

OVERVIEW
MS4 NPDES PERMIT NO. TXS001201

Introduction Co-permittees City of Houston (the City), Harris County (HC), Harris County Flood Control District (HCFCD), and the Texas Department of Transportation (TxDOT), have prepared the attached Annual System-wide Report as required by Part V.C. (Annual Report) of NPDES Permit TXS001201.

Reporting Period This fifth annual report covers the period from August 1, 2002 through July 31, 2003.

Year 5 Highlights During the reporting period, the City, Harris County and Harris County Flood Control District continued implementation of programs for compliance with permit conditions and as described in the Storm Water Management Program. In addition, the permittees continued implementation of an integrated Public Education Program addressing storm water quality issues. The permittees also prepared to renew the MS4 NPDES permit with the Texas Commission on Environmental Quality (TCEQ), the storm water permitting authority in Texas.

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SUMMARY

Introduction	<p>The City of Houston (the City) has met its due dates within the permit and the Storm Water Management Program (SWMP). The City continues to work with the co-permittees to develop consistent programs which will allow compliance with the requirements of the permit and the Storm Water Management Program requirements.</p>
Format	<p>The Annual Report is formatted in accordance with the annual report requirements of the permit (Part V.C. Annual Report). Storm Water Management Program activities conducted by the City during this period are described in Section I, Implementation Status of SWMP.</p> <p>Section I is formatted to correspond with the SWMP. Sections II through VII contain additional reporting requirements. Supporting documents, including discharge monitoring reports, are provided in the Appendices.</p>

I. Implementation Status of SWMP

Introduction

The City of Houston continued to implement activities described in its Storm Water Management Program. Permit Part III.A. and SWMP activities with due dates during the reporting period (08/01/02 – 07/31/03) and the status of these activities are listed respectively in Table I-1, *City of Houston, Status of Permit Schedule Due Dates* and Table I-2, *City of Houston, Status of SWMP Implementation Schedule Due Dates*. The implementation status of the SWMP activities is discussed in the text following the tables.

**Table I-1
City of Houston
Status of Permit Schedule Due Dates
(Reporting Period: 08/01/02-07/31/03)**

PERMIT REFERENCE	ACTIVITY	DATE DUE	STATUS
III.A.7. Wet Weather Screening Program	b. Complete wet weather screening of 50% of the area served by the MS4.	10/01/02	Complete
III.A.8. Industrial and High Risk Runoff	b. Expand industrial inspection program to include additional facilities as described in SWMP Chapters 1 and 2, Sections 4.3.1.	10/01/02	Complete

Table I-2
City of Houston
Status of SWMP Implementation Schedule Due Dates
(Reporting Period: 08/01/02-07/31/03)

SWMP REFERENCE	ACTIVITY	DATE DUE	STATUS
3 Roadways	Develop storm water pollution minimization plans for 75% of the city street maintenance yards.	10/01/2002	Complete
4 Flood Control Projects (program to be carried out by HCFCD)	Complete post-retrofit sampling of Choate Road wet pond extended detention retrofit, if project was deemed feasible.	10/01/2002	Complete
6.a Preventing Illicit Discharges and Improper Disposal	Expand database. Include additional industries as they are identified as applicable to industrial inspection and monitoring program	10/01/2002	Complete
7 Spill Response and Prevention	Develop and implement digital wireless technology program.	10/01/2002	Complete
8 Industrial and High Risk Runoff	Expand “no exposure” certification program and industrial inspection and monitoring program as applicable.	10/01/2002	Complete
11 Field Screening	Complete wet weather screening of 50% of the area served by the MS4, weather permitting.	10/01/2002	Complete

I. Implementation Status of SWMP, *continued*

General	During the reporting period, the City continued to implement existing programs and to develop programs proposed in the SWMP to control pollutants in runoff from commercial and residential areas.
Structural Controls and Storm Water Collection System Operation (SWMP 1)	As described in the SWMP, the City’s operation and maintenance activities for structural controls include manhole cleaning, storm sewer cleaning / flushing, repairs and investigations. During the reporting period, the City used the two combination cleaning units (vactor trucks) received in Year 2 for the City’s storm water program to expand operation and maintenance activities on structural controls. These units have continued to be utilized as intended during the reporting period.
Areas of New Development and Significant Redevelopment (SWMP 2)	<p>During the reporting period, the City continued implementation of an integrated multiyear Public Education Program which includes information on the new development / significant redevelopment program.</p> <p>On August 29, 2001, the Houston City Council adopted an ordinance relating to the reduction of pollutants in storm water runoff and the effective prohibition of non-storm water discharges to the municipal drainage system. Division 2 of this ordinance imposes requirements for post-construction controls on certain new development and significant redevelopment projects in the City, including the requirements that these project obtain a Storm Water Quality Permit (“SWQ Permit”). The ordinance also outlines numerous mechanisms for enforcing compliance with the program. During the reporting period, the City evaluated 184 projects to determine if a SWQ Permit was required and issued 105 SWQ Permits.</p>

I. Implementation Status of SWMP, *continued*

Roadways
(SWMP 3)

The development of storm water pollution minimization plans (SWPMPs) for the City’s road and right-of-way maintenance facilities was started in April 1999. The SWPMP for one site was completed in March 2000. By 10/01/02, the City had completed SWPMPs for 75% of the City’s street maintenance yards. It is anticipated that the City will complete SWPMPs for 100% of the City’s street maintenance yards by 09/30/03, in accordance with SWMP requirements.

As described in the SWMP, the City also conducted roadway sweeping, manhole cleaning, storm sewer cleaning / flushing, repairs and investigations.

During the reporting period, the City continued implementation of an integrated multiyear Public Education Program which includes information on the prevention of littering. The City has also started installing educational/informational inlet grates and manhole covers that carry a new message, “Clean Water Clear Choice.” A summary of the City’s public education program is provided in Section VI.

Flood Control
Projects
(SWMP 4)

The Harris County Flood Control District (HCFCD) is to carry out the flood management program as described in the SWMP. Activities for this element are provided in Part 3, Section I.4 of this report.

Pesticide,
Herbicide, and
Fertilizer
Application
(SWMP 5)

As detailed in the SWMP, the City uses state-licensed personnel for applications involving pesticides, herbicides, and fertilizers. During the reporting period, the City continued implementation of an integrated multiyear Public Education Program which includes information on proper management of pesticides, herbicides and fertilizers.

Preventing Illicit
Discharges
(SWMP 6.a)

On August 29, 2001, the Houston City Council adopted an ordinance relating to the reduction of pollutants in storm water runoff and the effective prohibition of non-storm water discharges to the municipal drainage system. The ordinance became effective on October 1, 2001. Division 5 of the ordinance prohibits the introduction into the City’s storm sewer system of any discharge not composed entirely of storm water. It is an affirmative defense to such a violation, however, that the discharge was entirely composed of certain non-storm water discharges specified in the ordinance that the City believes have minimal impact on storm water quality. The ordinance outlines numerous mechanisms for enforcing compliance with this program.

I. Implementation Status of SWMP, *continued*

Preventing Illicit Discharges (SWMP 6.a), *continued*

During the reporting period, the City’s Environmental Investigations Unit, now under the City’s Police Department, conducted approximately 1,325 investigations in response to complaints. The City’s Bureau of Public Health Engineering of the Department of Health and Human Services (Health Department) also conducted approximately 955 investigations during the reporting period. The City’s Public Works and Engineering / Right-of-Way Industrial Investigation Unit conducted 23 investigations in response to complaints for potential illicit discharges which resulted in four citations being issued. Additional details on the City’s inspections are provided in the Appendices.

During the reporting year, the City continued its integrated multiyear Public Education Program, which includes information on preventing illicit discharges.

The City also expanded its database to include additional industries identified as applicable to the City’s industrial inspection and monitoring program. The database was expanded by 10/01/02, in accordance with SWMP requirements.

In addition, the City reviewed previous years’ screening results to identify areas that might be contributing pollutants to the City’s MS4. Based on the review of the previous years’ screening results, the City engaged a contractor to investigate possible sources of illicit discharges. Based on the City’s evaluation, 35 sites were identified for further investigation. These sites were rescreened and it was determined that eight sites warranted further investigation. Six of those eight have been resolved. The remaining two have continuing investigations.

Infiltration of Seepage (SWMP 6.b)

During the reporting period, as part of ongoing efforts, the City continued to make point repairs to the wastewater system, rehabilitated the systems and generally endeavored to preclude the infiltration of wastewater into the storm sewer system.

I. Implementation Status of SWMP, *continued*

Floatables
(SWMP 6.c)

During the reporting period, the City continued its litter abatement program. Litter abatement crews collected litter in the City's rights of way and road ditches. The litter abatement crews are typically scheduled ahead of mowing activities in an effort to reduce the amount of floatables that enter the waters of the U.S. from the City's storm sewer system. Under the City's program, approximately 6,804 cubic yards of litter (compacted) and 9,024 cubic yards of litter (uncompacted) were collected during the reporting period. As described in the SWMP, the City also conducted roadway sweeping, manhole cleaning, storm sewer cleaning/flushing, repairs and investigations. During the reporting period, the City continued to implement an integrated multi-year public education program which includes information on litter (floatables).

Proper
Management of
Used Oil and
Toxics
(SWMP 6.d)

During the reporting period, the City continued to implement an integrated multiyear Public Education Program which includes information on proper management of used oil and toxics. A summary of the City's public education program can be found in Section VI.

The City also continued its Household Hazardous Waste (HHW) program. The City collected a total of 692,467 pounds of HHW during the reporting period. Details on the City's HHW program are provided in the Appendices.

Finally, the City entered into an agreement with Harris County that allows the County to purchase vouchers from the City. These vouchers allow a County resident to dispose of up to 200 pounds of HHW at the City's Environmental Service Center. During the reporting period, 252 County residents used this service.

Spill Prevention
and Response
(SWMP 7)

During the reporting period, the City continued to follow its Administrative Procedure regulating spill prevention containment and response activities at City facilities. Effective October 1, 2001, this Administrative Procedure required among other things, the evaluation of all City facilities to determine whether there is the potential for spills at the facility to discharge into the City's storm sewer system and the development of a spill prevention and response plan for every facility where there is such a potential.

Further, on August 29, 2001, the Houston City Council adopted an ordinance relating to the reduction of pollutants in storm water runoff and the effective prohibition of non-storm water discharges to the municipal drainage system. The ordinance became effective on October 1, 2001. Division 5 of the ordinance prohibits the introduction into the City's storm sewer system of any discharge not composed entirely of storm water. It is an affirmative defense to such a violation, however, that the discharge consisted of materials resulting from a spill

I. Implementation Status of SWMP, *continued*

Spill Prevention and Response (SWMP 7), *continued*

and the discharge was necessary to prevent loss of life, personal injury or severe property damage (provided that the party responsible for the spill takes all reasonable steps to minimize or prevent adverse effects to human health or the environment). The ordinance outlines numerous mechanisms for enforcing compliance with this program.

Prior to October 1, 2002, the City acquired and placed wireless technology in the vehicles of the City's Hazardous Material Response Team of the Houston Fire Department which now gives them direct access to the City's Geographic Information System (GIMS) database. This database contains the location and attribute data for City-owned or operated storm sewers in a computer-aided design format.

Industrial and High Risk Runoff (SWMP 8)

On August 29, 2001, the Houston City Council adopted an ordinance relating to the reduction of pollutants in storm water runoff and the effective prohibition of non-storm water discharges to the municipal drainage system. Division 4 of the ordinance regulates storm water discharges from Type 1 and Type 2 facilities, as those terms are defined in the permit. The Division requires analytical monitoring of storm water discharges from these facilities and includes a process by which a no exposure certification may be accepted in lieu of analytical monitoring. Type 1 and Type 2 facilities with "storm water discharges associated with industrial activities," as that term is defined in Section 122.26(b)(14) of Title 40 of the Code of Federal Regulations, must notify the City if the results of any required monitoring exceed a benchmark or effluent limitation in the National Pollutant Discharge Elimination System or Texas Pollutant Discharge Elimination System permit for that type of facility. Type 1 and Type 2 facilities that do not have storm water discharges associated with industrial activities must notify the City if the results of any required monitoring exceed a threshold established by the City Engineer.

