



City of Tucson

Department of Transportation and Mobility

Stormwater Management Program
(2022 SWMP)
Revised 2023

Permit Term - July 1, 2021 through June 30, 2026

<https://www.tucsonaz.gov/tdot/documents>

The City of Tucson's
Stormwater Management Program
(SWMP) (2021-2026)

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I. Overview

The City of Tucson's Stormwater Management Program (SWMP) was developed by the Stormwater Management Section within the Engineering Division of the Department of Transportation. The SWMP is a requirement of the City of Tucson's AZPDES Stormwater Permit AZS000001-2021 issued by Arizona Department of Environmental Quality (ADEQ). The most recent permit update became effective on July 1, 2021. The permit was not issued until December 30, 2021 with the latest modification on January 26, 2023. This report is the updated SWMP report for the second year of the permit's five-year term 2021-2026.

The City of Tucson has adopted a Stormwater Quality Ordinance No 10209 and all requirements and authority described in Chapter 26, Article II- Stormwater Management. The Stormwater Management procedures and processes in this SWMP complies with the City of Tucson's stormwater ordinance regulations. A copy of the Stormwater Quality Ordinance may be found on the City's website:

<https://www.tucsonaz.gov/Departments/Transportation-Mobility/Stormwater-Management>

The intent of the SWMP is to codify the requirements of the permit and provide guidance to other City of Tucson Department staff with a focus for employees who work outside, to reduce the discharge of pollutants to the Municipal Separate Storm Sewer System (MS4) and into the navigable waters of the U.S. The requirements and master plan reporting goals align with the 2021-2026 permit. The City shall review the SWMP at least annually in December to modify or revise, as needed, existing elements and/or develop new elements to comply with requirements for authorized stormwater discharges into and from its MS4. The City of Tucson shall retain records demonstrating compliance with the requirements of the Permit for a minimum of three (3) years.

II. Public Education and Outreach

A. Permit Requirements

Tucson shall provide outreach and education to the public on the Stormwater program issues and requirements. The following will detail the outreach strategy to be used.

Public education and outreach will be provided to one target group each year. This may include: the public, development community, homeowners, Homeowner Associations, automobile shops or schools. A different group will be targeted each year.

One or more topics shall be used in the public education and outreach program every year, but the topic or topics vary every year. The following topics are proposed:

- Potential impacts of animal waste on water quality and the need to clean up and properly dispose of pet waste to minimize runoff of pollutants in Stormwater
- Proper management and disposal of used oil
- Spill prevention, proper handling and disposal of toxic and hazardous materials, and measures to contain and minimize discharges to the storm sewer system
- Illicit discharges and illegal dumping, proper management of non-stormwater discharges, and providing information on reporting spills, dumping, and illicit discharges
- Installation of catch basin markers or stenciling of storm sewer inlets to minimize illicit discharges and illegal dumping to the storm sewer system
- Stormwater runoff issues and residential Stormwater management practices (GI/LID)
- Water conservation
- Potential water quality impacts of application of pesticides, herbicides and fertilizer and control measures to minimize runoff of pollutants in Stormwater
- Post-construction ordinances and long-term maintenance requirements for permanent Stormwater controls
- Community activities (monitoring programs, environmental protection organization activities, etc.)

The outreach topic selected, and the target group shall be reported in every Annual Report including an estimate of the number of participants reached.

Business sector education/outreach shall be provided to at least one target group every year on one or more appropriate topics. The outreach approach selected, the topic, the target group, and an estimated number of participants reached are documented in the Annual Report. One or more of the following topics are used every year:

- Planning ordinances, grading, and drainage design standards for Stormwater management in new developments and significant redevelopments
- Municipal Stormwater requirements and Stormwater management practices for construction sites.
- Illicit discharges and proper management of non-stormwater discharges
- Spill prevention, proper handling of toxic and hazardous materials, and measures to contain and minimize discharges to the storm sewer system
- Proper management and disposal of used oil and other hazardous or toxic materials, including practices to minimize exposure of materials/wastes to rainfall and minimize contamination of Stormwater runoff
- Stormwater management practices, pollution prevention plans, and facility maintenance procedures
- Water quality impacts associated with land development (including new construction and redevelopment)

The City will evaluate and measure the understanding and adoption of the targeted behaviors for at least one target audience in at least one subject area. The City shall work with the region to gather information on a different targeted audience to collect more

information. The results of the evaluation shall be used to direct future education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors by year four (4). This information shall be included in the Annual Report.

B. Implementation

Stormwater Outreach

The City of Tucson will continue to attend a variety of Stormwater-related public awareness activities every year including Earth Day, Water Festivals, Raytheon EHSS Vendor Fair, Engineers Week (E-Week) Park Mall Event, Juneteenth Festival, Tucson Association of Realtors (TAR) Expo, Health and Safety Fair, Operation Splash, Monsoon Safety Awareness Week, events at Ward Offices and attending Southern Arizona Home Builders Association (SAHBA) meetings. A variety of Stormwater handouts have been developed and shall be distributed at these events. The flyers that are handed out include Discharge Guidelines for Pools and Spas, Yard and Landscape Waste Disposal, Fix Leaky Vehicles, Ten Tips to Prevent Stormwater Pollution, Water Bill flyer, Clean Up After Your Critters, General Construction Flyer, and Best Management Practices (BMP) flyers. The City has also developed both middle school and elementary school materials to distribute to children at these outreach events. Other materials that are handed out include Water Harvesting Guidance Manual and other materials. These materials target the public, the business community, the construction and development community, and school children.

The City will continue to partner with the Pima Association of Governments (PAG) and other jurisdictions to create public awareness of stormwater issues through radio advertisements, interviews, public service announcements, billboards, magazine ads, movie theater slides, brochures, bus interior posters, Facebook, and website pages.

The City will continue to provide public education and initiate outreach activities that include presentations at schools and distribution of materials. The City has a middle school activity book- *Stormwater in the Desert*, with its interactive website activities but is currently inactive as the City pursues software updates for the interactive portions of the book. The City continues to distribute high volumes of the elementary school activity/coloring book- *Desert Wash Safety Activity Book*, at schools, dentists', and doctors' offices.

The City's ongoing catch basin identification program includes placing weather-resistant metal disks bearing the slogan, "Only Rain in the Drain" near catch basins that are more likely to receive illegal dumping. Stormwater staff are to check the inventory to see if replacements are needed.

The City will continue to inform citizens about the importance of preserving naturally vegetated watercourses and continue a program to install signs identifying washes by name

at significant road crossings. It is our intent the public will become aware of the location and name of their local washes. Our hope is they may be more likely to protect the wash as a natural resource if they are aware of its name and importance to the community. Stormwater Staff works with Sign Shop Staff to update and replace signs due to sun fading and graffiti.

Educational Program for Developers and Contractors

Construction information packets containing guidance on complying with the AZPDES General Permit for Construction will be distributed throughout the year. The City of Tucson Stormwater Management Section distributes various flyers on General Construction Procedures, Stormwater Pollution Prevention Plan (SWPPP) Guidelines, and Construction Best Management Practices (BMP). The Stormwater Management Section and Office of Integrative Planning also produced the Water Harvesting Guidance Manual to assist the development community in complying with Land Use Code requirements and low-impact development to maximize use of water harvesting.

The City of Tucson holds an annual Stormwater Workshop in compliance with the current ADEQ MS4 permit to target a variety of audiences including Southern Arizona Homebuilders Association (SAHBA).

Educational Program for Businesses and Industries

Business and Industrial education are provided by flyers handed out as needed throughout the year. Information packets and guidance for industrial facilities include information on the "No Exposure" certification process and an example SWPPP for a local industrial site. Flyers have been developed for Carpet Cleaners, Auto Paint and Body Shops, Auto Repair Shops, Brake Repair Shops, Food Service, Fuel Stations, Auto Salvage Yards, Fabricated Metal Products, Liquid Waste Recyclers, Parking Garage and Parking Lots, Printers and Publishers, Pool and Spa Companies, and Vehicle and Equipment Mobile Cleaners.

The Planning and Development Services Department (PDSD) serves as the one stop permitting facility for the private construction and development community in Tucson. Outreach is conducted through daily interactions with counter staff, handout materials and monthly meetings with contractors and developers. Post-construction maintenance of retention/detention basins and other private storm drain facilities is encouraged through direct mailings and inspections.

