CITY OF TEMPE

2019-2020

ANNUAL PHASE I MS4 REPORT

As Prescribed by AZPDES Permit No. AZS000005-2010 Appendix B

December 2020

Prepared by the City of Tempe Municipal Utilities Department
Water Utilities Division
Environmental Services Section
Regulatory Compliance Group

Table of Contents

List of Tables

1. General Information

A. Name of Permittee

City of Tempe

B. Permit Number

AZPDES Permit No. AZS000005-2010

C. Reporting Period

July 1, 2019 – June 30, 2020

D. Stormwater Management Program Contact

Name	Christina Hoppes
Title	Environmental Program Supervisor
Mailing Address	Mail Stop 38-01 P.O. Box 5002 Tempe, Arizona 85280-5002
Phone	(480) 350-8255
Fax Number	N/A
Email Address	Christina_Hoppes@tempe.gov

E. Certifying Official

Name	Terrance Piekarz
Title	Municipal Utilities Director
Mailing Address	Mail Stop 23-01 P.O. Box 5002 Tempe, Arizona 85280-5002
Phone	(480) 350-2660
Fax Number	N/A
Email Address	Terrance_Piekarz@tempe.gov

2. Annual Report Certification

The Annual Report Form (ARF) must be signed and certified by either a principal executive officer or ranking elected official; or by a "duly authorized representative" of that person in accordance with Sections 9.2 and 9.12 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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering 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.

Terrance Piekarz — 12/22/2020

Certifying Official — Date

3. Narrative Summary of Stormwater Management Program Activities Report

This section provides a status summary addressing stormwater management program activities required by the Arizona Department of Environmental Quality (ADEQ) Arizona Pollutant Discharge Elimination System (AZPDES) Permit No. AZS000005-2010 (Permit). Included is a brief description of program or activity implementation and progress or challenges, where applicable, in each area during the reporting year. If applicable, any significant developments or changes to the number or type of activities, frequency or schedule of activities or the priorities or procedures for specific management practices are explained. This section includes language required by Appendix B of the Permit and additional information provided by the City of Tempe.

A. Public Awareness Activities Including Outreach

Tempe Activities

Tempe has surpassed minimum Permit requirements outlined in Appendix A, Sections I.A and I.B, by coordinating and participating in many public and business sector awareness and outreach activities. During the reporting year 2019-2020, Tempe reached eight target groups totalling approximately 503,992 people and/or business contacts, while covering a wide array of stormwater topics. The 30,303 decrease in people reached compared to the estimate of 534,295 from 2018-2019 was due to the impacts of the COVID-19 pandemic. Stormwater pollution prevention information was transmitted by Tempe Channel 11 Video Broadcasts, which currently has 26,191 subscribers. The numbers for Tempe Channel 11 were not included in the Summary of Public Awareness Activities and Outreach (Table 1) count, since viewership could not be measured. In some cases, the number reached includes the same audience, though the stormwater message varies (e.g. Tempe resident messages through *Tempe Today* articles and Tempe businesses through *E-Bulletin* distribution, Tempe events, STORM messaging and other Tempe specific materials such as brochures and giveaways). Table 1 summarizes events, topics, estimated numbers of people reached (where possible), numbers and types of materials distributed and target groups. Examples of outreach materials, brochures, articles and E-Bulletins are included as **Attachment A**.

Table 1: Summary of Public Awareness Activities and Outreach

Outreach Events	Date	Topic(s)	People/ Businesses Reached	Type of Materials Distributed	Target Groups
Inspections	All Year	Stormwater best management practice (BMP) information for industrial, commercial facilities and restaurants	307	BMP brochures, discussions during inspections	Industrial, Commercial Businesses, Restaurants
Social Media	All Year	Stormwater pollution prevention videos (general information, pets, pools, lawns, auto, carpet, paint)	209	YouTube BMP Video	General Public, Residents
Newsletter	July 2019	Monsoon tips, Manage water use	44,000	BMP article via Tempe Today, water bills and website	General Public, Residents, Industrial, Commercial Businesses
Social Media	July 2019	Monsoon preparation and safety tips	730	Facebook BMPs and link to Tempe stormwater webpage	General Public, Residents
Newsletter	August 2019	Bag and tie, waste management, manage water leaks, landscaping workshops	44,000	BMP article via Tempe Today, water bills and website	General Public, Residents, Industrial, Commercial Businesses
Newsletter	September 2019	Water conservation workshops	44,000	BMP article via Tempe Today, water bills and website	General Public, Residents, Industrial, Commercial Businesses

Outreach Events	Date	Topic(s)	People/ Businesses Reached	Type of Materials Distributed	Target Groups
Environmental Bulletin	September 2019	Chemical handling and spill procedures	355	BMPs via email and posted to website	Commercial Businesses, Restaurants, Industrial
Social Media	September 2019	Monsoon preparation and safety tips	3,182	Facebook: BMPs and link to Tempe stormwater webpage	General Public, Residents
Social Media	September 2019	Monsoon tips, Manage water use	2,807	Nextdoor: BMPs and link to Tempe stormwater webpage	General Public, Residents
Newsletter	October 2019	Drug take back, Zero waste pollution prevention	44,000	BMP article via Tempe Today, water bills and website	General Public, Residents, Industrial, Commercial Businesses
Newsletter	November 2019	Compost, waste collection, recycle cooking grease, pollution prevention	44,000	BMP article via Tempe Today, water bills and website	General Public, Residents, Industrial, Commercial Businesses
Newsletter	December 2019	Holiday Tree disposal, waste management, Climate Action Plan (incorporates Low Impact Development)	44,000	BMP articles via Tempe Today, water bills and website	General Public, Residents, Industrial, Commercial Businesses

Outreach Events	Date	Topic(s)	People/ Businesses Reached	Type of Materials Distributed	Target Groups
Environmental Bulletin	December 2019	ADEQ New Rules for 2020, Multi-Sector General Permit (MSGP), Construction General Permit (CGP), Copper in stormwater and stormwater pollution prevention	355	ADEQ updates and BMPs via email and posted to website	Commercial Businesses, Restaurants, Industrial
Neighborhood Outreach	December 2019	Stormwater pollution prevention and BMPs for leaf blowing and yard maintenance	50	Pollution Prevention Tips	Homeowner Associations, Residents
City of Tempe Website	December 2019	Fats, oils and grease (FOG), recycle cooking grease, pollution prevention	363	Link to City of Tempe Sustainability website	General Public, Residents
Tempe Festival of the Arts	December 6-8, 2019	Stormwater pollution prevention, Stormwater Management Plan (SWMP)	808	BMP brochures, pet waste and grease collection bags, cups, pencils notepads, magnets	General Public, Residents, Downtown Visitors
Social Media	January 2020	Stormwater Awareness Week: Pollution Prevention	878	Facebook: BMPs and link to Tempe stormwater webpage	General Public, Residents
Newsletter	January 2020	Waste collection; urban core development; desert conservation	44,000	BMP articles via Tempe Today, water bills and website	General Public, Residents, Industrial, Commercial Businesses

Outreach Events	Date	Topic(s)	People/ Businesses Reached	Type of Materials Distributed	Target Groups
Newsletter	February 2020	Waste collection pollution prevention	44,000	BMP article via Tempe Today, water bills and website	General Public, Residents, Industrial, Commercial Businesses
Newsletter	March 2020	Adopt-A-Street or Path; waste collection, zero waste, fix a leak	44,000	BMP articles via Tempe Today, water bills and website	General Public, Residents, Industrial, Commercial Businesses
Environmental Bulletin	March 2020	General stormwater information, ADEQ rule updates	355	ADEQ updates and BMPs via email and posted to website	Commercial Businesses, Restaurants, Industrial
Newsletter	April 2020	Urban Forest program, Climate Action Plan; nonprofit partnership to reduce construction waste; waste collection	44,000	BMP articles via Tempe Today, water bills and website	General Public, Residents, Industrial, Commercial Businesses
Newsletter	April 2020	Stormwater awareness material specific to downtown Tempe	333	Downtown Tempe Authority (DTA) Flyers: BMPs	Commercial Businesses, Restaurants, Downtown Tempe Businesses
Newsletter	April 2020	Stormwater awareness material specific to downtown Tempe	333	Downtown Tempe Authority (DTA) Flyers: BMPs	Commercial Businesses, Restaurants, Downtown Tempe Businesses
Newsletter	May 2020	Waste management; landscape workshops	44,000	BMP articles via Tempe Today, water bills and website	General Public, Residents, Industrial, Commercial Businesses

Outreach Events	Date	Topic(s)	People/ Businesses Reached	Type of Materials Distributed	Target Groups
Environmental Bulletin	June 2020	Stormwater control measure maintenance, chemical handling and spill procedures, ADEQ updates	419	BMPs via email and posted to website	Commercial Businesses, Restaurants, Industrial
Newsletter	June 2020	Stormwater awareness material specific to downtown Tempe	333	Downtown Tempe Authority (DTA) Flyers: BMPs	Commercial Businesses, Restaurants, Downtown Tempe Businesses
Neighborhood Outreach[1]	June 2020	Stormwater Management Plan public review and comment	212	Facebook: request for stormwater program comments	Homeowner Associations, Residents
Social Media	June 2020	Proper pool water disposal practices and pool maintenance video	44	Facebook: YouTube BMP video	General Public, Residents
Social Media	June 2020	Storm drain education and runoff awareness	88	Facebook: BMPs and link to Tempe stormwater webpage	General Public, Residents
Social Media	June 2020	Pollution Prevention: monsoon stormwater runoff	87	Facebook: BMPs and link to Tempe stormwater webpage	General Public, Residents
Social Media	June 2020	Monsoon tips, manage water use	4,221	Nextdoor: BMPs and link to Tempe stormwater webpage	General Public, Residents

Outreach Events	Date	Topic(s)	People/ Businesses Reached	Type of Materials Distributed	Target Groups
Social Media	June 2020	Pollution Prevention: Monsoon stormwater runoff	11	Facebook: BMPs and link to Tempe stormwater webpage	General Public, Residents
Social Media	June 2020	Monsoon Awareness Week	1,343	Facebook: BMPs and link to Tempe stormwater webpage	General Public, Residents
Social Media	June 2020	Harvesting stormwater	98	Facebook: BMPs and link to workshop presentations	General Public, Residents
Social Media	June 2020	Pollution Prevention: stormwater runoff	122	Facebook: BMPs and link to Tempe stormwater webpage	General Public, Residents
Social Media	June 2020	Stormwater pollution prevention information (general information, pets, pools, lawns)	94	Facebook: BMPs and link to Tempe stormwater webpage	General Public, Residents
Social Media	June 2020	Stormwater Management Plan public review and comment	1,658	Twitter: request for stormwater program comments	General Public, Residents
Social Media	June 2020	Stormwater Management Plan public review and comment	96	Facebook: request for stormwater program comments	General Public, Residents

Outreach Events	Date	Topic(s)	People/ Businesses Reached	Type of Materials Distributed	Target Groups
Social Media	June 2020	Pollution Prevention: stormwater runoff	101	Facebook: BMPs and link to Tempe stormwater webpage	General Public, Residents
Tempe Channel 11	All year estimated 60 times/ month	Stormwater pollution prevention information (general information, pets, pools, lawns)	26,161 *	Stormwater pollution prevention information via videos	General Public, Residents
			503,992	**Estimated annual total of people or businesses reached through 40 awareness and outreach activities**	

[1] Neighborhood outreach messages sent to 212 organizations (132 homeowner associations and 80 neighborhood associations)
* Tempe Channel 11 viewership numbers were not included in the total numbers reached, since viewership could not be measured. Tempe Channel 11 has 26,191 subscribers, an unknown portion of whom were reached by the videos.

Regional Activities

Since the beginning of 2012, Tempe's Environmental Services has coordinated and hosted quarterly Arizona Phase I Municipal Separate Storm Sewer System (MS4) Coalition Meetings. These meetings are an opportunity for Arizona Phase I municipalities to discuss program challenges, successes, innovations and experiences. These meetings also allow for a more consistent understanding and implementation of the MS4 program statewide.

Tempe is an active member of Stormwater Outreach for Regional Municipalities (STORM). STORM is a regional organization promoting stormwater quality education within the greater Phoenix metropolitan area. STORM was founded in 2002, in response to regulations requiring municipalities to implement measures to educate the public on ways to protect the quality of stormwater runoff. Benefits for the region include increased public awareness of the impacts of stormwater pollution, shared experience and knowledge, pooled financial resources to address concerns common to all communities, protected environments and improved quality of life.

The purpose of STORM is to provide a platform for collaborative effort by which educational outreach may be provided to residents in the greater Phoenix area with a unified pollution prevention message to protect surface waters.

STORM is comprised of and benefits small, medium and large municipalities throughout the greater Phoenix metropolitan area. It has brought together the experience and resources of Phase I MS4s, including Phoenix, Mesa, Tempe, Glendale, Scottsdale and the Arizona Department of Transportation (ADOT), with Phase II MS4s including Apache Junction, Avondale, Buckeye, Casa Grande, Chandler, El Mirage, Flood Control District of Maricopa County (FCDMC), Fountain Hills, Gilbert, Goodyear, Guadalupe, Litchfield Park, Luke Air Force Base, Maricopa County, Paradise Valley, Peoria, Pinal County, Queen Creek and Surprise. A Tempe representative regularly attends the monthly STORM meetings. Tempe participates on the STORM Board of Directors, allowing the City to directly shape the future of this regional organization.