By 10/01/02, the City expanded its database to include additional industries identified as applicable to the City's industrial inspection and monitoring program. Also, during the first year of the program, which ended on 10/01/02, the City inspected all of the "No Exposure" Certificate (NEC) facilities that were also in the City's industrial pretreatment program. This expansion of the City's No Exposure Certificate program and industrial inspection and monitoring program was completed by 10/01/02 in accordance with SWMP requirements.

I. Implementation Status of SWMP, *continued*

Industrial and High Risk Runoff (SWMP 8), *continued*

The City’s Bureau of Public Health Engineering of the Department of Health and Human Services (Health Department) conducted 28 inspections of permitted landfills / transfer stations and 466 industrial wastewater inspections. In addition, the City’s Public Works and Engineering (Right-of-Way Branch) Industrial Facilities Investigation Unit conducted approximately 364 inspections of industrial facilities for compliance with storm water quality requirements. Several facilities have notified the City that results of monitoring required by the ordinance exceed a benchmark or threshold. The City is currently reviewing those facilities. Additional details are provided in the Appendices.

During the reporting period, the City, together with Harris County, held numerous educational programs. A summary of the City’s public education program is provided in Section VI.

Construction Site Runoff (SWMP 9)

On August 29, 2001, the Houston City Council adopted an ordinance relating to the reduction of pollutants in storm water runoff and the effective prohibition of non-storm water discharges to the municipal drainage system. Division 3 of the ordinance regulates storm water discharges associated with construction activity (excluding operations that result in the disturbance of less than five acres of total land that are not part of a larger common plan of development or sale).

The ordinance outlines numerous mechanisms for enforcing compliance with this program. During the reporting period, the City’s Department of Public Works and Engineering inspected 288 regulated construction sites. Of these, 162 sites required at least one follow up inspection, and 117 sites required multiple follow up inspections.

During the reporting period, the City continued to implement an integrated multiyear Public Education Program which includes information on construction site runoff.

Public Education (SWMP 10)

During the reporting period, the City continued to implement an integrated multiyear Public Education Program. A summary of the City’s public education program can be found in Section VI.

Monitoring Program (SWMP 11)

The City of Houston’s field screening program includes both Dry Weather Screening and Wet Weather Screening. Additional details on the City’s field screening program are provided in Section IV of this report.

II. Proposed Changes to SWMP

Introduction As required by Part V.C.2. of the permit, proposed changes to the SWMP are to be provided in the Annual Report.

Changes to SWMP Revisions to the City's SWMP are provided in the Appendices.

III. Revisions, if Necessary, to Assessments of Controls and the Fiscal Analysis Reported in Permit Application

Introduction As required by Part V.C.3. of the permit, revisions, if necessary, to assessments of controls and the fiscal analysis reported in the permit application are to be provided in the Annual Report.

No revisions are needed at this time to the assessments of controls in the permit application.

Discussion The fiscal analysis presented in the permit application was developed to implement the SWMP and monitoring program expectations at that time. The overall NPDES storm water permit program expectations continued to evolve and became better defined between submission of the application in November 1992 and the issuance of the permit in 1998. Given the evolution of the program, the cost analysis presented in the application is not totally reflective of the current program. Additionally, major components of the current program are performed under various contracts with the City, none of which have firm costs for the entire permit term. As a result, any revisions to the fiscal analysis requested today would likely have to be revised in subsequent years. Accordingly, we request that the fiscal analysis presented in the application not be revised at this time, but that current costs and next year projected costs be refined annually in the Annual Report (see Section V., Annual Expenditures for Reporting Period and Budget for Following Year).

IV.

Summary of Data, including Monitoring Data

Introduction

As required by Part V.C.4. of the permit, a summary of the data, including monitoring data, accumulated throughout the year is to be provided in the Annual Report.

During the reporting period, the City conducted the dry weather screening, the wet weather screening, and the representative monitoring programs. Summaries for the dry weather and wet weather screening programs and summaries and discharge monitoring reports (DMRs) for the representative monitoring program are provided in the Appendices. Additional information regarding the programs is provided below.

Dry Weather Screening Program

During the reporting period from August 1, 2002 to July 31, 2003, 101 sites were screened for the City's Dry Weather Screening Program. If observable flow conditions were found field tests were conducted.

An active flow was observed at 10 sites, and field screening tests were performed to evaluate screening parameters. In accordance with the City's Dry Weather Screening Program, a second visit was made to 7 sites within the reporting period. Site visits for the remaining three were conducted on 08/01/03. Of the 10 sites, field screening tests indicated that two were within expected ranges for the monitored parameters. Questionable discharges were indicated by field screening tests at eight of the sites. Samples of these flows were collected and sent to the lab for further analysis.

Based on the results of the analysis and follow up investigation by the City, resolution is pending for the eight sites, which are under investigation by the City. Three sites where resolution was pending from Year 4 have been resolved.

It is anticipated that the City will complete Dry Weather Screening of the area served by the MS4 by September 30, 2003.

IV.

Summary of Data, including Monitoring Data, *continued*

Wet Weather
Screening
Program

During the reporting period from August 1, 2002 to July 31, 2003, 82 sites were screened for the City's Wet Weather Screening Program. Seventy-one (71) of the 82 sites had flow. Of the 71 sites, field screening indicated that 45 sites were within expected ranges for monitored parameters. Questionable discharges were indicated by field screening at 26 sites. Samples of these flows were collected and sent to the lab for further analysis.

Based on the results of the analysis and follow up investigation by the City, 15 of the 26 sites are considered resolved. Resolution is pending for 11 of the 26 sites, which are under investigation by the City.

The permit requirement for wet weather screening of 50% of the area served by the MS4 was completed by October 1, 2002. It is anticipated that the City will complete Wet Weather Screening of 100% of the area served by the MS4 by September 30, 2003.

Representative
Monitoring Plan

During the fall season, August 1, 2002 to November 30, 2002, the City's Representative Monitoring sites had qualifying rain events, and all sites were sampled.

During the winter season, December 1, 2002 to February 28, 2003, the City's Representative Monitoring sites had qualifying rain events, and all sites were sampled.

During the summer season, March 1, 2003 to July 31, 2003, the City's Representative Monitoring sites had qualifying rain events, and all sites were sampled.

All sites met the EPA criterion that requires the minimum rainfall amount to be 0.10 inches. The results of all rainfall events collected during this year are included in the Discharge Monitoring Reports (DMRs), provided in the Appendices.

V. Annual Expenditures for Reporting Period and Budget for Following Year

Introduction

As required by Part V.C.5. of the permit, annual expenditures for the reporting period, with a breakdown for the major elements of the SWMP, and the budget for the following year are to be provided in the Annual Report.

Expenditures for the reporting period (08/01/02 – 7/31/03) are provided in Table V-1, and expenditures budgeted for the following year (08/01/03 – 07/31/04) are provided in Table V-2.

Discussion

Concerning Tables V-1 and V-2, several clarifications are warranted. The values presented in Table V-1 are estimated expenses incurred. The values presented in Table V-2 are projected costs. Given the accounting methods utilized, some of the expenses incurred are estimates. The City's fiscal year is July 1 through June 30, thus all of the costs shown in Table V-2 are not budgeted per se at this time. The City budget that will be adopted for July 1, 2003 to June 30, 2004, will complete the budgeting for the period covered in the table.

In regard to both tables, given the overlap of certain components of the program and shared costs, e.g., Public Education Program development, project administration, etc., the allocation of some components of the costs to major elements is approximate. Additionally, the values presented do not include all costs for activities that serve multiple purposes that could possibly be associated with the storm water management program, such as maintenance of storm and wastewater sewer systems, existing operations and programs, and activities related to other federal regulations (e.g., the construction general storm water permit).

V.

**Annual Expenditures for Reporting Period and Budget for
Following Year, *continued***

**TABLE V-1
Estimated Implementation Costs for City of Houston
Storm Water Management Programs
(August 1, 2002 – July 31, 2003)**

Section Number	Program Name	Estimated Costs (08/01/02 – 07/31/03)
1	Structural Controls and Storm Water Collection System Operation	\$334,600
2	Areas of New Development and Significant Redevelopment	\$550,000
3	Roadways	\$1,296,200
4	Flood Control Projects ¹	N/A
5	Pesticide, Herbicide and Fertilizer Application ²	N/A
6.a	Preventing Illicit Discharges	\$1,628,700
6.b	Infiltration of Seepage ³	N/A
6.c	Floatables	\$1,358,800
6.d	Proper Management of Used Oil and Toxics (HHW)	\$877,400
7	Spill Prevention and Response	\$369,200
8	Industrial and High Risk Runoff	\$301,500
9	Construction Site Runoff	\$230,100
10	Public Education	\$462,500
11	Monitoring Program	\$822,600
	Seasonal Loads and Representative EMC for Major Outfalls	\$39,300
	Collection of Representative Data for the Term of the Permit	\$136,100
	Permit Renewal	\$40,000
	Annual Report	\$43,100
	Total	\$8,490,100

Notes:

- 1 Activities related to this program for Flood Control Projects are conducted by Harris County Flood Control District (HCFCD), and HCFCD's costs are included in Part 3 Harris County Flood Control District. Thus, the City has not included any costs for implementing Flood Control projects in this table.
- 2 The cost for Public Education on the proper handling of herbicides and pesticides is included in 10 Public Reporting/Education Program.
- 3 Measures to prevent the infiltration of sanitary waste into the storm water system are addressed as a part of the City's sanitary sewer rehabilitation program that is funded through bonds and so are not reflected in this report.

V. Annual Expenditures for Reporting Period and Budget for Following Year, *continued*

TABLE V-2
Estimated Implementation Costs for City of Houston
Storm Water Management Programs
(Projected for August 1, 2003 – July 31, 2004)

Section Number	Program Name	Estimated Costs (Projected 08/01/03 – 07/31/04)
1	Structural Controls and Storm Water Collection System Operation	\$350,000
2	Areas of New Development and Significant Redevelopment	\$620,000
3	Roadways	\$800,000
4	Flood Control Projects ¹	N/A
5	Pesticide, Herbicide and Fertilizer Application ²	N/A
6.a	Preventing Illicit Discharges	\$1,700,000
6.b	Infiltration of Seepage ³	N/A
6.c	Floatables	\$1,500,000
6.d	Proper Management of Used Oil and Toxics	\$900,000
7	Spill Prevention and Response	\$370,000
8	Industrial and High Risk Runoff	\$310,000
9	Construction Site Runoff	\$465,000
10	Public Education	\$525,000
11	Monitoring Program	\$750,000
	Seasonal Loads and Representative EMC for Major Outfalls	\$45,000
	Collection of Representative Data for the Term of the Permit	\$195,000
	Permit Renewal	\$70,000
	Annual Report	\$45,100
	Total	\$8,645,100

Notes:

- 1 Activities related to this program for Flood Control Projects are conducted by Harris County Flood Control District (HCFCD), and HCFCD's costs are included in Part 3 Harris County Flood Control District. Thus, the City has not included any costs for implementing Flood Control projects in this table.
- 2 The cost for Public Education on the proper handling of herbicides and pesticides is included in 10 Public Reporting/Education Program.
- 3 Measures to prevent the infiltration of sanitary waste into the storm water system are addressed as a part of the City's sanitary sewer rehabilitation program that is funded through bonds and so are not reflected in this report.

VI. Summary of Number and Nature of Enforcement Actions, Inspections, and Public Education Programs

Introduction As required by Part V.C.6. of the permit, a summary describing the number and nature of enforcement actions, inspections and public education program are to be provided in the Annual Report.

Enforcement Actions and Inspections As detailed in the SWMP, the City maintains a 311 program for reporting all complaints to the City, including water quality and sanitation problems. The 311 program can receive calls 24 hours a day, 7 days a week. In addition, during the reporting period, the Health Department maintained an Environmental Pollution Control, Complaints, and General Information telephone number (713-640-4399) during business hours for reporting water quality and water sanitation problems. Field response to calls to either 311 or the Health Department's complaint number usually is made within 48 hours, excluding weekends and holidays.

During the reporting period, the Health Department conducted over 1,400 inspections and investigations related to possible illicit discharges and collected 314 samples related to storm water impacts or potential storm water impacts. Additionally, the Health Department collected 2,320 instream samples in coordination with the Texas Clean Rivers Program.