Environmental Services - Recycling Education

The City of Tucson Environmental Services Department gives presentations to schools and promotes City recycling programs at special events through news releases, newsletters, flyers, and brochures distributed to the community. This program includes blue barrel curbside recycling and several Neighborhood Recycling Centers (NRCs). Outreach to children includes providing brochures, activity booklets, stickers, recycled rulers, recycled pencils, magnets, recycled water bottles and height charts. Los Reales Landfill also accepts scrap metal for recycling, TVs, and personal computers.

Household Hazardous Waste

The Household Hazardous Waste Program distributes brochures on how to properly dispose of auto fluids, batteries, paints and solvents, pool chemicals, and pesticides. The program provides information to businesses through their Small Business Waste Assistance Program. A link to it is below:

<https://www.tucsonaz.gov/Departments/Environmental-and-General-Services/Household-Hazardous-Waste>

University of Arizona, Cooperative Extension Service

The University of Arizona's Cooperative Extension Services should be providing training on the proper storage, use, and disposal of pesticides, herbicides, and fertilizers to the public, and landscape professionals.

Tucson Water (TW)

The TW Department engages in a wide variety of educational outreach activities intended to increase awareness and encourage citizen action in water-related areas. The outreach program is largely targeted at promoting water conservation and water use efficiency. TW sub-contracts with Environmental Education Exchange to provide water-related programs and presentations to students.

Stormwater Harvesting

The City has created a Green Stormwater Infrastructure (GSI) program to encourage and promote more water harvesting and drainage solutions. The program works with the Ward offices to identify projects. Some GSI projects include park enhancements and Department of Transportation and Mobility (DTM) works with private citizens to do stormwater harvesting by considering curb cuts that enable stormwater to flow into water harvesting depressions. DTM develops water harvesting detail standards to assure efficiency and function and to keep maintenance costs low.

Tucson Clean and Beautiful

Tucson Clean and Beautiful works with communities to implement a variety of programs including tree planting, recycling, Adopt-A-Wash, Adopt-A-Park, and adopting other public spaces.

Recycling Education programs serve the greater Tucson-eastern Pima County metropolitan area. Programs include coordination of a live and recorded Recycling Information Line which serves as a clearinghouse for providing area residents with information on recycling and waste reduction programs including curbside recycling, neighborhood recycling centers, Household Hazardous Waste, and other available community environmental programs. Callers also may request brochures, information directories, and other resources by mail, email, and on the Internet.

Tucson Clean & Beautiful also produces a periodic email newsletter that is now available online, highlighting local environmental education events and community volunteer opportunities while encouraging involvement in the organization's programs.

Pima Association of Governments (PAG)

PAG assists in planning and facilitating the Santa Cruz Watershed Collaborative's semiannual forum, with a theme in 2022-2023 of Regional Drought Planning. Green stormwater infrastructure was a major focus of the conference.

PAG continues to maintain and update the Stormwater Outreach Toolkit and Construction Industry Resources guide. PAG continues to maintain and update the Resiliency Planning Maps:

<https://maps.pagregion.com/PAG-GIMap/>

PAG's distributes pet waste decals and they are displayed throughout the region. PAG's 208 Plan stormwater quality conditions and strategic action plan is also available at the link below:

<https://pagregion.com/sustainability/water-quality/208-plan/>

SWPPP topics are covered through PAGs environmental committees, including the Environmental Planning Advisory Committee, Watershed Planning Subcommittee, and Stormwater Management Working Groups.

PAG also helps coordinate meetings and presentations on green stormwater infrastructure and low impact development with outside academic, community, and professional groups.

C. Five Year Plan

The City of Tucson Stormwater Management Section has developed a five-year public education and outreach plan to focus on specific target audiences and topics, as required under the permit. The plan includes the following:

		Target Audience	Topic
Fiscal Year	2021-2022	<ul style="list-style-type: none"> • General Public • Schools 	<ul style="list-style-type: none"> • Potential impacts of animal waste on water quality • Illicit discharges and illegal dumping, proper management of non-stormwater discharges
	2022-2023	<ul style="list-style-type: none"> • General Public • HOAs and NAs • Residential/Development Community • Commercial Businesses 	<ul style="list-style-type: none"> • Wash Protection, Wildcat Dumping • Water conservation

2023-2024 <ul style="list-style-type: none"> • General Public • Homeowners • Homeowners Associations • Commercial Businesses 	<ul style="list-style-type: none"> • Commercial Businesses – proper disposal of contaminated water • How to clean up spills • Future Alternative Use for Pool Water
2024-2025 <ul style="list-style-type: none"> • General Public • Development Community • Auto Industry • Municipal Employees • Shopping Centers 	<ul style="list-style-type: none"> • LID Outreach • Proper management and disposal of used oil
2025-2026 <ul style="list-style-type: none"> • General Public • Lawn & Garden Centers 	<ul style="list-style-type: none"> • Potential water quality impacts of pesticides, herbicides, and fertilizers

III. Public Involvement and Participation

A. Permit Requirements

Tucson engages the public to help spread the message on preventing Stormwater pollution by sponsoring group activities that highlight storm drain pollution, and contributions from volunteers through community actions to restore and protect local water resources. The following details the outreach strategy used.

The City implements at least one of the following during each year of the permit to provide fundamental support to the City's SWMP. The number of complaints/reports, amounts of garbage/waste collected, attendance at public/volunteer activities, and effectiveness and evaluation of the activity are documented in the Annual Report.

- Provide the opportunity to involve the public in the City's SWMP through the Annual Stormwater Workshop and to encourage public participation in monitoring and reporting spills, discharges, or wildcat dumping within their communities (such as facilitation of neighborhood watch groups).
- Provide the public with an opportunity to participate in the City's SWMP, such as voluntary litter control activities (e.g., facilitation of Adopt a Wash, Adopt a Park, and Adopt a Street litter control activities) or voluntary erosion control projects with sign-up sheets at the Annual Stormwater Workshops.
- Provide the public with a household hazardous waste program to facilitate proper disposal of used oil, antifreeze, pesticides, herbicides, paints, and other hazardous and toxic materials by City residents (such as scheduled household hazardous waste collection events or operation of full-time disposal facilities) a minimum of two (2) times per year for the first two (2) years of the permit, three (3) times per year for years three (3) and four (4) of the permit, and every year thereafter.

The "Report a Concern" is found on the Stormwater web site that is a reporting system to facilitate public reporting of spills, discharges or dumping to the storm sewer system. These are tracked in an incident report database received by Community Service Representatives who relay stormwater concerns to the City of Tucson's Stormwater Management staff.

<https://www.tucsonaz.gov/Departments/Transportation-Mobility/Report-a-Concern>

This updated SWMP will be posted on the City's Stormwater Webpage within one year of the permit effective date. Updates shall be posted when completed. The current SWMP and the latest Annual Report is posted on the City's web site within 30-days after completion. City of Tucson Stormwater ordinance and Water Harvesting Manual is also available at this Stormwater website.

B. Implementation

Public Reporting of Concerns

Spills, discharges, or dumping may be reported by using "Report a Concern" link located in the Stormwater Management Section's web site. These are tabulated in our database.

Environmental Services – Recycling

City of Tucson Environmental Services Department provides an opportunity for residents to participate in residential recycling. Tucson residents and businesses can recycle a wide variety of material – including plastics. Curbside pickup for recycled items is available on the same day as the resident's trash pick-up. Neighborhood Recycling Centers are drop-off sites located throughout Tucson where residents can take any recyclables accepted in the Blue Barrel Recycling Program.

Tucson Clean and Beautiful

Tucson Clean and Beautiful is a nonprofit environmental organization funded in part by the City of Tucson, Pima County, private and corporate grants, and community membership donations. Through the Adopt a Park and Adopt a Wash program, public areas have been officially adopted by community volunteer groups, including schools, neighborhood and civic associations, government, and religious organizations. These groups make an ongoing volunteer commitment to clean up litter and aid in monitoring and reporting maintenance concerns at their adopted area. Volunteers removing of litter and illegally dumped material from public areas help to reduce impacts to Stormwater quality.

Trees for Tucson, a part of Tucson Clean and Beautiful, is a grassroots urban forestry program that advocates planting desert-adapted, low-water-use trees to increase shade tree cover that act to decrease the volume of direct stormwater runoff. Shade trees also help improve water quality by stabilizing soil and reducing erosion.