Key STORM accomplishments for Fiscal Year 2019-2020 include:

- Events: Due to the unique challenges of the COVID-19 pandemic, STORM members were only able to attend two events, the Town of Gilbert's Outdoors Expo and the OdySea Aquarium Conservation Expo, and made approximately 12,000 direct contacts, a decrease of 59 percent in direct contacts from Fiscal Year 2018-2019 (64 events with 20,300 direct contacts). However, STORM was able to reach over two million more people through its ABC15 and social media campaigns.
- Social Media:
    - STORM social media campaigns were accessible via ABC15 Facebook ads, STORM Facebook posts, regular and large banner ads, resulting in more than 1,457,800 ad views and almost 27,313 clicks (engagements), a nearly 700 percent increase in views compared to Fiscal Year 2018-2019 campaign results. STORM posted 126 times with a reach of 21,545 households. It is worthwhile to note that Facebook post numbers were boosted by ABC 15 advertisements and reached approximately 475,900, which is an increase from Fiscal Year 2019. STORM maintains 1,742 Facebook followers (an increase from 1,727).
    - STORM employed ABC15 creative advertising to campaign in English and Spanish, to use banner ads on their website, Facebook ads and Facebook posts, large banner ads, quizzes and high-impact units in addition to connected TV.

- STORM Website: azstorm.org received a total of 7,000 webpage views by 3,300 users. Webpage views decreased by approximately 30 percent from Fiscal Year 2019.
- Videos: Due to the COVID-19 pandemic and social distancing requirements, plans to produce educational videos and marketing materials were put on hold until next fiscal year.
- Promotional Items: 30,000 promotional items (reusable straws, stylus pens and poncho key chains) with the STORM web address were purchased and disbursed to the STORM member organizations for distribution.

The Fiscal Year 2019-2020 STORM Annual Report is included as **Attachment B**.

B. **Public Involvement Activities Including Outreach**

"Adopt-A" and Other Volunteer Programs
Tempe implements various City "Adopt-A" (street, path, park) and other volunteer programs as components of the public involvement and participation portion of the City's stormwater program. In addition to the aesthetic value of keeping roads and rights-of-way clean, the public and community service workers have helped Tempe to remove an estimated 347 bags of trash and debris that could have otherwise ended up in the MS4 system and/or subsequently a Water of the United States. Information on Tempe's "Adopt-A" programs can be found at the websites listed below.

- http://www.tempe.gov/adopt
- https://www.tempe.gov/government/community-services/parks/adopt-a-park

Table 2 summarizes the number of events that occurred during the 2019-2020 reporting year, number of participants and amount of trash removed.

Table 2: Summary of "Adopt-A" and Volunteer Involvement and Participation

Adopt Events	Number of Events	Volunteers or Community Service Workers Involved	Bags of Trash Removed
Tempe Adopt-A-Path	8	37	43
Tempe Adopt-A-Street	10	133	101
Tempe Adopt-A-Park	10	175	203
Totals	**28**	**345**	**347**

Open Meeting Events
Tempe must, at least biannually, incorporate "open meeting events" into community activities or other public events. These open forums are used for public education, input and feedback on the city's stormwater management program and review of the Stormwater Management Plan (SWMP). Since many of Tempe's stormwater awareness and outreach activities/events occur during community activities and/or public events and are hosted by City staff who are experienced with Tempe's program, these venues are utilized as "open meeting events." During the reporting year 2019-2020,, Tempe advertised and conducted one open meeting event at the Tempe Festival of the Arts. During 2019-2020, Tempe hosted one in person open meeting event and one online Outreach Event on the City's Facebook page requesting feedback on the SWMP. As a

result of the COVID-19 pandemic and Executive Order 2020-09 in which the Governor of Arizona recommended that individuals avoid social gatherings of more than ten people, the spring Tempe Festival of the Arts, which is typically used as an "open meeting," was cancelled. See Table 1 for details on outreach activities.

Parks

Tempe's Parks and Recreation Division continues to maintain approximately 70 pet waste bag dispensers at various Tempe parks. This activity specifically involves the public in the reduction of pet waste that has a potential to reach the MS4.

Communication and Public Reporting

Tempe continues to provide the public with the opportunity to participate in the City's stormwater program by providing avenues for the reporting of spills, discharges or illicit dumping within the community. Tempe continues to operate its stormwater hotline and web-reporting for public reporting of illegal discharges to the City's storm drain system. To consolidate City service information and contacts, Tempe utilizes a 311 system, which allows residents to call the 311 number, visit the 311 website or use the mobile Tempe 311 app to report potential illicit discharges. A summary of public reporting can be found in Section 3.C of this report. Means of reporting are as follows:

- 480-350-2811: Stormwater Hotline
- 480-350-4311: City Hall Call Center
- http://www.tempe.gov/311
- http://www.tempe.gov/stormwater (complaint form)
- Tempe 311 mobile app (iPhone and Android)

In addition, Tempe regularly disseminates the general Environmental Services Section stormwater webpage for purposes of allowing public discussion of stormwater issues, providing copies of stormwater material and the most current SWMP. The program information with contact information is located online at:

- http://www.tempe.gov/stormwater

Participation is encouraged during outreach events and public awareness activities and City contact information is provided with all outreach materials. See Table 1 of this report for a detailed listing of outreach events.

Household Products Collection Center

Tempe continues to operate its Household Products Collection Center (HPCC), which opened in 1999. The HPCC provides Tempe residents with an outlet for disposing of and recycling various household products to prevent possible stormwater pollution. Materials commonly collected at the facility include electronic waste (e-waste), batteries, used motor oil, paint, antifreeze, pesticides, herbicides and solvents. Materials are either recycled or disposed of in accordance with local, state and federal regulations. Usable materials, such as paint, are processed, packaged and made available to Tempe residents free of charge. Information on the HPCC and on the proper handling and disposal of household waste, is available at:

- http://www.tempe.gov/hpcc

In reporting year 2019-2020, HPCC planned for Zero-Waste Events in November 2019 and April 2020; however, the April event was cancelled due to the COVID-19 pandemic. The November event drew 557 vehicles. The total amount of waste collected at this event is included in the HPCC annual total below.

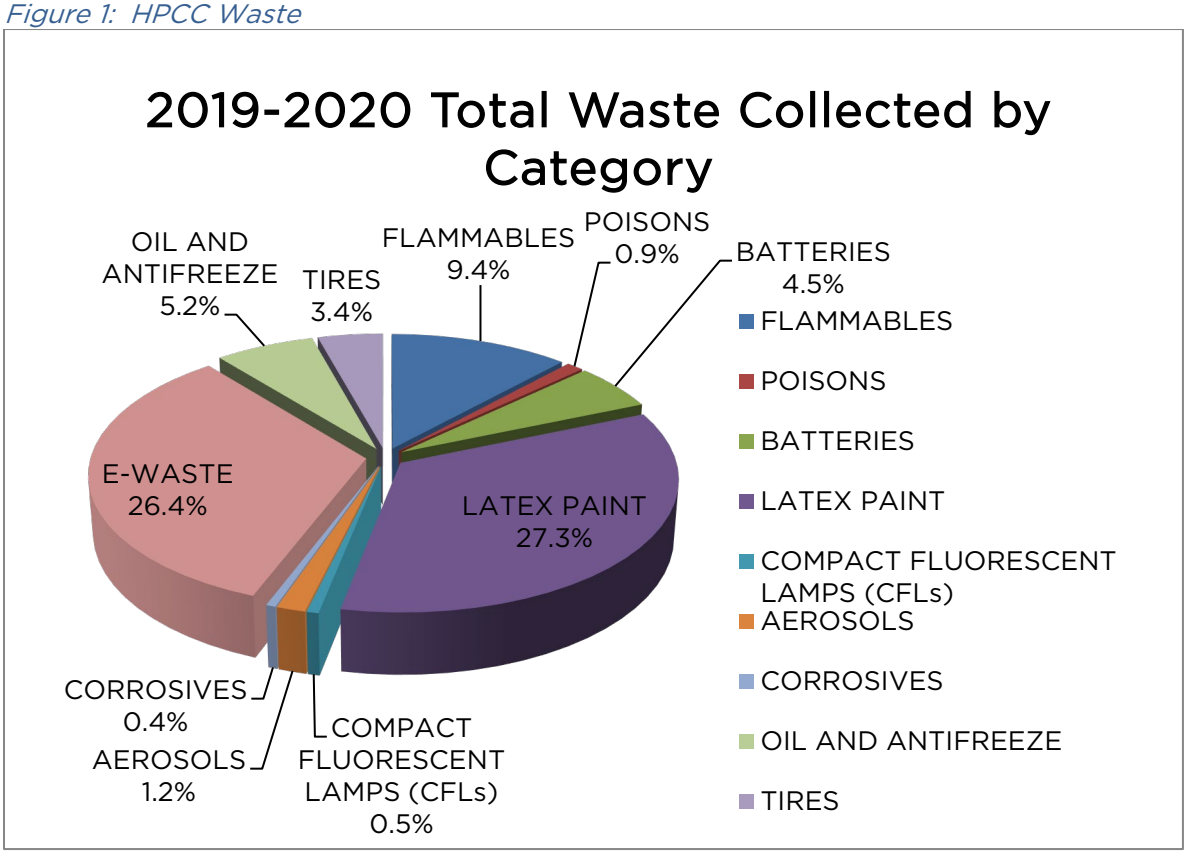
HPCC activities are summarized in Table 3 below.

Table 3: Summary of HPCC Activities

Number of Days Open to the Public	Number of People that Utilized HPCC Services	Amount of Household Hazardous Waste Collected
84	5,386	353,600 pounds

Figure 1 provides a breakdown of all waste collected at HPCC during the reporting year 2019-2020.

Figure 1: HPCC Waste



Tempe Grease Cooperative

In 2014, Tempe launched the Tempe Grease Cooperative (TGC), an innovative voluntary partnership program, between the City of Tempe and its food service establishments to better manage fats, oils and grease (FOG). In the program, Tempe brokers both pricing and service quality for grease trap and interceptor maintenance on behalf of community restaurants and food service establishments. Proper cleaning and maintenance of grease traps and interceptors helps prevent backups and sanitary sewer overflows which could enter the MS4. The partnership is a gateway to open communications between businesses and Tempe's Environmental Services Section and fosters compliance with

several environmental programs including stormwater. Since food service establishments have a potential to impact the MS4, restaurants are identified as a priority for commercial inspections. In this reporting year, ten restaurants joined the TGC for a total of 227 members.

C. Illicit Discharge Detection and Elimination (IDDE) Program Activities

Tempe's Illicit Discharge Detection and Elimination (IDDE) program consists of several components designed to educate, involve, solicit participation from City employees and the public, proactively prevent illicit discharges and detect and eliminate illicit discharges. Below is a summary of these IDDE program components.

Training

During the reporting year 2019-2020, Tempe maintained a staff of seven Environmental Compliance Inspectors (ECIs), one Environmental Compliance Supervisor (ECS), three Environmental Quality Specialists (EQSs) and one Environmental Program Supervisor (EPS) with direct stormwater responsibilities. All inspectors are cross-trained in pretreatment, cross-connection control and stormwater inspections. During the reporting year 2019-2020, stormwater training for this group consisted of a one hour long internal training event attended by ten staff members (seven ECIs, one ECS, one EQS and one administrative staff member). Internal training focused on overall program management of the MS4, IDDE components, inspections, enforcement, housekeeping and spill prevention BMPs.

Of the 227[1] Tempe employees who received training during the reporting year 2019-2020, approximately 217 City field employees outside of Environmental Services received site specific Municipal Facility training that included the identification and reporting of illicit and non-stormwater discharges. IDDE topics were discussed during these Municipal Facility training events, though are not specifically categorized as IDDE training for purposes of this report. See Section 3.K of this report for a summary of training events, number of employees trained and topics discussed. See **Attachment C** for copies of training sign-in sheets.

These Tempe employees, many of whom work in the field, have been specifically trained to contact Tempe's Environmental Services Section if a potentially illicit discharge is identified.

Outreach – Pollution Prevention

Tempe continues to implement a comprehensive outreach program that conveys a message of pollution prevention and encourages the reporting of illicit discharges or other potential sources of stormwater pollution. For details about this program, please see Sections 3.A and 3.B of this report.

[1] Number includes employees that may have attended more than one training event.

Infrastructure Inspection and Maintenance

One of Tempe's most proactive IDDE measures is the inspection and cleaning of municipal stormwater infrastructure. These activities are divided between four City workgroups: Environmental Services, Parks and Recreation, Streets and Water Utilities Operations. Each section maintains responsibilities for various aspects of stormwater infrastructure inspection and cleaning. Note that infrastructure is not limited to catch basins, but includes all aspects of the MS4 such as drywells, bubbler boxes, inlet structures, outfalls, streets, conveyance pipes, retention basins, etc. Outfall inspections are covered further in this section.

- Environmental Compliance Inspectors continue to conduct Alternative Retention Criteria Area (ARCA) catch basin inspections after large downtown events such as Oktoberfest, Tempe Festival of the Arts and the Innings Festival. See Section 3.G of this report for a description of the ARCA. During the reporting year 2019-2020, three events requiring ARCA catch basin inspections occurred. As a result, 39 catch basins were inspected, one of which required referral for cleaning. These are included in Table 4 under Environmental Services ARCA infrastructure cleaned. A numeric summary of infrastructure inspection and cleaning events can be found in Table 4 of this section. Inspection forms, narratives and other related information are included as **Attachment D**. A summary of cleaning events is included as **Attachment E**.
- Tempe's Parks and Recreation Division provides routine maintenance for various parks, retention areas, public common areas, public open areas and recreational areas throughout the city. During routine visits to each of these facilities, cursory inspections are conducted of stormwater infrastructure. Detailed inspections are conducted annually. During the reporting year 2019-2020, Tempe's Parks and Recreation Division inspected 270 stormwater assets including catch basins, inlet structures, drywells, bubbler boxes and retention basins. Of the 270 stormwater assets inspected, 27 were referred for cleaning and four were referred for repairs. Several parks upgraded their storm water capacity by installing new drywells: Alegre, two drywells; Campbell, two drywells; Corbell, four drywells; Creamery, one drywell; Scudder, one drywell; Svob, one drywell; and Waggoner, one drywell. A numeric summary of inspections, cleaning events and contracted services can be found in Table 4. Inspection forms are included as **Attachment F**.
- Tempe's Street Maintenance Section is tasked with the maintenance and cleaning of Tempe streets including street sweeping and maintenance of right of ways. To reduce the amount of debris entering the MS4, Tempe continues to implement an effective street sweeping program using the following schedule (adherence to this schedule varies occasionally due to unforeseen events that require staff and/or equipment reprioritization):
    - Arterial streets are swept once every two weeks.
    - Residential, collector and industrial streets are swept once every month.
    - City-owned parking lots and large City facility schedules vary upon condition.
    - Upon request (e.g., water main breaks, emergency road repairs, trackout, special events, etc.).