During the reporting period, the City's Environmental Investigations Unit responded to approximately 1,325 complaints. In addition, the Right-of-Way Division Industrial Facilities Investigation Unit inspected 371 industrial facilities for compliance with industrial storm water requirements.

The City also inspected 288 regulated construction sites. Of these, 162 sites required at least one follow up inspection, and 117 sites required multiple follow up inspections.

Additional information on the number and nature of inspections and enforcement actions for the reporting period are provided in the Appendices.

VI. Summary of Number and Nature of Enforcement Actions, Inspections, and Public Education Programs, *continued*

Public Education Program

During the reporting period, the City continued to distribute copies of the seven Clean Water Clear Choice brochures at public locations and environmental events. The brochures cover topics of: *New Development, Household Hazardous Wastes, Public Reporting of Illicit Discharges, Prevention of Littering, Storm Water Quality and You, Proper Management of Pesticides and Fertilizer, and Construction Activity*. The JTF also developed and distributed book covers to elementary and middle schools. The book covers provided images of the JTF mascots and basic program information and contacts. Other non-print material was distributed by the JTF including pens, pencils and water bottles. In addition, City and JTF staff attended a variety of local events where materials were also distributed.

Second, the City and Harris County continued to co-sponsor the Team “WET” Schools program. The Team WET Schools program is an outgrowth of the Council for Environmental Education’s WET (Water Education for Teachers) in the City K-12 water education program, which is already in place in Houston-area schools. WET in the City emphasizes the importance of conserving and protecting surface and underground water supplies, and the Team WET Schools initiative will expand the program to address many urban water issues, including water quality.

On November 12, 2002, James S. Deady Middle School became the second school in Houston to be designated as a Team WET School. The school received its certification and a Team WET School banner from the JTF. Staff members at the school were trained, prior to the ceremony, in the use of the *WET in the City Curriculum and Activity Guide*. Deady teachers also attended a specialized 6-hour WET in the City training specific to Team WET Schools. Students and teachers will test the water quality of Sims Bayou and other local waterways that are in their local watershed. A native wildlife habitat at the school, student monitoring of water use in their homes and school, and encouraging local businesses to use water more efficiently are some of the plans for Deady, as part of their dedication responsibilities.

In April 2003, Hogg Middle School (the school designated in May 2002 as the nation’s first Team WET School) held a school Water Festival. The festival was held as a requirement of their designation. Hundreds of people from the local area Hogg attended the festival. A number of local agencies, including the City and JTF attended the festival, presented materials and demonstrated water quality activities.

VI. Summary of Number and Nature of Enforcement Actions, Inspections, and Public Education Programs, *continued*

Public Education Program, *continued*

Third, the JTF mascots were officially given names during this period. Eddy the Egret and Clara the Catfish continued to appear at both City and JTF activities included those already named, the City Annual Drinking Water Festival and Harris County Household Hazardous Waste events. They will also appear in radio spots and television ads that will air following the end of this reporting period.

Fourth, Clean Water Clear Choice inlet grates and manhole covers began appearing at the conclusion of many City street repair projects, new construction projects and where replacements were needed. These devices contain images of the JTF mascots and messages related to storm water quality and information about where material that goes in the drains ends up (in Galveston Bay).

Fifth, the JTF continued public service announcements (PSAs) regarding storm water quality on 52 local radio stations (including some Spanish language stations). A television and radio advertising campaign was initiated during this reporting period for six local English and Spanish television stations, and eight local English and Spanish radio stations. Ads will include 15 and 30-second TV spots and 30 and 60-second radio spots. Eddy the Egret and Clara the Catfish will “star” in the ads. The ads are scheduled to begin being aired in August 2003. The PSAs during the reporting period and upcoming advertising campaign include information regarding preventing improper disposal of oil down a storm drain, proper use of fertilizers and pesticides, the fact that untreated storm water drains to the local waterways, and general information regarding the public’s role in keeping storm water and runoff free of pollutants.

Finally, during the reporting period, the JTF continued to maintain its website (cleanwaterclearchoice.org) to disseminate information on the City’s storm water quality management program.

Additional details of the City’s public education program are provided in the Appendices.

VII. Identification of Water Quality Improvements or Degradation

Introduction No water quality improvements or degradations were identified for this reporting period. Although quantitative information is not available to directly identify water quality improvements resulting from the City's storm water management program during the reporting period, it can be assumed that collected volumes of potential pollutants result in corresponding decreases in pollutant loadings.

Indirect Water Quality Benefits During the reporting period, indirect measures of water quality improvements due to the City's efforts to reduce storm water pollutants include the following:

- Collection of an average of approximately 6,804 cubic yards of litter (compacted) and 9,024 cubic yards of litter (uncompacted) of litter through the City's litter abatement program
 - Collection of 692,467 lbs of used oil and other hazardous material through the City's Household Hazardous Waste Program
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CONTENTS—PART 2: HARRIS COUNTY

<u>Section</u>	<u>Description</u>
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SUMMARY

Introduction Harris County has met its due dates within the permit and the Storm Water Management Program. Harris County continues to work with the co-permittees to develop consistent programs which will allow compliance with the requirements of the permit and the Storm Water Management Program.

Format The Annual Report is formatted in accordance with annual report requirements (Permit Part V.C. Annual Report). Storm Water Management Program (SWMP) activities conducted by Harris County during this period are described in Section I, Implementation Status of SWMP. Section I is formatted to correspond with the SWMP. Sections II through VII contain additional reporting requirements. Supporting documents, including discharge monitoring reports, are provided in the Appendices.

I. Implementation Status of SWMP

Introduction

Harris County continued to implement activities described in the Storm Water Management Program (SWMP). Permit and SWMP activities with due dates during the reporting period (08/01/02 – 07/31/03) and the status of these activities are listed respectively in Table I-1, *Harris County, Status of Permit Schedule Due Dates* and Table I-2, *Harris County, Status of SWMP Implementation Schedule Due Dates*. The implementation status of the SWMP activities is discussed in the text following the tables.

**Table I-1
Harris County
Status of Permit Schedule Due Dates
(Reporting Period: 08/01/02-07/31/03)**

PERMIT REFERENCE	ACTIVITY	DATE DUE	STATUS
III.A.8. Industrial and High Risk Runoff	b. Expand industrial inspection program to include additional facilities as described in SWMP Chapters 1 and 2, Sections 4.3.1.	10/01/02	Complete

Table I-2
Harris County
Status of SWMP Implementation Schedule Due Dates
(Reporting Period: 08/01/02-07/31/03)

SWMP REFERENCE	ACTIVITY	DATE DUE	STATUS
3. Roadways	Develop stormwater pollution minimization plans for 75% of the Harris county maintenance facilities.	10/01/2002	Complete
4. Flood Management Procedures and Retrofitting (To be carried out by HCFCD)	Complete post-retrofit sampling of Choate Road wet pond extended detention retrofit, if project was deemed feasible.	10/01/2002	Complete
8. Industrial and High Risk Runoff	Expand database. Expand industrial inspection and monitoring program. Include additional industries as they are identified as applicable to inspection and monitoring program.	10/01/2002	Complete
11. Monitoring Program	Complete wet weather screening of 50% of the area served by the MS4.	10/01/2002	Complete

I. Implementation Status of SWMP, *continued*

General	During the reporting period, Harris County (the County) continued its existing programs and performed the activities described in the SWMP to control pollutants in runoff from industrial, commercial and residential areas.
Structural Controls and Storm Water Collection System Operation (SWMP 1.)	Harris County Flood Control (HCFCD) operates and maintains certain structural controls for the County. Activities for this SWMP element are provided in Part 3 of this report.
Areas of New Development and Significant Redevelopment (SWMP 2.)	<p>During the reporting period, the County and HCFCD, through the Storm Water Management Joint Task Force (JTF), continued its efforts to work with and educate public and private organizations on Harris County Regulations for Storm Water Quality Management as it relates to the ongoing implementation of the Comprehensive Master Plan for New Development and Significant Redevelopment.</p> <p>Bilingual (English/Spanish) brochures on the program were distributed to public locations, including County libraries, as well as at public environmental events. The County also participated in various public presentations related to the New Development / Significant Redevelopment Program. A list of these presentations and events is included in the Appendices.</p> <p>The JTF continues to use the JTF website www.cleanwater-clearchoice.org as its main vehicle to keep the public and regulated community informed of any changes or updates on the New Development / Significant Redevelopment Program. The County also requires the installation of educational/informational inlet grates and manhole covers that carry a new message, “Clean Water Clear Choice.”</p> <p>During the reporting period, Harris County Permits Group (HCPG) performed 2,907 plan reviews for the areas of new development and significant redevelopment. HCPG performed 3,589 inspections, issued 458 violations and investigated 63 citizen complaints. The Harris County Attorney’s Office (HCAO) litigated four (4) cases that were brought about through the HCPG inspection violation program.</p> <p>HCPG is an additional vehicle for the County and HCFCD to keep the public and regulated community informed of any changes or updates on the New Development / Significant Redevelopment Program not only through the distribution of literature but also through the Engineering Division website.</p>

I. Implementation Status of SWMP, *continued*

Roadways
(SWMP 3.)

During the reporting period, the four County Precincts and the Harris County Toll Road Authority (HCTRA) continued existing programs for operating and maintaining County-owned streets, roads, toll roads, bridges highways and associated rights-of-way.

Harris County completed and implemented Storm Water Pollution Minimization Plans (SWPMPs), which include spill prevention and response requirements, for its bulk storage facilities.

Harris County, via its precincts and the Harris County Toll Road Authority, maintained the County's MS4 in a manner to effectively drain storm water while at the same time protecting the quality of storm water being conveyed. Activities related to the maintenance of the County's storm sewer system are summarized in the Appendices.

Through its participation in Trash Bash and in a Supplement Environmental Project that funds trash pickup by County inmates, Harris County removed 94 tons of floatables. Additionally, Harris County provided \$100,000 as a Supplemental Environmental Project for the development of a skimmer boat, the Mighty Tidy, to remove floatables along Buffalo Bayou and the Houston Ship Channel.

During the reporting period, the County continued to implement its integrated multiyear Public Education Program, which includes information on the prevention of littering. A bilingual (English/Spanish) brochure on the prevention of littering was distributed to public locations, including County libraries, as well as at public environmental events. Also, litter prevention messages were aired on 52 local radio stations (English/Spanish). Additional details on the County's public education program are provided in Section VI.

Flood Control
Projects
(SWMP 4.)

The Harris County Flood Control District (HCFCD) is to carry out the flood management program as described in the SWMP. Activities for this element are provided in Part 3 of this report.

I. Implementation Status of SWMP, *continued*

Pesticide, Herbicide, and Fertilizer Application (SWMP 5.)

As described in the SWMP, Harris County uses certified personnel for applications involving pesticides, herbicides and fertilizers. During the reporting period, the County continued to implement its integrated multiyear Public Education Program, which includes information on proper management of pesticides, herbicides and fertilizers. A bilingual (English/Spanish) brochure on the proper management of pesticides and fertilizers continues to be distributed to public locations, including County libraries, as well as at public environmental events. Messages on how to properly administer and dispose of pesticides, herbicides, and fertilizers messages were aired on 52 local radio stations (English/Spanish). Also, representatives from Harris County were guest speakers on several local radio and television talk shows to discuss proper management of pesticides, herbicides, and fertilizers.

Less-toxic alternative recipe cards for household cleaners were distributed at every Household Hazardous Waste Collection event this year. At the County's November 2, 2002, Household Hazardous Waste Collection event, the County provided a booth for a local wholesale merchant, William Hynek Organics, to distribute information and samples of less-toxic and organic gardening alternatives to the public. U-Mix-It Safe Spray® bottles and Less Toxic Recipes brochures were also distributed at the two Spring 2003 events.

Additional details on the County's public education program are provided in Section VI.

Allowable Non-Storm Water Discharges (SWMP 6.a.)

Harris County identified in its Regulations of Harris County, Texas for Storm Water Quality Management categories of non-storm water discharges that are allowed to be discharged into the MS4. For the most part, the list in these regulations correspond to those listed in 40CFR122.26(d)(2)(iv)(B)(1).

Infiltration of Seepage (SWMP 6.b.)