Tucson Clean and Beautiful produces a periodic e-mail newsletter and hosts a website. These online resources complement information shared by phone, in person and in brochure format, highlighting local environmental education events and community volunteer opportunities. These programs, as well as the central message of Tucson Clean and Beautiful, encourage the public to act responsibly in ways that improve and promote Stormwater quality.

Household Hazardous Waste

The City of Tucson provides year-round Household Hazardous Waste (HHHW) disposal services through a central dedicated hazardous waste facility and five Antifreeze, Batteries, Oil and Paint (ABOP) drop-off sites. The ABOP site at Los Reales Landfill, is now managed under the HHHW Program. The Household Hazardous Waste Collection program distributes outreach materials to the public through direct mailings, handouts at public events and facilities on topics including proper disposal of auto fluids, batteries, paints and solvents, pool chemicals, and pesticides. Educational materials provided to the public include a brochure describing the collection site locations, hours of operations, and tips on how to reduce environmental impacts. The public participates in the program by visiting the facilities and dropping off their household hazardous waste.

The program also provides information to businesses through the Small Business Waste Assistance Program. Waste collection is available to Conditionally Exempt Small Quantity Generator (CESQG) that generates small quantities of hazardous waste.

IV. Illicit Discharge Detection and Elimination (IDDE)

The Illicit Discharge Detection and Elimination Program (IDDE) is divided among three City of Tucson Departments: Planning and Development Services (PDS), Transportation and Mobility (DTM), and TW. PDS is responsible for compliance with the International Building Code and the Uniform Plumbing Code that prohibit cross-connections between sanitary sewers and storm drains. PDS inspectors visit building sites during construction to ensure that all work meets building, electrical and plumbing codes, including prohibition of illegal connection to the storm drain system and requirements for proper wastewater disposal. These PDS inspectors are not Stormwater Inspectors discussed in Section VI; these inspectors are engineering inspectors that inspect the grading and drainage at private development sites.

The DTM, Engineering Division inspects all drainage projects built under the City's Capital Improvement Program. Inspectors from the Division also examine drainage projects built under Private Improvement Agreement Contracts that are dedicated to the City upon completion. Both types of inspections ensure that drainage projects are built to City standards and help minimize illicit connection. The Stormwater Management Inspectors are part of the Engineering Division and implement the City's Field Screening Program, found in Section III Parts C, D, and E, to detect the presence of illicit flows in the storm drain system, in addition to responding to tips and notices from the public or

other informants of discharges identified by the City's Ordinance as sources of pollutants to water of the U.S.

TW is responsible for enforcement of the City's Water Waste (a water cop program), water Theft Ordinance, special ADEQ permitted outfalls to the WOTUS, stormwater interim BMP installation during water main replacement, water line testing, and well/water main flushing. Under this ordinance, Water Waste Investigators are assigned to respond to staff and citizen complaints of dry weather flows of water in the streets, drainage channels, parking lots and other locations. This enforcement program is designed to reduce water waste resulting from over-irrigation and other practices, but also serves as a means of detecting and responding to various types of illicit discharges.

TW requested Stormwater management Inspectors to take PFAS samples in 2022. Currently Stormwater management is awaiting further requests and protocols from TW for Chain of Custody and processing.

In addition, Pima County Regional Wastewater Reclamation Department (RWRD) participates in the IDDE Program through a review and approval process of all modifications to the wastewater system within the city limits. This review ensures compliance with the Uniform Plumbing Code and appropriate disposal of wastewater. RWRD provides copies of Sanitary Sewer Outfall (SSO) reports to City of Tucson Stormwater Management.

A. Municipal Employee Training

1. Stormwater Inspectors:

Stormwater Inspectors, new and existing, receive annual refresher training prior to inspecting the major outfalls and field screening points. These inspections are generally conducted during the dry periods in the spring and fall. Training includes an in-office review of the "Stormwater Management Protocols for Dry-Weather Screening of Outfalls (FSO)," included in Appendix A, inspection forms, sampling procedures, (including sample methods and the use of chain of custody forms), the use of the City's GIS hydrologic and wash map (MapTucson) that includes the City's storm drain system and watercourses. The City of Tucson Smart Automated Monitoring System (SAMS) Stormwater software provides data entry for the field screen database to update FSO's. Additionally, Stormwater Inspectors review outreach handouts, such as the "Discharge Guidelines for Pool & Spa Water," and the "Compliance Process," found in Appendix B. Field training is scheduled prior to annual field screening and includes the use of the Stormwater Testing Procedures to test for pH and chlorine in the field as well as laboratory sampling, and visual investigation processes. Field testing includes visual inspection of the following: color, odor, oil sheen, surface scum, sedimentation, obstruction, clogging, debris, erosion, hazardous waste, high water mark, homeless, pollution, trash, weeds. Field testing may also include testing pH and chlorine as well as taking samples to the laboratory for E. coli, RCRA 8, VOCs, flash point, hardness or other analytes.

2. Non-Stormwater Staff:

Non-stormwater staff include street sweeper drivers, road maintenance crews, meter readers, garbage truck drivers, and other non-stormwater inspectors (code enforcement, building, grading landscape, etc.)

During the first year of employment, employees can review the “New Employee Stormwater Training” presentation that is an introduction to stormwater through the City’s on-line university located on the City’s intranet website called ONE TEAM (oneteam.tucsonaz.gov). Additionally, they receive training from The Safety Group (a section within Risk Management) on various safety topics every month. In the past, the topics included: spill prevention and response, proper storage, handling and disposal of used oil and other toxics, reporting spills, reporting spills that threaten the storm drain system, and reporting suspicious non-storm flows. Fortunately, during orientation, new employees are trained utilizing the “City of Tucson Employee Safety Handbook” that includes spill prevention and response, proper storage, handling and disposal of used oil and other toxics, reporting spills, reporting spills that threaten the storm drain system, and reporting suspicious non-storm flows. New employees are instructed to report all significant non-storm flows to the City’s Environmental Management, Fire Department and Stormwater Management for documentation and then the Stormwater Management Section sends out an inspector for an investigation and action as necessary. New Fire personnel and Stormwater Inspectors receive the specialized 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER).

Current non-stormwater City employees are required to take annual OSHA refresher training through ONE TEAM. Every other year, this mandated training includes information on detecting and reporting spills and suspicious non-storm flows. The training instructed observers to report non-storm flows and spills that threaten to reach the storm drain system to the City’s Emergency Management Coordinator. Fire, stormwater, and environmental services staff take the 8-hr HAZWOPER refresher training annually. Additionally, The Safety Group provides stormwater awareness training annually to all staff who work outside at the Price Service Center.

B. Spill Prevention and Response

Spill response within the City is provided by the Hazardous Materials Unit of the Tucson Fire Department. They have been trained to berm or protect storm drain inlets as practical and appropriate in the event of a spill. As First Responders, they provide technical spill response expertise and oversight and initiate the City’s Hazard Communication Protocol. Among other requirements, this protocol specifies that if a spill threatens to reach the City’s storm drain system, the Stormwater Management Section should be notified. Stormwater personnel can provide specific information on the storm drain system in the spill and, if necessary, provide instructions on protecting or cleaning the stormwater conveyance system. See Appendix C for more regarding the Spill Response Program.

1. Spill Prevention and Control Measures at Municipal Facilities:

The City of Tucson has a City-wide Spill Response Program that provides guidance to employees on what to do in the event of a spill. Spill prevention practices required at City facilities include:

- reduction of the use of toxics,
- reduction in the quantities of these materials that are stored,
- use of secondary containment,
- bermed and covered storage areas where warranted, and
- readily accessible spill kits.

The Spill Response Program defines spill responsibilities for each city agency and includes notification procedures to follow in the event of a spill, including provisions to notify the City's Environmental Management Program Coordinator, Tucson Fire Department, and Stormwater Management if a spill threatens the storm drain system. All spills at City facilities are to be reported to City's Environmental Management Program Coordinator for inclusion in a centralized database at the City's Environmental Services Department.

2. Used Oils and Toxic Control Measures:

Proper use, storage, transport, and disposal of used oil and other hazardous or toxic materials and wastes are achieved in three ways. First, inspection of all City owned, and operated facilities are conducted annually by the City's Facility Inspection Program (FIP). These inspections include a multi-disciplinary team consisting of representatives from Tucson Fire Department, Central Safety Services, Risk Management, and Stormwater Management Section among others. The Facility Inspection Team of inspectors assure that spill prevention practices are followed at all City owned and operated facilities.

