ANNUAL REPORT

TPDES Storm Water Permit No. WQ0004705000
(NPDES Permit No. TXS000401)

System-Wide Annual Report

for the

City of Austin

Reporting Period: October 1, 2018 to September 30, 2019

Submitted to:

U.S. EPA Region 6
Compliance Assurance & Enforcement Division
Water Enforcement Branch (6EN-WC)
1445 Ross Avenue
Dallas, Texas 75202

&

TCEQ Region 11
Wastewater Permitting Section
Storm Water & Pretreatment Team
(MC-148)
P.O. Box 13087
Austin, TX 78711-3087

May 1, 2020

Watershed Protection Department
CM-07-01

TABLE OF CONTENTS

APPENDIX

Appendix A: City of Austin Storm Water Management Program

Appendix C: Wet Weather Screening Field Sheets

Appendix D: List of Municipal Facilities

Appendix E: Barton Springs Periodic Sediment Sampling Data

Appendix F: Barton Springs and Associated Springs Water Quality Data

City of Austin
Founded by Congress, Republic of Texas, 1839
Watershed Protection Department
P.O. Box 1088, Austin, Texas 78767

May 1, 2020

Ms. Rebecca L.Villalba, Team Leader
Storm Water & Pretreatment Team (MC-148)
Water Quality Division
Texas Commission on Environmental Quality (TCEQ)
P.O. Box 13087
Austin, Texas 78711-3087

Re: City of Austin - TPDES Permit No. WQ0004705000 (NPDES Permit No.TXS000401)
Municipal Separate Storm Sewer System (MS4) System-wide Annual Report

Dear Ms. Villalba,

Please find herewith for your review, the MS4 system-wide annual report for the City of Austin. The report has been prepared as required by Part IV.C. of the permit and includes information on the City's compliance activities during the reporting period from October 1, 2018 through September 30, 2019.

As required by Part IV.E and in accordance with Part V.B.8 of the permit, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If additional information related to any of the City's compliance activities described in the report should be required, please contact Ms. Lee C. Lawson, TPDES Program Coordinator at (512) 974-3348, or Ms. Roxanne Jackson, Division Manager Field Operations at (512) 974-1918.

Sincerely,

Jorge L. Morales, P.E., CFM, Director
Watershed Protection Department

SYSTEM-WIDE OVERVIEW

Introduction

The City of Austin was originally issued a Municipal Separate Storm Sewer System (MS4) Storm Water Permit by the Environmental Protection Agency (EPA ID. TXS000401) in September 1998. The City has renewed the MS4 storm water permit with the Texas Commission on Environmental Quality (TCEQ) in February 2006 (WQ0004705000), and every 5 years since. Most recently TCEQ reissued the permit on August 15, 2018. The City of Austin has continued to be in compliance with the activities required by the storm water permit as outlined in the City's Storm Water Management Program (SWMP) throughout each of the five-year permit terms; reporting on the execution of these activities during the reporting period from October 1st through September 30th of each year. The System-Wide Annual Report is due May 1 of each year.

Overview

This report documents the City's compliance activities during the reporting period from October 1, 2018 to September 30, 2019, Year 1 of the reissued permit. The City of Austin continued to execute Storm Water Management Program activities during the reporting period. Detailed information related to these activities has been included in Section 1 (Status of Storm Water Management Program Implementation and Summary Data), Section 4 (Summary of Monitoring and Other Data), Section 7 (Summary of Enforcement Actions, Inspections, and Public Education), of the Annual Report.

Section 1

STATUS STORM WATER MANAGEMENT PROGRAM IMPLEMENTATION AND SUMMARY DATA

Introduction

As required by Part IV.C.1.3. of the City's TPDES MS4 Storm Water Permit, the status of implementing the storm water management program (SWMP), the status of compliance with any schedules established under the permit, and a summary of the SWMP activities completed by the City of Austin during the reporting period from October 1, 2018, through September 30, 2019 have been included in the system-wide annual report as follows:

MS4 Maintenance Activities
(Minimum Control Measure 1-SWMP)

Structural Controls
Status: On-going

The City of Austin Watershed Protection Department (WPD) is responsible for the operation, inspection, maintenance and repair of the City's storm water drainage infrastructure. The inspection and maintenance programs are part of a comprehensive drainage maintenance plan to identify, evaluate and solve flooding, erosion and water quality problems, including those related to non-point source pollution. The WPD Field Operations Division (FOD) directly administers these activities and continually coordinates with the other divisions within the WPD, including the Environmental Resources Management (ERM) and Watershed Engineering (WED) Divisions. Activities reported on within this Minimum Control Measure (MCM) element have been identified as supportive of the TCEQ approved Austin area TMDL IP Plans.

The following minimum control measures were performed to accomplish the City's inspection and maintenance goals for the FY 18-19 reporting period:

- Removed debris and excessive vegetation from approximately 94.3 miles of open waterways to maintain flood flow conveyance and improve water quality.
- Removed vegetation three-six times in this reporting year from over 754 City maintained detention and water quality facilities.
- Conducted 900 inspections of City maintained detention and water quality facilities.

- Completed 3,003 inspections of privately owned and maintained detention and water quality facilities to enforce compliance with City Code and criteria.
- Removed sediment and debris obstructions from just over 6.0 miles of open channels to maintain flood flow conveyance, minimize erosion and improve water quality.
- Removed debris, sediment, vegetation and obstructions from 431 culvert and bridge locations to maintain flood flow conveyance and improve water quality.
- Cleaned approximately 14.7 miles of the storm water conveyance pipeline system to maintain flood flow conveyance and improve water quality.
- Inspected and cleaned as necessary 7,086 storm drain inlets to maintain flood flow conveyance and remove collected sediment, debris and other pollutants.

The City also continued efforts to identify and inspect residential and commercial ponds in the Barton Springs Zone (BSZ), repair non-functioning publicly maintained facilities and ensure compliance and enforcement of privately maintained facilities. During the reporting period:

- WPD Field Operations staff inspected all the publicly maintained facilities within the BSZ and performed necessary maintenance on 41 of the facilities. There were 330 publicly maintained controls in the BSZ as of September 30, 2019.
- WPD Field Operations staff conducted 937 inspections of the 337 commercial water quality controls in the Barton Springs Zone subject to the Barton Springs Zone Operating Permit program requirements; staff issued 42 letters of non-compliance.
- WPD FOD staff continued to update the department's records associated with the public and private storm water management facilities databases to ensure more accurate documentation of activities.

Floatables Program
Status: On-going

The Field Operations Division (FOD) of the WPD is responsible for checking the condition of two monitoring sites on Lady Bird Lake periodically and after major storm events. Each trash boom site is inspected weekly and cleaned monthly, if necessary, or as needed, after FOD staff verifies that site conditions are safe and adequate for access and will allow for the use of mechanical equipment without damage to the surrounding ground. During the reporting period, approximately 1.65 tons of floatable trash and debris was removed from the two boom locations on Lady Bird Lake (@ mouth of Shoal Creek and @ mouth of West Bouldin Creek).

Roadways Program
Status: On-going

The City of Austin Roadways Program addresses snow and ice management, road repair, street sweeping, litter collection and in-house new construction within the Public Right of Way (ROW), and activities to remove potential pollutants from entering waterways. Public Works Department (PWD) and Austin Resource Recovery (ARR) directly administer the activities for this program.

Snow Management

The average annual snowfall in the Austin area is one inch. As such, the City has developed an emergency response program that uses barricading and sanding to effectively manage slick streets and roadways during the rare ice and snow events. No snow management activities were required during the reporting period.

Street/Public Right of Way Operation and Maintenance

During the reporting period the PWD continued the ROW roadway maintenance activities, using Best Management Practices (BMP) and controls appropriate for each project.

Street Sweeping

Routine cleaning of the City of Austin curbed streets is the responsibility of Austin Resource Recovery (ARR). Street sweeping in the downtown Central Business District is scheduled to occur daily. Street sweeping along major thoroughfares in other areas of the City is performed on varying schedules, but generally once per month, and residential curbed streets are swept on an average frequency of twice per year. During the reporting period, this program collected over 4,567 tons of trash, leaves, debris and dirt that had collected along impervious roadway surfaces in Austin.

Litter Collection

The Litter Abatement Program is the responsibility of the ARR. The Litter Abatement Program is implemented within the City limits. It targets some City-owned properties such as uncurbed streets and public rights-of-way for removal of trash, litter and debris in the effort to prevent the waste materials from entering nearby storm drains or waterways.

In addition, the Litter Abatement Program removes dead animals from roadways, provides for the pick-up of brush and bulk items on a scheduled basis and maintains the litter receptacles in the Central Business District. During the reporting period FY 18-19 the Litter Abatement Program provided the following minimum control measures and services:

- Removed 433 tons of litter from sidewalks and litter containers in the downtown area, streets, rights-of-ways, and other City-owned property.
- Removed 31 tons of dead animals from roadways.
- Collected a total of 11,295 tons of bulk items from residences within the service area.
- Collected a total of 6,455 tons of brush items from residences within the service area, and
- Collected a total of 34,403 tons of yard trimmings (to be recycled into compost) from residences during weekly collection activities.

Post-Construction Storm Water Control Measures
(Minimum Control Measure 2-SWMP**)**

Areas of New Development and Significant Redevelopment
Status: On-going

The Planning and Zoning Department (PAZ) is responsible for most comprehensive planning activities within the City limits and the extraterritorial jurisdiction (ETJ). The comprehensive planning activities include ongoing planning support in areas such as land use inventories, mapping, and analysis; population and demographic forecasting; neighborhood planning and transportation planning.

From October 1, 2018 to September 30, 2019, the City of Austin experienced a net growth of 16,181 persons to reach a total population of 992,747. This increase represents a 1.6% annual growth rate and is down from an annual increase of 1.9% from the previous year. The population for the Metropolitan Statistical Area on September 30, 2019, was 2,261,324.

During the reporting period the net acres annexed were as follows

- 257 acres full purpose (converted from limited purpose)
- 166 acres limited purpose
- 166 total acreage added to the city limits in FY 2018-19

Comprehensive Planning Process (Zoning, Subdivision & Site Development Plan Regulations)
Status: On-going

Planning and Zoning (PAZ) staff reviewed zoning cases, and the Development Services Department (DSD) staff continued to review site development plan applications, subdivision plans and proposed utility projects for compliance with the water quality regulations of the City's land development code, as part of the overall development review process.
During the FY 18-19 reporting year DSD staff reviewed:

- 730 subdivision applications.
- 1,453 site development plans.
- 9 school site plans.
- 139 projects requiring zoning review.
- 198 underground storage tank permit applications.
- 420 General Permit applications.
- 154 Operating Permit applications for development in the Barton Springs Zone.