Harris County performs wet- and dry-weather screening for areas of unincorporated Harris County on behalf of Harris County and the Harris County Flood Control District. The purpose of this screening program is to locate illicit discharges, including chronic dry and wet weather overflows from sanitary sewerages. Activities under this element are summarized in the appendices.

Harris County, through several agencies, has procedures for locating and eliminating seepages and overflows from sanitary sewerages and on-site sewage facilities, as described in SWMP 6.e. below. Additional information on the County's efforts to prevent the infiltration of seepage are summarized in the Appendices.

I. Implementation Status of SWMP, *continued*

Floatables Program (SWMP 6.c)

Harris County Flood Control (HCFCD) monitors and removes floatables under this section of the SWMP for Harris County. Activities for this element are provided in Part 3 of this report.

Proper Management of Used Oil and Toxics (SWMP 6.d)

Harris County held one-day Household Hazardous Waste (HHW) Collection events on November 2, 2002, November 9, 2002, April 12, 2003 and April 26, 2003. A mercury thermometer exchange was held in conjunction with each of the above events allowing residents to bring in their old mercury thermometer for proper disposal and receive a mercury-free fever thermometer in exchange. The County also funded the North Channel Local Emergency Planning Committee's (LEPC) annual HHW event held on April 5, 2003. In addition to the HHW events, Harris County held an Electronics Recycling Event on May 17, 2003, using grant funds received from the Houston-Galveston Area Council (H-GAC). The County's HHW Collection efforts are summarized in the Appendices.

The 2002 agreement with the City of Houston that allows Harris County to purchase vouchers from the City is still in place. These vouchers, purchased at a cost of \$75 each, allow a County resident to drop off up to 200 pounds of HHW at the City of Houston's Environmental Service Center. During the reporting period, 252 County residents used this service.

During the reporting period, the County continued to implement its integrated multiyear Public Education Program, which includes information on proper management of used oil and toxics. County staff identified 140 facilities and retail stores that accepted used oil and filters from residents. Staff members visited each site and provided TCEQ registration and reporting forms and bilingual (English/Spanish) signs for posting to ensure the site's compliance with 30 TAC 324.7 (3). The County also partnered with the H-GAC to sponsor two Beat the Baron Waste© HHW curriculum workshops for elementary teachers.

A bilingual (English/Spanish) brochure on the proper management of used oil and toxics was distributed to public locations, including County libraries, as well as at public environmental events. Harris County also updated and distributed the brochure on the use and disposal of paint. HHW Waste Wheels and Home Inventory Guides that assist residents on deciding safe and proper disposal methods for HHW. Less Toxic Alternative recipe cards and brochures were distributed with U-Mix-It Safe Spray® bottles to help encourage residents to start using environmentally safe alternatives.

I. Implementation Status of SWMP, *continued*

Proper Management of Used Oil and Toxics (SWMP 6.d), *continued*

HHW Collection information was posted on the Joint Task Force www.cleanwaterclearchoice.org website, which received an average of 20,000 visitors per month, and on the County Pollution Control Division's website. The County also utilized the public service phone system and website, 1-800-CLEAN-UP (Earth 911). HHW Collection events and HHW disposal locations were posted on this website and flyers advertising the program were distributed. In addition, to further promote the importance of proper HHW disposal and to continue with its public education efforts, Harris County held two multi-media HHW campaigns to advertise its Fall 2002 and Spring 2003 HHW collection events. Also, representatives from Harris County were guest speakers on several local radio and television talk shows to discuss proper disposal of HHW. Additional details on the County's public education program are provided in Section VI. Examples of the County's household hazardous waste and public education program are provided in the Appendices.

Preventing Illicit Discharges, Industrial Inspections (SWMP 6.e, 6.f)

Wastewater Treatment Facilities

During the reporting period, Harris County Pollution Control (HCPC) performed 253 industrial and municipal TPDES discharge permit reviews. HCPC collected and analyzed 1,214 wastewater discharge samples from TPDES-permitted industrial dischargers, and 1,121 samples from TPDES-permitted municipal dischargers. HCPC also investigated 274 citizen complaints related to water pollution. Harris County Environmental Enforcement Division investigated 53 cases of water pollution.

Harris County Permits Group reviewed 1,419 plans for the installation of on-site sewage facility (OSSFs). The Group responded to 600 cases of failing OSSFs.

Harris County Environmental Services Section responded to 326 wastewater complaints, inspected 13 wastewater collection lines, and inspected 15 OSSFs. Additional information on the County's efforts to prevent illicit discharges are summarized in the Appendices.

During the reporting period Harris County implemented a program aimed at encouraging treatment works which required TPDES authorization for storm water discharges to gain permit coverage. Harris County identified 56 such facilities. At the beginning of the calendar year none of the facilities were permitted. As of the end of the reporting period, all these facilities had gained coverage under the Multi-Sector General Permit. This effort was accomplished through voluntary cooperation with the County issuing just one Violation Notice.

I.

Implementation Status of SWMP, *continued*

Preventing and Elimination of Illicit Discharges, Industrial Inspections (SWMP 6.e, 6.f) *continued*

Harris County Facilities

During the reporting period Harris County completed construction of wash bays at Precinct Operation and Maintenance facilities for the purpose of washing vehicles onsite and drying beds for dewatering street-sweeping materials and ditch-cleaning materials. These activities are aimed at eliminating possible non-allowable non-storm water discharges from County municipal operations.

Public Education

During the reporting period, the County continued with its integrated multiyear Public Education Program, which includes information on storm water quality in general and on the public reporting of illicit discharges. As part of implementing the public education program, bilingual (English/Spanish) brochures on the storm water quality program and on the public reporting of illicit discharges were distributed to public locations, including County libraries, as well as at public environmental events. Additional details on the County’s public education program are provided in Section VI.

Solid Waste

HCPC has identified all the municipal waste disposal sites in the unincorporated areas of Harris County. During the reporting period, HCPC conducted 175 municipal landfill inspections/investigations at TCEQ-permitted sites and 331 investigations of unauthorized dumping. Harris County Environmental Enforcement Division investigated 115 cases of unauthorized dumping during this same period. Harris County Environmental Services Section responded to 748 complaints relating to illegal storage and disposal of solid waste. Activities related to the County’s municipal waste program are summarized in the Appendices.

State regulations for municipal waste sites require operational controls (run-on and run-off controls) designed to prevent commingling of landfill leachate and storm water. The HCPC municipal landfill inspections include evaluation of these controls.

Inspections of Type 1 facilities in unincorporated Harris County will continue throughout the permit term. During the reporting period HCPC conducted 41 inspections of Type 1 facilities. Inspections of facilities that apply for the No-Exposure Certification (NEC) under the TPDES industrial general permit TXR050000 will continue over the permit term. HCPC conducted 51 inspections at facilities that applied for the no-exposure certification. The database for those applying for the NEC program was compiled from copies of the NEC sent to Harris County as well as from information shared by the TCEQ. HCPC also conducted inspections at 201 facilities that fall under the TPDES Multi-Sector General Permit.

I. Implementation Status of SWMP, *continued*

List of Industrial Dischargers (SWMP 6.g)

Harris County Pollution Control Division (HCPC) maintains a database, known as the “Tracking System”, of industrial dischargers. The Tracking System can produce a list by name and location of all industrial and municipal facilities in Harris County (incorporated or otherwise) operating under a general or individual TPDES discharge permit.

Spill Prevention and Response (SWMP 7.)

During the reporting period, Harris County Pollution Control Division (HCPC) provided assistance for 35 spill responses on Harris County right of way. Harris County Fire Marshal’s Office responded to 30 spills in the County. Additionally, Regulations of Harris County for Storm Water Quality Management require spill prevention and response for construction and post-construction activities, and for industrial facilities.

Harris County continued evaluating County operations during the reporting period to determine the status of existing spill prevention and response programs in compliance with state and federal requirements. Harris County completed and implemented Storm Water Pollution Minimization Plans, which include spill prevention and response requirements, for several County bulk storage facilities.

Harris County continues to educate its workers and firefighters on proper procedures of spill response and prevention. During the reporting period, Harris County Fire Marshal’s Office trained 185 firefighters on the importance of protecting water resources during emergency responses. The Storm Water Quality Section trained 44 precinct employees on spill response and prevention for its in-house operations.

Industrial and High Risk Runoff (SWMP 8.)

During the reporting period, Harris County Pollution Control (HCPC) refined its inspection procedures for high priority industries. The *Regulations of Harris County, Texas for Storm Water Quality Management* require the submission of monitoring data for excursions of thresholds for oil and grease, COD, pH, BOD5, TSS, total phosphorus, total Kjeldahl nitrogen, and nitrate and oil & grease, pH, and COD for Type 1 and Type 2 facilities, respectively, not covered under the Multi-Sector or other TPDES permit. As stated in the County Regulations, facilities covered under the TPDES Multi-Sector General Storm Water Permit, any other NPDES or TPDES general permit, or an individual permit that authorizes the discharge of storm water are required by these regulations to submit monitoring data for excursions of applicable effluent limitations and/or benchmarks to HCPC.

I. Implementation Status of SWMP, *continued*

Industrial and High Risk Runoff (SWMP 8.), *continued*

Currently, two quarters of benchmark data from various industrial facilities has been received and entered into a database maintained by the HCPC Storm Water Section. Depending on the frequency and/or severity of the excursion, some facilities will be placed on a special monitoring list and HCPC will sample at those facilities. As a result of those analyses and investigations, certain facilities may be required to conduct additional sampling, testing, analysis, or other monitoring as required in the Regulations.

HCPC continued its industrial stormwater inspection program. HCPC conducted inspections of industrial facilities and continued to work closely with the Texas Commission on Environmental Quality (TCEQ), City of Houston, and City of Pasadena storm water inspection personnel to develop consistent and pertinent inspection guidelines.

HCPC inspects all Type 1 and No-Exposure Certification industrial facilities within unincorporated Harris County. Additionally, HCPC inspects industrial facilities subject to the TPDES Multi-Sector General Permit and the TPDES Ready-Mix Concrete General Permit. Harris County performed 342 industrial inspections during the reporting year, exceeding the SWMP requirement of inspecting the lesser of three percent (3%) or ten (10) industrial facilities.

Harris County has compiled a database of Type 1 facilities (facilities subject to reporting under EPCRA Title III, Section 313 and Hazardous Waste Treatment Storage and Disposal facilities). Harris County further worked to identify Type 2 facilities (including commercial incinerators, publicly owned treatment works, and municipal solid waste transfer stations). This database expansion was completed by 10/01/02, in accordance with permit requirements.

Construction Site Runoff (SWMP 9.)

On August 21, 2001, Harris County Commissioners Court adopted the Regulations of Harris County, Texas for Storm Water Quality Management. These regulations became effective October 1, 2001. These regulations require, in part, the adherence by construction site owners and operators to the TPDES Construction General Permit (TXR150000) and provide for inspection and enforcement procedures.

During the reporting period, Harris County Permits Group (HCPG) performed 2,907 plan reviews for the areas of new development and significant redevelopment. HCPG performed 3,589 inspections, issued 458 violations and investigated 63 citizen complaints. The Harris County Attorney's Office (HCAO) litigated four (4) cases that were brought about through the HCPG inspection violation program. Additional details on the County's inspection and enforcement activities are provided in the Appendices.

I. Implementation Status of SWMP, *continued*

Construction Site Runoff (SWMP 9.), *continued*

HCPG is an additional vehicle for the County and HCFCD to keep the public and regulated community informed of any changes or updates on the Construction Program not only through the distribution of literature but also through the Engineering Division website.

On May 7, 2003, Harris County offered a seminar to the Houston Contractors Association on storm water compliance during the construction of underground utilities and paving in residential subdivisions. This seminar provided information on Harris County's regulations and procedures for storm water runoff management at construction sites. The requirements of the Construction General Permit for storm water were briefly discussed and the speaker reviewed County procedures for inspection and enforcement of storm water requirements.

During the reporting period, the County also continued with its integrated multiyear Public Education Program, which includes information on storm water quality in general and on the construction program. Additional details on the County's public education program are provided in Section VI.

Public Education (SWMP 10.)

During the reporting period, the County continued to implement its integrated multiyear Public Education Program, which includes information on public reporting of illicit discharges. A bilingual (English/Spanish) brochure on the public reporting of illicit discharges was distributed to public locations, including County libraries, as well as at public environmental events. Additional details on the County's public education program are provided in Section VI.

