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NORTHERN DISTRICT OF TEXAS
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AUG 28 2006
CLERK, U.S. DISTRICT COURT
By _____
Deputy

IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF TEXAS

UNITED STATES OF AMERICA)
and STATE OF TEXAS,)

Plaintiffs,)

v.)

CITY OF DALLAS)

Defendant.)

8-06CV0845-BD

Civil Action No.

CONSENT DECREE

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INTRODUCTION

Plaintiff United States of America, on behalf of the United States Environmental Protection Agency ("EPA"), and Plaintiff the State of Texas, on behalf of the Texas Commission on Environmental Quality ("TCEQ"), have filed a Complaint concurrently with the lodging of this Consent Decree.

The United States and the State's Complaint alleges that Defendant City of Dallas (the "City") violated the Federal Water Pollution Control Act, also known as the Clean Water Act, 33 U.S.C. §§ 1251-1387 ("Clean Water Act"), the Solid Waste Disposal Act, also known as the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901-6992k ("RCRA"), and Chapter 26 of the Texas Water Code.

The State of Texas is a plaintiff in this action and is joined as a party under Section 309(e) of the Act, 33 U.S.C. § 1319(e). Whenever a municipality is a party to a civil action brought by the United States under Section 309, the Act requires the State in which the municipality is located to be joined as a party.

On March 28, 1997, EPA issued the City National Pollutant Discharge Elimination System ("NPDES") Permit No. TXS000701, with an effective date of May 1, 1997.

On February 6, 2004, EPA issued an order titled "Findings of Violation and Order for Compliance" (the "Compliance Order") (attached to this Decree as Appendix I) for alleged violations of the Clean Water Act and RCRA.

On April 13, 2004, in response to the Compliance Order, the City submitted its "Response to Findings of Violation and Order for Compliance."

On February 22, 2006, the Texas Commission on Environmental Quality

("TCEQ") issued the City Texas Pollutant Discharge Elimination System ("TPDES") Permit No. WQ0004396000, which is a renewal of NPDES Permit No. TXS000701.

The City understands that, separate and apart from the requirements of this Consent Decree, EPA plans to audit and/or otherwise review the City's storm water management program in the future.

The City does not admit any liability to the United States or the State arising out of the transactions or occurrences alleged in the Complaints.

The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties, and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, before the taking of any testimony at trial, without the adjudication or admission of any issues of fact or law except as provided in Section I below, and with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331, 1345, 1355, and 1367; Sections 309(b), 311(b)(3), and 311(b)(7)(E) of the Clean Water Act, 33 U.S.C. §§ 1319(b), 1321(b)(3) and 1321(b)(7)(E); Section 3008(a) of RCRA, 42 U.S.C. § 6928(a); and over the Parties. Venue lies in this District pursuant to Sections 309(b) and 311(b)(7)(E) of the Clean Water Act, 33 U.S.C. §§ 1319(b) and 1321(b)(7)(E); Section 3008(a) of RCRA, 42 U.S.C. § 6928(a); and pursuant to 28 U.S.C. § 1391(b) and (c) and 28 U.S.C. § 1395; because the City is, and, at the time the action was commenced, was, located in,

residing in, and doing business in this judicial district, and because the violations and releases that are the subject of this action, and a substantial part of the events or omissions giving rise to the claims, occurred in this judicial district. For purposes of this Decree or any action to enforce this Decree, the City consents to the Court's jurisdiction over this Decree or such action and over the City, and consents to venue in this judicial district.

2. Notice of commencement of this action has been given to the State of Texas pursuant to Section 309(b) of the Clean Water Act, 33 U.S.C. § 1319(b), and Section 3008(a)(2) of RCRA, 42 U.S.C. § 6928(a)(2).

II. APPLICABILITY

3. The obligations of this Consent Decree apply to and are binding upon the United States, the State, and the City and any successor or other entities or persons otherwise bound by law.

4. The City shall provide a written, hard-copy notice that a copy of this Consent Decree is posted on the City's intranet to appropriate officers, employees, and agents whose duties include compliance with any provision of this Decree, including, without limitation, the Mayor and City Council members, the City Manager's Office, the Directors and Assistant Directors associated with the Environmental Management System ("EMS") required by this Consent Decree, the Director and non-clerical personnel of the Office of Environmental Quality, the non-clerical members of the Storm Water Management Section, and the Environmental Management Representatives and the EMS Core teams performing work on the EMS under this Consent Decree. The City shall provide a copy of this Consent Decree to any contractor retained to perform work required under this Consent Decree. The City shall condition any contract to

perform such work upon performance of the work in conformity with the terms of this Consent Decree.

5. In any action to enforce this Consent Decree, the City shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree (without waiving the City's rights against any such person). The City has the rights provided by Section IX (Force Majeure) of this Consent Decree.

6. Absent the written agreement of the United States, no transfer of ownership or operation of any of the facilities governed by this Decree, whether in compliance with this Section or otherwise, shall relieve the City of its obligation to ensure that the terms of the Decree are implemented.

7. If the City proposes to sell or transfer part or all of its ownership or operation of any facilities governed by this Decree, it shall advise the purchaser or transferee ("purchaser/transferee") in writing of the existence of this Consent Decree and provide a copy of the Consent Decree prior to such sale or transfer. The City shall send a copy of such written notification to the United States and the State pursuant to Section XIV of this Decree (Notices) by certified mail, return receipt requested, at least 45 days (or a shorter period if the United States and the City so agree in writing) before such sale or transfer.

III. DEFINITIONS

8. Unless otherwise provided in this Decree, terms used in this Consent Decree that are defined in the Clean Water Act and RCRA, or in regulations promulgated pursuant to those acts, shall have the meanings assigned to them in the Clean Water Act and RCRA, or such

regulations. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

“City” shall mean the City of Dallas, a municipal corporation duly chartered under the laws of the State of Texas.

“Clean Water Act” shall mean the Clean Water Act, formally entitled the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251-1387.

“Complaint” shall mean the United States’ and the State’s Complaint.

“Consent Decree” or “Decree” shall mean this Decree and all its attachments.

“Day” (whether or not capitalized) shall mean a calendar day unless expressly stated to be a working day. In computing due dates under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day.

“Effective Date” is defined in Section XV of this Decree.

“Eligible Project Costs” include the costs of planning and implementing a SEP, but do not include overhead, administrative expenses, legal fees, or oversight by City staff of contractors.

“Environmental Management System” or “EMS” shall mean a system of management practices and procedures that promote compliance with environmental legal requirements and improve environmental performance.

“EPA” shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

“Industrial Facility” shall mean any facility located within the city limits of the

City from which there is a "storm water discharge associated with industrial activity" as defined in 40 C.F.R. § 122.26(b)(14) excluding § 122.26(b)(14)(x).

"Inspection" shall mean a visit to a facility or site, including direct observations of facility operations and/or conditions, that is adequate in scope and thoroughness to determine whether the facility or site is in compliance with relevant obligations. "Inspect" shall mean to carry out an Inspection.

"Maintain," when used in connection with the staffing requirements set forth in this Consent Decree, shall mean that the City shall have the specified kinds and number of staff on the City payroll or under contract serving in the capacity specified by this Decree. If an employee or contractor leaves a position (whether as a result of retirement, resignation, or otherwise) that this Consent Decree requires the City to staff, the City shall return to the minimum staffing level set by this Consent Decree (meaning the employee or contractor has reported for duty) within 90 days of the date of the departing employee's or contractor's departure.

"NPDES" shall mean National Pollutant Discharge Elimination System, as established by 33 U.S.C. § 1342.

"Paragraph" shall mean a portion of this Decree identified by an Arabic numeral.

"Parties" shall mean the parties to this Consent Decree: the United States, the State, and the City.

"Reporting Year." A Reporting Year shall be each 365-day period commencing on the month and day of the Effective Date of this Decree.

"Reporting Year Covered by this Consent Decree." A Reporting Year is covered

by this Consent Decree if any part of the Reporting Year falls after the Effective Date of, and before the termination of, this Decree.

“Satisfactory Completion” means that the City shall complete the required work on supplemental environmental projects (“SEPs”) in accordance with the SEP descriptions and specifications set forth in Appendices A and B and subsequently approved statements of work or work plans for the SEPs, and that the City shall spend not less than the amounts set forth in Paragraph 24.

“SARA-313 Facilities” shall mean facilities that must submit chemical release forms pursuant to 42 U.S.C. § 11023.

“Section” shall mean a portion of this Decree identified by a Roman numeral.

“State” shall mean the State of Texas.

“Storm Water Management Program” and “SWMP” shall mean the City’s program to manage storm water approved by EPA on April 4, 1995, as amended thereafter. The SWMP as approved on April 4, 1995 and a list of subsequent amendments are attached to this Decree as Appendix H. Part III.G.2 of TPDES Permit No. WQ0004396000 provides a process by which the City’s storm water management plan can be amended (as did Permit No. TXS000701). For the purposes of this Decree, no change to the SWMP as defined herein shall be made unless the United States agrees to the change and the Decree is modified pursuant to Section XVII (Modification). (Nothing in this Decree, however, shall limit the rights of the Parties with respect to changes proposed to the storm water management plan in effect pursuant to TPDES Permit No. WQ0004396000.)

“United States” shall mean the United States of America, acting on behalf of

EPA.

IV. CIVIL PENALTY

9. Within 60 days after the Effective Date of this Consent Decree, the City shall pay a civil penalty of \$800,000 to the United States. Payment shall be made by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice in accordance with instructions to be provided to the City following lodging of the Consent Decree by the Financial Litigation Unit of the U.S. Attorney's Office for the Northern District of Texas.

10. At the time of payment required by this Section, the City shall simultaneously send written notice of payment and a copy of any transmittal documentation to the United States in accordance with Section XIV of this Decree (Notices). The notices shall reference the civil action number of the United States' case and DOJ Case Number 90-5-1-1-08359.

V. COMPLIANCE REQUIREMENTS

A. Public Participation and Governmental Coordination

11. The City shall Maintain a staff of at least seven technical staff in the Storm Water Management Section of the Public Works and Transportation Department to carry out the City's Public Participation and Governmental Coordination Program under the SWMP. The Public Participation and Governmental Coordination Program is Section 4.1 of the City's SWMP. Staff counted towards the staffing requirements set forth in Subsections V.B, V.D, V.E, and V.G of this Decree shall not count towards the staffing requirement of this Subsection V.A.

B. Illicit Discharges

12. The City shall Maintain a staff of at least two Environmental Specialists in the Storm Water Management Section of the Public Works and Transportation Department to carry

out the City's Illicit Discharge Program under the SWMP. The Illicit Discharge Program is Section 4.9 of the City's SWMP. Staff counted towards the staffing requirements set forth in Subsections V.A, V.D, V.E, and V.G of this Decree shall not count towards the staffing requirement of this Subsection V.B.

13. The City shall Inspect at least 500 outfalls each Reporting Year Covered by this Consent Decree.

C. Used Oil Program

14. The City shall Inspect at least once each Reporting Year Covered by this Consent Decree all of the City's general services fueling and vehicle maintenance operations. The Used Oil Program is Section 4.13 of the City's SWMP.

D. Industrial Inspections and Monitoring

15. The City shall Maintain a staff of at least five Environmental Specialists in the Storm Water Management Section of the Public Works and Transportation Department to carry out the City's Industrial Inspection and Control Program and the City's Monitoring Program for Industrial Facilities under the SWMP. The Industrial Inspection and Control Program and the Monitoring Program for Industrial Facilities are Sections 4.16 and 4.17, respectively, of the City's SWMP. Staff counted towards the staffing requirements set forth in Subsections V.A, V.B, V.E, and V.G of this Decree shall not count towards the staffing requirement of this Subsection V.D.

16. During each Reporting Year Covered by this Decree, the City shall Inspect at least 500 Industrial Facilities that hold, or are required to hold, NPDES storm water permits. Industrial Facilities Inspected in the immediately preceding Reporting Year shall not be counted

in determining whether 500 Industrial Facilities were Inspected in a Reporting Year.

17. During each Reporting Year Covered by this Decree, the City shall Inspect all SARA-313 Facilities located within the City limits, or 600 SARA-313 Facilities located within the City limits, whichever is fewer.

E. Construction Site Inspections

18. The City shall Maintain at least five Environmental Specialists in the Storm Water Management Section of the Public Works and Transportation Department to carry out the City's Construction Inspection Program under the SWMP. The Construction Inspection Program is Section 4.20 of the City's SWMP. Staff counted towards the staffing requirements set forth in Subsections V.A, V.B, V.D, and V.G of this Decree shall not count towards the staffing requirement of this Subsection V.E.

19. The City shall Inspect, at least once every two weeks, construction activities that result in the disturbance of (a) five (5) acres or more of total land area or (b) are located in the "escarpment zone" or in "geologically similar areas" as those terms are defined at Section 51A-5.201 of the Dallas City Code. "Construction activities that result in the disturbance of (a) five (5) acres or more of total land area" shall include a disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more.

20. The City shall Inspect once within the first six (6) weeks after the start of construction and within four (4) days after receiving a complaint about the activity those construction activities not located in the "escarpment zone" or in "geologically similar areas" (as those terms are defined at Section 51A-5.201 of the Dallas City Code) that result in the

disturbance of one or more acres but less than five acres of total land area and for which a copy of a construction site notification has been submitted to the City or for which a grading or tree permit has been issued by the City. "Construction activities that result in the disturbance of one or more acres but less than five acres of total land area" shall include a disturbance of less than an acre of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb greater than one and less than five acres.

F. Overall Staffing: Public Works and Transportation Department

21. The City shall Maintain in the Storm Water Management Section of the Public Works and Transportation Department at least six (6) supervisors; a total of three (3) GIS Analysts, GIS Technicians, and/or Graphic Artists; four (4) Coordinators; two (2) Office Assistants; and a total of 21 Environmental Specialists and Engineers.

G. Environmental Management System

22. The City shall develop and commence implementation of an Environmental Management System in accordance with the provisions of Appendices C through G of this Consent Decree.

23. The City shall Maintain a staff of at least five (5) people in or reporting to the Office of Environmental Quality, not including clerical, administrative, or support staff, to carry out, in accordance with the provisions of Appendices C through G of this Consent Decree, the requirements of this Decree regarding the Environmental Management System. Staff counted towards the staffing requirements set forth in Subsections V.A, V.B, V.D, and V.E of this Decree shall not count towards the staffing requirement of this Subsection V.G.

VI. SUPPLEMENTAL ENVIRONMENTAL PROJECTS

24. The City shall implement the following supplemental environmental projects (“SEPs”) listed in this Paragraph in accordance with the schedules and other provisions of Attachments A and B to this Consent Decree, which are part of this Decree. In implementing the SEPs, the City shall spend not less than the following in Eligible Project Costs:

<u>Project</u>	<u>Min. Expenditures</u>
Pavaho Storm Water Wetland SEP	\$ 675,000
Zoo Storm Water Wetland SEP	\$ 525,000

25. The City is responsible for the Satisfactory Completion of the SEPs in accordance with the requirements of this Decree.

26. With regard to the SEPs, the City certifies the truth and accuracy of each of the following:

a. That all cost information provided to EPA in connection with EPA’s approval of the SEPs is complete and accurate and represents a fair estimate of the cost necessary to implement the SEPs;

b. That, as of the date of executing this Decree, the City is not required to perform or develop the SEPs by any federal, state, or local law or regulation, nor is the City required to perform or develop any of the SEPs by agreement or grant or as injunctive relief awarded in any other action in any forum;

c. That the SEPs are not projects that the City planned or intended to fund, construct, perform, or implement other than in settlement of the claims resolved in this Decree;

d. That the City has not received, and is not negotiating to receive, credit for the SEPs in any other enforcement action; and

e. That the City will not receive any reimbursement for any portion of the SEPs from any other person.

27. SEP Completion Reports

a. Within 90 days after the completion of each SEP, the City shall submit a SEP Completion Report to the United States in accordance with Section XIV of this Consent Decree (Notices). The SEP Completion Reports shall contain the following information:

- i. A detailed description of the SEP as implemented;
- ii. A description of any problems encountered in completing the SEP and the solutions thereto;
- iii. An itemized list of all Eligible SEP Costs;
- iv. Certification that the SEP has been fully implemented pursuant to the provisions of this Decree; and
- v. A description of the environmental and public health benefits resulting from implementation of the SEP (with a quantification of the benefits and pollutant reductions, if feasible).

b. Progress reports on the SEPs are required pursuant to Paragraph 33.b.

28. EPA may, in its discretion, require information in addition to that described in the preceding Paragraph in order to determine the adequacy of SEP completion or eligibility of SEP costs.

29. After receiving each SEP Completion Report, the United States shall notify the City whether or not the City has Satisfactorily Completed the SEP. If the SEP has not been Satisfactorily Completed, Stipulated Penalties may be assessed under Section VIII of this

Consent Decree.

30. Disputes concerning the satisfactory performance and/or Satisfactory Completion of SEPs (including disputes about whether stipulated penalties are due) and the amount of Eligible SEP Costs may be resolved under Section X of this Decree (Dispute Resolution). No other disputes arising under this Section shall be subject to Dispute Resolution.

31. Each submission required under this Section shall be signed by a City official with knowledge of the SEP and shall bear the certification language set forth in Paragraph 35, below.

32. Any public statement, oral or written, in print, film, or other media, made by the City that publicizes the SEPs under this Decree shall include the following language: "This project was undertaken in connection with the settlement of an enforcement action under the Clean Water Act and other statutes, United States v. City of Dallas, brought on behalf of the U.S. Environmental Protection Agency."

VII. REPORTING REQUIREMENTS AND APPROVAL OF SUBMITTALS

33. Reports. The City shall submit the following notices and reports:

a. Violations of the Consent Decree. If the City violates any requirement of this Consent Decree or has reason to believe that it is likely to violate any requirement of this Consent Decree in the future, the City shall notify the United States and the State of such violation and its likely duration in writing within twenty working days of the day the City first becomes aware of such violation or likely violation, with an explanation of the violation's likely cause and of the remedial steps taken, and/or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, the City shall include a statement to that effect in the report. The City shall investigate to determine the cause

of the violation and then shall submit an amendment to the report, including a full explanation of the cause of the violation, within 30 days of the day the City becomes aware of the cause of the violation.

b. Semiannual Reports. After lodging of this Consent Decree and until termination of this Decree pursuant to Section XVIII (Termination), the City shall submit to the United States and the State periodic semiannual reports by email and by either U.S. Mail or an overnight delivery service. The semiannual report addressing the first six months of a Reporting Year shall be submitted no later than 30 days after the conclusion of the first six months of the Reporting Year. The semiannual report addressing the second six months of a Reporting Year shall be submitted no later than 45 days after the end of a Reporting Year. The semiannual reports shall state:

i. Whether the City was in compliance during the most-recently-ended six-month period with the provisions of Section V of this Decree (Compliance Requirements), including, without limitation, whether the City Maintained the required staffing, met required deadlines, and completed required Inspections. In addition, the report on the second half of the Reporting Year shall also report on whether the City was in compliance with annual requirements during the most-recently-ended Reporting Year;

ii. For each Paragraph in Section V of this Decree (Compliance Requirements) that requires staffing be Maintained at a specific level, the number and titles of the staff in the relevant Department, Program, Section, Office or other City governmental unit during the most-recently-ended six-month period;

iii. For each Paragraph in Section V of this Decree (Compliance

Requirements) that requires a minimum number of Inspections to be performed, how many Inspections were performed in each month of the six-month period covered by the report (and for the report on the second half of the Reporting Year, how many Inspections were performed during the Reporting Year as a whole);

iv. A discussion of the City's progress in satisfying its obligations in connection with the SEPs under Section VI of this Decree (Supplemental Environmental Projects) including, at a minimum, a narrative description of activities undertaken, a summary of costs incurred since the previous report, and a report on the City's compliance or noncompliance with the SEP descriptions, specifications, schedules set forth in Appendices A and B to this Decree and subsequent work plans or statements of work for the SEPs;

v. A description of any delays encountered or anticipated that may affect the future schedule for implementation of the requirements of this Consent Decree and a description of efforts made to mitigate those delays or anticipated delays.

c. The City shall submit semiannual progress reports regarding the EMS pursuant to Paragraph 10 of Appendix C, which sets a different schedule than that set by Subparagraph b of this Paragraph.

34. All reports submitted pursuant to Paragraph 33 shall be submitted to the recipients designated above in accordance with Section XIV of this Consent Decree (Notices).

35. Each written report submitted by the City under this Section shall be signed by an Assistant City Manager, or higher-level City official, and include the following certification:

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that this document and its attachments were

prepared either by me personally or under my direction or supervision in a manner designed to ensure that qualified and knowledgeable personnel properly gather and present the information contained therein. I further certify, based on my personal knowledge or on my inquiry of those individuals immediately responsible for obtaining the information, that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowingly and willfully submitting a materially false statement.

This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

36. Nothing in this Section VII relieves the City of the obligation to provide the requisite notice for purposes of Section IX (Force Majeure) of this Consent Decree.

37. The reporting requirements of this Consent Decree do not relieve the City of any reporting obligations required by the Clean Water Act or its implementing regulations or by any other federal, state, or local law, regulation, permit, or other requirement.

38. Approval of Deliverables. After review of any modification of the SWMP, plan, workplan, statement of work, report, or other item that is required to be submitted pursuant to this Consent Decree (other than the Initial Audit Response and Action Plan submitted pursuant to Paragraph 22 of Appendix C (Environmental Management System)) and portions of Development Plans submitted pursuant to Paragraph 7 of Appendix C (Environmental Management System), which are submitted for review and comment), EPA shall in writing: (a) approve the submission; (b) approve the submission upon specified conditions; (c) approve part of the submission and disapprove the remainder; or (d) disapprove the submission. If EPA fails to respond to a submittal within 60 days of receipt of the submittal, then the City may

contact the Chief of the Water Enforcement Branch of EPA Region 6 to discuss means of expediting EPA's response.

39. If the submission is approved pursuant to Paragraph 38, subpart (a), the City shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is conditionally approved or approved only in part, pursuant to Paragraph 38, subparts (b) or (c), the City shall, upon written direction of EPA take all actions required by the approved plan, report, or other item that EPA determines are technically severable from any disapproved portions, subject to the City's right to dispute under Section X of this Decree (Dispute Resolution), the specified conditions.

40. If the submission is disapproved in whole or in part pursuant to Paragraph 38, subparts (c) or (d), then, subject to the City's right to dispute the disapproval under Section X of this Consent Decree (Dispute Resolution), the City shall, within 60 days or such other time as the Parties agree to in writing, correct all deficiencies and resubmit the plan, report, or other item, or disapproved portion thereof, for approval, in accordance with the preceding Paragraphs.

41. Any Stipulated Penalties applicable to the original submission, as provided in Section VIII of this Decree, shall accrue during the 60-day period or other specified period, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided that, if the original submission was so deficient as to constitute a material breach of the City's obligations under this Decree, the Stipulated Penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

42. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in

whole or in part, EPA may again require the City to correct any deficiencies, in accordance with the preceding Paragraphs, or may itself correct any deficiencies, subject to the City's right to invoke Dispute Resolution and the right of EPA to seek Stipulated Penalties as provided in the preceding Paragraphs.

VIII. STIPULATED PENALTIES

43. If the City fails to pay the civil penalties required to be paid under Section IV (Civil Penalty), Paragraph 9, of this Decree when due, the City shall pay the United States a stipulated penalty of \$1,000 per day for each day that the payment is late. Late payment of the civil penalty shall be made in accordance with Section IV, above. Stipulated Penalties shall be paid in accordance with Section VIII, Paragraph 51, below. All transmittal correspondence shall state that any such payment is for late payment of the civil penalty due under this Decree, or for Stipulated Penalties for late payment, as applicable, and shall include the identifying information set forth in Paragraph 10, above.

44. The City shall be liable for Stipulated Penalties to the United States for violations of obligations of this Consent Decree unless excused under Section IX (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any statement of work or schedule approved under this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree.

45. Compliance Measures. The following Stipulated Penalties shall accrue for each violation identified below:

- a. For each day that the City fails to Maintain the minimum number or

required kind of staff in a Department, Program, Section, Office or other City governmental unit as required by a Paragraph in Section V (Compliance Requirements) of this Decree:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$750 per day	1st through 14th day
\$1,000 per day	15th through 30th day
\$1,250 per day	31st day and beyond

b. For each Reporting Year Covered by this Consent Decree during which the City fails to Inspect at least 500 outfalls as required by Paragraph 13, fails to Inspect all of the City's general services fueling and vehicle maintenance operations as required by Paragraph 14, fails to Inspect 500 Industrial Facilities as required by Paragraph 16, :

<u>Penalty Per Missed Inspection</u>	<u>No. of Inspections Below Minimum</u>
\$ 400 per inspection	1st through 25th inspections
\$1,000 per inspection	26th through 50th inspections
\$2,000 per inspection	50th and subsequent

c. For each Reporting Year Covered by this Consent Decree during which the City fails to Inspect the minimum number of SARA-313 Facilities as required by Paragraph 17:

<u>Penalty Per Missed Inspection</u>	<u>No. of Inspections Below Minimum</u>
\$ 400 per inspection	1st through 25th inspections
\$1,000 per inspection	26th through 50th inspections
\$2,000 per inspection	50th and subsequent

d. For each failure to conduct an Inspection of a construction site as required by Paragraph 19:

<u>Penalty Per Missed Inspection</u>	<u>Number of Violations</u>
\$ 150	1st through 25th violations
\$ 500	26th through 50th violations
\$1,500	51st and subsequent violations

For the purposes of this Subparagraph, one Inspection is missed during every 14-

day period in which an inspection should have been, but was not, performed. The first 14-day period begins on the day that construction activity commenced. (For example, if construction begins on February 1, 2007 and ends on March 9, 2007, and no Inspections are performed, three (3) Inspections were missed.)

e. For each failure to conduct an Inspection of a construction site as required by Paragraph 20:

<u>Penalty Per Missed Inspection</u>	<u>Number of Violations</u>
\$ 150	1st through 25th violations
\$ 500	26th through 50th violations
\$1,500	51st and subsequent violations

46. Submission, Reporting and Notice Requirements. The following Stipulated Penalties shall accrue per violation per day for each violation of the submission, reporting, or notice requirements of Section VII (Reporting Requirements) and Appendix C (Environmental Management System) of this Consent Decree:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$500	1st through 14th day
\$1,000	15th through 30th day
\$1,250	31st day and beyond

47. SEP Compliance

a. If for any SEP, the City has spent less than the amount set forth for that SEP in Paragraph 24, above, the City shall pay a stipulated penalty equal to the difference between the amount of total Eligible Project Costs incurred by the City for the SEP and the amount set forth for the SEP in Paragraph 24.

b. If the City has completed a SEP, but the SEP has not been Satisfactorily Completed, the City shall pay, in addition to any penalty required under Subparagraph a, above:

For the Pavaho Storm Water Wetland SEP:	\$100,000
For the Zoo Storm Water Wetland SEP:	\$80,000

Stipulated penalties under this Subparagraph b shall accrue as follows: If, the first time the City certifies that a SEP has been fully implemented pursuant to Paragraph 27.a, the SEP has not been Satisfactorily Completed, but the City's performance of the SEP substantially complied with the City's obligations under this Decree, then no stipulated penalty shall accrue while the City carries out the work necessary to Satisfactorily Complete the SEP. If the City certifies a second time that the SEP has been fully implemented, but the SEP has not been Satisfactorily Completed, the stipulated penalty shall accrue as of the date of the second certification. If, the first time the City certifies that a SEP has been fully implemented, the SEP has not been Satisfactorily Completed and the City's performance of the SEP did not substantially comply with the City's obligations under this Decree, then the stipulated penalty shall accrue as of the date of the first certification.

c. If the City abandons work on any SEP, the City shall pay:

For the Pavaho Storm Water Wetland SEP:	\$150,000
For the Zoo Storm Water Wetland SEP:	\$120,000

in addition to any penalty required under Subparagraph a, above, and any penalties owing under Subparagraph d, below, for milestones missed up to the time that the penalty under this Subparagraph accrues. The penalty under this Subparagraph shall accrue as of the date specified for completing the Project or the date performance ceases, whichever is earlier.

d. If the City fails to comply with the schedules in Section VI of this Consent Decree or in Appendices A and B to this Consent Decree (including the preparation of the SEP Completion Reports), for each failure to meet an applicable milestone the City shall pay

Stipulated Penalties of \$4,000 per month. Such penalties shall accrue from the date the City was required to meet each such milestone, until compliance with the milestone is achieved.

48. Subject to the provisions of Subparagraphs a, b, and c of the immediately preceding Paragraph, Stipulated Penalties under this Section shall begin to accrue on the day after performance is due or on the day a violation occurs, whichever is applicable, and shall continue to accrue until performance is Satisfactorily Completed or until the violation ceases. Stipulated Penalties shall accrue simultaneously for separate violations of this Consent Decree. The City shall pay any Stipulated Penalty within 30 days of receiving the United States' written demand, unless the Parties enter into Dispute Resolution, in which case the provisions of Paragraph 50 apply.

49. The United States may, in the unreviewable exercise of its discretion, reduce or waive any Stipulated Penalties otherwise due under this Consent Decree.

50. Stipulated Penalties shall continue to accrue as provided in Paragraph 48, above, during any Dispute Resolution, but need not be paid until the following:

- a. If the dispute is resolved by agreement or by a decision of EPA that is not appealed to the Court, the City shall pay accrued penalties agreed or determined to be owing to the United States within 60 days of the effective date of the agreement or the receipt of EPA's decision or order;
- b. If the dispute is appealed to the Court, the City shall pay all accrued penalties determined by the Court to be owing within 60 days of receiving the Court's decision or order, except as provided in Subparagraph c, below;
- c. If the United States or the City appeals the District Court's decision, the City shall

pay all accrued penalties determined to be owing within 60 days of receiving the final appellate court decision.

51. The City shall, as directed by the United States, pay Stipulated Penalties owing to the United States by EFT in accordance with Section IV, Paragraph 9, above, or by certified or cashier's check in the amount due payable to the "U.S. Department of Justice," referencing DOJ No. 90-5-1-1-008359 and the civil action number of this case, delivered to the office of the United States Attorney, Northern District of Texas, 1100 Commerce Street, Suite 300, Dallas, Texas 75242.

52. At the time of payments of stipulated penalties required by this Section, the City shall simultaneously send written notice of payment and a copy of any transmittal documentation to the United States in accordance with Section XIV of this Decree (Notices). The notices shall reference the civil action number of this case and DOJ case Number 90-5-1-1-008359.

53. If the City fails to pay Stipulated Penalties according to the terms of this Consent Decree, the City shall be liable for interest on such penalties, as provided for in 28 U.S.C. §1961, accruing as of the date payment became due.

54. Subject to the provisions of Section XII of this Consent Decree (Effect of Settlement/Reservation of Rights), the Stipulated Penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States for the City's violation of this Consent Decree or applicable law. Where a violation of this Consent Decree is also a violation of the Clean Water Act, the City shall be allowed a credit, for any Stipulated Penalties paid, against any statutory penalties imposed for such violation.

IX. FORCE MAJEURE

55. A "force majeure event" is any event beyond the control of the City, its contractors, or any entity controlled by the City that delays the performance of any obligation under this Consent Decree despite the City's best efforts to fulfill the obligation. "Best efforts" includes anticipating any potential force majeure event and addressing the effects of any such event (a) as it is occurring and (b) after it has occurred, to prevent or minimize any resulting delay to the greatest extent possible. "Force Majeure" does not include the City's financial inability to perform any obligation under this Consent Decree.

56. The City shall provide notice to EPA orally or by electronic or facsimile transmission as soon as possible, but not later than seven (7) days after the time the City first knew of, or by the exercise of due diligence, should have known of, a claimed force majeure event. The City shall also provide written notice to the United States as provided in Section XIV of this Consent Decree (Notices), within seven days of the time the City first knew of, or by the exercise of due diligence, should have known of, the event. The notice shall state the anticipated duration of any delay, its cause(s), the City's past and proposed actions to prevent or minimize any delay, a schedule for carrying out those actions, and the City's rationale for attributing any delay to a force majeure event. Failure to provide oral and written notice as required by this Paragraph shall preclude the City from asserting any claim of force majeure.

57. If the United States agrees that a force majeure event has occurred, the United States may agree to extend the time for the City to perform the affected requirements for the time necessary to complete those obligations. An extension of time to perform the obligations affected by a force majeure event shall not, by itself, extend the time to perform any other

obligation. Where the United States agrees to a material extension of time, the appropriate modification shall be made pursuant to Section XVII of this Consent Decree (Modification).

58. If the United States does not agree that a force majeure event has occurred, or does not agree to the extension of time sought by the City, the United States' position shall be binding, unless the City invokes Dispute Resolution under Section X of this Consent Decree. In any such dispute, the City bears the burden of proving, by a preponderance of the evidence, that each claimed force majeure event is a force majeure event, that the City gave the notice required by Paragraph 56, that the force majeure event caused any delay that the City claims was attributable to that event, and that the City exercised best efforts to prevent or minimize any delay caused by the event.

X. DISPUTE RESOLUTION

59. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. However, the procedures of this Section shall not apply to actions by the United States to enforce obligations of the City that have not been disputed in accordance with this Section.

60. Informal Dispute Resolution. Any dispute subject to dispute resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when the City sends the United States a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 30 days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations,

then the position advanced by the United States shall be considered binding unless, within 20 days after the conclusion of the informal negotiation period, the City invokes formal dispute resolution procedures as set forth below.

61. Formal Dispute Resolution. The City shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but may not necessarily be limited to, any factual data, analysis, or opinion supporting the City's position and any supporting documentation relied upon by the City.

62. The United States shall serve its Statement of Position within 30 days of receipt of the City's Statement of Position. The United States' Statement of Position shall include, but may not necessarily be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. If within five (5) days of receiving the United States' Statement of Position, the City requests to confer with the United States about the United States' Statement of Position, the United States will confer (in person and/or by telephone) with the City, but such a conference shall be concluded no later than 21 days after the issuance of the United States' Statement of Position. The United States will reaffirm its Statement of Position or, if the United States decides to amend its Statement of Position, the United States will amend its Statement of Position, within 14 days after the conclusion of the conference. If the United States fails to reaffirm or amend its Statement of Position, the Statement of Position shall be deemed reaffirmed. The United States' Statement of Position shall be binding on the City unless the City files a motion for judicial review of the dispute in accordance with the following Paragraph.

63. The City may seek judicial review of the dispute by filing with the Court and serving on the United States in accordance with Section XIV of this Consent Decree (Notices) a motion requesting judicial resolution of the dispute. If no conference was requested pursuant to the previous Paragraph, the City's motion must be filed within 14 days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. If a conference was requested pursuant to the previous Paragraph, the City's motion must be filed within 14 days of receipt of the United States' reaffirmation of its original Statement of Position or issuance of an amended Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of the City's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

64. The United States shall respond to the City's motion within the time period allowed by the Local Rules of this Court. The City may file a reply memorandum, to the extent permitted by the Local Rules.

65. In any dispute under this Section, the City shall bear the burden of demonstrating that its position clearly complies with this Consent Decree and the Clean Water Act. The United States reserves the right to argue that its position is reviewable only on the administrative record and must be upheld unless arbitrary and capricious or otherwise not in accordance with law, and the City reserves the right to oppose any such argument.

66. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of the City under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated Penalties shall be

assessed and paid as provided in Section VIII (Stipulated Penalties).

XI. INFORMATION COLLECTION AND RETENTION

67. The United States, the State, and their representatives, including attorneys, contractors, and consultants, shall have the right to enter City facilities at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States or the State in accordance with the terms of this Consent Decree;
- c. obtain samples;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess the City's compliance with this Consent Decree.

68. Until three years after the termination of this Consent Decree with respect to Sections IV and V, and VI, respectively, the City shall retain, and shall instruct its respective contractors and agents to preserve, all non-identical copies of all records and documents (including records or documents in electronic form) in their or their contractors' or agents' possession or control, or that come into their or their contractors' or agents' possession or control, and that demonstrate or document the City's compliance or noncompliance with the obligations of this Consent Decree. This record retention requirement shall apply regardless of any corporate or institutional document-retention policy to the contrary. At any time during this record-retention period, the United States or the State may request copies of any documents or records required to be maintained under this Paragraph.

69. Before destroying any documents or records subject to the requirements of the

preceding Paragraph, the City shall notify the United States and the State at least 90 days prior to the destruction of any such records or documents, and, upon request by the United States or the State, the City shall deliver any such records or documents to EPA or the State. The City may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If the City asserts such a privilege, it shall provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted.

70. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the State pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of the City to maintain records or information imposed by applicable federal or state laws, regulations, permits, or orders.

XII. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

71. This Consent Decree resolves (i) the civil claims of the United States and the State for the violations alleged in the Complaint through the date of lodging, and (ii) the violations alleged in the Compliance Order through the date of lodging.

72. The United States and the State reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated herein. This Consent Decree shall not be construed to prevent or limit the rights of the United States or the State to obtain penalties or injunctive relief under the Clean Water Act or its implementing regulations,

or under other federal or state laws, regulations, or permit conditions, except as expressly specified in the preceding Paragraph. The United States and the State further reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, the City of Dallas, whether related to the violations addressed in this Consent Decree or otherwise.

73. This Consent Decree is not a permit, or a modification of any permit, under any federal, state, or local laws or regulations. The City is responsible for achieving and maintaining complete compliance with all applicable federal, state, and local laws, regulations, and permits. The United States and the State do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that the City's compliance with any aspect of this Consent Decree will result in compliance with provisions of the Clean Water Act or with any other provisions of federal, state, or local laws, regulations, or permits.

74. This Consent Decree does not limit or affect the rights of the City or of the United States or the State against any third parties, not party to this Consent Decree. The effect of this Consent Decree on the rights of third parties, not party to this Consent Decree, against the City shall be as provided by law.

75. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

XIII. COSTS

76. The Parties shall bear their own costs of this action, including attorneys fees, except that the United States shall be entitled to collect the costs (including attorneys fees) incurred in any action necessary to collect any portion of the civil penalty or any Stipulated

Penalties due but not paid by the City.

XIV. NOTICES

77. Unless otherwise specified herein, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

To the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-08359

&

Thea Lomax
Municipal and Industrial Section (6EN-WM)
Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733
Ph: 214-665-8098
Fax: 214-665-2168
Lomax.Thea@epa.gov

& Scott McDonald
Office of Regional Counsel (6RC-EW)
Environmental Protection Agency, Reg. 6
1445 Ross Avenue
Dallas, TX 75202-2733
Ph: 214-665-2718
Fax: 214-665-3177
Mcdonald.Scott@epa.gov

To EPA only, as opposed to the United States:

Thea Lomax
Municipal and Industrial Section (6EN-WM)
Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733
Ph: 214-665-8098
Fax: 214-665-2168
Lomax.Thea@epa.gov

& Scott McDonald
Office of Regional Counsel (6RC-EW)
Environmental Protection Agency, Reg. 6
1445 Ross Avenue
Dallas, TX 75202-2733
Ph: 214-665-2718
Fax: 214-665-3177
Mcdonald.Scott@epa.gov

To the State:

Texas Commission on Environmental Quality & Texas Commission on Environmental
Enforcement Division Quality
PO Box 13087 Water Program Manager
Austin, Texas 78711-3087 2309 Gravel Drive
Fort Worth, Texas 76118-6951

To the City:

For Notices Re: the EMS:

Laura Fiffick
Director, Office of Environmental Quality
City of Dallas
1500 Marilla, Room L2F South
Dallas, Texas 75201
214.670.1200
Fax: 214.670.0134
Laura.fiffick@dallascityhall.com

& David Howe
Assistant City Attorney
Office of City Attorney
City of Dallas
1500 Marilla, Room 7C
Dallas, Texas 75201
214.670.3519
Fax: 214.670.0622
David.howe@dallascityhall.com

For Notices Re: All Other Matters:

Errick Thompson
Assistant Director
Public Works & Transportation Department
City of Dallas
320 E. Jefferson, Room 108
Dallas, Texas 75203
214.948.4022
Fax: 214.948.4076
Errick.thompson@dallascityhall.com

& David Howe
Assistant City Attorney
Office of City Attorney
City of Dallas
1500 Marilla, Room 7C
Dallas, Texas 75201
214.670.3519
Fax: 214.670.0622
David.howe@dallascityhall.com

78. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address.

79. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XV. EFFECTIVE DATE

80. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court.

XVI. RETENTION OF JURISDICTION

81. The Court shall retain jurisdiction over the case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections X (Dispute Resolution) and XVII (Modification), or effectuating or enforcing compliance with the terms of this Decree.

XVII. MODIFICATION

82. The terms of this Consent Decree may be modified only by a subsequent written agreement signed by the United States and the City or by further order of the Court. Where a modification agreed-upon by the United States and the City constitutes a material change to any term of this Decree, it shall be effective only upon approval by the Court.

XVIII. TERMINATION

83. This Consent Decree may be terminated in two phases.

a. Termination With Respect to Sections IV and V – Civil Penalty and Compliance Requirements. Three years after the Effective Date of this Decree the City may invoke the following procedures regarding termination: Any time after the City submits the semiannual report on the third Reporting Year Covered by this Consent Decree, if (i) the City has completed all of the requirements of Subsection V.G (Environmental Management System), (ii) the City is in compliance with the requirements of Section V (Compliance Requirements), (iii) for the twelve-month period preceding the City's request for termination, the City Maintained

compliance with the staffing requirements of Section V of this Decree and complied with the Inspection requirements of Paragraphs 13, 14, 16, and 17 of this Decree, and (iv) the City has paid the civil penalty and any accrued Stipulated Penalties as required by this Consent Decree, the City may serve upon the United States a Notice of Intent to Terminate the Consent Decree with respect to Sections IV and V of this Decree, including obligations that flow from the obligations of Sections IV and V, such as the obligations to pay stipulated penalties for violations of, and the duty to submit reports regarding, the obligations of Sections IV and V. The Notice of Intent to Terminate shall certify that the City has satisfied the requirements listed in the preceding sentence and include all necessary supporting documentation. For the purposes of this Paragraph, the City shall have "complied with the Inspection requirements of Paragraphs 13, 14, 16, and 17 of this Decree" for the twelve-month period preceding the City's request for termination if, during that twelve-month period the City conducted the number of Inspections required by those Paragraphs during a Reporting Year Covered by this Consent Decree.

b. Termination With Respect to the Section VI – SEPs – And Final Termination. Anytime after EPA has notified the City whether or not both SEPs have been Satisfactorily Completed, any Dispute Resolution proceedings regarding the SEPs have been completed, and the City has paid any accrued Stipulated Penalties regarding the SEPs as required by this Consent Decree, the City may serve upon the United States a Notice of Intent to Terminate the Consent Decree with respect to Section VI of this Decree.

84. Following receipt by the United States of a Notice of Intent to Terminate, the United States and the City shall confer informally concerning the Notice and any disagreements as to whether the City has satisfactorily complied with the requirements for termination. The

period of informal discussions shall not exceed 21 days from the date of the Notice of Intent to Terminate, unless that period is modified by written agreement. If the United States agrees that the City has satisfied the applicable termination requirements, the United States and the City shall submit, for the Court's approval, a joint stipulation regarding termination.

85. If the United States does not agree that the City has satisfied the applicable termination requirements, the City may serve and file a motion seeking termination of the Consent Decree, provided, however, that the City shall not serve such a motion until 30 days after the conclusion of the period of informal consultation provided by the preceding Paragraph.

86. If the Court has previously terminated the Consent Decree with respect to Sections IV (Civil Penalty) and V (Compliance Requirements), termination of the Consent Decree with respect to Section VI (SEPs) shall constitute the final and complete termination of the Consent Decree. If the Court has previously terminated the Consent Decree with respect to Section VI (SEPs), termination of the Consent Decree with respect to Sections IV (Civil Penalty) and V (Compliance Requirements), shall constitute the final and complete termination of the Consent Decree.

XIX. PUBLIC PARTICIPATION

87. This Consent Decree shall be lodged with the Court for a period of not less than 30 days for public notice and comment in accordance with 28 C.F.R. § 50.7 and Texas Water Code § 7.110. The United States and the State of Texas each reserve the right to withdraw or withhold their consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. The City consents to entry of this Consent Decree without further notice. This Paragraph does not

create any rights exercisable by the City.

XX. SIGNATORIES/SERVICE

88. Each undersigned representatives of the City and the State and the Assistant Attorney General for the Environment and Natural Resources Division of the United States Department of Justice, certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

89. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis.

90. The City agrees not to oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified the City in writing that it no longer supports entry of the Decree.

91. The City agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXI. INTEGRATION

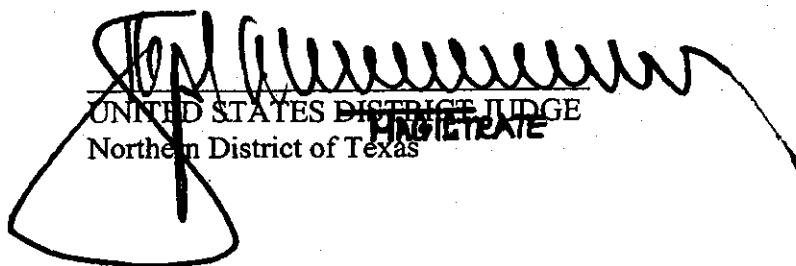
92. This Consent Decree and its Appendices constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersede all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than the Appendices, which are attached to and incorporated in this Decree, and submittals that are subsequently submitted and

approved pursuant to this Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, nor shall it be used in construing the terms of this Decree.

XXII. FINAL JUDGMENT

93. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, the State, and the City. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

Dated ~~and entered~~ this 28TH day of August, 2006.


UNITED STATES DISTRICT JUDGE
Northern District of Texas
PROFFITT

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

FOR PLAINTIFF UNITED STATES OF AMERICA:



SUE ELLEN WOOLDRIDGE
Assistant Attorney General
U.S. Department of Justice
Environment and Natural Resources Division
California Bar No. 131244

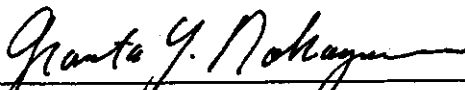


ROBERT R. KLOTZ
Senior Attorney
U.S. Department of Justice
Environment and Natural Resources Division
Environmental Enforcement Section
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044-7611
202-514-5516
202-514-8865 (fax)
California Bar No. 114991

RICHARD B. ROPER
United States Attorney
KATHERINE SAVERS MCGOVERN
Assistant United States Attorney
Texas Bar No. 13638020
1100 Commerce Street, Suite 300
Dallas, Texas 75242
214-659-8600
214-767-2916 (fax)

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

FOR PLAINTIFF UNITED STATES OF AMERICA (con't):



GRANTA Y. NAKAYAMA
Assistant Administrator
Office of Enforcement & Compliance Assurance
U.S. Environmental Protection Agency
Virginia Bar No. 37533

WE HEREBY CONSENT to the entry of this Consent Decree subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

FOR PLAINTIFF UNITED STATES OF AMERICA (con't):



RICHARD E. GREENE
Regional Administrator
U.S. Environmental Protection Agency
Region VI

WE HEREBY CONSENT to the entry of this Consent Decree:


FOR PLAINTIFF STATE OF TEXAS:

GREG ABBOTT
Attorney General of Texas


BARRY R. McBEE
First Assistant Attorney General

EDWARD D. BURBACH
Deputy Attorney General for Litigation

KAREN W. KORNEILL
Assistant Attorney General
Chief, Natural Resources Division

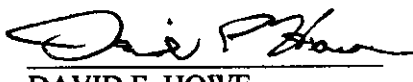

BURGESS JACKSON
Assistant Attorney General
Texas Bar No. 10486850
Natural Resources Division
P. O. Box 12548
Austin, Texas 78711-2548
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FOR DEFENDANT CITY OF DALLAS:


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APPENDIX A

Pavaho Storm Water Wetland SEP

Introduction. The Pavaho pump station is located along the land side (as opposed to the river side) of the Dallas Floodway West Levee south of Sylvan Street. The sump at the Pavaho pump station collects rainfall runoff from a watershed located outside of (on the land side of) the West Levee. Runoff from approximately 1843 acres of land drains into the Pavaho sump, which has a maximum storage capacity of 386 acre-feet of water.

The Pavaho pump station periodically pumps storm water from the Pavaho sump to the Trinity River. At present, a pump with a 6,000-gallon-per-minute (gpm) capacity pumps storm water from the Pavaho sump through a pipe that carries the water up and over the West Levee to a channel that empties into the Trinity River.

The City shall construct the Pavaho Storm Water Wetland in accordance with the following objectives and requirements:

I. Location, Size, and Source of Water

The City shall construct the Pavaho Storm Water Wetland downstream of Sylvan Avenue along the west bank of the Trinity River within the Dallas Floodway. The wetland shall be at least 60 acres in size. At least some of the water supplied to the Pavaho Storm Water Wetland shall be supplied by diverting to the wetland some or all of the storm water that is pumped out of the Pavaho sump.

II. Objectives of the Project

One objective of the Pavaho Storm Water Wetland Project is to create habitat for wetland flora and fauna, including habitat that can be maintained during sustained dry periods. Another

objective of the Project is to improve the quality of the storm water runoff reaching the Trinity River by having the water flow through the wetland vegetation that absorbs nutrients and metals from the storm water.

III. Submissions, Schedule, Minimum Plant Survival

A. Pavaho Wetland Project Manager and Design Consultant. No later than one (1) month after the Effective Date of this Consent Decree, the City shall notify EPA in writing of the name and title of the City employee who shall be the City's Project Manager for the Pavaho Storm Water Wetland SEP. If the City changes the Project Manager, the City shall notify EPA in writing of the name and title of the new Project Manager, no later than the date that the Project Manager assumes his or her duties.

No later than two (2) months after the Effective Date of this Consent Decree, the City shall submit to EPA a list of contractors, including the qualifications of each contractor, that the City is considering retaining to be the Pavaho Wetland Design Consultant, which shall, among other things, prepare the Workplan required by this Appendix. EPA will issue a written notice stating whether it disapproves of any of the proposed contractors. If EPA disapproves all of the contractors proposed by the City, the City shall submit to EPA a new list of contractors, including the qualifications of each contractor within 30 days of receipt of EPA's disapproval of the contractors previously proposed. EPA will issue a written notice stating whether it disapproves of any of the proposed contractors.

No later than seven (7) months after the Effective Date of this Consent Decree, the City shall notify EPA in writing of the name of the contractor selected to be the Pavaho Wetland Design Consultant. If at any time thereafter the City proposes to change a Pavaho Wetland

Design Consultant, the City shall give such notice to EPA and must obtain an authorization to proceed from EPA, before the new Pavaho Wetland Design Consultant performs, directs, or supervises any work under this Appendix.

B. Workplan. No later than fourteen (14) months after the Effective Date of this Consent Decree, the City shall submit to EPA for approval a Workplan for the Pavaho Storm Water Wetland Project. The Workplan shall contain a detailed description of, and design for, the work to be performed. The Workplan shall include, without limitation: (a) a statement of the elevations, water depths, and location of the wetland to be constructed; (b) a description of plant species to be planted, the spacing of the plants, and the number of plants to be planted per acre; (c) the plan for supplying water to the wetland (pumping frequencies, rates, etc.); (d) a description of the means by which the wetland will be maintained during sustained dry periods, including an assessment of whether water from a source other than the Pavaho sump will be needed, and if so, an estimate of how much additional water will be needed and a plan for providing such water; (e) plans for vector (including mosquito) control; (f) an identification of the principal dry- and wet-season pollutants and pollutant concentrations in the water in the Pavaho sump and any other water sources to be used to supply water to the wetland; (g) an evaluation of whether some form of pre-treatment (e.g., oil and grit interceptors, sand filters, forebays, floating berms) should be employed to maximize the water pollution removal efficiencies of the wetland or to maximize the quality of the wetland as habitat, (h) an evaluation of whether steps need to be taken to control erosion where water from the wetland flows from the flood plain down to typical river levels; (i) an evaluation whether planting a transitional vegetative buffer zone around all or part of the wetland would significantly improve the habitat

created by the project; and (j) an evaluation of the extent to which the acreage selected for the Project was previously wetland, and if possible, the hydroperiod and hydrodynamic of the previous wetland. The Workplan shall also contain: (k) photos of the area taken before the start of any work; (l) aerial photos, maps, sketches, or drawings, as appropriate, of the work proposed to be performed; (m) a proposed monitoring plan to determine the water quality improvements that are due to the wetland; (n) a long-term maintenance plan for the wetland; (o) a budget for the project; and (p) a schedule consistent with the following deadlines:

City submits names of proposed Construction Contractors to EPA	2 months after EPA approval of a Workplan
Applications for all Permits submitted	3 months after EPA approval of a Workplan
Construction commences	12 months after EPA approval of a Workplan
Construction and initial planting completed	7 months after construction commences
Monitoring continues for at least	3 years after construction and initial planting are completed.

C. Construction Contractor. No later than two (2) months after EPA approval of the Workplan for the Pavaho Storm Water SEP, the City shall submit to EPA a list of contractors and/or City Departments, including the qualifications of each contractor and City Department, that the City is considering retaining or using to construct the Pavaho Storm Water Wetland. EPA will issue a written notice stating whether it disapproves of any of the proposed contractors or City Departments. If EPA disapproves all of the contractors and Departments proposed by the City, the City shall submit to EPA a new list of contractors and/or City Departments, including the qualifications of each, within 30 days of receipt of EPA's disapproval

of the contractors or City Department previously proposed. EPA will issue written notice stating whether it disapproves of any contractor(s) or City Departments.

No later than eight (8) months after EPA approval of the Workplan for the Pavaho Storm Water SEP, the City shall submit to EPA the name and title of the Construction Contractor or City Department that shall construct the Pavaho Storm Water SEP. If at any time thereafter the City proposes to change the Pavaho Wetland Construction Contractor or Department, the City shall give such notice to EPA and must obtain an authorization to proceed from EPA before the new Pavaho Wetland Construction Contractor or City Department performs, directs, or supervises any work under this Appendix.

D. As-Built Drawings. The City shall submit two as-built drawings of the wetland for EPA approval, the first within 30 days after excavation and grading is complete and the second after the initial planting is complete.

E. Minimum Plant Survival. The City shall achieve at least 50% ground cover after the first growing season. The City shall achieve at least 80% ground cover after the second growing season and thereafter maintain plant coverage over at least 80% of the wetland area. If the plant coverage after the first growing season is less than 50%, the City shall replant to achieve an 50% coverage rate. If the plant coverage after the second growing season is or falls below 80%, the City shall replant until the 80% coverage rate or a greater coverage rate is achieved, but the City shall not be required by this Consent Decree to continue replanting after the minimum three-year monitoring period prescribed above has passed.

F. Access for Scientific Studies. The City shall make the wetland available, on reasonable terms, to any academic or government scientist who wishes to study the wetland.

IV. Minimum Funding

The City shall spend not less than \$675,000 on the project described in this Appendix.

Appendix B

Dallas Zoo Storm Water Wetland SEP

Introduction. Runoff entering the storm sewer system from the Dallas Zoo comes primarily from rainwater and from wash water used to clean animal exhibits and animal holding areas.

To date, the City attests that it has addressed storm water compliance at the Dallas Zoo by, among other things:

- (i) employing a "best management practice" – the daily dry cleaning of animal wastes;
- (ii) constructing improvements to exhibits and holding areas to reduce erosion potential;
- (iii) collecting runoff from exhibits, animal holding areas, and non-animal areas;
- (iv) employing separators to separate out trash and other solids and diverters to allow the Zoo to divert flows either to the sanitary sewer or the storm water system;
- (v) routing most wash water from animal holding facilities directly to the City's sanitary sewer system;
- (vi) diverting the first half inch of rain runoff from exhibits and animal holding areas into the sanitary sewer system; after this "first flush," rainwater is routed through the storm drainage system to Cedar Creek, which bisects the Zoo.

I. Location, Capacity, and General Requirements for the Project

The Dallas Zoo Storm Water Wetland SEP shall include collection infrastructure; a separator or separators to reduce the presence of floatable materials and reduce sediment load in the runoff; small biological-treatment facilities (also called "package treatment plants"), a wetland, and a means of returning water (after final treatment in the wetland) to the Zoo for use

in irrigation. The SEP shall be designed and constructed so that it can accept runoff from at least 15 acres of the Zoo's Wilds of Africa Exhibit, and a greater number of acres if possible. The SEP shall be designed and constructed to maximize the amount of treated water that can be diverted back to the Zoo for use in drip irrigation and minimize the amount of water discharged to Cedar Creek. The wetland component of the SEP shall be located adjacent to or near Cedar Creek, on the west side of E. Clarendon Drive. The wetland shall slowly filter and biologically treat storm water and any wash water entering the wetland, both to prepare the water for use in drip irrigation and to reduce the pollutant load in discharges of water from the Zoo to Cedar Creek.

II. Objectives of the Project

The primary objective of the Project is to improve the quality and reduce the impact of discharges from the Zoo's storm water system to Cedar Creek. Additional objectives are to maximize the use of the treated water for drip irrigation (thereby reducing demand on the City's drinking water system), to create habitat for wetland flora and fauna, and, if possible, achieve treatment efficiencies that allow wash water and the first half inch of storm runoff to be treated in the SEP's treatment system and safely used as irrigation water in the Zoo or safely discharged to Cedar Creek.

III. Submissions, Schedule, Minimum Plant Survival

A. Zoo Wetland Project Manager and Design Consultant.

No later than one (1) month after the Effective Date of this Consent Decree, the City shall notify EPA in writing of the name and title of the City employee who shall be the City's Project Manager for the Zoo Wetland SEP. If the City changes the Project Manager, the City shall notify

EPA in writing of the name and title of the new Project Manager, no later than the date that the Project Manager assumes his or her duties.

No later than two (2) months after the Effective Date of this Consent Decree, the City shall notify EPA in writing of the name, title, and qualifications of any contractor proposed to be the Zoo Wetland Design Consultant, which shall, among other things, prepare the Workplan required by this Appendix.

No later than two (2) months after the Effective Date of this Consent Decree, the City shall submit to EPA a list of contractors, including the qualifications of each contractor, that the City is considering retaining to be the Zoo Wetland Design Consultant, which shall, among other things, prepare the Workplan required by this Appendix. EPA will issue a written notice stating whether it disapproves of any of the proposed contractors. If EPA disapproves all of the contractors proposed by the City, the City shall submit to EPA a new list of contractors, including the qualifications of each contractor within 30 days of receipt of EPA's disapproval of the contractors previously proposed. EPA will issue a written notice stating whether it disapproves of any of the proposed contractors.

No later than seven (7) months after the Effective Date of this Consent Decree, the City shall notify EPA in writing of the name of the contractor selected to be the Zoo Wetland Design Consultant. If at any time thereafter the City proposes to change a Zoo Wetland Design Consultant, the City shall give such notice to EPA and must obtain an authorization to proceed from EPA, before the new Zoo Wetland Design Consultant performs, directs, or supervises any work under this Appendix.

B. Workplan. No later than fifteen (15) months after The Effective Date of

this Consent Decree, the City shall submit to EPA for approval a Workplan for the Zoo Storm Water Wetland Project. The Workplan shall contain a detailed description of, and design for, the work to be performed, including, without limitation: (a) a delineation of the acreage, drainage basins, and flow quantities to be served by the wetland; (b) an identification of the character, volume, and frequencies of the runoff, including an identification of the principal pollutants and pollutant concentrations in the runoff to be treated in the wetland; (c) layout and design of the collection facilities; (d) layout and design of the separation and diversion devices; (e) layout and design of the small biological treatment facilities; (f) layout and design of inlet and outlet structures; (g) a statement of the elevations, water depths, and location of the wetland to be constructed; (h) a description of plant species to be planted, the spacing of the plants, the number of plants to be planted per acre; (i) a description of the means by which the wetland will be maintained during sustained dry periods; (j) plans for vector (including mosquito) control; (k) an evaluation of whether odor-control measures will be needed and, if so, an odor control plan; and (l) proposed numerical limits on the pollutants in the water emerging from the project's treatment process, including a statement of the federal, state, local, industry, and other regulations, codes, guidelines, and standards that are relevant or applicable to the discharge. The Workplan shall also contain (m) photos of the area taken before the start of any work; (n) aerial photos, maps, sketches, or drawings, as appropriate, of the work proposed to be performed; (o) a proposed monitoring plan to determine the water quality improvements that result from the wetland and other components of the project, which shall measure, without limitation, ammonia, biochemical oxygen demand, bacteria, and total suspended solids; (p) a long-term maintenance plan for the wetland; (q) a budget for the project; and (r) a schedule consistent with the following deadlines:

City submits names of proposed Construction Contractors to EPA	2 months after EPA approval of a Workplan
Applications for all permits submitted	3 months after EPA approval of a Workplan
Construction commences	12 months after EPA approval of a Workplan
Construction and initial planting completed & wetland operating	11 months after construction commences
Monitoring continues for at least:	3 years after construction and initial planting is completed.

C. Construction Contractor. No later than two (2) months after EPA approval of the Workplan for the Dallas Zoo Storm Water SEP, the City shall submit to EPA a list of contractors, including the qualifications of each contractor, that the City is considering retaining to construct the Dallas Zoo Storm Water Wetland SEP. EPA will issue a written notice stating whether it disapproves of any of the proposed contractors. If EPA disapproves all of the contractors proposed by the City, the City shall submit to EPA a new list of contractors, including the qualifications of each, within 30 days of receipt of EPA's disapproval of the contractors previously proposed. EPA will issue written notice stating whether it disapproves of any contractor(s). Nothing in this Section C prevents the City from using qualified City staff to conduct the surveying required by, or associated with, this SEP.

No later than eight (8) months after EPA approval of the Workplan for the Dallas Zoo Storm Water SEP, the City shall submit to EPA the name and title of the Construction Contractor that shall construct the Dallas Zoo Storm Water SEP. If at any time thereafter the City proposes to change the Dallas Zoo Storm Water Construction Contractor, the City shall give such notice to EPA and must obtain an authorization to proceed from EPA before the new Dallas Zoo

Construction Contractor performs, directs, or supervises any work under this Appendix.

D. As-Built Drawings. The City shall submit two as-built drawings of the wetland treatment system for EPA approval, the first within 30 days after excavation and grading is complete, and the second after the initial planting is complete.

E. Minimum Plant Survival. The City shall achieve at least 50% ground cover after the first growing season. The City shall achieve at least 80% ground cover after the second growing season and thereafter maintain plant coverage over at least 80% of the wetland area. If the plant coverage after the first growing season is less than 50%, the City shall replant to achieve an 50% coverage rate. If the plant coverage after the second growing season is or falls below 80%, the City shall replant until the 80% coverage rate or a greater coverage rate is achieved, but the City shall not be required by this Consent Decree to continue replanting after the minimum three-year monitoring period prescribed above has passed.

F. Access for Scientific Studies. The City shall make the wetland available, on reasonable terms, to any academic or government scientist who wishes to study the wetland.

IV. Minimum Funding

The City shall spend not less than \$525,000 on the project described in this Appendix.

APPENDIX C

ENVIRONMENTAL MANAGEMENT SYSTEM

1. The purpose of this Part of the Decree is to enhance the City's ("Respondent's") development and implementation of a comprehensive environmental management system (EMS) to promote compliance with all environmental legal requirements, improve environmental performance, achieve pollution prevention, and accomplish pollution reduction at the City Facilities listed in Appendix D (Facilities List). Respondent's EMS development, as more fully described in Paragraphs 2 through 9 below, shall be based on the ISO 14001:2004 standard as supplemented by the provisions in Appendix E (Supplementary Requirements for ISO 14001-2004 (second edition)), hereafter, collectively referred to as "the EMS Standard."

Environmental Management System Implementation

2. Respondent shall fully implement an EMS that conforms to the EMS Standard at all Facilities in accordance with the following provisions.
3. Implementation Plan. Respondent shall develop a general EMS Implementation Plan for all Facilities and submit the plan to EPA for review and approval within one (1) month after this Decree is entered by the Court. The plan shall contain an implementation approach, plan, and schedule with milestones for each Facility. The EMS Implementation Plan shall also describe the process by which the environmental performance metrics described in Paragraph 9 will be established for each Facility. Further, the plan shall identify individuals (by position or affiliation, if a consultant) who are responsible for EMS development and implementation at Assistant City Manager, Department, and Facility levels, as appropriate, and their respective

roles, responsibilities, and authorities.

Each Facility development and implementation team shall include an individual from the Dallas Office of Environmental Quality who meets the following qualifications: (a) has successfully completed an ISO 14001 EMS implementation course and an ISO 14001 lead auditor certification course; (b) has a working knowledge of federal and state environmental legal requirements affecting that Facility, and (c) has at least a bachelor's degree from an accredited institution.

At a minimum, the EMS Implementation Plan milestones shall include:

- a. Completion of an initial review and evaluation of the current EMS and/or environmental management practices at each Facility, as described in Paragraph 6 below.
- b. Completion of initial plans and schedules for development of implementing documents and tasks (hereafter, Development Plan) for each Facility, as described in Paragraph 7 below.
- c. Completion of the Environmental Performance Metrics Data Compilation Report, as described in Paragraph 10c., below.

4. EPA shall approve the EMS Implementation Plan if it adequately addresses the items identified in Paragraph 3, above. Subsequent to EPA's initial approval of the EMS Implementation Plan, Respondent may revise and/or update the EMS Implementation Plan. Substantial revisions or updates to the EMS Implementation Plan made by Respondent before the EMS Audit required by Paragraph 18 below shall be submitted to EPA for review and approval. Upon approval by EPA, the changes shall be incorporated into the EMS Implementation Plan.

5. Upon Respondent's receipt of EPA's approval, Respondent shall commence implementation of the EMS Implementation Plan in accordance with the implementation schedule contained therein.
6. Initial Review. In accordance with the schedule contained in the approved EMS Implementation Plan, Respondent shall conduct an initial review and evaluation of the current EMS and/or environmental management practices at each Facility to identify and assess the potential impacts of program gaps relative to the EMS Standard for the purpose of identifying and prioritizing development of implementing documents and other tasks.
7. Development Plan. In accordance with the schedule contained in the EMS Implementation Plan, Respondent shall complete an initial EMS Development Plan for each Facility. The Development Plans shall be based on the initial review and evaluation results and other information and shall: (a) identify an initial list of environmental performance metrics data to be collected and include a justification for any proposed substitutions to the list of metrics in Appendix F hereto -- "Environmental Metrics"; (b) contain a schedule for identifying those additional metrics for which data will be collected; (c) contain a document-development schedule, and (d) contain a list of and schedule for other implementing tasks. Each specific document and task identified in the Development Plan shall be cross-referenced to the respective EMS Standard, where appropriate. The format for each Development Plan shall be the same and shall be based on the format presented in Appendix G hereto. Within thirty (30) days following internal City approval of each draft plan, but not later than three (3) months after the approval by EPA of the EMS Implementation Plan as described in Paragraph 4, above, Respondent shall submit each Development Plan to EPA. Any proposed substitutions to the list of metrics in

Appendix F must be approved by EPA. Other portions of the Development Plans shall be submitted to EPA for review and comment. EPA may submit any comments within sixty (60) days of the submission of the development plan by Respondent. The submittal shall be in both paper hard copy and a mutually agreeable electronic format. Any proposed substitutions to the list of metrics in Appendix F that have not been approved by EPA within sixty (60) days of the submission of the development plan by Respondent shall be deemed denied.

8. Within three (3) months after the submission of the Development Plan pursuant to Paragraph 7, Respondent shall initiate implementation of the Development Plans in accordance with the schedule of implementing tasks required by Paragraph 7, above.

Environmental Performance Metrics

9. As specified in the EMS Development Plan for each Facility and identified through the process described in the approved EMS Implementation Plan, Respondent shall collect data for the Environmental Performance Metrics listed in Appendix F (or EPA-approved substitutions thereto), and others, as determined necessary and appropriate by the City, for the purpose of measuring the impacts of implementation of the EMS. Metrics data collection, consequently, shall be initiated early in the process of EMS development and implementation.

Reporting on Environmental Management System Implementation

10. Respondent shall submit progress reports to EPA summarizing progress made in completing the activities required by Paragraphs 3 through 9, above. Semiannual reports, as described in subparagraph a below, shall be submitted to EPA within thirty (30) days after the

last day of June and December of each calendar year commencing in 2006 until all activities required by Paragraphs 3 through 8, above, are completed. (If the Decree has not been entered by June 30, 2006, the first progress report shall be due thirty (30) days after the last day of December, 2006.) An annual progress report presenting the results of the metrics shall be submitted in accordance with subparagraph b, below.

- a. Semiannual progress reports shall contain a summary of the EMS implementation required by Paragraphs 3 through 8, above, and include the following information:
 - (1) Progress in achieving pertinent milestones, including any obstacles encountered.
 - (2) Total number of procedures requiring documentation for the EMS (current total).
 - (3) Total number of procedures for which documentation has been completed.
 - (4) Total number of procedures for which documentation was completed during reporting period.
- b. The annual progress reports shall be due within thirty (30) days after the end of June and shall include the data collected during the previous calendar year for the Environmental Metrics, as required by Paragraph 9, above.
- c. Following submittal of the Certification of EMS Implementation, as described in Paragraph 25 (e), for the final Facility, the next annual progress report shall include an Environmental Performance Metrics Data Compilation Report that presents a compilation of all the metrics data collected for each Facility.

EMS Audit

11. EMS Audit Program Respondent shall develop and implement an EMS audit program to assess whether an effective Environmental Management System (EMS) has been implemented at the Facilities and whether it conforms to the EMS Standard. This program will commence on or before January 3, 2008, in accordance with the provisions of Paragraphs 11 through 21.

12. Auditor Selection. On or before January 3, 2008, Respondent shall propose in writing to EPA an independent auditor or group of independent auditors (the "Proposed EMS Auditor") who will implement the EMS Audit Program. Each Proposed EMS Auditor must be "qualified," meaning that he/she: (a) was not involved in the development of the EMS, (b) satisfies or meets the EMS Auditor qualification requirements of ISO 19011 (First edition, 2002-10-01), (c) has expertise and competence in regulatory programs under federal and state environmental laws, and (d) has at least a bachelor's degree from an accredited institution. Respondent's proposal shall include supporting documentation regarding the qualifications of each Proposed EMS Auditor. In addition, each Proposed EMS Auditor must be capable of exercising independent judgment and discipline in performing an EMS audit at each Facility, as described in Paragraphs 16 through 18. The EMS Auditor must have no direct financial stake in the outcome of the EMS audit conducted pursuant to this Consent Decree. If Respondent has or had any other contractual or financial relationship with any Proposed EMS Auditor, Respondent shall disclose to EPA such past or present contractual or financial relationship when the Proposed EMS Auditor is identified.

13. EPA shall notify Respondent whether the Proposed EMS Auditor meets the qualifications set forth in the previous Paragraph. If EPA disapproves Respondent's selection of such Proposed

EMS Auditor, then Respondent shall propose another Proposed EMS Auditor to EPA within thirty (30) days of Respondent's receipt of EPA's determination.

14. Within ninety (90) business days of the date that EPA notifies Respondent of the approval of the Proposed EMS Auditor, Respondent shall retain the Proposed EMS Auditor, thereafter designated the EMS Auditor, to perform an EMS Audit of all Facilities, as further described in Paragraphs 16 through 18, below. Respondent shall provide a copy of this Consent Decree to each EMS Auditor who is retained to conduct any of the EMS audits required by this Consent Decree.

15. If, at any time, Respondent wishes to replace the EMS Auditor for any reason, Respondent shall notify EPA in writing, provide an explanation for the change, and identify a substitute Proposed EMS Auditor. Respondent's proposal to substitute for the EMS Auditor must address the criteria specified in Paragraph 12 of this Appendix and shall be subject to the EPA review and approval process described in Paragraph 13.

16. Respondent shall require the EMS Auditor to submit, within two (2) months after EPA's notification that the EMS Auditor is qualified to conduct the EMS Audit program, a proposed schedule and plan for conducting the EMS Audits (the EMS Audit Plan) to Respondent, and EPA for review and approval. The audits shall be scheduled so that they are completed within 18 months after the EMS Audit Plan is approved. The audit criteria shall include the EMS Standard and any other EMS standards or criteria deemed appropriate by Respondent. The EMS Audit Plan shall provide for an evaluation of the adequacy of EMS implementation and conformance to the audit criteria, from senior management down, throughout each major organizational unit at all Facilities and the making of pertinent observations where there are opportunities for

improvement or areas of concern. The EMS Audit Plan shall provide that each audit will be conducted in a manner consistent with ISO 19011 (First edition, 2002-10-01) and shall specify that each audit team shall have at least two (2) qualified (as defined in Paragraph 12) EMS Auditors, one of which is designated and qualifies as a Lead Auditor.

17. EPA shall approve the EMS Audit Plan if it addresses the elements of Paragraph 16.

18. Within sixty (60) days after Respondent's receipt of EPA's approval of the EMS Audit Plan, Respondent shall require the EMS Auditor to initiate the EMS Audit Program in accordance with the approved EMS Audit Plan and the schedule contained therein. In the context of assessing Respondent's conformance with the criteria specified in Paragraph 16, above, the EMS Audit at each Facility shall address the following:

- a. Whether there is a defined system, subsystem, program, or planned task for the respective EMS element;
- b. To what extent the system, subsystem, program, or task has been implemented, and is being maintained;
- c. The adequacy of each operation's internal self-assessment procedures for programs and tasks composing the EMS;
- d. Whether Respondent is effectively communicating applicable environmental legal requirements to affected parts of the organization and those working on its behalf as contemplated by Appendix E hereto;
- e. Whether further improvements should be made to the EMS to conform to the EMS Standard;
- f. Whether there are observed deviations from Respondent's written

requirements or procedures; and

g. Whether continual improvement is occurring.

19. Representatives from Respondent (other than those employed at the Facility being audited) and EPA may participate in the EMS Audit as observers, but may not interfere with the audit process or independent judgement of the EMS Auditor. Respondent shall notify EPA at least ten (10) days before the commencement of the on-site portion of each EMS Audit.

20. EMS Audit Report. Respondent shall direct the EMS Auditor to develop and submit simultaneously to Respondent and EPA an EMS Audit Report for the EMS Audit for each Facility within sixty (60) days following the completion of the final on-site portion of the EMS Audit at that Facility. The EMS Audit Report shall present the audit findings and shall contain the following information:

- a. The audit scope, including the period of time covered by the audit;
- b. The date(s) the on-site portions of the audit were conducted;
- c. The identification of audit team members for each Facility;
- d. The identification of Respondent representatives and regulatory agency personnel observing the audit;
- e. The distribution for the EMS Audit Report;
- f. A summary of the audit process, including any obstacles encountered;
- g. Detailed audit findings, including the basis for each finding and each area of concern identified;
- h. Identification of any audit findings corrected, or areas of concern addressed, during the audit and a description of the corrective measures

and when they were implemented; and,

- i. Certification by the EMS Auditor that the EMS Audit was conducted in accordance with the provisions of the approved EMS Audit Plan and Paragraphs 18 and 19 of this Decree.

21. If the EMS Auditor believes that additional time is needed to analyze available information or to gather additional information, then the EMS Auditor, or Respondent on behalf of the EMS Auditor, may request that EPA grant the EMS Auditor such additional time as needed to prepare and submit the EMS Audit Report.

22. Follow-Up Corrective Measures: Initial Audit Response and Action Plan. Upon receiving the EMS Audit Report, Respondent shall review and evaluate the identified audit findings, any need for conducting a root cause analysis, and shall investigate all observed areas of concern. Within sixty (60) days of receiving the EMS Audit Report, Respondent shall develop and submit to EPA, for review and comment, an initial response to the EMS Audit Report (the Initial Audit Response and Action Plan). The Initial Audit Response and Action Plan shall provide a response to the findings and areas of concern identified in the EMS Audit Report. To the extent that Respondent determines, based on its review of the EMS Audit Report, that appropriate actions or measures should be implemented to achieve conformance at the respective Facility with the EMS Standard and with any other EMS standards or criteria deemed appropriate by Respondent, then Respondent shall include an action plan in the Initial Audit Response and Action Plan for expeditiously implementing those appropriate actions or measures. The Initial Audit Response and Action Plan shall include the result of any root cause analysis, specific deliverables, responsibility assignments, and an implementation schedule for the identified

actions and measures, including those that may have already been completed.

23. Final Audit Response and Action Plan. EPA will provide its comments on the Initial Audit Response and Action Plan and Respondent shall, within thirty (30) days of receipt of EPA's comments on the Initial Audit Response and Action Plan, submit to EPA a Final Audit Response and Action Plan and implement the Final Audit Response and Action Plan in accordance with the schedule contained therein.

24. Following submittal and until completion of the actions or measures described in the Final Audit Response and Action Plan, Respondent shall include, within the semiannual status reports submitted pursuant to Paragraph 10 of this Appendix, a report of the status of Respondent's conduct of any actions or measures identified within the Final Audit Response and Action Plan, as well as the status of the Certification of EMS Implementation described in the following paragraph.

25. Certification of EMS Implementation

- a. Within 10 days after completion of an EMS Audit in which no instances of nonconformance with the EMS Standard are found at the respective audited Facility, Respondent shall submit a Request for Certification of EMS Implementation to the EMS Auditor. Within ten (10) days after the receiving the certification request, the EMS Auditor shall issue to Respondent a Certification of EMS Implementation for the respective Facility, indicating that the EMS has been fully implemented and conforms to the EMS Standard.
- b. Alternately, within 10 days after completion of actions or measures identified in the Final Audit Response and Action Plan, Respondent shall submit to the EMS

Auditor a Request for Certification of EMS Implementation.

- c. As soon as practicable, but in no event later than 30 days after it has received the certification request pursuant to Subparagraph b of this Paragraph, the EMS Auditor shall, as necessary, reinspect the respective Facility (i.e., conduct a "Certification Review") and submit to Respondent a written statement identifying those instances of nonconformance that have been addressed and any that have not, including an explanation describing the failure to address or correct, as appropriate, any instances of nonconformance. Respondent shall use its best efforts to address in a timely manner any outstanding instances of nonconformance identified during the Certification Review.
- d. When the EMS Auditor concludes that all instances of nonconformance have been addressed at the respective Facility, the EMS Auditor shall issue to Respondent a Certification of EMS Implementation for the respective Facility, indicating that the EMS is fully implemented and conforms to the EMS Standard.
- e. Within ten (10) days of receipt, Respondent shall submit a copy of each Certification of EMS Implementation to EPA.

APPENDIX D

List of Facilities

Facility Name	Facility Address	Included Operations
Salvage Yard	Building 25, 8200 West Jefferson Boulevard, Dallas, Texas	All associated with operation of the salvage yard at this location.
Note: This facility will be dropped when operations are moved to new Northwest Service Center on Harry Hines Blvd.	2828 Shorecrest Drive, Dallas, Texas 75235	Equipment & Building Services ("EBS") Fleet Operations
		Sanitation – District 3
		Streets - District 3
		Parks and Recreation
Northeast Service Center	8915-8919 Adlora Street, Dallas, Texas 75238	EBS Fleet Operations
		Sanitation – District 4
		Streets – District 4
		Dallas Water Utilities – Collections
		Parks and Recreation

Southeast Service Center	2700-2900 Municipal Street, Dallas, Texas 75215	EBS Fleet Operations
		EBS Heavy Equipment Shop
		Police Department
		Sanitation – District 1
		Dallas Water Utilities – Material Services
		Dallas Water Utilities – Pipeline
		Dallas Water Utilities – Distribution
		Dallas Water Utilities – Meters Repair
		Code Compliance – Mow Clean
		Streets – Administration, The Company, District 1 & Inspection
		PWT/SWM Storage (This facility will ultimately be moved to Building 27, 8200 West Jefferson Boulevard, Dallas, Texas.)
Southwest Service Center	2423-2545 Valleria Street and 4130-4230 W. Illinois, Dallas, Texas 75211	EBS Fleet Operations
		Dallas Water Utilities – Distribution
		Streets – District 2
		Parks and Recreation
		Code Compliance
		Sanitation – District 2
		Police Department

Central Service Center	3112-3212 Canton Street, Dallas, Texas 75226	EBS Warehouse
		EBS Building Services
		EBS Roofing Section
		EBS Administration
		EBS Fleet Operations
		PWT – Sign Shop
		Police Department
		Fire Prevention
		Sanitation Administration – District
		CIS – Radio Shop and Administration
		Code Compliance
		Dallas City Marshal
		Parking Enforcement
		PWT Transportation Striping Operation (moving from 2912 Bryan Street during 2 nd qtr FY2006)

<p>New Northwest Service Center</p> <p>Note: This facility ultimately will replace the Northwest Service Center above. Currently, this new facility is only partially operational.</p>	<p>9801 Harry Hines Boulevard, Dallas, Texas 75220</p>	Dallas Water Utilities
		Police Department
		Development Services – Building Inspection
<p>I.C. Harris Maintenance Facility</p>	<p>5620 Parkdale, Dallas, Texas 75227</p>	<p>All operations at this location.</p>
<p>Dallas Fire and Rescue Training Center</p>	<p>5000 Dolphin Road, Dallas, Texas 75207</p>	<p>This facility is clearly divided into 2 uses: (i) fire and rescue training, and (ii) heavy vehicle maintenance (similar to the service centers). Vehicle maintenance is a secondary, but significant use at the site. Use (i) does not involve any maintenance activities and the City proposes that the EMS specifically cover only the maintenance activities and maintenance portion of the facility.</p>

BS Make Ready Shop	Building 25, 8200 West Jefferson Boulevard, Dallas, Texas	All operations at this location. The Salvage Yard offices are associated with the offices of this shop.
Dallas Zoo	650 S. R L Thornton Freeway, Dallas, Texas	All operations at this location.
PARD Ewing Maintenance Center	1021 S. Ewing, Dallas, TX	All operations at this location. This includes the manure staging/disposal operations associated with the Dallas Zoo.

APPENDIX E

Supplementary Requirements for ISO 14001-2004 (second edition)

4.3.1 Environmental Aspects

Add new second paragraph after "b" as follows:

Consistent with 4.5.3, the aspects/impacts assessment carried out pursuant to this section 4.3.1 shall specifically include, but not be limited to, identifying activities, products, or services where equipment malfunctions and deterioration, operator errors or deliberate malfeasance are causing, or have the potential to cause: (1) unplanned or unauthorized releases of hazardous contaminants to the environment, (2) a threat to human health or the environment, or (3) noncompliance with legal requirements.

4.3.2 Legal and Other Requirements

Add new subsections as follows:

c) Information about applicable legal requirements shall be used to plan, develop, and implement ongoing routine evaluation of compliance, consistent with 4.5.2, to ensure that the organization's activities conform to those requirements.

d) for prospectively identifying and obtaining information about changes and proposed changes in legal requirements, and incorporating those changes into the EMS (i.e., regulatory "change management").

e) for communicating with regulatory agencies regarding legal requirements and regulatory compliance.

4.3.3 Objectives, targets, and programme(s)

To end of second paragraph add

Targets and objectives shall include, where appropriate, actions which reduce the risk of noncompliance with legal requirements and minimize the potential for unplanned or unauthorized releases.

4.4.1 Resources, roles, responsibility and authority

Add to end of first paragraph as follows:

Management shall integrate environmental planning into organizational decision-making, including plans and decisions on capital improvements, product and process design, training programs and maintenance activities.

4.4.2 Competence, training, awareness

Add to end of first paragraph

This requirement shall also extend to any person within the organization or acting on its behalf whose activity has the potential to cause environmental regulatory noncompliance.

Add new subsections as follows:

(e) the applicable environmental legal requirements (without dictating the specific details or specific methods of compliance).

(f) the process for communicating environmental concerns and information to the organization.

4.4.3 Communication

Replace opening paragraph and subsection (a) as follows:

With regard to its environmental aspects, the need to comply with legal requirements and environmental management system, the organization shall establish and maintain procedures for:

a) an ongoing means of internal communication regarding environmental issues and information among the various levels and functions of the organization, to include all organization personnel and a means for receiving, documenting, and responding to relevant communication from those individuals;

Add new subsection as follows:

c) as appropriate, implementing and maintaining security measures to prevent unauthorized disclosure of environmental management system information (including audits and reviews) and documentation, which shall include protocols for responding to inquiries and requests for release of information.

4.4.6 Operational control

Add new subsections as follows:

d) conducting and documenting routine, objective, self-inspections by supervisors and trained staff to check for malfunctions, deterioration, worker noncompliance with operating criteria, unusual situations and unplanned or unauthorized releases.

e) developing, implementing and maintaining a "management of change" procedure to incorporate identification and consideration of legal requirements and environmental aspects

during the planning and design of new and/or changes to buildings, operations, processes, equipment, maintenance activities and products.

4.4.7 Emergency response and preparedness

Add to end of first paragraph

The procedures shall address internal and external reporting of environmental incidents and noncompliance with legal requirements.

4.5.2.1 Evaluation of compliance

Add new paragraphs following the first paragraph as follows:

The compliance evaluations shall include:

a) a compliance audit conducted at least annually, by an auditor(s) independent of the facility being audited. Evaluation results are reported to senior management and nonconformities (i.e., instances of noncompliance) are addressed through the process developed pursuant to element 4.5.3, below. The organization's annual compliance audit workplan, including any schedule, shall be based on the legal requirements applicable to the evaluated facility, and the results of previous audits.

b) conducting and documenting routine, objective, internal self-inspections by supervisors and trained staff.

APPENDIX F

Environmental Metrics

I. Spills and Accidental Releases – Number, content, and volume or mass of documented chemical (including petroleum) spills and accidental releases, and which, if any, exceeded a state or federal reportable quantity. Indicate approximate mass released to each media (i.e., ground, surface water, air, etc.) and normalize to an annually adjusted variable.

II. Permit Exceedances – Number of instances when actual compliance monitoring data results exceed reporting limits established in applicable local, state, or federal permits or standards.

III. Hazardous and Non-hazardous Waste Generation – The respective masses of hazardous and non-hazardous wastes generated will be reported and normalized to an annually adjusted variable so that results from year to year may be compared.

IV. Recycling – Utilizing pertinent records, recycling rates will be determined, recorded, and normalized to an annually-adjusted variable so that results from year to year may be compared. Recycling information will be reported for at least the following materials: oil, batteries, scrap metal, tires, gasoline, and antifreeze.

V. Energy Usage – Consumption of electricity and thermal energy (e.g., natural gas, petroleum, etc.), normalized to an annually-adjusted variable so that results from year to year may be compared.

APPENDIX G

EMS Development Plan Template

[Facility Name] EMS Development Plan

Section 1 - Facility Background Description - name, location, tenants (maybe include/ID members of Implementation team)

Section 2 - Results of Gap Analysis (synopsis)

Section 3 - Performance Metrics - initial list and proposed substitutions, if any, to Appendix F list and a schedule, as needed, for identifying additional metrics

Section 4 - Implementing Task and Document Table (see below - may be expanded, as needed)

EMS Element	EMS Standard Reference	Implementation Task/Document	Target Completion Date	Procedure Name	Procedure Effective Date	Person(s) Responsible
Policy	4.2					
Environmental Aspects	4.3.1					
Legal and Other Requirements	4.3.2					
Objectives and Targets	4.3.3					

Environmental Management Program (EMP)	4.3.3					
Monitoring and Measurement	4.5.1					
Operational Controls	4.4.6					
Training	4.4.2					
Internal/External Communication	4.4.3					
Documentation and Document Control	4.4.4, 4.4.5, and 4.5.4					
Emergency Response	4.4.7					
Structure and Responsibility	4.4.1					
Compliance Audits	4.5.2					
EMS Audits	4.5.5					
Corrective Action	4.5.3					
Senior Management Review	4.6					

APPENDIX H
STORM WATER MANAGEMENT PROGRAM

Storm Water Management Program (SWMP)
As Approved April 4, 1997
and
List of Selected Amendments

Appendix to the Consent Decree in
United States and State of Texas v. City of Dallas

SELECTED AMENDMENTS TO THE SWMP

1. Flood Control Structures - Ponds

Original requirement: retrofit Whispering Oaks Detention Pond and Lone Star Park Retention Pond to provide more detention or retention time. (SWMP § 4.6, Procedures for Existing Flood Management Projects, Detention/Retention Ponds, Tasks 2 and 3. SWMP p. 4.6-3.)

Change: install trash racks at two sumps. (See City's 2004 Annual Report, Feb. 27, 2004, Section 2.)

2. Inspection of Industrial Facilities

Original requirement: inspect all industrial facilities at least once during the five-year permit term. (SWMP § 4.17, Monitoring Program for Industrial Facilities, Program Summary and Task 4. SWMP pp. 4.17-3 and 4.17-6.)

Change: inspect 500 industrial facilities per year. (See City's 2004 Annual Report, Feb. 27, 2004, Section 2.)