  During the reporting year 2019-2020, Tempe cleaned approximately 21,888 linear miles of streets, removing approximately 784 tons of debris. A numeric summary of these events can be found in Table 4. In addition to street sweeping outlined above, Streets staff visually scans catch basins during sweeping and right of way maintenance operations. On an as needed basis, Streets staff will notify the Water Utilities Operations Section of MS4 maintenance and/or cleaning needs. These visual

scans are not specifically documented beyond noting the location for cleaning/maintenance referral.

- Tempe's Water Utilities Division, Water Utilities Operations Section is also responsible for the operation and maintenance of Tempe's water, wastewater, flood irrigation and stormwater infrastructure. Water Utilities Operations also maintains contracts for any additional infrastructure cleaning services needed. During the reporting year 2019-2020, Tempe inspected 469 structures and cleaned 460 structures and 0.07 miles of underground MS4 conveyance. During inspections or cleaning events, staff assures that storm structures are properly labeled. Tempe employees labeled or replaced worn labels on approximately 469 stormwater structures as part of routine inspections.

Table 4: Summary of MS4 Infrastructure Inspections and Cleaning

Location/ Description	Infrastructure Inspected		Infrastructure Cleaned		Amount of Debris Removed
	Number	Repaired	Number	Miles	Tons
Environmental Services - ARCA	39	1	1*		
Parks and Recreation	270	4	27		
Water Operations	469		460	0.07	30.16
Streets (including street sweeping)	-			21,888	784
Totals	**778**	**5**	**488**	**21,888**	**815**

Note: Infrastructure includes catch basins, drywells, bubbler boxes, inlet structures, streets, conveyance pipes, etc. Referral for cleaning and repair numbers may not match the number of structures cleaned due to verification process and service schedule.
* Included in Water Operations infrastructure cleaned count.

Call-Outs

Tempe's Stormwater Permit requires that the City respond to at least 90 percent of all reported illicit discharges and investigate at least 80 percent of potential illicit discharges reported by the public within three days of report. Of the 136 call-outs that Tempe's Environmental Services Section received, 136 were either directly or indirectly related to stormwater concerns. All calls were responded to and all calls were investigated. A summary of all call-outs pertaining to these reports can be found in **Attachment G**. Table 5 summarizes the response and investigation percentages.

Table 5: Summary of Potential Illicit Discharge Reports

Reports (hotline, web form, other calls)	Reports Responded To	Percent Responded To	Reports Investigated	Percent Investigated
136	136	100	136	100

Inspections – Municipal, Industrial, Commercial, Outfall

Tempe's stormwater inspection program for municipal, industrial and commercial facilities is a critical component of the IDDE program. Aside from identifying and eliminating discharges, these inspections compel the use of stormwater BMPs, bring awareness to stormwater pollution issues and ultimately prevent the occurrence of illicit discharges that could impact the MS4 or receiving waters. These specific programs are further summarized in Sections 3.D and 3.E of this report. Tempe's outfall inspection program also serves as a vital component of this program. This program is further summarized in Section 3.H of this report.

IDDE Screening Program, Investigations, Identified Sources and Corrective or Enforcement Actions

Tempe's IDDE screening program can be initiated by notifications from persons participating in any of the previously listed components (e.g., public notifications, field staff notifications, inspections, etc.). Tempe responds to all reported discharges, regardless of the source, to determine if they are illicit discharges and initiates investigation of these discharges within three business days of detection or report. Discharges known to not be a significant source of pollutants or are otherwise exempt are not subject to further investigation. If a discharge is found to be illicit, corrective actions, including enforcement actions, are used to eliminate the illicit discharge. See **Attachment H** for Tempe's Enforcement Response Plan (ERP). Identified wastewater discharges, such as raw sewage or grease, are immediately investigated and eliminated as quickly as possible. Discharges found to not be a significant source of pollutants, are exempt from Clean Water Act (CWA) discharge provisions or are permitted under an ADEQ AZPDES permit are not necessarily investigated each time they are identified (e.g. irrigation water, tail-water, permitted DeMinimis discharges).

If the source of an illicit discharge cannot be identified through physical investigations and field screening, grab samples will be collected at the outfall or field location where the prohibited discharge occurred and will be analyzed at an Arizona certified laboratory. During the reporting year 2019-2020, all discharges were investigated and/or identified through physical investigations, field screening and/or characterized through laboratory analysis.

Tempe ECIs modified inspection procedures to continue performing inspections while maintaining COVID-19 pandemic safety protocols. Inspectors issued two warning letters to restaurants as a result of the 124 industrial/commercial inspections, 176 restaurant inspections and 50 outfall inspections conducted. From the 136 call-outs, 12 field notices of violation were issued to residents for the discharge of pool water or filter backwash water into the right of way. Table 6 summarizes the Environmental Services Section's non-municipal inspections and findings.

Table 6: Environmental Services Non-Municipal Facility Inspection Summary

Inspection Type	Number of Inspections	Official Findings/Enforcement
Outfalls	50	
Industrial/Commercial (non-restaurant)	124	
Restaurant	176	2 Warning Letters
Call-Out (stormwater)	136	12 Field Notices of Violation
Catch Basins and Other Infrastructure	39	
Total	**525**	**14**

D. Municipal Facilities

Inventory

Tempe maintains a total of 153 Municipal Facilities. A list of all facilities and a map of general locations are maintained and kept on file with Tempe's Environmental Services Section and can be reviewed by ADEQ upon request. This inventory is subject to change based upon internal annual reviews. All facilities were reviewed for potential reclassification to allow for a stronger emphasis on sediment control, storage practices, site activities and general housekeeping. Ranking criteria was modified to accommodate this focus in 2012, but no changes were made in facility classifications because impacted facilities were already classified at a higher level. Table 7 summarizes the Municipal Facility inventory prioritization.

Table 7: Summary of Priority Municipal Facilities

Department/Division	Priority 1 Facilities	Priority 2 Facilities	Priority 3 Facilities	Total Number of Facilities
Municipal Utilities - Water	3	13	21	37
Fire Medical Rescue	1	9	1	11
Community Services - Parks and Recreation	5	5	55	65
Community Services - Other	0	5	11	16
Transportation	1	2	4	7
Police	0	4	1	5
Municipal Utilities - Other	2	0	0	2
Miscellaneous	0	2	8	10
Totals	**12**	**40**	**101**	**153**

All Priority 1 facilities are on a biennial (every other year) inspection schedule. Priority 2 facilities are inspected every three years and Priority 3 facilities are inspected every five years. New facilities and those with significant changes in purpose and/or inventory will be inspected as they come on-line or change.

New to this year's report is the addition of one Fire Medical Rescue facility, Fire Station Number 7. There were no deletions of facilities during the 2019-2020 reporting year.

Inspections

Consistent with Tempe's Municipal Facility Stormwater Inspection Program, Tempe prioritized all 153 sites over the previous reporting years. In the reporting year 2019-2020, 27 facilities were inspected. Table 8 summarizes all inspection activities from 2019-2020. Inspection reports can be found in **Attachment I**.

Table 8: Summary of Municipal Facility Inspections

Facility type/ inspection frequency	Total Number of Facilities	Number of Facilities Inspected	Number of Facility Inspections	Percent Inspected
Priority 1	12	8	8	67
Priority 2	40	14	14	35
Priority 3	101	5	5	5
Totals	**153**	**27**	**27**	**18**

ADEQ Audit

ADEQ performed an audit of Tempe's MS4 Program on May 27-28, 2020. During the Audit, ADEQ and Tempe's Environmental Services Section conducted a joint inspection of the Johnny G. Martinez (JGM) Water Treatment Plant and East Valley Bus Operations and Maintenance. No deficiencies were found at either location.

Results

Results and/or activities and control measures implemented as a result of the 27 inspections conducted this reporting year are as follows:

- There were no significant findings and no follow up actions required, other than described below, for the 27 inspections conducted this reporting year.
- All inspected facilities storing a single container exceeding five gallons of a hazardous material maintained documentation of practices and procedures designed to prevent and respond to spills that have potential to come into contact with stormwater. See **Attachment J**. These practices are in addition to Tempe's Hazardous Waste Management Plan (HWMP), found in **Attachment K**, which requires the proper handling, storage, transport and disposal of hazardous wastes associated with municipal operations and facilities.
- During facility inspections, basic stormwater awareness and housekeeping practices were discussed with facility representatives. These discussions are separate and in addition to formalized stormwater training.
- As a result of previous years findings, Parks and Recreation completed upgrades to storm drainage at seven facilities: Alegre, Campbell, Corbell, Creamery, Scudder, Svob and Waggoner Parks.

Chemical Handling, Storage, Disposal Practices and Spills

Several Permit sections require various plans, documents or procedures to ensure the proper handling, storage and disposal of chemicals and effective response to chemical spills at municipal facilities. Tempe's efforts in this area involve several workgroups, all of which serve an important role related to the protection of human life and the environment. Below is a summary of activities performed by the various workgroups.

Environmental Services Section

Tempe's Environmental Services Section is responsible for all facility stormwater inspections required by the Permit. In part, the purpose of these inspections is to ensure proper housekeeping and the implementation of stormwater BMPs. During these inspections, facility chemical storage practices are reviewed from an environmental protection perspective. Facilities at which any single container exceeding five gallons of a hazardous material is stored are required to post or maintain documentation of practices and procedures designed to prevent and respond to spills that may come into contact with stormwater. This document was designed to provide a simple, easy-to-read message of proper chemical handling, storage, disposal and spill response practices. This document was developed by representatives from Environmental Services, Risk Management and HPCC and is included as **Attachment J**.

During the reporting year, one municipal facility spill incident was reported to the Environmental Services Section. Two municipal sanitary sewer overflows (SSO) occurred in the reporting year. Notification of these events were reported to the appropriate regulatory agencies at the time of the occurrence.

- On July 26, 2019, a release of approximately 100 gallons of wastewater occurred in the public right of way near 525 West Broadway. The discharge originated at sanitary sewer manhole number NE28N4MH0008 and flowed north along South Roosevelt Street approximately 96 meters to catch basin CB#0007. The affected area was vactor cleaned and treated with a chlorine solution. A flow study was conducted and the cause of the SSO was determined to be a capacity issue and the line was replaced. Tempe will continue ongoing preventative maintenance, which has shown to be effective in the reduction of SSOs. Internal SSO response procedures were followed limiting public exposure and minimizing impact to the MS4.
- On October 27, 2019, there was a small spill of less than ten gallons of calcium hydroxide (lime) at the JGM Tempe Water Treatment Plant. The spill was on a paved surface in front of the Operations Building and was from incorrectly switched valves. The spilled material was contained by trained and certified City staff and then cleaned by a commercial contractor. All internal spill reporting procedures were followed, which allowed for quick response. No spilled material entered the storm system.
- On April 27, 2020, a release of approximately 150 gallons of wastewater occurred in the public right of way behind 727 East Solana Drive. The release happened in the alleyway, originating from sanitary sewer manhole number SE22N4MH0045 and flowed north approximately 110 meters along a public street gutter. Staff bermed the flow prior to it reaching a catch basin or drywell, and used a vactor truck with a high-pressure stream to break up blockage in the line and to collect the overflow. The area was disinfected with a chlorine solution. The SSO was determined to be caused by roots intrusion into the sanitary sewer pipe. Tempe will continue ongoing preventative maintenance, which has shown to be effective in the reduction of SSOs. Internal SSO response procedures were followed limiting public exposure and minimizing impact to the MS4.

Tempe's Environmental Services Section is also responsible for most City-wide MS4 stormwater training. This training includes proper chemical handling, storage, disposal and spill response practices. See Section 3.K (Table 10) for a summary of training events.

Household Products Collection Center (HPCC)
HPCC staff provides various levels of support for all aspects of chemical handling, storage, disposal and spill response practices. The HPCC is a city-wide liaison for the acquisition of necessary spill prevention and response equipment and Tempe's in-house facility for the disposal of chemical wastes. The HPCC staff also maintains Tempe's HWMP. The HWMP was updated in 2011 to include practices to minimize exposure of hazardous waste to precipitation. The plan is reviewed annually. It was most recently updated in June 2020, by Tempe's Health and Safety Supervisor and reviewed by an EQS. The HWMP is included as **Attachment K**. In addition to these responsibilities, HPCC staff provides assistance with various municipal facility stormwater BMP needs.

Risk Management
Risk Management provides support, guidance and training in areas related to chemical handling and storage. All city-wide safety programs are managed by this section and include the City of Tempe Hazard Communication Program, which was developed to inform employees of their "right to know" about all physical and health hazards associated with handling materials that contain hazardous substances.

Fire Medical Rescue Department
Tempe's Fire Medical Rescue Department provides emergency response services for incidents involving hazardous materials. Stormwater protection is a critical part of emergency response procedures and is included as part of the city's emergency response training. The Fire Medical Rescue Department's Hazardous Materials Policy addresses containments of hazardous materials as a critical component of spill response procedures.