Monitoring Program (SWMP 11.)

Activities for this element are provided in Section IV.

II. Proposed Changes to SWMP

Introduction As required by Part V.C.2. of the permit, proposed changes to the SWMP are to be provided in the Annual Report.

Changes to SWMP In the application for the existing NPDES MS4 permit, Harris County (County) and the Harris County Flood Control District (HCFCD) have a joint Storm Water Management Program (SWMP). For the permit renewal application submitted to the Texas Commission on Environmental Quality (TCEQ), the County and HCFCD have retained the elements of the joint SWMP, but have developed separate SWMPs. A complete copy of the separate SWMP for the County (representing the existing SWMP for the County) is provided in the Appendices.

Additionally, the County is proposing a correction to page 19 of its SWMP. The revised page is included in the Appendices.

III. Revisions, if Necessary, to Assessments of Controls and the Fiscal Analysis Reported in Permit Application

Introduction As required by Part V.C.3. of the permit, revisions, if necessary, to assessments of controls and the fiscal analysis reported in the permit application are to be provided in the Annual Report.

No revisions are needed at this time to the assessments of controls provided in the permit application.

Discussion The fiscal analysis presented in the permit application was developed to implement the SWMP and monitoring program expectations at that time. The overall NPDES storm water permit program expectations continued to evolve and became better defined between the submission of the application in November 1992 and the issuance of the permit in 1998. Given the evolution of the program, the cost analysis presented in the application is not totally reflective of the current program. Additionally, major components of the current program are performed under various contracts with the County, none of which have firm costs for the entire permit term. As a result, any revisions to the fiscal analysis requested today would likely have to be revised in subsequent years. Accordingly, we request that the fiscal analysis presented in the application not be revised at this time, but that current costs and next year projected costs be refined annually in the Annual Report (see Section V., *Annual Expenditures for Reporting Period and Budget for Following Year*).

IV. **Summary of Data, including Monitoring Data**

Introduction As required by Part V.C.4. of the permit, a summary of the data, including monitoring data, that are accumulated throughout the year are to be provided in the Annual Report.

During the reporting period, Harris County and Harris County Flood Control District (HCFCD), through Harris County Pollution Control, conducted sampling for the dry weather screening and wet weather screening, and representative monitoring programs for the Harris County and HCFCD MS4s. Summaries for the dry weather and wet weather screening programs and summaries and discharge monitoring reports (DMRs) for the representative monitoring program are provided in the Appendices. Additional information regarding the screening and representative monitoring programs is provided below.

Dry Weather Screening Program The period for the dry weather screening program was from October 1, 2002 to September 30, 2003. Screening efforts began in December 2002. As of July 31, 2003, two hundred fifty-five sites have been screened for the Harris County and HCFCD MS4s.

An active discharge was observed at twenty-seven sites. Questionable discharges were observed at five of these sites. It was determined that four of the flows were from a nearby sewage treatment plant, and one was from a nearby permitted industrial facility. These discharges have been investigated and resolved.

It is anticipated that 100% of the area served by the Harris County and HCFCD MS4s will be screened by September 30, 2003, in accordance with permit requirements.

Wet Weather Screening Program The period for the wet weather screening program was from October 1, 2002 to September 30, 2003. Twenty-five sites were identified for screening for year five. As of July 31, 2003, nineteen have been screened for the Harris County and HCFCD MS4s with no notable pollutant values detected. The remaining three sites from the previous year were also screened by October 1, 2002 with no notable values recorded. It is anticipated the remaining six sites will be screened by September 30, 2003.

The permit requirement for wet weather screening of 50% of the area served by the Harris County and HCFCD MS4s was completed by October 1, 2002. It is anticipated that 100% of the area served by the MS4s will be screened by September 30, 2003, in accordance with permit requirements.

IV.

Summary of Data, including Monitoring Data, *continued*

Representative
Monitoring
Program

During the fall season, August 1, 2002 to November 30, 2002, the Harris County and HCFCD representative monitoring sites had qualifying rain events, and all sites were sampled.

During the winter season, December 1, 2002 to February 28, 2003, the representative monitoring sites had qualifying rain events, and all sites were sampled.

During the summer season, March 1, 2003 to July 31, 2003, the representative monitoring sites had qualifying events, and all sites were sampled.

V. Annual Expenditures for Reporting Period and Budget for Following Year

Introduction As required by Part V.C.5. of the permit, annual expenditures for the reporting period, with a breakdown for the major elements of the SWMP, and the budget for the following year are to be provided in the Annual Report. Expenditures for the reporting period (08/01/02 – 07/31/03) are provided in Table V- 1, and projected expenditures budgeted for the following year (08/01/03 – 07/31/04) are provided in Table V-2. The values in these tables include Harris County and Harris County Flood Control District’s estimated costs.

Discussion Concerning Tables V-1 and V-2, several clarifications are warranted. The values presented in Table V-1 are estimated expenses incurred. Given the accounting methods utilized, some of the expenses incurred are estimates. The values presented in Table V-2 are projected costs. The County’s fiscal year is March 1 through February 28, thus all of the costs shown in Table V-2 are not necessarily budgeted at this time. The County budget that will be adopted for March 1, 2003 to February 28, 2004 will complete the budgeting for the period covered in the table.

In regard to both tables, given the overlap of certain components of the program and shared costs, *i.e.*, Public Education Program development, project administration, *etc.*, the allocation of some components of the costs to major elements is approximate. Additionally, the values presented do not include all costs that could possibly be associated with the storm water management program.

V.

**Annual Expenditures for Reporting Period and Budget for
Following Year, *continued***

**TABLE V-1
Estimated Implementation Costs For HC
Storm Water Management Programs
(August 1, 2002 – July 31, 2003)**

Section Number	Program Name	Estimated Costs (08/01/02 – 07/31/03)
1.	Structural Controls and Storm Water Collection System Operation	N/A
2.	Areas of New Development and Significant Redevelopment	\$426,200
3.	Roadways	\$11,706,800
4.	Flood Control Projects	N/A
5.	Pesticide, Herbicide and Fertilizer ¹	N/A
6.a.	Allowable Non-Storm Water Discharges	\$86,700
6.b.	Infiltration of Seepage	N/A
6.c.	Floatables Program	N/A
6.d.	Proper Management of Used Oil & Toxics	\$456,000
6.e.	Preventing Illicit Discharges	\$4,159,400
6.f.	Elimination of Illicit Discharges	Included in 6.e. above.
6.g.	List of Industrial Dischargers	Included in 6.e. above.
7.	Spill Prevention and Response	\$61,500
8.	Industrial and High Risk Runoff	Included in 6.e. above.
9.	Construction Site Runoff	\$1,258,000
10.	Public Education	\$316,000
11.	Monitoring Program	\$526,500
	Permit Renewal	\$174,600
	Annual Report	\$88,800
	Seasonal Loads and Representative EMC for Major Outfalls	N/A
	Collection of Representative Data	\$65,800
Total		\$19,326,300

Notes:

¹ Estimated costs for Section 5 Pesticide, Herbicide and Fertilizer are included in estimated costs for Section 10. Public Education.

V. **Annual Expenditures for Reporting Period and Budget for
Following Year, *continued***

**TABLE V-2
Estimated Implementation Costs For HC
Storm Water Management Programs
(Projected for August 1, 2003 – July 31, 2004)**

Section Number	Program Name	Estimated Costs (Projected 08/01/03 – 07/31/04)
1.	Structural Controls and Storm Water Collection System Operation	N/A
2.	Areas of New Development and Significant Redevelopment	\$438,800
3.	Roadways	\$12,456,300
4.	Flood Control Projects	N/A
5.	Pesticide, Herbicide and Fertilizer ¹	N/A
6.a	Allowable Non-Storm Water Discharges	\$94,500
6.b	Infiltration of Seepage	N/A
6.c	Floatables Program	N/A
6.d	Proper Management of Used Oil & Toxics	\$501,200
6.e.	Preventing Illicit Discharges	\$4,439,400
6.f.	Elimination of Illicit Discharges	Included in 6.e. above.
6.g.	List of Industrial Discharges	Included in 6.e. above.
7.	Spill Prevention and Response	\$68,400
8.	Industrial and High Risk Runoff	Included in 6.e. above.
9.	Construction Site Runoff	\$1,414,600
10.	Public Education	\$335,340
11.	Monitoring Program	\$548,500
	Permit Renewal	\$185,000
	Annual Report	\$85,000
	Seasonal Loads and Representative EMC for Major Outfalls	N/A
	Collection of Representative Data	\$90,000
	Total	\$20,657,040

Notes:

¹ Estimated costs for Section 5 Pesticide, Herbicide and Fertilizer are included in estimated costs for Section 10. Public Education.

VI. Summary of Number and Nature of Enforcement Actions, Inspections, and Public Education Programs

Introduction	<p>As required by Part V.C.6. of the permit, a summary describing the number and nature of enforcement actions, inspections and public education programs are to be provided in the Annual Report.</p>
Enforcement Actions and Inspections	<p>Harris County Pollution Control Division (HCPC) conducts routine sampling of TPDES-permitted dischargers and investigations of dischargers and solid waste disposal facilities. In addition, HCPC responds to citizen complaints that may involve impacts to the County’s MS4. Harris County Permits Group reviews and inspects new on-site sewage facilities (OSSFs) as well as responds to citizen complaints concerning failing or overflowing OSSFs. Harris County Environmental Enforcement Division conducts criminal investigations of water pollution and solid waste cases, generally in response to citizen complaints or referrals from other agencies. Harris County Environmental Services Division conducts inspections of OSSFs, solid waste complaints, and sewer collection systems.</p> <p>Harris County generally seeks voluntary compliance of violations. When this is not possible, or in cases of recurring, egregious, or serious violations, enforcement is handled through the justice-of-the-peace courts or referred to the County or District attorneys’ office for civil or criminal prosecution.</p> <p>The number and nature of inspections and enforcement actions for the reporting period are provided in the Appendices and in Section I(6)(e).</p>
Public Education Program	<p>During the reporting period, the County continued to develop and implement its public education program. The seven bilingual (English / Spanish) brochures—one for each of the subject areas described in the SWMP (prevention of littering; public reporting of illicit discharges; proper management and disposal of used oil and toxics; proper management of pesticides, herbicides, and fertilizers; construction activities; and new development / significant redevelopment) and one general storm water quality brochure—continued to be distributed to public locations, including County libraries, as well as at public environmental events and various public presentations such as Earth Day, Trash Bash and the City of Houston’s Water Festival.</p> <p>The JTF also distributed other print materials to the public, including book covers for elementary and middle schools. The County also distributed promotional items, such as pens, pencils and water bottles, at local environmental events and various presentations. Copies of the public education program print materials and promotional items are provided in the Appendices.</p>

VI.**Summary of Number and Nature of Enforcement Actions, Inspections, and Public Education Programs, *continued***

Public Education Program, *continued*

The egret and catfish mascots were named during the reporting period as Eddy the Egret and Clara the Catfish. The mascots are and will continue to be an integral part of the County and City's overall public education program. Pictures of the mascots are provided in the Appendices.

During the reporting period, radio messages generally related to storm water quality management issues were aired on 52 local radio stations (English/Spanish). Also, representatives from Harris County were guest speakers on several local radio and television talk shows to discuss storm water quality issues and its importance.

The JTF website (www.cleanwaterclearchoice.org) continued to be the primary vehicle for disseminating information on the County's storm water quality management program. During this reporting period Harris County and the City of Houston continued to co-implement the Team "WET" Schools program. This program, which targets middle schools, allows teachers to introduce water education into their curricula. Deady Middle School has been designated as the second Team "WET" School. JTF members, local officials and school administrators attended a formal designation ceremony for Deady, on November 22, 2002 at the schools campus.

During the reporting year Harris County held several in-house trainings for County employees on Harris County's regulations and procedures for storm water runoff management at construction sites. The requirements of the Construction General Permit for storm water and County procedures for inspection and enforcement of storm water requirements. Additional information on these trainings is provided in the Appendices.

On May 7, 2003, Harris County offered a seminar to the Houston Contractors Association on storm water compliance during the construction of underground utilities and paving in residential subdivisions. This seminar provided information on Harris County's regulations and procedures for storm water runoff management at construction sites. The requirements of the Construction General Permit for storm water were briefly discussed and the speaker reviewed County procedures for inspection and enforcement of storm water requirements.