3. Inspection of SARA-313 Facilities

Original requirement: inspect SARA-313 facilities annually. (NPDES Permit No. TXS000701, issued March 28, 1997, Part III, A.1, Industrial and High Risk Runoff Permit, Part III, p. 2 of 3.)

Change: inspect 600 SARA-313 facilities annually. (See City's 2004 Annual Report, Feb. 27, 2004, Section 2.)

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NPDES PERMIT NUMBER TXS000701

**DALLAS
MUNICIPAL SEPARATE STORM SEWER SYSTEM**

STORM WATER MANAGEMENT PROGRAM

CHAPTER ONE

CITY OF DALLAS

STORM WATER MANAGEMENT PROGRAM

4 PROPOSED MANAGEMENT PROGRAM

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)]

(iv) Proposed management program. A proposed management program covers the duration of the permit. The program shall also include a description of staff and equipment available to implement the program. Separate proposed programs may be submitted by each coapplicant. Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. Proposed programs will be considered by the director when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable. Proposed management programs shall describe priorities for implementing controls.

4.1 PUBLIC PARTICIPATION AND GOVERNMENTAL COORDINATION

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)]

...It shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate.

Program Summary

This Public Information and Governmental Coordination Program is a on going plan designed to call attention to the impacts of storm water runoff in the City of Dallas community. The program's long-term objective is to build public awareness of the issues and involve the public in creative and viable solutions to controlling runoff and maintaining clean water supplies.

Short-term objectives include 1) increasing public awareness of and participation in an illicit discharges reporting and clean-up program; and 2) implementing specific programs to educate the public regarding the responsible use and disposal of toxic materials, used oils, herbicides, pesticides, and fertilizers.

The overall program will emphasize communication with the general public, as well as business and special interest groups. Due to the long-term nature of the effort, it includes particular emphasis on the participation of such basic audiences as school children, families, teachers, and environmental and other civic groups.

A priorities plan for each of the five years of the permit term is divided into action to increase general awareness and develop projects to support the illicit discharge reporting program, as well as the used oil, toxic materials and herbicides/pesticides programs. The plan will be fully implemented over the first three years of the permit. Years 4 and 5 are shown to show the ongoing nature of this program. Each year the prior year will be evaluated to see if changes or adjustments are needed in the program to better convey our message.

This plan acknowledges that public awareness of storm water runoff issues is currently very low, and that the subject is not today considered highly important to the average citizen. Much time will be required to increase awareness of water runoff issues and to motivate community residents to participate.

The plan also acknowledges that resources, in terms of budget and personnel, are limited and must be used wisely and efficiently. The program is designed to build on existing City resources. It calls for the addition of one full-time professional and one assistant to the DWU staff and limited additional equipment for database resources. It suggests that staff serve as storm water experts in the community and as sources of helpful public information. Communication and coordination with other cities and governmental agencies are also encouraged.

Overall efforts of DWU are designed to provide a catalyst for public participation. The program includes initiatives to help involve concerned business leaders, environmental groups, schools and the public at large.

To achieve the program objectives, a series of action steps are proposed, including: audience identification; contact list compilation; benchmark research; media kit production; on-going, pro-active public relations program; community relations and outreach efforts such as a speakers bureau; school programs and pilot projects; development of program information materials such as brochures and public service materials. The five-year effort will include dissemination of specific information about the illicit discharge, pesticides/herbicides/fertilizers, used oil and toxic materials programs.

The initial stages of the program will lay the foundation for the action steps to follow. During this phase, little visible evidence of the program's success is to be expected. Instead, program budgets and personnel will be dedicated to initial research, identification of audiences, compilation of lists and production of basic program materials including comprehensive media kit and basic brochures.

Beginning in the first year of the permit term, a pro-active program will be implemented. This includes media contacts, programs, news releases, public service projects, solicitation of volunteers, and development of pilot programs for schools. Results of these efforts should begin to be visible late in the first year, with the bulk of the efforts coming to fruition during the second year and afterwards.

The plan emphasizes targeted programs that build over time. Informational materials will be created according to an annual schedule, and community groups will be asked to help with distribution. The plan treats advertising and public service dollars as seed money, encouraging additional funding and in-kind services from state agencies, businesses and community groups. At all levels, the plan encourages the active participation of media, volunteers, business leaders and the public schools.

At the culmination of the five-year permit, it is envisioned that the media, business segments, and audiences targeted should be aware of the general problem of storm water runoff. There should be noticeable changes in attitude regarding this problem and program results should be measurable.

Governmental Coordination

City Facilities:

The McCommas Bluff Landfill, under the Department of Streets and Sanitation Services, Office of Sanitation Operations, has been part of a group permitting effort under the auspices of the Texas Municipal League. The NPDES Storm Water discharge permit ultimately will be held by the Department of Street and Sanitation Services as an individual permit as an industrial discharge.

The Central and Southside Wastewater Treatment Plants, and the

Elm Fork, Bachman and East Side Water Treatment Plants, under the Dallas Water Utilities, Office of Water and Wastewater Operations, have also been part of a group permitting effort under the auspices of the Texas Municipal League. The NPDES storm water discharge permits ultimately will be held by the Dallas Water Utilities as individual permits as industrial storm water discharges.

The City of Dallas airports, Love Field and Redbird Airport, under the Department of Aviation, have been part of a group permitting effort by airports in the Dallas-Ft. Worth Metroplex. However, the group effort was recently abandoned and a Notice of Intent (NOI) to file under the general permit option has been made by each airport. The NPDES permit ultimately will be held by the Department of Aviation as industrial storm water discharges.

The Storm Water Utility will monitor these individual industrial storm water discharge permits as it will other industrial storm water discharges within the City of Dallas.

Non-City Facilities

Several other entities are contained within the "general boundaries" of the City of Dallas for which coordination will be needed.

Most of the Dallas Naval Air Station is located within the City of Dallas. The Dallas Naval Air Station drains into Mountain Creek Lake which lies wholly within the City of Dallas. The Naval Air Station, as a Federal facility, is responsible for obtaining its own storm water discharge permit(s). The City of Dallas will depend on Region 6, U.S. EPA, for ensuring that the Naval Air Station fulfills its responsibilities in this regard. Because of the sensitive nature of munitions storage and other issues of "national security", the City of Dallas must depend on the U.S. EPA to provide suitable mechanisms to monitor the Naval Air Station and to require compliance. The City of Dallas does provide water quality monitoring, on a regular basis, upstream and downstream from the Naval Air Station.

The Cities of Cockrell Hill, Highland Park, and University Park are contained within the "general boundaries" of the City of

Dallas, meaning that the City of Dallas totally engulfs these jurisdictions. None of these cities currently has a population large enough to require municipal storm water permitting (MS4s). However, drainage from all of these cities drains through the City of Dallas. Therefore, the City of Dallas maintains monitoring stations immediately downstream from these cities by which to assess the quality of storm water from these cities and the overall quality of the streams. Most of the drainage from Cockrell Hill flows through Coombs Creek. Part of the drainage from Highland Park flows through Cedar Springs Branch. Most of the flow from University Park and Highland Park flows through Turtle Creek into the City of Dallas. The City of Dallas, through the Health and Human Services Department, maintains sampling stations along these streams downstream from these cities for assessing water quality and overall stream health. Recent stream assessments have shown these streams to rank from "fair" to "poor" in terms of overall environmental quality. The City of Dallas, through the Storm Water Utility, will continue stream assessments and will share with these cities information made available to City of Dallas residents on source control measures and house-holder good housekeeping methods. The City of University Park also has a solid waste transfer station the drainage of which flows into the City of Dallas. Coordination with officials of these cities will be maintained between the Dallas Storm Water Utility and operating departments of the cities, as needed. Coordination of efforts also may occur through the NCTCOG on issues of regional commonality.

Area wide transportation agencies also operate within the City of Dallas corporate limits. These agencies currently are not co-permittees with the City of Dallas. These agencies are each responsible for storm water discharge permits for their operations. These agencies include the Texas Department of Transportation (TxDOT), the Dallas Area Rapid Transit Authority (DART), and the Texas Turnpike Authority (TTA). These entities are required to obtain storm water discharge permits for their industrially related activities. The Dallas Storm Water Utility will track these permits as it would other permits within the City of Dallas relating to storm water discharge from other industrial activity. Specific areas of cooperation and coordination are cited in proposed management programs for "Public Transportation Right-of-Way Operation and Management" and

"Pesticide and Fertilizer Management".

Many other entities within the City own large campus-type facilities that drain to the City's municipal separate storm sewer system. Coordination will also be needed between the City and these entities in their efforts to comply with the regulations.

Adjoining Jurisdictions

Adjoining jurisdictions have storm water draining through stream channels through the City of Dallas. These jurisdictions include the Cities or Communities of: Addison, Balch Springs, Buckingham, Carrollton, Cedar Hill, Coppell, DeSoto, Farmers Branch, Garland, Grand Prairie, Hutchins, Irving, Lancaster, Mesquite, Plano, and Richardson. Most of these entities contribute significant storm water runoff to the City of Dallas. The City of Dallas has a modest amount of drainage area contributing drainage to the Cities of Carrollton and Farmer's Branch, and very minor areas contributing to a few of the other entities. The cities of Irving, Plano and Mesquite are due to submit storm water discharge permit applications to EPA as medium-sized municipalities, and may be included within the next tier of municipalities for which permitting regulations may be established. The City of Dallas has a monitoring program to monitor water quality and to assess stream environmental health for principal tributary streams crossing the City of Dallas corporate boundaries. In this way, problems can be indicated and communication with the appropriate jurisdictional officials can be initiated as appropriate.

Jurisdictions, such as City of Carrollton and the City of Mesquite, have solid waste operations covered under the "Landfill Management" program of the City of Dallas. The City of Dallas also has operations which may effect abutting jurisdictions. These have been singled out and addressed in the appropriate management program. The City of Dallas, Storm Water Utility, will track the development of the municipal storm water permit applications submitted by abutting cities required to submit such to the U.S. EPA, and will examine management programs for areas of potential commonality and cooperation. Contact with all abutting jurisdictions will be maintained through NCTCOG, as appropriate, for issues of common concern.

Implementation Plan

For purposes of this program, the following quantities are represented by these items within the implementation plan:

- Bill inserts mailings goes to 265,000 households annually.
- Newsletter is published quarterly and will go to approximately 1,000 entities.
- Media Kit will be distributed to about 20 media outlets.
- School Pilot program will target 3 schools per year.
- Speakers Bureau will address at least 5 groups (schools, civic, industry, etc.) per year.

Year 1 Develop a program to increase general public awareness to be implemented during Year 1. Include the following elements.

General Public Awareness

1. Identify target audiences and build database.
2. Create lists of media and community contacts (groups and individuals).
3. Select firm to do research; complete benchmark surveys for public and industry.
4. Hold background briefings for City officials, department heads and staff.
5. Produce media kit and hold initial media briefing.
6. Begin production of general information brochure and plan contents.
7. Set up education committee to plan first school pilot programs and identify schools to be targeted for first projects.
8. Inventory existing slides, photographs and other graphic materials.
9. Initiate planning for community general information slide

- program.
10. Begin PR program, distributing information via water bill inserts, newsletters, news media and public access channels regarding used oil, yard waste, HHW, etc.
 11. Hold public input meetings; begin to identify citizen volunteers for Speakers Bureau and committees.
 12. Gather information and program ideas from other communities for resource files.
 13. Identify resources from EPA and TWC, to use as appropriate.
 14. Set up business/industry task force and hold initial meetings to discuss illicit discharge, used oil disposal, herbicides/pesticides/fertilizer programs and others.
 15. During the Fall, kick off first school pilot programs and publicize.
 16. Select a firm to create logo and campaign theme development.
 17. During the final quarter of Year 1, re-evaluate plans for Year 2, and refine as needed.

Illicit Discharges Program

1. Complete fact sheet and tips sheet to be included in media kit.
2. Set up citizen committee to plan pilot program focusing on river and stream areas and involve community volunteer groups.
3. Distribute initial information via water bill insert, media briefing and newsletters.
4. Identify helpful information that can be included in the content of the community general information slide program and other materials.
5. Brief staff and City officials on plans for illicit discharge pilot program.
6. Set up citizen response program and hotline.

Used Oil/Toxic Materials and Herbicides/Pesticides Program

1. Complete fact sheets and tip sheets for each subject to be included in media kit.
2. Identify representatives to be part of business task force to give input on program ideas.
3. Distribute initial information via media briefing and newsletters.
4. Begin to build lists of trade groups and companies with vested interest in each subject.

5. Begin to identify possible corporate sponsors who might underwrite and/or sponsor programs.
6. Identify information (tips, etc.) on the disposal of used oil and household hazardous waste materials and the proper use of herbicides and pesticides that can be included in the slide program and in print materials.
7. Identify neighborhood groups, businesses and others that might want to participate in pilot projects or help distribute information.

Year 2 Develop a program to increase general public awareness to be implemented during Year 2. Include the following elements.

General Public Awareness

1. Complete focus group interviews for general public and industry groups.
2. Begin advanced bookings for programs to start in Spring.
3. Complete production of general information brochure, distribute and publicize.
4. Produce general information slide program for Speakers Bureau presentations.
5. Convert slide program to video; adapt for industry groups, as needed.
6. Preview program for staff and City officials.
7. Hold update media briefing to show slide presentation, review program progress.
8. Begin series of community briefings for leaders and decision makers, using slide program.
9. Kick off Speakers Bureau program schedule for civic groups and trade groups.
10. Continue PR program, publicize community slide program, pilot projects, etc.
11. Produce logo/theme for public service campaign and begin planning for future collateral materials (brochures, other public service materials, etc.).
12. Continue briefings for staff, officials, others, as needed.
13. Produce first public service materials, featuring illicit discharge program.
14. Initiate industry training programs, as feasible.
15. Evaluate school programs from Year 1, continue and expand

them.

16. Initiate planning for community exhibit on water runoff and water quality.
17. Evaluate plans for year 3 and update, as needed.

Illicit Discharges Program

1. Kick off illicit discharge pilot program.
2. Publicize via news conference, ongoing PR through newsletters, cable, etc.
3. Initiate public service campaign.
4. In Fall, give update on program via media.
5. Contact groups to get involved, through Speakers Bureau programs, direct contacts.
6. Identify construction related groups to target for information materials and distribute brochures to them.
7. Explore sponsorships for continuing project.
8. Seek editorial support from newspapers.

Used Oil/Toxic Materials and Herbicides/Pesticides Program

1. Begin planning for information brochure series.
2. Complete business/industry target lists for distribution of information and distribute brochures to them.
3. Produce household hazardous waste disposal print information, in cooperation with CREED or other groups.
4. Distribute public service materials via newsletters, media and newspapers.
5. Sponsor project with volunteers in shopping mall or other high visibility locations.
6. Use cable access for demonstration programming.
7. Target groups for information and programs.
8. Explore and plan school pilot project on herbicides/pesticides to launch in Fall.
9. Kick off program and publicize via school publications, general media.
10. Produce general information brochure for small businesses.

Year 3 Develop a program to increase general public awareness to be implemented during Year 3. Include the following elements.

General Public Awareness

1. Continue recruiting Speakers Bureau volunteers and giving programs, updating database as needed.
2. Utilize cable access channel to continue programming on the water quality control topics and features on community volunteer programs.
3. Update mailing lists of community leaders, civic groups and business organizations.
4. Explore opportunity for new school pilot program to link into the family and home environment.
5. Continue plans for community exhibit and work with citizen volunteers to explore opportunities for sponsorships or grant funding.
6. Plan, produce and distribute annual public service campaigns on herbicides/pesticides and the disposal of used oil.
7. Plan and implement public information programs to support public service campaigns.
8. Continue PR program, publicizing key programs and events throughout the year; give periodic progress reports on ongoing programs such as illicit discharge project, etc.
9. Continue staff briefings, training programs and update for public officials, as needed.
10. Update photo files and media kit, as needed; add fact sheets on new programs.
11. In Fall, launch new school pilot program with news conference with children, parents, school, volunteers and DWU representatives.
12. Publicize through school publications, news media and newsletters.
13. In Fall, evaluate priorities for Year 4 and adjust as needed.

Illicit Discharges Program

1. Continue program from Year 2, broadening the base of support.
2. Look for new story angles to publicize through news media.
3. Continue to recruit new volunteers and new organizations to get involved.
4. Approach bicycle clubs and other environmental groups to plan related programs.
5. Hold "how to" workshop for interested groups and individuals.

Used Oil/Toxic Materials and Herbicides/Pesticides Program

1. In Spring, launch public service program focusing on herbicides/pesticides.
2. In Fall, launch public service program focusing on the disposal of used oil.
3. Explore pilot program through public school system for custodial staff; plan training workshop and launch in Fall.
4. Begin planning for small business workshops for Year 4 for automotive businesses and lawn and garden businesses.
5. Produce print materials on herbicides/pesticides and the disposal of used oil, with versions for business owners/operators, as well as for consumers at point of purchase.
6. Hold workshops for business owners/operators to brief on public service campaigns and offer tips on using and distributing information to customers.
7. Enlist the help of business committee volunteers to help distribute public service materials and promote programs to various business groups.
8. Continue Speakers Bureau program targeted to business groups.

Year 4 Develop a program to increase general public awareness to be implemented during Year 4. Include the following elements.

General Public Awareness

1. Update and reprint general information brochure, as needed.
2. Plan and implement annual public service campaigns, focusing on the disposal of used paints and new campaign on illicit discharges; launch in Spring and Fall.
3. Plan support activities for public service campaigns and publicize via newsletters, media and other outfits.
4. Explore new school pilot project focusing on the disposal of paint and involving both students and parents; launch in Fall and publicize.
5. Work with area newspaper and radio stations to plan and implement public service campaign focusing on lawn and garden environmental tips.
6. Distribute environmental tips information to area newsletter editors.

7. Plan new series of programs for cable access channel, focusing on public service campaign topics and ongoing community and school projects.
8. Update media kit materials, as needed.
9. Continue plans for community exhibit, with objective of launching in Year 5.
10. Begin advance planning to publicize the exhibit and involve citizens, groups and schools.
11. Continue briefings, training programs for staff, as needed.
12. Continue updates for City officials; recap first three years, showing progress, growth of overall community program from Year 1.
13. Continue ongoing PR program, utilizing newsletters and new media.
14. Hold update briefing for news media, giving status report on program from Year 1; distribute updated media kit/portfolio.
15. Meet with newspaper editorial staff, also to update on progress of overall program.
16. In final quarter, evaluate priorities for Year 5 and adjust as needed.

Illicit Discharges Program

1. Enlist new ideas from volunteers on enhancing and broadening the program.
2. Recruit volunteers to help publicize public service program and distribute materials.
3. Explore additional opportunities for contests, incentives for citizens to get involved.
4. Recognize volunteer achievements through community events or other forums.
5. Brief volunteers on community exhibit planned for Year 5 and enlist support.

Used Oil/Toxic Materials and Herbicides/Pesticides Program

1. In Fall launch new public service campaign on the disposal of paints.
2. Launch school project on same subject and tie in publicity efforts.
3. Involve businesses in support activities, publicity efforts.
4. Seek opportunities for shared sponsorships from paint

- companies, trade groups, etc.
5. Plan and implement workshops/training programs for janitorial and custodial services related businesses.
 6. Continue Speakers Bureau programs for business and trade groups.
 7. Develop traveling general information exhibit, using photos and on -case studies from projects developed during first four years of the program.
 8. Display exhibit initially at city Hall or other public space.
 9. Publicize availability of exhibit for outside bookings; utilize volunteers to assist in finding appropriate locations to display exhibit.

Year 5 Develop a program to increase general public awareness to be implemented during Year 5. Include the following elements.

General Public Awareness

1. Produce new community slide program for Speakers Bureau bookings, updating content with visuals and examples from ongoing community programs. Stress the involvement of local citizens and partnerships between community groups, individual volunteers, schools, businesses and the City.
2. Launch new program with special showing for City officials, staff, volunteer leaders and media representatives.
3. Continue Speakers Bureau bookings, recontracting previous groups for updated programs.
4. Conduct new research surveys of general public and businesses to check progress, measure awareness and gather updated information for future priorities.
5. Update and approve general information brochure for small businesses, using examples and photos from community projects.
6. Distribute brochure to business contacts and publicize via newsletters and media.
7. Continue PR program, giving updates as needed.
8. In Spring or Fall, launch community exhibit on water quality.
9. Maximize opportunities to publicize and involve volunteers and school children.

10. Plan and implement new public service campaign for Year 5; allocate some portion of this to publicize exhibit and feature various environmental tips.
11. Continue staff briefings, updates for City officials, as needed; once survey is completed, give five year progress report and recommendations for continuing program.

Illicit Discharges Program

1. Feature illicit discharge program in five-year progress report; involve volunteers and recognize achievements.
2. Evaluate school programs and assess for effectiveness; continue as appropriate and plan additional pilot projects, as needed.
3. Involve schools in planning and producing cable access program to showcase student projects and achievements over five-year program.
4. Publicize recap of student projects through school information channels, PTAs and other outlets; involve parents and teachers.

Used Oil/Toxic Materials and Herbicides/Pesticides Program

1. Feature programs in five-year progress report; recognize achievements of business volunteers who have made major contributions to the program or who have been innovative in developing programs.
2. Publicize programs, progress report and achievements through newsletters, community programs and news media.
3. Work with area newspaper or other media to plan and produce special feature section on volunteer achievements.
4. Continue workshops and training programs for businesses in cooperation with businesses and professional groups or individual businesses.

4.2 MAINTENANCE ACTIVITIES AND SCHEDULE

Regulatory Requirement [40 CFR 122.26 (d) (2) (iv) (A) (1)]

(A) A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls. At a minimum, the description shall include:

(1) A description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers;

Program Summary

The objective of the storm water Maintenance Activities and Schedule Program is to further reduce pollutants that remain in the storm water after the runoff has flowed off-site from its point of origin and has entered the municipal storm water conveyance system. Key program components include modifying existing operation and maintenance practices, instituting new inspection practices, developing a sediment and debris removal protocol, and generating a maintenance schedule to accomplish these tasks and to manage the maintenance program. The responsibility for maintenance resides with the owner of the facility.

Pollutants in storm water may be present in the dissolved or particulate state. Suspended particles less than a few micrometers in size are important carriers of contaminants in storm water. These suspended solids increase turbidity and carry

nutrients, bacteria, heavy metals and toxic organic compounds adsorbed onto their surface while competing with the aquatic biota for dissolved oxygen. Since the smallest size fraction of the suspended particles may contain the majority of the sediment-bound pollutants, conditions which promote small particle settling will have the greatest effect in removing storm water contaminants. Dissolved contaminants may be assimilated by wetland plants and aquatic life provided that a very long and extended contact period, such as found in a marshy area or a wet pond with a permanent pool elevation, is maintained.

Maintenance activities are important to storm water contaminant removal strategies because if sediment is left to accumulate in a storm sewer, inlet, sump area or detention pond, re-suspension of the sediments may occur and the storm water conveyance system becomes a pollutant source. The design of storm water conveyance or storage facilities should build-in good maintenance access to all parts of the facility. This access allows for functional optimization of the system, providing that routine maintenance is scheduled and performed.

The NPDES storm water permit program requires municipalities to develop a *Comprehensive Master Plan* to control the discharge of pollutants in storm water runoff from new developments and areas of significant redevelopment. Present in this master plan are recommendations to improve the quality of urban runoff including the construction and use of water quality control basins. Water quality control basins trap and filter pollutants out of storm water either prior to discharge of the surface runoff to the municipal storm drainage system or prior to flowing into municipal detention ponds. Another task of the *Maintenance Activity and Schedule Program* is to develop guidelines for the operation and maintenance of public water quality control structures that may be constructed during the second five-year term of the City of Dallas NPDES storm water permit.

Implementation Plan

Task 1 Add watershed information to databases, and verify accuracy of databases. This item is related to Task 1 of the

Comprehensive Master Plan.

Subtask 1 Add an additional database field in the inventory list of channels and flood management areas maintained by the Street and Sanitation Services Department to the database and include the watershed name for each entry listed. Verify the accuracy of the channel database information.
(Year 1)

Subtask 2 Develop a reproducible mylar map detailing City maintained creeks and channels.
(Year 1)

Subtask 3 Reprogram mainframe City computer to add the watershed location to all complaints that are reported. This addition will allow the manipulation of complaint data by watershed.
(Years 1-2)

Subtask 4 Re-delineate the geographic district boundaries to include complete watersheds within the new maintenance district boundaries. Develop a reproducible mylar map showing the new district boundaries. Use same base map as subtask 2.
(Year 2)

Task 2 Develop planning and management strategies for optimizing the maintenance of storm water structural controls.

Subtask 1 Complete the revisions and submit the Drainage Design Manual (1990) to the Dallas City Council for adoption, so the Manual's requirements can be enforced by engineering plan review personnel.
(Years 1-2)

Subtask 2 Develop maintenance specifications for all large storm water quantity and quality projects that are submitted for engineering plan review and are to be maintained by City of Dallas personnel. Specifications to consider include an equipment

access plan, maintainability of proposed design, and functional maintenance sequence.

(Year 2)

Subtask 3 Review and make comments on operation and maintenance plans submitted for engineering plan review.

(Years 3-5)

Subtask 4 Resume the vegetation control program with a private contractor. The vegetation control program prevents erosion and reestablishes bermuda-type grasses along specific creeks and channels.

(Years 3-5)

Task 3 Expand the existing inventory and inspection program into a full scale operation. Use a 15 year frequency schedule for inventorying, inspecting, and mapping the whole underground storm sewer system.

Subtask 1 Initiate the planning process. Develop a data reporting format between the Street and Sanitation Services Department, Storm Water Operations Division and DWU Department, Storm Water Management Division to input the stored data logger information and the inventory and inspection information into the ARC-INFO database. This format could include the placement of DWU's employees with the Street and Sanitation Services Department inspection and inventory group to facilitate the transfer of information.

(Year 3)

Subtask 2 Implement a data acquisition process to print maps for the Street and Sanitation Services Department using the updated storm sewer information.

(Year 4)

Subtask 3 Expand existing inventory and inspection program. With an additional CCTV system, an additional 78 miles of storm sewer system could be inventoried, inspected and mapped annually.

Equipment

- One (1) CCTV camera with equipped truck
- Six (6) data loggers, programmed with ARC-INFO software (These data loggers can also be used to inventory culverts, outfalls, inlets, manholes and other appurtenances of the open stream drainage system).
- One (1) debris truck
- One (1) VAC-ALL truck
- One (1) drag bucket sewer cleaner

(Years 3-5)

Task 4 Develop a storm water pollutant minimization plan for all district service yards.

Subtask 1 Rehabilitate the three existing VAC-ALL dump pads and construct one new concrete dump pad at the four district service yards to prevent the decanted liquid from gaining entrance into the storm sewer system, roadside ditch drainage system or infiltrating into the ground.

(Years 3-4)

Subtask 2 Develop written procedures for the process of drying out the waste material on these concrete dump pads located at the service yards.

(Year 3)

Subtask 3 Develop a documentation format to record the amount of material removed and set up reporting procedures to the City department that will be responsible for pollutant load analyses.

(Year 4)

Task 5 Develop a sump area inspection schedule and sampling procedure and determine the effectiveness of increasing the

frequency of sump area maintenance activities.

Subtask 1 Schedule monthly inspections. Develop an inspection report form that lists criteria for evaluating need for maintenance.
(Year 3)

Subtask 2 Develop a documentation format to record the amount of material removed from each sump area and record it, and set up reporting procedures to the City department that will be responsible for pollutant load analyses.
(Year 3)

Subtask 3 Develop and write composite sediment and storm water sample collection procedures for the sump areas.
(Year 3)

Subtask 4 Develop and write procedures for disposal process based on whether the sediment sample's Toxicity Characteristic Leaching Procedure (TCLP) testing results indicate contamination or a lack of contamination.
(Years 3-4)

Subtask 5 Test sediment for TCLP parameters. Test storm water samples for conventional pollutants. Document results.
(Years 4-5)

Subtask 6 Evaluate the effectiveness of increasing the frequency of sump area maintenance activities. Evaluating factors will include sediment test results and annual sedimentation rates.
(Year 5)

Task 6 Develop an inspection schedule for inlets in each of the five geographic districts.

Subtask 1 Continue to dedicate personnel to clean inlets in

each of the five geographic districts.
(Years 2-5)

Subtask 2 Develop inspection criteria report form and an inspection schedule for Districts 1, 2, 3 and 4 and the Central Business District (CBD).
(Years 3-4)

Subtask 3 Develop a documentation format to record the amount of material removed and set up reporting procedures to the City department that will be responsible for pollutant load analysis.
(Year 4)

Subtask 4 Set up inlet sediment sampling program and sampling procedure. The waste material from inlets is usually removed by VAC-ALL trucks and placed onto the concrete dump pads at the district yards. Related to inlet retrofit program contained in Task 3 of the *Best Management Practices for Fully Developed Areas* document.
(Year 4)

Subtask 5 Test material for conventional pollutants.
(Year 5)

Task 7 Develop an inspection schedule and sampling procedures and determine the effectiveness of increasing the frequency of detention/retention pond and flood management area maintenance activities.

Subtask 1 Develop an annual inspection schedule. Develop an inspection report form that lists criteria for evaluating maintenance needs.
(Year 4)

Subtask 2 Develop a documentation format to record the amount of material removed and set up reporting procedures to the City department that will be responsible for pollutant load analyses.

(Year 4)

Subtask 3 Develop and write composite sediment and storm water sample collection procedures for detention/retention ponds and flood management areas.

(Year 4)

Subtask 4 Test sediment material and storm water samples for conventional pollutants prior to removal.

(Year 5)

Subtask 5 Evaluate the effectiveness of increasing the frequency of detention/retention pond area maintenance activities. Evaluating factors will include sediment test results and annual sedimentation rates.

(Year 5)

Task 8 Develop storm water quality control basin maintenance specifications. This item is related to Task 5, subtask 6 of the *New Development and Redevelopment Management Program*.
(Year 5)

TASK SCHEDULE
Maintenance Activities and Schedule

Task	Name	Year 1			Year 2			Year 3			Year 4			Year 5					
		Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct
1	Watershed Organization																		
	Revise Database																		
	Develop Mylar Map																		
	Reprogram City Mainframe Comp.																		
	Revise data collection methodology																		
2	Optimize Maintenance Strategies																		
	Revise Drainage Design Manual																		
	Develop Maintenance Specifications																		
	Review O&M Plans																		
	Resume Vegetation Control Program																		
3	Expand Inspection Program																		
	Develop Data Reporting Format																		
	Implement Data Acquisition																		
	Expand Existing Program																		
4	Sump Area Program																		
	Schedule Monthly Inspections																		
	Develop Documentation Format																		
	Develop Sampling Procedure																		
	Develop Disposal Procedure																		
	Test Samples/Sediment Study																		
	Evaluate Maintenance Frequency																		
5	Inlet Inspection Program																		
	Dedicate One Crew Per District																		
	Develop Inspection Schedule																		
	Develop Documentation Format																		
	Inlet Sampling Procedure																		
	Test Samples																		

Figure 2

4.3 NEW DEVELOPMENT AND REDEVELOPMENT MANAGEMENT PROGRAM

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)(A)(2)]

(2) A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment.

Program Summary

Representatives of the City of Dallas accompanied members of the Carter and Burgess consultant team to four cities with successful storm water management programs to review their planning and engineering procedures. Using the information obtained from Dallas and other cities and a literature review of various storm water quality processes, a list of procedural tasks for developing and redeveloping areas has been generated and presented in a sequential order of action. Using this ranking system, a comprehensive master plan of planning procedures and control techniques to be implemented during the five year permit term is presented.

Long term effectiveness and performance of surface water quality structural controls should be the goal of the Comprehensive Storm Water Master Plan. Municipal procedures governing development should be generated to ensure that effective pollutant and sediment removal strategies are considered during the planning phase before construction begins; temporary erosion control measures are implemented during the construction phase; and permanent structures are in place and functioning after construction and throughout the life of the development.

A review of the existing storm water programs, policies and procedures of the City of Dallas was conducted. The review provided information concerning the development potential of Dallas and the status of surface water quality enhancement requirements as vested in the City's legal authority. The review also provided an overview of the planning, engineering design, and platting process required for developing private property or constructing improvements in the public right-of-way. Requirements governing drainage infrastructure design, floodway and flood plain protection, and specific ordinance protection of special geologic features were also examined.

Implementation Plan

Task 1 Develop Best Management Practices (BMP) manual for residential and commercial land uses for use during development/redevelopment of those land uses.

Task 2 Identify each watershed's boundary and categorize each watershed according to urban or suburban conditions. Rank the watersheds in descending order according to potential for development or significant redevelopment. Identify which watersheds in each category contribute storm water runoff to the water supply of Dallas or other communities located in close proximity to Dallas.
(Year 1)

Task 3 Create an interdepartmental review committee to examine the existing organizational structure and to develop policy recommendations regarding the development and implementation of storm water quality controls requirements for new developments and significant redevelopment.

Subtask 1 Review the existing platting process and review existing requirements for development.
(Year 2)

Subtask 2 Assess the possibility of coordinating the detention requirements for new development and significant redevelopment with the storm water quality control requirements and make

recommendations.

(Year 2)

Subtask 3 Assess adding requirements to the site drainage design process to include the pre-construction and post-construction conditions regarding erosion potential, estimated sediment loads, rate of erosion, pollutant loads for the more frequent storm discussed in Task 2, Subtask 4, and the 100-year storm frequency event, and an erosion control and sedimentation plan.

(Year 2)

Subtask 4 Review requirements for submittal of drainage design and detention calculations including volume of runoff and peak rate of runoff for pre-construction and post-construction conditions. Assess adding requirements to include the volume and peak rate of runoff for a more frequent storm, such as the 1-year or the 2-year storm frequency storm, as a means to mitigate erosion problems.

(Years 2-3)

Subtask 5 Assess the engineering plan review process, including checklists and routing procedures by staff, to determine how to integrate the proposed storm water quality requirements with the engineering design and construction process for public infrastructure and private development/redevelopment.

(Years 2-3)

Subtask 6 Review the need for inspection of private development construction and assess the enforcement tools needed for effective regulation of the construction and maintenance of permanent surface water quality control structures.

(Years 2-3)

Subtask 7 Assess the need for proof of financial security to cover the cost of installing and maintaining all surface water quality control structures.
(Years 2-3)

Subtask 8 Evaluate recommendations and make policy decisions.
(Year 3)

Subtask 9 Incorporate policy decisions into a policy manual to be used by developers and their engineers.
(Years 3-4)

Task 4 Review the technical aspects of the City of Dallas legal authority

Subtask 1 Review the City of Dallas (COD) code for discharges to the storm drainage system. Contemplate changes to the code that are analogous to the wastewater pretreatment requirements contained in Section 49-42 and outlined earlier in this document and analogous to the code governing discharges to storm sewer and watercourses. Make recommendations.
(Year 1)

Subtask 2 Coordinate with the Texas Natural Resource Conservation Commission (TNRCC) to be sure that potential water quality impacts are adequately considered at the time state NPDES permits are issued to discharges which require the use of the municipal storm water conveyance system to convey the discharge to the waters of the U.S. Require that monitoring of all pertinent constituents be included as a permit stipulation.
(Year 2)

Subtask 3 Evaluate recommendations and make decisions.
(Year 2)

Subtask 4 Incorporate decisions and implement necessary
changes to COD codes.
(Year 3)

4.4 BEST MANAGEMENT PRACTICES FOR FULLY-DEVELOPED AREAS

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)(A)(2)]

...Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed. (Controls to reduce pollutants in discharges from municipal separate storm sewers containing construction site runoff are addressed in paragraph (d)(2)(iv)(D) of this section;

Program Summary

This program addresses Best Management Practices (BMPs) for Fully Developed Areas which might not otherwise be considered in subsequent portions of the management program. Three tasks are proposed for implementation over the five-year life of the initial NPDES permit.

The first task proposed involves conducting a review of standard operating procedures at all municipal facilities. This review will be conducted by existing staff and will be focused on removing any remaining sources of pollutant loadings at municipal facilities. Alteration of current operating procedures at municipal facilities is one method of reducing the levels of certain pollutants in storm water discharges. The Transit Division of the Municipality of Metropolitan Seattle (Metro) implemented this type of BMP at their vehicle maintenance facilities during 1988 and 1989. Detergents were investigated to determine which would perform adequately while protecting the environment and workers. Information from these studies was used in developing purchasing contracts for detergents to be used in the bus washing facilities and for the lot washing program at all Metro Transit Bases. Although the detergents were evaluated for potential impacts on receiving waters in the event of a spill or by-pass, the wash waters from each operation are typically directed to the sanitary sewer system. All wash water from

vehicle washing stations, if not currently being discharged to the sanitary sewer, will be redirected to a sanitary sewer inlet. Storm water from areas outside the wash areas will be diverted. No wash water will be allowed to discharge to storm sewers or natural water bodies.

Another way to reduce the introduction of contaminants to storm water at vehicle maintenance areas is to eliminate exposure to storm water. All fueling islands at the municipal maintenance facilities will be, if not already, covered with an awning, canopy or partial enclosure to prevent storm water from washing spilled fuels into the storm drain. The addition of concrete curbs to prevent runoff of storm water will be investigated and added in areas deemed appropriate. Absorbent materials (such as absorbent pads or kitty litter) should also be readily available at the fuel islands to absorb larger (any amount which creates a puddle) quantities of spilled fuel. Used absorbent materials could be disposed of with other contaminated fuels or waste automotive fluids.

The second task in the BMPs for Fully Developed Areas program involves retrofitting storm water inlets with a sedimentation tray to provide better collection of sediments and easier access for cleaning the inlets. The pilot program currently being conducted by the City of Austin will be evaluated for applicability to the City of Dallas. Following the evaluation, a pilot program for retrofitting fifty storm water inlets in the CBD will be developed, implemented and evaluated for applicability to the remainder of the City of Dallas.

The third task involves creating a storm drain inlet stencilling program to aid in preventing illegal dumping to the storm water conveyance system. This program would entail applying a selected "Storm Water Quality" logo (possibly decided by an open contest) and anti-dumping message to the exterior of the inlet with eye-catching paint. The purpose of stencilling is to remind citizens not to dump materials into the storm sewer conveyance system. Storm drain inlet stencilling programs implemented by other municipalities will be evaluated and a pilot program developed to install a test area of storm drain inlet stencils. The pilot program will be assessed for effectiveness, and a decision will be made concerning continuation of the stencilling program.

Citizen volunteers will be recruited to assist with the monumental task of initially labelling the storm drain inlets not contained in the pilot program. Following the initial stencilling, the stencils could be inspected and repainted as necessary during an annual inspection program.

Implementation Plan

Task 1 Review standard operating procedures at municipal facilities. Address any remaining sources of pollutant loadings at the municipal facilities. The studied sources will primarily be housekeeping activities. These items are fairly easy and economic to implement with existing staff performing the majority, if not all, of the work. Evaluated activities for potential reduction in pollutant loadings include:

- 1) changing detergents used for vehicle washing (of particular interest would be detergents used for washing rapid transit equipment);
- 2) directing all wash water from any vehicle washing stations to the sanitary sewer rather than to the storm sewer;
- 3) installing awnings and/or curbing at all fuel island locations; and
- 4) maintaining stocks of absorbent materials within accessible locations at municipal operations facilities which use or store hazardous materials.

(Year 1)

Task 2 Retrofit storm drain facilities. Address the feasibility, development and implementation of a program to install sedimentation trays on storm water inlets in the CBD. It has been assumed that sedimentation trays similar to the retrofit equipment developed by the City of Austin, Texas would be used.

Subtask 1 Assess feasibility of retrofitting storm drain inlets. Review information from City of Austin regarding installation of sedimentation trays in storm drain inlets. In particular, review cost-to-benefit ratios developed by the City of Austin regarding water quality benefits achieved versus the costs of installation and maintenance of the retrofitted structures.
(Year 2)

Subtask 2 Develop pilot program for installation of sedimentation trays. If determined to be cost-effective, develop pilot program for installation of sedimentation trays in the CBD. Develop plan for phased installation of additional retrofits in the CBD over the remaining five-year period of the permit, following evaluation.
(Year 3)

Subtask 3 Implement and evaluate pilot program for installation of sedimentation trays. Install retrofit equipment according to pilot program. Evaluate results based on frequency of cleaning required, amount of material collected, reduction in quantity of suspended material in runoff and any other pertinent parameters determined from review of other case studies.
(Year 4)

Task 3 Stencil storm drain inlets. Address the feasibility, development and implementation of a program to stencil or label storm drain inlets to discourage indiscriminant dumping of waste and/or toxic materials into the municipal storm sewer system.

Subtask 1 Assess feasibility of stencilling storm drain inlets. Gather and review information from other municipalities which have instituted stencilling programs (Santa Clara County, California; Bellevue and Seattle, Washington, among others). In particular, assess information regarding water

quality improvement versus cost to implement program.

(Year 3)

Subtask 2 Develop stencil and pilot program for installation. If determined feasible, coordinate with Public Information/Participation to determine appropriate language for signs and storm drain stencils, evaluate alternate designs, and standardize single design or group of designs for use throughout City. Consider use of both English and Spanish on all signs. Develop pamphlet detailing proper installation and use of stencil for distribution to employees and/or volunteers who will be responsible for installing the stencils. Decide what areas to target (i.e. areas of known dumping, residential areas, etc.) Establish plan for pilot program and for stencilling all storm drain inlets over five year period.

(Year 4)

Subtask 3 Implement and evaluate pilot program for stencilling. Using community volunteers, where available, or storm drain maintenance crews, install stencils using durable, non-toxic, quick-drying, highly visible paint. Assess water quality impacts of stencilling program by reviewing: 1) increases in amount of waste oil and recyclable materials collected, and 2) decreases in amounts of material collected during storm drain inlet maintenance. Make recommendations for improvements and/or continuation of program.

(Year 5)

Subtask 4 Implement maintenance program for stencils on storm drain inlets. Inspect stencils during routine maintenance/cleaning of storm drain inlets. Inspection personnel should have materials on truck to repair/relabel inlet during inspection to avoid having to make second trip to

location.
(Year 5)

TASK SCHEDULE

Best Management Practices for Fully Developed Areas

Task Name	Year 1			Year 2			Year 3			Year 4			Year 5					
	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct
1																		
Review of Standard Operating Procedures at Municipal Facilities																		
2																		
Retrofit of Storm Drain Facilities																		
Assess Feasibility																		
Develop Pilot Program																		
Implement and Evaluate Program																		
3																		
Staffing of Storm Drain Inlets																		
Assess Feasibility																		
Develop Pilot Program																		
Implement and Evaluate Program																		
Implement Maintenance Program																		
COST PER YEAR																		
TOTAL COST																		

\$78,000

\$185,000

\$115,000

\$85,000

\$15,000

\$478,000

**4.5 PUBLIC TRANSPORTATION RIGHT-OF-WAY
OPERATIONS AND MAINTENANCE**

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)(A)(3)]

(3) A description of practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities;

Program Summary

Roadways, highways and tollways can be a significant source of pollutants to storm water runoff discharges. The objective of the Public Transportation Right-of-Way Operations and Maintenance program is to mitigate the quality degradation of area channels, creeks and the Trinity River, from public right-of-way maintenance activities. Key program components include reviewing existing operation and maintenance practices, developing new maintenance specifications and procedures, inspection and maintenance of earthen channels, creeks, and roadside drainageways, and forging new agreements with the other entities operating within the Dallas corporate limits.

Public transportation entities operating within the Dallas corporate limits include the TxDOT, the DART, and the TTA. Much of the runoff originating from other entity facilities is transported by the Dallas storm water conveyance system to the receiving waterbody. Dallas is responsible for all urban runoff that discharges from outfalls located within the City of Dallas corporate limits. Proper operation and maintenance of public roadways and drainage ditches are necessary to reduce the pollutant impacts on receiving streams, creeks or rivers.

A four part strategy is recommended for implementation of this maintenance program. The first consideration is to initiate a review of existing operation and maintenance practices and determination of which may have an adverse impact on storm water quality. The second strategic component is to develop written maintenance specifications which incorporate safeguards to protect the quality of storm water runoff. These maintenance specifications should be generic in nature and applicable to other public transportation entities doing maintenance activities within the Dallas corporate limits. The primary intent of developing City of Dallas maintenance specifications emphasizing water quality is to designate their use by other public transportation entities that do construction improvements and maintenance activities within the corporate limits of Dallas. The third strategic component concerns the inspection and maintenance of earthen channels, creeks and roadside drainageways. Currently, there is no planned inspection, cleaning or desilting program in place for City maintained earthen channels or roadside ditches. The fourth strategy is to develop or renegotiate agreements with other public transportation entities operating in the Dallas corporate limits. These agreements should acknowledge that maintenance practices and traffic loadings can contribute significant amounts of pollutants to urban runoff and that compliance with uniform maintenance specifications will be necessary to mitigate the degradation of receiving waterways.