Flood Control Projects

Existing Structural Flood Control Devices
Status: On-going

During the reporting period from October 1, 2018 through September 30, 2019, Watershed Protection Department (WPD) staff continued the activities detailed in the program description, including the required City code's and criteria elements in proposed flood control projects. The City of Austin's WPD Watershed Engineering Division (WED) continued to evaluate existing flood control facilities for flood and water quality retrofit opportunities. Activities reported on within this Minimum control Measure (MCM) element have been identified as supportive of the TCEQ Approved Austin Area TMDL IP Plans.

Examples of this includes the following projects:

Lower Onion Creek Flood Hazard Mitigation, Ecosystem Restoration, and Recreation Project

The US Army Corps of Engineers (USACE) completed a Reconnaissance Study in 1999 and an Interim Feasibility Study in December 2006 for Onion Creek. The Interim Feasibility Study identified a property acquisition, ecosystem restoration, and recreational facility project for the

Lower Onion Creek watershed. All of the properties within the USACE project area have been acquired and construction of the recreational facility was completed in 2019. Adjacent to the USACE project area are 340 additional properties that the City identified for buyouts due to the risk of interior flooding of the houses. To date, 330 of those 340 properties have been acquired. The houses have been demolished and the land is being allowed to return to a more natural riparian area.

Watershed Engineering Studies

There were no updates to floodplain studies during FY19, since efforts have been focused on the adoption of Atlas 14-based revisions to the floodplain regulations and Drainage Criteria Manual. However, we are initiating studies to update our floodplain mapping to account for the increased rainfall per Atlas 14. This will include updates to all our existing floodplain models and maps and extension of modeling and mapping to approximately the 64-acre drainage area point.

Future Flood Control Projects
Status: On-going

During the reporting period the City of Austin's WPD Watershed Engineering Division (WED) continued to evaluate existing flood control facilities for retrofit opportunities. Typical flood control projects include the upgrade of low water crossings and culverts, the acquisition of properties in flood prone areas, channel modifications, storm drain improvements and the construction or modernization of storm water detention facilities. Examples of this include the following projects:

Little Walnut Creek Flood Risk Mitigation – Metric Blvd. to Rutland Drive
The main branch of Little Walnut Creek from Metric Boulevard to Rutland Drive has a 100-year floodplain that extends beyond the boundary of the creek system and encompasses residential property and buildings. These properties are at a high risk of flooding in large storm events. The improvement project will include a bypass culvert system under Mearns Meadow Boulevard and an expansion of the existing regional detention facility at Mearns Meadow Park to reduce the flood risk from the 100-year storm event for 60 homes. The project will also improve the capacity and safety of roadways that cross the creek in this area. Project design is anticipated to complete in fiscal year 2019, Bid Award Execution Phase also in Fiscal year 2019. Design is complete and the project is in the final stages of permitting. The project is expected to go to bid in May 2020 and construction is expected to begin in November 2020.

Old San Antonio Road Drainage Improvements
The existing Slaughter Creek crossing at Old San Antonio Road is overtopped in a 2- year storm event and is inundated in excess of 10 feet in a 25-year event. This road is frequently closed during rain events, creating extremely hazardous conditions for drivers and pedestrians.

The improvement project will permanently close the roadway to vehicular traffic while still providing pedestrian and bicycle access. Construction of the project is expected to begin in 2020.

Williamson Creek Flood Risk Reduction Project

This project seeks to reduce flood risks for approximately 250 houses and roadways at high risk of flooding along the main-stem of Williamson Creek from its junction with Cherry Creek to South Congress. The first phase is voluntary buyouts of up to 66 properties that are at significant flood risk in the 25-year floodplain. To date, 51 of those 66 properties have been acquired. The second phase of the project includes a new feasibility study (including a reevaluation of previous Preliminary Engineering Reports) to identify and conceptually evaluate flood risk reduction options for this area. The city has finalized the scope of work for the study and issued the notice to proceed to the consultant. Staff also attended a neighborhood association meeting in January to discuss the project and provide status updates.

Guadalupe St. Storm Drain Improvement Project

The Guadalupe Street Storm Drain Improvements project is intended to alleviate the flooding of buildings, yards, and streets through an upgraded storm drain pipe and numerous new storm drain inlets throughout the area. The project is located in the Waller Creek Watershed in central Austin. This project is currently in final design, which is expected to be completed in fiscal year 2025.

Meredith Storm Drain Improvements

The project will reduce flood risk for up to six residential homes and the adjacent streets. In addition, it will relieve excess water from directly entering a karst feature. This project is currently in design which is expected to begin construction in fiscal year 2020.

Del Curto Storm Drain Improvements

The Del Curto Storm Drain Improvement Project will reduce flood risk for several roadways and at least 10 buildings. The project area is located in the West Bouldin Creek watershed, an area of the city that is undergoing rapid development. This project is currently in design and scheduled to begin construction in fiscal year 2023.

Oak Park/Oak Acres Storm Drain Improvements

The Gaines Tributary of Barton Creek is located north of Highway 290 near the "Y" at Oak Hill. The roadways and properties along this tributary are subject to frequent localized and creek flooding as a result of undersized and non-existent storm drain infrastructure, a narrow and constrained creek system, an overflow from the Williamson Creek watershed during large storm events, and changing overland flow patterns. This project, currently in the final design phase, will implement solutions to mitigate these flooding problems. Solutions include property acquisitions, storm drain improvements, and upgraded low water crossing, and an open channel, which the project team selected over a concrete-lined channel in part due to its water quality benefits. Oak Acres is currently in design and the 60% submittal has been received and reviewed. Final design is anticipated to be complete by 2024. All properties needed to construct the Oak Park Flood Risk Reduction project have been acquired and the city issued the design notice to proceed in March 2019.

East Bouldin Annie St. Storm Drain Improvements

The purpose of this project is to reduce flood risk to homes and properties associated with a failing storm drain system. The contributing project area is primarily residential, generally located in the East Bouldin watershed. The existing storm drain system, both undersized and aged, has deteriorated to the point of needing to be replaced. Approximately 4,000 linear feet of existing storm drain will be evaluated. Once completed this project will mitigate localized flooding issues for approximately ten (10) buildings. The preliminary engineering phase of this project is nearing completion, with the options to mitigate the downstream adverse impacts currently being evaluated. Final design is anticipated to be complete by 2022

Whispering Valley/West Cow Path Flood Mitigation Project

This multi-object project includes improvements for the railroad creek crossing and storm drain installation near Whispering Valley Dr. and West Cow Path. The first phase of the project, and upgrade of the railroad creek crossing, will reduce flood risk for seven (7) buildings in the 100-year floodplain. The second phase of the project will reduce flood risk for at least 13 buildings and properties. The project is currently in the final design phase, which is anticipated to be complete by 2023

North Acres Storm Drain Improvements

The North Acres Storm Drain Improvements project will improve drainage and reduce the risk of flooding in the North Acres neighborhood in northeast Austin. The project is intended to reduce the risk of flooding of buildings, yards, and streets through the upgrade of approximately 6,446 linear feet storm drainage system. Preliminary Engineering for this project is in progress and is expected to be complete in fiscal year 2021.

Jamestown Drive Storm Drain and Erosion Improvements

This project will protect properties, including utilities and multifamily residential buildings by stabilizing the estimated 2,500 linear feet of this stream reach. It will also reduce localized flooding on Jamestown Dr and will replace a flood-prone culvert on Fairfield Dr with a bridge. Approximately 2,500 linear feet of this stream reach will be stabilized, two existing storm sewers will be upgraded, and two new systems will be constructed near Jamestown Drive. Additionally, the Fairfield Drive crossing will be upgraded from a culvert to a bridge. Construction is expected to be completed in fiscal year 2024.

Oak Knoll Storm Drain Improvements

This project will upgrade drainage infrastructure in the Oak Knoll Dr area, which has experienced multiple flooding events to several homes and two roadways in an area between Woodcrest Dr & Research Blvd. This project will mitigate localized flooding of two roadways and ten building and yards. Design phase of this project is in progress and is expected to be completed in fiscal year 2022.

Illicit Discharges Detection and Elimination
(Minimum Control Measure 3-SWMP)

Illicit and Allowable Discharges
Illicit Discharge Program
Status: On-going

The City's Illicit Discharge Program includes a series of regulatory requirements in City Code to effectively prohibit illicit discharges and improper disposal into the municipal separate storm sewer system (MS4). These code requirements are enforced by programs within the City's Austin Water (AW), and Watershed Protection Department (WPD). City staff investigates suspect facilities or activities, initiates inspections of the premises and connections to the MS4 and works to obtain voluntary compliance with City Code requirements. Non-storm water discharges to the City's MS4 are addressed through the City's Illicit Discharge Program. Activities reported on within this Minimum Control Measure (MCM) element have been identified as supportive of the TCEQ Approved Austin Area TMDL IP Plans.

Detection and Elimination of Illicit Discharges
Status: On-going

Investigations are conducted to prevent, reduce or facilitate recovery of polluting discharges to the MS4, creeks and lakes from commercial, residential, and industrial sources The Water Quality Compliance (WQC) Spills and Complaint Response Program (SCRP) staff performed the following minimum control measure activities: Conducted a total of 1057 incident investigations of which 32 were in the Barton Springs Recharge Zone (BSRZ). As a result of those investigations, SCRP staff initiated 118 enforcement actions citywide, with 6 located in the BSRZ. The SCRP staff has continued to work with the criminal prosecutors at the Travis County District Attorney's Office in Austin. During the reporting period, the SCRP staff referred 10 cases for criminal prosecution.

Overflows and Infiltration (Wastewater Pipelines)
Status: On-going

Austin Water (AW) is responsible for maintaining the integrity of its wastewater collection system to prevent the infiltration or seepage of wastewater into the storm sewer system and waterways. This task is accomplished by using flow monitoring, sewer cleaning, television

inspection, smoke testing, dye testing, walking of creeks with sewer line crossings and working with the WPD Spills and Complaint Response Program, to determine the location and sources of seepage, exfiltration, and inflow/infiltration. During the reporting period between October 1, 2018 and September 30, 2019 the following minimum control measures were performed by AW staff to accomplish the City's inspection and maintenance goals:

- Inspected 1,730,024 linear feet of wastewater pipeline via television.
- Cleaned 2,127,120 linear feet of wastewater pipeline.
- Smoke tested 242,505 is linear feet of wastewater pipeline.
- Replaced 17,627 linear feet of wastewater main pipeline.
- Handled a total of 2,511 requests for wastewater service calls including stop-up, backups and overflows.
- Continued with improved wastewater overflow emergency response time – 93.93% of emergency calls associated with wastewater overflows had a crew on site to relieve the problem within one hour or less of the call being dispatched; 99.71% of calls had a crew on site to relieve problem within three hours or less.
- Continued with process improvements for correction, cleanup and investigation of cause of all wastewater overflows, backups, stop-ups, odor complaints, and other problems.
- Continued to provide on-the-spot repair of small leaks in the wastewater collection system as necessary.

Overflows and Infiltration (Septic Systems)
Status: On-going

Austin Water (AW) regulates on-site sewage facilities located within its jurisdictional boundaries through the management and implementation of the City's On-Site Sewage Facilities (OSSF) Program. The TCEQ has granted authority to AW to enforce the requirements established in Title 30 of the Texas Administrative Code (TAC) Chapter 285 and has approved the additional requirements under City Code 15-5. The focus of the program is to abate and/or prevent pollution and injury to the public health from the use of inadequate and/or failing private sewage facilities thus preventing the improper disposal of domestic waste and sewage. Austin Water's OSSF Program generally applies to all subdivisions or lots (commercial) (residential) within the City of Austin's Full Purpose jurisdiction, Limited Purpose annexation areas where Health and Safety Codes applies. All other properties are required to comply with city regulations through

plat restrictions or legal contractual agreements. A summary of the OSSF minimum control measures during the reporting period has been provided below:

- Reviewed 116 plans for new or modified OSSF.
- Issued 43 permits to construct OSSF.
- Issued 15 letters of approval for minor modifications to sites served by OSSFs.
- Completed 111 site inspections, (e.g., site evaluations, open trench, rock and pipe, and final inspections) to ensure compliance with existing design and installation requirements.
- Conducted 58 inspections to ensure the proper abandonment of OSSF's.
- Conducted three OSSF pollution complaint investigations.
- Conducted three investigations related to malfunctioning systems and potential permit violations.
- Opened 178 enforcement cases to address maintenance reporting deficiencies.

Household Hazardous Waste Program
Status: On-going

The City's Austin Resource Recovery (ARR) Household Hazardous Waste Program (HHW) serves residents of Austin and Travis County Texas. The HHW Program provides for daily collection at a permanent facility with service throughout the week, and for customers who require home pickups or other accommodations. Currently the HHW program hours are Monday thru Friday 9 a.m. to 5 p.m. and Saturday 7 a.m. to noon.

This program benefits Austin area residents by providing convenient, responsible disposal options so that hazardous household wastes are removed from the City's regular liquid (sanitary sewer) and solid waste streams while making homes safer. Proper disposal of hazardous waste also decreases this category of material from being disposed of in vacant yards, easements or storm sewer drains. Participation levels have increased from 450 households at the initial event to some 35,615 households serviced in Fiscal year 2018-19. A total of approximately 1,982,048 pounds of household hazardous waste were diverted from City municipal waste streams in FY 2018-19.

During the reporting period the HHW Program performed the following minimum control measure activities:

- Provided drop-off services to 35,615 households in the Austin area.
- Handled a total volume of 1,982,048 pounds of hazardous waste.
- Disposed of 623,641 pounds of flammable materials.
- Disposed of 34,497 pounds of corrosive materials.
- Recycled 515,667 pounds of materials (this does not include paint).
- Recycled 310,940 pounds of paint.
- Recycled 111,757 pounds of waste oil and 2,475 pounds of oil filters.

NPDES and TPDES Permittee List:
Summary data is reported in the Section 5 of the system-wide Annual Report.

MS4 Outfall Map:
MS4 outfall maps available upon request.

Illicit Discharge Inspection Program
Status: On-going

The City's Illicit Discharge Inspection Program is based primarily on the activities of the WQC Spills and Complaint Response Program (SCRP) of the Watershed Protection Department (WPD).

SCRP staff investigate complaints/reports of illicit discharges to the storm sewer system, tracking the route of an illicit discharge and attempting to identify its source and cause. Once an illicit discharge source and cause have been identified, SCRP staff will work with the responsible party(s) to obtain compliance with City Code requirements. This includes the coordination of any initial response activities that may be necessary, supervision of remedial activities and possible referral to other more appropriate City programs, such as the Stormwater Discharge Permit Program (SDDP), that have regulatory and/or permitting authority over the facility.

During the reporting period between October 1, 2018 and September 30, 2019 the SCRP staff performed the following minimum control measure activities: Responded to a total of 1,057 incidents that were reported through the 24-Hour Pollution Hotline. One illicit plumbing connection was detected and corrected during illicit discharge investigations by the SCRP staff.

Spill Prevention and Response
Status: On-going

WQC Spills and Complaint Response Program (SCRP) maintains a rapid response capability for the investigation of environmental emergencies. When hazardous materials are involved, the SCRP staff work directly with the Austin Fire Department (AFD) Hazardous Materials Emergency Response Team. In these cases, emergency incident notification comes from AFD dispatch. Notification also comes from other agencies such as the Texas Commission on Environmental Quality (TCEQ), Travis County and through the WPD Pollution Hotline. The hotline operates on a 24-hour basis, thus allowing for after-hours notification of environmental emergencies. The SCRP also responds to non-emergency pollution complaints, which are received from many sources, including:

- private citizens calling the WPD Pollution Hotline directly;
- patrolling assigned districts for evidence of illicit discharges;
- referrals from other WPD field staff;
- referrals from other City departments such as the Austin Fire Department, Austin Water and the Austin Police Department;
- referrals from other regulatory agencies such as the TCEQ.

The Spills and Complaint Response Program has developed a categorization system for the reports of illegal discharges that are received based on the severity of the incident and the potential to pollute surface water or storm water quality. The two incident categories are:

- *Priority Incidents* - which pose an immediate threat to water quality, and
- *Non-priority Incidents* - which do not pose an immediate threat to water quality.

During the reporting period the Spills and Complaint Response Program completed the following minimum control measure activities:

- Responded 590 priority incidents
- Responded to 467 non-priority incidents

The Spills and Complaint Response Program recovered 784,750 gallons and 305 cubic yards of pollutants, as a result of these pollution investigations.

Austin Fire Department Special Operations
Status: On-going

The Austin Fire Department (AFD) hazardous materials response is one of several activities that are the responsibility of the Special Operations Division. The Special Operations Division specializes in maintaining response capabilities to hazardous material spills or other incidents that may endanger human health and safety within the City limits. During the reporting period, the AFD Special Operations Division performed the following minimum control measure activities: Responded to 1,934 incidents, of which 61 were at facilities that have been identified as requiring AFD Aboveground Hazardous Materials Permits (see Industrial and High Risk Runoff).

Pollution Prevention/Good Housekeeping for Municipal Operation
(Minimum Control Measure 4-SWMP**)**

Pollution Prevention/Good Housekeeping Program
Status: On-going

The Pollution Prevention Good Housekeeping programs are implemented by several departments as described in the Storm Water Management Plan. The WPD screens a list of all City properties and facilities to identify and prioritize city locations that could potentially contribute to pollutants in storm water runoff. Staff inspects these City properties and facilities on a rotational basis and provides periodic training on TPDES storm water best management practices to facilities staff, in various city departments. During the FY18-19 reporting period WPD Water Quality Compliance (WQC) staff performed the following minimum control measure activities:

- Conducted 57 inspections of City operations with storm water permit coverage to verify compliance with storm water regulations.
- Conducted 10 site visits of City owned properties to verify compliance with TPDES storm water regulations.
- Assisted City of Austin Parks and Recreation staff with end of season swimming pool discharges by testing the water to ensure complete removal of chlorine prior to releasing the water to area waterways.
- Assisted with special events; coordinating with event staff to identify appropriate BMP’s and pollution prevention measures for each event.

Waste Handling
Status: On-going

All materials removed from maintenance activities were disposed of in an acceptable permitted local landfill.

Pesticide Herbicide and Fertilizer Application
Integrated Pest Management (IPM) Program
Status: On-going

The Integrated Pest Management (IPM) Program is a City-wide program that actively coordinates educational outreach activities. The IPM Program is managed by the WPD and is responsible for the following activities:

- Implementation of an IPM public education campaign.
- Review of IPM plans as required by the land development code review process.
- Review of IPM plans required for development projects in the Barton Springs Zone and Save or Springs (SOS) water quality ordinance
- Coordination of compliance with the TPDES Pesticides General Permit (TXG870000).
- Maintain pesticide application and pesticide applicator license records for all city departments (except Austin Energy) that use pesticides.

During the reporting period between October 1, 2018 and September 30, 2019 the IPM Program accomplished the following:

- The WPD Watershed Education staff hosted 11 Grow Green trainings for homeowners and landscape professionals, by staffing a booth at an environmental event, or giving a presentation. IPM techniques are addressed during the landscape professional trainings. 15 in-store group trainings attended by 115 people were provided to staff at Grow Green partner nurseries.
- Administered an IPM Review Program for development projects. 106 private and public development IPM plans were reviewed for compliance with City codes and criteria.
- Austin Water Center for Environmental Research, a partnership of the City of Austin, The University of Texas at Austin, and Texas A&M University) hosts the Texas Department of Agriculture Structural Pest Control Service's Austin area exams and classes. These Structural Pest Control Service classes and exams are provided for Austin area pest control and landscape management businesses, local school district employees and local governmental agency staff involved in pest control and landscape maintenance.

List of Municipal Facilities:
Status: See Appendix D for Municipal Facilities list.

Industrial and High Risk Program
(Minimum Control Measure 5 SWMP)

Industrial and High Risk Inspection Program
Status: On-going

The Industrial and High Risk Program is based on the activities of the Austin Fire Department (AFD) and the Watershed Protection Department (WPD) programs.

Hazardous waste treatment, disposal or recovery facilities and facilities subject to SARA Title III

The AFD Aboveground Hazardous Materials Permit Program is responsible for the inspection and permitting (three year permit term) of Austin facilities that store hazardous materials. During the reporting period, the AFD Aboveground Hazardous Materials Permit Program continued these minimum control measure activities, maintaining information on 3,062 permit locations (281 are Tier II sites) and inspecting 420 facilities.

Inactive Municipal Landfills

The Watershed Protection Department (WPD) is responsible for citizen complaints and tracking remediation activities at selected sites. During the FY18-19 reporting period no citizen complaints were received; activities at the following locations were tracked:

- **Waste Management, Inc., Industrial Waste Unit -** The Austin Community Landfill Industrial Waste Unit is a closed industrial liquid waste disposal area that was operated in the 1970s and received large quantities of solvents, acids and other industrial liquid wastes. In response to citizen concerns in 2002 an agreement between the City and Waste Management, Inc. was finalized that requires WMI to conduct additional groundwater monitoring near the IWU. Placement of additional cover over the IWU was also required to prevent infiltration of storm water. The City continues to receive and review these monitoring reports and will work with WMI and/or the TCEQ to address any identified problems. In 2016 and 2018 the City collected surface water samples from the tributaries that are downgradient of the industrial waste unit and the adjacent municipal solid waste landfills. All concentrations are within the federal and state permissible limits for surface water.

- **Brinkley-Anderson Landfill** – This abandoned landfill is located in northeast Austin near the intersection of Highway 183 and U.S. 290 East and is located on the east bank of Little Walnut Creek. Watershed Protection Department staff previously worked with the owners of the Salado at Walnut Creek Apartments, which overlie a portion of the landfill, to address leachate discharges to the creek from their drainage facility. The owner's consultant designed a system to redirect that leachate to the sanitary sewer system.

The system was approved by TCEQ in 2009, and subsequently submitted to the City for review, but was never constructed. The owner's conducted water quality monitoring and submitted results to TCEQ for review.

- **Lott Avenue Dump Site –** This small dumping area was discovered in 2010 as a result of a citizen complaint regarding trash in a tributary of Fort Branch Creek. After large areas of surface dumping were removed from the stream channel by Watershed Protection Department crews; buried waste was discovered in the banks of the creek in several areas. The waste appears similar to the Rosewood site, likely ash from burned municipal-type waste. In 2012, the City began design of remediation for the site. Design work by a private firm under contract to the City was delayed due to a dispute has resumed. Construction is expected to begin in 2020.

- **Butler Landfill –** The Butler Landfill is located on City parkland on the southern shore of Lady Bird Lake near the MoPac Expressway Bridge. The landfill was operated by the City from 1948 to 1967 exclusively for municipal waste. The City Council has initiated a public process to consider short- and long-term repairs of erosion of the landfill covering. A plan for the covering should be developed in 2019.

Industrial facilities that the municipality determines are contributing a substantial pollutant loading to the municipal storm sewer system

WQC staff are responsible for identifying facilities that may be contributing a substantial pollutant load to the City's municipal storm sewer system (MS4) and establishing a database of industrial and high-risk facilities discharging to the City's MS4 within the Austin city limits.

During the reporting period, WQC staff continued to contact industrial facilities which according to their listed SIC codes, were required to obtain a Multi-Sector General Permit (MSGP) under the State's TPDES storm water permit program. Staff provided facilities notification regarding the issuance of the MSGP, instructed facilities to confirm their permit eligibility and provided instructions for obtaining permit coverage or no exposure certification.

Facilities were directed to complete the appropriate forms, submit originals to the State and forward a signed copy of either their Notice of Intent (NOI) or No Exposure Certification (NEC) to the City of Austin.

Facilities declaring a non-industrial status were required to sign and return a City of Austin non-industrial Facility Declaration Form and were advised to update their SIC Facilities declaring a non-industrial status were required to sign and return a *City of Austin Non-Industrial Facility*

Declaration Form and were advised to update their SIC code to one that accurately reflects their business activities. In addition, code to one that accurately reflects their business activities.

In addition, SDPP staff also focused efforts on those facilities that may not be subject to the MSGP requirements, but are believed to have the potential to contribute pollutant loads to the MS4. During the reporting period, the following minimum control measure activities were performed: WQC issued City of Austin Stormwater Discharge Permits to 1,019 facilities and conducted 429 stormwater inspections within the City's Full Purpose Jurisdiction. As a result, the SDPP recovered approximately 231.35 gallons and 5.82 cubic yards of pollutants. No illicit plumbing connections were detected and corrected during illicit discharge investigations by WQC staff.

Underground Storage Tank Leak Protection Program

The Development Services Department (DSD) Underground Storage Tank Leak Detection Program (UST) continued to focus efforts on all permittable facilities with underground storage tanks found within both the Barton Springs Zone and the Full Purpose City Limits. The UST Program staff conducted inspections of identified facilities, ensuring compliance with City Water Quality Codes, including proper storage, monitoring and leak detection activities. The UST Program staff recommend best management practices and provide educational materials applicable to each operation as needed and during permit renewals. The UST Program issued both storage and/or construction permits to identified facilities in the Barton Springs Zone. During the FY18-19 reporting period, the UST Program performed the following minimum control measure activities:

- issued 14 UST Hazardous Materials Construction permits;
- renewed 92 UST Hazardous Materials Storage permits
- conducted 1,483 UST Inspections in the Austin and BSZ area.

Construction Site Runoff
(Minimum Control Measure 6-SWMP)

Site Development Plan Regulations
Status: On-going

The Development Services Department (DSD) staff continued the site plan review program functions within the City's planning jurisdiction. The DSD environmental inspection staff inspects permitted site development plans, subdivision, and utility construction projects within the City and the ETJ for compliance with water quality regulations regarding water quality zones, impervious cover limitations, erosion and sedimentation controls, site disturbances, permanent final stabilization, cut and fill, water quality controls, spoil disposal, storm sewer discharges, wastewater restrictions, roadways, where applicable.

Inspection of Sites During Construction
Status: On-going

The DSD Environmental Inspection staff are responsible for inspecting construction projects for compliance with the approved plan which includes code and criteria manual requirements. Environmental inspectors conduct the required Pre-Construction meeting with the owner's representative, engineer, contractor, and relevant inspection staff. All parties review and discuss details and requirements of construction phase activities. Environmental Inspectors review the approved erosion sedimentation plan for placement and maintenance of erosion controls, water quality and drainage construction, and site restoration, permanent revegetation activities, and confirm placement of all temporary and permanent BMP's onsite. During the reporting period, DSD Environmental Inspection staff performed the following minimum control measure activities:

- Conducted 10,349 inspections at commercial construction sites.
- Conducted 23,650 inspections at residential construction sites.
- Conducted 11,336 inspections at residential redevelopment sites.
- Issued 641 Stop Work Orders due mostly to inadequate erosion and sedimentation controls or development activities without the required approved site plan or permits.

Education and Outreach Program for Construction Site Operators
Status: On-going

During the reporting period, the City continued the Education and Outreach Program for construction site operators, including the following activities:

- Provide written materials upon request related to local, state and federal regulatory requirements and technical guidance and non-technical information to the development, construction and engineering communities as well as the general public on an on-going basis.
- Continued meeting with development, construction and engineering communities as well as City staff during the design, development review and site construction phases of projects.
- DSD EV Inspection staff developed a pre-construction handout to educate the contractors and developers and help guide them through the City's environmental inspection and enforcement procedures. The handout has detailed diagrams and information on inspection of water quality and drainage ponds, maintenance requirements for BMP's, spill response contacts, TPDES Construction General Permit (CGP) permitting information and contacts.

Public Education and Involvement
(Minimum Control Measure 7-SWMP)

Public Education
Water Quality Education and Awareness Programs
Status: On-going

The public education and awareness efforts of the City of Austin encompass a wide variety of water quality-related programs. The Watershed Protection Department (WPD), Austin Resource Recovery (ARR), and Austin Water (AW) each have programs that provide water quality protection and pollution protection education to citizens in the Austin area. Activities reported on within this Minimum Control Measure (MCM) element have been identified as supportive of the TCEQ Approved Austin Area TMDL IP Plans. Summary Status detailed information on the FY 18-19 City's public education program efforts during the reporting period have been provided in Section 7 (Enforcement Actions, Inspections & Public Education Programs) of the annual report.

Public Involvement and Participation
Community Education
Status: On-going

Summary Status detailed information on the FY 18-19 City's public involvement, participation and community education have been provided in Section 7 (Enforcement Actions, Inspections, & Public Education Programs) of the annual report.

Monitoring Programs
(Minimum Control Measure 8-SWMP)

Dry Weather Screening

Status: On-going

The WPD WQC staff conducts dry-weather screening as part of its compliance with the TPDES MS4 permit. Outfalls to be screened were selected if they were a) 36" inches or greater, (b) within 50 feet of the centerline of named creeks and c) within the full purpose jurisdiction of the City of Austin. No dry weather screening was conducted in FY 18-19 Year One of the permit due to changes in the program. The program activities were moved from the Monitoring group to Water Quality Compliance group. The Water Quality Compliance staff will resume Dry Weather Screening in Year Two of the permit. Activities reported on within this Minimum Control Measure (MCM) element have been identified as supportive of the TCEQ Approved Austin Area TMDL IP Plans.

Wet Weather Screening
Status: On-going

The Wet Weather Screening (WWS) is conducted by WPD FOD staff as part of its compliance with the TPDES MS4 permit. WWS is performed in accordance with Part III.B.8.b. (1)(2), of the permit. For FY 18-19 reporting year Wet Weather Screening minimum control measure activities were conducted at Blunn Creek, Carson Creek, and Country Club Creek. See Data sheets in Appendix C

Industrial and High Risk Monitoring
Status: On-going

Austin Fire Department (AFD) and Watershed Protection Department (WPD) have an Industrial and High Risk Monitoring Program that identifies and prioritizes facilities that have the potential to discharge pollutants into the municipal separate storm sewer system (MS4). As part of this effort WPD Pollution, Prevention, Reduction (PPR) Stormwater Discharge Permit Program (SDPP) staff are responsible for identifying facilities that may fall under TPDES Stormwater rules. The SDPP staff may request that analytical monitoring data collected by the facility be submitted for review. TCEQ's Central Registry is reviewed annually for new facilities. SDPP staff did not submit any enforcement referrals to the TCEQ during this reporting period.

2. Proposed Changes to the Storm Water Management Program

Introduction

As required by Parts III.H.1. and IV.C.3.c. of the City's permit, a review of the current Storm Water Management Program (SWMP) was conducted. Based on this review, the Watershed Protection Department (WPD) has identified several necessary updates to the SWMP. These modifications are a continuation of the SWMP revisions already identified and submitted to the TCEQ in August 2019 as directed by Part III D.1-3 of the reissued permit, and TCEQ's feedback provided in late 2019 and then again during the TCEQ Comprehensive Compliance Investigation of the COA Storm Water Management Program during the month of January 2020.

Proposed Modifications

Global Changes

- Minor updates, grammatical, typographical, and other incidental, non-substantive changes and updates were made throughout the SWMP document.
- Formatting throughout the SWMP document has changed to more accurately align the City's older SWMP organization, formatting and activities description structure with the newer Part III.B. structure of organizing SWMP Components.
- Updates throughout the SWMP to include "Measurable Goals" within to each Minimum Control Measure (1-8).

Section-Specific Changes

- Updates to all Part III.B. SWMP Components minimum control measure (MCM) program description sections affected by the Part II.C Total Maximum Daily Load (TMDL) Requirements. Specific language has been added to each Part III. SWMP program description that includes targeted controls and measurable goals considered supportive of the Part II.C. Impaired Water Bodies and Total Maximum Daily Load (TMDL) Requirements, and are consistent with the voluntary activities in those portions of the MS4 that discharge to portions of watersheds included in the two TCEQ approved TMDL IP Plans for Four Austin Streams and Gilleland.

- Updates to Part III.B. MCM 3, Illicit Discharge Detection and Elimination program description sections to add all items identified through specific permit references to be included in that MCM, such as the extended list of miscellaneous, allowable non-stormwater discharges that may be authorized by the permittee; a description of other non-prohibited discharges, and the Priority Areas heat map development and use information,

.

None of the above changes affect the City's compliance responsibilities of the SWMP. A copy of the revised SWMP is included as Appendix A.

3. REVISIONS TO ASSESSMENT OF CONTROLS AND FISCAL ANALYSIS

Introduction

As required by Part IV.C.4.c. of the permit, the City of Austin has reviewed the assessment of controls and the fiscal analysis reported in the City's permit renewal application. Based on the review, the City has no information to update in either the assessment of controls or the fiscal analysis for October 1, 2018 to September 30, 2019 reporting year.

Assessment of Controls

No revisions to the assessment of controls submitted in the City's permit renewal application are warranted at this time.

Fiscal Analysis

The amount of funding for each program included in the City of Austin Storm Water Management Program (SWMP) has not changed significantly since the last reporting period. The Fiscal Analysis for 2018-2019 is provided in Section 6 of the Annual Report. Funding for each program is dependent upon the collection of adequate revenues and the allocation of these funds to the programs each year by the City Council during the budget approval process.

4. SUMMARY OF MONITORING AND OTHER DATA

Introduction

As required by Part IV.C.4. of the City's permit, a summary of the data, including monitoring data that is accumulated throughout the year has been included in the system-wide annual report. During the reporting period between October 1, 2018 and September 30, 2019, the City's Watershed Protection Department (WPD) conducted sampling activities associated with the Representative and Rapid Bioassessment Component monitoring requirements. Information related to all the City's TPDES monitoring efforts has been provided as follows. The City of Austin utilizes Option 2: Representative Rapid Bioassessment Monitoring as described in the Part IV.A.2 of the permit. Given Option 2 requires storm water monitoring events in permit years one and four, and this report provides data on reporting year one (1) of the City's permit; the City will submit the storm event water monitoring Data Monitoring Reports electronically to TCEQ.

Representative Monitoring

The Watershed Protection Department (WPD) Environmental Resource Management (ERM) staff are responsible for the City of Austin's Representative Monitoring Program. The principal objectives in the effort to satisfy the representative monitoring requirements for the City of Austin's municipal separate storm sewer system (MS4) permit are to characterize not only the quality and quantity of storm water discharges, but the effect these discharges may have on aquatic environments in the Austin area. These objectives were met through the continued implementation of a monitoring program composed of traditional chemical water quality measures and biological integrity assessments.

Streams that receive storm water discharges from Austin's MS4 have been selected to represent the variety and intensity of development pressures on Austin's surface water resources. Storm Water monitoring is conducted at USGS- type stations, at sites selected to characterize storm water influences and flow during storm events.

A minimum of four sites are sampled in Year 1 and Year 4 of the permit period. The composite samples are analyzed for nutrients, metals, field and physical parameters.

Storm Water Sampling Component

The storm water monitoring component of the program consists of four monitoring sites at outfalls located within four watersheds, see Figure 1. Information about each monitoring location has been included in Table 1.

Figure 1. City of Austin Representative Monitoring Locations

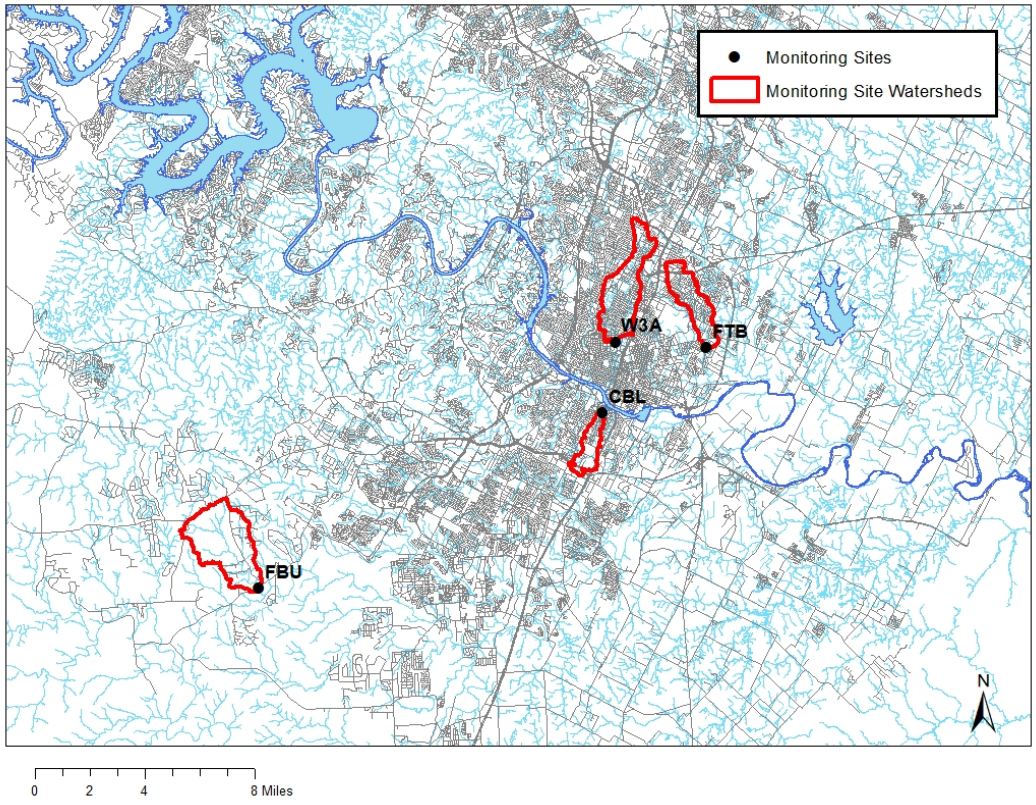


Table 1. Storm Water Monitoring Site Locations

Watershed	Site No.	Monitoring Site Location	Drainage Area (Acres)	Land Use	Receiving Water Body (Segment No.)
Bear Creek					
	001	Bear Creek @ FM 1826	3563	Undeveloped	1427
Waller Creek					
	002	Waller Creek @ 23rd St.	2524	Mixed Urban	1429
Fort Branch Creek					
	003	Fort Branch near Webberville Road	1600	Residential (Mixed) Urban	1428
Blunn Creek					
	004	Blunn Creek near Little Stacey Park	786	Mixed Urban	1429

Due to lack of summer rains, no monitoring data was available for Outfall 001 (Blunn) during Seasons 3. Outfall 003 (Fort Branch) was not sampled in Season 2 due to equipment failure. As such, the City will conduct additional monitoring within the same season the following year, as required in Part IV.A.6. of the permit. The analytical results Discharge Monitoring Reports (DMR) for the events monitored during the FY18-19 reporting period have been submitted electronically to TCEQ and EPA's NetDMR system. In addition to the event mean concentration data collected from laboratory analyses, the following information is collected for each sampled storm:

- Rainfall depth (in.)
- Runoff volume (gal.)
- Event duration (hr.)
- Duration of the intervening dry period (hr.)

Outfall	Date	Rainfall (in)	Flow (gal)	Duration (hr)	Preceding dry interval (hr)
Blunn Creek	26-Dec-2018	2.52	10,743,365	13.37	451.23
Blunn Creek	12-Mar-2019	.36	133,153	9.48	1077.75
Blunn Creek	6-Apr-2019	2.98	6,149,492	49.07	574.75
Bear Creek	7-Dec-2018	1.74	33,618,335	24.48	7.50
Bear Creek	6-Apr-2019	1.96	32,753,168	37.08	576.25
Fort Branch	6-Dec-2018	.29	4,780,390	11.75	10.00
Fort Branch	6-April-2019	2.25	56,462,252	17.68	574.75

Outfall	Date	Rainfall (in)	Flow (gal)	Duration (hr)	Preceding dry interval (hr)
Waller Creek	8-Nov-2018	.85	13,065,924	17.72	113.75
Waller Creek	12-Mar-2019	.36	3,450,132	16.67	297.25
Waller Creek	6-Apr-2019	2.45	69,209,548	13.05	574.75
Waller Creek	19-Sep-2019	.18	5,622,259	20.98	194.00

Rapid Bioassessment Component

The Environmental Integrity Index (EII) (http://austintexas.gov/department/environmental-integrity-index) is the primary routine non-storm, surface water monitoring program of the Watershed Protection Department (WPD) (COA1997), and is a critical piece of the WPD master planning process (COA 2001). The Environmental Resource Management (ERM) Division of the WPD has implemented the EII as a tool to monitor and assess the ecological integrity and the degree of impairment of Austin's creek watersheds. In accordance with the approved rapid bioassessment monitoring program; the City of Austin performs EII studies on the following four watersheds on a semi-annual rotation: Barton Creek, Onion Creek, Walnut Creek, and Bull Creek. The WPD sampled the following Barton Springs Zone watersheds during the FY18-19 reporting period: Barton and Williamson Creek. (See Table 5).

Sample sites within each watershed are selected for each defined sampling reach, with reaches representing contiguous areas of similar geomorphology and anthropogenic impacts. Each watershed is monitored for six index components: water quality, sediment quality, contact recreation, aesthetics, physical integrity, and aquatic life support. Water quality samples are collected quarterly, and data are collected for all other components once per sampling year. Each of the six components are averaged by site to produce the overall EII score. The aquatic life support score integrates benthic macroinvertebrate data collected using Surber samplers and periphyton (diatoms) collected from rock scrapings. EII scores are reported on 100-point basis and are associated with narrative score descriptions, see (Table 4).

Table 4. Narrative EII score descriptions

Narrative Score	EII Score Range	
	Lower	Upper
Excellent	89	100
Very Good	76	88
Good	64	75
Fair	51	63
Marginal	39	50
Poor	26	38
Bad	13	25
Very Bad	0	12

The EII narrative scores for all the EII watersheds sampled during the reporting period are found in Table 5; watersheds in the Barton Springs Zone of the Edwards Aquifer are indicated with an asterisk (*) and watersheds monitored to fulfill permit requirements have been highlighted. EII sampling was conducted in 22 watersheds see (Table 5, Figure 2). A total of 66 different reaches within the 22 watersheds were visited approximately 5 times for the EII program. The watersheds which required EII sampling this reporting period (Barton and Williamson creeks) are highlighted in Table 5. Data and resulting analyses obtained from monitoring additional watersheds are included for informational purposes only. Data from Bear, Little Bear, Little Barton and Onion creek will be submitted in FY 19-20 as part of the two-year rotational cycle of the EII. See Table 5.

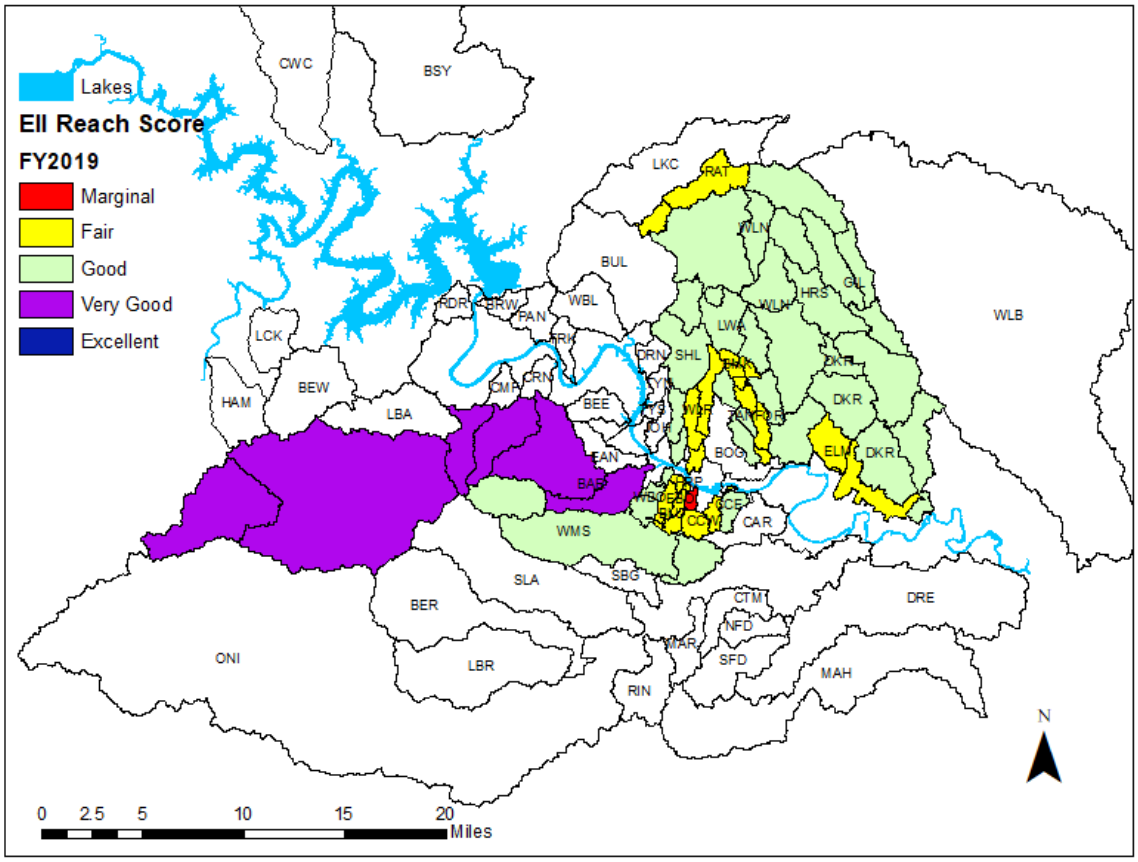
Table 5. Total EII scores by watershed for FY 18-19 EII component. Rapid Bioassessment watersheds highlighted. Watersheds containing the Barton Springs Segment of the Edwards Aquifer Recharge Zone noted with an asterisk (*).

Watershed	Watershed EII Score		Water Quality	Sediment Quality	Contact Recreation	Aesthetics	Habitat	Aquatic Life
Barton Creek*	86	Very Good	73	79	74	98	93	98
Shoal Creek	66	Good	56	70	47	80	67	78
Waller Creek	57	Fair	48	63	27	78	63	63
East Bouldin Creek	60	Fair	54	57	52	79	57	57
Little Walnut Creek	72	Good	61	81	55	80	69	87
Walnut Creek	71	Good	61	73	48	73	78	91
Fort Branch	64	Good	58	80	46	73	55	74
Blunn Creek	63	Fair	52	64	32	78	76	76
Buttermilk Creek	56	Fair	51	54	30	72	56	75
North Boggy Creek	63	Fair	53	78	47	76	53	70

Watershed	Watershed EII Score		Water Quality	Sediment Quality	Contact Recreation	Aesthetics	Habitat	Aquatic Life
East Country Club	65	Good	55	76	57	78	61	65
Decker Creek	70	Good	60	89	46	77	67	82
Elm Creek	63	Fair	59	65	47	73	63	73
Gilleland Creek	67	Good	36	85	45	77	78	81
Harpers Branch Creek	50	Marginal	46	62	25	74	52	38
Harris Branch Creek	71	Good	47	83	51	85	72	91
Rattan Creek	59	Fair	50	74	58	81	53	38
Maha Creek	72	Good	54	83	66	77	75	78
Tannehill Creek	67	Good	58	84	46	74	56	86
West Bouldin Creek	68	Good	58	66	50	81	71	79
Wilbarger Creek	74	Good	47	84	64	86	85	78
Williamson Creek *	72	Good	57	87	48	84	77	77

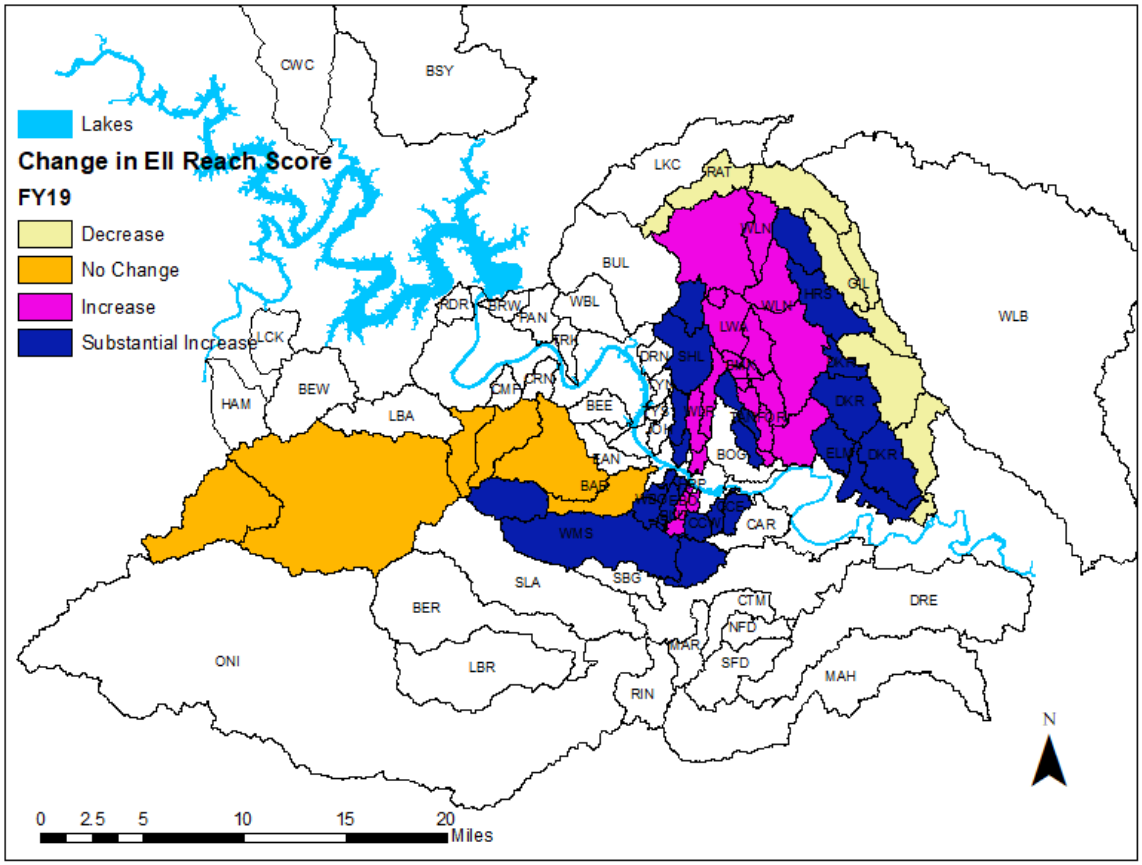
Current total EII watershed scores indicate that 14 of 22 watersheds did score “good” or better in total overall EII score in the FY2018-2019 reporting period see (Table 5). Barton Creek, which flows into Lady Bird Lake yielded the highest total overall EII score. Harper’s Branch Creek yielded only a “marginal” score.

Figure 2. Map of FY2019 EII reach total scores. White spaces are watersheds not sampled in this reporting year.



The change in the current EII scores was evaluated relative to baseline conditions established from 1996 to 1999. Change in a score of more than 12 points represents a significant change of at least one narrative category. There were no significant decreases in EII sampling reach scores relative to baseline levels in the FY2019 reporting period. The maximum decrease in EII scores was -3 points, observed in the Rattan Creek watershed, a tributary of Gilleland Creek. Ten (10) sampling reaches yielded a substantial positive change from baseline. See (Figure 3).

Figure 3. Change in FY2019 EII reach total scores from baseline sampling year (1996-1999).



The change in EII scores from baseline assessments were stable (no change) or improved in 90% of sampled reaches. The overall average change was a plus 11 points.

Seasonal Loadings and Event Mean Concentration

Status: Report year four of permit term

As required by Part IV.A.2.4 of the permit, the City is required to provide the seasonal loadings and event mean concentrations (EMCs) data for the parameters listed in Part IV.A.1.a.(1). of the permit, for each of the four storm water outfall monitoring locations in reporting year four of the permit term. FY 18-19 is reporting Year One therefore no seasonal loadings or event mean concentration information are included.

Floatables Monitoring Program

During the reporting period, program staff completed periodic inspections at two boom locations on Lady Bird Lake (Shoal Creek and West Bouldin Creek). A total of 1.65 tons of floatable trash and debris were removed from the two locations during cleaning activities.

Other Water Quality Monitoring

1. Barton Springs Complex Sediment Monitoring

Five sediment samples were collected from within Barton Springs Pool in the FY19 reporting period. One sediment sample was collected from each of Eliza, Old Mill and Upper Barton springs see (Appendix E). The majority of analytes were less than detection limits as usual. There were no detects of DDT or its metabolites in this reporting period. Multiple polycyclic aromatic hydrocarbon analytes were detected at values above the laboratory reporting limit at multiple locations. WPD staff completed a new monitoring program to evaluate the spatial and temporal extent of organochlorine and PAH contamination in multiple watersheds in Austin including Barton Creek and published these summary reports.

http://www.austintexas.gov/watershed_protection/publications/document.cfm?id=276630
http://www.austintexas.gov/watershed_protection/publications/document.cfm?id=283711

2. Barton Springs Complex Water Quality Monitoring - Biweekly Monitoring

During the reporting period, WPD staff monitored for conventional water quality parameters, including physical parameters and nutrients, yielding a total of 12 samples from Barton Springs see (Appendix F). Nitrate-nitrogen levels were lower in FY19 with annual average nitrate-nitrogen concentrations of 1.26 mg/L.

3. Barton Springs and Associated Springs – Semi-annual and Annual Monitoring

An expanded list of water chemistry analytes was analyzed from Barton Springs on a quarterly basis see (Appendix F). One sample for organic analytes and five samples for ions and metals were collected from Barton Springs in this reporting period. Organic analytes in water at Barton Springs were less than detection limits. Petroleum hydrocarbons have been detected in previous samples at Barton Springs at low levels but were not detected in this reporting period. Tetrachloroethene has been detected in water previously and well samples from other locations in the recharge zone have been evaluated by WPD staff to determine if contaminant plumes may be sourced, potentially related to dry cleaning operations which use the solvent. No detected values of tetrachloroethene were observed in this reporting period.

Additional water quality measures for conventional analytes and physical parameters were conducted five times at Eliza Springs and Old Mill Springs and two times at Upper Barton Springs see (Appendix F). Some metals are not routinely collected for every event at these sites, but all data is reported. One sample was collected from Eliza and Old Mill Springs for an extended list of analytes including organic and volatile parameters in FY19 see (Appendix F). All organic analytes in water at Eliza and Old Mill springs were less than detection limits.

Barton Springs Continuous Monitoring

A multi-probe data logger has been continually deployed at a spring-fed cave at the bottom of Barton Springs Pool. The units are serviced every three to four weeks for cleaning and recalibration. Field parameter and discharge data continues to be monitored by the United States Geological Survey (USGS) in cooperation with City of Austin staff on a 15-minute interval basis and is available real-time via the web. (http://waterdata.usgs.gov/tx/nwis/dv?referred_module=sw&site_no=08155500).

Physical parameters including temperature, conductivity and dissolved oxygen, turbidity, pH may be accessed real-time or as daily averages from the USGS website, maintained under contract with the City of Austin. Barton Springs daily discharge averaged 103.9 ft^3/s during the reporting year. The long-term historic average is 62 ft^3/s. See Table 8.

Table 8. Multi-probe summary data for FY18-19

Parameter	Units	Mean	Minimum	Maximum	# Days Measured
Temperature	Deg C	20.9	19.4	22.7	364
Conductivity	uS/cm	659.0	579	689	364
Dissolved Oxygen	mg/L	6.5	5.5	7.3	364
pH	Std Units	7.13	6.9	7.4	340
Turbidity	FNU	2.43	1.4	8.5	339

4. Critical Environmental Feature Protection

Status: On-going

During the site development permit application process, City of Austin Watershed Protection staff reviewed site plans for large-scale residential and commercial development to ensure that Critical Environmental Features (CEF's) are properly identified and buffered from development. WPD staff identified new CEF's within Austin's jurisdictions, during a review of approximately 856 site development permit applications. Approximately 1012 acres of new protective buffers were established by WPD staff, bringing the cumulative citywide total to approximately 7,723 acres.

5. NPDES & TPDES GENERAL PERMIT SUMMARY DATA

Introduction

As required by Part IV.C.4.d. of the City's permit, a summary of the number of Notices of Intent, Change, Secondary, Termination and Small Construction (CSN) Notices received from construction site operators and industrial facilities seeking NPDES or TPDES coverage for storm water discharges, and number of inspections conducted by the City of Austin at construction sites, and industrial facilities during the reporting period from October 1, 2018 through September 30, 2019 has been included in the system-wide annual report as follows. The City of Austin received the following submissions:

TPDES Construction General Permit TXR150000

- 119 Notices of Intent;
- 9 Notices of Termination;
- 140 Construction Site Notices;
- 36 Notices of Change; 33 Secondary Operator Notices.

TPDES Multi-Sector General Permit TXR050000

- 1 Notices of Intent
- 1 No Exposure Certifications

TPDES General Permit TXG110000

- 1 Notices of Intent

Inspections by the City of Austin

- 45,335 construction inspections at permitted development sites;
- 420 industrial inspections at facilities that store hazardous materials; and
- 429 industrial inspections at facilities that may be contributing a substantial pollutant load to the City's municipal storm sewer system (MS4).

6. ANNUAL EXPENDITURES

Introduction

As required by Part IV.C.4.b. of the permit, the City of Austin has compiled annual expenditure information for the reporting periods between October 1, 2018 and September 30, 2019 and the anticipated expenditures for the reporting period between October 1, 2019 and September 30, 2020.

Annual Expenditures

The following expenditure information addresses the major elements of the Storm Water Management Program (SWMP). The data reflects current operation budgets of the City of Austin programs utilized to satisfy the TPDES permit requirements. The expenditure information may in some cases include expenses for activities not directly required by the City's permit.

Storm Water Management Program Element	FY 18-19 Actual	FY 19-20 Budget
MS4 Maintenance Activities	66,032,307	62,496,874
[1]Post-Construction Storm Water Control Measures	1,565,140	1,863,662
[2] Illicit Discharges Detection and Elimination	8,709,118	8,973,827
Pollution Prevention/good Housekeeping for Municipal Operation	70,439	72,119
Industrial and High Risk Runoff	1,810,174	1.852,507
Construction Site Runoff	1,386,012	2,596,976
Public Education	2,144,755	2,422,422
Monitoring Programs	531,516	505,442
[4]**Total Expenditures**	**82,249,460**	**80,783,829**

[1]Does not include capital expenditures for construction or retrofit activities.

[2]Does not include capital expenditures for Austin Water.

[4]Total may include expenditures for program activities not directly related to compliance with the City's TPDES Storm Water Permit .

7. SUMMARY OF ENFORCEMENT ACTIONS, INSPECTIONS AND PUBLIC EDUCATION PROGRAMS

Introduction

As required by Part IV.C.3.d. of the permit, the City of Austin has compiled summary information describing the number and nature of enforcement action, inspections and public education events for the reporting period between October 1, 2018 and September 30, 2019.

Inspection Programs and Enforcement Actions

Various City programs conducted inspections and complaint investigations. A summary of the enforcement and inspection activities of these programs have been summarized below:

Spills and Complaint Response Program

The Watershed Protection Department (WPD) Spills and Complaint Response Program (SCRP) conducted a total of 1057 incident investigations of which 32 were in the Barton Springs Recharge Zone (BSRZ). Investigations are conducted to prevent, reduce or facilitate recovery of polluting discharges to the MS4, creeks and lakes from commercial, residential, and industrial sources. As a result of those investigations, SCRP staff initiated 118 enforcement actions citywide, with 6 located in the BSRZ. The SCRP staff has continued to work with the criminal prosecutors at the Travis County District Attorney's Office in Austin. During the reporting period, the SCRP staff referred 10 cases for criminal prosecution.

Stormwater Discharge Permit Program

The WPD Stormwater Discharge Permit Program (SDPP) conducted 429 inspections of commercial, industrial, and city facilities in the Full Purpose City Limits, of which 9 are in the BSRZ. The activities of these facilities have the potential to discharge pollutants into the storm sewer system and waterways. As a result of these inspections, 6 enforcement actions were initiated due to non-compliant conditions, none of which are in the BSRZ. Corrective actions were taken to obtain compliance with the City's water quality code.

Construction Inspection Program

The Environmental Inspection Program staff conducted 10,349 inspections at commercial construction sites, 23,650 inspections at residential construction sites and 11,336 inspections at residential redevelopment construction sites to ensure compliance and proper installation and maintenance of erosion and sedimentation controls, BMP's and on-site Drainage and Water Quality controls. Staff issued 641 Stop Work Orders, due mostly to inadequate erosion and sedimentation controls. The Environmental Inspection Program filed 334 misdemeanor complaint cases in municipal court including 12 Citations.

Underground Storage Tank Inspection and Leak Detection Program

During the reporting period, the DSD Underground Storage Tank (UST) Program issued 14 hazardous materials construction permits; renewed 92 (underground) hazardous materials storage permits (for a 3-year period) and conducted 1,483 inspections in the Austin and Barton Springs Zone (BSZ) area.

On-site Sewer System Program

Austin Water's On-site Sewage Facility (OSSF) Program conducted approximately 111 inspections to ensure compliance with OSSF regulations regarding the installation and modification of on-site sewage facilities. In addition, approximately 93 inspections were conducted to ensure the proper abandonment of OSSFs. During the reporting period, three instances of pollution complaints related to OSSFs were investigated by Austin Water staff. A total of nine enforcement cases were opened to address malfunctioning systems and potential permit violations. Austin Water issued approximately 215 notices of violation addressing 178 enforcement cases related to reporting deficiencies. Approximately 26 cases were filed with Municipal Court to address cases of continued non-compliance.

Pond Inspection Program

The Watershed Protection Department (WPD) continued inspection of residential and commercial ponds throughout the permit area for compliance with City code requirements. WPD staff inspected 900 residential and 3003 commercial water quality and detention ponds subject to the Land Development Code.

The WPD staff mailed a total of 680 Letters of Non-compliance in the effort to resolve problems identified at commercial pond locations throughout the City during inspections. The WPD FOD Operating Permit Staff for the Barton Springs Zone (BSZ) conducted 937 inspections of the 337 permitted commercial ponds in the Barton Spring Zone, subject to the (BSZ) Operating Permit program requirements; with staff issuing 42 letters of non-compliance.

Aboveground Hazardous Materials Permit Program

The Austin Fire Department (AFD) Fire Marshal's Office and Special Operations personnel conducted inspections at 420 facilities that store hazardous materials. No enforcement actions were necessary to gain compliance.

Inactive Landfill Inspection Program

No new sites or unexpected conditions have been found at any known inactive landfills during the reporting period.

Public Education and Public Involvement Programs

During the FY 18-19 reporting period, several City programs conducted public education campaigns that promote water quality protection, pollution prevention, water conservation, and general non-point source pollution.

Water Quality Education Program

CLEAN CREEK CAMPAIGN

The partnership between Watershed Protection Department (WPD) and Keep Austin Beautiful (KAB) has been a very successful partnership. The campaign focuses on one-time creek cleanups, longer commitments through the Adopt-a-Creek program, and in-class education through the Clean Creek Campus program.

The Clean Creek Campus, which provides both litter and water quality education to students, reached over 1,805 elementary students with water quality hands-on lessons in the 2018-

2019 school year. These students conducted 26 service projects to protect and improve water quality.

The Adopt-a-Creek portion of the campaign continued its enhancement of "Grow Zones" along more than twenty creek segments that flow through parks. WPD and KAB collaborate to enhance volunteer restoration protocols to use along these creek segments. During the reporting period educational videos were promoted on restoration techniques like planting bare root seedlings. There are currently 115 active Adopt-a-Creek groups. During the reporting period, 3,723 citizens volunteered, 11,200 tree saplings were planted, and 32,000 pounds of trash was collected from waterways.

See www.keepaustinbeautiful.org and www.austintexas.gov/creekside.

GROW GREEN

The Interdepartmental Grow Green Team's Landscape Professional Training had 117 community members attend. Additionally, classes for the public were held in the fall and spring and reached 68 community members. The group also maintains landscape demonstration gardens at the Zilker Botanical Gardens, the Howson Branch Library. An important component of the program is delivering information in a variety of ways including do-it-yourself videos. To date, the mulching video has received more than 9415 views. www.GrowGreen.org

WATER QUALITY EDUCATION PERFORMANCE MEASURES

Through the three, fifth-grade elementary programs, Earth Camp, Teacher-Led Earth Camp and Earth School, the Education group was able to reach most AISD fifth graders through the following activities during 2018-2019 school year.

- Earth Camp, the four-day outdoor, science-based camp offered to fifth graders in lower socio-economic schools reached 676 students, who showed an improvement in their water quality protection knowledge of 58% between, pre-& post-Earth Camp tests.
- Teacher-Led Earth camp led by classroom teachers who had attended previous Earth Camp sessions reached 1,069 students.

- Earth School, the in-school fifth grade watershed and aquifer reached 3,842 students in Austin ISD, 454 students in Eanes, ISD, and 42 students in Del Valle ISD.
- Watershed Detectives, a middle school investigative science program: reached 1987 students.
- Hydrofiles, a high school aquatic science program: reached 613 students.

WATER QUALITY PUBLIC INVOLVEMENT PERFORMANCE MEASURES

Barton Springs Watershed and Other Watersheds within the Barton Springs Zone

During the reporting period, the Watershed Education Section of the WPD:

- Displayed prominent interpretive signage about the endangered Barton Springs and Austin Blind salamanders, hydrology of the Edwards Aquifer, the history of the springs, and the importance of stewardship at the main entries to Barton Springs Pool.
- Displayed signs in English and Spanish to display at Eliza Spring, Sunken Gardens, and Upper Barton Springs to raise awareness about the endangered salamanders and activities that are not allowed in the area.
- Created and installed signage at Eliza Spring to explain the daylighting process.
- Continued to provide materials such as an audio tour of Barton Springs Pool that citizens can stream on their phones, the "Who's swimming with you?" brochure in both English and Spanish, and Barton Springs salamander masks.
- Provided Grow Green landscaping education that includes a focus on reducing the use of landscaping chemicals by using integrated pest management techniques.
- Continued funding for the Splash! Groundwater education Exhibit.D

Other Performance measures for 2018-2019 include:

- Grow Green, the landscaping program to benefit water quality**:**
- Number of participating retailers and distribution outlets: 58
- More than 101,000 Fact Sheets distributed.
- 120,000 hits to the Grow Green website.
- Over 24,360 copies of the full color Native and Adapted Plant Guide have been distributed in Austin.

- Storm Drain Marking: 537 markers were installed throughout the city
- Scoop the Poop, the pet waste cleanup campaign 2,958,000 pet waste bags were purchased during the year.

The Watershed Protection Department (WPD) Pollution Prevention and Reduction Section (PPR), which focuses on pollution prevention education activities, promoted additional public education and awareness programs. During the reporting period the PPR Section accomplished the following:

- East Austin Environmental Initiative (EAEI): Two issues of the EAEI newsletter were produced and distributed. EAEI staff participated in four community events in the initiative area. Staff also distributed City of Austin environmental programs literature to area libraries and recreation centers.
- Focused on promotion of our 24-Hour Pollution Hotline. Developed a Hotline marketing/promotion plan, and a new Hotline logo. Promoted the Hotline in the Shoal Creek Conservancy Newsletter, on social media, on web pages, and in Austin Energy's Utility Bill Insert. Placed a Pollution Hotline promotional ad in the fall/winter issue of Austin's Community Impact Newspaper. Added a Hotline promotional ad for the City of Austin's web site and Watershed News. Promoted the Hotline in the annual Austin Preparedness Calendar by designing the page for the month of February with messaging about keeping pollutants out of our storm drains and waterways and timely reporting of illegal activity.
- Developed a new educational brochure called Preventing Stormwater Pollution on Construction Sites. The target audience is construction site workers. The focus is educating contractors in laymen's terms on best practices to prevent polluting discharges during activities such as site dewatering, vehicle and equipment fueling, trash and demolition debris handling, building of structures, and soil disturbance activities.
- Developed a Don't Blow It campaign and posted information on social media that emphasizes keeping leaves and yard debris out of storm drains and waterways.
- Staff provided an article on this in the Power Plus utility bill insert. Posted information on Facebook and responded to several of subsequent Facebook comments. Provided written statement on leaf blowing best practices to the Austin Resource Recovery Department so they can answer questions they are receiving on it.
- Austin Enviro-Mechanics (AEM) – AEM is a program that gives incentive and recognition to businesses that contribute exceptional efforts to protect water quality program. Participants were recognized in a Community Impact Newspaper, and various Time Warner Cable media outlets.

- Shade Tree Mechanic Program: An initiative aimed at preventing pollution and water quality degradation associated with home automotive repair. Free oil change buckets, educational material and a list of free locations to drop off used oil are all provide to City of Austin residents. If a home auto repair issue is reported to the 24-Hour Pollution Hotline, staff investigates the complaint and meets with home mechanics to educate them on BMP's, water quality laws, and the free oil change bucket for recycling their waste oil. Staff added 31 new participants this year.
- Swimming Pool Outreach: Staff placed over 50 educational door hangers in various neighborhoods where swimming pool backwash discharges have historically occurred. Additionally, educational materials were provided to pool operation managers on how to properly manage pools and not create illegal discharges.

Keep Austin Beautiful & Austin Resource Recovery

Anti-litter Education Program

Keep Austin Beautiful (KAB) is a non-profit organization whose mission is to inspire and educate all Austinites to volunteer together, beautify green spaces, clean waterways, and reduce waste every day.

During the FY 18-19 reporting period Keep Austin Beautiful was involved in many activities including, but not limited to:

- Facilitated 56 Lady Bird Lake cleanups, engaging 1,385 volunteers, and removing 5.43 tons of litter;
- Led the Annual Keep Austin Beautiful Day event. During the event, 565 volunteers worked at 31 sites in the City of Austin, and collected 3.38 tons of litter;
- Provided 46 community groups bins through the Event Recycling Program, collecting 1.63 tons of recycling;
- Supported 60 projects through Tool Shack and Beautification Resources, engaging 4,135 volunteers, donating 10,568 hours of volunteer time;
- Engaged 3,113 volunteers in Adopt-A-Creek projects, contributing 7,790 hours of volunteer time, and removing 15 tons of litter;
- Facilitated 68 Adopt-a-Street cleanups, engaging 1,071 volunteers, and removing 3.22 tons of litter;
- Participated in 30 community events including environmental, neighborhood, college and corporate fairs, distributing Keep Austin Beautiful educational materials;

- Distributed a monthly email newsletter to over 9,400 individuals and a biweekly volunteer newsletter to 2,600 subscribers;

- Garnered 33,787 unique website visits, and 21,600 social media followers across platforms (9,200 on Twitter; 10,300 on Facebook; and 2,100 on Instagram); and

- Partnered with The City of Austin, Travis County, Travis County Integral Care, Texas Parks and Wildlife, Keep America Beautiful, Keep Texas Beautiful, Colorado River Alliance, Treefolks and Keep America Beautiful to raise awareness and educate the community about the importance of implementing environmentally wise practices which ultimately improve the quality of life for all Central Texans.

During the reporting period, Austin Resource Recovery's (ARR) (formerly Solid Waste Services) Anti-litter Program continued the Pay-As-You-Throw and the curbside recycling campaigns in the effort to educate citizenry and promote recycling. Efforts included promotion of home composting, yard waste pick-up services, the annual Christmas tree recycling event and phone book recycling. Austin Resource Recovery also continued promotion of the Household Hazardous Waste Facility through various means including the distribution of an educational flyer. The flyer is written in Spanish and English and indicates the types of materials the facility accepts, the facility's hours, a facility location map and helpful tips related to home chemicals.

8. IDENTIFICATION OF WATER QUALITY IMPROVEMENTS OR DEGRADATION

Introduction

As required by Part IV.C.4.a. of the permit, the City of Austin has reviewed the annual report summary data in the effort to identify any water quality improvement or degradation.

Identification of Improvements or Degradation

Identification of improvement or degradation of water quality can be done directly or indirectly. Indirect measures of water quality improvements related to the pollution prevention efforts of several City programs have been identified. The following are indirect measures of City's storm water pollutant load reduction efforts during the October 1, 2018 through September 30, 2019 reporting period:

- Collected 4,567 tons of dirt and debris from roadways throughout the City.
- Properly disposed of approximately 1,982,048 pounds of household hazardous waste.
- Recycled 111,757 pounds of waste oil and 2,475 pounds of oil filters.
- Recycled 310,940 pounds of paint.
- Recovered approximately 784,750 gallons and 305 cubic yards of pollutants as a result of pollution investigations.
- Removed approximately 1.65 tons of floatable trash and debris from two floatable boom locations.
- Removed approximately 4090 tons of trash and debris from all Waller Creek Tunnel facilities.

Appendix A

City of Austin
Storm Water Management Program