Additional information on the County's public education program is provided in the Appendices.

VII. Identification of Water Quality Improvements or Degradation

Introduction No water quality improvements or degradations were identified for this reporting period. Although quantitative information is not available to directly identify water quality improvements resulting from the County's storm water management program during the reporting period, it can be assumed that collected volumes of potential pollutants result in corresponding decreases in pollutant loadings.

Indirect Water Quality Benefits During the reporting period, indirect measures of water quality improvements due to the County's efforts to reduce storm water pollutants included the following:

- Collection of approximately 112,113 cubic yards of litter from areas operated or maintained by the County Precincts
- Collection of approximately 94 tons of litter from other areas operated or maintained by the County
- Collection of 476,136 lbs of used oil and other hazardous materials through the County's Household Hazardous Waste Program

CONTENTS—PART 3: HARRIS COUNTY FLOOD CONTROL DISTRICT

<u>Section</u>	<u>Description</u>
	Summary
I	Implementation Status of SWMP
II	Proposed Changes to SWMP
III	Revisions, if necessary, to Assessments of Controls and the Fiscal Analysis Reported in Permit Application
IV	Summary of Data, including Monitoring Data
V	Annual Expenditures for Reporting Period and Budget for Following Year
VI	Revisions, if necessary, to Assessments of Controls and the Fiscal Analysis Reported in Permit Application
VII	Identification of Water Quality Improvements or Degradation

SUMMARY

Introduction	<p>Harris County Flood Control District (HCFCD) has met its due dates within the permit, the Storm Water Management Program and seasonal monitoring. HCFCD continues to work with the co-permittees to develop consistent programs which will allow compliance with the requirements of the permit and the Storm Water Management Program.</p>
Format	<p>The Annual Report is formatted in accordance with annual report requirements (Permit Part V.C. Annual Report). Storm Water Management Program (SWMP) activities conducted by HCFCD during this period are described in Section I, Implementation Status of SWMP.</p> <p>Section I is formatted to correspond with the SWMP. Sections II through VII contain additional reporting requirements. Supporting documents, including discharge monitoring reports, are provided in the Appendices.</p>

I. Implementation Status of SWMP

Introduction The Harris County Flood Control District (HCFCD) continued to implement activities described in the Storm Water Management Program (SWMP). Permit and SWMP activities with due dates during the reporting period (08/01/02– 07/31/03) and the status of these activities are listed respectively in Table I-1, *Harris County Flood Control District, Status of Permit Schedule Due Dates* and Table I-2, *Harris County Flood Control District, Status of SWMP Implementation Schedule Due Dates*. The implementation status of the SWMP activities is discussed in the text following the tables.

**Table I-1
Harris County Flood Control District
Status of Permit Schedule Due Dates
(Reporting Period: 08/01/02-07/31/03)**

PERMIT REFERENCE	ACTIVITY	DATE DUE	STATUS
III.A.3. Flood Control Projects and Structural Controls	d. Complete post-retrofit sampling of Choate Road wet pond extended detention retrofit, if project was deemed feasible.	10/01/02	Complete
III.A.7. Wet Weather Screening Program	b. Complete wet weather screening of 50% of the area served by the MS4.	10/01/02	Complete

Table I-2
Harris County Flood Control District
Status of SWMP Implementation Schedule Due Dates
(Reporting Period: 08/01/02-07/31/03)

SWMP REFERENCE	ACTIVITY	DATE DUE	STATUS
3. Roadways	Develop stormwater pollution minimization plans for 75% of Harris County maintenance facilities.	10/01/2002	Complete
4. Flood Control Projects	Complete post-retrofit sampling of Choate Road wet pond extended detention retrofit, if project was deemed feasible.	10/01/2002	Complete
8. Industrial and High Risk Runoff	Expand database. Expand industrial inspection and monitoring program. Include additional industries as they are identified as applicable to inspection and monitoring program.	10/01/2002	Complete
11. Monitoring Program	Complete wet weather screening of 50% of the area served by the MS4.	10/01/2002	Complete

I. Implementation Status of SWMP

General During the reporting period, Harris County Flood Control District (HCFCD) continued existing programs and implemented activities described in the SWMP to control pollutants in runoff from commercial and residential areas.

Structural Controls and Storm Water Collection System Operation (SWMP 1.) HCFCD continued operation and maintenance activities for structural controls as described in the HCFCD SWMP. Operation and maintenance activities included mowing of channels and detention basins, application of herbicides, litter and debris removal, turf establishment, and cleaning and repair of structural controls as needed.

During the reporting period, HCFCD continued implementation of a floatables monitoring program, in accordance with permit requirements. The program was conducted at the Harris County Flood Control Unit P700-01, located at the Southwest corner of North Belt East (Beltway 8) and the Union Pacific Railroad. The floatables monitoring program is intended to identify the type and quantity of floatables that are carried by storm water from Beltway 8 during and after rain events.

As described in the SWMP, HCFCD will conduct at least two floatables monitoring events annually. From October 1, 2002 to July 31, 2003, one storm event was monitored at the HCFCD Unit P700-01 site. An additional floatables monitoring event was conducted after July 31, 2003. Observations were noted regarding the effectiveness of equipping a surge basin with an inlet basket as well as the types of floatables collected from both the basket and the surge basin. Based on the collection results of the event, the primary types of floatables captured during the storm event was processed wood and unprocessed wood. The total amount of floatable material collected from the July 4, 2003 event was 0.486 cubic yards. Summary tables for HCFCD's floatables monitoring events during the reporting period are provided in the Appendices.

I. Implementation Status of SWMP, *continued*

Areas of New Development and Significant Redevelopment (SWMP 2.)

During the reporting period, the County and HCFCD, through the Storm Water Management Joint Task Force (JTF), continued its efforts to work with and educate public and private organizations on Harris County Regulations for Storm Water Quality Management as it relates to the ongoing implementation of the Comprehensive Master Plan for New Development and Significant Redevelopment.

Bilingual (English/Spanish) brochures on the program were distributed to public locations, including County libraries, as well as at public environmental events. The County also participated in various public presentations related to the New Development / Significant Redevelopment Program. A list of these presentations and events is included in the Appendices.

The JTF continues to use the JTF website www.cleanwater-clearchoice.org as its main vehicle to keep the public and regulated community informed of any changes or updates on the New Development / Significant Redevelopment Program.

Roadways (SWMP 3.)

The four Harris County Precincts and the Harris County Toll Road Authority operate and maintain County streets, roads, and highways. Activities conducted during the reporting period for this SWMP element are provided in Part 2 of this report.

HCFCD conducts maintenance of detention basins and drainage channels. During the reporting period, HCFCD continued developing SWMPs for HCFCD bulk storage and maintenance facilities.

Flood Control Projects (SWMP 4.)

HCFCD began implementing the floatables control monitoring at the Choate Road Detention Basin in February 2001. From August 1, 2002 to July 31, 2003, two storm events were monitored at the site. Based on the collection results of these events, the primary types of floatables captured during these storm events were unprocessed wood and plastic. The total amount of floatable material from the July 4, 2003 and July 9, 2003 events were 0.093 cubic yards and 0.111 cubic yards, respectively. Summary tables for the Choate Road Detention Basin floatables control monitoring events during the reporting period are provided in the Appendices.

The HCFCD is incorporating water quality enhancement features into the design of all new flood control projects where practicable. An evaluation is performed during the Study or Preliminary Engineering Stages of a project to determine the usage of water quality enhancements based on parameters such as site topography, soils, hydrology, groundwater depths and rainfall.

I. Implementation Status of SWMP, *continued*

Flood Control Projects (SWMP 4.), <i>continued</i>	To determine the effectiveness of the water quality enhancement features or Best Management Practices (BMPs), a Pond Protocol for monitoring the effectiveness was developed. The Pond Protocol will enable HCFCD to collect data on flood control basins with water quality enhancements throughout the county and assess their relative effectiveness.
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Pesticide, Herbicide, and Fertilizer Application (SWMP 5.)	Activities for this SWMP element are provided in Part 2 of this report.
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Allowable Non-Storm Water Discharges (SWMP 6.a.)	During the reporting period, HCFCD continued the Dry Weather Screening Program. See Section IV for additional details.
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Infiltration of Seepage (SWMP 6.b.)	Activities for this SWMP element are provided in Part 2 of this report.
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Floatables Program (SWMP 6.c.)	<p>During the reporting period, HCFCD continued implementation of a floatables monitoring program, in accordance with permit requirements. The program was conducted at the Harris County Flood Control Unit P700-01, located at the Southwest corner of North Belt East (Beltway 8) and the Union Pacific Railroad. The floatables monitoring program is intended to identify the type and quantity of floatables that are carried by storm water from Beltway 8 during and after rain events.</p> <p>As described in the SWMP, HCFCD will conduct at least two floatables monitoring events annually. From October 1, 2002 to July 31, 2003, one storm event was monitored at the HCFCD Unit P700-01 site. An additional floatables monitoring event was conducted after July 31, 2003. Observations were noted regarding the effectiveness of equipping a surge basin with an inlet basket as well as the types of floatables collected from both the basket and the surge basin. Based on the collection results of the event, the primary types of floatables captured during the storm event was processed wood and unprocessed wood. The total amount of floatable material collected from the July 4, 2003 event was 0.486 cubic yards. Summary tables for HCFCD's floatables monitoring events during the reporting period are provided in the Appendices.</p> <p>The HCFCD has partnered with the Buffalo Bayou Partnership in the operation of the "Mighty Tidy" trash skimmer boat. The District is providing annual operation funds, in the amount of \$220,000, and in exchange the navigable waters in the County will have trash removed by the skimmer boat.</p>
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I. Implementation Status of SWMP, *continued*

Floatables Program (SWMP 6.c.), <i>continued</i>	HCFCDD is also continuing the floatable control efforts on Little Vince bayou which uses a boom to collect trash and debris in a natural collection area of the bayou. HCFCDD is also further developing the Floatable Control Program to identify other natural floatable / debris collection areas along the channel systems and designing collection / removal methods. Research of different types of floatable control devices which operate efficiently within basins is continuing. Some of the devices designed during this reporting period include a netting overlay at a White Oak Bayou Basin outfall, a natural trash trap created with a box of cattails, and a planted gabion wall.
Proper Management of Used Oil and Toxics (SWMP 6.d.)	Activities for this SWMP element are provided in Part 2 of this report.
Elimination of Illicit Discharges (SWMP 6.f.)	Activities for this SWMP element are provided in Part 2 of this report.
List of Industrial Discharges (SWMP 6.g.)	Activities for this SWMP element are provided in Part 2 of this report.
Spill Prevention and Response (SWMP 7.)	Activities for this SWMP element are provided in Part 2 of this report.
Industrial and High Risk Runoff (SWMP 8.)	Activities for this SWMP element are provided in Part 2 of this report.

I. Implementation Status of SWMP, *continued*

Construction Site Runoff (SWMP 9.)

Harris County Flood Control District and Harris County have implemented a Construction Program, which includes the County regulations. On August 21, 2001, Harris County Commissioners Court adopted the Regulations of Harris County, Texas for Storm Water Quality Management. These regulations became effective October 1, 2001. These regulations require, in part, the adherence by construction site owners and operators to the TPDES Construction General Permit (TXR150000) and provide for inspection and enforcement procedures.

During the reporting period, the County continued with its integrated multiyear Public Education Program, which includes information on storm water quality in general and on the construction program. As part of implementing the public education program, bilingual (English/Spanish) brochures on the storm water quality program and on the public reporting of illicit discharges were distributed to public locations, including County libraries, as well as at public environmental events.

Public Education (SWMP 10.)

Activities for this SWMP element are provided in Part 2 of this report.

Monitoring Program (SWMP 11.)

See Section IV for details regarding Wet and Dry Weather Field Screening programs.

II. Proposed Changes to SWMP

Introduction As required by Part V.C.2. of the permit, proposed changes to the SWMP are to be provided in the Annual Report.

Changes to SWMP In the application for the existing NPDES MS4 permit, the Harris County Flood Control District (HCFCD) and Harris County (County) have a joint Storm Water Management Program (SWMP). For the permit renewal application submitted to the Texas Commission on Environmental Quality (TCEQ), the HCFCD and County have retained the elements of the joint SWMP, but have developed separate SWMPs. A complete copy of the separate SWMP for the County (representing the existing SWMP for the County) is provided in the Appendices.