A detailed review of the operation and maintenance procedures governing right-of-way located within the Dallas corporate limits was conducted. Using information provided from Dallas and TxDOT, a list of procedural tasks for right-of-way maintenance activities has been generated and presented in a sequential order of action. The intent of the action plan is to mitigate the additional water quality degradation of area creeks and the Trinity River originating from public transportation right-of-way maintenance activities.

Implementation Plan

Task 1 Request and receive an inventory list of drainage system connections into the City of Dallas storm water conveyance

system from other entities doing maintenance activities within the City of Dallas corporate limits.

Subtask 1 Request, receive and verify an inventory list from the TxDOT of all TxDOT drainage system tie-ins into the City of Dallas storm water conveyance system. Request and receive copies of existing water quality data characterizing runoff from TxDOT highways or storage facilities located within the Dallas corporate limits.
(Years 1-3)

Subtask 2 Request, receive and verify an inventory list from the TTA of all TTA drainage system tie-ins into the City of Dallas storm water conveyance system. Request and receive copies of existing water quality data characterizing runoff from TTA roadways or storage facilities located within the Dallas corporate limits.
(Year 1)

Subtask 3 Request, receive and verify an inventory list from the DART of all DART drainage system tie-ins into the City of Dallas storm water conveyance system. Request and receive copies of existing water quality data characterizing runoff from DART right-of-way or storage facilities located within the Dallas corporate limits.
(Year 2)

Task 2 Review the City of Dallas right-of-way maintenance procedures listed below and evaluate each activity's potential to adversely impact the quality of storm water runoff. Develop safeguards. Write uniform maintenance specifications that describe the maintenance activity and proper method of sediment or debris disposal, unsuitable weather conditions which would preclude the activity, and safeguards to be used during the maintenance activity to protect the quality of any storm water runoff generated from the site.
(Years 2-4)

Task 3 Develop maintenance specification for pesticide, insecticide, and herbicide use in public right-of-way maintenance activities. Implement Program.

Subtask 1 Develop criteria for the selection of pesticides, insecticides and herbicides. Develop specifications governing the application and usage of pesticides, insecticides and herbicides in public right-of-way. Specify the minimum distance that a pesticide, insecticide, or herbicide is permitted to be applied from a physical feature or sensitive area. Develop criteria for the definition of sensitive areas. Implement Program.
(Year 2)

Subtask 2 Devise a record keeping system on pesticide use and coordinate activities with the Integrated Pest Management committee as discussed under Task 1 of the *Pesticides, Herbicides and Fertilizers*.
(Year 2)

Task 4 Develop erosion protection requirements for right-of-way maintenance activity.

Subtask 1 Develop and implement erosion protection maintenance specification for all swale or ditch regrading or slope stabilization work in public right-of-way. Specify the type of seed or grasses allowed, suitable weather conditions which allow for placement, and the preferred season of application.
(Years 2-3)

Subtask 2 Develop and implement erosion protection planning requirements for all maintenance activity in public right-of-way that disturbs vegetation.
(Years 2-3)

Subtask 3 Assess the creation of a vegetation management program governing the open stream drainage system.
(Year 3)

Task 5 City of Dallas (COD) Legal Department review of private ownership and private maintenance of creeks and channels. Make recommendations for changes in ordinances.
(Years 2-3)

Task 6 Analyze and evaluate the existing street sweeping program for the Trinity River industrial corridor and the major prime network roadways. Evaluate whether other public entities operating in the Dallas right-of-way should evaluate their street sweeping practices.
(Years 4-5)

Task 7 Develop specification and disposal methodology regarding the use of traction grit particles and deicing chemicals.

Subtask 1 Develop maintenance specification governing the selection and use of traction grit particles and deicing chemicals used for emergency deicing operations.
(Year 4)

Subtask 2 Develop proper clean-up and disposal methodology for used traction grit.
(Year 4)

Task 8 Request an inventory list from TxDOT, TTA and DART of all disposal sites, including all known inactive sites, where each entity disposes of drainage system sediments and highway sweeping debris from each entities' maintained facilities. Record disposal procedures. Verify inventory list and determine if present disposal techniques are

allowable under the Dallas NPDES storm water permit requirements.
(Years 4-5)

Task 9 Develop and implement an inspection schedule for publicly maintained earthen channels and creeks.

Subtask 1 Develop an inspection report form that lists criteria for evaluating maintenance needs.
(Year 4)

Subtask 2 Develop a documentation format to record the amount of material removed and set up reporting procedures to the City department that will be responsible for pollutant load analyses.
(Years 4-5)

Subtask 3 Develop and implement an annual inspection schedule for Districts 1, 2, 3, 4 and the CBD.
(Year 5)

Task 10 Develop and implement an inspection schedule for publicly maintained roadside ditches and roadway culverts.

Subtask 1 Develop an inspection report form that lists criteria for evaluating maintenance needs.
(Year 5)

Subtask 2 Develop a documentation format to record the amount of material removed and set up reporting procedures to the City department that will be responsible for pollutant load analyses.
(Year 5)

Subtask 3 Develop and implement an annual inspection schedule for Districts 1, 2, 3, 4 and the CBD.
(Year 5)

Task 11 Negotiate maintenance agreement with TTA. Elements of the

agreement include:

- delineation of drainage and maintenance responsibilities;
- adoption of uniform maintenance and disposal specifications;
- hazardous material spill response, cleanup and disposal responsibilities and procedures;
- financial reimbursement for cost of hazardous material spill response;
- storm water quality control criteria and monitoring requirements, penalties for non-compliance;
- development of a communication protocol and penalties between TTA and the City of Dallas to resolve maintenance activity problems that result in adverse storm water runoff quality.

(Year 5)

Task 12 Negotiate maintenance agreement with DART. Elements of the agreement include:

- delineation of drainage and maintenance responsibilities;
- adoption of uniform maintenance and disposal specifications;
- hazardous material spill response, cleanup and disposal responsibilities and procedures;
- financial reimbursement for cost of hazardous material spill response;
- storm water quality control criteria and monitoring requirements; and
- development of a communication protocol and penalties between DART and the City of Dallas to resolve maintenance activity problems that result in adverse storm water runoff quality.

(Year 5)

Task 13 Evaluate the development of an open stream master plan. Proposed components of the plan include:

- identification of the direction of the ditch or stream flow;
- the location of its discharge point into a receiving

- waterway or the City storm sewer system;
- drainage subareas contributing to earthen and concrete channels; and
- the condition of the grass lined surface; and
- recommended maintenance for each segment.

This plan will assist maintenance personnel in determining the downstream direction for regrading ditches and instituting erosion protection.

(Year 5)

Task 14 Develop maintenance specification requiring that erosion and sedimentation control BMPs be incorporated in all new construction or any roadway improvement activities performed by public transportation entities operating within the Dallas City limits.

(Year 5)

**TASK SCHEDULE
PUBLIC TRANSPORTATION RIGHT-OF-WAY OPERATIONS AND MAINTENANCE**

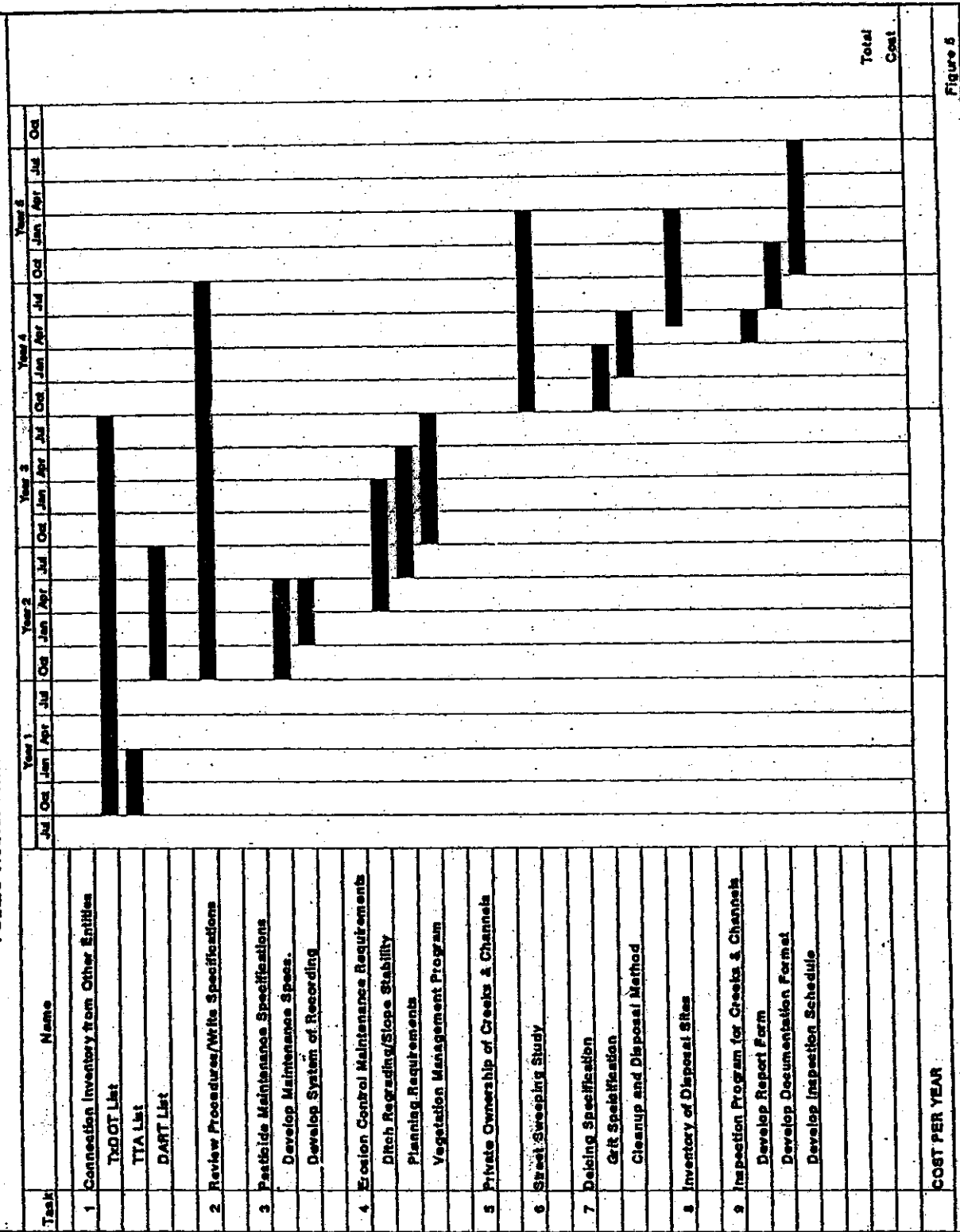


Figure 6

PART 2 PERMIT APPLICATION

City of Dallas

4.6 PROCEDURES FOR EXISTING FLOOD MANAGEMENT PROJECTS

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)(A)(4)]

(4) A description of procedures to assure that flood management projects assess receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible.

Program Summary

This section of the proposed management program for the City of Dallas' Part 2 NPDES Permit application addresses how Dallas will evaluate its existing flood management projects to determine which retrofits are practicable to reduce pollutants in storm water runoff. [See 40 CFR, Part 122.26 (d)(2)(iv)(A)(4).] Existing projects that were evaluated include detention/retention ponds, lakes, sump areas and pumping stations, and the Trinity River levee system and floodplain.

DETENTION/RETENTION PONDS

The City of Dallas currently maintains eleven detention and retention ponds. Most ponds are designed solely to prevent flooding by delaying storm water runoff. However, a reduction in pollutant concentration also occurs due to settling during the period in which the runoff is detained. If storm runoff is detained for 24 hours or more, as much as 90% removal of particulate pollutants is possible. The best way to improve water quality in existing ponds then is to increase the holding or detention time. It is recommended that the City of Dallas revise its Drainage Design Manual to include design guidelines that prolong detention periods. Pilot retrofitting projects to increase

detention time are recommended for Whispering Oaks Detention Pond and Lone Star Park Retention Pond. A review of the pilot projects and an evaluation of the remaining ponds is also recommended.

LAKES

Three of Dallas' existing lakes were evaluated for retrofits. These included White Rock Lake, Bachman Lake, and Lake Cliff. Suggestions include the installation of litter booms to remove floating debris and improve lake aesthetics, the construction of forebays to collect heavy silt deposits, and dredging to restore full detention volumes. A study of Lake Cliff's vegetation and its impact on pollutant uptake is recommended as well as a study of its outlet and hydrology. Development of a plan to dredge Bachman Lake at the upstream end and construct a forebay is also recommended.

SUMP AREAS AND PUMPING STATIONS

The City of Dallas currently operates six pumping stations and sump areas as a part of the Trinity River levee system. Runoff collected in the sumps flows by gravity through sluices into the Trinity River channel until the river elevation reaches a certain depth at which time the gates close and the pumps begin operating. Two studies to evaluate retrofits to enhance water quality in this area are recommended. One study will incorporate the use of a Supervisory Controlled Automatic Data Acquisition System (SCADA) to maximize sump detention time, without creating a flood hazard, to help remove pollutants through settling. Another study will address how to fund the installation of special automated trash racks that remove floating debris. One additional recommendation is to construct concrete lined areas near each pump site to facilitate the removal of deposited silt.

LEVEE FLOODPLAIN AREA AND CREEKS

The City of Dallas has approximately 2,500 acres of floodplain within its levees. One retrofitting

recommendation is to study how the floodplain may be utilized to benefit water quality. For instance, runoff from small storms could be diverted to a designated marsh area within the floodplain rather than directly into the Trinity River. A marsh environment can remove pollutants through filtering, plant uptake, settling, and biodegrading. Another retrofitting recommendation is to review an existing development plan entitled Trinity Park Master Plan to ensure water quality measures are included. Existing streams were also evaluated. Dallas has nearly 300 miles of streams and creeks. One retrofitting recommendation is to add small check dams at various intervals to enhance the removal of pollutants through settling and velocity reduction. A study of existing check dams along the Peacock Branch of Five Mile Creek is recommended.

Following is an implementation section that provides detail on the cost, scheduling, and scope of each recommendation. A specific task number for each recommendation is also assigned. A cost summary table and a schedule are also included.

Implementation Plan

This section presents the retrofit recommendations described above in more detail as individual tasks and includes preliminary costs and scheduling for each.

DETENTION/RETENTION PONDS

- Task 1** Review and revise Section 3.4, *Detention Design*, of the City's Drainage Design Manual.
 (Year 1)

- Task 2** Retrofit Whispering Oaks Detention Pond.
 (Year 3)

- Task 3** Retrofit Lone Star Park Retention Pond.
 (Year 4)

- Task 4** Review existing retrofits and remaining ponds.

(Year 5)

LAKES

- Task 1 Study the surrounding vegetation of Lake Cliff.
(Year 2)
- Task 2 Install litter booms at inlet and outlet of Bachman Lake.
Evaluate based on volume of debris removed.
(Years 3-5)
- Task 3 Study Lake Cliff's outlet structure and hydrology.
(Year 4)
- Task 4 Study dredging Bachman Lake near the upstream end and
constructing a forebay.
(Year 5)

SUMP AREAS AND PUMPING STATIONS

- Task 1 Use SCADA in conjunction with a detailed study of operating
procedures to develop maximum detention times for each sump
under varying conditions.
(Years 4-5)
- Task 2 Begin planning to include the purchase of additional
automated trash racks and the construction of concrete
desilting areas during the next NPDES permit period.
(Year 5)

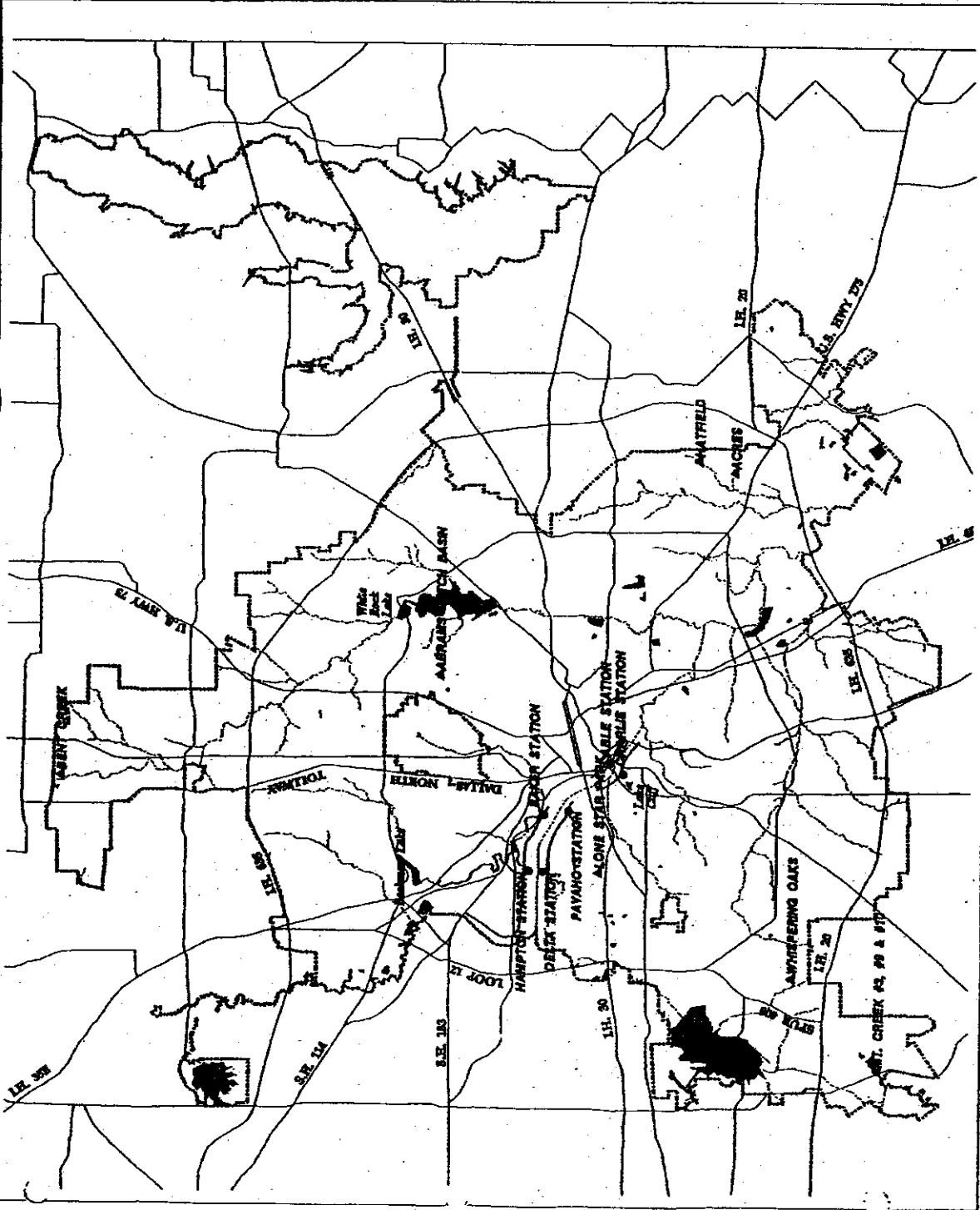
LEVEE FLOODPLAIN AREA AND CREEKS

- Task 1 Review Trinity Park master plan for water quality impacts.
(Year 4)

Task 2 Conduct a study of redirecting low flows from pump stations to marsh areas. Construct small berms to delineate marsh areas and redirect pump outflow to marsh areas.
(Year 5)

Task 3 Study water quality impact of check dams on Peacock Branch.
(Year 4)

CITY OF DALLAS 1992 EXISTING FLOOD CONTROL STRUCTURE LOCATIONS



- LEGEND**
- ▣ Retention & Detention Basin
 - ▣ Levee Pump Station
 - ▣ City Boundary
 - ▣ Road
 - ▣ Waterway
 - ▣ Existing Water Bodies

NOT TO SCALE

This Map is Part Of
 The NPDES Part 2 Stormwater
 Permit Application Submitted To
 The U.S. Environmental Protection
 Agency By And For The
 City Of Dallas, Texas

Prepared For:



City of Dallas

Prepared By:



Carter & Burgess, Inc.
 Graphics by GIS Division

TASK SCHEDULE
Procedures for Existing Flood Management Projects

Task Name	Year 1			Year 2			Year 3			Year 4			Year 5			Cost		
	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan		Apr	Jul
DETENTION/RETENTION PONDS																		
1 Drainage Design Manual Revision																		
2 Retrofit Whispering Oaks Pond																		
3 Retrofit Lone Star Park Pond																		
4 Review Retrofits and Remaining Ponds																		
LAKES																		
1 Study of Lake Cliff Vegetation																		
2 Install Litter Booms at Bachman Lake																		
3 Study Lake Cliff's Outlet and Hydrology																		
4 Plan to Improve Bachman Lake																		
SUMP/PUMP AREAS																		
1 Detailed Sump Area and Pump Study																		
2 Plan Acquisition of Automated Trash Racks																		
LEVEE SYSTEM AND CREEKS																		
1 Review Trinity Park Master Plan																		
2 Study to Redirect Flows to Marsh Area																		
3 Check Dam Pilot Project																		
COST PER YEAR																		
TOTAL COST																		

FIGURE 7

4.7 LANDFILL PROGRAM

Regulatory Requirement [40 CFR 122.26 (d) (2) (iv) (A) (5)]

(5) A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges (this program can be coordinated with the program developed under paragraph (d) (2) (iv) (C) of this section); and...

Program Summary

This section of the Proposed Management Plan addresses a program to monitor and control pollutants from open and closed municipal landfills or other treatment, storage or disposal facilities for municipal waste. This program is part of a larger management program that addresses hazardous waste treatment, disposal and recovery facilities and industrial facilities that are subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the City of Dallas determines are contributing substantial pollutant loading to the municipal storm sewer system. Also associated with the "landfill" management program are corollary programs for used oil and for household hazardous waste management. These programs are outlined more completely elsewhere in this permit application. The City of Dallas already has in place, and to a high level of sophistication, most of the elements of this proposed management plan as it relates to landfills and solid wastes. Other programs have been initiated, at least to the pilot program stage. Other activities to complete the management programs are outlined in this document. This document summarizes programs in place and programs begun for landfill management, and describes the remaining program elements

needed to complete the management functions in this area. The planning and management functions are found primarily in the Department of Street and Sanitation Services and in DWU. The present functional arrangement appears to be workable and efficient, and present overall organizational arrangements should continue. With few exceptions, the City has a program in place that should satisfy much of the intent of the storm water regulations. With respect to municipally oriented programs and practices related to landfill operations and solid waste management, the City has much more than the rudiments of an effective storm water management program in place. The most significant area for expanded management efforts relate to practices of individuals, businesses and industries at large which, in the past, have not fallen under the active scrutiny of City officials.

The focus of this storm water management program is to control runoff from landfills and to eliminate pollutants to the waters of the United States. The City of Dallas Department of Street and Sanitation Services, through its Sanitation Operations, is in charge of the City's landfill operations. The present operation centers around solid waste collection operations which deliver solid waste to the City's McCommas Bluff Landfill. (This landfill and its appurtenant operations are subject ultimately to a requirement for an individual storm water discharge permit. The City of Dallas has joined with other cities in Texas, under the auspices of the Texas Municipal League, to address these current landfill operations under a group permitting procedure, which is in progress. This permitting activity is not included within this management plan component, at this time, until the full terms of the individual permit arising from the group permitting activity are known. At that time, those active landfill operations requirements will be subsumed within the overall landfill management plan.) The McCommas Bluff Landfill is permitted as a Type I landfill to receive municipal solid waste, and is actively under the supervision of both the TWC, Municipal Solid Waste Division, and the U.S. EPA, Region VI. The McCommas Bluff Landfill is a modern landfill operating in general compliance with permit conditions as imposed primarily by the TWC, Municipal Solid Waste Division, (formerly State of Texas Department of Health, Bureau of Solid Waste Management through March, 1992, when functions were transferred to the TWC), and the

U.S. EPA. (Note that the TWC is to be renamed the Texas Natural Resources Conservation Commission effective September 1993.)

Most of the solid waste comes to the landfill by way of transfer from three transfer stations spaced geographically in the northeastern, northwestern and southwestern sectors of the city. The McCommas Bluff Landfill is located within the southeastern sector of the City. The transfer stations and their operations are currently maintained under virtually spotless conditions. City pride in these operations sets a positive tone for its citizens. Given the volume of activity that occurs and the dynamic nature of the operations, the landfill itself is maintained with reasonable care.

Recent legislation by the Texas Legislature has required the City of Dallas, through its Sanitation Operations, to address used tire shredding and recycling and other recycling issues. Other than the recycling of used oil, recycling in general is not addressed in either the Preamble or in the Storm Water Regulations. However, a useful expertise is being developed within Sanitation Operations in developing contacts for recycling various materials and in developing contracts with commercial concerns for marketing, or otherwise disposing, these materials to parties elsewhere in the state or country. Although recycling markets are volatile (unreliable), the City's commitment to encouraging recycling also is helping its citizenry to develop more of an environmental awareness. The McCommas Bluff Landfill and the Northwest Transfer Station (Bachman) may play a prominent role in the City of Dallas' recycling efforts and in its Household Hazardous Waste (HHW) programs. The latter is detailed within the toxic materials management program given elsewhere. The City already has recycling operations (including used oil) under way at the Northwest Transfer Station as well as at the McCommas Bluff Landfill and at convenient locations throughout the City.

Sludges generated by municipal water and wastewater treatment operations are managed and appropriately disposed of in sludge lagoons and monofills operated by DWU (City of Dallas). These operations either have NPDES permitted discharges or are zero discharge operations. Long range plans are for all operations to be zero discharge as funding permits. Future water treatment and

wastewater treatment sludge management operations should continue to be directed and controlled by DWU.

The City has in the past operated 25 landfill sites on private properties. These sites have all been closed and returned to their owners, except for one. These former landfills all have been closed for more than five years each, with the earliest closure in the late 1930's and the most recent in 1983. These sites were operated in compliance with standards then existent. Current and recently promulgated standards are more stringent.

In addition to City of Dallas facilities, a large landfill is operated within the corporate limits by the City of Mesquite. The City of Carrollton also has a municipal landfill, the drainage from which may flow along the Elm Fork Branch of the Trinity River adjacent to boundaries of the City of Dallas. Other waste management operations are operated by commercial concerns. Most notable among these are: Brown and Ferris Industries; Waste Management, Inc.; and proposed operations by others. Several landfills are located within Dallas County near the City of Dallas boundaries, but not within its confines. Several waste transfer stations operated by other municipalities are located near the City of Dallas boundaries.

Numerous construction debris dumps appear within the confines of the City; parties responsible have not yet been identified. In addition, there is widespread promiscuous and clandestine dumping of waste that should go to the landfill by residents of both the City and the County of Dallas. Enforcement activities are aimed at apprehending dumpers, and ordinances provide for fines and further remedies when dumpers are apprehended. The practices of industries within the City of Dallas for storage or disposal of various waste materials on their own sites are not well known. At locations where hazardous materials are used and stored, information concerning materials that could be encountered is available to the City in a database maintained by the Dallas Fire Department for use by the Hazardous Material (HazMat) response team in the event of an hazardous spill incident. Storage and material usage practices by local industries and businesses will be the subject of City scrutiny under its industrial activities management program (detailed elsewhere), in conjunction with U.S. EPA, during the term of the NPDES storm water discharge permit.

This examination of practices will be conducted so that existing ordinances or other regulations can be effectively enforced and additional ordinances can be drawn up and enacted as needed.

Cognizance and management of landfills in Dallas should continue to fall under the Sanitation Operations office of the Department of Street and Sanitation Services. Besides managing the McCommas Bluff Landfill, satellite transfer stations, and also related material recycling operations presently under way, the Sanitation Operations Office should continue to monitor developments at the former landfill sites, maintain active cognizance of the larger permitted landfill operations within the City of Dallas boundaries, and assure cognizance of other landfill operations presently permitted or those that should be permitted. The Sanitation Operations Office needs to be prepared to provide guidance to these operations to assure compliance with both solid waste disposal requirements and minimization of pollutant runoff from these operations by way of storm water runoff. Based on its expertise, the Sanitation Operations Office needs to devise and initiate the appropriate steps to eliminate unpermitted and/or promiscuous dumping.

Implementation Plan

Significant activity related to recycling, transfer station and landfilling operations is presently budgeted as part of current operations, or has been anticipated because of changes to landfill regulations, etc.; prompted by revisions to RCRA; and started because of Texas Legislature actions. Most of the additional activities outlined in this section can begin immediately, and several may be phased in at a relatively low effort level over the term of the permit.

- Task 1** Prevent polluted runoff at existing McCommas Bluff Landfill and transfer stations. This task involves assuring that runoff leaving the sites of present operations does not come into contact with pollutants, and that possible problems that may develop are caught by a routine monitoring and inspection program.

Subtask 1 Examine and inspect site grading at the McCommas Bluff Landfill and transfer stations to assure that all storm water is diverted away from operations where pollutants are present or, in the case of the landfill, that contaminated storm water is ponded on the site for more than 24 hours (for a ten-year storm). Grading should be checked at least annually, and after any significant construction or other change in operations. (Note that any remedial regrading deemed necessary as a result of the inspections must be determined and performed on an "ad hoc" basis.

(Years 1-5)

Subtask 2 Inspect and maintain vegetative cover at the landfill to minimize erosional problems from storm water.

(Years 1-5)

Subtask 3 Implement instream semi-annual water quality and biotic monitoring program for Five Mile Creek above and below McCommas Bluff Landfill.

(Years 1-5)

Task 2 Review and remediate storm water runoff problems from up to 60 sites of movable "igloos" used to collect recyclable material throughout the City of Dallas, and inspect and correct for any storm water problems associated with recycling efforts at "Dry Gulch Junction" at the Northwest Transfer Station (Bachman).

(Years 1-5)

Task 3 Maintain knowledge and awareness of sludge operations to assure that storm water coming into contact with sludge is treated properly. At present, sludge operations are a closed loop with the supernatant being recycled to the head of the plant. This task also involves staff time required to stay knowledgeable concerning current liner requirements, and the like, associated with sludge land-filling

operations. It also includes assuring that the operations do not violate storm water regulations because of temporary fixes or modifications to operations.

(Years 1-5)

Task 4 Protect the public from problems which may arise from storm water flows from the sites of landfills previously operated by the City of Dallas. (Most of these sites have passed from City control back to the hands of their owners. Several sites have been converted to other uses.)

Subtask 1 Distribute and circulate maps showing former landfills and suitable warnings to all departments associated with development or construction to exercise all due care concerning disturbance of these sites.

(Year 1)

Subtask 2 Revise and update the Street and Sanitation Services document on the former landfills based on current conditions and knowledge, and distribute the same to the departments identified above, and to the general public, as requested.

(Year 1)

Subtask 3 Recover archived landfill files, older topographic maps of the sites (possibly archived maps of the U.S. Geological Survey through its National Cartographic Information Center, Reston, Va.), aerial photographs of the sites, and interviews with former employees having knowledge of the sites and operations. This effort is necessary to provide background and documentation concerning the likelihood of problems with these sites that may develop.

(Year 1)

Subtask 4 Examine sites and current topography to identify storm water discharge points, photograph and document current site conditions, and assess the apparent extent of site problems and potential

for contaminated storm water. This task element will form the basis for defining remedial or enforcement actions that may be deemed necessary, or for defining additional studies needed.

(Year 1)

Subtask 5 Initiate instream semi-annual water quality and biotic monitoring above and below eleven former landfills adjacent to streams.

(Years 2-5)

Task 5 Monitor other permitted landfills operating within or adjacent to the boundaries of the City of Dallas (e.g., Cities of Carrollton and Mesquite, etc.). A sense of City Council resolution or an ordinance may be needed to allow officials of the Street and Sanitation Services Department to effectively exercise oversight. Alternatively, oversight might be exercised by negotiation between jurisdictions. Components of both mechanisms might also be adopted.

(Years 1-5)

Task 6 Address the problem of promiscuous dumps and illegal dumps occurring at random throughout the City of Dallas. A nucleus of staff and inspectors within the Street and Sanitation Services Department presently address this problem. However, the problem appears to exceed the capacity of present staff and equipment to get ahead of the problem. Promiscuous dumps are an obvious source of contamination to storm water. The extent and level of contamination is unknown and indeterminate at this time. Toxic materials may be involved. Therefore, a special expertise in handling such materials is warranted.

Subtask 1 Identify illegal debris dumps and refer to the TWC. This may require assignment of part-time personnel.

(Years 1-5)

Subtask 2 Develop a special promiscuous dump identification and disposal team. Inspectors and crew members are to be trained in identification, handling and

disposal of hazardous materials with requisite periodic recertification. Costs include a full-time inspector, a field supervisor and two laborers and clerical support, a dump truck and loader with specialized material and equipment for hazardous material handling, clerical support, and cross-training of police and other City inspectors in identifying and discouraging potential dumping incidents or in investigating such incidents to find perpetrators. Major start up costs are anticipated in the second year of the program. Existing equipment, modified for and dedicated to the use of the team may defray or postpone incursion of these costs.

(Year 1)

Use existing staff and equipment as possible, while attempting to better assess the extent of the problem.

(Year 2)

Hire or assign inspector and team staff, provide HazMat training, acquire equipment and cross-train other City inspectors and police.

(Years 3-5)

4.8 PESTICIDES, HERBICIDES AND FERTILIZERS PROGRAM

Regulatory Requirement [40 CFR 122.26 (d) (2) (iv) (A) (6)]

(6) A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.

Program Summary

The City of Dallas will develop and distribute a brochure on the need for proper application of pesticides, herbicides, and fertilizers and their affect on water quality. This brochure will be used as an education tool and will be distributed to the general public (See Program 4.1 Public Participation and Governmental Coordination). Several city departments are involved in application of pesticides. Each department will be asked to review pesticides that are currently used by their departments, determine whether they are the least toxic materials available, identify alternative management techniques, determine appropriate buffer areas for waterways and sewers and provide such other expertise, and oversight, as necessary. Each departments' applicators must abide by State laws of Texas and obtain an applicator's license from the Structural Pest Control Board. Also, commercial applicators with Texas must also be licensed by this same entity. Municipalities in Texas are not allowed to issue licenses for this type of work. Therefore, the City will rely on the state laws and licensing to govern this work within its city limits.

The Personnel Development/Training section of the City of Dallas

Personnel Department will assist in educational efforts. A priority will be the establishment of an on-going educational program for municipal applicators. Coordination of course offerings for the public, commercial applicators, and municipal applicators will be a significant focus. This task will emphasize utilization of on-going programs. Training programs available in the Dallas area will be publicized. The Texas Agricultural Extension Service (TAEX), which has taken the lead in the development of training materials and short courses in the past, is expected to continue in that role. TAEX through Dallas County and the State currently offer numerous educational seminars, workshops, and home study courses.

The City Park and Recreation Department is expected to play a major role in the pesticide and fertilizer management program. Parks and Recreation has control of nearly 47,000 acres within the City and is the largest municipal applicator of pesticides, herbicides, and fertilizers. Park personnel are licensed by the State and experienced with application and use of pesticides, herbicides, fungicides, and fertilizers and apply them in a conservative manner.

Applicators are required to earn six continuing education points in general training and three points in each category in which the applicator is certified during any 3 year period as required by state law. Effective January 1, 1993, as a result of the Structural Pest Control Act, Texas Civil Statutes, Article 135b, amended 1991, of the six general category points required for recertification.

Because of recent shifts in licensing and enforcement of pesticide control laws (e.g., the Texas "Structural Pest Control Act of 1991), the City of Dallas has lost licensed applicators of pesticides (because supervisors no longer possess the qualifications to obtain a license). The training program for municipal applicator licensing will be modified to include City reimbursement of training and licensing fees.

Guidelines concerning where City personnel apply chemicals, and under what circumstances and constraints, and when and where commercial assistance may be used will be outlined in a Best Management Practices manual.

Implementation Plan

Task 1 . Establish a public and commercial educational effort for applicators. Develop a brochure on pesticide, herbicide, and fertilizer applications and how they affect water quality. Distribute to public and commercial applicators.

Task 2 . Establish procedures to insure City personnel and city contractors that are applicators are licensed and trained in accordance with SPCB requirements.

4.9 ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)(B)(1) and (5)]

(B) A description of a program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer. The proposed program shall include:

- (1) A description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program description shall address all types of illicit dischargers, however, the following category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges and street wash water (program descriptions shall address discharges or flows from fire fighting only where such discharges or flows are identified as significant sources of pollutants to waters of the United States);

- (5) A description of a program to promote publicize and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers;

Program Summary

This section of the Proposed Management Plan addresses an area of the overall Storm Water Management Plan that is an umbrella to other program elements described in detail elsewhere.

The regulations set forth certain requirements for the individual management programs [55 CFR, pg. 48070]. The U.S. EPA has defined basic criteria for management programs, including the following items:

They must cover the duration of the permit.

They must include comprehensive planning involving public participation.

They must reduce pollutant discharge to the maximum extent practicable.

They must describe staff and equipment available.

They may include controls to be imposed on a system-wide, watershed, jurisdiction, or individual outfall basis.

They may be implemented in a phased manner.

They must describe priorities for control implementation.

This section describes the "overall" management program for the detection and elimination of non-storm water discharges into the City of Dallas storm drainage system. However, several activities cited by the regulations are presented in other sections of this City of Dallas Storm Water Management Plan. These include: inspections to prevent illicit discharges; procedures for on-going field screening activities; procedures for the detailed investigation of suspect portions of the storm drainage system; procedures to prevent, contain, and respond to spills; educational activities, public information activities, etc., to facilitate the proper management of used oil and toxic substances; and controls to limit the infiltration of seepage from municipal sanitary sewers. Several of these related items were determined to be best addressed individually, while others

were determined to be best addressed in association with other City of Dallas storm water management programs. Those programs which are addressed within this section include the overall coordination and support of related activities and the program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts.

There are four primary objectives of the overall non-storm water detection and elimination program. Simply stated, these objectives are:

1. Identify potential non-storm water discharges.
2. Investigate potential non-storm water discharges.
3. Terminate non-storm water discharges.
4. Reduce potential for future improper dumping.

These objectives overlap with other storm water management program objectives. For example, storm drainage system maintenance and industrial facility inspection activities will both limit impacts of interferences on the definition and investigation of potential non-storm water discharges. In addition, these activities will provide a substantial level of knowledge regarding potential sources of non-storm water, thereby enhancing the ability of field personnel to investigate potential illicit discharges.

For any municipal program aimed at the identification of non-storm water discharges, the use of the local citizenry and municipal employees provides an opportunity for the municipality to observe more portions of the storm drainage system and receiving waters at any given time. Public education and employee awareness training can prove economically beneficial for the community. Equally important is the involvement of local groups with either an "environmental focus," or those who simply may have an interest in the local Dallas environment. Thus, the City of Dallas proposes to provide environmental awareness materials and information to citizens and municipal employees.

The City of Dallas proposes to continue using existing, trained personnel for potential non-storm water discharge investigations. These individuals will continue to handle appropriate, water-related citizen reports, as well as other investigative measures. Additional personnel will be brought into this activity as

conditions demand. These trained investigators also will work with the teams involved in continued outfall screening activities. With this relationship, outfalls with potential non-storm water discharge contamination would be identified with the concurrent ability to research and identify pollution sources.

The City of Dallas proposes to continue to resolve problems with those individuals and companies who may be sources of non-storm water discharges. The City of Dallas will review the technical and legal aspects of the City Code to ensure proper definition of prohibited activities and allowance for effective enforcement, making revisions as necessary.

Through other related programs, the City of Dallas proposes to reduce the potential for non-storm water discharges related to improper disposal of waste materials. Of particular importance are the activities associated with HHW, Wastewater Infiltration Controls, Spill Control, Landfill Management, and Used Oil Management.

Implementation Plan

Implementation is presented in terms of actions grouped for the general public, for departments of the City of Dallas, and for industrial facilities within the City of Dallas.

- Task 1 As detailed in our Part 1 Permit Application, the City of Dallas Codes prohibit discharge into the storm sewer system of:
- 1) normal domestic wastewater;
 - 2) wastewater from the cleaning or maintenance of a bus, truck or other vehicle by a business which operates more than two vehicles or which commercially washes these vehicles;
 - 3) wastewater from the cleaning or maintenance of an airplane;

- 4) effluent from a cooling tower, condenser, compressor, or boiler;
- 5) filter backwash from a swimming pool or fountain;
- 6) effluent from an animal pen; animal hospital, meat packing or slaughter house, poultry processing plant, or dairy;
- 7) base material from ready mixed concrete, mortar, asphalt, or ceramic;
- 8) grass, leaves, brush, or other debris;
- 9) crankcase drainings, wastewater from washing the engine of a vehicle, oil, grease, or a similar substance;
- 10) chemical waste;
- 11) industrial or domestic waste; or
- 12) any substance which damages, clogs, or adversely affects the quality of water in the storm sewer system.

The City issues citations of up to \$2,000 per day for such violations. The City currently responds to citizen complaints/reports of such violations. The City will implement a program to inspect at least 500 outfalls per year during dry weather to see if flow is present. It will then field test the flow to see if a water quality problem exists. If so, it will be traced to its source and generator will be issued a notice of violation and given a set amount of time to rectify the problem. If compliance is not achieved, a citation will be issued. If an illicit discharge is found, it will be corrected within thirty days, a schedule for expeditious removal will be developed and followed.

The City will review and modify as necessary its existing City Codes to address other non-permitted storm sewer system discharges and permit discharges by the second year of the

permit.

(Year 1-2)

Task 2 Encourage public reporting of illicit discharges and deliberate dumping in order to have effective public involvement in the program. Access to responsible City inspectors and enforcement personnel may be via several channels. City Councilpersons report incidents, and an aggressive program of investigation and follow up reporting is done concerning the resolution of the incidents. Citizens presently call in to various City departments to report incidents or observations. A system of investigation and response has already been instituted. Follow up calls to the reporting citizen are made, wherever possible, to report the disposition of the cases. Records are kept.

For public reporting to be effective, a citizen must feel that effective and timely follow up is made of reported incidents and that the reporting can be expedited. Several enhancements to the present situation are needed to make effectiveness a reality to the public. Present telephone response to citizens is often ineffective because of understaffed switchboards. Often citizens are put on hold for extended periods of time before an answer is received and, often, the wrong department is reached for effective response. This situation becomes counterproductive to citizen confidence in the City's ability to effectively respond. Telephone operators are needed to give a personal touch to the citizen's interface with the City, however, an automatic voice mail system can provide prescreening of many phone calls to the proper department while minimizing citizen hold times. Therefore, automatic voice mail type equipment needs to be installed on one of the City's switchboards with a unique number for citizen reporting of incidents. The incidents can be recorded on voice mail or routed through to a human responder, as available. A record can be kept and routed into a computerized database to assure prompt and effective response to the average citizen. The switching gear can also route other calls to appropriate departments, or can give preprogrammed answers to run-of-the-mill citizen queries. For those citizens desiring a more active involvement in storm water quality improvement,

City staff (selected staff of the Storm Water Utility, or of the Health and Human Services, or of the Street and Sanitation Services, or of the Parks and Recreation departments, and other interested staff) may be able to help train volunteers in "stream walk" observations or other helpful surveillance activities.

A statistician/planner is also needed to design and implement database and reporting systems development; to analyze data; to identify patterns and trends; to assure that citizen reports, City employee or Councilperson reports are properly considered; as well as to provide overall programmatic support to assure that field screening, detailed investigation, industrial monitoring, and water quality and biotic monitoring programs are effective. These other programs are described in detail elsewhere within the Storm Water Management Plan. The statistician/planner will also need a dedicated microcomputer and peripherals with statistical and database management software.

(Year 1-5)

Task 3 Develop and implement a GIS at the Storm Water Utility for planning storm water operations and investigations and analyzing the storm water drainage system for problems, trends, and possible improvement, and for tracking and documenting the management of the systems. It is assumed that GIS staff of the DWU will assist in the development of the necessary GIS databases and that GIS analyses can be made available to Storm Water Utility staff as needed. As experience is gained with the management of the Storm Water Utility and the storm water drainage systems, additional staff and equipment may prove to be necessary.

Task 4 Plan, review, analyze and report about the illicit discharge detection and removal program and the effective public reporting of illicit discharges and other storm water quality problems. Besides annual analyses and reviews for budgetary and planning purposes, analyses and reviews of operations and data collected for drainage areas and geographic areas of the City need to be made continually

throughout each year of the permit term. This task is also generic for program planning and for analyses of the various means and alternatives for the detection and elimination of illicit discharges and illegal disposal. It is assumed that present, and currently proposed, staff and equipment will be sufficient to provide the necessary review and analyses needed initially.

4.10 FIELD SCREENING PROCEDURES

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)(B)(2)]

(2) A description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens;

Program Summary

Part 2 of the NPDES application process requires the applicant to develop a program which will detect non-storm water discharges by field screening of the storm water system. This section addresses the procedural framework for the City of Dallas personnel to use for field screening on non-storm water discharges for the life of the permit, and is designed to achieve the following:

- Inform City staff of the U.S. EPA requirements
- Develop an implementation plan for the Storm Water Utility for compliance with U.S. EPA requirements
- Introduce Field staff to the step-by-step field screening procedures.
- Provide guidance for safety of field personnel.
- Provide guidance on prioritization of field screening locations

Prioritization of locations for field screening will be accomplished as follows:

1. Screening Location Identified by Citizen Involvement

The storm water program must promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges to municipal

separate storm sewers. The general public will act as additional inspectors and the success of the program will depend on how well the public is educated.

2. Routine Screening of Industrial/Commercial Areas

The Storm Water Utility will implement a plan to classify all industrial/commercial outfalls as having either high or low potential for non-storm water discharges. Those most likely to exhibit contamination from non-storm water discharges should be field screened first. Several factors will be identified to aid in the classification of industrial/commercial outfalls.

3. Routine Screening of Major Stream Systems

The City of Dallas has formulated a list of sampling points on 47 major stream systems within the City. This will be used to identify sampling points on major stream systems during the life of the permit. The major streams will be screened quarterly.

4. Intensive Screening of Streams with Poor Environmental Conditions

The City of Dallas Health and Human Services Department (HHS) performs an annual bioassay of 34 streams. By examining various environmental conditions that have been encountered over the past 10 years, it is possible to obtain a very good indication of the overall environmental condition of City of Dallas streams. This information is used to prioritize screening activities.

The screening program will require monitoring of a series of basic parameters to determine if non-storm water discharges are present. The time and date of any dry-weather flow is recorded. Physical characteristics are noted. Certain chemical analysis will be performed on-site using field kits. Additional analysis may be performed based on the field technician's assessment.

Implementation Plan

- Task 1** Institute citizen report telephone number.
(Year 4)
- Task 2** Initiate citizen observer program.
(Years 1-5)
- Task 3** Involve a high school biology/chemistry class in program efforts.
(Years 1-5)
- Task 4** Begin to develop a prioritization plan for industrial/commercial outfalls during the second year. The potential for illicit discharges and improper disposal is generally higher for areas with significant numbers of heavy industrial facilities.
(Years 1-5)
- Task 5** Identify SIC classifications with industrial activities by watershed during the first year.
(Years 1-5)
- Task 6** Track discharge permits issued by TWC on a continuous basis.
(Years 1-5)
- Task 7** Update prioritization plan for "other streams" annually based on current bioassay.
(Years 1-5)
- Task 8** Initiate placement of outfall identification numbers on outfalls during first year. Other outfalls identified during Part 2 will be numbered and marked as available resources.

(Years 1-5)

Task 9 Conduct quality control of field screening on a quarterly basis or as new staff are hired.
(Years 1-5)

Task 10 Formulate an Emergency Action Plan for emergencies encountered during field screening efforts.
(Year 1)

Task 11 Provide annual in-house training in first aid, CPR, hazardous waste and confined space entry.
(Years 1-5)

Task 12 Report on effectiveness of programs on annual basis.
(Years 1-5)

Task 13 Monitor storm related work by other departments.
(Years 1-5)

Task 14 Acquire necessary start-up equipment for field screening.
(Year 1)

Task 15 Acquire equipment and expendable supplies during duration of permit.
(Years 1-5)

TASK SCHEDULE
Field Screening Procedures

Task Name	Year 1			Year 2			Year 3			Year 4			Year 5						
	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	
1. Citizen Complaint Line																			
2. Citizen Observer Program																			
3. High School Science Class Involvement																			
4. Develop Outfall Plan																			
5. Identify SIC's In Watersheds																			
6. Track TWC Discharge Permits																			
7. Update Prioritization Plan																			
8. Outfall Identification																			
9. Quality Check Of Field Screening																			
10. Emergency Action Plan																			
11. Staff Emergency Training																			
12. Annual Reports																			

FIGURE 11

TASK SCHEDULE
Field Screening Procedures

Task Name	Year 1			Year 2			Year 3			Year 4			Year 5						
	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	
13 Monitor Other Departments																			
14 Start-up Equipment																			
15 Additional Equipment And Supplies																			
COST PER YEAR																			
TOTAL COST																			

\$153,244

\$123,144

\$123,144

\$123,644

\$123,144

\$646,320

FIGURE 11

PART 2 PERMIT APPLICATION

City of Dallas

4.11 DETAILED INVESTIGATION PROCEDURES

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)(B)(3)]

(3) A description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water (such procedures may include: sampling procedures for constituents such as fecal coliform, fecal streptococcus, surfactants (MBAS), residual chlorine, fluorides and potassium; testing with fluorometric dyes; or conducting in storm sewer inspections where safety and other considerations allow. Such description shall include the location of storm sewers that have been identified for such evaluation);

Program Summary

Part of the NPDES approaches requires the applicant to develop procedures to investigate portions of the storm sewer system that, based on the results of the field screening or other appropriate information, indicate a reasonable potential of containing non-storm water discharge. This document addresses the procedural framework which City of Dallas personnel will use for detailed investigation of non-storm water discharges for the life of the permit. The focus of the document is to pinpoint and remediate non-storm water discharges. Detailed investigative procedures and estimated costs are included in the procedure development.

This document is designed to achieve the following:

- Inform City staff of U.S. EPA requirements
- Develop an implementation plan for the Storm Water Utility

Introduce field staff to the field investigation procedures
Provide guidance for safety of field personnel
Provide guidance on sample collection, preservation,
analysis and completion of chain-of-custody forms, and if
necessary, to insure investigations produce evidence
admissible in court.

The City of Dallas current program for field screening is
to continue the dry weather screening process performed
during Part 1 of Permit Application. Screen all outfalls
during permit term or at least 500 outfalls per year.
Screen outfalls for color, odor, turbidity, presence of oil
or scum, pH, total chlorine, total copper, total phenol, and
detergents on any flow observed. Implement in year one as
an ongoing program. Illicit discharges are then handled as
described in Program 4.9, Illicit Discharge Detection and
Elimination Program.

Implementation Plan

- Task 1** Document training procedures, calibration of
instrumentation, sample collection procedures, and
investigative methodology for each investigation performed.
(Years 1-5)
- Task 2** Modify City Ordinance No. 21108 (re: substances prohibited
in storm drainage system) to establish the adequate legal
authority to control non-storm water discharges as mandated
by U.S. EPA.
(Year 1)
- Task 3** Characterize discharges by SIC Codes (via GIS) to provide
identity of possible sources.
(Years 1-5)
- Task 4** Train personnel in field sampling, first aid, CPR, hazardous
waste, confined entry, and material safety data.
(Years 1-5)

- Task 5** Establish reporting file system for developing forms, tracking investigations and coordination of crews.
(Years 1-5)
- Task 6** Compile annual assessment reports.
(Years 1-5)
- Task 7** Develop a priority system for investigation of non-storm water discharges.
(Years 1-5)
- Task 8** Develop a written safety policy and procedure manual for the storm water program.
(Year 1)
- Task 9** Establish a confined entry program.
(Year 1)
- Task 10** Analyze selected samples at the Central Laboratories or other qualified laboratory.
(Years 1-5)
- Task 11** Acquire ownership of all confined space entry equipment and supplies. The Storm Water Utility must also obtain other equipment such as vehicles, expendables, communication equipment and fuel.
(Year 1-5)

4.12 SPILL CONTROL PROCEDURES

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)(B)(4)]

(4) A description of procedures to prevent, contain and respond to spills that may discharge into the municipal separate storm sewer;

Program Summary

This program addresses the development of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer system. Four tasks are proposed for implementation over the five-year life of the initial NPDES permit.

The establishment of a Spill Response Subcommittee of the Interagency Storm Water Task Force for oversight of the spill response program is recommended. This subcommittee would meet on a regular basis, monthly at first and then less frequently as action items are completed, to address the specifics of the spill control program. Some of the items which would be evaluated include staffing requirements, the need for reinstatement of a second Fire Department HazMat team, formalization of interagency activation and coordination, implementation of a fine/penalty system to recover administrative costs for the program and formalization of standard procedures such as identifying responsible parties, washdown of spills, and instituting long-term monitoring after spills. Additional topics requiring action might become apparent during the course of the meetings. If not, the Spill Response subcommittee could be disbanded when its usefulness was served.

Another task which would improve the current spill response program is the incorporation of information gathered from

Industrial Spill Response plans prepared under the Industrial Inspection and Control Program into the database of users of significant quantities of hazardous materials. Updating and cross-referencing the Fire Department and Office of Emergency Preparedness databases would provide better information during a spill response and a faster, more accurate response.

Development of a small business spill containment education program will also provide additional information for the Fire Department and Office of Emergency Preparedness databases. The intent of this program is to identify and educate businesses that use or store quantities of hazardous materials below the threshold reporting quantities established by the existing Fire Department notification and the proposed Industrial Inspection and Control programs. The education component focuses on the proper use and storage of hazardous materials to prevent endangerment to water resources from spills. The Fire Department's threshold quantity is established by the Texas Community Right-to-Know program.

An additional recommendation is the identification of Rapid Response Areas for spill response. The Rapid Response Areas would be defined as locations where a spill of hazardous materials has a very short travel time to impact a City water resource or a water supply watershed. Once identified, these areas may require special containment procedures or establishment of special spill response procedures. Special containment procedures would be developed as part of the Small Business spill containment education program recommended above and the Industrial Inspection and Control program.

Implementation of a HHW program to encourage proper disposal of these materials would improve the spill response program by limiting the potential for spills of these materials. While small quantities of these materials are not likely sources of impacts to receiving waters, continual dumping or certain concentrations could cause acute problems. The HHW program is discussed in another section of the permit application.

The City currently has two programs to respond to spills - one for large hazardous spills and a second for small spills and abandoned substances. For large spills, the Fire Department

responds and determines the nature of the spill. If it is hazardous, Fire Department HazMat team and truck are dispatched to the scene. They handle command of the incident, containment, and absorbing of spilled material, and public safety. Once the incident is determined safe and under control, a contract clean up firm is called to handle site cleanup and disposal of hazardous material. If the incident is on private property or company causing spill on public property is known, the owner is charged with site clean up. On small spills or abandoned substances, the environmental inspection staff of the Water Department, responds, absorbs material, controls site or substance and calls contract clean up firm to pick up and dispose of material. The following implementation plan addresses ways we plan to supplement and reinforce our current program.

Implementation Plan

This section provides specific information on the tasks required to implement the management program for spill control.

Task 1 Organize Spill Response Subcommittee of the Interagency Storm Water Task Force for review and evaluation of ongoing spill response program.

Subcommittee members will consist of:

1. Fire Department HazMat Coordinator
2. Department of HAS, Environmental Health Division representative
3. Department of Streets and Sanitation, Operations representative
4. Department of Streets and Sanitation, Office of Emergency Preparedness representative
5. Police Department representative
6. DWU, Storm Water Utility or Customer Service representative
7. DWU Purification Division Representative (for watershed management concerns)

Some of the subtasks below will be evaluated on a one-time basis and some will require annual evaluation. It is assumed that, once formed, the subcommittee will remain in effect, although in later years the meetings may become less

frequent.

Subtask 1 Compile information on existing program. Collect data on the number and character of incidents, response time, problems encountered in coordination between various agencies during responses, ability of response team to identify the responsible party for reimbursement of cleanup costs to City, and any other data sets deemed pertinent by the subcommittee. Compilation of data on the program may continue through the life of the program as deemed necessary by the Subcommittee.

Subtask 2 Evaluate staffing requirements. Current budgeting allows for staffing of eleven Fire Department HazMat team personnel per shift (one Captain, one Lieutenant and nine staff). Due to various personal leaves (such as sick time, vacation, training, etc.) staffing is usually below this number. This can create difficult or even dangerous situations since a minimum of ten personnel is required for certain entry activities. The Spill Response Subcommittee will evaluate not only the Fire Department's, but also other response departments' staffing. This subtask will be evaluated annually.

Subtask 3 Evaluate reinstatement of second HazMat team. From compiled data, determine if an additional Fire Department HazMat team should be reinstated at Station #20. Location of rapid response areas, the potential for simultaneous, multiple or large incidents with a lack of adequately trained personnel, the ability of Station #4 to respond in a timely manner and sources of funding for the additional team should be considered in this subtask. This subtask will be evaluated annually.

Subtask 4 Evaluate and formalize procedures for calling coordinating response agencies to a spill

response incident. During discussions with various City departments who would be represented on the proposed Spill Response Subcommittee, it became apparent that the communications network for coordinating response departments (other than the Fire Department HazMat response team) is fairly informal and could lead to occasions where a department was not called to respond in time to prevent endangerment of a water resource. The Subcommittee will evaluate and establish formal procedures for assuring all necessary agencies are called.

Subtask 5 Evaluate and formalize procedures for interagency coordination. The Subcommittee will consider establishing bi-monthly or post-incident roundtable discussions between representatives from each responding agency to air grievances, discuss alternatives, etc. A primary communications channel for onsite communications will be established, such as using Fire Department Channel Five which is non-repeating. The Subcommittee will also establish a time frame and funding source for purchasing enough handheld radios (and rechargeable battery packs) to ensure that each Fire Department HazMat team member and each coordinating agency onsite has a radio.

Subtask 6 Evaluate and formalize onsite standard operating procedures with all agency departmental representatives. Of particular concern is establishing procedures which protect water resources. Revisions to the City of Dallas Code will be implemented as described in the New Development and Redevelopment Management Program to govern discharges to the storm sewer system and water courses. For instance, washing hazardous materials which have been spilled down the storm drain would not be allowed unless the material had been neutralized or otherwise rendered harmless to the environment.

Subtask 7 Evaluate the establishment of a long-term monitoring program following spills of hazardous materials. Of concern here would be not only spills that directly impact water resources, but also spills of materials on soils located near a water resource where the residual materials might leach into the water following precipitation events or flooding. The current monitoring program conducted by Health and Human Services should be evaluated and broadened as deemed necessary by the Subcommittee. A long-term monitoring program would most likely become a task of the field-screening crew in locales following spills of hazardous materials.

Subtask 8 Evaluate and formalize procedures for identifying responsible party and for obtaining reimbursement for cleanup costs from responsible party. The Subcommittee will establish formal guidelines for assuring information on the identity of the responsible party is obtained so that remediation costs can be recovered. The Subcommittee will meet with the City Attorney's office to discuss legal alternatives.

Subtask 9 Evaluate implementation of a fine/penalty system for spills of hazardous materials. The Subcommittee will also meet with the City Attorney's office to discuss establishing a fine/penalty system for recovering some of the administrative costs associated with the spill response program. This would be in addition to, not instead of, recovering response and cleanup costs from responsible parties.

(Years 2-5)

Task 2 Incorporate Industrial Spill Response Plans into existing Emergency Response databases. Review the incoming Industrial Spill Response Plans and determine what information would be useful for updating and cross-

referencing the existing spill response databases maintained by the Fire Department and the Office of Emergency Preparedness. Perform the actual data entry.
(Years 2-5)

Task 3 Develop Small Business spill containment education program. Address businesses that store quantities of hazardous materials that are below the minimum quantities set by the Fire Department notification and Industrial Inspection and Control programs. Storm Water Utility personnel will be responsible for overseeing development and implementation of the program.

Subtask 1 Develop Small Business spill containment education program. Using the existing Fire Department guidelines and the proposed Industrial Inspection and Control program, an inspector from the Fire Department and an inspector from Industrial Waste Control program or Storm Water Utility personnel will develop the Small Business spill containment education program. The program will focus on identifying and educating businesses that store small quantities of hazardous materials.
(Year 3)

Subtask 2 Implement Small Business spill containment education program. Using the guidelines developed in Subtask 1, Storm Water Utility personnel will determine the best method for contacting identified small businesses, such as through group mail-outs, individual facility visits, or group seminars. The program will be implemented based on this decision.
(Years 3-5)

Task 4 Define Rapid Response Areas for spill incidents. Using the GIS developed for the City of Dallas, Dallas Storm Water Utilities personnel will define those areas where travel time for hazardous materials spills to impact City water.

resources is short. DWU personnel would develop the final criteria for defining the extent of the rapid response areas. Some of the GIS databases that could be used for defining the location of the rapid response areas include the intersection of surface water bodies with known industrial users of hazardous materials (from the inventory of industrial sites) or hazardous cargo routes, drainage slopes or soil types, among others. In analyzing the proximity of hazardous cargo routes to surface water bodies, particular attention should be directed to interchanges where merging traffic patterns and increased traffic can increase the potential for an accident and subsequent spillage of hazardous materials. The information generated in defining the rapid response areas will also be useful to the Spill Response subcommittee when determining if an additional HazMat team should be re-instated.

(Year 2)

TASK SCHEDULE Spill Control Procedures

Task	Name	Year 1		Year 2			Year 3			Year 4			Year 5			Total Cost
		Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	Organize Spill Response Task Force															
2	Incorporate Information From SRTF															
3	Small Business Spill Program															
4	Define Rapid Response Area															
COST PER YEAR																\$ 49,000
																\$ 56,000
																\$ 83,300
																\$ 48,500
																\$ 48,500
																\$ 285,500

Figure 13

4.13 USED OIL PROGRAM

Regulatory Requirement [40 CFR 122.26 (d) (2) (iv) (B) (6)]

(6) A description of educational activities, public information activities and other appropriate activities to facilitate the proper management and disposal of used oil...

Program Summary

This section of the Proposed Management Plan addresses a program to manage used oil. The U.S. EPA has identified the improper disposal of used oil as being a pollution problem of nationwide importance. In the past, some cities have exacerbated the problem by passing ordinances precluding the disposal of used oil to the sanitary sewers and have even prescribed that used oil be disposed of in the storm sewers by homeowners doing their own automotive maintenance. Although it is known that the larger wastewater treatment plants are able to successfully treat a relatively high volume of oil and grease arriving at the plant intakes, such practices promote poor regard for the environment, and actual harm to it, as well as waste of valuable resources. Only a small quantity of oil in the waters of the United States can create unsightly conditions. It is widely reported that one quart of oil can create an oil slick covering a pond of an acre or more in size. Oil slicks are positive signs of the discharge of pollutants into the waters of the United States irrespective of the volume of the pollutants discharged. Likewise, improper disposal of oil on the ground can also cause pollution of the groundwater. The TNRCC estimates that "do-it-yourself" oil changers in Texas dump 17 million gallons of used motor oil on the ground or down storm drains each year. This program for used oil management will help to eliminate used oil entering the storm sewer system (creating problems with the waters of the United States) and to relieve the wastewater treatment facilities

from the possibility of operational problems from the receipt of unnecessary or excessive oil and grease.

This program will focus on public awareness of the problem among private citizens and the commercial/industrial/governmental community. The program will focus on disseminating of information on environmentally correct means and methods for disposal of used oil and will provide current inventories of receptors of used oil and the likely methods of ultimate disposal of used oil. Programs both by the City of Dallas and private businesses are in place in and around the City for the proper disposal of oil. This document summarizes programs in place and describes program elements required to enhance these programs and preserve them into the future.

This management program will emphasize general public disposal methods of used oil. Commercial, industrial, and municipal users will also be targeted by the program. Specific program elements of the used oil program will include:

1. Identifying methods for the proper disposal and management programs for used oil.
2. Identifying public and industrial sectors to be targeted by future programs.
3. Developing and compiling a plan for educational materials/activities to be implemented during the initial five year permit period.

The third element will be part of the overall "public information program" presented elsewhere.

This used oil management program builds upon, and enhances, existing programs in the City of Dallas. The focus of this management program is to eliminate, or at least to greatly reduce, improper disposal of used oil to the storm and sanitary sewer systems and to groundwater. A secondary goal is to recycle the used oil as a resource.

The City of Dallas, Department of Street and Sanitation Services, through its Division of Sanitation Operations, is in charge of the City's oil recycling operations. The Department of General Services of the City also is active in collecting and recycling used oil from vehicle maintenance and similar operations. The Health and Human Services Department tracks shipments of used

oil. The Department of Aviation also has programs in place similar to those of General Services. As an industrial enterprise of the City, the airports, under the direction of the Department of Aviation, have entered into a application for a general NPDES storm water permit for airport operations. Love Field and the Redbird Airport are the City of Dallas airports included with that application.

Through the Department of Street and Sanitation Services, Division of Sanitation Operations, the City of Dallas participates in the TNRCC's "Clean Texas 2000" programs, along with other area jurisdictions. Used oil recycling is one of the programs being promoted statewide through this vehicle. Further, the Division of Sanitation Operations maintains contact with the Corporate Recycling Council of Dallas, which is a voluntary amalgamation of corporations that sponsor recycling efforts on their premises and among their employees. These programs include used oil recycling among other recyclables.

Finally, several commercial entities, operating within the City of Dallas, are active receptors of used oil from the public.

Implementation Plan

Implementation is presented in terms of actions grouped for the general public, for departments of the City of Dallas, and for industrial facilities within the City of Dallas.

Task 1 Identify and promote used oil receptors. The following activities will be implemented by the Street and Sanitation Services Department, with the recycling program staff taking the lead.

Subtask 1 Continue development of updated brochures and bill inserts concerning receptors of used oil and problems with improper disposal. Continue to develop and maintain files of instructional and motivational material from available sources to assist in the development of suitable bill inserts, brochures and posters. Coordinate with

DWU Public Relations staff, as appropriate, for dissemination of such material in a timely manner. Submit brochures to public through bill inserts within 18 months of permit issuance giving specifications of private receptors of used oil.

Subtask 2 Develop and maintain a GIS database of used oil receptors for use in producing maps and updating information for mapping and poster and literature production purposes.

Subtask 3 Participate with Dallas County's Regional Household Hazardous Waste Program (see Toxics Materials Program) for disposal of contaminated used oil and other motor vehicle fluids.

Subtask 4 Review receptor location posters and literature availability. Produce and provide receptors with information on disposal of "contaminated" used oil, when available. Make available or direct receptors to suitable material for dissemination to the public concerning used oil disposal.

Subtask 5 Provide information to, and coordinate with, other City inspectors concerning used oil receptors and other entities storing used oil.

Task 2 Review and inspect City of Dallas facilities. The following activities will be implemented by the General Services Department staff.

Subtask 1 Perform annual site review and maintenance to minimize the possibility of storm water contact with General Services fueling or vehicle maintenance operations.

Subtask 2 Examine Street and Sanitation Services facilities, in conjunction with Street and Sanitation Services staff, for storage and

handling of used oil, grease, and related materials. General Services and Street and Sanitation Services staff will coordinate to assure that such materials are handled and disposed of correctly, and that storm water does not come in contact with these materials or containers.

Task 3 Inspect industrial sites. The following activity will be conducted by industrial site inspection and monitoring staff under the direction of the Storm Water Utility. Other City inspectors may also be involved, as appropriate. Review SWPPPs of industries as they relate to handling and disposition of used oil, grease, solvents, and other related material.

Full implementation of the industrial inspection and monitoring procedures must await granting of permits to the industries by U.S. EPA or the TNRCC. Inspectors should be available to assist industries in questions concerning siting of used oil containers, and the like, as inspectors become available.

4.14 TOXIC MATERIALS PROGRAM

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)(B)(6)]

(6) A description of educational activities, public information activities and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials;

Program Summary

To reduce the inflow of toxic products into local environments, local government efforts to manage household hazardous wastes (HHWs) tend to focus on (1) educating citizens about the nature of hazardous wastes and the potential danger to the environment, property and themselves and (2) collecting and disposing of HHW in an efficient and proper manner that minimizes the impact on the local watersheds and local environment.

The City of Dallas Toxic Materials Program is designed around a regional Household Hazardous Waste Program being developed by Dallas County and the Coalition for the Earth's Environment of Dallas (CEED). The components of the proposed regional program in which Dallas is participating include: preparation of a plan to organize and implement a county-wide program for the collection, transportation, and disposal of household hazardous wastes, increased educational and informational efforts pertaining to HHW issues including proper use and storage, and promotion of alternative less toxic materials. This program includes promotion of industrial materials exchange programs for commercial and industrial hazardous waste generators. The program will involve a plan to recommend the best options for the management of HHW and to facilitate development of a county-wide HHW management plan. Federal and State grant funds will assist the City in funding this very important program.

Implementation of this task calls for :

- study to provide county service area demographic information;
- analysis and recommendations on alternative collection methods, frequency, and hours for specified areas;
- recommendation on collection sites;
- types of chemicals to collect and reject;
- limitations on quantities and participation eligibility;
- waste diversion plans for materials to be recycled;
- functions to be performed by personnel and volunteers;
- list of recommended collection/disposal contractors;
- define contractor responsibilities;
- identify support functions needed;
- comparison of safety of disposal methods;
- financial assurance requirements, sources, and costs;
- recommendation of funding sources;
- recommendation for media coverage;
- draft of a survey to be distributed on site;
- estimated volume of materials to be collected;
- cost analysis and estimate for collection, disposal, and support services; and
- provide opinion on benefit to the environment of diverting HHW from municipal solid waste stream.

Preparation of this county plan was completed, through CEED, with funding being provided by an EPA grant. The county received a grant from Texas Natural Resource Conservation Commission (TNRCC) to conduct a pilot HHW collection day. The grant funded the planning, packaging, transporting, and public education for this collection day with the participating cities, which includes Dallas, funding their respective share of disposal costs. Based on results of this study and the HHW collection day, permanent collection and disposal plans will be considered for development in Dallas and Dallas County. The first two collection dates were held on November 5 and November 12, 1994. These collection days collected typical household hazardous wastes as paints, pesticides, herbicides, cleaning household chemicals, and used vehicle fluids. Three more collection days are scheduled for March 5, April 8, and April 29, 1995.

A countywide, regional effort provides for a broader range of public participation that is cost efficient by sharing costs with other municipalities within the county. It also brings participation by more municipalities than just those currently required under EPA's Storm

Water Permit process. This approach makes much more sense to Dallas than going it alone and it has the potential to be more beneficial to our storm water system due to the larger base of participation.

Existing educational programs concerning HHW issues are supported by the TRNCC, NCTCOG, CEED, Texas Department of Agriculture (TDA), and Texas Agriculture Extension Service (TAEX). These existing educational programs provide guidance on alternatives, waste minimization, proper disposal and storage of HHW. Safe disposal options such as small quantity disposal of dried latex paint at landfills and commercial collection options of used oil and used batteries will be implemented. Additionally the NCTCOG has been selected by U.S. EPA and the TNRCC to undertake a comprehensive HHW public education outreach program in which the City will be participating.

The organization CEED and affiliated HHW Task Force of Dallas County have produced an educational brochure on household hazardous alternative materials and disposal guidelines. Utilization of such existing educational information will be increased.

The City will promote an industrial waste exchange program for commercial and industrial businesses. The City will work with the TNRCC which currently sponsors a materials exchange program entitled "RENEW." The push of our program will be to educate the public of the dangers of HHW and to identify their less toxic alternatives. We will also stress proper usage of pesticides, herbicides, cleaners, and other household chemicals. The goal is to drastically reduce the quantity of HHW that will need a means of disposal. Our program will also educate the public on proper and improper disposal methods. It will urge public to store their HHW's until disposal day(s) is held. Thus our program will be effective year around.

Implementation Plan

Task 1 Participate in regional, county-wide plan to study, organize, and implement a program for the collection, transportation, and disposal of HHW. Participate in proposed county-wide pilot HHW collection and disposal days. These collection days were planned to occur during the first year of this permit and were to collect the normal HHW's as well as used motor vehicle fluids. Since the permit issuance was delayed, the City and the County went forward and implemented this program prior to permit issuance.

Task 2 Review study results and experience gained from pilot HHW collection day and develop with county a plan for permanent collection and disposal of HHW. The current proposal is to establish a permanent site in the county for HHW collection with a mobile collection unit to serve remote locations, making 24 stops (See attached letter from Dallas County).

Task 3 Initiate public informational campaign.

Subtask 1 Promote existing educational programs (as materials are available) concerning HHW issues supported by the TNRCC, NCTCOG, CEED, TDA and TAEX. Provide guidance on use alternatives, waste minimization, proper disposal and storage. Promote safe disposal options such as small quantity disposal of dried latex paint at landfills and commercial collection options of used oil (Exxon, Chief) and used batteries (Sears, K-Mart, Wal-Mart, etc.), and the current City collection program.

Promote NCTCOG HHW Public Educational Outreach Program to undertake a comprehensive HHW public education outreach program pursuant to Section 319 of the Clean Water Act.

As a result of educational programs, the goal is to reduce amount of HHW available for disposal. That is available will be encouraged to be stored until collection day or days arrive. This will provide a year around program for our citizens.

Subtask 2 Promote an industrial waste exchange program for commercial and industrial businesses with the assistance of the TWC which currently sponsors an exchange program entitled "RENEW."

Subtask 3 Promote existing educational information by the CBED and affiliated HHW Task Force of Dallas County on household hazardous alternative materials and disposal guidelines.



Dallas Area Household Hazardous Waste Network
Shirin C. Yousuff, Manager

February 20, 1995

Larry McDaniel
The City of Dallas
Public Works and Transportation

Dear Mr. McDaniel,

As per your request, here is some information on what the County hopes the program will continue. Please keep in mind that this program can only continue if there is a significant financial support from the cities.

Current program:

Dallas County has received a grant from the TNRCC to cover the administrative costs for a one year program. This program involves five one-day collection events for residents of participating cities. Thus far, 11 of the 26 Dallas County cities, representing approximately 75% of the population of the county, have signed interlocal agreements to participate. To date 2 of 5 events have been held servicing 1300 residents. Three more events are planned for the spring: March 25 (Richardson), April 8 (Irving), and April 29* (South Dallas) *tentative. Residents may bring a variety of HHWs, including automotive products, cleaners, pesticides, herbicides, paints, tires, auto batteries, antifreeze, and craft/hobby supplies. All wastes are handling by local recyclers or a licensed disposal contractor who signs the manifest as generator. The current contract with TNRCC for this grant ends at the end of June, 1995.

Plans for future program:

a) Option A: Permanent Program

Much interest has been expressed by the participating cities, Texas Dept. of Transportation, and residents in establishing a permanent HHW drop off site. While it is uncertain whether the County will be able to continue to provide this service beyond the current grant year, efforts are being made to pursue funding through grants. A proposal was recently submitted to the US EPA to request funds to establish a HHW Drop Off Center and Mobile Collection Unit. The Drop-Off site would be open one day a week, with extended hours. Residents from participating cities could drop off their wastes while the center is open. A mobile collection unit would

be used to service remote areas, making 24 stops in different locations to collection HHWs, and would transport these wastes back to the drop off center for proper packaging, storage, recycling. The grant requested funds for salaries, equipment and supplies, and a community education program. Funds were requested for a two year period. Cities would again be asked to sign interlocal agreements to participate in the program. The estimated cost/household (for disposal and transportation) is estimated to be \$67.00. The drop off center would be serviced by a licensed disposal contractor at least once a month.

b) Option B: One Day Collection Events

Another option would be to continue the program as it is currently being conducted. One day collection events would be held as before, serving the different participating jurisdictions of the county. Cities would again be required to pay for their residents waste disposal (and transportation) costs, but funding options for salary, set-up costs, other administrative costs have not been explored yet.

I hope this information is helpful in completing your MS4 permit requirements.

Sincerely,

Shirin Ypusoff,
HHW Manager

4.15 WASTEWATER INFILTRATION CONTROL PROGRAM

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)(B)(7)]

(7) A description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary;

Program Summary

Part 2 of the NPDES application process requires the applicant to describe the programs and/or controls which are currently implemented and that will be implemented to limit infiltration from municipal sanitary sewers to municipal separate storm sewers.

This section provides only a brief summary of wastewater master plan elements that will provide wastewater infiltration control during the five-year permit term. The City of Dallas I/I Wastewater Plan (currently underway with completion date of November, 1993) will serve as the detailed written document in support of this program. The previous Wastewater Master Plan will also be used to support this program.

Implementation Plan

The City of Dallas has several existing programs that contribute to the elimination of wastewater infiltration into the storm sewers. Those programs are as follows:

- Annual Maintenance
- Replacement in Advance of Paving Projects
- Environmental Data Acquisition System (EDAT)
- I/I Reduction Studies and Rehabilitation Plans

Post-Rehabilitation Flow Monitoring
Sanitary Sewer Internal Inspection
Cleaning of Sanitary Sewers
Rehabilitation Construction of Sanitary Sewers
Storm Water Sampling
Capital Improvements
Development Design
Construction Inspection
Private Sewer Construction
Emergency Response

The Wastewater Master Plan update is expected to review each of these on-going programs and to make recommendations for improvement of addition to existing efforts to eliminate wastewater infiltration.

The schedule of additional programs and modification to existing programs will be delineated in the Wastewater Master Plan update, scheduled to be completed in December, 1993.

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 6

IN THE MATTER OF § DOCKET NO. VI-93-1264
§
THE CITY OF DALLAS §
§
PROCEEDINGS UNDER SECTION 309(a)(3), §
CLEAN WATER ACT, §
[33 U.S.C. § 1319(a)(3)], § ADMINISTRATIVE ORDER
In RE: NPDES PERMIT NO. TX0047830 §

The following FINDINGS are made and Order issued pursuant to the authority vested in the Administrator of the Environmental Protection Agency (EPA) by the above referenced statute (hereinafter the Act) and duly delegated to the Regional Administrator, Region 6, and duly redelegated to the undersigned Director, Water Management Division, Region 6.

I.

The city of Dallas (hereinafter the Permittee) is a municipality in the State of Texas and located in Dallas County, the mailing address for which is 1500 Marilla, City Hall 4A-North, Dallas, Texas 75201.

II.

Pursuant to the authority of Section 402(a)(1) of the Act, 33 U.S.C. § 1342, Region 6 issued National Pollutant Discharge Elimination System (NPDES) Permit No. TX0047830 to the Permittee on September 30, 1988, with an effective date of November 15, 1988. The permit authorizes the discharge of

RECEIVED AUG 13 1993



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

JUL 22 1993

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (P 399 614 643)

Mr. Roger Proza, Assistant Director
Dallas Water Utilities
1500 Marilla, City Hall 4A-North
Dallas, Texas 75201

Re: Administrative Order Docket No. VI-93-1264
NPDES Permit No. TX0047830

Dear Mr. Proza:

Violation of an NPDES permit requires the Environmental Protection Agency (EPA) to take appropriate enforcement action to assure compliance. Pursuant to the Clean Water Act (33 U.S.C. § 1251 et seq.), the enclosed Administrative Order is hereby served on you and the city of Dallas for the violations described therein. This Order replaces Administrative Orders Docket Nos. VI-93-1268 and VI-93-0084, which are hereby closed.

Compliance with the provisions of this Order is expected within the maximum time periods established by each part of the Order. Your cooperation and prompt attention will be appreciated. In response hereto, please reference Docket No. VI-93-1264 and your NPDES permit number, and send correspondence to the attention of Ms. Terry D. Lane (6W-EAT). The violations cited in the referenced Order could result in the issuance of an EPA administrative penalty order or referral to the United States Department of Justice for judicial action with monetary fines.

It is the policy of EPA to achieve full compliance with the NPDES permit program as rapidly as possible. This office is prepared to help you in any way it can. If you have any questions, please contact Ms. Cecilia Kernodle, EPA, Dallas, Texas at (214) 655-6452.

Sincerely yours, . . .

Myron O. Knudson, P.E.
Director
Water Management Division (6W)

Enclosure

cc: SEE NEXT PAGE

cc: Mr. Rick Ruddell
Section Chief, Enforcement
Watershed Management Division
Texas Water Commission

specified qualities and quantities of effluent to receiving waters named Trinity River in Segment No. 805 of the Trinity River Basin. The permit also requires the submission of Discharge Monitoring Reports (DMRs) and Noncompliance Reports.

III.

Part III.B.4. of the permit prohibits bypassing, the diversion of wastes or wastewaters from any portion of the treatment facilities unless all the following conditions are met:

1. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;
2. There are no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the Permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance.

Part III.B.3. of the permit requires the Permittee to at all times properly operate and maintain facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit.

IV.

FINDINGS OF FACT

Administrative Order Docket No. VI-92-1268 was issued to the Permittee on March 19, 1992, citing bypasses which had occurred

throughout the city. The Order also incorporated schedules for collection system studies and rehabilitation work in several basins throughout the city and required the Permittee to eliminate all overflows and bypasses by September 1, 1999. Inflows/Infiltration (I/I) Studies for the Cedar Creek and Coombs Creek Drainage Basins were to be completed by September 30, 1992. Schedules for the necessary design and construction in these basins were incorporated in Administrative Order Docket No. VI-93-0084. The Permittee has completed the I/I study for Kidd Springs Basin and has submitted a schedule for the design and construction in this basin. This schedule will be incorporated in this Order.

In addition, the Permittee has indicated some changes in the construction schedule for the West Bank Interceptor. The start construction date for Phase I will be delayed, but construction on Phase II will begin sooner. The changes in the schedule will not affect the date for the completion of rehabilitation work in that area or the final compliance date of September 1999.

Administrative Orders Docket Nos. VI-92-1268 and VI-93-0083 will be closed and all the schedules and requirements of those Orders will be incorporated into this Order.

V.

FINDINGS OF VIOLATION

Based on information provided by EPA and the Permittee, the Regional Administrator, through the Director of the Water Management Division, finds that the Permittee has violated Parts III.B.4. and III.B.3. of the permit.

Parts III.B.4. and III.B.3. of the permit has been violated in that the Permittee has experienced several instances of bypasses and overflows throughout the city.

VI.

Issuance of this Order does not preclude the pursuit of additional enforcement action including additional administrative penalty orders, and/or civil or criminal judicial actions for the violations cited herein. If an EPA administrative penalty order is issued or a judicial action is initiated by the U.S. Department of Justice, you will be subject to a monetary fine.

ORDER.

Based on the foregoing FINDINGS OF VIOLATION and pursuant to the authority vested in the Administrator under Section 309(a)(3) of the Act, 33 U.S.C. § 1319(a)(3), and duly delegated to the Regional Administrator, Region 6, and duly redelegated to the undersigned Director, Water Management Division, Region 6, it is ordered:

A. That the Permittee shall comply with the following schedules:

<u>ACTIVITY</u>	<u>DATE</u>
1. Coombs Creek	
a. Complete In-House Repairs	December 31, 1993
b. Complete Design for Rehabilitation	Completed
c. Start Construction of Rehabilitation Projects	December 31, 1993.
d. Complete Construction of Rehabilitation Projects	December 31, 1994
e. Complete Design for Phase I Replacements	April 30, 1994
f. Start Construction of Phase I Replacements	October 31, 1994
g. Complete Construction of Phase I Replacements	April 30, 1996
h. Complete Design for Phase II Replacements	April 30, 1995
i. Start Construction of Phase II Replacements	October 30 1995
j. Complete Construction of Phase II Replacements	April 30, 1997
2. Cedar Creek	
a. Complete In-House Repairs	December 31, 1994
b. Complete Design for Phase I Replacements	October 31, 1995
c. Start Construction of Phase I Replacements	April 30, 1996
d. Complete Construction of Phase I Replacements	October 30, 1997
e. Complete Design for Phase II Replacements	April 30, 1996
f. Start Construction of Phase II Replacements	October 30, 1996
g. Complete Construction of Phase II Replacements	October 30, 1997
h. Complete Design for Phase III Replacements	April 30, 1997
i. Start Construction of Phase III Replacements	October 30, 1997
j. Complete Construction of Phase III Replacements	April 30, 1999

<u>ACTIVITY (Continued)</u>	<u>DATE</u>
3. Kidd Springs	
a. Start In-House Repairs	January 1, 1995 ✓
b. Complete In-House Repairs	June 30, 1995 ✓
c. Complete Design of Replacement	July 31, 1996 ✓
d. Start Construction of Replacement	November 30, 1996 ✓
e. Complete Construction of Replacement	June 30, 1998 ✓
4. East Bank Interceptor	
a. Start Construction on Phase I	June 30, 1994
b. Complete Construction on Phase I	June 30, 1996
c. Start Construction on Phase II	June 30, 1997
d. Complete Construction on Phase II	June 30, 1999
5. Elmwood Branch Drainage Basin	
a. Complete all Rehabilitation and Replacement	April 30, 1994
6. Five Mile Creek Drainage Basin	
a. Start Inflow Infiltration Study upper half of drainage basin	Completed
b. Complete this study	April 30, 1994
c. Start Inflow/Infiltration Study for lower half of drainage basin	April 31, 1995
d. Complete this study	December 31, 1996
7. Knights Branch Drainage Basin	
a. Complete In-House Repairs	Completed
b. Start Phase I Line Replacement	Completed
c. Complete Phase I Line Replacement	April 30, 1994
d. Start Phase II Line Replacement	July 31, 1993
e. Complete Phase II Line Replacement	October 31, 1994
8. West Bank Interceptor	
a. Start Construction of Phase IV Relief Interceptor	Completed
b. Start Construction of Phase I Interceptor	April 30, 1996
c. Start Construction of Phase II Relief Interceptor	December 31, 1994

<u>ACTIVITY (Continued)</u>	<u>DATE</u>
d. Start Construction of Phase III Relief Interceptor	April 30, 1998
e. Complete all rehabilitation on the existing West Bank Interceptor	August 31, 1999
9. White Rock Creek Relief Interceptor	
a. Start Construction on Phase I	January 31, 1994
b. Complete Construction on Phase I	June 31, 1996
c. Start Construction on Phase II	April 30, 1994
d. Complete Construction on Phase II	June 30, 1996
e. Start Construction on Phase III	April 30, 1995
f. Complete Construction on Phase III and eliminate all overflows and bypasses in the Basin	June 30, 1997

B. That the Permittee submit quarterly progress reports on the 15th of each month following a calendar quarter with the first report being due April 15, 1993.

C. That the Permittee, within thirty (30) days of completion of the I/I study for Five Mile Creek, submit a schedule for the necessary design and construction activities.

D. That the Permittee eliminate all bypasses and overflows of the collection system by September 1, 1999.

The effective date of this Order shall be the date it is received
by the Permittee.

DATED: This JUL 22 1993 day of _____, 1993.

~~Myron O. Knudson, P.E.~~
Director
Water Management Division (6W)

4.16 INDUSTRIAL INSPECTION AND CONTROL PROGRAM

Regulatory Requirement [40 CFR 122.26 (d)(2)(iv)(C)(1)]

(C) A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system. The program shall:

(1) Identify priorities and procedures for inspections and establishing and implementing control measures for such discharges;

Program Summary

This program addresses the Industrial Inspection and Control Program which identifies priorities and procedures for inspections and establishes and implements control measures for industrial discharges to the municipal separate storm sewer system. Five tasks are proposed for implementation over the five-year life of the initial NPDES permit.

The first task proposed involves adding industrial inspectors to the Storm Water Utility staff. In addition to personnel, the databases maintained by the different departments currently performing industrial inspection will need to be coordinated and shared to provide timely information to the department requiring the information.

The next four tasks are partially funded by a U.S. EPA grant and

are interrelated. The first of these, industrial wet-weather sampling, involves the collection of independent data to evaluate existing correlations between industrial category and storm water discharge characteristics. The next task is correlation and analysis of the data developed in the wet-weather sampling program. Concurrently, a review of existing industrial best management practices (BMPs) will be conducted to determine which BMPs are effective in reducing pollutant loadings. Finally, industrial BMP guidelines and discharge limits will be developed based on data gathered in the other tasks. Various chapters of the Dallas City Code will be amended to reflect these discharge limits.

Currently, as part of the City's wastewater pretreatment program, an inspection staff annually visits industries in Dallas and inspects their operations. Their primary duties are to insure that the industries are not discharging materials or substances improperly to the wastewater system. However, as part of this inspection they insure that there are no cross or illicit connections between the storm sewer and wastewater systems. If they see a potential storm water quality problem with the industries activities, they report these activities for correction. Inspection and monitoring of municipal landfills is covered as part of Program 4.7, Landfills Program. The following implementation plan describes additions to this program.

Implementation Plan

This section provides specific information on the tasks required to implement the management program for Industrial Inspection and Control. A major portion of this program will be funded through a grant from the U.S. Environmental Protection Agency.

Task 1 **Expand Storm Water Utility industrial inspection program.** This task involves adding an industrial inspection program to the Storm Water Utility to include storm water quality activities.

Subtask 1 **Evaluate all City programs (Industrial Waste Control, Environmental Health, Fire Department) currently performing activities**

related to industrial inspection, control and monitoring. In the evaluation, consider coordination of resources and data bases to provide a smooth transfer of information between the various departments performing industrial inspection.

Subtask 2 Consider consolidating all industrial databases including Industrial Waste Controls' Roster of Significant Industrial Users, Environmental Health's list of facilities receiving a plant survey, Fire Department's industrial inspection list and the list of industrial sources identified for the Part II NPDES Storm Water Permit Application into one master database. The master database will be maintained on the GIS which has been developed as part of the NPDES Part II Storm Water Permit Application. Since the City has limited GIS resources, part of this task may be contracted to a consultant.

Subtask 3 Develop/revise industrial inspection forms to include storm water quality inspection items.

Subtask 4 Develop inspection forms and checklists for inspection of hazardous waste transfer and TSD facilities including review of RCRA spill control plans and inspection of structural BMPs.

Subtask 5 Develop a system for reviewing NPDES storm water discharge permits issued to industrial facilities in the City of Dallas. Industrial facilities are required to notify the owner of the municipal storm drain system used for discharge of storm water. A self-reporting form will be developed and sent to industries. Determine contact point for receipt of all

storm water related notifications. Amend appropriate chapters of the Dallas City Code to address industrial notification and submittal of permit information to the City and to levy fines for noncompliance with notification or submittal requirements.

Subtask 6 Develop a system for notifying the state and U.S. EPA, Region VI of noncompliant industrial facilities.

Subtask 7 Transfer personnel or hire two additional full-time inspectors and a clerk to handle work involved in expanding the Storm Water Utility program.
(Years 1-5)

Task 2 Initiate an industrial wet-weather sampling program to develop data for evaluating the correlation between industrial category and storm water discharge characteristics.

Subtask 1 Divide the list of major outfalls (primarily industrial facilities) prepared under the Source Identification program of the City of Dallas NPDES Part II storm water permit application by SIC classification. Make an analysis of this list to select five (5) representative industrial categories. Base the selection on which industrial categories are most representative of the Dallas industrial community and which industries would most significantly impact receiving waters (or which would have the most potential for improving water quality in receiving waters).

Subtask 2 Evaluate, once the five industrial categories have been selected, the industries within those categories for selection as a candidate wet-weather

sampling site. Contact the selected industries to request participation in the wet-weather sampling program. An incentive package may be developed to encourage voluntary industrial participation, such as assistance in addressing those problem areas, etc.

Subtask 3 Develop sampling plan for industrial wet-weather monitoring program. Samples from three to seven representative storm events from each of the five sites will be analyzed for general parameters including Oil & Grease, Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Total Kjeldahl Nitrogen, Nitrate plus Nitrite Nitrogen, Total Phosphorus and pH. In addition, each site may also have individual analytical parameters assigned which will provide representative data for the specific industrial activity. (For instance, storm water discharge from metal manufacturing industries would be analyzed for specific heavy metals, while discharges from chemical manufacturers would be analyzed for specific chemical compounds.) The total number of samples which will be analyzed will be determined after the total number of parameters to be analyzed has been finalized. The sampling plan will also detail the sampling frequency, types of samples to be collected (one grab and one flow-weighted composite), and quality assurance/quality control procedures.

Subtask 4 Prepare a brief report detailing the results of the sampling program.

The majority of this task will be funded through the U.S. EPA grant for industrial inspection and control. Work will be

contracted to a consultant.
(Years 1-3)

Task 3 Analyze the data collected during the industrial wet-weather sampling program and compare the quantitative results to the industrial classification in an effort to develop a relationship between the industrial category and a specific set of discharge characteristics. Compare data at the Storm Water Utility to sampling data provided by various industrial groups in response to U.S. EPA's group application requirements. Use statistical methods to assess proper representation of sampling events at each of the five industrial sites.
(Years 1-3)

Task 4 Review Best Management Practices (BMPs) currently being used by industries and their effectiveness to develop a database of effective BMPs.

Subtask 1 By inspection, document the use of BMPs at various industries. If the industry is conducting storm water discharge monitoring, review this data to provide input on the effectiveness of the BMP.

Subtask 2 Enter the information gathered during facility inspections in a database for future analysis of BMP effectiveness.

Subtask 3 At the conclusion of the first year of the storm water program, analyze the data and develop a brief report documenting effective BMPs. Include information on BMPs which were not deemed effective and the reasons for such classification. Use the information developed in this report in developing BMP recommendations for industrial categories and in documentation of the first year results.
(Years 1-2)

Task 5. Develop discharge limits and recommendations for BMPs for each of the five industrial categories identified in Task No. 2 above. After the Storm Water Utility develops the guidelines and discharge limits (based on data and new industries added), amend the Dallas City Code. Limits will need to be adjusted as other industries are added. Recommendations for BMP usage for other industrial categories may be addressed if information is available based on Tasks No. 3 and 4 above. As part of the deliverables associated with the U.S. EPA grant funding, careful documentation of this activity will produce guidelines which can be directly utilized by regulatory agencies on a state, regional and national level in the development of industrial general permits.
(Years 1,2,3)

4.17 MONITORING PROGRAM FOR INDUSTRIAL FACILITIES

Regulatory Requirement [40 CFR 122.26 (d) (2) (iv) (C) (2)]

(2) Describe a monitoring program for storm water discharges associated with the industrial facilities identified in paragraph (d) (2) (iv) (C) of this section, to be implemented during the term of the permit, including the submission of quantitative data on the following constituents: any pollutants limited in effluent guidelines subcategories, where applicable; any pollutants limited in effluent guidelines subcategories, where applicable; any pollutant listed in an existing NPDES permit for a facility; oil and grease, COD, pH, BOD₅, TSS, total phosphorus, total Kjeldahl nitrogen, nitrate plus nitrite nitrogen, and any information on discharges required under 40 CFR 122.21 (g) (7) (iii) and (iv).

Program Summary

This section of the Proposed Management Plan sets forth a monitoring program for industrial facilities to meet the requirements of the U.S. EPA National Pollution Discharge Elimination System (NPDES) storm water discharge regulations. This document provides specific guidance on monitoring industrial storm water discharges to detect illicit connections within the City of Dallas, and should be used in conjunction with a description of the overall program given in the section entitled "Industrial Inspection and Control Program".

The industrial inspection and control program is designed to supplement, but not supersede, U.S. EPA's program of NPDES permitting of industrial storm water discharges and other discharges subject to permit requirements. Several approaches are available to industries required to obtain storm water discharge permits and permits for other discharges. Industries could have submitted group applications, individual applications,

or, in some cases, submit a notice of intent (NOI) to be covered under a general permit. All the permitting approaches should ultimately converge to a specific set of requirements for each industrial facility. The time frame in which the specific set of requirements is ultimately developed may vary depending on the application approach. It is expected that the final permit terms may be adjusted over the course of the permit term in a similar manner to permit term adjustments for more traditional point source discharges. Therefore, a multi-tiered monitoring program is envisioned to reflect adjustments to permit requirements, while at the same time assisting in making sure that industries are in compliance with storm water discharge regulations and that illicit discharges can be detected and eliminated.

A basic requirement of industry is to certify that storm water does not come into contact with pollutants, and that no illicit discharges are made to the storm water drainage system. That means that controls are in place to assure that storm water does not come into contact with pollutants, and that any discharge that contains pollutants is accounted for and is properly permitted, with suitable treatment, or else is disposed of by means of discharge to a wastewater treatment system that is permitted.

Consequently, an industry may have four principal components for its permitting requirements, as follows:

1. It will have permits in place for all discharges that may contain pollutants.
2. It will develop and document a storm water pollution prevention plan to assure that potential pollutants are not exposed to storm water so that storm water can not be contaminated. (In permits issued, U.S. EPA will require this component as a central requirement. This requirement essentially will be the heart of most permits.)
3. It will monitor to assure that no illicit connections are made and that no illicit discharges can occur (or that, if by accident, such occur that there is a prompt and effective cleanup made so that there will be no storm water pollution after the accident).

4. It will maintain water quality sampling data from storm events for such storm water discharge points as its NPDES permit may require.

A typical permit requirement will be that records will be kept, on site or suitably available, to document compliance with permit terms.

The City's efforts will be directed to assist U.S. EPA in seeking industrial compliance with storm water discharge permit terms and in assuring that such permits are, in fact, obtained. It is recognized that since the U.S. EPA storm water discharge regulations are new, and the requirements are not well understood by all parties affected, that City monitoring efforts will be an interactive process in conjunction with the U.S. EPA, Region 6.

The City's primary monitoring and enforcement efforts will be conducted by the Storm Water Utility (DWU) staff. During the early phases of monitoring and enforcement efforts it may be desirable to coordinate these efforts with the Industrial Waste Control Division (IWC) of the DWU's Wastewater Operations Department. Inspectors from the IWC are already familiar with pretreatment requirements of significant industrial users of the City's wastewater collection system. The significant industrial users are likely candidates for the more stringent NPDES storm water discharge permits that U.S. EPA will ultimately issue. The IWC inspectors also have become familiar with other potentially polluting industries within the City. IWC inspectors observe the operations of several industries which exhibit polluting potential within a general surveillance program. Work efforts for Storm Water Utility inspectors are being formalized within this program and the additional staffing and budget requirements have been outlined in the document, "Industrial Inspection and Control Program".

The assigned inspectors will inspect industrial facilities, subject to the storm water regulations, at least once during the five year permit term. The inspectors will review and examine the documentation and data required to be maintained by the industrial storm water dischargers, as outlined above. They will also conduct an overview evaluation of the industrial site and site operations for conformance with the site's SWPPPs.

Deviations and discrepancies between the Plan and practice will be cited, as appropriate. Where illicit discharges or connections are suspect, the inspectors will arrange for investigative examination of the site along guidelines set up by the Storm Water Utility, or may initiate storm water monitoring and sampling of suspect outfalls, on an ad hoc basis. Every effort will be made to encourage industries to self-monitor and to meet the terms and requirements of their permits.

In order to provide a wider surveillance capability within reasonable budget constraints, additional City personal may be trained to assist Storm Water Utility staff during the course of conducting inspections for other programs. Thus, Fire Department personnel, and other City inspectors, may be cross-trained and authorized to inspect records and sites during their official visits. (Ordinances may need to be examined to assure that any City inspector on the premises has authority to inspect storm water NPDES permit related documents.) Spot checks may be made randomly, to keep all parties honest, but may also be made by design for industries suspected of illicit discharges, or industries which prove to be generally non-cooperative with the program. Problems noted will be referred to inspectors of the Storm Water Utility for follow-up and further action. The latter will also schedule and arrange for additional specialized City staff as appropriate. For instance, staff of the Department of Health and Human Services Department's Environmental Assessment Section may be able to render effective assistance in some investigations. Similar arrangements have been effected in the past.

To the maximum extent practicable, industries will be encouraged to voluntarily obtain and comply with the terms of their storm water discharge permits. City ordinances will need to be developed to provide for fines and other enforcement mechanisms for those that don't.

Implementation Plan

Task 1 Establish industries covered by the program and assess industrial response. Focus during the first year on

establishing which industries should be permitted under this storm water permitting program, and assure that the permit process is underway for each of them. This is an on-going activity to begin during year 1.
(Years 1-5)

Task 2 Inform industries of U.S. EPA NPDES Storm Water Permit responsibilities. During the first and second years of the City's permit, staff will focus on informing industries of their individual Storm Water Pollution Prevention Program responsibilities. A general information form will be mailed to the industries covered under the storm water regulations. Industries will be required to return the form to the storm water utility so that the staff can remain informed of industrial activity that occurs within the City. In addition, staff will be involved in reviewing the monitoring information required from the industries on the form, and setting up the general random storm water sampling program and any special sampling programs for specific industries, as needed.

During the second and third years, staff should be able to identify and prioritize problem industries and to be able to estimate whether additional staff and equipment support would be needed. If additional resources are needed, they should be acquired during the fourth year. By the fourth and fifth years, the program should be established and become more-or-less routine in overall operation. This evaluation of staffing and equipment needs is part of the on-going operation of the Storm Water Utility and is not identified, herein, as a separate task. Like task 1, this program is on-going with initial implementation beginning in year 1 and continuing through year 5 with program evaluations and adjustments taking place as needed. Request sampling/monitoring data on priority industries from EPA. This data would be accomplished under their EPA Storm Water Permits - General, Group, Multisector, etc.
(Years 1-5).

Task 3

Review industrial monitoring data and industrial storm water pollution prevention plans to measure the expected risk of storm water pollution based on the industrial activities involved. Industries, which are found to be in violation of the storm water regulations because of "illicit" flows will be of significant importance to the City. These situations may involve minor corrective plumbing adjustments or extensive remedial action for which the industry may need to work out a consent decree with the EPA. Violators will be notified to begin remedial action immediately. Data will be accumulated and also will be evaluated in terms of other water quality measurements and measures of stream quality and biotic health made by City staff and others. This task will be implemented begin in year 3, but on-going from then on.

(Years 3-5)

Task 4

Inspect all industries holding NPDES storm water discharge permits within the City of Dallas at least once during the five-year permit term by Storm Water Utility inspectors or other qualified City staff trained in site evaluation procedures for storm water runoff considerations. Request and obtain sampling data from Dallas industries from EPA. Such data is required under the industries' EPA storm water permits. Set up a review of this data at least annually to determine industries that require permits but have not obtained them, or industries in violation of their permits. Refer these industries to EPA for enforcement action. Implement program by third year, with in continuing from then on.

(Years 3-5)

4.18 SITE PLANNING PRACTICES

Regulatory Requirement [40 CFR 122.26 (d) (2) (iv) (D) (1)]

(d) A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system, which shall include:

(1) A description of procedures for site planning which incorporate consideration of potential water quality impacts:

Program Summary

The NPDES Part 2 permit program will include a range of requirements for operators of regulated construction sites to document and implement efforts toward reducing pollutant discharges from the regulated sites. Correspondingly, municipal permittees, including the City of Dallas, will have to include in their permit applications a description of a comprehensive program to reduce pollutant discharges from construction sites - including program procedures and control measures, as well as provisions for oversight and enforcement of compliance by construction-industry permittee.

Good site planning practices are a well developed and understood technique to prevent or control pollutants in storm water discharge from urban development and construction activity. As part of preparing the municipal NPDES Part 2 permit application, the City of Dallas directed its consultant team to:

1. Conduct an assessment of current site planning practices
2. Identify additional or improved practices to reduce pollution from construction activity
3. Propose programmatic measures to implement these beneficial

- practices, as well as to oversee and enforce parallel implementation by developers and operators of regulated construction sites
4. Estimate costs to the City of Dallas to implement the proposed site planning practices.
 5. Suggest an implementation schedule consistent with the November, 1992 deadline for the City's NPDES municipal permit application and the five-year term of the permit once approved by U.S. EPA.

This section presents an introductory site planning program as an important component of an overall urban storm water management program. The issues raised in this document are applicable to any significant development (i.e. roughly one acre or larger) within an urban watershed. The water quality-based objectives of any site plan, and the factors that shape site plan decision-making, are basically the same for private developers as for municipalities as they undertake public works projects that significantly disturb the natural landscape. The emphasis herein is on a general approach (but also some very specific site planning practices) which, if implemented, can minimize the adverse water quality impact of any significant urban development.

The Implementation Plan summarizes and suggests major activities of a "Site Planning Practices" program to be implemented by the City of Dallas over the term of the municipal NPDES Part 2 permit. This section also addresses the anticipated costs of implementation and concludes by presenting a suggested implementation schedule for the Site Planning Practices program activities.

Implementation Plan

- Task 1** Identify and adopt measures to increase interagency coordination of site planning and plan review for new developments. Include a review of all current interagency development review procedures, formulation of management recommendations for any recommended procedural changes, and follow-up through

implementation by the affected departments.

The recommended mechanism is that the Executive Steering Committee forms an interagency, interdisciplinary committee comprised of planning and design professional staff, including administrators, from the departments with responsibility in this area. The committee would be a working group. In addition to this first task, it is recommended that the committee also be responsible for accomplishing the other activities in the Site Planning Practices program.

(Years 2-5)

Task 2 Conduct a comprehensive review of all municipal development ordinances, floodplain management ordinances, and general development plans and standards. Revise as required to strengthen the requirements for beneficial site planning practices, and to enhance attainment of water quality objectives during construction. Objects of this review to include at a minimum:

The Dallas Development Code (e.g. the escarpment ordinance, floodplain fill ordinance)

The City of Dallas Planning Policies

The storm drainage policy of the City of Dallas

The Long Range Physical Plan for Parks and Recreation Facilities

The Dallas City Code

The Dallas Building Code

Dallas Fire Code

Thoroughfare Plan

The CBD Streets and Vehicular Circulation Plan

Dallas CBD Pedestrian Facilities Plan

Revise ordinances as required to reflect more explicit consideration of water quality impact during construction of proposed development plans, and to assure implementation of regulated sediment and erosion control measures.

(Year 1)

Task 3 Review and revise (as necessary) the draft Tree Preservation ordinance. Finalize, ratify and implement.
(Year 1)

Task 4 Review and revise the City's in-place comprehensive development plan. Identify and evaluate watershed areas "at risk" from the standpoint of water quality or nonpoint source pollution (NPS) due to topography, hydrology, advisable land uses, etc. Establish procedures for special screening of proposed new development plans (both public and private) and applications for zoning changes in these areas.
(Year 1)

Task 5 Conduct additional training of staff with responsibilities for development planning, Environmental Assessment/Environmental Impact Statement, and review of site development plans and appropriate participation of the development community with responsibilities for plan development is recommended. Training topics include the recommended use of site planning practices to minimize nonpoint-source pollution, erosion and sedimentation. Note that the cost estimate below includes labor cost to the various City departments for staff attendance in training sessions.
(Years 1-5)

Task 6 Conduct a public information campaign to increase awareness of required site planning practices for construction activities and recommended site planning practices to achieve improved water quality. Targeted groups for outreach should include design professional organizations (civil engineers, landscape architects), urban and regional planners, the development community, and civic and community groups. Outreach mechanisms could include brochures, presentations to appropriate professional or industry groups and mass mailings.

(Years 1-5)

Task 7 Adopt a comprehensive Site Planning Checklist and a detailed Erosion and Sediment Control Plan for utilization by City staff with responsibility for site planning or site plan review. Make the submission of the Storm Water Pollution Prevention Plan a condition of receiving a building permit.
(Year 1)

TASK SCHEDULE
Site Planning Practices

Task Name	Year 1			Year 2			Year 3			Year 4			Year 5						
	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	
1 Intergency Coordination Committee																			
2 Develop Codes and Ordinances																			
3 Tree Preservation Ordinance																			
4 Revise Comprehensive Development Plan																			
5 Staff Training																			
6 Public Information																			
7 Site Plan and E.S.C. Checklist																			
COST PER YEAR																			
TOTAL COST																			

\$117,500

\$7,000

\$7,000

\$7,000

\$7,000

\$145,500

4.19 BEST MANAGEMENT PRACTICE REQUIREMENTS

Regulatory Requirement [40 CFR 122.26 (d) (2) (iv) (D) (2)]

(2) A description of requirements for nonstructural and structural best management practices;

Program Summary

One important means of addressing the new storm water requirements is through the implementation of storm water controls at construction sites. These management, structural and source control measures are known as Best Management Practices (BMPs). A BMP can best be described as a tool to mitigate the adverse environmental impact of storm water runoff.

This section provides an overview of BMP technology and the role of BMPs in a comprehensive approach to storm water management at construction sites. It proposes a City of Dallas program to implement construction BMPs on public works projects and to encourage and enforce BMP implementation by operations of regulated construction sites.

The construction BMP program will be complemented by two other programs which deal with site planning practices and construction inspection, respectively. Together, these three programs will comprise a comprehensive approach by the City to the reduction of pollutant discharges due to new development and construction.

Implementation Plan

Task 1 Develop, in conjunction with NCTCOG and/or a

consultant, a detailed BMP technical design manual which includes the following:

1. Screening criteria accompanied by a detailed discussion of use for selecting BMPs.
2. Compilation of detailed design information for each type of BMP. The design manual would include discussion of the relevant design parameters as well as quantitative design aids such as charge and hydrographs for performing design calculations.

It should be noted that the BMP design manual could be developed cooperatively by the City of Dallas and NCTCOG. Also, this activity should develop BMP design information (and perhaps standard details) distinct from and broader in scope than contained in the pending draft revision of the Public Works Storm Drainage Manual.

(Year 3)

Task 2 Compile standard specification language for installation, use, and maintenance of BMPs at construction sites. Incorporate these requirements in the existing Public works standard specifications and Construction Standard Details.

(Year 2)

Task 3 Review existing City ordinance requirements for submittal of a formal erosion and sediment control plan and use of construction BMPs. Strengthen and further detail.

(Year 2)

Task 4 Conduct additional training of engineering staff in BMP planning and implementation. Training will include City engineers with responsibility for engineering design or review of paving, drainage, water, wastewater or development projects.

(Years 1-5)

Task 5 Implement a program to develop innovative region-specific construction BMPs and to assess the performance of various BMPs. The program could encompass both in-house engineering designs as well as consultant designs for both private and public works.
(Years 1-5)

Task 6 Develop bonding requirements to ensure that funding is available to correct problems when responsible parties fail to act. Also investigate establishing a system of fines and a system for assessing and collecting fines for violations by construction site operators or other responsible parties.
(Years 1-5)

TASK SCHEDULE

Best Management Practice Requirements

Task Name	Year 1			Year 2			Year 3			Year 4			Year 5					
	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct
1 BMP Technical Design Manual																		
2 BMP Standard Specs.																		
3 Revise Ordinance for E.S.C. Plan																		
4 BMP Training																		
5 BMP Innovation /Assessment																		
6 Bonding/Enforcement Practices																		
COST PER YEAR																		
TOTAL COST																		

\$38,400

\$46,000

\$52,700

\$19,000

\$19,000

\$175,100

4.20 INSPECTION PRIORITIES

Regulatory Requirement [40 CFR 122.26 (d) (2) (iv) (D) (3) and (4)]

(3) A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality; and

(4) A description of appropriate educational and training measures for construction site operators.

Program Summary

One important means of addressing the storm water requirements is through the implementation of controls at construction sites. U.S. EPA has included in the regulatory definition of industrial activity "...discharges resulting from activities involving construction operations that result in the disturbance of five acres total land...". This definition was adopted for good reason. Reduction of discharges from new site development and construction will be one of the areas emphasized under the NPDES program because construction activity has been shown to be a major contributor to urban water quality impairment.

The key role of the construction inspector cannot be overemphasized. First, both structural and non-structural measures to reduce pollutants generated by construction operations are only effective to the degree that they are properly implemented - and in the case of structural measures, properly maintained as well. From the day of the preconstruction conference until the project's completion, the inspector is the individual in closest contact with the contractor and his onsite operations. Oversight and enforcement is the inspector's

responsibility, and his role in ensuring implementation of measures to manage storm water runoff from the construction site cannot be filled by anyone else.

Implementation Plan

- Task 1** Develop an Inspectors Field Manual which will assist field personnel inspect for pollutant reduction measures. The manual should cover topics including:
1. A review of the basic principles of sedimentation, erosion and pollutant generation by construction site operations.
 2. A review and discussion of the inspection prioritization criteria.
 3. Descriptions of construction BMPs including proper implementation of operational BMPs as well as the installation and maintenance of structural BMPs. The manual would also discuss the applicability, benefits and drawbacks of the various types of BMPs for different site conditions.
 4. Discussions of enforcement options available to the inspector in case of non-compliance by operators of regulated sites.
(Year 4)

- Task 2** Conduct additional training for City construction inspection staff. The training sessions would basically cover the same topics as recommended for the Inspectors Field Manual. A cooperative approach to training in conjunction with NCTCOG is practical and should be considered by the City of Dallas. Training should include inspectors (and selected managers) from the following organizational units:
- Public Works, Construction Inspection
 - Public Works, Development Activity
 - Public Works, Facilities Planning
 - Economic Development, Code Enforcement
 - Street and Sanitation department, Street Operation Division, River Levee Operations

Section
DWU, Capital Improvements
Park and Recreation

Estimated cost to the City of Dallas assumes a 16-hour course conducted with a class size of 20 inspectors each session. Year 3 costs include course development, and assume that a total of 100 staff would take the training class. In Years 4 & 5, it is assumed that the course would be repeated once yearly for an average of 20 staff. Training of contractors will be accomplished through a regional training program to be given through NCTCOG of which Dallas is a participant.

(Years 3-5)

Task 3 Recognizing the additional workload that will be associated with increased inspection to reduce pollutants from regulated construction sites, the City of Dallas may hire additional inspectors. The recommendation herein is for five (5) additional inspectors to be hired in Year 2 of the permit team. The inspectors will initially be assigned to the Storm Water Utility but may be assigned differently as workload is evaluated.

Hire new inspectors. Additional funds for vehicles and equipment should also be budgeted. It is assumed that 5 new vehicles would be purchased in Year 2. After the first year, cost would be limited to labor, miscellaneous equipment, insurance, supplies, gas and maintenance.

The recommended numbers of new inspectors are minimum initial numbers for Year 2 of the term of the City's NPDES Part 2 Permit. Additional inspectors may be needed in later years, pending more detailed analysis of the frequency of inspections that can be achieved by the staff, for different project types and by department, district etc.

(Years 2-5)

Task 4 The City should develop flat-file database techniques and/or GIS application to reference construction activity and flag "priority" projects by geographic area as they are permitted. The report and/or special purpose maps developed would total and indicate locations of projects by prioritization factors including disturbed land area and project type.
(Year 1)

Task 5 Review the historic and current inspection workload to compute average frequency on inspections by organizational unit (and district, where applicable). Results of this analysis should be compared with a recommended goal of inspections at least every two weeks for the following project categories:

1. Projects three acres or larger in area.
2. Projects located in the escarpment or geologically similar area.
3. Projects that otherwise require a formal erosion and sedimentation control plan as part of the construction documents.

(Year 1)

Task 6 Implement the draft "Warranty Maintenance Program" currently being developed by Public Works Department. Finalize requirements for financial responsibility for maintenance of permanent structural BMPs by the operators of private development and retainage by the City for funds to cover maintenance in the event of default for a 1-2 year warranty period. Identify which City inspection unit will be responsible for inspection of "Warranty Maintenance Program" - covered control structures.

(Year 2)

Task 7 Implement measures to enforce compliance by site operators with provisions of the municipal NPDES permit and establish penalties for violations by responsible parties. Available enforcement measures

and penalties include direct fines for violators; withholding acceptance on public works jobs; withholding issuance of a certificate of occupancy; and issuance of "stop work" orders for sites in violation. The "Warranty Maintenance Program" should be included as an integral part of this activity. Develop brochures on construction site practices to protect storm water quality to give to all contractors as they obtain their building permits.

(Year 2-5)

Task 8

Conduct a systematic review of the Construction Inspection Priorities program to assess its effectiveness before the expiration of the initial five-year NPDES Part 2 permit and reapplication to U.S. EPA for permit renewal. Rather than waiting and conducting only one assessment in Year 5, it is recommended that assessments be conducted in both Years 3 and Years 5.

(Year 2 and 5)

5 ASSESSMENT OF CONTROLS

Regulatory Requirement [40 CFR 122.26 (d) (2) (iv) (D) (v)]

(v) *Assessment of controls. Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program. The assessment shall also identify known impacts of storm water controls on ground water.*

Program Summary

Estimated reductions in loadings of pollutants from the municipal storm sewers should have a basis. The basis may be from quantitative measurements, where those are possible; or the basis may be qualitative, based on surrogate measures. A strong emphasis in the permitting program is the reduction or elimination of pollutants at the source. To a large measure, reductions at the source depend greatly upon public awareness of the environmental stress caused by the actions of human beings, and upon commitment by the public to good housekeeping and other practices that can prevent pollutants from reaching the surface or ground waters of the United States.

Some "best management methods", such as street sweeping practiced in the City of Dallas and elsewhere, may be somewhat counter-productive in terms of direct pollutant reduction. Street sweeping, while modestly effective in reducing total solids and suspended solids, may actually contribute to slightly higher loadings of metals and nutrients being released to the surface waters. This negative aspect results from the fact that the operations best remove the coarser sediment fractions while leaving finer material, to which the pollutants bind, disturbed and more susceptible to storm water washoff. However, street

sweeping produces streets that are free from litter and which appear to be cleaner than unswept streets. The appearance serves as a psychological boost to individuals to refrain from littering the "clean" streets. Enforcement of anti-littering ordinances is also easier to accomplish because the littering occurs and can be seen against a background of a "clean" street. Consequently, the simple measurement of pollutant loading reduction for street sweeping may show only marginal effect when taken by itself. However, street sweeping, when taken in context with its possible corollary effects, may be an effective BMP measure even though the quantifiable results of the operations may appear to be only marginally effective or somewhat counter-productive. Of the BMP's available, adequately sized detention and retention ponds offer the better pollutant reduction potential once pollutants have entered the drainage system. However, it appears to be true that the best loading reductions occur by intercepting possible pollutants before they can enter the storm sewer system. Such reductions may only be measured by surrogate measures with the end result being an apparently healthier environment.

The City of Dallas is a well established and mature city. Many areas, particularly the industrialized corridor adjacent to the Trinity River, are substantially developed, highly impervious, and offer few opportunities for the large scale retention basins that are possible in under developed areas of the City. Some under developed areas exist for which regional BMP's may be appropriate within the City. However, in the industrial corridor, good housekeeping procedures and tight control over potential pollutant discharges offer the best feasible approaches for storm water quality management.

Therefore, measures of effectiveness of controls should include surrogate measures such as number of calls, gallons of oil collected, number of classrooms visited, etc. None of these measures can be directly converted into estimates of pollutant loading reductions. However, they all may be measures of management program effectiveness in reducing pollutants. The proposed storm water management program includes the use of surrogate measures, where appropriate, in lieu of, or in addition to, other quantifiable measures. Some of the measures used will be modified, as the management program unfolds, to produce measures that better reflect environmental conditions in the City

of Dallas than those presently available.

Surface and Ground Water in the City of Dallas

Water supply for the City of Dallas, and most adjacent jurisdictions, is from surface water sources. The City derives water from the Elm Fork of the Trinity River, from Lake Ray Hubbard, and several other reservoirs non-contiguous to the City. The City has virtually no drainage control over the point of withdrawal on the Elm Fork of the Trinity River, and has no drainage control over the land areas tributary to Lake Ray Hubbard, and has no control over drainage areas tributary to the non-contiguous reservoirs. The Trinity River through the City of Dallas is largely composed of treated wastewater from other jurisdiction (during dry weather conditions). The City of Dallas contributes its own treated wastewater to the Trinity River for use again by downstream jurisdictions. The City also is correcting storm surcharged sanitary sewer overflows to the Trinity River and contributing drainage areas within the City of Dallas.

Little use is made of ground water within the City of Dallas. Most wells, for which records have been kept, have been capped in recent years as surface water supplies have become more plentiful to users. Only a few deep wells appear to be operating, apparently for cooling and makeup water purposes. The City of Dallas' surface waters have no apparent interaction with the deep aquifers beneath the City. Indeed, surface soils are mostly silt or clay loams that do not readily support ground water recharge. The surface soils are underlaid by chalk and shale formations which also discourage ground water recharge. Therefore, principal storm water runoff and quality interactions with ground water considered in the storm water management program have been mostly focused on shallow ground water in the upper soil column and on interflow and water table level interactions. These interactions can be reflected in the existing and proposed stream water quality monitoring activities (which presently use National Sanitation Foundation water quality indices), and in the programs

monitoring ground water quality such as that found in wells adjacent to active landfill activities, or in remediation of past faulty solid waste disposal practices.

Public Participation and Governmental Coordination

Public participation is a key component in the development of storm water management programs for the City of Dallas. Programs are being developed to involve citizens at every level in controlling pollutants with means that may be at their disposal. These means include providing citizens with literature (and facilities, where appropriate), speaker's bureau appearances, and school programs concerning good housekeeping; proper disposal of used oil and household hazardous wastes; proper application and handling of pesticides, herbicides and fertilizers; promotion of the adoption of streams (and stream-walking programs); adoption of streets and local park areas (for maintenance and beautification programs); observation and reporting of promiscuous dumps; and public reporting of apparent stream and storm sewer water quality problems such as spills, dumping, or accidental discharge of materials.

Programs are also being developed for governmental coordination within the City of Dallas so that the number of eyes officially available to the City is maximized in order that problems can be detected at the earliest possible time and remedies initiated in a timely fashion. In addition, the City of Dallas will participate and cooperate with adjoining jurisdictions, either by direct contact or in suitable forums, to share program experiences, problems and results; and to maintain contact with adjacent jurisdictions from which the City of Dallas receives storm water flows or to which the City contributes storm water flows.

All of these measures help the City to know, manage and monitor, and control its storm water systems. The various communication and reporting assessment measures are initially outlined in this document and supporting documents developed for the City of Dallas. Experience with the storm water management programs may result in revisions to the reporting measures to enhance and maximize their utility. All the proposed storm water management

programs being formulated within the United States are dynamic in nature and must be adapted to the uniqueness of each municipal storm sewer system. It will take some time for the best set of assessment measures to be developed. The measures outlined are a starting point, not an ending point.

Quantitative Measures

An ARC/Info Geographic Information System is being developed within the City of Dallas which will assist in the management of the storm sewer system and other systems of the City requiring management and maintenance. An ARC/Info Macro Language (AML) has been formulated to permit analysis an assessment of storm water drainage concerns to any point within the City of Dallas. Both present and future conditions can be assessed. Present conditions include present land uses, drainage patterns, pollutant loading rates, present best management practices and pollutant removal efficiencies (based on reported values from the literature), and the like. The current AML makes use of existing City of Dallas land uses (as developed and reported by the North Central Texas Council of Governments (NCTCOG)). National Urban Runoff Program (NURP) pollutant loading rates, imperviousness as estimated for various NCTCOG land uses, and BMP removal efficiencies (taken from the literature) for recognized BMP's. The AML follows the draft guidance from EPA for use of its "simple method" for surface water assessments. The AML allows assessment of pollutant loadings for EPA's list of 12 pollutant parameters based on the NURP data. (Dallas Metroplex pollutant loading rates can be easily substituted for the NURP rates when the Metroplex numbers become available.) The AML allows analyses for four conditions: 1) present land use with no BMP's, 2) present land use with existing BMP's, 3) present land use with additional BMP's, and 4) future land use (with or without BMP's present or future). The AML allows analyses of full watersheds down to small catchment areas, depending on how extensive the base file coverage is. The key is to set up the base files with the land use polygons and basin boundaries to the point of drainage concentration. BMP's can be assigned to specific polygons or to areawide BMP's, as appropriate. Removal efficiencies for each pollutant can be assigned for the various BMP's. A lookup table is developed for each BMP. The removal

efficiencies assigned can be based on national experience (as done for the set of available BMP's in the AML) or from local data, as developed. The AML contains a routine allowing the establishment of a BMP centered on a physical feature, such as street-sweeping centered along a street centerline, or a vegetative buffer established alongside a stream. Such an AML allows assessment of BMP's for a wide variety of "what if ?" situations.

The City of Dallas has several BMP's in place. Street sweeping is extensive; covering the central business district (CBD) downtown five working days per week; covering 2042 curb/gutter miles of the primary street system once per month; and covering residential areas, in the past, once or twice per year. As noted, pollutant reduction may be modest, or slightly counter-productive; but, by keeping the streets free from debris, corollary benefits may accrue by encouraging people to not litter, etc. The storm water sump system along the Trinity River provides a BMP of unquantified benefit. The sumps are for flood control, but trapped sediments must be removed periodically. These sediments probably contain nutrients and other pollutants that would otherwise be carried down the Trinity River. Bachman, Mountain Creek, Lake Cliff, and White Rock Lakes all provide trapping efficiency and removal of sediments and pollutants from surface waters. Data is not available yet to characterize the removal efficiencies. The City also has a few detention/retention facilities in small drainage areas near the periphery of the City. Data concerning effectiveness of these facilities has not yet been developed. As part of the management programs, data development studies have been proposed to assist in evaluating the effectiveness of several of these "BMP's".

The following Table, "Gross Pollutant Loadings", based on NURP unit loading values, local land use based on NCTCOG definition, and estimates of imperviousness for the land uses, shows the potential gross contribution of pollutants for the City of Dallas, and the Town Highland/City of University Park, and Cockrell Hill based on the ARC/Info methodology. The rainfall depths used are based on National Climatic Center, Asheville, N. C. rainfall statistics for Love Field in Dallas. The annual rainfall depth of 34.89 inches, and the average storm depth of 0.698 inches, were used.

There are other quantifiable measures that will be used within the storm water management program. Some measures that may be obtained include: the gallons of used oil turned in to various receptors; the tons (or other measure) of recyclables turned in to approved receptors; the numbers, sizes and composition of promiscuous dumps cleaned up; and similar quantifiable measures. These measures cannot be directly translated into pollutant reductions. Rather they are measures of reduced opportunity for environmental degradation that result from storm water management programs.

Other quantifiable measures that can be used to assess water quality are the stream water quality indices and water quality sampling results taken at set sampling sites throughout the City. The City of Dallas has a total of 191 sampling points. Most of the sampling locations are at points along the principle streams, or tributaries in the City. Both water quality samples and physical and biotic assessments are made at these sites once or twice per year. Water quality measurements are made approximately quarterly at 46 locations located near the mouths of principal streams or tributaries. Measurements have been taken, more or less regularly, since 1982. The observations and measurements taken are measures of water quality which may not be directly related to pollutant loading rate reductions, but certainly will be indicative of the effectiveness of storm water management efforts. An annual report on the observations is usually produced.

GROSS POLLUTANT LOADINGS

POLLUTANT	LOADING (pounds)	JURISDICTION		
		CITY OF DALLAS	CITY OF COCKRELL HILL	TOWN OF HIGHLAND PARK/CITY OF UNIVERSITY PARK
BOD5	Annual Storm	8,538,710 170,823	13,627 273	138,772 2,776
COD	Annual Storm	66,886,564 1,338,115	106,743 2,135	1,087,048 21,747
Total Suspended Solids	Annual Storm	170,062,64 8 3,402,228	271,399 5,430	2,763,876 55,293
Total Cadmium	Annual Storm	1,423 28	2.27 0.05	23.1 0.5
Total Copper	Annual Storm	37,713 754	60.2 1.2	613 13
Total Lead	Annual Storm	169,351 3,388	270.3 5.4	2,752 55
Total Zinc	Annual Storm	251,180 5,025	400.9 8.0	4,082 82
Total Dissolved Solids	Annual Storm	56,924,736 1,138,821	90,845 1,817	925,147 18,508
Total Phosphorus	Annual Storm	355,780 7,118	568 11	5,782 116
Dissolved Phosphorus	Annual Storm	106,734 2,135	170.3 3.4	1,735 35
Total Nitrogen	Annual Storm	2,355,261 47,119	3,759 75	38,278 766
Organic + Ammonia Nitrogen	Annual Storm	1,636,586 32,741	2,612 52	26,598 532
Average Percent Impervious		44.85	42.16	41.72
Total Area (Acres)		219,834	371	3,809

Loadings based on National Urban Runoff Program unit loadings and "simple" procedure. Land uses based on NCTCOG determinations. Imperviousness assigned to land uses based on engineering judgement. Possible effects of BMP's not included (see text).

Qualitative Measures

A host of qualitative measures will be used to measure the level of effort exercised within the storm water management programs. Some of these can be quantified. Examples of quantifiable measures of a qualitative nature are: numbers of citizens involved in stream walk programs; number of speaker's bureau addresses made to civic groups; numbers of bill-stuffer brochures and newsletters sent to citizens; numbers of citizen reports of storm water quality problems; and the like. These qualitative measures cannot be directly related to pollutant load reductions, but are a measure of citizen awareness and response to storm water management initiatives. Ultimately, quantifiable water quality improvements will begin to be measured on a regular basis. The results will not be as predictable or measurable as point source clean up efforts but may prove to be dramatic, ultimately.

The following sections outline initial qualitative and quantitative measures to be used to assess potential for pollution reduction and program effectiveness for the four principal storm water management areas and their respective individual programs. The four principal areas are: commercial and residential programs; illicit discharges and improper disposal; industrial and related facilities; and construction sites (associated with new development and redevelopment).

Residential and Commercial Management Programs

Public Participation and Governmental Coordination

The success of this program area can be measured in terms of increased awareness of the general problems of storm water runoff by the media (radio, television, newspapers, etc.), the business community, neighborhood groups, school students, and the general public. Measures of success will include production and distribution of the specific literature targeted at problem areas such as: illicit discharges and spills; proper disposal of used oil and toxic household materials; and the proper use and disposal of pesticides, herbicides and fertilizers. Random phone surveys may be used to test community awareness of the issues following distribution of bill-stuffers, and the like. Other

measures of success may include speaker bureau engagements concerning storm water problems for the general public, and briefings for City staff and elected officials. Records will be kept concerning the various groups to be targeted, the nature of the public awareness thrust, and records concerning responses received.

Maintenance Activities and Schedule

Measures of success in this program area include reviewing and revising operation and maintenance practices to reduce sedimentation and disturbance of fine grained material resulting in training material and/or directives to maintenance staff; development of a written sediment and debris removal protocol; instituting new inspection practices with associated written training materials and/or directives to staff; and generating a maintenance schedule to accomplish these objectives and to manage the maintenance program. The latter should be keyed to the ARC/Info GIS system so that problems may be properly logged, appropriate data accumulated, and maintenance activities tracked.

Specific measures include the revision of the City's Drainage Design Manual during the first year of the permit, and development of maintenance specifications during the second year.

Opportunities exist to develop quantitative data from these maintenance activities by recording sediment and debris composition and removal quantities so that accumulation rates can be later correlated to land use and runoff patterns over time. Such data can then be used to quantify the effectiveness of BMP's adopted and management practices adopted.

Comprehensive Master Plan - New Development and Redevelopment

Measures of effectiveness of this program include delineation of watersheds sufficiently small (say approximately six square miles each) to allow ranking of watershed according to urban and suburban conditions (percent impervious) according to development or redevelopment potential. Review and refine the platting process and define requirements for inclusion of storm water quality considerations in development and redevelopment activities. Enactment of suitable ordinances during the course of the permit will also be measures of success.

Best Management Plans for Fully Developed Areas

Measures of success include review of City operations and establishing storm water pollution prevention plans at City facilities including measures to maintain good housekeeping and to assure that pollutants are kept clear from storm drains.

Results of installation of a pilot program of inlet sedimentation trays in the central business district will be a measure of success. If quantifiable reductions in pollutants result at a suitable cost-benefit ratio, the pilot program can be extended in the future. If positive results are produced the program could also be tried in industrial areas, such as trucking terminals and bus yards, etc.

Results from stenciling of storm water inlets can be evaluated based on opinion polling of area citizens to assess awareness response to such a program. Also results from physical assessment of the durability and maintainability of the stencils can be used to assess the merits of such a program.

Public Transportation Right-of-Way Operations and Maintenance

Suitable lists of drainage facilities received from TxDOT, TTA, and DART in a timely fashion may be a measure of the possibility of cooperation between the City and these public entities.

Joint review and development of maintenance procedures and specifications can result in the production of a common document(s) between entities for the maintenance of public right-of-way facilities within the City. Common maintenance specifications for pesticides, herbicides, and fertilizers; for removal and disposal of sediment and debris (and maintenance of records quantifying the activities); definition of erosion and sedimentation control and vegetation management practices; definition of unsuitable weather conditions to conduct maintenance activities and safeguards to be used to protect the quality of storm water generated from right-of-ways will be positive measures for the improvement of surface waters and possibly of ground water.

Procedures for Existing Flood Management Projects

Specific studies are to be accomplished during the term of the permit. Results of these studies may be used to guide possible

retrofits of eleven existing detention and retention ponds, three lakes totally contained within the City of Dallas, sump areas and pumping stations, and levee flood plains and adjacent creeks. Use of litter booms and creation of forebays for sediment trapping appear to be viable means of enhancing lake water quality and pollutant removal efficiency. Likewise, operational modifications of sump areas and pumping trigger levels.

Landfill

Specific measures related to surface and ground water quality for this program include: regular examination of recycling and active landfill sites to assure that pollutants do not come into contact with storm water; continuous tracking of solid waste disposal regulations to resolve any differences between landfill and storm water regulations; redevelopment of former landfill documents and site examination; and inauguration of a promiscuous dump clean up team. Specific measures of success include the number and types of promiscuous dumps closed and citizen participation in the reporting of such dumps.

Pesticides, Herbicides and Fertilizers

The establishment of an Integrated Pest Management Coordinator with an IPM committee will be an early measure of success in this program. Development of coordinated procedures and training of City personnel in the proper application and handling of these substances are also measures of success. Development of literature for citizens and the promotion of state sponsored training programs, and the use of City employees as speaker's bureau participants concerning these matters are also useful measures of program success.

Illicit Discharge Programs

Illicit Discharge Detection and Elimination

Measures of success in the overall illicit discharge and detection program include: developing relationships between the stream monitoring and sampling program of the City of Dallas and watershed related databases of land use, industries, outfalls, and results of inspection, data gathering, and citizen complaints and actions. Specific measures of success relate to public reporting of spills and illicit discharges and the mechanisms in

place to respond to reports and resolve them. A measure of success may relate to citizen awareness of the storm water hotline and its purpose. (The City will pursue adopting a catchy telephone number such as XXX-RAIN, where XXX is the specific telephone exchange available.) Further success is related to public participation programs including involving citizen groups in "stream-walking" programs ("adopt-a-stream") and/or other proactive programs to which the City of Dallas citizens respond.

Field Screening Procedures

The field screening program has easily definable measures of success. The program involves dry weather inspection of all storm water outfalls on a regular schedule. Areas of anticipated problems will receive special attention. These areas of special attention will be redefined during the program based on experience gained in the overall program and on specific data gathered and analyzed through the GIS linked databases developed.

Detailed Investigation Procedures

Most of the measures used to measure the initial success of the program relate to documentation of procedures to be used, training personnel in following those procedures for field sampling and for following appropriate safety practices, and in acquiring the necessary equipment. A City ordinance regarding prohibited substances to storm drainage systems needs to be rewritten and approved. Further initial definable efforts relate to characterizing possible industrial discharges to City storm water drainage systems by SIC codes. An initial set of reporting forms and a corresponding data base need to be set up. It is expected, based on initial pilot studies, that a limited amount of detailed inspections will be required. Results of investigations performed and other SWU investigations will be used to develop prioritization schemes for how staff will be assigned to perform detailed investigations.

Spill Control Procedures

The principal initial measure of success in this program is the establishment of an inter-departmental Spill Response Committee (or sub-committee) to evaluate City spill response capabilities and to standardizing and formalizing procedures between departments during and after spill events. A second measure is

reviewing industrial spill response plans and incorporating appropriate information into City databases to enhance City response and follow-up capabilities. A third measure is establishing a small business spill containment education program for those businesses too small to fall under the industrial spill response planning requirements. A final measure is defining and establishing rapid response areas where time of response is of particular importance.

Used Oil

Measures of success involve dissemination of information to citizens concerning proper disposal of used oil and the location of used oil receptors. Some receptors keep records concerning the volume of used oil received and processed. Receptor organizations will be encouraged to gather such information and share it with the City for planning purposes. The City will keep the necessary records concerning its own used oil program and for its role as a receptor. The City will review its own operations, at least annually, to assure proper housekeeping practices concerning used oil and grease, etc. The City will continue to track the transportation and disposal of used oil by used oil carriers, and will inspect used oil management by industries as part of its overall industrial inspection program.

Toxic Materials

The City will disseminate information on the proper storage and disposal of household hazardous wastes and will provide businesses with literature on toxic materials exchange programs and concerning other means of commercial collection and disposal of hazardous materials. The City will also disseminate literature on the use of safe alternatives to household hazardous wastes. The City will explore options and will initiate a household hazardous waste collection day(s) at one or more of its facilities. The City will expand the days and sites to provide relatively convenient disposal sites for its citizens as budgets allow, based on experience with its phased program.

Wastewater Infiltration Control

Specific goals and timetables have been, or are being, established for wastewater infiltration control. Remediation of storm water surcharged sanitary sewer overflows, as presently identified, is underway according to a schedule. A wastewater

master plan is being finalized in which other problems are being identified with a schedule to address them being established. The SWU will integrate these efforts within its overall storm water management planning so that efforts can be coordinated to the maximum extent practicable.

Industrial Activity Programs

Industrial Inspection and Control

Industrial inspection programs within the City will be coordinated, and an industrial database will be constructed for use within the GIS system so that field inspectors will be able to coordinate and evaluate storm water observations with industrial activity which could influence the observations. Mechanisms will be developed to track the status of NPDES industrial storm water discharge permits for industries within the City so that appropriate actions may be taken. A specific EPA grant program will be used to develop wet-weather sampling data for evaluating the correlation between industrial category and storm water discharge characteristics for several industrial categories in Dallas.

Monitoring Program for Industrial Facilities

In conjunction with the management area above, a database of industries having, or needing, NPDES storm water discharge permits will be built. The City will assess industrial response and will encourage industries to meet requirements. A program of reviewing industrial storm water pollution prevention plans (SWPPP's) will be started as industries comply with the permit requirements. A program of selected inspection and storm water monitoring of industries will be begun later in the permit period, as appropriate.

Construction Activity Programs

Site Planning Practices

The City will examine its site planning review process to incorporate erosion and sedimentation control measures and other water quality considerations within the City's site planning review and approval procedures. Existing City ordinances will be

reviewed in order to develop and adopt the necessary new ordinances to meet these water quality related objectives with the full force of City authority.

Best Management Practice Requirements

A detailed BMP technical design manual will be developed for use within the City. A set of specifications will be developed for installation, use and maintenance of BMP's at construction sites for incorporation in City of Dallas standard specifications and details.

Inspection Priorities

An Inspectors Field Manual will be developed to assist personnel in inspecting for pollutant reduction measures in the field. City personnel will be trained in its use and objectives. Additional inspectors will be added to City staff to accomplish the additional efforts required.

CHAPTER TWO

TEXAS TURNPIKE AUTHORITY

STORM WATER MANAGEMENT PROGRAM

THE TEXAS TURNPIKE AUTHORITY

Part 2

**NPDES PERMIT APPLICATION FOR
STORM WATER DISCHARGES FROM A
MUNICIPAL SEPARATE STORM SEWER SYSTEM**

DALLAS NORTH TOLLWAY
(The segment within the City of Dallas)
and
MOUNTAIN CREEK TOLL BRIDGE
(The segment within the City of Dallas)

Co-application with the City of Dallas

**This Part 2 is a supplement to
and is a part of the Part 2 NPDES
Permit Application for Storm Water
Discharges from a Municipal Separate
Storm Sewer System filed by the City of Dallas**

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[REDACTED]

[REDACTED]

[REDACTED]

(Revised June 10, 1994)

INTRODUCTION

JOINT APPLICATION

This Part 2 of the National Pollutant Discharge Elimination System Application for Discharge from a Municipal Separate Storm Sewer System (the "Authority Part 2") is filed by the Texas Turnpike Authority, an agency of the State of Texas (the "Authority"), as a joint application with the City of Dallas (the "City").

The City previously filed Part 2 of its National Pollution Discharge Elimination System Permit Application for Discharges from Municipal Separate Storm Sewer Systems ("City of Dallas Part 2") on November 16, 1992. The Authority has requested from the City that it be allowed to join the City as a Co-applicant. The final consent to this request may not be received until the Authority and the City finalize the interlocal agreement between them. The Texas Department of Transportation ("TxDOT") is also joining the City and the Authority as a co-permittee. TxDOT and the Authority are working on an interlocal agreement between them defining their rights and obligations as co-permittees.

~~It is expected that the agreement will be finalized and the permit application approved by EPA.~~

This permit application is intended to be a part of the City of Dallas Part 2 and the Authority is hereby requesting that it be regarded as co-applicant with the City and TxDOT for the permit requested in the City of Dallas Part 2, as supplemented by this Authority Part 2 and the Part 2 filed by TxDOT, and that they be co-permittees under the final co-permit with each having the responsibilities and duties for the permit conditions relating to the discharges from the storm sewer system for which it is the owner.

Section 1 - Legal Authority
[40 C.F.R. 122.26(d)(2)(ii) [REDACTED]]

The Texas Turnpike Authority (the "Authority") is an agency of the State of Texas created and empowered by the Texas Turnpike Authority Act [REDACTED] to construct, maintain, repair, and operate turnpike projects and to issue revenue bonds for the purpose of paying for the costs of turnpike projects. Tex. Rev. Civ. Stat. Ann. Act. 6674v. (See Appendix E E) [REDACTED]

Pursuant to its statutory authority, the Authority constructed and operates the Dallas North Tollway (the "Tollway") and the Mountain Creek Toll Bridge (the "Toll Bridge"). As part of the construction of both the Tollway and the Toll Bridge, a storm water sewer system was installed to collect, drain and transport storm water runoff from the Tollway or the Toll Bridge to naturally occurring drainage channels or to existing municipal separate storm water systems. The predominant functions of the Tollway system are (i) to accept storm water from drainage areas within the Tollway right-of-way and (ii) to act as a conduit for the City storm water draining from one side of the Tollway to enable it to flow into the City storm water system on the other side of the Tollway. The exclusive function of the Toll Bridge system is to accept storm water runoff from the approach roadways to the bridge or from the bridge itself.

~~The Authority has only those powers granted to it in the Texas Turnpike Authority Act and has been granted no land use authority over property adjacent to the Tollway or the Toll Bridge. Thus, since a large portion of the storm water carried by the Tollway system originates on property within the City, the Authority lacks the legal authority to control discharges into the separate storm sewer system owned by it, except for those discharges that occur immediately on the premises of the Tollway, such as a spill from a motor vehicle.~~

To satisfy the requirements of 40 C.F.R. 122.26(d)(2)(i), [REDACTED] the Authority intends to enter in an interlocal agreement [REDACTED] with the City in which it is anticipated that (i) the City will acknowledge that the ordinances of the City for controlling [REDACTED] discharges [REDACTED] to the City of Dallas municipal separate storm sewer system are also applicable to discharges to [REDACTED] the Authority separate storm sewer, (ii) the City and the Authority will agree to cooperate [REDACTED]

[REDACTED]

[REDACTED]

Section 2 - Source Identification
[40 C.F.R. 122.26(d)(2)(ii)]

Major Outfall Locations

All major outfalls from the Tollway and Toll Bridge storm water system were reported in the Part 1 application of the Authority.

Facilities Discharging Storm Water to MS4s

Section 2.2 of the City of Dallas Part 2 is incorporated into this submittal by this reference. Except to the extent storm water received from the City MS4 carries storm water discharges associated with industrial activity, the Tollway does not directly receive storm water discharges associated with industrial activity. These discharges into the City MS4 will be controlled by the City pursuant to its management plan.

Section 3 - Discharge Characterization
[40 C.F.R. 122.26(d)(2)(iii)]

The Characterization Plan, dated April, 1992 of the North Central Texas Council of Governments and the Regional Urban Storm Water Management Task Force submitted with the City of Dallas Part 1, and as revised and submitted with the Part 1 NPDES Storm Water Permit Applications for the cities of Arlington, Garland, and Irving, Texas is incorporated into this Authority Part 2 by this reference. This Characterization Plan, when complete, will be filed with the EPA as a separate report.

The Authority has agreed to participate with TxDOT and to fund equally one of the sampling events called for in the Characterization Plan.

Section 3 - Discharge Characterization
[40 C.F.R. 122.26(d)(2)(iii)]

The Characterization Plan, dated April, 1992 of the North Central Texas Council of Governments and the Regional Urban Storm Water Management Task Force submitted with the City of Dallas Part 1, and as revised and submitted with the Part 1 NPDES Storm Water Permit Applications for the cities of Arlington, Garland, and Irving, Texas is incorporated into this Authority Part 2 by this reference. This Characterization Plan, when complete, will be filed with the EPA as a separate report.

The Authority has agreed to participate with TxDOT and to fund equally one of the sampling events called for in the Characterization Plan. [REDACTED]

[REDACTED]

[REDACTED]

Section 4 - Proposed Management Program
[40 C.F.R. 122.26(d)(1)(v)]

4.1 Introduction

In regard to the quality of storm water runoff associated with transportation activities, it is the intent of the Authority to develop a comprehensive management plan and establish design criteria and guidelines both to comply with the NPDES criteria and to establish a proactive stance regarding water quality issues. The Authority has requested that the Texas Department of Transportation and the Authority work together to finalize a management plan for storm water runoff associated with transportation actions. The following plan is virtually identical to the proposed management plan of the Texas Department of Transportation.

4.2 Development and Implementation of Permanent Controls

This section includes a description of permanent structural and non-structural control measures to reduce pollutants from roadway runoff, and how the controls will be developed and incorporated into the planning process. In the past, the Authority has used [REDACTED] permanent storm water control measures on an "as-needed" or "as required" basis. As a result of the NPDES requirements and other water quality concerns, the Authority is developing this program to assist in addressing water quality issues in the early stages of project development and throughout the construction of the project. The program will be phased into the existing project development process and will provide guidance on the appropriate levels of mitigation to minimize the impacts to water quality resulting from highway runoff.

When determining the potential of a project to impact water quality, the designer/planner should take into account the existing quality of receiving water at the site. For the purposes of this management plan, the source for this determination will be based on the Texas Water Commission's (TWC) stream segment classification system as referenced from the "State of Texas Water Quality Inventory" and 31 Texas Administrative Code Chapter 307 entitled "Texas Surface Water Quality Standards." Using the stream segment classification system, the TWC and the Texas Parks and Wildlife Department have published documents which list "Use" and "Quality" designations for each waterway segment.

Using this available information, sensitive waters can be identified in the early stages of project development and the design can incorporate appropriate mitigation measures. For the purposes of this program, the quality of receiving water has been classified into three categories: Exceptionally High, High, and Moderate. The stream segment numbering system does not cover all of the waters of the state; therefore, if any perennial stream is affected by a roadway project which does not have a segment designation then that water shall be considered a "High" quality receiving water.

The Texas Department of Transportation has compiled a list of the waterways in the

• **Level I**

This designation pertains to projects that have the highest potential to affect water quality and require the highest degree of mitigation consideration. Preventive measures appropriate for consideration at this level include:

- extended detention (wet/dry) pond,
- sedimentation pond,
- filtration pond,
- vegetative controls/filters, and
- hazardous material traps.

• **Level II**

This designation pertains to projects that have a moderate potential to affect ambient water quality depending on project specific conditions. Preventive measures appropriate for consideration at this level include:

- low volume dry or wet detention basins,
- vegetative controls

• **Level III**

This designation pertains to projects which have a minimal potential to impact water quality depending on project specific conditions and only if drainage is by curb and gutter. Drainage through a grass-lined channel will typically attenuate any contaminants in runoff -from this level of project.

4.2(a) Description of Permanent Control Measures

Upon identification of a potential turnpike storm water runoff pollution problem, a management measure (or measures) shall be implemented to the extent practicable to effectively abate the runoff impact on receiving waters through pollutant removal and retention. There are five primary management measures considered cost-effective for pollutant removal from highway runoff. The management measures are:

- extended detention (wet/dry) pond,
- sedimentation pond,
- filtration pond,
- vegetative controls/filters, and
- hazardous material traps.

Extended Dry or Wet Detention Basin -- An extended detention basin is a runoff storage basin with increased runoff residence time sufficient to remove settleable pollutants to acceptable levels. A wet detention basin has a permanent pool of water. To be effective in removing pollutants there must be sufficient runoff detention time. Expected performance is uncertain as it has been observed to range from poor to excellent depending on the basin's size relative to the following five characteristics which should be considered in the design:

- watershed area,
- vegetative cover of watershed,

- seasons,
- soil erodibility, and
- storm characteristics.

Since a particular detention basin may exhibit variable performance characteristics depending on the foregoing five characteristics, the long-term average performance shall be considered rather than analyzing individual events. General design criteria are as follows:

- Hydrograph centroid shall be delayed through control from a small orifice in the release structure.
- Extended detention shall normally be limited to two-year runoff events.
- Hydrograph delay time shall be at least 24 hours.
- Runoff in excess of a two-year event shall normally be passed through the basin with peak discharge controls only.

A wet detention pond is designed so that the contributing drainage area and/or groundwater is capable of supporting a permanent pool. This pond provides pollutant removal through settling of particulates and biological uptake of soluble contaminants.

Sedimentation pond -- A sedimentation pond is a storage basin with sufficient volume to isolate and contain the "first flush" of runoff for an extended residence time sufficient to remove settleable pollutants to acceptable levels. The typical residence time is between 24 and 40 hours with a first flush volume of one-half to one inch of runoff either from impervious areas or the entire drainage area.

Filtration pond -- A filtration pond is a storage basin with sufficient volume to isolate and contain the first flush of runoff which filters runoff through a porous medium (sand filter) to remove settleable pollutants to acceptable levels. The "first flush" volume should be equal to one-half to one inch of runoff either from impervious areas or the entire drainage area.

Vegetative Controls/Filters -- These shall commonly be used in conjunction with other measures to pre-treat runoff. The most common vegetative controls/filters are:

- Grassed channels, waterways, ditches, or swales designed to inhibit erosion and enhance the settling of suspended solids.
- Overland flow through a filter strip where such strips consist of grass or forested vegetation designed to filter pollutants from sheet flow runoff and increase filtration.

These management measures can be used alone or in combination to address site-specific turnpike project runoff pollution problems. Available information is insufficient to readily determine which management measure is the most effective in removing a specific pollutant from highway runoff; effectiveness is a function of numerous variables related to site conditions, highway design, and other factors. Research is currently underway to

determine the overall effectiveness of each of these management measures and to further refine the procedures for their design and operation.

Vegetative controls can be used in combination with other effective management measures to increase pollutant removal, provide filtering of suspended solids for permanent control structures, and reduce erosion and scour at inflow discharges to infiltration basins, detention basins, and wetlands. Combinations are particularly advantageous where the desired length of grass-lined channel or width of overland flow is unobtainable.

Hazardous material traps (HMT) -- An HMT is a storage facility used to capture and contain a hazardous spill on the highway facility. It typically provides for a capacity of 8,000 gallons, and contains a self-draining outlet and an emergency cut off to contain any spilled materials. It captures the initial volume of runoff from the highway while bypassing any runoff when full.

Miscellaneous -- Relatively effective low-cost management measures that are not necessarily site specific are:

- **Curb elimination** -- Omitting curbs or providing discontinuous curbs (periodic gaps) encourages the transport of storm water runoff off the roadway into vegetated roadside areas. These vegetated roadside areas can be designed and maintained to effectively remove pollutants before the runoff enters any receiving waters. Gaps must be consistent with essential traffic control and highway safety requirements.
- **Litter control** -- Litter control programs will, as a secondary purpose, achieve pollutant reduction through the elimination of pollution sources.
- **Reduction of direct discharges** -- Avoid the direct discharge of turnpike runoff into receiving waters or groundwaters by using effective management measure(s).
 - **Reduction of runoff velocity** -- Encourage bed load deposition by lowering velocities through gradient reduction using drop structures and/or baffles as well as by providing heavily vegetated waterways.
 - **Establish and maintain vegetation** -- Dense vegetative cover and limited mowing with no grass removal provides pollutant reduction through filtration, sediment deposition, infiltration, and to a limited extent, biological assimilation of pollutants by the vegetation.

4.2(b) Effectiveness of Management Measures

At this time only qualitative ratings of management techniques can be offered. This

is due to the variance in the design and management of these measures as well as the intangible site-specific factors that determine the runoff characteristics and pollutant loads. Since mitigation is often a function of a high ADT, which in turn commonly occurs near urban areas, any additional right-of-way may be very costly. As such, cooperative storm water management agreements with local governments to share the benefits and cost is encouraged.

4.3 Erosion and Sedimentation Control During Construction

This section describes the storm water control measures for construction activities. Also applicable to this section are the NPDES General Permit requirements for construction activities.

The major water quality issues associated with turnpike construction activities are the processes of erosion and sedimentation. Accelerated erosion and sedimentation can occur at times in conjunction with the construction of highway and transportation facilities. The accelerated process can result in significant impacts such as safety hazards, expensive maintenance problems, unsightly conditions, instability of slopes, and the disruption and/or destruction of ecosystems. Due to these potentially adverse effects, the minimization of the erosion and sedimentation processes during highway construction shall be included in the total design process of highway projects.

4.3(a) General Guidelines

The design of erosion and sediment control systems involves the application of common sense planning, scheduling, and control actions that will minimize the adverse impacts of soil erosion, transport and deposition. In order to meet the objectives of the management plan for construction, activities the following basic guidelines shall govern the development and implementation of a sound erosion and sediment control plan:

- Plan the highway project to fit the particular topography, soils, drainage patterns and natural vegetation as much as practicable. In general, areas with steep slopes, erodible soils and soils with severe limitations should be avoided when possible.
- Construction sequencing. A sequence of construction should be developed that minimizes the potential erosion and sedimentation impacts. The sequence should consider specific measures dealing with allowable disturbed areas, construction vehicle maintenance procedures, and material stockpiling methods. The sequence of work must be anticipated, stipulated, and should reflect measures to be used throughout the project. Layouts for erosion control features should be included in the construction plans.
- Minimize the extent and the duration of exposure. Plan the phases or stages of construction to minimize exposure. Permanent vegetation should be

- achieved as soon as practicable as the work progresses.
- Apply erosion control practices to prevent discharge of sediments offsite. This principle relates to using practices that control erosion on a site to prevent excessive sediment from being produced. Efforts should be made to keep soil covered as much as possible with temporary or permanent vegetation, erosion control blankets or with various mulch materials. Other practices include diversion structures to channel surface runoff from exposed soils and using slope drains where grades may be prone to erosion.
 - Apply perimeter control practices to protect the disturbed area from off-site runoff and to prevent sedimentation damage to areas downgradient of the construction site. This principle relates to using practices that effectively isolate the construction site from surrounding properties, and especially to controlling sediment once it is produced and preventing its transport from the site. Diversion structures, swales, dikes, sediment traps, vegetative and structural sediment control measures can be classified as either temporary or permanent depending on whether or not they will remain in use after construction is complete.
 - Keep runoff velocities low and retain runoff on the site. The removal of existing vegetative cover and the resulting increase in impermeable surface area during construction will increase both the volume and velocity of runoff. These increases must be taken into account when providing for erosion control. Keeping slope lengths short and gradients low, and preserving natural vegetative cover can keep storm water velocities low and limit erosion hazards. Runoff from the development should be safely conveyed to a stable outlet using storm drains, diversion structures, stable waterways or similar measures. Conveyance systems should be designed to withstand the velocities of projected peak discharges. These facilities should be operational as soon as possible.
 - Stabilize disturbed areas immediately after final grade has been attained. Permanent structures, temporary or permanent vegetation, mulch, stabilizing emulsions, or a combination of these measures, should be employed as quickly as possible after the land is disturbed. Temporary seeding, mulches and other control materials can be most effective where or when it is not practical to establish permanent vegetation or until the vegetation is established. Such temporary measures should be employed immediately after rough grading is completed, if a delay is anticipated in obtaining finished grade. The finished slope of a cut or fill should be stable and ease of maintenance should be considered in the design.
 - Implement a thorough inspection, maintenance and follow-up program. This last principle is vital to the success of the management of runoff from construction activities. A site cannot be effectively controlled without thorough, periodic checks of the erosion and sediment control practices.
 - The Authority generally expects to follow the standard Authority ~~specification~~ specification for "Erosion, Sedimentation and Water Pollution Prevention and Control" in all construction projects.

4.3(b) Storm Water Pollution Prevention Plans

A storm water pollution prevention plan shall be developed for each construction site covered by the NPDES general permit for construction activities. The plan shall describe and ensure the implementation of practices that will be used to reduce the pollutants in storm water discharges associated with the construction site and to assure compliance with the terms and conditions of the general permit. The Storm Water Pollution Prevention Plan must be completed prior to the commencement of construction and shall include the following items:

1. **Site Description.** Each plan shall, provide a description of pollutant sources and other information as indicated:
 - a. A description of the nature of the construction activity;
 - b. A description of the intended sequence of major activities that disturb soils for major portions of the site;
 - c. Estimates of the total area of the site and the total area of the site that is expected to be disturbed by excavation, grading, or other activities;
 - d. An estimate of the runoff coefficient of the site after construction activities are completed and existing data describing the soil or the quality of any discharge from the site;
 - e. A site map indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which are not to be disturbed, the location of major structural and nonstructural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands), and locations where storm water is discharged to a surface water; and
 - f. The name of the receiving water(s) and the ultimate receiving water(s), and areal extent of wetland acreage at the site.
2. **Controls.** Each plan shall include a description of appropriate controls and measures that will be implemented at the construction site. The plan will clearly describe for each major activity the appropriate control measures and the timing during the construction process that the measures will be implemented. The controls will be implemented in accordance with the Authority's Standard Specification for Erosion and Sedimentation Control and relevant Special Specifications. The description of the controls shall address the following minimum components:

- stabilization practices,
 - structural practices, and
 - other controls, e.g. waste disposal, and off-site vehicle tracking of sediments.
3. **Storm Water Management.** A description of measures to be taken to address long term water quantity and quality issues after the completion of construction activities.
 4. **Maintenance.** A description of the procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and other protective measures identified in the site plan in good and effective operating condition).
 5. **Inspections.** A description of the inspection procedures to ensure the effectiveness of vegetation, erosion and sediment control measures and other protective measures identified in the site plan.

4.3(e) Inspection of Temporary Controls

Within 24 hours after a significant rainfall event (0.5 inches), the Contractor and Engineer will inspect the entire project to determine the condition of the erosion control devices. Sediment will be removed from devices and damaged devices repaired as soon as practical. The Contractor will remove silt accumulations and deposit the spoils in an area designated by the Engineer.

Repeatedly troublesome areas will be analyzed, modified and reconstructed to minimize maintenance and provide maximum protection. Prior to forecasted heavy rain predictions, the entire area will be inspected to ensure the best possible protection.

The Contractor should be aware that paved surfaces may accumulate sediment after rainfall events, especially areas where construction traffic has caused soils to accumulate on traffic surfaces.

All damaged and/or ineffective temporary erosion control devices will be repaired at the earliest date possible, but no later than seven days after the defective controls have been noted in the inspection notes.

Qualified personnel should inspect the construction site at least once every seven calendar days and within 24 hours of the end of a rainfall that is 0.5 inches or greater. Where sites have been finally stabilized, or during seasonal arid periods in arid areas (areas with an average annual rainfall of 0-10 inches) and semi-arid areas (areas with an average annual rainfall of 10-20 inches) such inspection shall be conducted at least once every month.

The inspection procedures should be as follows:

- a. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.
- b. Based on the results of the inspection, the site description identified in the plan and pollution prevention measures identified in the plan shall be revised as appropriate, but in no case later than seven calendar days following the inspection. Such modifications shall provide for timely implementation of any changes to the plan within seven days following the inspection.
- c. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken shall be made and retained as part of the storm water pollution prevention plan for at least three years from the date that the site is finally stabilized. The report should be signed by the Project Manager.

An inspection form to be used on Authority field inspections is being developed. Each drainage system or critical discharge area can be noted by code as to its performance and/or maintenance requirement.

A place on the form is also provided for the recording of rainfall in inches from the last 24 hour period. The Authority's inspector should keep a rain gauge on site and check the functional level on a daily basis recording, if necessary, the amount of rain received. The rain gauge should be of a design to maintain accurate records during cold weather conditions.

Priority maintenance items should be numbered in sequence by the Authority inspector. Under no circumstances shall the Contractor deviate from this plan without written authorization from the Engineer. The purpose of this form is, 1) to provide an easy and effective inspection report, 2) to provide the Contractor with updates for the work required, 3) to provide a track record of troublesome areas so that they can be identified, analyzed and modified to minimize maintenance and maximize performance, and 4) to provide a report of activities in accordance with the NPDES general permit requirements and the storm water management plan.

Part 2: NPDES Application
Storm Water Discharges
Municipal Separate Storm Sewer System

The Texas Turnpike Authority
Co-Permittee: City of Dallas
Page 15 of 21

4.4 Turnpike Operation and Maintenance Activities

Preserving water quality while maintaining and operating the turnpike system presents a complex challenge. The Authority continues to review and improve its maintenance activities so as to minimize the potential to impact the natural environment.

Water quality and storm water runoff issues in maintenance and operations may be summarized using seven categories:

- **Vegetation Management**
- **Earth Disturbing Operations**
- **Material Storage/Stockpiles**
- **Disposal Practices**
- **Spill Response**
- **Paint Removal** [REDACTED]
- **Other**

4.4(a) Vegetation Management

Overall, the Authority's effort to control storm water runoff and its success in water quality conservation rely heavily on roadside vegetation management. The Authority addresses its right-of-way vegetation in a four-level vegetation management plan, with levels determined by using average daily traffic (ADT) and descriptions of surrounding property use. This statewide guide harmonizes with the local climate, topography, plant life and levels of urbanization to:

- ensure the safety of the traveling public
- enhance environmental protection
- mitigate erosion, and
- promote coordination and efficiency in maintenance activities.

Vegetation management along the roadside consists of propagation and control of vegetation. Control of vegetation growth is accomplished by physical and chemical means. Physical methods of weed and brush control may include hand-pulling, hoeing, plowing, cultivating, trimming and mowing. The most economical means of control is by using herbicides. Herbicides have been developed to control vegetation with a minimum of harm to the environment. On an annual basis, the Authority utilizes very small quantities of herbicides and pesticides.

4.4(b) Earth Disturbing and Maintenance Operations

The Authority on rare occasions engages in earth-disturbing operations during regular maintenance of roadways. These operations do not presently meet the definition of construction activities as regulated by the NPDES program but the Authority encourages the use of controls to limit erosion and sedimentation resulting from these projects.

Most turnpike maintenance sites experience little erosion if the work is performed:

- at the proper time of year (season),
- at a location protected from sensitive environments,
- with minimal land area disturbance, and only after an investigation/knowledge of area soils.

Maintenance by definition means keeping the system in its existing state. Minimal amounts of land area are usually disturbed or rehabilitated into additional paved surface areas which would increase storm water runoff.

It is thought that sedimentation in the majority of maintenance activities can be controlled with a timely control of soil erosion at the site. This control plan should not merely duplicate new construction control principles. The specification elements of the erosion plan would consider site specificity, locating sensitive resources, scheduling with respect to the season, applying natural and man-made devices, and establishing reliable vegetative cover. However, the plan likely would require more mobility in temporary controls with the smaller and more mobile maintenance operation. The control plan should be implemented prior to any earthwork operations and include unit pay items for applicable control measures.

4.4(c) Material Storage/Stockpiles

The Authority has minimized the storage of material on turnpike right-of-way and storage is only planned for areas that have effective means for controlling any erosion or runoff.

4.4(d) Disposal Practices

Unknowns found on the Right-of-Way

The Authority rarely finds unknown substances on turnpike projects. The quality and use or disposal usually results in costly testing to first classify the material. A waste can be classified as hazardous by the EPA because it is listed, it exhibits hazardous characteristics, or it is a mixture of wastes that contains a listed waste, or a characteristic waste. The wastes may be saturating soils or within sediment encountered during a maintenance activity. Obviously, the problem becomes magnified when dealing with unlabeled waste drums improperly stored or appearing on the right-of-way. When the waste is an unknown waste or from an unknown source, the available options are usually limited to analytical testing before disposal.

The Authority can best manage the removal of waste products threatening water quality on the right-of-way by:

- Checking the EPA list of hazardous chemical names if known. EPA also provides a list of sources that generate hazardous waste and should be

- checked.
- Understanding the process of identification and disposal.
Testing the waste for hazardous characteristics.

4.4(e) Spill Response

The Authority rarely discovers or is notified of hazardous material spills on turnpike right-of-way. The Authority maintains a Hazardous Materials Emergency Response Guidebook that sets forth its response procedures.

4.4(f) [REDACTED]

[REDACTED]

Other Maintenance Considerations

Deicing Activities - Removal of snow and ice from the roadway is considered work of great importance and is classified as an emergency operation that takes precedence over all other work. The work is executed as expeditiously as practicable so that roads are maintained in as good a working condition as possible. During and after the icy conditions, inspection should be made of the conduct of the work and to insure proper cleanup operations.

Deicing salt is used on a limited basis by the Authority. The preferred method of maintaining a safe roadway during icy conditions is through the use of sand without salt. Only during the most severe conditions will salt be mixed with the sand, at approximately 100 pounds of salt per cubic yard of sand.

4.5 [Redacted] Detection and Removal of Illicit Connections, [Redacted] Illicit Discharges and [Redacted] [Redacted]

The Tollway's storm drainage systems conveys runoff from areas within the City and outside the tollway [Redacted] right-of-way and, therefore, may be vulnerable to illicit connections [Redacted] to the City MS4 system or its own [Redacted]

[Redacted]

The program to detect and eliminate illicit connections to the storm drainage systems under Authority control will consist of the following:

- periodic inspections and daily workday monitoring of activities,
- [Redacted] coordination with municipalities and other regulatory agencies.

The normal inspection and maintenance activities performed by the Authority will include screening for potential environmental problems within the storm drainage systems. This will include visual inspections for dry weather discharges or other indications of potential undesirable environmental impacts. Due to its lack of enforcement powers outside the [Redacted] right-of-way, coordination with the City will be established to report and remedy illicit connections. Upon detection of a potential illicit connection, the Authority will investigate to the source or to the limits of the [Redacted] right-of-way and then report the problem to the source and other responsible regulatory agencies.

4.6 Public Awareness and Education

Specific emphasis on educating the general public and Authority personnel are important and integral aspects of a storm water management program. Many pollution problems can be avoided by having an informed populace willing to participate in improving storm water quality. The Authority is committed to participating in:

- Regional programs to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers;
- Educational, public information, and other activities to facilitate the proper management and disposal of used oil and toxic materials; Appropriate educational and training guidelines for Authority planners, highway designers, construction site personnel and maintenance personnel; and appropriate funds necessary to perform the goals stated above.

The Authority hereby adopts by reference the contents of all documents, activities, and programs contained in Part 2 of the NPDES permit application, including the City's Municipal Separate Storm Sewer System (MS4) plan, and the City's plan for the development and implementation of the City's public awareness program.

Section 5 - Assessment of Controls
[40 C.F.R. 122.26(d)(2)(iv)(D)(v)]

Estimating the reduction of pollutant loads entering municipal storm sewers resulting from the implementation of Authority's management plan would be difficult to predict at this time. Even a review of the literature reveals that any one particular control may have varying effectiveness. For example, according to one study the capability of a wet pond to remove zinc from highway runoff varied from 13 to 92 percent. The comprehensive nature of the Authority's storm water management plan makes it more difficult to estimate reduction in pollutant loads. The plan stresses avoidance of water quality impacts through education and pre-project planning. This in itself should significantly reduce pollutant loads resulting from Authority activities.

Section 101.01
Responsibilities of Permittee
101.01.01 (b) (2) (i) (A)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Applicable to any violation caused or to be caused by the Authority, including any

Paragraph 18. The Authority, as part of its storm water management plan, will develop and implement a water management and control plan to meet the requirements of the discharge of pollutants to surface waters.

Paragraph 19. When all the discharges are approved by the Authority, the Authority will cooperate and consult with the public in the appropriate region.

Paragraph 20. Each party will cooperate and consult with the other in the maintenance program being conducted by the North Central Texas Council of Governments.

Paragraph 21. The Authority will participate and consult by retaining the City for any on-going air quality monitoring program or water quality monitoring required by the EPA.

Paragraph 22. The Authority and the City will participate in a public relations program.

Paragraph 23. The Authority and the City will cooperate in the preparation and filing of any annual system wide report required by the EPA.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

APPENDIX I
COMPLIANCE ORDER

EPA's
Findings of Violation
and
Order for Compliance
Issued February 6, 2004

Appendix to the Consent Decree in
United States and State of Texas v. City of Dallas

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 6

In the Matter of	§	Docket Nos. CWA-06-2004-1911 and RCRA-06-2004-0907
	§	
THE CITY OF DALLAS, a Texas Municipality	§	
	§	
Respondent	§	FINDINGS OF VIOLATION AND ORDER FOR COMPLIANCE
	§	
NPDES Permit No. TXS000701	§	
EPA ID Nos. TXD981605975 and TXD982548307	§	

I.

COMPLIANCE ORDER

The Director of the Compliance Assurance and Enforcement Division, of the United States Environmental Protection Agency (EPA), Region 6, issues this COMPLIANCE ORDER (Order) to the City of Dallas (Respondent).

II.

STATEMENT OF AUTHORITY

I. This Order is issued pursuant to Section 3008(a) of the Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. §§ 6928(a) and 6901 ~~et seq.~~, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA). Section 3008(a) of RCRA authorizes the Administrator of the EPA to issue such compliance orders whenever the Administrator has information that any person has violated or is violating any requirement of Subtitle C of RCRA, 42 U.S.C. §§ 6921-6939e. This Order is also issued under the authority vested in the Administrator of EPA by Sections 308(a) and 309(a) of the Clean Water Act (the Act),

Appendix I

33 U.S.C. §§ 1318(a) and 1319(a).

2. The requirements of Subtitle C of RCRA include the requirements of the authorized program in a State which has been authorized to carry out a hazardous waste program under Section 3006 of RCRA, 42 U.S.C. § 6926. The State of Texas received final authorization for its RCRA-hazardous waste program on December 26, 1984 (49 Fed. Reg. 50362), and there have been subsequent authorized revisions to the Texas base program. With the addition of Section 3006(g) of RCRA, 42 U.S.C. § 6926(g), new requirements imposed pursuant to the authority of HSWA are immediately applicable in the authorized states upon the federal effective date. The Texas Commission on Environmental Quality (TCEQ) is the State agency designated to carry out the authorized RCRA Program in Texas.

3. The authority to issue this Order pursuant to RCRA and the Clean Water Act has been delegated by the Administrator of EPA to the Regional Administrator, EPA Region 6, who has further delegated this authority to the Director of the Compliance Assurance and Enforcement Division, Region 6.

III.

NOTICE TO THE STATE

4. Notice of this administrative action has been given to the State of Texas prior to the issuance of this Order, pursuant to Section 3008(a)(2) of RCRA, 42 U.S.C. § 6928(a)(2), and Section 309(b) of the Clean Water Act, 33 U.S.C. § 1319(b).

FACTS RELEVANT TO RCRA VIOLATIONS:

IV.

FINDINGS OF FACT AND CONCLUSIONS OF LAW
(RCRA)

5. City of Dallas (Respondent) is a municipality chartered under the laws of the State of Texas, and as such, Respondent is a "person," as that term is defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15), 40 C.F.R. § 260.10, and 30 Texas Administrative Code (TAC) § 335.1.

6. Respondent operates multiple facilities located on City owned properties, including two (2) vehicle maintenance and service centers (Service Centers) subject to this RCRA Order. Said Service Centers are primarily used by Respondent to perform routine maintenance and repair work on City owned vehicles, construction equipment, and street maintenance equipment for storage of vehicles, equipment, materials, and fuel; and street sign printing.

7. Respondent's Service Centers, along with all contiguous land and structures, and other appurtenances and improvements, are located in Dallas, Dallas County, Texas and identified as follows: Central Service Center located at 3111 Dawson Street and Northeast Service Center located at 8935 Adlora Lane.

8. Pursuant to RCRA § 3010(a), 42 U.S.C. § 6930(a), Respondent filed Notifications of Hazardous Waste Activity (Notifications) with the State of Texas in September 1986 (Central Service Center) and February 1988 (Northeast Service Center), identifying the Service Centers as small quantity generators of hazardous waste. Respondent's Notifications listed hazardous waste code D001 (ignitable liquids) as being present at Respondent's Service Centers.

9. Each of Respondent's Service Centers, specified above, is a "facility" as that term is defined at 40 C.F.R. § 260.10, and 30 TAC § 335.1.

10. Respondent is a "generator" of hazardous waste, as the term is defined at 40 C.F.R. § 260.10, and 30 TAC § 335.1.

11. Pursuant to RCRA Section 3007, 42 U.S.C. § 6927, EPA conducted Compliance Evaluation Inspections (Inspections) at Respondent's Service Centers on November 19, 2003 and November 21, 2003, to determine compliance with RCRA regulations.

12. During the Inspections, EPA representatives observed that Respondent's Central Service Center consisted of multiple buildings situated throughout the property. EPA representatives determined that the majority of the hazardous waste generated on-site originates from the Equipment and Building Services Department's vehicle service garage.

13. EPA representatives noted that the vehicle service garage is responsible for performing maintenance and repairs on approximately 1500 city owned vehicles, as well as other heavy equipment. The vehicle service garage is open for operation twenty-four hours per day.

14. During the Inspections, EPA representatives documented that the Central Service Center houses the Public Works and Transportation Department building, located at 3204 Canton Street, Dallas, Texas. Respondent operates a street sign painting shop within the building. The sign painting shop manufactures traffic, road, and street signs for Respondent.

15. EPA representatives documented that the sign painting shop regularly uses paints, inks, solvents, and other chemicals in Respondent's multi-step silk screen printing and painting process.

16. EPA representatives observed that the concrete floor and walls of the silk screen cleaning area were stained by various paints, inks, and solvents, indicating that much of the waste had previously been deposited down the cleaning area drain and into the building's wastewater piping system.

17. EPA representatives then analyzed a blueprint of the building provided by Respondent which illustrated that the cleaning area drain is connected to a 400 gallon dilution box. The dilution box is designed to catch heavy paint and ink particles which settled as the wastewater flows through the dilution box. The remaining wastewater flows through the dilution box and into Respondent's sanitary sewer collection system.

18. EPA representatives were informed by Respondent that hazardous waste determinations were occasionally performed on sludges removed from the dilution box; however, no analytical results from such hazardous waste determinations were provided to EPA. EPA representatives further noted that the sign shop manager had no knowledge of hazardous waste analyses being performed on waste streams generated from the sign shop.

19. During the Inspections, EPA representatives observed one (1) waste fuel storage tank located outside of and adjacent to the Equipment and Building Services Department's vehicle service garage. Said storage tank is used by Respondent to store gasoline and diesel waste fuel with an estimated capacity of 100 to 250 gallons.

20. EPA representatives noted that the storage tank contained a certain quantity of waste fuel measured at less than one foot of liquid as indicated on the tank gauge or approximately six (6) inches as indicated on a "broom handle test." A puddle of fuel was visible on top of the

storage tank adjacent to the fill pipe, indicating that waste fuel had recently been injected into the tank.

21. EPA representatives documented that the storage tank failed to be equipped with adequate secondary containment. Additionally, Respondent provided no records to demonstrate that required tank integrity, corrosion protection, or leak detection testing had been conducted.

22. EPA representatives further noted that Respondent provided no records to demonstrate that required daily inspections of the storage tank had been conducted.

23. Pursuant to 30 TAC § 335.69(f) [40 C.F.R. § 262.34(d)(3)], a generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month may accumulate hazardous waste on-site for 180 days or less without a permit or without having interim status provided that the generator complies with the requirements of 40 CFR § 265.201.

24. At the time of the Inspections, Respondent failed to comply with hazardous waste storage tank requirements set forth in 40 C.F.R. § 265.201, Subpart J of 40 C.F.R. § 265, and Section 3005(a) of RCRA, with respect to accumulation, storage, secondary containment, tank integrity testing, corrosion protection testing, leak detection, tank inspections, and record keeping.

25. During the Inspections, EPA representatives documented the above mentioned acts of non-compliance and alleged the following violations of RCRA at Respondent's Central Service Center:

Central Service Center

- a. Respondent failed to perform hazardous waste determinations and implement proper waste management practices during operation of the vehicle service garage to prevent motor oil, hydraulic fluid, gasoline, and other hazardous wastes from draining onto Service Center grounds, in violation of 30 TAC § 335.62 [40 C.F.R. § 262.11].
- b. Respondent failed to perform hazardous waste determinations on certain waste streams generated during sign painting operations and prior to disposal. After reviewing the Material Safety Data Sheet (MSDS) and lists of constituents regularly used in sign manufacturing processes, EPA representatives determined that certain materials used by Respondent contained hazardous constituents such as xylene, toluene, turpentine, naphthalene, ketone, petroleum distillates, and aromatic hydrocarbons. Violation of 30 TAC § 335.62 [40 C.F.R. § 262.11].
- c. Respondent failed to comply with hazardous waste storage tank requirements with respect to accumulation, storage, secondary containment, tank integrity testing, corrosion protection testing, leak detection testing, tank inspections, and record keeping, as required by 30 TAC § 335.69(f) [40 C.F.R. § 262.34(d)(3)]. Therefore, Respondent stored hazardous waste without a permit, in violation of 30 TAC § 335.151 [40 C.F.R. § 270.1, RCRA § 3005(a)].

26. During the Inspections, EPA representatives observed that Respondent's Northeast Service Center consisted of four buildings identified as follows: Equipment and Material Services Department, Wastewater Collection Department, Sanitation Services Department, and Street Maintenance Department.

27. The respective Departments located at the Northeast Service Center operate semi-autonomously with separate management structures. The Equipment and Material Services Department's vehicle service garage performs maintenance and repairs on all vehicles and heavy equipment housed and dispatched by Respondent from this Service Center.

28. EPA representatives observed three (3) above ground used oil storage tanks located outside of and adjacent to the Equipment and Material Services Department's vehicle service garage. These used oil tanks are used by Respondent to store waste oil.

29. EPA representatives documented that one (1) of the used oil tanks, with a capacity of 1000 gallons, was missing the secondary containment drain plug.

30. EPA representatives further documented that two (2) used oil storage containers were not properly labeled with the words "Used Oil". One container was located inside of the vehicle service garage, while the other was located inside of the Service Center's Wastewater Collection Department building.

31. Pursuant to 40 C.F.R. § 279.22, which is adopted by reference in 30 TAC § 324.1, "containers and above ground tanks used to store used oil at generator facilities must be in good condition (no severe rusting, apparent structural defects, or deterioration); and not leaking (no visible leaks); must be labeled or clearly marked with the words 'Used Oil'."

32. At the time of the Inspections, Respondent was not properly maintaining secondary containment equipment connected to the used oil storage tanks at the Northeast Service Center.

33. During the Inspections, EPA representatives documented the above mentioned acts of non-compliance and alleged the following violations of RCRA at Respondent's Northeast Service Center:

Northeast Service Center

- a. Respondent failed to label and clearly mark containers used to store used oil with the words "Used Oil", in violation of 30 TAC § 324.6 [40 C.F.R. § 279.22].
- b. Respondent failed to properly maintain secondary containment equipment, in violation of 30 TAC § 324.6 [40 C.F.R. § 279.22].

34. Each of the substances identified in paragraph nos. 16, 18, 19 and 20 above is a "solid waste" as defined at 30 TAC § 335.1 [40 C.F.R. § 261.2].

35. Pursuant to 40 C.F.R. § 261.3(a)(2)(iv), a solid waste is a hazardous waste if it is a mixture of a solid waste and one or more hazardous wastes listed in subpart D of this part and has not been excluded under 40 C.F.R. §§ 260.20 and 260.22. Thus, the substances identified in paragraph nos. 16, 18, 19 and 20 above are hazardous waste.

36. Each of the substances identified in paragraph nos. 16, 18, 19 and 20 above is a "hazardous waste" as defined at 30 TAC § 335.1 [40 C.F.R. § 261.3].

37. Each of the substances identified in paragraph nos. 16, 18, 19 and 20 above is also an "industrial hazardous waste" as defined at 30 TAC § 335.1. For the purposes of this RCRA Order, the term "hazardous waste" shall mean "hazardous waste" and "industrial hazardous waste."

38. Pursuant to 30 TAC § 335.62 [40 C.F.R. § 262.11], a person who generates a solid waste must make a determination as to whether that solid waste is a hazardous waste.

39. At the time of the Inspections, Respondent had not determined whether certain solid wastes (motor oil, hydraulic fluid, gasoline, etc.) generated from vehicle service garage operations and solid wastes (paints, inks, solvents, chemicals, etc.) generated from sign painting operations, referenced in paragraph no. 25 above, were a hazardous waste.

FACTS RELEVANT TO CWA VIOLATIONS:

FINDINGS OF FACT AND CONCLUSION OF LAW
(CWA)

40. Paragraphs 1 through 39 are realleged and incorporated by reference.

41. The City of Dallas (Respondent) is a municipality chartered under the laws of the State of Texas, and as such, the Respondent is a "person," as that term is defined at Section 502(5) of the Clean Water Act, (the Act) 33 U.S.C. § 1362(5), and 40 C.F.R. § 122.2.

42. At all times relevant to this Order, Respondent owned or operated the Municipal Separate Storm Sewer System (MS4 or the facility), located within the corporate boundary of the City of Dallas, Dallas County, Texas and was, therefore, an "owner or operator" within the meaning of 40 C.F.R. § 122.2.

43. At all relevant times, the facility was a "point source" of a "discharge" of "pollutants" with its storm water discharges to receiving waters of all areas, except agricultural lands, within the corporate boundary of the City of Dallas, served by a Municipal Separate Storm Sewer System owned or operated by Respondent. Said receiving waters are considered "waters of the United States" within the meaning of Section 502 of the Act, 33 U.S.C. § 1362, and 40 C.F.R. § 122.2.

44. The MS4 includes all municipal separate storm sewers within the meaning of 40 C.F.R. §§ 122.26(b) and 122.30.

45. Because the Respondent owned or operated a facility that is a point source of discharges of pollutants to waters of the U.S., the Respondent and the facility were subject to the Act and the National Pollutant Discharge Elimination System (NPDES) program.

46. Under Section 301 of the Act, 33 U.S.C. § 1311, it is unlawful for any person to discharge any pollutant from a point source to waters of the United States, except with the

authorization of, and in compliance with, an NPDES permit issued pursuant to Section 402 of the Act, 33 U.S.C. § 1342.

47. Section 402(a) of the Act, 33 U.S.C. § 1342(a), provides that the Administrator of EPA may issue permits under the NPDES program for the discharge of pollutants from point sources to waters of the United States. Any such discharge is subject to the specific terms and conditions prescribed in the applicable permit.

48. The City of Dallas, (Respondent), as a co-permittee with North Texas Tollway Authority (formerly Texas Turnpike Authority - Dallas), applied for and was issued NPDES Permit No. TXS000701 (herein "the permit") under Section 402(p) of the Act, 33 U.S.C. § 1342. The permit was issued with an effective date of May 1, 1997. At all relevant times, the Respondent was authorized to discharge from all portions of the MS4 owned or operated by Respondent, to waters of the United States, only in accordance with Respondent's Storm Water Management Program; specific terms and conditions of the permit; and associated Storm Water Discharge Regulations set forth in 40 C.F.R. § 122.26.

49. The Respondent has failed to take timely and appropriate enforcement action to address the illicit discharges of storm water and improper disposal of non-storm water associated with industrial activities (including Respondent's vehicle service centers) which are operated by the City of Dallas. These illicit discharges are prohibited from entering the MS4 and are violations of the Respondents' NPDES Storm Water Permit. Part II.A.6.f. of the permit specifies that each Permittee shall require the elimination of illicit discharges and improper disposal practices as expeditiously as reasonably possible. Where elimination of an illicit discharge within

thirty (30) days is not possible, the permittee shall require an expeditious schedule for removal of the discharge. In the interim, the permittee shall require the operator of the illicit discharge to take all reasonable and prudent measures to minimize the discharge of pollutants to the MS4.

50. Pursuant to Section 308 of the Act, 33 U.S.C. § 1318, EPA conducted a compliance evaluation inspection of Respondent's Northeast Area Service Center (NEC) on November 19, 2003. As a result, the Northeast Service Center was rated unsatisfactory in the areas of Records/Reports, Storm Water, and Operations and Management. The specific deficiencies are noted as follows and are violations of the provisions of Respondent's Storm Water Management Program (SWMP), and therefore are violations of Part I, Part II, and Part III of the permit:

- a) The waste oil storage containment tank lacked a drain plug.
- b) The battery storage room and battery casing wash sink contains limestone chips to neutralize acids. However, there is no process in place to pre-treat potential discharges of metals from the battery wash area into the sanitary sewer and other potential discharges into the various floor drains within the service area.
- c) The vehicle wash bay troughs and drains contained oily sludge.
- d) The bulk fueling area does not have a canopy as required per the SWMP (page 4-4-2) and has not been evaluated for the potential release of fuel (with a polar component of MTBE that will not be trapped by an O/W separator) into an adjacent storm sewer.
- e) There are accumulated floatables and trash dispersed behind the NEC fencing, along the White Rock Creek flood plain, which have

not been collected and disposed of in an appropriate manner as per Part II.A.6.c. of the MS4 permit which requires the implementation of a floatables control program.

- f) The NEC Water Utilities building's material storage area contains sediment that can potentially discharge to the storm drain. This storm drain is plumbed to the O/W separators.
 - g) The five (5) gallon plastic containers holding sewer line degreaser and enzymes are not stored in a diked or indoor area to prevent potential discharges resulting from possible container leakage or rupture.
 - h) The west side of the NEC Street Maintenance Department's winter sand/salt mix storage bunker slopes downhill toward the storm drain leading to White Rock Creek. There was evidence of salt discharges from this bunker. This area does not have any storm water controls such as those situated on the east side of the bunkers.
 - i) The concrete silo containment dike has two cuts to prevent the accumulation of contaminated storm water. These cuts need to be sealed and repaired, and a program put in place to prevent the discharge of potentially high pH storm water runoff to White Rock Creek. Such a program may include the assimilation of the water into the concrete mix, or discharge into the sanitary sewer system upon approval by the City's industrial pretreatment staff.
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- j) The Street Maintenance Department lacks Best Management Practice (BMP) with regards to stabilization of the fill materials brought into the former salvage yard. Grass seed or another BMP is required. The silt fencing at the far southwest side of the site is in need of repair.
- k) The Street Maintenance Department's tractor wash area conducts its operations in an open area which drains toward White Rock Creek. These operations should be conducted in area that is equipped with a grit trap plumbed into the sanitary sewer. While no detergents were reportedly used in this washing operation, it violates Section 4.9, Illicit Discharge Detection and Elimination Program of SWMP (pg. 4.9-4), prohibiting the discharge of wastewater into the MS4 from the washing of City vehicles.
- l) A Streets Maintenance Department truck was found to be leaking hydraulic oil in the parking lot. A review of service records showed that the vehicle had not been reported as having an oil leak, even though it was apparent that the leak was ongoing and long term. The driver failed to report the leak to the City Equipment and Building Services (EBS) staff.
- m) The NEC's street sweeper is in disrepair. Consequently, this unit is not available to be used to periodically clean the materials storage areas.

- n) The NEC has failed to establish an adequate management tracking system to address potential storm water deficiencies identified by EBS Environmental and Inventory Services reporting. Program inception was March 3, 2003. These site inspection reports need to include greater detail to include, but not be limited to: 1) where the concerns are located; 2) who made the inspection; 3) who ensured that the corrections were made and 4) visual observations of the storm water runoff quality (ideally within a half-hour of the storm event).
- o) There is no process in place to pre-treat potential discharges of metals from the battery wash area into the sanitary sewer and other discharges into the various floor drains within the service area.

51. Pursuant to Section 308 of the Act, 33 U.S.C. § 1318, EPA conducted a compliance evaluation inspection of Respondent's Northwest Area Service Center (NWC), located at 2630 Shorecrest Lane, Dallas, Texas on November 20, 2003. As a result, the Northwest Area Service Center was rated unsatisfactory in the areas of Records/Reports, Facility Site Review, Storm Water, and Operations and Management. The specific deficiencies are noted as follows and are violations of provisions of the SWMP, and therefore are violations of Part I, Part II, and Part III of the permit:

- a) Several garbage trucks around the service area driveways were observed to be leaking "leachate" onto the ground. Following a storm event, this leachate will discharge to the street drainage
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system on Shorecrest Lane, and then to Bachman Lake, which is located approximately 500 feet down slope.

- b) The NWC does not have any oil/water separators to remove oily contaminants from storm water runoff draining from the parking and/or fueling areas. These areas discharge directly into the MS4, and then ultimately to Bachman Lake.
- c) The battery storage room and battery casing wash sink contain limestone chips to neutralize acids. There is no process in place to pre-treat potential discharges of metals from the battery wash area into the sanitary sewer and other potential discharges into the various floor drains within the service area.
- d) The NWC vehicle parking lot had numerous new oil and diesel fuel spill stains in and around the vehicle servicing area lot and fuel island, respectively. The EBS staff was observed applying oil sorb throughout the parking lot. This clean-up effort should have been performed prior to inspection, and could have been avoided by the use of oil drip pans. There was minimal use of oil drip pans at the NWC, which explains the staining and excessive use of oil sorb.
- e) The bulk fueling area does not have a canopy as required per the SWMP (page 4-4-2) and has not been evaluated for the potential release of fuel (with a polar component of MTBE that will not be trapped by an O/W separator) into an adjacent storm sewer.

- f) While there was no evidence of cement dust on the pavement, the cement silo failed to have containment.
- g) The scrap roll-off was discharging an unknown liquid onto the ground which lead toward both a storm drain in the parking lot and Shorecrest Lane. Either discharge route has the potential to discharge pollutants to Bachman Lake.
- h) The Street Maintenance Department's materials storage bunkers will discharge runoff and sediment into the parking lot during significant rainfall. There are no preventive runoff measures currently in place, such as curbing, to control pollutant runoff.

52. Pursuant to Section 308 of the Act, 33 U.S.C. § 1318, EPA conducted a compliance evaluation inspection of Respondent's Southeast Area Service Center (SEC), located at 2761 Municipal Street, Dallas, Texas on November 20, 2003. As a result, the Southeast Area Service Center was rated unsatisfactory in the areas of Records/Reports, Facility Site Review, Storm Water, and Pollution Prevention. The specific deficiencies are noted as follows and are violations of provisions of the SWMP, and therefore are violations of Part I, Part II, and Part III of the permit:

- a) Failure to use trained personnel to investigate non-storm water discharges at the SEC from 1997 until 2001.
 - b) Failure to identify outfalls with potential non-storm water discharge contamination.
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- c) Failure to ensure that corrective action was taken and documented, and that management changes have been implemented.
 - d) Failure to reduce the potential for non-storm water discharges related to improper disposal of waste materials.
 - e) Failure to comply with City of Dallas Code (Code) by allowing private business to discharge wastewater into Respondent's storm sewer.
 - f) Failure to comply with Code by allowing grass, leaves, brush, and/or other debris to discharge into Respondent's storm sewer.
 - g) Failure to comply with Code by allowing oil, grease, or similar substances to discharge into Respondent's storm sewer.
 - h) Failure to comply with Code by allowing the discharges of substances into Respondent's storm sewer which clog and/or adversely affect the quality of water.
 - i) Failure to coordinate among various City of Dallas Departments operating at SEC to ensure proper handling and disposal of used oil, grease, and related materials, and ensure that storm water does not come into contact with hazardous materials or containers.
 - j) There are accumulated floatables and trash dispersed behind the SEC Police Department Building which have not been collected and disposed of in a timely or appropriate manner, as per Part II.A.6.c. of the MS4 permit.
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- k) The storm water inlet at the SEC material storage area, located at 2721 Municipal, Dallas, Texas showed evidence of sediment discharge to Respondent's storm sewer.
 - l) The SEC material storage area, located at 2900 Municipal, Dallas, showed evidence of salt discharge to Respondent's storm sewer.
 - m) A bare, freshly graded area behind the SEC fuel island and vehicle wash area, located at 2800 Municipal, Dallas, Texas has not been stabilized. New construction is scheduled to begin in this area.
 - n) There were many oily patches in and around the SEC' uncovered vehicle parking areas, which pose the potential threat to discharge to the storm sewer.
 - o) Failure to prevent vehicle maintenance activities in uncovered parking areas is prohibited, as indicated in the environmental training program referred to in the SWMP.
 - p) Failure to inspect and evaluate storm water controls in order to improve installation, maintenance, and control effectiveness. Sediment, debris, and vegetation were present at the on-site storm sewer inlets.
 - q) The storm sewer inlet at the northeast side of the SEC located near the Water Utilities Building's equipment yard is structurally in disrepair. The rebar and crumbled cement inside of the inlet box pose the potential threat to cause blockage of the storm sewer system in that area.
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- r) The SEC has failed to establish an adequate management tracking system to address potential storm water deficiencies identified by EBS Environmental and Inventory Services reporting. These site inspection reports need to include greater detailed to include, but not be limited to: 1) where the concerns are located; 2) who made the inspection; 3) who ensured that the corrections were made and 4) visual observations of the storm water runoff quality (ideally within a half-hour of the storm event).
- s) There are various floor drains within and outside of the buildings. The industrial pre-treatment staff has failed to evaluate the vehicle maintenance and service area for allowable pollutant discharges into the various floor drains.
- t) There was evidence of fresh oil staining and drips under and around the vehicles of the fleet maintenance operations. There were no catch pans in any vehicle parking lots. This practice poses a potential problem of oily runoff.

53. Pursuant to Section 308 of the Act, 33 U.S.C. § 1318, EPA conducted a compliance evaluation inspection of Respondent's Central Service Center (CC) on November 21, 2003. As a result, the Central Service Center was rated unsatisfactory in the area of Records/Reports. The specific deficiencies are noted as follows and are violations of provisions of the SWMP, and therefore are violations of Part I, Part II, and Part III of the permit:

- a) The Public Works and Transportation Department's sign painting shop and vehicle maintenance and service area discharge

contaminants of concern, including paints, thinners, solvents, and degradants. Respondent's industrial pre-treatment staff has not evaluated the discharges from these operations.

- b) The CC has failed to establish an adequate management tracking system to address potential storm water deficiencies identified by EBS Environmental and Inventory Services reporting. These site inspection reports need to include greater detailed to include, but not be limited to: 1) where the concerns are located; 2) who made the inspection; 3) who ensured that the corrections were made and 4) visual observations of the storm water runoff quality (ideally within a half-hour of the storm event).
- c) There are accumulated floatables and trash dispersed behind the CC Police Department Building which have not been collected or disposed of in an appropriate manner, as per Part II.A.6.c. of the MS4 permit.

54. Part II of the permit requires that each permittee contribute to the development, revision, and implementation of a comprehensive Storm Water Management Program (SWMP) which includes pollution prevention measures; treatment or removal techniques; storm water monitoring; use of legal authority; and other appropriate means to control the quality of storm water discharged from the MS4. The SWMP shall be implemented in accordance with Section 402(p)(3)(B) of the Act, and the Storm Water Regulations (40 C.F.R. § 122.26), and is hereby incorporated into this CWA Order by reference.

55. Respondent submitted a Storm Water Management Program, which is hereby incorporated by reference, to EPA with modifications on April 4, 1995. Subsequent and most recent modifications were submitted on October 30, 1997.

56. Part V.D. of the permit requires that the permittee shall contribute to the preparation of an annual system-wide report for the entire MS4 for each permittee, to be submitted by no later than March 1 (year to year). Part V.D.1. of the permit requires that the permittee file an Annual Report with EPA, which includes "the status of implementing the Storm Water Management Program (status of compliance with any schedules established under this permit included)". The Respondent has submitted Annual Reports for the years 1997- 2003.

57. After reviewing the submitted Annual Reports, EPA finds that Respondent failed to implement a comprehensive storm water pollution prevention and management program, as required by the NPDES permit. Respondent is in violation of the following provisions of the Storm Water Management Program, and therefore has violated Parts I, II, III, and V of Respondents NPDES permit.

Section 4.1 PUBLIC PARTICIPATION AND GOVERNMENTAL COORDINATION

Respondent failed to develop a program to increase general public awareness to be implemented during years 1-5 (1998-2002); in that, all of the committed tasks were not completed as required by the SWMP.

Section 4.2 MAINTENANCE ACTIVITIES AND SCHEDULE

Respondent failed to further reduce pollutants that remain in the storm water after runoff has flowed off-site from the point of origin and has entered the municipal storm water conveyance system, in that, all of the committed tasks were not completed as required by the SWMP.

**Section 4.3 NEW DEVELOPMENT AND REDEVELOPMENT MANAGEMENT
PROGRAM**

Implementation Plan

- Task 1** Respondent failed to develop a Best Management Practices (BMPs) manual for residential and commercial land uses for use during development and redevelopment of those land uses.
- Task 2** Respondent failed to create an interdepartmental review committee to examine the existing organizational structure and to develop policy recommendations regarding the development and implementation of stormwater quality control requirements for new developments and significant redevelopment.

Individual Task	Completion Due Date
Subtask 1	Year 2 (1999)
Subtask 2	Year 2 (1999)
Subtask 3	Year 2 (1999)
Subtask 4	Years 2-3 (1999-2000)
Subtask 5	Years 2-3 (1999-2000)
Subtask 7	Years 2-3 (1999-2000)
Subtask 8	Year 3 (2000)
Subtask 9	Years 3-4 (2000-2001)

- Task 3** Respondent failed to review the technical aspects of the City of Dallas legal authority.

Individual Task	Completion Due Date
Subtask 1	Year 1 (1998)

Section 4.4 BEST MANAGEMENT PRACTICES FOR FULLY-DEVELOPED AREAS

Implementation Plan

Task 1 Respondent failed to review Standard Operating Procedures (SOP) and address any remaining sources of pollutant loadings at the municipal facilities.

Due - Year 1 (1998)

Task 2 Respondent failed to address the feasibility, development and implementation of a program to install sedimentation trays on storm water inlets in the Central Business District (CBD).

Subtask 1 Failed to assess feasibility of retrofitting storm drain inlets.
Due - Year 2 (1999)

Subtask 2 Failed to develop pilot program for installation of sedimentation trays. Due - Year 3 (2000)

Subtask 3 Failed to implement and evaluate pilot program for installation of sedimentation trays. Due - Year 4 (2001)

Section 4.5 PUBLIC TRANSPORTATION RIGHT-OF-WAY OPERATIONS AND MAINTENANCE

Implementation Plan

Task 1 Respondent failed to request and receive an inventory list of drainage system connections into the City of Dallas storm water conveyance system from other entities doing maintenance activities within the City of Dallas corporate limits.

Subtask 1 Failed to request, receive and verify an inventory list from the Texas Department of Transportation (TXDOT) of all TXDOT drainage system tie-ins into the City of Dallas storm water conveyance system.

Failed to request and receive copies of existing water quality data characterizing runoff from TXDOT highways or storage facilities located within the Dallas corporate limits. Due-

Years 1-3 (2000-2002)

Subtask 2 Failed to request, receive and verify an inventory list from the North Texas Tollway Authority (NTTA) of all NTTA drainage system tie-ins into the City of Dallas storm water conveyance system.

Failed to request and receive copies of existing water quality data characterizing runoff from NTTA roadways or storage facilities located within the Dallas corporate limits. Due - Years 1-3 (2000-2002)

Subtask 3 Failed to request, receive and verify an inventory list from the Dallas Area Rapid Transit (DART) of all DART drainage system tie-ins into the City of Dallas storm water conveyance system.

Failed to request and receive copies of existing water quality data characterizing runoff from DART right-of-way or storage facilities located within the Dallas corporate limits.

Due - Years 1-3 (2000-2002)

Task 2 Respondent has failed to review the City of Dallas right-of-way maintenance procedures and evaluate each activity's potential to adversely impact the quality of storm water runoff. Failed to develop safeguards and write uniform maintenance specifications. Due - Years 2-4 (1999-2002)

Task 3 Respondent failed to develop maintenance specification for pesticide, insecticide, and herbicide use in public right-of-way maintenance activities and implement the program.

Subtask 1 Failed to develop criteria for the selection of pesticides, insecticides and herbicides.

Failed to develop specifications governing the application and usage of pesticides, insecticides and herbicides in public right-of-way.

Failed to develop criteria for the definition of sensitive area.

Due - Year 2 (1999)

Subtask 2 Failed to devise a record keeping system on pesticide use and coordinate activities with the Integrated Pest Management committee. Due - Year 2 (1999)

Task 4 Respondent failed to develop erosion protection requirements for right-of-way maintenance activity.

Subtask 2 Failed to assess the creation for a vegetation management program governing the open stream drainage system. Due - Year 3 (2000)

Task 5 Respondent failed to have the City of Dallas legal department conduct a review of private ownership status and private maintenance of creeks and channels, and submit recommendations for changes in city ordinances.

Due - Years 2-3 (1999-2000)

Task 6 Respondent failed to analyze and evaluate the existing street sweeping program for the Trinity River industrial corridor and the major prime network roadways.

Failed to evaluate whether other public entities operating in the right-of-way should also evaluate their street sweeping practices.

Due - Years 4-5 (2001-2002)

Task 7 Respondent failed to develop specification and disposal methodology regarding the use of traction grit particles and de-icing chemicals.

Subtask 1 Failed to develop governing maintenance specifications for selection and use of traction grit particles and de-icing chemicals used for emergency de-icing operations. Due - Year 4 (2001)

Subtask 2 Failed to develop proper clean-up and disposal methodology for used traction grit. Due - Year 4 (2001)

Task 8 Respondent failed to request an inventory list from TXDOT, NTTA, and DART of all disposal site, including all known inactive sites, where each entity disposed of drainage system sediments and highway sweeping debris from each entity's maintained facilities.

Failed to record disposal procedures.

Failed to verify inventory list to determine if present disposal techniques are allowable under the Dallas NPDES Storm Water Permit requirements.

Due - Years 4-5 (2001-2002)

Task 9 Respondent failed to develop and implement an inspection schedule for publicly maintained earthen channels and creeks.

Subtask 1 Failed to develop an inspection report form that lists criteria for evaluating maintenance needs. Due - Year 4 (2001)

Subtask 2 Failed to develop documentation format to record material removed and failed to set up reporting procedures to the City department

responsible for pollutant load analyses. Due -Years 4-5 (2001-2002)

Subtask 3 Failed to develop annual inspection schedule for Districts 1, 2, 3, 4 and the CBD. Due - Year 5 (2002)

Task 10 Respondent failed to develop and implement an inspection schedule for publicly maintained roadside ditches and roadway culverts.

Subtask 1 Failed to develop inspection report form that list criteria for evaluating maintenance needs. Due - Year 5 (2002)

Subtask 2 Failed to develop documentation format to record material removed and failed to set up reporting procedures to the City department responsible for pollutant load analyses. Due - Year 5 (2002)

Subtask 3 Failed to develop annual inspection schedule for Districts 1, 2, 3, 4 and the CBD. Due - Year 5 (2002)

Task 11 Respondent failed to negotiate a maintenance agreement with NTTA as required. An interagency agreement dated October 10, 1997, has been submitted, but does not fulfill the requirements of the maintenance agreement. Due - Year 5 (2002)

Task 12 Respondent failed to negotiate a maintenance agreement with DART as required. Due - Year 5 (2002)

Task 13 Respondent failed to evaluate the development of an open stream master plan as required. Due - Year 5 (2002)

Task 14 Respondent failed to develop maintenance specification requiring that erosion and sedimentation control BMPs be incorporated in all new

construction or roadway improvement activities performed by public transportation entities operating within the Dallas City limits.

Section 4.6 PROCEDURES FOR EXISTING FLOOD MANAGEMENT PROJECTS

Implementation Plan

Respondent failed to complete the following required individual tasks as scheduled for the retrofit recommendations described in the SWMP, which is incorporated into this CWA Order.

Detention/Retention Ponds

Individual Task

Task 1

Review and revise Section 3.4, Detention Design of the City's Drainage Design Manual.

Due - Year 1 (1998)

Task 2

Retrofit Whispering Oaks Detention Pond

Due - Year 3 (2000)

Task 3

Retrofit Lone Star Park Retention Pond

Due - Year 4 (2001)

Task 4

Review existing retrofits and remaining ponds.

Due - Year 5 (2002)

Lakes

Individual Task

Task 1

Study the surrounding vegetation of Lake Cliff.

Due - Year 2 (1999)

Task 2

Install litter booms at the inlet and outlet of Bachman Lake. Evaluate based on volume of debris removed.

Due - Years 3-5 (2000-2002)

Task 3
Study Lake Cliff's outlet structure and hydrology.
Due - Year 4 (2001)

Sump Areas and Pumping Basins

Individual Task

Task 1
Use SCADA in conjunction with a detailed study of operating procedures to develop maximum detention times for each sump under varying conditions.
Due - Years 4-5 (2001-2002)

Task 2
Begin Planning to include the purchase of additional automated trash racks and the construction of concrete de-silting areas during the next NPDES permit period.
Due - Year 3 (2000)

Levee Food Plain Area and Creeks

Individual Task

Task 2
Conduct a study of redirecting low flows from pump stations to marsh areas. Construct small berms to delineate marsh areas and redirect pump outflow to marsh areas.
Due - Year 5 (2002)

Task 3
Study water quality impact of check dams on Peacock Branch.
Due - Year 5 (2002)

Section 4.7 LANDFILL PROGRAM

Implementation Plan

Respondent failed to complete the following required individual tasks as scheduled for significant activity related to recycling, transfer station, and landfilling operations.

Task 1 Respondent failed to prevent polluted runoff at the existing McCommas Bluff Landfill and associated transfer stations by ensuring the implementation of a routine monitoring and inspection program.

Individual Task	Completion Due Date
Subtask 1	Years 1-5 (1998-2002)
Subtask 2	Years 1-5 (1998- 2002)
Subtask 3	Years 1-5 (1998- 2002)

Task 3 Respondent failed to protect the public from problems which may arise from storm water flows from the sites of landfills previously operated by the City of Dallas.

Individual Task	Completion Due Date
Subtask 1	Year 1 (1998)
Subtask 2	Year 1 (1998)
Subtask 3	Year 1 (1998)
Subtask 4	Year 1 (1998)
Subtask 5	Years 2-5 (1999-2002)

Task 4 Respondent failed to monitor other permitted landfills operating within or adjacent to the boundaries of the City of Dallas (e.g., Cities of Carrollton, Mesquite, etc.). Due - Years 1-5 (1998-2002)

Task 5 Respondent failed to address the problem of promiscuous dumps and illegal dumps occurring at random throughout the City of Dallas.

Individual Task	Completion Due Date
Subtask 1	Years 1-5 (1998-2002)
Subtask 2	Year 1 (1998)
Subtask 2	Year 3-5 (2000-2002)

Section 4.8 PESTICIDES, HERBICIDES AND FERTILIZERS PROGRAM

Implementation Plan

Respondent failed to complete the following required individual tasks as scheduled to reduce to the maximum extent practicable, pollutants discharged from the MS4 associated with the application of pesticides, herbicides, and fertilizer, which will include controls

such as educational activities, permits, and certifications for application in public right-of-ways and at municipal facilities.

Individual Task	Completion Due Date
Task 1	Years 1-5 (1998-2002)
Task 2	Years 1-5 (1998-2002)

Section 4.9 ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

Implementation Plan

Respondent failed to complete the following required individual task as scheduled to detect and remove (or require the discharger to the MS4 to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.

Individual Task	Completion Due Date
Task 1	Years 1-2 (1998-1999)
Task 2	Years 1-5 (1998-2002)
Task 4	Years 1-5 (1998-2002)

Section 4.10 FIELD SCREENING PROCEDURES

Implementation Plan

Respondent failed to complete the following required individual tasks as scheduled to conduct ongoing field screening activities.

Individual Task	Completion Due Date
Task 2	Years 1-2 (1998-1999)
Task 3	Years 1-5 (1998-2002)
Task 4	Years 1-5 (1998-2002)
Task 6	Years 1-2 (1998-1999)
Task 9	Years 1-5 (1998-2002)

Section 4.11 DETAILED INVESTIGATION PROCEDURES

Implementation Plan

Respondent failed to complete the following required individual tasks as scheduled to investigate portions of the separate storm sewer system that indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.

Individual Task	Completion Due Date
Task 1	Years 1-2 (1998-1999)
Task 3	Years 1-5 (1998-2002)
Task 7	Years 1-5 (1998-2002)
Task 8	Year 1 (1998)

Section 4.12 SPILL CONTROL PROCEDURES

Implementation Plan

Respondent failed to complete the following required individual tasks as scheduled to prevent, contain, and respond to spills that may discharge and flow into the MS4.

Individual Task	Completion Due Date
Task 1	
Subtask 1	Years 2-5 (1999-2002)
Subtask 2	Years 2-5 (1999-2002)
Subtask 3	Years 2-5 (1999-2002)
Subtask 4	Years 2-5 (1999-2002)
Subtask 5	Years 2-5 (1999-2002)
Subtask 6	Years 2-5 (1999-2002)
Subtask 7	Years 2-5 (1999-2002)
Subtask 8	Years 2-5 (1999-2002)
Subtask 9	Years 2-5 (1999-2002)

Task 3

Subtask 1
Subtask 2

Year 3 (2000)
Years 3-5 (2000-2002)

Section 4.13 USED OIL PROGRAM

Implementation Plan

Respondent failed to complete the following required individual tasks as scheduled to implement educational activities, public information activities, and other activities to facilitate the proper management and disposal of used oil.

Individual Task	Completion Due Date
Task 1	
Subtask 1	Years 1-5 (1998-2002)
Subtask 2	Years 1-5 (1998-2002)
Subtask 3	Years 1-5 (1998-2002)
Subtask 4	Years 1-5 (1998-2002)
Subtask 5	Years 1-5 (1998-2002)
Task 2	
Subtask 1	Years 1-5 (1998-2002)
Subtask 2	Years 1-5 (1998-2002)
Task 3	Years 1-5 (1998-2002)

Section 4.14 TOXIC MATERIALS PROGRAM

Respondent failed to complete the following required individual task as scheduled to implement educational activities, public information activities, and other activities to facilitate the proper management and disposal of used oil and toxic materials.

Individual Task	Completion Due Date
Task 3	

Subtask 2
Subtask 3

Years 1-5 (1998-2002)
Years 1-5 (1998-2002)

Section 4.15 WASTEWATER INFILTRATION CONTROL PROGRAM

Implementation Plan

Respondent failed to complete the following required individual tasks as scheduled with regard to programs and/or controls which are currently implemented to limit infiltration of seepage from the municipal sanitary sewers to the MS4.

Task 2 Respondent failed to monitor and test for the presence of wastewater I/I and overflows and direct detected problem areas to the Water Utilities Department for identification and correction under the NPDES Permit No. TX0047830, as specified in the revised SWMP.

Section 4.16 INDUSTRIAL INSPECTION AND CONTROL PROGRAM

Implementation Plan

Respondent failed to complete the following required individual tasks, as scheduled, to identify priorities and procedures for inspections and establish and implement control measures for industrial discharges to the MS4.

Individual Task	Completion Due Date
Task 1	
Subtask 1	Years 1-5 (1998-2002)
Subtask 2	Years 1-5 (1998-2002)
Subtask 3	Years 1-5 (1998-2002)
Subtask 4	Years 1-5 (1998-2002)
Subtask 5	Years 1-5 (1998-2002)
Subtask 6	Years 1-5 (1998-2002)
Subtask 7	Years 1-5 (1998-2002)
Task 2	
Subtask 1	Years 1-3 (1998-2000)

Subtask 2	Years 1-3 (1998-2000)
Subtask 3	Years 1-3 (1998-2000)
Subtask 4	Years 1-3 (1998-2000)
Task 3	Years 1-3 (1998-2000)
Task 4	
Subtask 1	Years 1-5 (1998-2002)
Subtask 2	Years 1-5 (1998-2002)
Subtask 3	Years 1-2 (1998-1999)
Task 5	Years 1-3 (1998-2000)

Section 4.17 MONITORING PROGRAM FOR INDUSTRIAL FACILITIES

Implementation Plan

Respondent failed to complete the following required individual tasks, as scheduled, to implement a monitoring program for industrial facilities to meet the requirements of the U.S. EPA NPDES storm water discharge regulations.

Individual Task	Completion Due Date
Task 1	Years 1-5 (1998-2002)
Task 3	Years 3-5 (2000-2002)
Task 4	Years 3-5 (2000-2002)

Section 4.18 SITE PLANNING PRACTICES

Implementation Plan

Respondent failed to complete the following required individual tasks, as scheduled, to prevent and/or control pollutants in storm water discharge from urban development and construction activity.

Individual Task	Completion Due Date
Task 1	Years 2-5 (1999-2002)
Task 2	Year 1 (1998)
Task 4	Year 1 (1998)
Task 7	Year 1 (1998)

Section 4.19 BEST MANAGEMENT PRACTICE REQUIREMENTS

Implementation Plan

Respondent failed to complete the following required individual tasks, as scheduled, to mitigate the adverse environmental impact of storm water runoff by developing Best Management Practice (BMP) requirements.

Individual Task	Completion Due Date
Task 5	Years 1-5 (1998-2002)
Task 6	Years 1-5 (1998-2002)

Section 4.20 INSPECTION PRIORITIES

Implementation Plan

Respondent failed to complete the following required individual tasks, as scheduled, to implement measures to support the role of the construction inspector in managing storm water run off from construction sites.

Individual Task	Completion Due Date
Task 1	Year 4 (2001)
Task 2	Years 3-5 (2000-2002)
Task 3	Years 2-5 (1999-2002)
Task 4	Years 1(1998)
Task 5	Years 1(1998)
Task 6	Year 2 (1999)
Task 8	Years 2 & 5 (1999 & 2002)

58. Each violation of the conditions of the permit, or regulations described above, is a violation of Section 301 of the Act, 33 U.S.C. § 1311.

59. Respondent has failed to comply with numerous other provisions required by the SWMP which were not cited by EPA in this Order. Each failure by Respondent to comply with

the SWMP results in a violation of the provisions of Respondent's NPDES permit. Thus, EPA may pursue such violations or other relief in the future, as may be appropriate under RCRA or the CWA. EPA reserves the right to seek any remedy available under the law that it deems appropriate.

COMPLIANCE ORDER

Based on the foregoing Findings of Fact, and pursuant to the authority of Sections 308 and 309 of the Clean Water Act, and Section 3008(a) of RCRA, 42 U.S.C. § 6928(a), Respondent is hereby ORDERED to take the following actions, and provide evidence of compliance within the time period specified below:

A. Within fifteen (15) days of the effective date of this Order, Respondent shall submit a complete and comprehensive list of facilities that undertake Industrial Activity, as defined at 40 C.F.R. § 122.26 (b)(14), for facilities owned and operated by the City of Dallas. The list shall include the facility's name, address, signature authority; Standard Industrial Classification (SIC) Code; TPDES permit number; whether or not the facility has a Storm Water Pollution Prevention Plan; current compliance status; and a summary of any enforcement action taken in the last three (3) years.

B. Within thirty (30) days of the effective date of this Order, Respondent shall take whatever corrective action is necessary to correct the deficiencies and eliminate and prevent recurrence of the CWA violations cited above, and to come into compliance with all of the applicable requirements of the permit.

C. Within thirty (30) days of the effective date of this Order, Respondent shall submit a written report detailing the specific actions taken to correct the violations cited herein and explaining why such actions are anticipated to be sufficient to prevent recurrence of these or similar violations.

D. In the event that Respondent believes complete correction of the violations cited herein is not possible within thirty (30) days of the effective date of this Order, Respondent shall, within those thirty (30) days, submit a comprehensive written plan for the elimination of the cited

violations within the shortest possible time. Such plan shall describe in detail the specific corrective actions to be taken and why such actions are sufficient to correct the violations. The plan shall include a detailed schedule for the elimination of the violations within the shortest possible time, as well as measures to prevent these or similar violations from recurring.

E. Within ninety (90) days of the effective date of this Order, Respondent shall provide EPA with documentation which certifies that Respondent is in compliance with the small quantity generator requirements set forth in 40 C.F.R. § 262.34(d) [30 TAC § 335.69(f)].

F. Within ninety (90) days of the effective date of this Order, Respondent shall provide EPA with documentation which certifies that Respondent is in compliance with hazardous waste determination requirements set forth in 40 C.F.R. § 262.11(c) [30 TAC § 335.62].

G. Within ninety (90) days of the effective date of this Order, Respondent shall provide EPA with documentation which certifies that Respondent is in compliance with used oil storage requirements set forth in 40 C.F.R. § 279.22 [30 TAC § 324.1].

H. In order to Show Cause as to 'why' the Respondent has not complied with the Clean Water Act, Subtitle C of RCRA, and the regulations promulgated thereunder, and 'why' EPA should not take further enforcement action against Respondent for the violations cited herein, the Respondent should arrange a meeting with EPA within forty-five (45) days of the effective date of this Order, to be held at the Region 6 offices, 1445 Ross Avenue, 7th Floor, Dallas, Texas. The Respondent shall submit to EPA all information or materials it considers relevant to the meeting at least ten (10) days prior to the meeting.

I. To arrange a Show Cause meeting, or to ask questions or comment on this matter, please contact Ms. Mona Tates of EPA at (214) 665-7152.

J. In all instances in which this Order requires written submissions to EPA, each submission must be accompanied by the following certification signed by a "responsible official":

"I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the city official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete."

For the purpose of this certification, a "responsible official" of a municipality means a manager, head, or chief of a department or division in charge of a principal city functions, or any other person who performs similar decision-making functions for the city.

K. Copies of all documentation or correspondence required by this Order shall be sent to the following persons:

For CWA Responses

Ms. Debra Berry
Environmental Protection Specialist
Water Enforcement Branch (6EN-WC)
EPA Region 6
1445 Ross Ave., Suite 1200
Dallas, TX 75202

For RCRA Responses

Samuel Tates, Section Chief
Texas Section (6EN-HT)
Hazardous Waste Enforcement Branch
Compliance Assurance and Enforcement Division
U.S. EPA - Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733
Attention: Tami Engle

For CWA and RCRA Responses

Scott McDonald, Enforcement Counsel
Office of Regional Counsel (6RC-EW)
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

For the State

John Sadlier, Manager
Enforcement Section III, MC 149
Office of Compliance and Enforcement
Texas Commission on Environmental Quality

P.O. Box 13087
Austin, Texas 78711-3087

NOTICE: If you fail to take the required action(s) within the time specified in this Order, you may be liable for an additional penalty of up to TWENTY-SEVEN THOUSAND FIVE HUNDRED DOLLARS (\$27,500) for each day of continued noncompliance, and may be subject to further enforcement action, including injunction from any further generation, transportation, treatment, storage, or disposal of hazardous waste and such other and further relief as may be necessary to achieve compliance with Subtitle C of RCRA, all pursuant to Section 3008(c) of RCRA, 42 U.S.C. § 6928(c).

Notwithstanding any other provision of this RCRA Order, an enforcement action may be brought against the Respondent pursuant to Section 7003 of RCRA, 42 U.S.C. § 6973, or other statutory authority if the EPA finds that the handling, storage, treatment, transportation or disposal of solid waste or hazardous waste at facilities owned and/or operated by Respondent presents an imminent and substantial endangerment to human health or the environment.

GENERAL PROVISIONS

Issuance of this Order shall not be deemed an election by EPA to forego any administrative or judicial, civil, or criminal action to seek penalties, fines, or any other relief appropriate under RCRA or the Clean Water Act for the violations cited herein, or other violations that become known. EPA reserves the right to seek any remedy available under the law that it deems appropriate.

Failure to comply with this Order, RCRA, or the Clean Water Act, can result in further administrative action, or a civil judicial action initiated by the U.S. Department of Justice. If the

United States initiates a civil judicial action, Respondent will be subject to civil penalties of up to \$27,500 per day per violation.¹

If a criminal action is initiated by U.S. Department of Justice, and Respondent is convicted of a criminal offense under Section 309(c) of the Act, the Respondent may become ineligible for certain contracts, grants, or loans under Section 508 of the Act.

This CWA Order does not constitute a waiver or modification of the terms or conditions of Respondent's NPDES permit, which remains in full force and effect. Compliance with the terms and conditions of this Order does not relieve the Respondent of its obligations to comply with any applicable federal, state, or local law or regulation.

This Compliance Order is hereby issued pursuant to Section 3008(a) of RCRA, 42 U.S.C. § 6928, and Sections 308(a) and 309(a) of the Clean Water Act, 33 U.S.C. §§ 1318(a) and 1319(a). It is so ORDERED. The effective date of this Compliance Order is the date it is received by the Respondent.

DATE: _____

Gerald Fontenot, P.E.
Acting Director
Compliance Assurance and
Enforcement Division

¹ The civil penalty amounts that can be assessed under Section 309 of the Clean Water Act were amended by the Civil Monetary Penalty Inflation Adjustment Rule (61 Fed. Reg. 69359, December 31, 1996, as corrected in 62 Fed. Reg. 13514, March 20, 1997), effective June 1, 1997, under the Debt Collections Improvement Act of 1996, 31 U.S.C. § 3701, et. seq., for all violations occurring or continuing after January 30, 1997.