Tucson Fire Department funds the City's Hazardous Waste Disposal Program. Under this program, the Fire Department is responsible for providing technical expertise, trained and equipped personnel for the prevention, mitigation and resolution of incidents involving hazardous substances and wastes. The Tucson Fire Department ensures that City facilities properly dispose of hazardous wastes.

City employees are required to take an annual OSHA refresher course through the City's on-line university called ONE TEAM. This training included proper handling, transport, and disposal of potential stormwater pollutants.

The Stormwater Inspector assigned to FIP performs and documents assessments of City facilities where more than five gallons of potentially toxic or hazardous materials are stored in outside areas. Additionally, biennially the inspector ensures that site-specific material handling and spill response procedures are in place and effective.

Additionally, the Stormwater Inspector has identified higher risk facilities. Those are facilities that have a higher storage volume of toxic or hazardous material (5 gallons or

more) or have increase in staff turnover.

C. Major Outfalls and Field Screening Points

1. The outfalls have been mapped on the City's GIS MapTucson under the Stormwater theme and this map also includes the City's storm drain system under the Plan Library/Storm Drains theme. See Appendix D for more information regarding FSOs. The 514 outfalls can be found at MapTucson under the FSO layer in stormwater at the following link:

<https://maps2.tucsonaz.gov/Html5Viewer/?viewer=maptucson>

The City has developed a map that includes the following minimum requirements:

- Storm sewer system including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains that are owned or operated by the permittee and convey stormwater to protected surface waters.
- The location of all outfalls; and
- The name of all protected surface waters that receive discharges from outfalls.

The rationale behind identifying these major outfalls as priority is based on the following characteristics:

- History of illicit discharges and any cause for prioritization identified by the City
- Discharges to/within another regulated MS4
- Discharges located within ¼ mile and upstream of listed impaired, Outstanding Arizona Waters (OAWs), and/or perennial waters

These outfalls identified may impact Lakeside Lake, which is classified as "Not Attaining", as well as the Santa Cruz River, which is an "Impaired Water" downstream of Orange Grove Road alignment.

2. Field Screening Procedures. The City has developed procedures for inspecting field screening points and a database to track and record all findings of conditions and the presence of potential illicit discharges. Procedures for inspecting outfalls include visual inspection for flow, trash, suds, odors, and other indicators of potential illicit discharges. The City follows the protocol established under the 40 CFR 122.26 requirements for the Phase I MS4 permit. These requirements include conducting field screening utilizing the Stormwater Testing Procedures when flow is observed. If the field test indicates the presence of contaminants, a sample is collected and submitted to the laboratory for analysis, and an investigation to determine the source of the flow is conducted. If flow is present, re-inspection within 24 hours is required to determine if the flow is still present.

D. Inspections of Major Outfalls

1. Inspection Priorities and Schedule: To meet the requirements of the City's MS4 permit, the City has inspected the developed watershed upstream of Lakeside Lake, "Not Attaining Water", and determined there are 14 outfalls to the Atterbury Wash that flows into Lakeside Lake and have been included as priority dry weather screening outfalls. In addition, City staff have reviewed the database and determined there are not any instances where illicit discharges have occurred nor are there any significant sources of pollutants. Now identified as a priority, these 14 major outfalls are inspected annually. There have not been any other outfalls identified as 'priority' since the time of this writing.
2. Of the City's 514 identified outfalls, more than 20% are inspected every year, and records of the inspection, any observations, any analytical data, and any follow-up actions are documented in the Field Screen Outfall database. The outfall locations are inspected according to this schedule:

FSO Inspection Area		Number of Outfalls	
Fiscal Year	2021-2022	<ul style="list-style-type: none"> • North East • Atterbury Wash 	<ul style="list-style-type: none"> • 97 • 14
	2022-2023	<ul style="list-style-type: none"> • South East • Atterbury Wash 	<ul style="list-style-type: none"> • 108 • 14
	2023-2024	<ul style="list-style-type: none"> • South West • Atterbury Wash 	<ul style="list-style-type: none"> • 95 • 14
	2024-2025	<ul style="list-style-type: none"> • North West • Atterbury Wash 	<ul style="list-style-type: none"> • 99 • 14
	2025-2026	<ul style="list-style-type: none"> • Central • Atterbury Wash 	<ul style="list-style-type: none"> • 101 • 14

E. Investigation of Potential Illicit Discharges

1. Dry Weather Discharges:
The City has developed Stormwater Management Protocols for Dry-Weather Field Screening of Outfalls (FSO) that includes details for investigating dry weather discharges

including criteria to identify, characterize, and prioritize dry weather flows as well as practices to determine and evaluate the source of the flow and to follow a schedule to eliminate potentially polluting non-storm flows or take enforcement actions where the source is known.

2. Existing Dry Weather Flows:

Currently, there are no known illicit discharges to the City's MS4 that have not yet been resolved. When one of the 514 field screen locations shows evidence of dry weather flow, and past records indicate that the outfall was previously identified as having evidence of dry weather flow, it is re-evaluated to ensure that the flows are not considered to be a continual source of pollutants. Because it takes five years to inspect all 514 outfalls, this means that all outfalls with known dry weather flow are placed on the priority list and annually inspected.

3. Illicit Discharge Investigation (Source Identification):

If flowing or ponded water is present at a field screening location, and the Stormwater Testing Procedures identifies any contaminant (indicated by confirmation using visual inspection or an immediate on-site positive test result), the inspector immediately investigates to determine the source of the water. This may include searching up gradient in the storm drain system (manholes, inlet grates, catch basins, channels, washes, culverts, ditches or other watercourse) for inflows and/or illicit connections, reviewing storm drain maps and records of the area, and interviewing people who work at possible sources of inflow. Additionally, during industrial facility inspections, the Stormwater Inspector inspects drainage within the facility, looking for evidence of non-storm flow that could indicate a cross-connection, poor housekeeping, or other illicit discharge. Any findings are documented on the Stormwater Industrial Inspection Summary. If any concerns are noted, the Stormwater Inspector takes actions to educate the facility operator or enforce the provisions of the City's Stormwater Ordinance (SWORD) as appropriate.

4. Tracking and Reporting:

The City shall track and maintain records of the activities conducted to meet the requirements of Parts 6.1 – 6.6 of the Tucson MS4 Permit. The City shall submit as part of each annual report a summary of IDDE activities in tabular format. The required fields are:

- MS4 Name;
- Date incident reported or discovered;
- Date of the beginning of your response;
- Date of the end of your response;
- Did the discharge reach a protected surface water (yes, no, or unknown);
- Incident location (address or latitude and longitude);
- Pollutants;
- Source; and
- Correction method(s).

The City utilizes the database for IDDE reports. The SAMS Stormwater Software tracks all IDDEs and provides fields for input by the inspector for the following data:

- Incident Number;
- Incident Date;
- Type of Inspection;
 - Citizen Complaint,
 - Construction Site SWPPP,
 - Commercial,
 - De minimis discharge,
 - Dry-Weather flow,
 - Feces,
 - Fire suppression runoff conditions,
 - Grey water discharge,
 - Industrial,
 - Mosquito compliant,
 - Private SSO,
 - Public SSO,
 - Reclaimed water discharge,
 - Referral from other Agency,
 - Residential,
 - Spill,
 - Storm Drain Issue,
 - Swimming Pool Issue, and
 - Watercourse issue.
- Inspector Name;
- Location;
- Complaint;
- Tucson Codes that may be applicable;
- Actions taken by the Stormwater Inspector;
- Complaint Status;
- Whether Follow-up Needed;
- Status Update (if case is still open);
- Updated Status Date;
- Additional Comments; and
- Additional Inspections Performed By.

The City also utilizes a field screening outfall database (FSO) for all the data collected during dry weather field screening. The database is organized by outfall, and previous inspection records are accessible. The database also includes fields where observations, testing results, laboratory results and follow-up actions are recorded. A summary report is prepared based on the current information contained in the database. The FSO map will be updated each year and included in the 4th year Annual Report. The map indicates which outfalls were flowing, if any, or had evidence of recent flow, and any outfall where field testing was conducted, and/or samples were collected for laboratory analysis. Any outfalls with indications of recent flow are re-inspected within three days. If there is any

flow, Stormwater Inspector will perform testing Stormwater Testing Procedures. If a unknown contaminant is detected, a sample is collected for laboratory analysis.

5. Illicit Discharge Elimination:

Illicit discharges to the MS4 are prohibited and constitute a violation of the permit, when the City is not fully implementing applicable permit requirements and the SWMP.