III. Revisions, if Necessary, to Assessments of Controls and the Fiscal Analysis Reported in Permit Application

Introduction As required by Part V.C.3. of the permit, revisions, if necessary, to assessments of controls and the fiscal analysis reported in the permit application are to be provided in the Annual Report.

No revisions are needed at this time to the assessment of controls provided in the permit application.

Discussion The fiscal analysis presented in the permit application was developed to implement the SWMP and monitoring program expectations at that time. The overall NPDES storm water permit program expectations continued to evolve and became better defined between the submission of the application in November 1992 and the issuance of the permit in 1998. Given the evolution of the program, the cost analysis presented in the application is not totally reflective of the current program. Additionally, major components of the current program are performed under various contracts with the County, none of which have firm costs for the entire permit term. As a result, any revisions to the fiscal analysis requested today would likely have to be revised in subsequent years. Accordingly, we request that the fiscal analysis presented in the application not be revised at this time, but that current costs and next year projected costs be refined annually in the Annual Report (see Section V., *Annual Expenditures for Reporting Period and Budget for Following Year*).

IV. **Summary of Data, including Monitoring Data**

Introduction As required by Part V.C.4. of the permit, a summary of the data, including monitoring data, that are accumulated throughout the year are to be provided in the Annual Report.

During the reporting period, Harris County Flood Control District (HCFCD) and Harris County, through Harris County Pollution Control, conducted sampling for the dry weather screening and wet weather screening and representative monitoring programs for the HCFCD and Harris County MS4s. Summaries for the dry weather and wet weather screening programs and summaries and discharge monitoring reports (DMRs) for the representative monitoring program are provided in the Appendices. Additional information regarding the monitoring programs is provided below.

Dry Weather Screening The period for the dry weather screening program was from October 1, 2002 to September 30, 2003. Screening efforts began in December 2002. As of July 31, 2003, two hundred fifty-five sites have been screened for the HCFCD and Harris County MS4s.

An active discharge was observed at twenty-seven sites. Questionable discharges were observed at five of these sites. It was determined that four of the flows were from a nearby sewage treatment plant, and one was from a nearby permitted industrial facility. These discharges have been investigated and resolved.

It is anticipated that 100% of the area served by the HCFCD and Harris County MS4s will be screened by September 30, 2003, in accordance with permit requirements.

Wet Weather Screening Program The period for the wet weather screening program was from October 1, 2002 to September 30, 2003. Twenty-five sites were identified for screening for year five. As of July 31, 2003 nineteen have been screened for the HCFCD and Harris County MS4s with no notable pollutant values detected. The remaining three sites from the previous year were also screened by October 1, 2002 with no notable values recorded. It is anticipated the remaining six sites will be screened by September 30, 2003.

The permit requirement for wet weather screening of 50% of the area served by the HCFCD and Harris County MS4s was completed by October 1, 2002. It is anticipated that 100% of the area served by the MS4s will be screened by September 30, 2003, in accordance with permit requirements.

IV.

Summary of Data, including Monitoring Data, *continued*

Representative
Monitoring
Program

During the fall season, August 1, 2002 to November 30, 2002, the HCFCFCD and Harris County representative monitoring sites had qualifying rain events, and all sites were sampled.

During the winter season, December 1, 2002 to February 28, 2003, the representative monitoring sites had qualifying rain events, and all sites were sampled.

During the summer season, March 1, 2003 to July 31, 2003, the representative monitoring sites had qualifying events, and all sites were sampled.

V. Annual Expenditures for Reporting Period and Budget for Following Year

Introduction As required by Part V.C.5. of the permit, annual expenditures for the reporting period, with a breakdown for the major elements of the SWMP, and the budget for the following year are to be provided in the Annual Report. Expenditures for the reporting period (08/01/02 – 07/31/03) are provided in Table V- 1, and expenditures budgeted for the following year (08/01/ 03 – 07/31/04) are provided in Table V-2.

Discussion Concerning Tables V-1 and V-2, several clarifications are warranted. The values presented in Table V-1 are estimated expenses incurred. Given the accounting methods utilized, some of the expenses incurred are estimates. The values presented in Table V-2 are projected costs. The County’s fiscal year is March 1 through February 28, thus all of the costs shown in Table V-2 are not necessarily budgeted at this time. The County budget that will be adopted for March 1, 2003 to February 28, 2004 will complete the budgeting for the period covered in the table.

In regard to both tables, given the overlap of certain components of the program and shared costs, i.e. Public Education Program development, project administration, etc., the allocation of some components of the costs to major elements is approximate. Additionally, the values presented do not include all costs possibly be associated with the storm water management program.

V.

**Annual Expenditures for Reporting Period and Budget for
Following Year, *continued***

**TABLE V-1
Estimated Implementation Costs For HCFC
Storm Water Management Programs
(August 1, 2002 – July 31, 2003)**

Section Number	Program Name	Estimated Costs (08/01/02 – 07/31/03)
1.	Structural Controls and Storm Water Collection System Operation	\$4,133,100
2.	Areas of New Development and Significant Redevelopment	\$11,400
3.	Roadways	N/A
4.	Flood Control Projects	\$1,175,500
5.	Pesticide, Herbicide, and Fertilizer Application	N/A
6.a.	Allowable Non-Storm Water Discharges	N/A
6.b.	Infiltration of Seepage	N/A
6.c.	Floatables Program	\$271,300
6.d.	Proper Management of Used Oil & Toxics	N/A
6.e.	Preventing Illicit Discharges	N/A
6.g.	List of Industrial Discharges	N/A
7.	Spill Prevention and Response	N/A
8.	Industrial and High Risk Runoff	N/A
9.	Construction Site Runoff	\$313,100
10.	Public Education	\$35,300
11.	Monitoring Program	\$143,700
	Seasonal Loads and Representative EMC for Major Outfalls	\$27,000
	Collection of Representative Data	\$15,500
	Permit Renewal	\$83,200
	Annual Report	\$33,500
	Total	\$6,242,600

V.

**Annual Expenditures for Reporting Period and Budget for
Following Year, *continued***

**TABLE V-2
Estimated Implementation Costs For HCFC
Storm Water Management Programs
(Projected for August 1, 2003 – July 31, 2004)**

Section Number	Program Name	Estimated Costs (Projected 08/01/03 – 07/31/04)
1.	Structural Controls and Storm Water Collection System Operation	\$4,959,500
2.	Areas of New Development and Significant Redevelopment	\$40,000
3.	Roadways	N/A
4.	Flood Control Projects	\$1,875,000
5.	Pesticide, Herbicide and Fertilizer Application	N/A
6.a.	Allowable Non-Storm Water Discharges	N/A
6.b.	Infiltration of Seepage	N/A
6.c.	Floatables Program	\$309,000
6.d.	Proper Management of Used Oil & Toxics	N/A
6.e.	Preventing Illicit Discharges,	N/A
6.f.	Elimination of Illicit Discharges	N/A
6.g.	List of Industrial Discharges	N/A
7.	Spill Prevention and Response	N/A
8.	Industrial and High Risk Runoff	N/A
9.	Construction Site Runoff	\$493,000
10.	Public Education	\$50,000
11.	Monitoring Program	\$200,000
	Seasonal Loads and Representative EMC for Major Outfalls	N/A
	Collection of Representative Data	\$50,000
	Permit Renewal	\$10,000
	Annual Report	\$37,000
	Total	\$8,023,500

VI. Summary of Number and Nature of Enforcement Actions, Inspections, and Public Education Programs

Introduction	As required by Part V.C.6. of the permit, a summary describing the number and nature of enforcement actions, inspections and public education program are to be provided in the Annual Report.
Enforcement Actions and Inspections	Activities for the SWMP element are provided in Part 2 of this report.
Public Education Program	During the reporting, HCFCD created signs for installation near HCFCD basins and channel systems to increase public awareness and discourage public activities that may result in potential storm water pollutants (such as pet waste, litter, and improper disposal of oils and chemicals). A copy of the HCFCD sign is provided in the Appendices. Additional Public Education Program activities for this SWMP element are provided in Part 2 of this report.

VII. Identification of Water Quality Improvements or Degradation

Introduction No water quality improvements or degradations were identified for this reporting period. Although quantitative information is not available to directly identify water quality improvements resulting from HCFCD's storm water management program during the reporting period, it can be assumed that collected volumes of potential pollutants result in corresponding decreases in pollutant loadings.

Indirect Water Quality Benefits During the reporting period, indirect measures of water quality improvements due to the HCFCD's efforts to reduce storm water pollutants included the following:

- Cleaning and removal of over 100,000 cubic yards of floatable debris and sediment from channel systems.
- Vegetation and stabilization of over 50 miles of drainageways.

CONTENTS—PART 4: TEXAS DEPARTMENT OF TRANSPORTATION

<u>Section</u>	<u>Description</u>
	Summary
I	Implementation Status of SWMP
II	Proposed Changes to SWMP
III	Revisions, if necessary, to Assessments of Controls and the Fiscal Analysis Reported in Permit Application
IV	Summary of Data, including Monitoring Data
V	Annual Expenditures for Reporting Period and Budget for Following Year
VI	Summary of Number and Nature of Enforcement Actions, Inspections, and Public Education Programs
VII	Identification of Water Quality Improvements or Degradation

SUMMARY

Introduction	<p>The Texas Department of Transportation (TxDOT) has met its due dates within the permit and the Storm Water Management Program. TxDOT continues to work with the co-permittees to develop consistent programs which will allow compliance with the requirements of the permit and the Storm Water Management Program.</p>
Format	<p>The Annual Report is formatted in accordance with annual report requirements (Permit Part V.C. Annual Report). Storm Water Management Program (SWMP) activities conducted by TxDOT during this period are described in Section I, Implementation Status of SWMP. Section I is formatted to correspond with the SWMP. Sections II through VII contain additional reporting requirements. Supporting documents, including discharge monitoring reports, are provided as Appendices.</p>

I. Implementation Status of SWMP

Introduction

The Texas Department of Transportation (TxDOT) continued to implement the activities described in the Storm Water Management Program (SWMP). Permit and SWMP activities with due dates during the reporting period (08/01/02 – 07/31/03) and the status of these activities are listed respectively in Table I-1, *Texas Department of Transportation, Status of Permit Schedule Due Dates* and Table I-2, *Texas Department of Transportation, Status of SWMP Implementation Schedule Due Dates*. The implementation status of the SWMP activities is discussed in the text following the tables.

Table I-1
Texas Department of Transportation
Status of Permit Schedule Due Dates
(Reporting Period: 08/01/02-07/31/03)

PERMIT REFERENCE	ACTIVITY	DATE DUE	STATUS
II.A.7. Wet Weather Screening Program	b. Complete wet weather screening of 50% of the area served by the MS4.	10/01/02	Complete

Table I-2
Texas Department of Transportation
Status of SWMP Implementation Schedule Due Dates
(Reporting Period: 08/01/02-07/31/03)

SWMP REFERENCE	ACTIVITY	DATE DUE	STATUS
4. Flood Control Projects	Conduct retrofit evaluation and complete final report for the SH249 / Coons Road Basin.	07/01/2003	Complete
11. Monitoring Programs	Complete wet weather screening of 50% of the area served by the MS4.	10/01/2002	Complete

I. Implementation Status of SWMP, *continued*

General	During the reporting period, TxDOT continued existing programs and implemented activities described in the SWMP to control pollutants in runoff from commercial and residential areas.
Structural Controls and Storm Water Collection System Operation (SWMP 1.)	TxDOT continued operation and maintenance activities for structural controls. Operation and maintenance activities include inspecting, cleaning and repairing storm sewers, controlling weeds in ditches, inspecting, cleaning and repairing outfalls, and inspecting and cleaning detention ponds and pump stations. TxDOT has completed a Structural Control Retrofit Study, and a study for targeting of permanent floatables controls and developed a schedule for implementation, in accordance with permit requirements.
Areas of New Development and Significant Redevelopment (SWMP 2.)	A summary detailing the master plan process was submitted to EPA by 03/31/00, in accordance with permit requirements. TxDOT implemented the master planning process for new and significant re-construction of State roads and highways by 10/01/2001, in accordance with permit requirements. Design concept meetings are held during the transportation planning process. Project site conditions are evaluated for water quality control features, contingent upon what is practicable. TxDOT promotes the use of vegetation, including grassy swales and vegetated filter strips, as a storm water quality control feature.
Roadways (SWMP 3.)	TxDOT's ongoing floatables control programs include litter prevention through public education and structural controls at pump stations. These programs are effective and will continue. The litter prevention programs are implemented statewide. Billboard advertisements and highway signs that include "Don't Mess with Texas" are displayed along the Texas highways to educate the public.
Flood Control Projects (SWMP 4.)	TxDOT evaluated drainageways and flood control facilities for water quality retrofit. Most of the basins that were evaluated have fixed boundaries and adjacent land was not available to accommodate retrofit designs. The State Highway 249/Coons Road Basin was further evaluated for retrofit feasibility. Data from 2000, 2001, and 2002 were reviewed and basin retrofit is not feasible. No further retrofit evaluations are planned.

I. Implementation Status of SWMP, *continued*

Pesticide, Herbicide, and Fertilizer Application (SWMP 5.)	<p>As detailed in the SWMP, TxDOT uses certified personnel for applications involving pesticides, herbicides and fertilizers. The three-day Herbicide Certification Training course is conducted every year between January and April.</p> <p>During the reporting period, TxDOT continued distribution of an educational brochure that addresses proper management of pesticides, herbicides and fertilizers to reduce the impact of potential pollutants.</p>
Preventing Illicit Discharges (SWMP 6.a.)	<p>During the reporting period, TxDOT continued efforts described in the SWMP to prevent illicit discharges.</p>
Preventing Illicit Discharges (SWMP 6.a.)	<p>During the reporting period, TxDOT continued to investigate potential illicit discharges as described in the SWMP.</p>
Infiltration of Seepage (SWMP 6.b.)	<p>This program does not apply to TxDOT.</p>
Floatables (SWMP 6.c.)	<p>During the reporting period, TxDOT continued efforts described in the SWMP for floatables.</p>
Proper Management of Used Oil and Toxics (SWMP 6.d.)	<p>Brochure materials describing the proper management of used oil and toxics were distributed during the reporting period. TxDOT has implemented an annual training program regarding proper management of used oil and toxics in the workplace as described in the SWMP.</p>
Spill Prevention and Response (SWMP 7.)	<p>Where indicated, TxDOT employees attend the Hazardous Materials – Small Quantity Incidents/Spill Response Training for Laboratories and Work Areas course which includes containment procedures for storm sewers and storm water inlets.</p>
Industrial and High Risk Runoff (SWMP 8.)	<p>This program does not apply to TxDOT.</p>

I. Implementation Status of SWMP, *continued*

Construction Site Runoff (SWMP 9.)	During the reporting period, TxDOT continued existing programs and implemented activities described in the SWMP for the control of pollutants in runoff from construction sites.
Public Education (SWMP 10.)	TxDOT continued with its successful “Don’t Mess with Texas”, “Adopt-A-Highway”, and “Keep Texas Beautiful” programs and other public education efforts as described in the SWMP.
Monitoring Program (SWMP 11.)	TxDOT’s field screening program includes both Dry Weather Screening and Wet Weather Screening. Additional details on TxDOT’s field screening program are provided in Section IV.

II. Proposed Changes to SWMP

Introduction As required by Part V.C.2. of the permit, proposed changes to the SWMP are to be provided in the Annual Report.

Changes to SWMP No changes to TxDOT's SWMP are being proposed in this Annual Report.

III. Revisions, if Necessary, to Assessments of Controls and the Fiscal Analysis Reported in Permit Application

Introduction	<p>As required by Part V.C.3. of the permit, revisions, if necessary, to assessments of controls and the fiscal analysis reported in the permit application are to be provided in the Annual Report.</p> <p>No revisions are needed at this time to the assessments of controls provided in the permit application.</p>
Discussion	<p>The fiscal analysis presented in the permit application was developed to implement the SWMP and monitoring program expectations at that time. The overall NPDES storm water permit program expectations continued to evolve and became better defined between the submission of the application February 1995 and the issuance of the permit in 1998.</p> <p>Given the evolution of the program, the cost analysis presented in the application is not totally reflective of the current program. Additionally, major components of the current program are performed under various programs and contracts, none of which have firm costs for the entire permit term. As a result, any revisions to the fiscal analysis requested today would likely have to be revised in subsequent years. Accordingly, we request that the fiscal analysis presented in the application not be revised at this time, but that current costs and next year projected costs be refined annually in the Annual Report.</p> <p>Considering the above, we submit that the fiscal analysis presented in the application be considered for what it is, with refinement of current costs and next year projected cost presented annually in the Annual Report (see Section V, <i>Annual Expenditures for Reporting Period and Budget for Following Year</i>).</p>

IV. Summary of Data, including Monitoring Data

Introduction As required by Part V.C.4. of the permit, a summary of the data, including monitoring data, that are accumulated throughout the year are to be provided in the Annual Report.

During this reporting period, Texas Department of Transportation (TxDOT) conducted dry weather screening, wet weather screening, and representative monitoring programs. Summaries for the dry weather and wet weather screening programs and summaries and discharge monitoring reports (DMRs) for the representative monitoring program are provided in the Appendices. Additional information regarding the programs is provided below.

Dry Weather Screening The period for the dry weather screening program was conducted from October 1, 2002 to September 30, 2003. As of July 31, 2003, dry weather screening had been conducted for TxDOT at 55 sites.

An active flow during dry weather conditions was observed at 12 sites. None of these 12 discharges had notable levels of pollutants.

It is anticipated that dry weather screening will be conducted at all 47 sites by September 30, 2003.

Wet Weather Screening Program The period for the wet weather screening program was from October 1, 2002 to September 30, 2003. Screening began in October 2002 with the nine sites that had been identified for screening. As of July 31, 2003, all nine sites had been screened with no notable pollutant values detected.

It is anticipated that TxDOT will complete Wet Weather Screening of 100% of the area served by the MS4 by September 30, 2003.

IV.

Summary of Data, including Monitoring Data, *continued*

Representative
Monitoring

During the fall season, August 1, 2002 to November 30, 2002, the TxDOT representative monitoring sites, outfalls No. 009 and No. 010, received qualifying rain events and both sites were sampled.

During the winter season, December 1, 2002 to February 28, 2003, the TxDOT representative monitoring sites, outfalls No. 009 and No. 010, received qualifying rain events, and both sites were sampled.

During the summer season, March 1, 2003 to July 31, 2003, the TxDOT representative monitoring sites, outfalls No. 009 and No. 010, received qualifying rain events, and both sites were sampled.

All sites met the EPA criterion that requires the minimum rainfall amount to be 0.10 inches. The results of all rainfall events collected during this year are included in the Discharge Monitoring Reports (DMRs), provided in the Appendices.

V. Annual Expenditures for Reporting Period and Budget for Following Year

Introduction As required by Part V.C.5. of the permit, annual expenditures for the reporting period, with a breakdown for the major elements of the SWMP, and the budget for the following year are to be provided in the Annual Report.

Expenditures for the reporting period (08/01/02 – 07/31/03) are provided below in Table V-1, and expenditures budgeted for the following year (08/01/03 – 07/31/04) are provided below in Table V-2.

Discussion Concerning Tables V-1 and V-2, several clarifications are warranted. The values presented in Table V-1 are estimated expenses incurred. Given the accounting methods utilized, some of the expenses incurred are estimates. The values presented in Table V-2 are projected costs. TxDOT’s fiscal year is from September 1 through August 30, thus all of the costs shown in Table V-2 are not necessarily budgeted at this time. The TxDOT budget adopted for September 1, 2002 to August 30, 2003 will complete the budgeting for the period covered in Table V-2.

In regard to both tables, given the overlap of certain components of the program and shared costs, (i.e., Public Education Program development, project administration, etc.), the allocation of some components of the costs to major elements is approximate. Additionally, the values presented for 1. Structural Controls and Storm Water Collection System Operation, and 3. Roadways include some costs for program items that TxDOT was conducting prior to permit issuance, (i.e., “Don’t Mess With Texas”, “Adopt-A-Highway”, and “Keep Texas Beautiful.”) The values presented for Construction Site Runoff also include some costs for program items that TxDOT was conducting prior to permit issuance.

The values presented do not include all costs that could possibly be associated with the storm water management program, such as ongoing repairs, routine operations, or activities related to other federal regulations.

V.

**Annual Expenditures for Reporting Period and Budget for
Following Year, *continued***

**TABLE V-1
Estimated Implementation Costs for Texas Department of Transportation
Storm Water Management Programs
(August 1, 2002 – July 31, 2003)**

Section Number	Program Name	Estimated Costs (08/01/02 – 07/31/03)
1.	Structural Controls and Storm Water Collection System Operation	\$4,144,100
2.	Areas of New Development and Significant Redevelopment	\$79,500
3.	Roadways	Included in 1. above.
4.	Flood Control Projects	\$51,300
5.	Pesticide, Herbicide, and Fertilizer Application	\$16,900
6.	Preventing Illicit Discharges and Improper Disposal	\$6,700
7.	Spill Prevention and Response	\$17,600
8.	Industrial and High Risk Runoff	N/A
9.	Construction Site Runoff	\$1,566,700
10.	Public Education	Included in 1., 2., 5., 6., and 7. above.
11.	Monitoring Program	\$29,600
	Seasonal Loads and Representative EMC for Major Outfalls	\$28,900
	Collection of Representative Data	\$123,800
	Annual Report	\$20,000
	Permit Renewal	\$51,000
	Total	\$6,136,100

V. **Annual Expenditures for Reporting Period and Budget for
Following Year, *continued***

**TABLE V-2
Estimated Implementation Costs For Texas Department Of Transportation
Storm Water Management Programs
(Projected for August 1, 2003 – July 31, 2004)**

Section Number	Program Name	Estimated Costs (Projected for 08/01/03 – 07/31/04)
1.	Structural Controls and Storm Water Collection System Operation	\$4,351,300
2.	Areas of New Development and Significant Development	\$83,500
3.	Roadways	Included in 1. above.
4.	Flood Control Projects	\$53,900
5.	Pesticide, Herbicide, and Fertilizer Application	\$17,800
6.	Preventing Illicit Discharges and Improper Disposal	\$6,800
7.	Spill Prevention and Response	\$18,500
8.	Industrial and High Risk Runoff	N/A
9.	Construction Site Runoff	\$1,645,000
10.	Public Education	Included in 1., 2., 5., 6., and 7. above
11.	Monitoring Program	\$31,000
	Seasonal Loads and Representative EMC for Major Outfalls	\$30,300
	Collection of Representative Data	\$130,000
	Permit Renewal	\$54,000
	Annual Report	\$25,000
Total		\$6,447,100

VI. Summary of Number and Nature of Enforcement Actions, Inspections, and Public Education Programs

Introduction	As required by Part V.C.6. of the permit, a summary describing the number and nature of enforcement actions, inspections and public education program are to be provided in the Annual Report.
Enforcement Actions	TxDOT did not have any enforcement actions related to this program during the reporting period. TxDOT continues to report suspected illicit discharges to the appropriate agency with jurisdiction for further investigation and enforcement, if warranted.
Inspections	TxDOT did not have any inspections related to this program during the reporting period.
Public Education Program	<p>During the reporting period, TxDOT continued ongoing public education programs, including the “Don’t Mess with Texas”, “Adopt-A-Highway”, and “Keep Texas Beautiful” campaigns.</p> <p>During the reporting period, TxDOT also continued distribution of an educational brochure that addresses storm water pollution-related topics to reduce the impact of potential pollutants.</p>

VII. Identification of Water Quality Improvements or Degradation

Introduction No water quality improvements or degradations were identified for this reporting period. Although quantitative information is not available to directly identify water quality improvements resulting from TxDOT's storm water management program during the reporting period, it can be assumed that collected volumes of potential pollutants result in corresponding decreases in pollutant loadings.

Indirect Water Quality Benefits During the reporting period, indirect measures of water quality improvements due to TxDOT's efforts to reduce storm water pollutants include continued successful programs for litter prevention and collection, recycling programs and environmental public education programs throughout Texas.