Pesticides, Herbicides and Fertilizers
Tempe is committed to reducing the amount of pesticides and herbicides used by employing integrated pest management (IPM) practices. However, when pesticide and/or herbicide use is needed, established application of BMPs are implemented. These practices were developed by Tempe-certified applicators and Tempe's Environmental Services Section in 2011 and updated in 2020. Additionally, a multi-disciplinary, multi-departmental team has developed a formal IPM Program document updated in 2019. A copy of the updated Stormwater BMP for the Application of Pesticides and Herbicides at City Facilities is included as **Attachment L**. The plan is reviewed annually by a Parks and Recreation representative, who also serves as Tempe's IPM Program Coordinator.

- Tempe's Parks and Recreation Division applies fertilizer to City parks during the growing season using calibrated broadcast spreaders. Application rates are based on recommendations from the University of Arizona Cooperative Extension Turf Grass Research Facility Soil. Tissue analyses are periodically used to confirm or modify application rates. Currently, some parks and the City golf courses have the ability to inject liquid fertilizers through programmable irrigation controllers. When fertilizer is applied in this manner, it is done in small applications over several days to reduce or eliminate chemical run-off. In some turf areas, aerification methods are used which allow for better infiltration of water, fertilizers, chemicals and soil amendments. In addition, all City pesticide applicators are licensed through the Arizona Office of Pest Management and are required to complete Continuing Education Units (CEUs) every year, which include training on stormwater BMPs. As part of Tempe's IPM Program,

certified applicators and supervisors are required to review the formal IPM Program document annually.

- Tempe maintains area-wide AZPDES Pesticide General Permit (PGP) coverage for the application of pesticides and herbicides to City-owned and operated urban lakes. Tempe does not conduct the actual application of pesticides to these water bodies; rather, applications are conducted by contracted pesticide applicators licensed through the Arizona Office of Pest Management. All contracted applicators are required to comply with PGP conditions and Tempe-specific BMPs.

Multi-Sector General Permit (MSGP) and other AZPDES Tracking

Two Tempe-owned and/or operated facilities, Priest Maintenance Yard and East Valley Bus Operations and Maintenance, maintain coverage under the Multi-Sector General Permit (MSGP). Two additional facilities, HPCC and Kyrene Wastewater Treatment Facility, maintain No Exposure Certifications (NECs). No other facilities to which the MSGP is applicable have been identified. Tempe identifies facility environmental regulatory requirements when operations at an existing facility change or new facilities are constructed. East Valley Bus Operations and Maintenance updated its MSGP Notice of Intent (NOI) on February 27, 2020. Priest Maintenance Yard updated its MSGP NOI on February 21, 2020. Complete records for MSGP regulatory requirements are maintained onsite at each permitted facility. Reminders and compliance tracking of MSGP and other ADEQ and EPA requirements occurs electronically through a compliance management solution known as Intelex (http://www.intelex.com/).

Inventories and Mapping

Tempe's Permit contains a series of inventory and mapping requirements with various completion dates ranging from the submittal of the first annual report to the fourth-year annual report. Table 9 summarizes Permit mapping requirements that have been met, the reporting year in which they were completed or updated and the map title. These maps will be updated to reflect changes and Permit requirements as needed.

During 2017-2018, the Water Utilities Operations Section performed field verification of over 288 stormwater appurtenances at 39 parks. During 2019-2020, geoprahic information system (GIS) inventory and maps were updated and aligned so the history of the asset's maintenance can be recorded in a work order tracking database. This effort will allow for work orders to be generated and will ensure the correct maintenance is performed at the correct time on the correct structure. All maps are maintained in GIS and on file with Tempe's Environmental Services Section and can be reviewed by ADEQ upon request. Note that all other inventories are addressed in their respective reporting sections.

Table 9: Summary of Mapping Status

Map Description	Reporting Year Map Completed or Updated	Map Name
Identification and mapping of Waters of the U.S. (including Tempe area canals) that may receive discharges from the MS4	2016-2017	Map 1: Tempe MS4 Surface Waters
An up-to-date map or map(s) showing MS4 boundaries	2010-2011	All Maps
An up-to-date map or map(s) showing locations where Tempe's storm sewer discharges to Waters of the U.S.	2016-2017	Map 2: Tempe MS4 Monitoring and Discharge Locations, Tempe MS4 Drainage System
An up-to-date map or map(s) showing wet weather stormwater monitoring location(s) and the associated drainage basins (including acreage and land uses)	2018	SWMP ATTACHMENT G: KP-01, SR-05, SR-08, TD-01, TD-03 Stormwater Monitoring Location Fact Sheets
Map of all major outfalls and other field screening points	2016-2017	Map 3: Tempe MS4 Major Outfalls
Map of facilities owned or operated by the MS4 that have the potential to discharge pollutants to Waters of the U.S.	2016-2017	Map 4: Tempe MS4 Municipal Facilities
An up-to-date drainage system map	2016-2017	Map 5: Tempe MS4 Drainage System
Drainage Basins	2019-2020	Map 6: Tempe MS4 Stormwater Basins
ARCA	2015-2016	Map 7: ARCA Map 2016

A summary of Tempe's mapping capabilities and evaluation of future potential mapping requirements, as outlined in Appendix A, Section IV.E, were included in the 2013-2014 annual report.

E. Industrial Facilities

Status of Identification and Inventory of Industrial/Commercial Facilities

In 2019-2020, the Environmental Services Section continued to update the inventory of all industrial and commercial facilities within the City that are subject to inspection under Tempe's MS4 Permit. This inventory was developed in 2018-2019 using the following Permit-required criteria:

- Industrial facilities identified in 40 Code of Federal Regulations (CFR) 122.26(b)(14)(xi);
- Industrial facilities subject to MSGP requirements, including those facilities that have submitted a NEC 40 CFR 122.26(b)(14)(i-ix) except (iii);
- Facilities subject to 313 Title III Superfund Amendments and Reauthorization Act (SARA);
- Other industrial and/or commercial sources (or categories of sources) Tempe determines are contributing a substantial pollutant load to the MS4. These include automotive facilities for auto body (SIC 7532), auto repair (including dealership service) (SIC 5511, 753-7, -8, -9) and car washes (SIC 7542).

The inventory list was developed by acquiring information from InfoGroup, Government Division – ReferenceUSAGov Data Base. The prioritized list of 1,574 facilities is in **Attachment M**.

Other sources used by the City to identify industrial and/or commercial sources (or categories of sources) that may be contributing a substantial pollutant loading to the MS4 are:

- Utility billing records;
- Arizona State Emergency Response Commission – (facilities subject to Superfund Amendments and Reauthorization Act (SARA) Title III);
- EPA Enforcement and Compliance Online (ECHO);
- Multi-media inspections conducted by ECIs;
- ADEQ lists of facilities in Tempe with MSGP or NECs;
- Internet research based on visual field observation.

The inventory of SARA Title III and MSGP facilities is duplicative in many respects and is inclusive of facilities within Tempe that are subject to industrial pretreatment permitting requirements.

Industrial pretreatment facilities are prioritized for annual stormwater inspections. In addition to the above-listed facilities, Tempe has added restaurants as a "category of sources" with a potential to impact the MS4. Accordingly, all inspected restaurants are evaluated for stormwater compliance. A separate inventory list for restaurants and other food service establishments is maintained by the FOG program.

These lists will be reviewed annually to appropriately include or remove businesses with Standard Industrial Codes (SIC) that have been noted, during the term of the permit, to demonstrate a potential to contribute pollution to the MS4.

Overview of Inspection Findings and Significant Findings

Tempe ECIs conducted stormwater inspections at 124 industrial/commercial facilities subject to SARA Title III, MSGP or Industrial Pretreatment requirements and 176 restaurants. Restaurants were inspected for compliance with stormwater requirements along with other regulatory program requirements. As a result of these inspections, findings range from minor to significant. Minor findings, such as inadequate use or lack of BMPs or inadequate material/chemical storage, did not result in enforcement escalation and were quickly addressed by the inspected entity. Industrial/commercial inspection documentation and restaurant inspection documentation are included as **Attachment N** and **O**, respectively.

Corrective and Enforcement Actions Needed and Taken in Response to Inspections
During inspections, Tempe ECIs routinely identify minor corrective needs that do not escalate to formal enforcement action. These corrections are usually addressed during or shortly after the inspections occur and are verified by the inspector. These findings are generally documented on inspection forms or addressed verbally.

In addition to addressing deficiencies, ECIs regularly provide information to facilities whom may require coverage with ADEQ. In 2019-2020, Tempe identified 46 facilities to which the MSGP may be applicable but for which a demonstration of coverage was not provided. Tempe provided ADEQ with information for these potential non-filers on January 10, 2020, and July 17, 2020. See **Attachment P** for copies of non-filer notifications.

F. Construction Program Activities

Status
Tempe's stormwater construction program is managed by the Engineering and Transportation Department/Engineering Division and Community Development Department/Building Safety/Private Development Engineering. The program encompasses plan review, inventory, prioritization, inspection and enforcement of Capital Improvement Projects (CIP) and private construction projects that will result in a land disturbance of one acre or more and projects that disturb less than one acre but are part of a larger common plan of development. For the reporting year 2019-2020, Tempe reviewed grading plans and inventoried 100 percent of all 18 new construction projects meeting the land disturbance criteria, which were then added to the appropriate existing inventory. Of the projects requiring review, inventory, prioritization and inspection, five were CIP and 46 were private development projects. The CIP group currently maintains an inventory of five construction sites; three active construction sites and two sites which received final inspection. Development Services maintains an inventory of 58 construction sites; 46 are active construction sites, 12 are finalized sites and four of which are pending final inspection.

Inspection Findings
Stormwater BMPs are checked as part of other inspections on active construction sites. During the reporting year, 31 active construction site stormwater inspections occurred. The Engineering workgroup inspected three active CIP projects at three separate locations in the reporting year. Development Services conducted 31 inspections at active qualifying private development construction sites in the reporting period. One correction notice was given; upon re-inspection, corrective actions have been made.

Post-construction inspection is part of the final inspection completed within the twelve-month warranty period. A total of 14 post construction site inspections occurred this reporting period. Engineering conducted two CIP project post construction inspections. Development Services conducted 12 inspections at finalized private development construction sites.

Each active site will have at least one annual inspection during the next reporting period and post construction controls will be inspected within 12 months of project completion per permit requirements. All inspection reports are included as **Attachment Q**.

Note that the number of inspected sites does not necessarily reflect the number of sites inventoried or prioritized since the annual inspection requirement is a "rolling" target based upon the project's grading and drainage permit issuance.

Corrective Action and Enforcement
Compliance escalation processes have been defined and are inclusive in the civil citation processes. In April of 2019, a site was inspected and issued a corrective notice. A follow-up inspection in November 2019, verified corrective actions were completed.

No non-filers were identified. Tempe's Engineering and Development Services Divisions require proof of ADEQ's AZPDES Construction General Permit (CGP) NOI Authorization from the project's owner or developer prior to issuance of a grading and drainage permit. Therefore, Tempe does not anticipate the identification of CGP non-filers.

Training
CIP conducted training for nine construction employees with storm water responsibilities on April 21, 2020, for stormwater requirements at construction sites. Development Services had no new hires during this reporting period. The last employee training was conducted on April 2, 2019. The biennial training requirement has been met at this time and the next training will be scheduled for early in 2021. In the event of a new hire, that person(s) will be trained within one calendar year.

G. Post-Construction Controls

Summary of Controls
Consistent with EPA's Low Impact Development (LID) recommendations and urban stormwater BMPs, Tempe's most effective post-construction control is on-site retention as implemented by Tempe's Stormwater Retention Ordinance - Chapter 12, Article IV, of the Tempe City Code (see **Attachment R**). This ordinance is an effective control measure by providing containment for approximately 50 percent of the rainfall in Tempe, and consequently limiting discharges of pollutants to Waters of the United States. Tempe's Stormwater Retention Ordinance has been in effect since 1967 and has undergone modifications to accommodate denser development in and around downtown Tempe and the Rio Salado corridor(the ARCA). Outside the ARCA, all new development or substantial improvements to existing developments that may impact Tempe's MS4 must provide storage of sufficient volume (i.e., on-site retention) to hold the runoff from the 100-year design storm. Inside the ARCA, new development or substantial improvements to existing developments must provide on-site retention for the two-year design storm. The two-year requirement may be waived within the ARCA subject to approval by the Tempe Engineering and Transportation Director if equivalent BMPs for on-site pollutant removal are implemented.

Overview of Program
Post-construction inspections are conducted on 100 percent of all permitted residential, commercial and CIP projects that result in a land disturbance of one acre or more, and those that disturb less than one acre but are part of a larger common plan of development. These post-construction inspections are part of the warranty period inspections and occur within 12 months after completion of construction. The inspections provide an opportunity to identify corrective actions to be implemented by the developer or responsible contractor for a variety of items, including stormwater and/or drainage

controls. Stormwater control measures can utilize one feature or a combination of several features. These control measures will be examined during post-construction site inspections for which an ADEQ CGP NOI is required.

Corrective Action and Enforcement
See section 3.F. for a summary of post construction inspection activities. No corrective or enforcement actions were needed or taken during this reporting period for post construction activities. Post-construction inspection documents are included in Attachment Q.

New or Revised Post-Construction Requirements
Since Tempe's last annual report, there have been no new or revised post-construction requirements related to city-issued permits. Tempe will not issue a grading permit, building permit or a certificate of occupancy to an owner/developer until notification from the City Engineer is received indicating that a drainage plan and on-site grading and drainage improvements are in compliance with Chapter 12, Article IV of the Tempe City Code. In addition, the City Engineer will not issue this notification unless a project provides the required retention or unless the project is in the ARCA and the Engineering and Transportation Director has approved alternative on-site pollutant removal BMPs. Sections 12-71 and 12-73 of Tempe's on-site retention ordinance contains the administrative requirements that ensure implementation of this program. The ordinance provides some flexibility to developments outside the ARCA that discharge directly to Waters of the United States, as long as: drainage does not enter the MS4, BMPs for pollutant removal are included in the design and stormwater is discharged consistent with AZPDES and all other regulatory requirements.