Upon detection of an illicit discharge, or receipt of a complaint regarding a discharge, the City shall eliminate the discharge as expeditiously as possible. The City shall identify and notify all responsible parties for any such discharge and require immediate cessation in accordance with the Stormwater Ordinance and other Tucson Code and regulations. Where elimination of an illicit discharge is not immediately possible, the City shall require a Corrective Action Plan per Stormwater Ordinance Code which establishes a schedule for any active cases for the elimination and also reports the dates of identification and schedules for removal in the permittee's annual reports. The City shall immediately commence actions necessary for elimination. In the interim, the City shall take all reasonable and prudent measures to minimize the discharge of pollutants to its MS4.

The City of Tucson MS4 system has relatively few underground conduits; most of the storm drain system consists of open channels and natural and improved washes. Conducting follow-up investigations of dry weather flows can be as basic as following the flow path upstream to the source. If the flow passes through an underground conduit, Stormwater Inspectors utilize storm drain plans or the GIS MapTucson (theme setting: City Flood Data) to determine the flow path of the discharge. If the source can be determined and has the potential to be a source of pollutants, as evidenced by field or laboratory testing, it should be considered illicit. The following steps are taken to cease the discharge to the storm drain system: staff determines responsible party and then requests the responsible party to immediately cease and control the discharge. Other actions may be necessary if cessation of the illicit discharge is not immediately taken; this includes issuance of a written or verbal warning, issue of a notice of violation, issue of a citation, and notification of regulatory authorities. Inspectors also provide distribution of guidance materials pertaining to the type of spill or incident.

6. Public Awareness and Reporting of Potential Illicit Discharges:

The City utilizes an integrated stormwater quality education program that includes messages on recognizing and reporting suspect non-storm discharges. This program includes storm drain inlet markers bearing the slogan, "Only Rain in the Drain," wash identification signs with the admonition to "Protect Our Natural Watercourses," and "No Dumping" signs at washes where illicit dumping has been known to occur. Citizens with concerns regarding suspect non-storm or dry weather flows are directed through the City's website to a "report a concern" link that sends an email alerting the Stormwater Management Section staff at stormwater@tucsonaz.gov. Detailed discussion of the City's Stormwater Quality Education Program can be found under I. Public Awareness and Outreach.

7. Investigation of Reported Potential Illicit Discharges:

Stormwater Inspectors investigate reports of dry weather flows to determine if they are significant sources of pollutants. Due to the nature of the City's storm drain system, sampling is not usually the first course of action when investigating a non-storm flow. The City's storm drain system contains limited subsurface conduit and is primarily comprised of natural and improved open channels. Usually, the inspector can trace the flow path and identify the source. Typical dry weather flows include discharges from pools and irrigation overflow and there is an increasing number of private SSO and unboxed pollutants occurring. The City could see an improvement to IDDE issues if Pima County would resume providing SSO reports to City of Tucson Stormwater management and informing the City when there are SSOs impacting the City's stormdrain systems. Stormwater management is also working with Risk Management to increase awareness for other departments such as Housing Community Development who are trying to address SSO incidents. The Stormwater Management Protocols for Dry-Weather Field Screening of Outfalls (FSO) discussed in E.1 includes a list of allowable dry weather flows and criteria to determine if a suspect flow is a significant source of pollutants.

8. Responding to Reports of Potential Illicit Discharges:

Stormwater Inspectors respond to a minimum of 90% of reports of illicit discharges by initiating an inspection to determine the source.

9. Investigating Potential Illicit Discharges:

Stormwater Inspectors investigate a minimum of 80% of potential illicit discharges identified by field screening, public reporting, or other detection methods, such as reports by other City departments or government agencies, within three days of the detection or report. When discharges contain obvious indicators of pollutants as determined by visual observation or field testing, the investigation is initiated immediately.

F. Illicit Discharge Elimination

1. Illicit Discharge Ordinance:

The City's Floodplain, Stormwater, and Erosion Hazard Management Ordinance prohibits the discharge of all sources of pollutants to the City's stormwater drainage system, including non-storm flows and illicit discharges. The ordinance contains provisions to enforce against any party shown to be discharging pollutants to the storm drain system and requires the responsible party to eliminate the discharge and perform clean-up activities as needed or face penalties. The compliance process developed defines a corrective action to be initiated within five days, staff typically initiates responses same day or within 4 days maximum.

2. Non-Stormwater Discharge Evaluation:

Discharges that qualify for the AZPDES De Minimus General Permit are not prohibited. Qualifying Discharges include:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(b)(20)) to separate storm sewers
- Uncontaminated pumped groundwater
- Discharges from potable water sources
- Foundation drains
- De Minimus, pumped water from construction sites
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated, clean swimming pool discharges
- Street wash water
- Discharges or flows from emergency firefighting activities
- Discharges authorized by another NPDES or AZPDES permit

Although air conditioning condensation is listed in the stormwater ordinance as a prohibited discharge, there is existing building codes which prohibit the air conditioning condensate from leaving the property.

If the source of the discharge qualifies for the De Minimus General Permit, and if the results of the field tests are negative, then the discharge is not considered to be a significant source of pollutants. Please note, however, that swimming pool (and spa) discharges should follow Discharge Guidelines for Pool & Spa Water found in Appendix B. Staff checks for characteristics that would designate the discharge as De Minimus. For instance, discharges with notable color are not considered De Minimus.

3. Non-stormwater Discharge Records:

The City maintains a database of tracking and recording non-stormwater discharges, available upon request.

G. Compliance Activities/Enforcement

The City of Tucson has developed an enforcement guidance Compliance Process that includes prioritizing the violation, as either a very minor deficiency, a minor deficiency, or a major deficiency.

The three stages of compliance for an illicit discharge include stopping the flow, controlling/containing the flow and cleaning up the discharge. Stormwater Inspectors

will work with property owner or tenant to first stop the illicit discharge and then to address the other steps.

If the enforcement has to escalate and depending on the severity of the infraction, the Stormwater Inspector will issue a verbal warning and subsequently, a written warning (Notice of Violation of Stormwater code) with an opportunity to resolve the condition within a set time frame or a notice of violation. In some cases, the warning will include a request for a Corrective Action Plan per code. Stormwater Management staff works with City of Tucson Environmental and General Services Department (EGSD) Code Enforcement section to further escalate incidents that are not being resolved with the notice of violation. Code Enforcement will take the case to court for clean-up and other mitigation actions. Resolution must be reached on 80% of these incidents within one year, or the violation is transferred to the City Court. The Compliance Process flowchart is in Appendix G and more information on Compliance Activities and Enforcement in Appendix E.

The City shall track instances of non-compliance either in hard copy files or electronically. The enforcement case documentation shall include, at a minimum, the following:

- Name of owner/operator of facility or site of violation
- Location of the illicit discharge source (*e.g.*, construction project, industrial facility)
- Description of violation
- Required schedule for returning to compliance
- Description of enforcement response used, including escalated responses if repeat violations occur or violations are not resolved in a timely manner
- Accompanying documentation of enforcement response (*e.g.*, notices of noncompliance, notices of violations)
- Any referrals to different departments or agencies
- Date violation was resolved.

V. Municipal Facilities Pollution Prevention/Good Housekeeping Program

The Municipal Facilities Pollution Prevention Program is shared by several City of Tucson Departments and Programs. They include:

Fire Department

The Tucson Fire Department (TFD) is responsible for enforcing the hazardous materials storage provision of the International Fire Code. This includes reviewing building plans for compliance with International Fire Code and conducting building inspection. The Fire Code includes requirements for secondary containment for hazardous materials storage. TFD has HazMat emergency response units respond to spill incidents that could impact waters of the U.S. or the City's municipal separate storm sewer system. Upon

arrival at a site, the HazMat Unit will investigate the incident, contain the spill, and in conjunction with TFD Fire Prevention Division Inspectors, initiate containment, and cleanup procedures. TFD initiates annual review of the stormwater related safety directives including SD-022 (Spill Response Program). Staff in this annual review includes EGSD, TFD, PDSD, The Safety Group, DTM-Streets, and DTM-Stormwater.

Department of Transportation and Mobility (DTM)

Erosion control and repair of road surfaces includes dust suppression, street dirt maintenance, shoulder grading, and alley dirt maintenance. These activities contribute to improving stormwater quality by reducing suspended solids and other naturally occurring constituents of concern associated with sediment in runoff.

The Streets Maintenance Division has established a standard of sweeping major arterial and collector streets monthly and sweeping the central business district weekly. As needed, the debris from street sweeping is transferred to dump trucks and hauled to approved landfills for disposal. DTM Streets section spends over a couple of million dollars a year for storm drain system maintenance. An additional element of the sweeping program involves sweeping for special events and at various City-owned facilities as appropriate. This category includes sweeping following traffic accidents or after spill cleanups in the street. After storms, a cleanup involves additional street sweeping and debris removal. Unhoused encampments, previously maintained by streets section, is as of 2022, primarily cleaned up by EGSD and environmental hazard clean-up companies hired by the City.

The primary responsibility for maintenance of the public storm drain system and public detention/retention basins lies with the DTM Streets Division with assistance from the DTM Engineering Division.

General Services Department

The General Services Department (GSD) as a part of EGSD (as a combination of two departments) has taken the lead in implementing the City's Spill Policy. GSD supplies spill kits for the Thomas O. Price Service Center. Upon request, the General Services Department will coordinate the disposal of spent materials. Used rags, unless they are considered contaminated with hazardous materials, are taken to the landfill. Otherwise, they are disposed of at Household Hazardous Waste facilities. Restocking the spill kits with absorbent material is the responsibility of the department.

Thomas O. Price Service Center houses the vehicle maintenance yard, fueling operations, and material storage yards that support the functions of Facilities Management, Fleet Services, and Communications. Thomas O. Price Service Center operates under a Spill Prevention Control and Countermeasure (SPCC) plan. The City developed a Stormwater Pollution Prevention Plan (SWPPP) for this facility. A major update to the SWPPP was the summer of 2020 and the SPCC Plan was in 2019. The SWPPP is adhered to, reviewed for effectiveness, and updated as needed.

In accordance with these plans, spill control stations were erected next to vehicle parking and repair areas, as well as at the fuel island similar to other City fuel stations. TFD, HazMat Unit or contractors handle cleanup for large spills, or spills of unknown materials. During normal operations, personnel from the General Services Department routinely clean up minor spills that occur while maintaining the City's vehicles. In most cases, these minor spills were caused by failure of coolant and hydraulic lines on City vehicles or equipment.

Environmental Management Program

The City of Tucson's Environmental Management Program, or EMP, provides a set of management processes and procedures that address the needs of the City's staff to analyze, control and reduce the environmental impact of its activities, services, and programs.

The EMP allows City staff to continuously improve its environmental performance, operate with greater efficiency and control, and provide the highest level of environmental protection to the departments and the community.

The City of Tucson's EMP is comprised of a group of senior department representatives whose focus is to convene and implement proactive, comprehensive, and collaborative environmental management tools to address environmental issues facing the City of Tucson.

Quarterly meetings were scheduled for the EMP group to assemble and apply issue identification and problem-solving tools that can be used by employees to meet individual department's environmental activities and needs. This meeting is integral to finding solutions and getting up-to-date on environmental remediation projects and environmental hazardous conditions and which departments are working on these issues. During COVID-19, these meetings stopped occurring, however it is expected that these meetings will resume. Staff evaluates the processes and procedures they use to manage environmental issues and incorporate strong operational controls, roles, and responsibilities into existing job descriptions and work instructions. The EMP integrates the environment into everyday business operations, and environmental stewardship becomes part of the daily responsibility for employees across the entire City organization.

Representatives from the larger departments form a Governing Board (GB). The EMP GB used to meet monthly to set priorities, manage current incidents, and follow up on previous incidents. The meetings usually included training, question and answer sessions, and informational updates.

The City's EMP is an evolving, growing, changing program based on the "Plan, Do, Check, Act" model. This model leads to continual improvement based upon:

- Plan Planning, identifying environmental aspects and establishing goals
- Do Implementing, training and operational controls

- Check Checking, monitoring and corrective action
- Act Reviewing, progress reviews and act to make needed changes to the EMP.

Parks and Recreation Department

Within City-owned parks and golf courses, the Parks and Recreation Department is responsible for drainage system maintenance. Drainage channels are maintained primarily using manual and mechanical means to control vegetation.

Within City owned and operated parks and golf courses, washes, and selected detention/retention basins, the Parks and Recreation Department performs minor maintenance and repairs to the stormwater drainage system. In addition, the Department is responsible for the maintenance of detention/retention basins owned by the City within and adjacent to developed park areas. These basins are on the Dell Ulrich Golf Course, at 600 South Alvernon Way. A series of six small detention basins along the Arroyo Chico Drainage way lie within the golf course. Local detention basins are currently being developed in conjunction with the City's Proposition 407 Program for Park Improvements. Parks designated to be improved are being studied for potential to accept offsite stormwater into the park layout for detention or retention. Debris and trash are removed from all basins seasonally, or as necessary, contingent on flow.

All open channels within the Parks and Recreation Department's parks and golf courses are maintained with careful attention to plant life and the environment. Drainageways are monitored, and actions are taken to ensure healthy plant life and restriction-free waterways.

Risk Management – The Safety Group

The Safety Group provides stormwater training to new employees and refresher safety training for all employees. Risk Management used to manage the Facility Inspection Program (FIP) called Multi-Agency Inspection Team (MAIT). During COVID-19, MAITs was disbanded and is expected to resume. This program utilized a multi-disciplinary team consisting of representatives from various City departments to inspect City-owned and operated facilities for environmental and safety regulatory compliance. The FIP team consisted of representatives from the following City agencies: The Safety Group, TFD, EGSD, DTM-Stormwater Management; and a representative of the City's liability insurer. Each City-owned facility is intended to be inspected annually. Following each inspection, the inspection team would document any concerns and recommend pollution control measures in an inspection report. The report would be supplied to the department in charge of the facility for follow up action.

A. Employee Training

New City employees take an Introduction to Stormwater class that is available through Oneteam.tucsonaz.gov. Additionally, new City employees attend mandatory OSHA training during their first year and ongoing employees receive OSHA training every other year as discussed in the previous section. Specific staff to be trained include fleet maintenance personnel with General Services, Fire's HazMat Team, and Fire Code Inspectors, Transportation's street sweeper drivers, Parks and Recreation Department's fertilizer applicators, vehicle maintenance personnel, and wash, detention/retention basin maintenance crews. OSHA training for City of Tucson employees will include the following key subject areas:

1. Spill Training: topics covered include prevention, response, and practices to prevent or minimize spills or discharges to the City's storm drain system, and
2. Proper handling, storage, transport and disposal of used oil and other toxics and hazardous materials and wastes to prevent spills, exposure to rainfall, and contamination of stormwater runoff.

Specialized training for Stormwater Inspectors includes the following:

1. Stormwater management practices and pollution prevention plans.
2. Review of the Floodplain, Stormwater, and Erosion Hazard Management Ordinance and supporting development standards and other Tucson regulations.
3. Review of stormwater discharge regulations and permit requirements, including the Stormwater Management Program (SWMP).

The City of Tucson Stormwater Management training includes the importance of protecting water quality, pollutants and sources of pollutants expected at the facilities, operation and maintenance standards, inspection procedures, relevant SWPPPs, selecting appropriate BMPs, ways to perform job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns. Follow-up training is provided as needed to address changes in procedures, techniques, requirements, or staffing.

Fleet Maintenance personnel received training in the City's Hazardous Communication Program and the Spill Response Program requirements to clean minor spills.

DTM Stormwater Inspectors receive training during their first year of employment and refresher training every other year. New Stormwater employees each receive a copy of the AZPDES General Permit for Discharge from Construction Activities to Waters of the United States, SWMP, the Floodplain, Stormwater, and Erosion Hazard Management Ordinance, the Stormwater Sampling Procedures, the Stormwater Industrial Inspection Procedures, and the Stormwater Construction Inspection Procedures and other training material. Every other year these materials are reviewed and updated as needed.

On-going training for PDSO Stormwater staff includes frequent review and discussion of the AZPDES General Permit for Discharge from Construction Activities to Waters of the United States, the Floodplain, Stormwater, and Erosion Hazard Management Ordinance, and Development Standards. New staff are trained by existing staff in a mentoring process.

The City has developed training on best management practices (BMPs) for street repair and road improvements to control the discharge of pollutants to the storm drain system, to employees directly involved in these activities.

B. Municipally Owned and Operated Facilities

1. Municipal Facility Inventory:

As discussed in the previous section, The Safety Group maintains a list of City owned and operated facilities that were inspected as part of the Facility Inspection Program. A new list was derived from the FIP list and serves as a starting point for developing the required floodplain and stormwater information for each facility. The following information was added to the inventory (that have the potential to discharge pollutants to waters of the U.S.); latitude/longitude, facility contact, the operational status (operating or closed), the Standard Industrial Classification (SIC) code(s) that best reflects the services provided by each facility, and brief description of activities that may generate pollutants of concern as well as pollutants of concern and other factors of risk at such facilities.

2. Higher Risk Facilities:

The Stormwater Inspector assigned to the FIP is to collect information and assess the potential of City owned and operated facilities to impact stormwater quality. The facilities were prioritized based on the following criteria:

- i. Proximity to Lakeside Lake, an impaired water, and associated upstream major outfalls,
- ii. Need for an MSGP,
- iii. Potential for impacting stormwater quality due to material handling, storage and use, including pesticide and herbicide use and maintenance of oil and toxic materials,
- iv. Current priority City-owned facilities include Lincoln Regional Park and Fred Enke Golf Course*, both located upstream of the impaired Lakeside Lake. These facilities are inspected annually. Other City facilities are considered higher risk. They are Thomas O. Price Service Center, Silverbell and Randolph Golf Courses*, Reid Park Zoo*, Fire Department Maintenance (HAZMAT) and Household Hazardous Waste. Additionally, facilities with an MSGP are considered higher risk. They are Los Reales Landfill, (AZMSG-61695), Sun Tran Bus Terminal AZMSG-61745, Sun Tran Bus Terminal Northwest AZMSG-61747, Sun Van AZMSG-61746, and

- v. The El Rio Golf Course* was found to be higher risk from previous FIP inspections and had been included in the higher risk list of facilities.
- vi. Potential for exposure to stormwater.

*The Reid Park Zoo is owned by the City, however has a management agreement, like the Golf Courses, for a group to perform Stormwater Management. City is to review performance by these management groups to ensure Stormwater Ordinance and Stormwater Permit compliance.

3. The City controls the use of pesticides, herbicides, and fertilizers, by ensuring that those used in any area within or adjacent to the waters of the U.S. are approved for aquatic use under the Federal Insecticide, Fungicide, Rodenticide Act (FIFRA). Herbicides and pesticides, as a Stormwater Management policy, are not used within riparian floodplain wash bottoms or side slopes.

C. Inspections

1. Prioritizing Areas of MS4 for Inspection:

The City of Tucson, DTM - Streets Division shares responsibility for inspection and maintenance of the City's MS4 Drainage System with the Parks and Recreation Department. There are approximately 32 miles of drainage channels/washes and seven retention/detention basins located within City owned parks. All 32 miles of drainage channels within City owned parks are considered priority and are inspected a minimum of once a year. Based on system history, citizen complaints, and known maintenance concerns, the City annually inspects key areas of the storm drain system located outside of City owned parks for the presence of illicit discharges, excess sediment, litter, debris, or other pollutants that may obstruct flow or be transported in stormwater. In addition, Stormwater Inspectors perform inspections of the City's MS4.

2. Municipal Facility Assessments:

Prior to COVID-19, the City's MAITs, as part of the FIP program, used to conduct annual inspections of all City owned and operated facilities. Follow-up inspections had been conducted to verify that corrections have been performed as needed. The Stormwater Inspector assigned to FIP performed assessments of City facilities and determined if five or more gallons of potential stormwater pollutants such as oil, fuel, chemicals, or fertilizers were stored in areas that could be exposed to stormwater. Based on this assessment, and on the types of activities performed, material stored and proximity to receiving waters, the City had determined which of these facilities were considered high risk. They high risk facilities are listed in B.2.v of this section.

The City shall identify in the Annual Report municipal facilities inspected and note whether improvements were needed. The City shall initiate any recommended improvements within three months of the inspection and set a schedule for implementation. The City will maintain a tracking system and the status of improvements and dates of implementation.

D. Infrastructure Maintenance

1. The City shall evaluate the drainage system maintenance priorities and update the inspection schedule at least once a year. The number of units (broom miles, number of storm drain inlets, or pounds of debris, etc.) cleaned each year is considered for documentation in the Annual Report.
2. The Streets Maintenance Division's current priorities for street sweeping for major arterial and collector streets and sweeping streets in the central business district. These priorities are reassessed annually. Street and parking lot sweeping in public parks is conducted through the Parks and Recreation Department. The City shall evaluate street sweeping frequency at least once a year.
3. The City will continue to assess all municipal maintenance activities performed by the City (e.g., paving and road repairs, saw cutting, concrete work, curb and gutter replacement, buried utility repairs and installation, vegetation removal, street and parking lot striping, drainage channel cleaning, etc.) and update a control measure field manual for municipal maintenance activities.

E. Municipal System Maps

The City's Geographic Information System (GIS) mapping system is formatted as an Environmental Systems Research Institute (ESRI) Geodatabase feature class North America Datum of 1983 (NAD83) High Accuracy Reference Network (HARN) in State Plane Arizona Central FIPS 0202 International Feet. The GIS based MapTucson, <https://maps2.tucsonaz.gov/Html5Viewer/?viewer=maptucson> currently contains the following information:

- Linear Drainage Structures: Line layer showing the location of Stormwater system pipes. The direction of flow can be determined based on the topographic layer.
- Storm Drain Grates and Catch Basins: Point layer showing the locations of storm drain grates and catch basins.
- Outfalls: Point layer showing the location of all major outfalls (field screen locations); polygon layer showing the drainage area associated with each of the five sampling sites where Stormwater is monitored.
- Detention/Retention Basins: Point or polygon layer showing the locations of all identified City-owned retention and detention basins.
- Jurisdictional Boundary: Line or polygon layer showing the jurisdictional boundaries of the MS4, including any new land annexations during the permit term.

The additional features will include:

City of Tucson Regulatory Floodplain data and Linear Drainage Structures

- Line layer showing the location of all streets used for stormwater conveyance and the direction of stormwater flow.

- Line layer showing other linear stormwater conveyance structures (channels, culverts, inlets, bank protection, floodways, etc.) and the direction of stormwater flow.

Land Uses – Polygon layer showing the land uses within each drainage area associated with each outfall.

Detention/Retention Basins

- Point layer showing the location of all privately-owned retention and detention basins that are connected to the municipal stormwater conveyance system (i.e., that receive drainage from, or discharge to, a stormwater conveyance).
- Line layers showing the drainage infrastructure associated with each retention/detention basin.

Locations of Discharges to Waters of the United States

- Line or polygon layer shall show the location (and name) of all waters of the U.S. that may receive stormwater discharges from the MS4 either directly or by way of a conveyance owned or operated by another person.
- Any water body that is listed as an Outstanding Arizona Water (A.A.C. R18-11-112) or as an Impaired Water (Arizona's 303(d)) and other impaired water list(s) shall be clearly identified.

The City shall continue to update all new stormwater infrastructure to the current GIS based MapTucson.

VI. Industrial and Commercial Facilities (Non-Municipally Owned)

The City of Tucson Stormwater Management (which is in a section of DTM) is responsible for implementing the City's stormwater program to control pollutants in stormwater discharges from industrial and commercial facilities. Outreach to the industrial and commercial community on stormwater management is detailed in Sections I. and II. Public Education and Public Involvement. See Appendix F for a summary of the Stormwater Industrial Inspection Program.

A. Municipal Employee Training

New Stormwater Management Staff receive extensive training during their first year. Stormwater training incorporates both SWPPP review and inspection. Employees each receive a copy of the SWMP, the Floodplain, Stormwater, and Erosion Hazard Management Ordinance, manuals on the Multi-Sector General Permits, the Stormwater Industrial Inspection Procedures, and outreach materials for stormwater management for industrial and commercial facilities.

Stormwater Inspectors receive training regularly and at a minimum, every other year, through seminars, educational videos, and on-line training. Where applicable, training dates and topics are recorded for inclusion in the Stormwater Annual Report.

B. Inventory

1. The Stormwater Management Section maintains a database of industrial and commercial facilities that have the potential to discharge pollutants to the City's storm drain system. The list includes the facility name and address, and the Standard Industrial Classification (SIC) code(s) best reflects the principal products or services provided by each facility. The Stormwater Management Section added a brief description of the facilities' activities to the Industrial Facility Database. The database includes the following facilities:
 - i. Industrial facilities identified in 40 CFR 122.26(d)(2)(iv)(C);
 - ii. Industrial facilities subject to MSGP requirements, including those facilities that have submitted for a no exposure exclusion; and
 - iii. Other industrial and commercial sources (or categories of sources) where the City determined to be a significant source of pollutants.
2. Higher Risk Facilities:

The Stormwater Management Section prioritized inspections. The higher risk facilities are most likely to be sources of stormwater pollution. The risk assessment includes the type of facility, the products or services provided by the facility, proximity to receiving waters, receiving water quality, and other factors that indicate the potential to impact water quality.
3. Maintaining the Inventory:

The Industrial Facility Database is updated regularly, and a minimum of biannually throughout the permit term. The information is obtained through various means including correspondence with the facility, inspection visits to the facility, and mailings to groups of facilities requesting their assistance in protecting stormwater quality. The inventory is reviewed biannually to determine if there are any facilities that have not filed a Notice of Intent (NOI) with the State of Arizona. Due to changes in the ADEQ website, Commercial and Industrial facilities have had difficulty obtaining updated NOIs.
4. AZPDES Non-filers:

When the City learns either through reporting, inspection or during a review of the Industrial Facility Database that a particular facility may not have obtained coverage as required under the Arizona MSGP, the City will report that facility's location and contact information to the ADEQ – Water Quality Compliance Section, Field services Unit Manager, Mail Code: 5415B-1, 1110 West Washington Street, Phoenix, AZ 85007. In addition, the City either calls or sends a letter to the facility notifying them of the City's MS4 Permit requirement to report them to ADEQ.
5. Other Measures to Control Pollutants from Landfills, Municipal Waste Facilities, and Industrial Facilities:

The City conducts annual inspections of Los Reales Landfill, despite the landfill's coverage under the MSGPs. This inspection is an additional measure to ensure that pollutants from landfills, municipal waste facilities, and industrial facilities are controlled and watershed boundaries are maintained.

6. Finding MSGP Targeted Industrial Facilities:

In addition to the established inventory of industrial facilities, a Stormwater Inspector routinely visit areas of the City zoned for industrial uses and takes note of new businesses. The City's business license database no longer references the SIC code, however, on-line searches of local business directories are utilized to locate new facilities.

7. Notifying New Industries of MSGP Requirements:

Once a new facility is identified as being potentially targeted under Arizona's MSGP, a Stormwater Inspector schedules a site visit to assess the facility, and if appropriate, provides an outreach packet with information on the MSGP permit requirements. In addition, the City advises the facility operator that the City is required by its Permit to report them to ADEQ as a non-filer. Non-filers are reported to AZPDES@azdeq.gov within five (5) business days of identification.

C. Inspections

1. Inspection Procedures:

The Stormwater Inspector verifies that an NOI has been filed and an authorization number issued by ADEQ, and that a SWPPP exists for the facility. A review of the SWPPP is performed to verify that substantial elements required by the permit are addressed. Additionally, an inspection of the site is performed to verify that the SWPPP is implemented and accurate as well as good housekeeping measures are being performed. Outdoor materials handling and storage areas are inspected, along with hazardous materials handling, secondary containment measures, and spill controls. The location of stormwater flow entering and exiting the site is inspected. Potential sources of pollutants or illicit discharges are addressed during the inspection and in an inspection report. A thorough inspection report is prepared for, and provided to, the owner and operator of the facility.

2. Industrial Facility Inspections – Higher Risk:

The City developed a system to identify higher risk facilities. The City prioritized industrial and commercial facilities in the Industrial Facility Database based on the following criteria:

- i. Requirement for MSGP,
- ii. Proximity to Lakeside Lake, an impaired water,
- iii. Potential for impacting stormwater quality,
- iv. Significant source of pollutants, and
- v. Violation history.

3. Inspect 20% of all facilities:
The City's goal is to annually inspect a minimum of 20% of the industrial facilities listed in the City's Industrial Facilities Database that have an MSGP. The number of inspections completed each year and follow-up inspection are documented in the Annual Report.
4. Enhancing the Industrial Facility Program:
During the permit term, the DTM - Stormwater Management Section evaluates alternatives for enhancing the industrial/commercial stormwater program with the goal of increasing field presence through increased numbers of inspections and increasing interaction with commercial and industrial facilities through outreach or other innovative measures.
5. Recognition of Outstanding Facilities:
Industrial facilities that perform outstanding maintenance practices for stormwater compliance are provide with and "Certificate of Excellence" signed by the Director of Transportation. The Stormwater Inspector chooses facilities based on his inspection findings. Some of the criteria the Stormwater Inspector looks for are facilities that are pro-active with following MSGP guidelines. The Stormwater Inspector looks for facilities that have extra BMPs installed, are clean, incorporate GSI, and demonstrates they are environmentally conscientious. The Stormwater Inspector also provides the certificate to sites that have several challenging problems, and the operator makes changes to the site to prevent stormwater from contacting potential pollutants and demonstrates environmental compliance by continuously maintaining a clean site.

D. Compliance Activities and Enforcement

1. Enforcement Flow Chart:
The City's enforcement process is illustrated by the enforcement flow chart, included in Appendix G. The flow chart shows escalation actions in response to the severity of the infraction, repeat offenses, and willful negligence.
2. Formal Enforcement Protocol:
The City has established a formal enforcement escalation protocol that focuses on having the highest level of enforcement resolved or turned over to the City court system within one year of the initial inspection/violation.
3. Industrial Facility Inspection Protocols:
The City has conducted a review of the industrial facility inspection procedures for effectiveness. Recommendations for improvements have been made and incorporated. An enforcement protocol to address violations of municipal stormwater requirements, ordinance, or code identified during inspections is in place.

4. The City will document in the Annual Report the number of corrective or enforcement actions taken during the reporting period including severity, elapsed time for resolution, penalties assessed, and outcome.

VII. Construction Sites

Construction site plans shall be reviewed, and the sites inspected by the DTM for roadway projects and PDS development projects in the private sector. Staff include Plan Reviewers, PDS Floodplain and Grading Inspectors, and Stormwater Inspectors to ensure the requirements of the AZPDES Construction General Permit are met. Plan Reviewers verify that ground disturbing activities that fall under the AZPDES General Permit requirements include a SWPPP with the plan submittal and Stormwater Inspectors ensure the SWPPP is utilized and updated in the field. Development project sites are inspected for SWPPP BMPs, as well as grading permit conditions, SWPPP report, and plans.

A. Municipal Employee Training

1. New Employees

The City provides new employee training at least one time per year and shall provide refresher training for existing employees directly involved in these activities at least once every two years. In the event there are no new employees in each period, the City will document this information in the Annual Report. Staff receives training during their first year of employment and refresher training every other year. New employees each receive a copy of the AZPDES General Permit for Discharge from Construction Activities to Waters of the United States, the SWMP, the Floodplain, Stormwater, and Erosion Hazard Management Ordinance, the Stormwater Construction Inspection Procedures. New staff are trained by existing staff in a mentoring process along with attendance of periodic Stormwater trainings throughout the year.

2. Current Employees

Current employees receive training in both SWPPP review and inspections. An emphasis on cross training allows a limited number of staff to fill in as needed to meet fluctuations in workload.

On-going training for staff includes frequent review and discussion of the AZPDES General Permit for Discharge from Construction Activities to Waters of the United States, the Floodplain, Stormwater, and Erosion Hazard Management Ordinance, and Development Standards.

Current employees receive written materials, including a copy of the AZPDES General Permit for Discharge from Construction Activities to Waters of the United States, SWMP, the Floodplain, Stormwater, and Erosion Hazard Management Ordinance, the Stormwater Construction Inspection Procedures.

B. Planning and Land Development

The City of Tucson has long advocated water harvesting, open space, native plant preservation, landscape requirements, riparian habitat preservation, scenic corridor, hillside preservation, and other practices to limit the impact of development on the environment, including stormwater quality. During development plan review, City plan reviewers verify that plans submitted for review comply with provisions of these ordinances.

The City will continue to evaluate Low Impact Development (LID) practices to assess the feasibility of incorporating additional measures into the City's practices. Land use planners and other appropriate departments will be consulted in the evaluation.

The City will submit the findings of how LID practices would contribute to the reduction of pollutants in stormwater discharges to the MS4. In addition, the evaluation will identify any additional, feasible LID practices for potential incorporation into City design standards. DTM – Engineering Section has developed Water Harvesting details for Right of way (ROW) GSI. DTM – