 million to improve the water quality and ecological integrity of urban ponds and wetland areas through removal of pollution sources and restoration of aquatic habitat. The Manchester Conservation Commission has identified the following areas for potential restoration:

- McQueston pond and wetland area
- Big and Little Cohas Brook
- Black Brook and Maxwell Pond
- Dorrs Pond and Ray Brook
- Crystal Lake
- Nutt Pond and Tannery Brook
- Stevens Pond and Cemetery Brook
- Pine Island Pond

The City shall develop a plan of action which would include an assessment of the ponds and recommendations for actions including: planning and engineering work, construction of best management practices, land use management and restoration actions. The plan of action shall be approved by the Executive Committee prior to commencement of work. This effort shall include an educational program for students.

E) Reduce Environmental Health Risks to Children - \$500,000

The City agrees to commit \$50,000 per year for five years towards the establishment of an Environmental Toxicologist position for the Manchester Health Department and \$50,000 per year for five years for environmental projects aimed at improving children's health as recommended by the United Way Healthy Manchester Coordinating Council. The Toxicologist will examine and recommend community strategies to address environmentally related health concerns in the community, with specific emphasis on childhood lead poisoning and asthma. Projects considered by the United Way Healthy Manchester Coordinating Council should likewise consider these two issues, although funds do not have to be spent exclusively on childhood lead poisoning and asthma. In addition, the Environmental Toxicologist will establish a mapping system for significant sources of pollution within the City and will work closely with local school and school nurses in the development of an asthma education project.

F) Environmental Education - \$100,000

The City will consult with NHDES, EPA, NH Audubon, and the Merrimack River Watershed Council to develop and implement an environmental education program for seventh grade students and faculty to be run out of a City location such as Audubon's Manchester facilities at Amoskeag Falls and Lake Massabesic. This would include field trips and student involvement in environmental projects related to the SEPP.

G) Measuring Environmental Results

In an effort to measure and track improvements to the environment as a result of this SEPP the City will establish a series of practicable measures by which it can report change over time.

These measures will be described in the work plan and reported in the status reports. The City will establish a baseline to measure from and is expected to take advantage of the assistance of volunteers to do some of this work as well as water quality sampling. Some of the measures that could be used include:


- Water quality parameters, such as: dissolved oxygen, nutrients, pH, bacteria, temperature, turbidity, metal and PAH's
- Number of illicit sewer connections removed
- Pounds of trash removed from the River in cleanups
- Percent of the total of the number of storm drains stenciled
- Acres of land protected
- Percent of riparian habitat improved
- Aquatic health based on presence and diversity of macro invertebrates
- Tons of sediment kept from getting to the river due to erosion controls

REASONABLE ENVIRONMENTAL CONSULTING COSTS

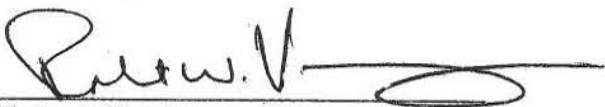
It is understood that the cost of reasonable environmental or engineering consultants required to facilitate compliance with the SEPP and the measurement of environmental results described in section G above will be considered as part of the total cost included in the \$5.6 million. It is also understood that the City will make practical efforts to avail itself of available environmental or engineering assistance from federal and state agencies.

We, the undersigned, hereby agree this 5th day of March 1999, to implement this Supplemental Environmental Projects Program.


Date: 3/8, 1999


John P. DeVillars
Regional Administrator
EPA Region I - New England

Date: 3/5, 1999


Robert W. Varney, Commissioner
New Hampshire Department of Environmental Services

Date: 3/5, 1999


Raymond J. Wiczorak
Mayor
City of Manchester, NH

ATTACHMENT 2

MONITORING REQUIREMENTS

| During the period that the Consent Order is effective, the permittee is authorized to discharge from outfall serial number SUMA (blended discharge). Such discharges shall be limited and monitored as specified below. Such discharges may only occur under the conditions described in Order paragraph 17a. | | | | | | | | |
|---|---|-----------------------------|---------------|------------------------------|-----------------------------|---|----------------------------|-------------|
| <u>EFFLUENT CHARACTERISTIC</u> | <u>DISCHARGE LIMITATIONS</u> (SPECIFY UNITS) | | | | | <u>MONITORING REQUIREMENTS</u> ^{1,3,5} | | |
| PARAMETER | AVERAGE MONTHLY ⁷ | AVERAGE WEEKLY ⁷ | MAXIMUM DAILY | AVERAGE MONTHLY ⁷ | AVERAGE WEEKLY ⁷ | MAXIMUM DAILY | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| FLOW ⁶ | ----- | ----- | ----- | ----- | ----- | REPORT | CONTINUOUS | RECORDER |
| BOD ₅ (Through April 25, 2002) | REPORT (LBS/DAY) | REPORT (LBS/DAY) | ----- | REPORT (mg/l) | REPORT (mg/l) | REPORT (mg/l) | 1/BYPASS DAY | COMPOSITE |
| CBOD ₅ (Beginning April 26, 2002) | REPORT (LBS/DAY) | REPORT (LBS/DAY) | ----- | REPORT (mg/l) | REPORT (mg/l) | REPORT (mg/l) | 1/BYPASS DAY | COMPOSITE |
| TSS | REPORT (LBS/DAY) | REPORT (LBS/DAY) | ----- | REPORT (mg/l) | REPORT (mg/l) | REPORT (mg/l) | 1/BYPASS DAY | COMPOSITE |
| pH ² | SEE FOOTNOTE 4. | | | | | | 1/BYPASS EVENT /BYPASS DAY | GRAB |
| CHLORINE RESIDUAL ² | ----- | ----- | ----- | ----- | ----- | CURRENT PERMIT LIMIT | 2/BYPASS EVENT /BYPASS DAY | GRAB |
| <u>ESCHERICHIA COLI</u> ² | ----- | ----- | ----- | ----- | ----- | CURRENT PERMIT LIMIT | 1/BYPASS EVENT /BYPASS DAY | GRAB |
| OVERFLOW USE OCCURENCES | REPORT THE NUMBER OF BYPASS DAYS ³ AND THE NUMBER OF HOURS PER DAY THAT THE CSO-related BYPASS OCCURRED. | | | | | | ----- | ----- |

All samples shall be collected and tested using EPA approved methods as stated at 40 C.F.R. §136, unless otherwise defined in the permit.

Outfall serial number SUMA discharge data shall be submitted with monthly Discharge Monitoring Reports as specified by the NPDES Permit.

ATTACHMENT 2

FOOTNOTES

1) SAMPLING LOCATIONS:

Effluent sampling for NPDES compliance for BOD5, CBOD5 and TSS, on each bypass day, shall be conducted after the secondary clarifiers and before the blend with the wet weather bypass. This sampling location is identified as sampler 8 and 9 at the WWTF.

Samples for total residual chlorine, pH and E. coli for NPDES compliance purposes, and on bypass days, will be taken after the last treatment process. This location is identified as sampler 10 at the WWTF.

On each bypass day, samples for BOD5, CBOD5 and TSS will be taken for reporting purposes only at sampler 10, during the normal 24 hour reporting period, and an analysis will be done on the entire 24 hour composite. If no bypass occurs during this period, samples at sampler 10 will be taken and analyzed for BOD5, TSS and other parameters specified in the Permittee's then current NPDES permit.

2) Samples for E. coli, pH and total residual chlorine will be done in accordance with the Permittee's then current NPDES permit. The City will ensure that the sample will be taken during at least one bypass event on each bypass day whenever practicable.

Bypass (self) monitoring data, to be collected and analyzed at Sampler 10 during bypass days/events, will be collected by the Permittee for up to two years after the receipt of the Order to establish baseline conditions. After two years, the EPA, NH DES and the City will meet to evaluate the data and determine if additional data collection is necessary.

3) A bypass event is defined as the period of time between the initiation of the bypass of secondary treatment and ceasing the bypass of secondary treatment. A bypass day is any portion of a calendar day in which a bypass event is occurring. A single bypass day may consist of multiple bypass events.

For bypass events exceeding one calendar day in duration, sampling shall be performed each day of the event according to the measurement frequency specified.

4) The pH of the effluent shall not be less than 6.0 nor greater than 8.5 at anytime, unless these values are exceeded due to natural causes or as a result of the approved treatment process.

5) The Permittee shall submit to EPA copies of all self monitoring data required by the New Hampshire Department of Environmental Services as reported on Monthly Operations Reports sheets.

6) The Permittee shall report bypass flow, secondary flow and total flow.

7) The Permittee shall report average monthly and average weekly BOD, CBOD5 and TSS concentrations and mass loadings using all data (wet and dry) from Sampler 10 located downstream of all WWTF treatment processes. This report shall not be used for NPDES compliance purposes.