H. Outfall Inspection Program

Staff training
Tempe reviewed and updated the IDDE Program Guidance Manual this reporting year to provide clarity to procedures involved during outfall inspections and investigations. During the reporting year, Tempe conducted one detailed IDDE training event that covered conducting dry weather screening events and source investigations. A total of seven ECIs and one ECS were trained.

Outfall inventory
Tempe has identified 42 major outfalls as defined by 40 CFR 122.26. A map and inventory of outfalls are maintained on file with Tempe's Environmental Services Section and can be reviewed by ADEQ upon request. The number of major outfalls is subject to change based upon system changes or the identification of previously unidentified outfalls.

The priority designation is based upon receiving water, history of illicit discharges or non-stormwater flow over the last five years or any cause for prioritization identified by the City. The number of priority outfalls is subject to change based upon regulatory determinations in receiving water designation, detection of illicit discharges that have not been eliminated, elimination of illicit discharges, confirmation that non-stormwater flows do not contain a significant source of pollutants or other factors. After evaluation of criterion, nine sites remain identified as priority outfalls.

Inspection Tracking System
All major outfalls are inspected annually. If illicit discharges are identified, inspection frequencies may be increased to quarterly. Beginning in reporting year 2018-2019, ECIs resumed the responsibility from the Water Quality Specialists (WQS) for dry weather outfall screenings at the required frequencies. If field screening procedures trigger the need for investigation, an ECI will conduct an inspection or make a source determination and follow-up as needed. Once screenings and inspections are completed, field data forms and investigation forms are provided to the ECS for review, after which all forms are provided to an EQS for MS4 Permit tracking and reporting. The outfall inspection reports are included in **Attachment S**.

Inspection and Screening Procedures
Outfall inspections are conducted using standard field screening procedures and are typically completed when rainfall, temperature and moisture are lowest, but may be conducted at any time in dry weather conditions as long as the inspection occurs at least 72 hours after the latest rain event. There were no changes in the detailed protocol for Outfall Inspection, Field Screening or Illicit Discharge Elimination procedures this year. A summary of the procedures for Inspections, Investigations and Illicit Discharge Elimination can be found in the SWMP Section 6.3, Section 6.4 and Section 6.5 respectively, see **Attachment AA**.

Findings
During 2019-2020, ECIs conducted 50 outfall inspections. Of these, 15 inspections were completed at priority outfalls and 35 were routine major outfall inspections. One site, GD-01, had dry weather flow that has been identified as Salt River Project (SRP) canal water. There was moisture identified at 20 of the inspection sites without the presence of flow for field screening. The remaining sites will continue to be monitored annually and will be field screened according to the procedures outlined in the SWMP if flow is detected.

I. New or Revised Ordinances, Rules or Policies

Revised Ordinances
No new rules were developed in 2019-2020. Revisions were made to existing stormwater Code during the 2018-2019 reporting year to reflect changes in Tempe's organizational structure.

Copies of Chapter 12, Articles IV and VI and Chapter 19, Article IV, 50) B) of the Tempe City Code can be found in **Attachment R**.

Policies and Stormwater Management Plan (SWMP)
Tempe has not developed new or revised existing policy. The SWMP was updated in 2019 to reflect role changes in the organization and document ADEQ approved control measure updates. The SWMP can be found in **Attachment AA**.

City of Tempe General Plan
The General Plan is the overarching planning document for the City of Tempe. It holds the community's vision for the future and reflects how the community wants to grow and change over the next 30 years. During Fiscal Year 2012-2013, Tempe worked with the public to develop a new General Plan 2040. LID was added to the plan in the form of

General Plan strategies and goals. Voters approved the General Plan in May 2014. General Plan 2040 information can be found on the following website:

- https://www.tempe.gov/government/community-development/general-plan-2040

City of Tempe Stormwater Master Plan

Appendix A, Section VII (A) of the Permit required Tempe to review the City's stormwater master plan in the second year of the Permit term and report findings of the evaluation, including recommendations, in the third annual report. A team consisting of representatives from the Environmental Services Section, Water Engineering Section and Engineering Division met for several months to evaluate the existing stormwater master plan. Findings and needed improvements were consolidated in August 2012 and reported in the 2012-2013 Annual Report. Subsequently, the FCDMC conducted two studies; the Tempe Area Drainage Master Study (ADMS) and the Lower Indian Bend Wash Area Drainage Master Study and Plan (ADMS/P) which utilized FLO2D and Stormwater Management Model (SWMM) to determine areas of potential flooding across Tempe. Tempe then completed a Storm Drainage Management Study in June 2019, which took the results of those two studies and refined conceptual mitigation plans for the areas of potential flooding, provided cost estimates and ranked the potential projects. The Engineering Division has begun forwarding these projects for inclusion in the CIP. The 15 projects that resulted from the management study will reduce uncontrolled flooding, will reduce pollutants in discharges from its MS4 that receive discharges from older development areas and areas of significant redevelopment after construction is complete.

Enforcement Response Plan

Appendix A, Section III (G) of the Permit required Tempe to create a stormwater specific Enforcement Response Plan (ERP) within two years of permit issuance. In December 2012, Tempe City Council approved Tempe's new ERP. The ERP consolidates Tempe's pretreatment and stormwater program enforcement elements and was received and approved by ADEQ. See **Attachment H** for a copy of the ERP.

J. Fiscal Expenditures

Tempe's estimated expenditures related to implementation of the stormwater program were adjusted for Fiscal Year 2018-2019, to $1,631,071 due to a calculation error found in the preparation of this year's report. For Fiscal Year 2019-2020, stormwater expenditures were $1,535,968. A more detailed analysis of fiscal expenditures can be found in Section 12 of this report.

K. Training Summary[1]

Tempe coordinated ten employee training events covering permit-required training topics over the reporting period. Eight training events were conducted internally by City staff. A total of 227[2] employees attended these trainings. Note that Municipal Facility training included the identification and reporting of illicit and non-stormwater discharges but is not specifically categorized as IDDE training because the training event primarily focused on pollution prevention and good housekeeping. See Table 10 for specific training details.

[1] Section added by Tempe to provide a more detailed and centralized summary of training events.

[2] Number includes employees that may have attended more than one training event.

Table 10: Summary of Training Activities

Date	Target Groups	Topic(s)	Permit Training Type	Trainees	Trainer
August 2019; April 2020	Environmental Quality Specialist - Direct Stormwater Responsibilities	Municipal activities including the required minimum control measures, inspection of industrial, construction and commercial activities.	Certified Stormwater Inspector	3	National Stormwater Center
Octctober 2020	Parks - Direct Stormwater Responsibilities	Pollution Prevention; Spill Management; Handling, Storage of Used Oil and Other Toxic/Hazardous Materials; Permit Requirements Including Identifying and Reporting Illicit and Non-Stormwater Discharges and Field Practices.	Municipal Employee	43	Tempe Environmental Services
February 2020	Fleet Services - No Direct Stormwater Responsibilities	Pollution Prevention; Spill Management; Handling, Storage of Used Oil and Other Toxic/Hazardous Materials; Permit Requirements Including Identifying and Reporting Illicit and Non-Stormwater Discharges and Field Practices, DeMinimis discharges.	Municipal Facilities	20	Tempe Environmental Services
June 2020	Water Utility Services - Direct and No Direct Stormwater Responsibilities	Pollution Prevention; Spill Management; Handling, Storage of Used Oil and Other Toxic/Hazardous Materials; Permit Requirements Including Identifying and Reporting Illicit and Non-Stormwater Discharges and Field Practices, DeMinimis discharges.	Municipal Facilities	40	Tempe Environmental Services
April 2020	Engineering CIP - Direct Stormwater Responsibilities	Municipal Construction, Erosion and Sediment Controls, Maintenance Requirements for BMPs, Municipal Ordinances Related to Stormwater and Construction, Plan Review Procedures, Grading and Drainage Design Standards, Requirements for Structural and Non-structural BMPs on Construction Sites, Inspection Procedures, Enforcement Procedures, Post-Construction Stormwater Controls, Post-Construction Inspection Procedures.	Construction/ Post-Construction	9	Tempe Community Development

Date	Target Groups	Topic(s)	Permit Training Type	Trainees	Trainer
June 2020	Facility and Custodial Services - No Direct Stormwater Responsibilities	Pollution Prevention; Spill Management; Handling, Storage of Used Oil and Other Toxic/Hazardous Materials; Permit Requirements Including Identifying and Reporting Illicit and Non-Stormwater Discharges and Field Practices.	Municipal Facilities	42	Tempe Environmental Services
June 2020	Solid Waste - No Direct Stormwater Responsibilities	Pollution Prevention; Spill Management; Handling, Storage of Used Oil and Other Toxic/Hazardous Materials; Permit Requirements Including Identifying and Reporting Illicit and Non-Stormwater Discharges and Field Practices.	Municipal Facilities	25	Tempe Environmental Services
June 2020	Transportation Maintenance and Traffic Operations - No Direct Stormwater Responsibilities	Pollution Prevention; Spill Management; Handling, Storage of Used Oil and Other Toxic/Hazardous Materials; Permit Requirements Including Identifying and Reporting Illicit and Non-Stormwater Discharges and Field Practices.	Municipal Facilities	34	Tempe Environmental Services
June 2020	Environmental Services - Direct Stormwater Responsibilities	Pollution Prevention; Spill Management; Handling, Storage of Used Oil and Other Toxic/Hazardous Materials; Identifying Illicit and Non-Stormwater Discharges and Field Practices.	IDDE Municipal Employee	11	Tempe Environmental Services
		Total Number of Training Events:			10
		Total Number of Attendees:			227

4. Numeric Summary of Stormwater Management Program Activities

The table below provides a numeric summary of stormwater management practices and activities performed each year.

	Annual Reporting Year (July 1–June 30)					
Stormwater Management Practice or Activity:	**2014-2015**	**2015–2016**	**2016-2017**	**2017-2018**	**2018-2019**	**2019-2020**
Illicit Discharge Detection and Elimination Program						
1. Municipal Employee Training						
Number of training sessions (on non-stormwater discharges and the IDDE program)	3	5	1	1	1	1
Number of employees attending training	10	24	14	9	8	11
2. Spill Prevention						
Number of Municipal Facilities identified with hazardous materials	49	49	50	51	51	52
Number of spills at Municipal Facilities with hazardous materials that occurred in outside areas	1	1	1	3	0	0
Number of facility assessments completed *(identify any issues found requiring follow-up in narrative and summarize new practices to minimize exposure*)	95	70	64	75	76	27[1]

[1] The reduction is due to staffing turn over and COVID-19 pandemic restrictions.

	Annual Reporting Year (July 1–June 30)					
Stormwater Management Practice or Activity:	**2014-2015**	**2015–2016**	**2016-2017**	**2017-2018**	**2018-2019**	**2019-2020**
Date of last review of HWMP (*identify committee participant with stormwater expertise in narrative*)	February 19, 2014	February 2, 2016	February 8, 2017	February 6, 2018	May 13, 2019	June 24, 2020
3. Outfall Inspections						
Total number inspected *(attach or forward electronic copy of inventory or map of major outfalls and priority outfalls)*[2]	64	65	46	42	43	50
Number of 'priority outfalls' identified to date*(summarize findings and follow-up actions in narrative)*	19	19	19	9	9	9
Number of 'priority outfalls' inspected *(summarize findings and follow-up actions in narrative*)	40	42	22	9	10	15
Number of dry weather flows detected	7	5	2	1	2	1
Number of dry weather flows investigated	7	5	2	0	0	0
Number of major outfalls sampled[4]	7	5	2	0	0	0
Number of illicit discharges identified	0	1	0	0	0	0

[2] All maps and inventories are maintained on file with Tempe's Environmental Services Section and can be reviewed by ADEQ upon request.
[4] Includes field screening and analysis.

	Annual Reporting Year (July 1–June 30)					
Stormwater Management Practice or Activity:	**2014-2015**	**2015–2016**	**2016-2017**	**2017-2018**	**2018-2019**	**2019-2020**
Number of illicit discharges eliminated	0	1[5]	0	0	0	0
Amount (percentage, linear miles, etc.) of storm drain inspected[6]	8,619 feet	8,668 feet	8,645 feet	8,624 feet	4,075 feet	0 feet
Number of storm drain cross connection investigations	0	0	0	0	0	0
Number of illicit connections detected	0	0	0	0	0	0
Number of illicit connections eliminated	0	0	0	0	0	0
Number of corrective or enforcement actions initiated within 60 days of identification[7]	0	5	3	6	2	0
Percent of cases resolved within one calendar year of original enforcement action	100	100	100	100	100	100
Number of illicit discharge reports received from public	90	61	75	56	84	136
Percent of illicit discharge reports responded to	100	100	100	100	100	100
Percent of responses initiated within three business days	100	100	100	100	100	100

[5] See Findings in 2015-2016, Report Section 3.H. for a description of the investigation.
[6] CCTV inspections only. See section 3. C. the control measure to inspect 8,000 feet by CCTV was approved for replacement by ADEQ in 2019.
[7] Total number of corrective and enforcement action for the year excluding minor construction and post-construction.

	Annual Reporting Year (July 1–June 30)					
Stormwater Management Practice or Activity:	**2014-2015**	**2015–2016**	**2016-2017**	**2017-2018**	**2018-2019**	**2019-2020**
Municipal Facilities						
1. Employee Training						
Number of training events (dates and *topics to be included* in narrative)	9	11	9	9	9	7
Number of staff trained	214	248	236	234	260	215
2. Inventory, Map, or Database of MS4 Owned and Operated Facilities						
Total number of facilities on inventory	149	149	149	152	152	153
Date identification of 'higher risk' facilities completed	December 26, 2012	December 26, 2012	December 26, 2012	December 26, 2012	December 26, 2012[8]	December 26, 2012[8]
Date prioritization of municipal facilities completed	December 26, 2012	December 26, 2012	December 26, 2012	December 26, 2012	December 26, 2012[8]	December 26, 2012[8]
3. Inspections						
Miles of MS4 drainage system prioritized for inspection	101.5	101.5	1.5	1.5	0[9]	0[9]
Miles visually inspected[10]	101.6	202.5	1.6	1.6	0.77	0
Number of municipal facilities inspected[11]	95	70	64	75	76	26

[8] Reviewed annually for changes
[9] The control measure to inspect 8,000 feet by CCTV was approved for replacement by ADEQ in 2019.
[10] Includes CCTV and above-ground linear inspections of the drainage system. Does not include cursory street inspections. This control measure to approved for replacement by ADEQ.
[11] This numeric parameter was added by Tempe to provide a more detailed explanation of the municipal inspection program.

	Annual Reporting Year (July 1–June 30)					
Stormwater Management Practice or Activity:	**2014-2015**	**2015–2016**	**2016-2017**	**2017-2018**	**2018-2019**	**2019-2020**
Number of 'higher risk' municipal facilities inspected	11	21	10[12]	8	11	8
Number of 'higher risk' municipal facilities found needing improved stormwater controls	0	0	0	0	0	0
4. Infrastructure Maintenance						
Linear miles of drainage system cleaned each year (c*ity to maintain records documenting specific street cleaning events*)	21,891.5	21,889	21,888	21,889	21,894	21,888
Record amount of waste collected from street and lot sweeping (reported in pounds, gallons, etc.) (tons)	1,175.7	1,007	1,126	985	1,189	784
Total number of catch basins[13]	558	503	569	766	869	778
Number of catch basins cleaned	175	63	71	510	597	488
Amount of waste collected from catch basin cleaning (tons)	20.9	24.2	---[14]	43	55.7	30.16
Industrial and Commercial Sites Not Owned by the MS4						
Number of training events for MS4 staff	3	5	1	1	1	1
Number of municipal staff trained	14	24	14	9	8	11

[12] Number amended after Fiscal Year 2016-2017 report was submitted. Thirteen inspections were conducted at ten facilities.
[13] Inspected, includes other stormwater infrastructure such as drywells, bubbler boxes, inlets, etc.
[14] Hauling was not conducted in Fiscal Year 2016-2017.

	Annual Reporting Year (July 1–June 30)					
Stormwater Management Practice or Activity:	**2014-2015**	**2015–2016**	**2016-2017**	**2017-2018**	**2018-2019**	**2019-2020**
Number of industrial facilities inspected (see Appendix A, Part V.B)[15]	122	126	140	121	141	124
Number of corrective or enforcement actions initiated on industrial facilities[15]	2	1	0	0	0	0
Percentage of cases resolved under the ERP within one (1) calendar year of original enforcement action	100	100	100	100	100	100
Construction Program Activities[16]						
Number of training events for MS4 staff (include topics in narrative summary)	2	1	3	1	1	1
Number of municipal staff trained	24	6	29	2	23	9
Number of construction/grading plans submitted for review	42	26	15	26	24	18
Number of construction/grading plans reviewed	57	26	15	26	24	18
Number of construction sites inspected[17]	59[18]	20	15	19	26	34
Number of corrective or enforcement actions initiated on construction facilities	2	0	0	0	1	1

[15] Number excludes restauraunt inspections. The number reported for 2015-2016, was amended after annual report submission.
[16] Includes Private and CIP activities
[17] Number may not match review and prioritization number based upon date of grading and drainage permit issuance.
[18] See narrative in Section 3.F. in 2015-2016 Annual Report.

	Annual Reporting Year (July 1–June 30)					
Stormwater Management Practice or Activity:	2014-2015	2015–2016	2016-2017	2017-2018	2018-2019	2019-2020
(identify the type of actions in narrative summary)						
Post Construction Program Activities						
Number of post-construction inspections completed	17	29	28	2	28	10
Number of corrective or enforcement actions initiated for post-construction activities (identify the type of actions in narrative summary)	0	0	0	0	0	0

5. Evaluation of the Stormwater Management Program

In accordance with Section 5.4 of the Permit, this section provides an evaluation of the progress and success of the stormwater management program, including an assessment of the effectiveness of stormwater management practices in reducing the discharge of pollutants to and from the municipal storm sewer system.

Much of Tempe's stormwater program progress during the reporting period consisted of fine-tuning of existing programs and the completion of permit-required tasks. Quantifiable program successes include the following:

- Maintain equipment and staff to conduct routine inspections and cleaning of stormwater infrastructure greatly increased the number of inspections and cleaning events. The debris removed from infrastructure through this process reduces potential pollutants from discharging from the MS4. Staff assured structures are properly labeled to increase public awareness and reduce potential pollutants.
- Updated mapping of stormwater drainage areas and infrastructure inventory at parks and municipal facilities.
- Updated customized stormwater training materials for online site specific municipal facility training.
- Sent three new employees with stormwater program responsibilities to training at National Stormwater Center.
- Continued to explore new outreach opportunities to reach Neighborhoods, Homeowner Associations and Businesses through neighborhood coordinator on social media and by adding newly inspected business emails to the quarterly e-Bulletin newsletter.
- Partnered with the Downtown Tempe Association https://www.downtowntempe.com to provide stormwater outreach materials to businesses in the downtown area, reaching approximately 1,000 people.
- Updated asset management systems to streamline tracking of inspection and maintenance activities.
- Implemented inspection management software platforms to manage industrial/commercial and restaurant inspections for stormwater compliance.
- Continued to enroll restaurants into the TGC. This program reduces public health and safety concerns, plumbing backups and SSOs.
- Continued operation of the HPCC and Zero Waste Day to provide Tempe residents with an outlet for proper disposal of hazardous household products, potentially reducing their release into the environment or MS4.
- LID activities **(Attachment BB)**:
  - Continued participation in the Specifications and Standards Sub-Workgroup of the Sustainable Cities Network (SCN). The Specifications and Standards Sub-Workgroup continues to develop and collect uniform standards addressing alternative stormwater management with low-impact development details to be used throughout the region.
  - Engineering personnel are working with the Maricopa Association of Governments (MAG) to develop new standard details for LID applications including those outside of the right-of-way.
  - The efforts of Tempe's Water Conservation group provided benefit to the stormwater program by reducing chemical products necessary for landscape maintenance and water runoff. The conservation group hosted several sustainable

landscape workshops throughout the year on topics such as xeriscape landscape design, proper maintenance and irrigation, rainwater and gray water harvesting and tree maintenance. Tempe also offers landscape rebates for xeriscape conversions. Seventy rebates and grants were processed this reporting year, converting over 100,000 square feet of grass to xeriscape. Such conversions contribute to pollution reductions by reducing overwatering and lawn chemical use. Tempe's conservation website, http://www.tempe.gov/conservation, shares LID information on rainwater harvesting, gray water rebates, demonstration gardens and Tempe hosted workshops. The WaterSmart Customer Portal, https://tempe.watersmart.com/index.php/welcome, has several conservation recommendations, one of which specifically calls out harvesting rainwater and investing in gray water, which requires LID implementations in order to reuse water onsite.

- LID continues to be discussed as part of the Rio Salado and Beach Park Masterplan https://www.tempe.gov/government/community-services/parks/rio-salado-and-beach-park-master-plan.
- Continued participation in the SCN, which actively discusses urban issues associated with tree and shade, structural shade, the urban canopy, stormwater management and LID techniques. The goal of SCN is to standardize best practices in the area of urban forestry and expand knowledge of green infrastructure across the Valley and state of Arizona. A Tempe employee is Chairperson of the SCN.
- Encouraged the use of LID in municipal and private development projects when possible. In 2019-2020, two municipal development projects implemented LID concepts on their projects to limit stormwater runoff.
- Tempe's Climate Action Plan (CAP) serves as a guideline for the City of Tempe's path to a sustainable and resilient future. The plan provides a detailed framework for measuring and reducing greenhouse gas (GHG) emissions and climate change impacts. LID is included as an aspect of the plan to achieve this goal. https://www.tempe.gov/government/sustainable-tempe/climate-action-plan

While implementation of many of these stormwater management practices is assumed to have effectively reduced the discharge of pollutants to and from the MS4, this reduction is not always quantifiable. For example, due in large part to Tempe's on-site retention policy, it cannot be assumed that all debris removed from the system or all waste collected by HPCC would have ended up in a discharge to a Water of the United States. Tempe will continue to review analytical data in the effort to identify correlations between pollutant concentration and stormwater management practices.

6. Stormwater Management Program Modifications

In accordance with Section 5.5 of the Permit, this section provides a description of modifications, if applicable, to the stormwater management program each year as follows:

A. Addition of New Control Measures

Tempe did not implement new control measures in the reporting year 2019-2020. The last new control measures implemented were accepted by ADEQ in January 2013.

B. Addition of Temporary Control Measures

Tempe continues to implement temporary control measures related to discharge concentrations of Escherichia coli (*E. coli)* and copper that were higher than applicable Surface Water Quality Standards (SWQS). The temporary measures are related to outreach/education messages. The topics and frequency focus mostly on industrial/commercial inspections. See Section 10.C of this report for details.

C. Increase of Existing Control Measures

Tempe did not have an increase of existing control measures in the reporting year.

D. Replacement of Existing Control Measures

In2019, ADEQ approved the following update to existing control measures:

Replacement of 8,000 feet of the closed-circuit television (CCTV) inspection criteria per year with the inspection of at least 360 catch basin inspections per year. This 450 percent increase above the current catch basin inspection requirement is a more effective use of resources and will continue to reduce the discharge of pollutants to the maximum extent practical. The results of Tempe's extensive investment in staff and equipment dedicated to increasing the catch basin inspection and maintenance program can be seen in Table 4. The CCTV will remain as an available resource when the need for more extensive infrastructure inspection is identified.

7. Monitoring Locations

There have been no changes to the stormwater monitoring locations for the duration of the permit.

As discussed with ADEQ during permit negotiations, TD-01 and TD-03 monitoring station may be unavailable for a period of time in the future due to construction in the area. These lines and outfalls are near an ADOT right-of-way that will be undergoing construction at dates not yet determined. The monitoring stations may require minor relocations following to the construction but will still be collect stormwater representative of the same land uses once the construction is complete.

As discussed, and approved by ADEQ staff in August 2019, due to road improvements near SR-05, the monitoring location required relocation. The decommissioning of the current equipment occurred in September 2019. Due to construction the site was unavailable for monitoring for a period of the summer and winter wet weather seasons in 2019-2020.

In 2017-2018, ADEQ updates to the eMaps, the Tempe Drain is listed as the San Francisco Canal North Branch. Historically, the Tempe Drain has been identified as an unnamed tributary to the Salt River. The location is at the confluence of the segment of the Salt River between Tempe Town Lake dam and Interstate 10 bridge. It has designated uses are Aquatic and wildlife (ephemeral) (A&We) and Partial-body contact (PBC). If ADEQ

determines that the receiving water, as listed in eMaps, is actually the San Francisco Canal North, data from TD-01 and TD-03 would be compared to the standards for the designated uses of Agricultural irrigation (AgI) and Agricultural livestock watering (AgL). Until notification is received to do otherwise from ADEQ, Tempe will continue to compare analytical data from the stormwater monitoring sites TD-01 and TD-03 to those consistent with designated uses for the above listed reach of the Salt River.

The designated use of the receiving water for SR-08 was changed and reported to ADEQ in the 2013-2014 Annual report. All outfall information is maintained on file with Tempe's Environmental Services Section and can be reviewed by ADEQ upon request.

8. Storm Event Records

Part 8 of the Permit states:

"For each monitoring location identified in Section 7.0, Table 1.0 of the Permit, summarize all measurable storm events (0.1 inch or greater) occurring in the drainage area of each monitoring location within the winter and summer wet seasons, respectively, until samples have been collected for the monitoring location. Include the date of each event, the amount of precipitation (inches) for each event and whether a sample was collected, or if not collected, information on the conditions that prevented sampling. (Note: If unable to collect stormwater samples due to adverse climatic conditions, provide, in lieu of sampling data, a description of the conditions that prevented sampling. Adverse climatic conditions which may prevent the collection of samples include weather conditions that create dangerous conditions for personnel, such as local flooding, high winds, electrical storms, etc.)"

Tempe has consolidated this requested information in **Attachment T.** Tempe tracks all sampling events required by the Permit. **Attachment U** summarizes sampling status throughout the reporting year. All sampling and analytical monitoring requirements were met for this reporting year.

Tempe's annual rainfall is calculated using a precipitation group on the MCFCD website, http://alert.fcd.maricopa.gov/showrpts_mc.html. The group is named G055: CITY OF TEMPE, and is comprised of four storm gauges in and bordering Tempe.

9. Summary of Monitoring Data (By Location)

A summary of all monitoring data for each site is provided in **Attachment V**. The table for SR-08 includes the most recent data. This site had a change in designated use for the receiving water in 2013-2014. All laboratory reports are included as **Attachment W**.

From 2011, to September 2014, Tempe collected orthophosphate samples without field filtration, based on its MS4 permit requirement to sample total orthophosphate. However, based upon Arizona Department of Health Services (ADHS) guidance from the EPA, filtration of samples in the field is a valid component of EPA criteria for orthophosphate sampling. Tempe has modified procedures per EPA and ADHS guidance to include filtration of the sample within 15 minutes of collection.

10. Assessment of Monitoring Data

A. Stormwater Quality

Tempe has reviewed all sampling event results collected from November 2011, through March 2020. A full trending of data is included as **Attachment X**. The trending was done by a comparison of the previous year's data maximum and average to this reporting year's (2019-2020) maximum and average by site location.

Below is a summary of the findings:

- In 2019-2020, there were 12 sampling events from which 256 analytical results were produced. From those results a total of 148 parameters were detected (conventional parameters, microbiological, metals, nutrients) and 108 of the parameters were detected at levels less than the SWQS. There were only 13 SWQS exceedances (for *E. coli* and copper) which will be discussed more in this section. Overall, there was little significant difference in the results of 2019-2020, compared to previous year's data.

- For the entire dataset 2011-2020, 77 sampling events were conducted during the winter wet season (November-May, 2011-2020), and 79 sampling events were conducted during the summer wet season (June – October, 2012-2019).
- Averages for rate, volume, duration, pH and Temperature for all sites from 2011-2020, are as follows:
  - Average rate (GPM): 2,274
  - Total volume (gallons): 211,116
  - Duration (mins): 93
  - pH (S.U.): 7.5
  - Temperature (C°): 22.4

Conventional Parameters

- All sites were sampled for conventional laboratory parameters (i.e., hardness, total dissolved solids (TDS), total suspended solids (TSS), biochemical oxygen demand (BOD), chemical oxygen demand (COD)); the relative levels of parameters observed from site to site varied. Analytical results for all five sites were below historic maximum concentrations for these parameters. However, this year's hardness and TDS result averages increased at four of five sites. The TSS average increased at KP01, the BOD average increased at TD01 and COD averages increased at both TD01 and TD03.
- Based upon the assessment of conventional parameter results, there does not appear to be specific trends indicating the degradation of stormwater quality from Tempe's MS4. The results for at least one parameter at each site was higher than the average permit term result. There were no results exceeding the highest historical results for the conventional laboratory parameters.
- Metals and nutrients comprised the largest groups of components detected, with results observed for all nutrients and several metals, for all sites and at every event. Thirty-seven percent of the analytes monitored for metals had detections (47 of 126 analytes) and all results were within the range of what has been detected throughout the permit term.

Microbiological

- *E. coli* was above the SWQS at each sampling location in nine of the ten sampling events that were measured. One event collected at KP-01 during the summer of 2019 was less than 20 most probable number (MPN).
- *E. coli* concentrations were observed to have an increase from the permit term average result from 2011-2019,1,640 MPN, compared to the result for 2019-2020, 1,954 MPN, for all sites and all events during the respective periods. There is no indication of degradation of stormwater quality discharges due to *E. coli* from Tempe's MS4. As stated in the Permit, "*E. coli* values above the SWQS are prevalent in Arizona in high flow precipitation events." There is no indication of the *E. coli* source being linked to wastewater or sanitary sewer overflows. Tempe continues to provide educational material to the public about picking up pet waste.

Metals

- Copper was observed to be above the SWQS during four of the ten sampling events at two of the five sampling locations, SR-08 had two events less than the SWQS, KP-01 had two events less than the SWQS and SR-05 had one event less than the SWQS.
- Although average copper levels were observed at 19.8 ug/L in the recent sampling period, no discernible trends have been identified for copper values when compared to previous wet seasons during the permit term which had an average of 18 ug/L. Copper is abundant in the environment, both naturally occurring and in forms associated with industrial and residential uses. Tempe will continue to monitor copper trends and determine best practices for the reduction of copper concentrations in runoff. There is no indication of degradation of stormwater quality due to copper discharges from Tempe's MS4.
- There was very little variability between summer and winter samples this reporting year.
- Trends for the most common parameter hits has not changed. Barium and copper were found in all samples, zinc was detected in six samples, lead was detected in four samples and arsenic was detected in seven out of the nine total sample events. Minor items still occasionally show up similar with historic trends. Of the nine sampling events, antimony and chromium were found in four samples and there were three detections for nickel.

Nutrients

- Average nutrients observed at each site in the reporting year demonstrate relative consistency with the results throughout the permit term. TD-01 and TD-03 both had results greater than the historic average, but none of the analytes exceeded standards and were lower than historical maximum values. Nutrients, although a common stormwater pollutant in many areas in the country, do not appear to be a significant contributor to stormwater pollution in the City of Tempe. Nitrogen and phosphorous species show no specific trends and there is no indication of degradation of stormwater quality discharges from Tempe's MS4.

Organic Pollutants (Total Petroleum Hydrocarbons (TPH) and Oil and Grease (O&G), Volatile Organic Compounds (VOCs), Semi Volatile Organic Compounds (SVOCs) and Pesticides)

- Organic Pollutants monitoring was not required during the reporting year 2019-2020.

Conclusions
Based on the data collected during this Permit term, no obvious, discernible and consistent trends, improvements or degradation of stormwater quality from the MS4 were observed.

In 2012-2013, Tempe suspected that TD-01 sampling was being impacted by "Tempe Ditch" flow. During large rain events, the flow in the "Tempe Ditch" has the potential to back-up into the TD-01 outfall, possibly comingling other sources of stormwater and/or non-stormwater. Further evaluation of the data collected (2011-2013) led to the conclusion that TD-01 is not impacted by "Tempe Ditch" flow. This conclusion was reached by evaluating the data for TD-01 and comparing the collected data to the remaining four sites. If standing water is observed to be "backed up" into the outfall prior to storm sampling events, it is suspected that the volume of the storm flush is sufficient to ensure that samples collected from TD-01 are primarily related to storm runoff. Tempe will track this potential concern.

In 2019-2020, Tempe experienced the highest concentration levels of antimony and chromium discharged from TD-03 and TD-01 respectively. TD-03 had antimony concentrations 2.5 times higher than previous concentrations and TD-01 was slightly higher than previous results. Antimony is associated with copper smelting and refining industries. According to the EPA Toxics Release Inventory, the largest releases occurred in Arizona. Further investigation is needed to determine if a correlation exists between antimony concentration in the outfall sample and industrial releases.

B. Surface Water Quality Standards (SWQS)

Stormwater monitoring sample results conducted consistent with Permit sampling conditions have been compared to SWQS for the applicable receiving water. A summary of Monitoring Data sheets in **Attachment Y** allow for this comparison.

The Permit allows for the testing of dissolved metals and collection of Hardness data used to calculate corresponding SWQS. Since 2012-2013, Tempe's approach to collecting ambient hardness data for a perennial water body, for the purposes of SWQS comparison, has been to monitor hardness in the waterbody during times that stormwater discharges are not occurring. As explained in the 2016-2017, annual report, an evaluation to compare storm event and lake water quality over time demonstrated stormwater as significantly lower in hardness than the ambient water body (Kiwanis Park Lake). The trend showed hardness in the stormwater decreasing over time as the lake hardness continued to increase. The data demonstrates that stormwater does not significantly alter the water quality of the lake ambient conditions. Continuing to use the hardness value of ambient lake conditions to calculate the SWQS of hardness-dependent analytes is the most conservative method for protecting the aquatic habitat.

C. Exceeding a SWQS

Tempe has been experiencing concentrations greater than SWQS for *E. coli* and copper since 2011-2012. Tempe identified only these two parameters as having concentrations greater than the applicable SWQS during the reporting period. *E. coli* was found to be higher than the SWQS at five sites and nine of the ten sampling events. Site KP-01 was

below the SWQS in July 2019. Dissolved copper was found to be higher than the applicable hardness-dependent standard at two sites and four of the nine sampling events.

In 2014-2015, KP-01 experienced a single pH event of 9.1, greater than the SWQS. This result was a deviation from typical pH values at this outfall location. Throughout 2011-2013, the site average pH was 7.3 pH units with the previous highest pH result at the site being of 7.6. There is no known cause for the atypical result. An inspector investigated the area around KP-01 for evidence of a discharge that may have contributed to the high pH level but could not pinpoint a specific source in the residentially zoned area. Tempe will continue to monitor this site for pH values greater than SWQS in subsequent sampling events. See **Attachment Y** for details pertaining to sampling date, location, impacted receiving water, SWQS and results.

In 2011-2012, Tempe began implementing the provisions outlined in Permit Section 4.0, relating to the recurrence of discharges higher than SWQS for *E. coli* and copper. After a full review of all sample results from 2012-2019, there does not appear to be an immediate or obvious correlation between implemented control measures and *E. coli* and copper concentrations. The concentrations of these pollutants appear to correspond more directly to when the sample was taken (time of year and season). Tempe will continue to evaluate existing and future analytical data in an effort to better understand impacts on pollutant concentrations in addition to following the control measures identified in Table 11 and Table 12.

Potential pollutant sources and applicable control measures are summarized in Tables 11 and 12 below.

Table 11: Copper Investigation, Evaluation and Action

Potential Sources of Copper	
Vehicle brake pads	Chromated copper arsenate (CCA) pressure treated wood
Mobile cleaning	Air emissions
Vehicle washing and service	Soil erosion
Architectural copper	Irrigation water
Pool/spa/fountain algaecides	SSOs
Pesticides, algaecides, root killers and fungicides	Cooling towers
Industrial use of copper	Discharges to the publicly owned treatment works (POTW)
Evaluated Control Measures	
Industrial Inspections – Focus on copper sources and applicable BMPs.	
Evaluate service facilities for automotive waste disposal practices.	
Outreach/Education – Pools, spa, fountain use of copper treatment and discharge practices.	
Outreach/Education – Alternatives for copper bearing pesticides, algaecides and fungicides.	
Outreach/Education – Proper use of copper bearing pesticides, algaecides and fungicides.	
Newly Developed/Implemented or Continued Control Measures	
Industrial Inspections – Inspection focus on potential sources of copper. BMPs discussed, if applicable.	
Industrial Outreach/Education – Copper focused education and Prevention BMPs directed to industrial users.	
Public Outreach/Education – Copper focused education and Prevention BMPs directed to the general public.	
General – Continued implementation of IDDE program.	

Table 12: E. coli Investigation, Evaluation and Action

Potential Sources of *E. coli*	
Animal feces (domesticated, wild, farm)	Wastewater treatment plants
Manure	On-site septic systems
Wastewater discharges	Illicit connections
Evaluated Control Measures	
Review of SSO Control Practices	
Maintenance and cleaning of sewers	
Septic tank policies	
Outreach/Education – Clean up after your pet	
Outreach/Education – Feeding wild animals at waterside locations.	
Newly Developed/Implemented or Continued Control Measures	
Review of SSO Control Practices – Continued review of practices related to response and reporting of SSO events.	
Maintenance and cleaning of sewers – Continued implementation of comprehensive sanitary sewer cleaning program.	
Septic tank policies – Continued non-allowance of septic tank use.	
Public Outreach/Education – *E. coli* focused education and prevention BMPs directed to the general public.	
Public Outreach/Education – BMP focused education and prevention BMPs directed to the general public.	
Public Outreach/Education – Continued BMP focused on pet waste pick-up in public places.	

11. Estimate of Annual Pollutant Loadings

Appendix B Part 11 of the Permit requires *an estimate of the pollutant loadings each year from the municipal storm sewer system to Waters of the United States for each constituent listed in Section 7.4 of the Permit detected by stormwater monitoring within the Permit term. Pollutant loadings and event mean concentrations may be estimated from sampling data collected at the representative monitoring locations, taking into consideration land uses and drainage areas for the outfall. Include a description of the procedures for estimating pollutant loads and concentrations, including any modeling, data analysis and calculation methods. Compare the pollutant loadings estimated each year to previous estimates of pollutant loadings.*

The annual pollutant loads for reporting year 2019-2020, had 13 components that varied significantly from the average results between 2011-2019. This increase is likely due to an overall increase in the amount of rainfall for the reporting period. The previous five year average rainfall was 6.6 inches (2014-2019), whereas the average rainfall was 7.98 inches in 2019-2020. The calculations also changed because of updates to the retention areas in the pollutant loading formula. In the last year, many drainage basins were added to water geographic information system (WGIS). For example, Anozira, located at McClintock and Elliot, did not previously have any storm structures documented in WGIS, even though there is a lake that receives stormwater. Due to these updates, some pollutant loadings increased while other loadings decreased. For example, drainage basin number one had an increase of adjusted drainage area from 387 acres to 899 acres. This year was the first

major update to the drainage area calculations. As described in section ten of the annual report, a few individual analytes had higher than average results (TSS, TDS and nitrite/nitrate (NO_2/NO_3)). However, the event mean concentrations (EMCs) for those analytes were in line with the previous reporting periods averages. The overall pollutant loading increase is attributed to the higher annual volume of rainfall creating more runoff causing higher pollutant loading combined with the slightly higher EMCs. Table 13 provides a summary of pollutant loading estimates in the reporting year and **Attachment Z** contains detailed analysis information.

For pollutant loading calculations, Tempe's annual rainfall is calculated using a precipitation group on the Maricopa County Flood Control District website http://alert.fcd.maricopa.gov/showrpts_mc.html. The group is named G055: CITY OF TEMPE and is comprised of four storm gauges in and bordering Tempe.

Table 13: Annual Pollutant Loading Estimate (tons)*

Analyte	Gila River	Kiwanis Park Lake	Salt River (above TTL EDW)	Indian Bend Wash	Tempe Town Lake	Salt River (Below TTL)	Papago Park South Pond
BOD	30	1.9	21	1.1	30	133	0.052
COD	138	8.5	95.8	5.2	140	609	0.24
TSS	112	6.9	78	4.2	113	494	0.20
TDS	187	12	130	7.1	190	827	0.33
Total Nitrogen	3.70	0.23	2.6	0.14	3.8	16	0.0065
TKN	2.8	0.17	1.9	0.10	2.8	12	0.0048
TP	0.35	0.022	0.24	0.013	0.36	1.6	0.00061
Antimony	0.0047	0	0.0033	0	0.0048	0.021	0
Arsenic	0.0011	0	0.00076	0	0.0011	0.0048	0
Barium	0.023	0.0014	0.016	0.00085	0.023	0.1	0
Chromium	0.00052	0	0	0	0.00053	0.0023	0
Copper	0.013	0.00083	0.0093	0.00051	0.014	0.059	0
Lead	0	0	0	0	0	0.0018	0
Nickel	0.0016	0	0.0011	0	0.0016	0.0071	0
Selenium	0	0	0	0	0	0.0006	0
Zinc	0.039	0.0024	0.027	0.0015	0.039	0.17	0

Table notes: Metals with non-detects are not listed and zero (0) is less than 1 pound (0.0005 tons). Tempe Town Lake (TTL); Effluent Dependent Water (EDW); total kjeldahl nitrogen (TKN); total phosphorus (TP)

12. Annual Expenditures

Tempe's stormwater program expenditures for the July 1, 2019-June 30, 2020 reporting period is conservatively estimated to be $1,535,968. Funding for the program comes from

Tempe's Capital Improvement Program (CIP) fund and various departmental general funds (GF) and enterprise funds (EF). Further explanation of these expenditures and funding sources can be found in this section.

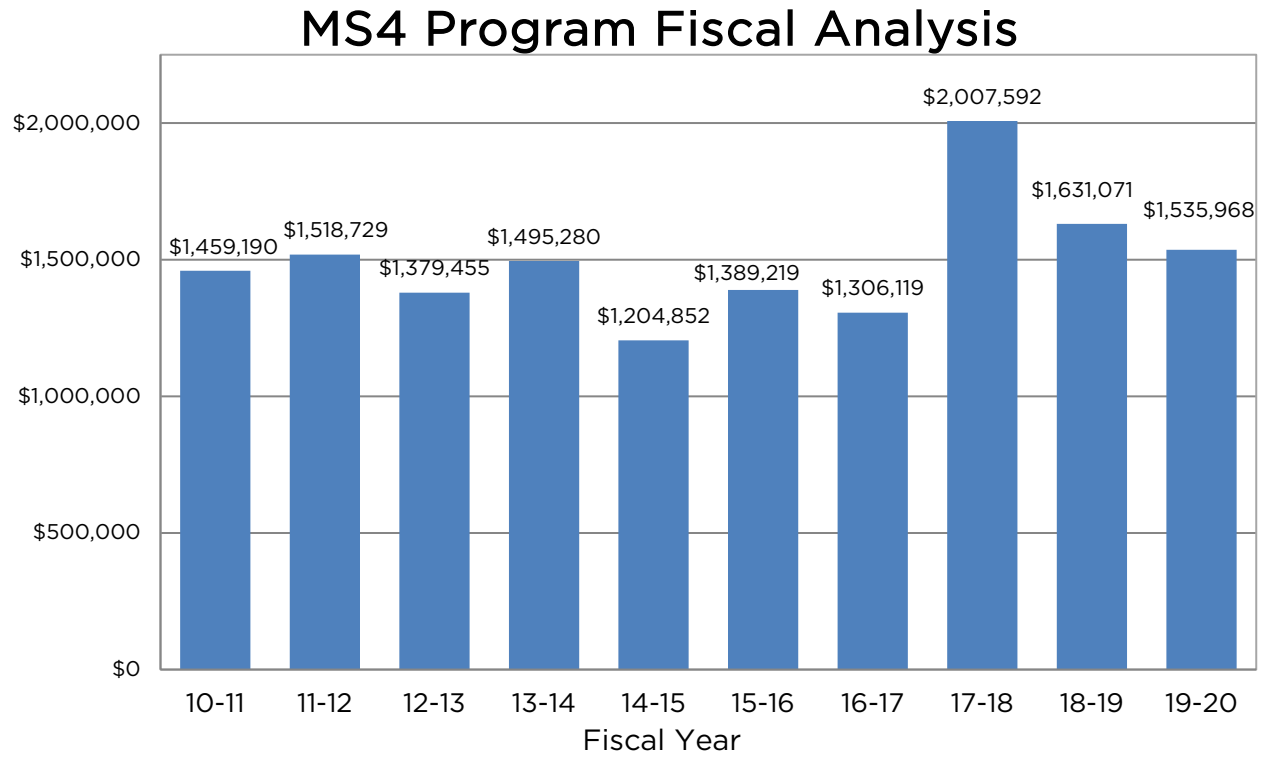
The following factors were considered when developing this fiscal analysis:

- Public involvement and participation programs are not exclusively related to the stormwater program. Accordingly, stormwater expenditures in these areas were either estimated to be one-half of the total operational budget, or the time and materials specific to stormwater activities;
- Most of the operational street sweeping activities are funded as a stormwater program component and are reflected as such;
- Employee attendance at training events hosted internally is not incorporated as a stormwater expenditure, though cost to develop and conduct training is considered;
- Adopt-A-Park programs are volunteer events that have been restructured to run solely on a volunteer basis; Tempe expenses are negligible.

Tempe's stormwater expenditures reflect a decrease from the 2018-2019 reporting year. The following considerations help explain the overall and specific decrease in expenditures:

- One significant decrease in stormwater costs this reporting period is public and education outreach materials and events. There was a decrease of $9,263 primarily due to the COVID-19 pandemic social distancing recommendations, therefore material printing was movedto Fiscal Year 2020-2021 and one event was cancelled;
- There was a decrease from the previous year ($10,362) in expenditures for contracted infrastructure cleaning costs;
- Other incremental expenditure decreases were seen in training, private construction stormwater program, stormwater GIS development, IDDE enforcement, CCTV and analytical costs.

Figure 2: Fiscal Analysis



Tempe cannot accurately estimate the scope of budget changes and cost allocations for the 2020-2021 reporting year; however, the city does anticipate some expenditures to continue to be higher than previous years due to the assumption of the in-house maintenance program and increase in analyses. Tempe will continue to streamline various city processes and increase operational efficiencies to ensure that all stormwater regulatory mandates are met in an economically and environmentally responsible manner. A full summary of this Fiscal Analysis can be found in Table 14.

Table 14: Tempe MS4 Annual Expenditures and Fiscal Analysis

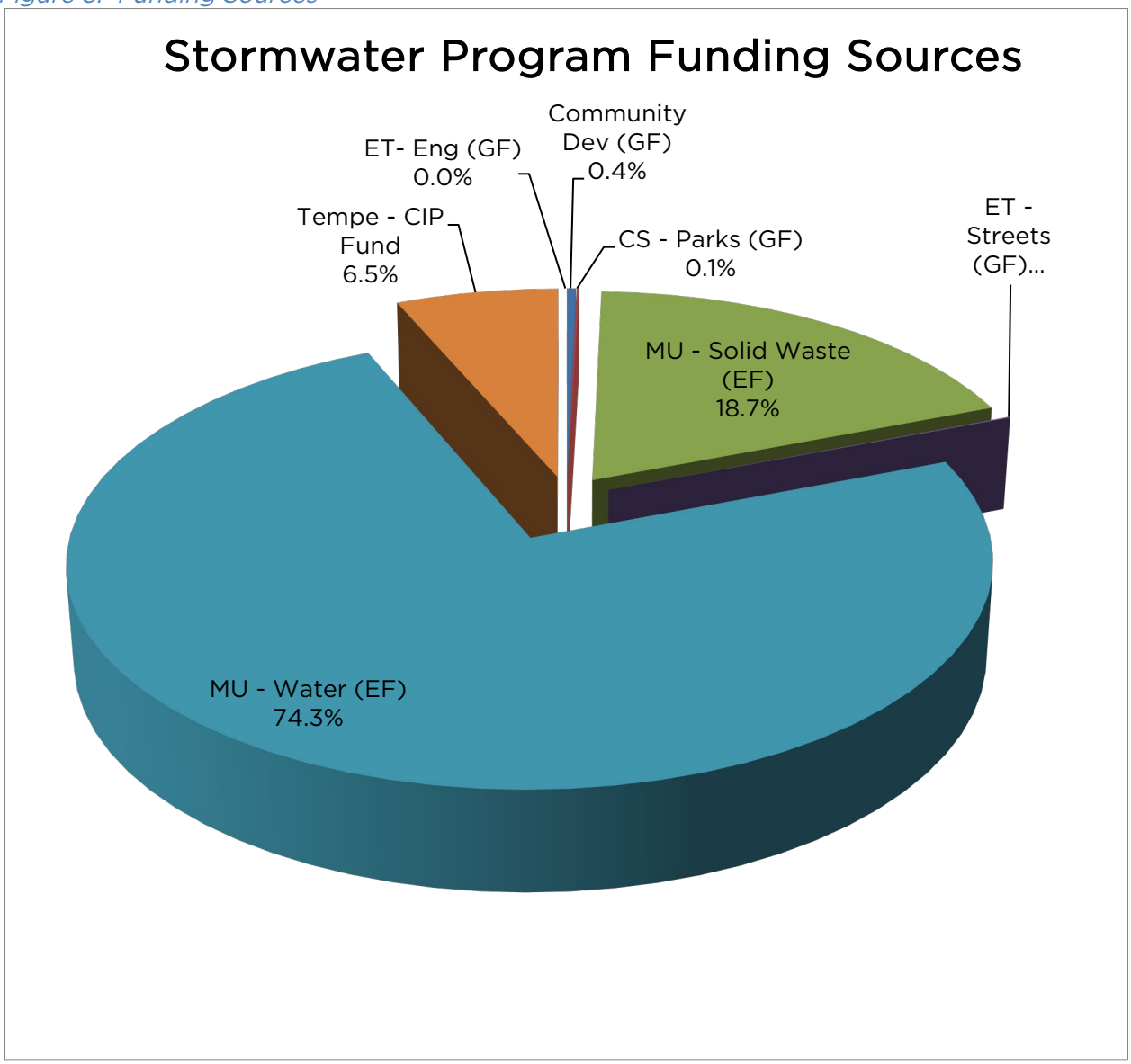
Activity	Amount in U.S. Dollars	Funding Source(s)	Notes
Program Administration (annual reporting, SWMP development and implementation, training, etc.)	$361,088	MU - Water (EF)	1.75 EQS 0.25 EPS
Legal Counsel	$2,000	MU - Water (EF)	Legal counsel - time
Public Education and Outreach			

Activity	Amount in U.S. Dollars	Funding Source(s)	Notes
Materials	$0	MU - Water (EF)	BMP Brochure Printing / Promo Material / Labels
Memberships	$4,000	MU - Water (EF)	STORM Dues
Other	$450	MU - Water (EF)	Outreach Booth for Festival of Arts
Public Involvement and Participation			
Hazardous Materials Safety/HPCC	$287,038	MU - Solid Waste (EF)	(1/2 HPCC operational expenses)
Adopt-A-Park	$0	CS - Parks (GF)	Operated by volunteers no City staff costs
Adopt-A-Path/Street	$1,200	ET - Streets (GF)	Full Program Expense
Training (External)	$2,397	MU - Water (EF)	(3) NPDES CSI - MS4
Capital expenses for new, replaced or repaired stormwater sewers, capital for facility replacement.	$100,000	Tempe - CIP Fund	Repair and replacement of catch basins
Operational expenses for cleaning and/or repairing stormwater sewers.			
Cleaning / Repair (Internal)	$279,861	MU - Water (EF)	Staff Time
Cleaning / Repair (Contract)	$1,666	MU - Water (EF)	Spoils handling / contracted cleaning services
Other expenses/equipment		MU - Water (EF)	
Engineering Capital Construction Stormwater Program		ET - Engineering (GF)	Staff Time
Private Construction Stormwater Program	$5,732	CD - DS (GF) Developer Fees	Staff Time
Stormwater GIS development, maintenance, operations, staff time, etc..	$18,147	MU - Water (EF)	Staff Time

Activity	Amount in U.S. Dollars	Funding Source(s)	Notes
Inspection / Enforcement (IDDE, Industrial / Commercial, etc.)	$141,558	MU - Water (EF)	Staff Time and Equipment
Outfall Inspections / Wet weather Sampling	$72,941	MU - Water (EF)	Staff Time and Equipment
Analytical			
Analytical	$14,370	MU - Water (EF)	
Staff Time - Chemists	$11,926	MU - Water (EF)	
CCTV	$0	MU - Water (EF)	Staff Time and Equipment
Parks and Recreation	$1,400	CS - Parks (GF)	Staff Time and Equipment
Streets			
Street sweeping	$220,193	MU - Water (EF)	4 FTEs - Stormwater Expenditures / Crash truck
Permit Fee	$10,000	MU - Water (EF)	Permit Fee
Total	**$1,535,968**		

Table Notes: Funding sources are:
Municipal Utilities Department (MU)
Community Services (CS)
Engineering and Transportation Department (ET)
Community Development Department (CD)
Development Services (DS)

Figure 3: Funding Sources



13. Attachments

To save resources and paper, Tempe is providing all attachments in electronic format. In the event ADEQ feels there is missing information or would like paper copies of any attachment, please feel free to contact Tempe's stormwater representative. Table 15 summarizes the attachments.

Table 15: Summary of Report Attachments

Attachment	Description	Attachment	Description
A	Outreach, Education, Awareness	P	Non-Filer Notifications
B	STORM Annual Report	Q	Construction Inspections
C	Training Sign-In Sheets	R	Tempe City Code
D	ESS ARCA Infrastructure Inspections	S	Outfall Inspections
E	MS4 Cleaning Summary	T	Sampling Event Parameters
F	Parks and Open Spaces Infrastructure	U	MS4 Sample Event Tracking
G	Call-out Summary	V	Summary of Monitoring Data
H	City of Tempe ERP	W	Laboratory Reports
I	Municipal Facility Inspections	X	Data Trending
J	Municipal Facility Chemical Handling and Spill Procedures	Y	SWQS Comparison
K	Hazardous Waste Management Plan	Z	Pollutant Loading report
L	COT MS4 Pesticide Herbicide Plan	AA	COT SWMP (Minus Attachments)
M	MSGP- SARA Inventory	BB	LID Evaluation
N	Industrial Commercial Inspections	CC	2018-2019 ADEQ Letter
O	Restaurant Inspections		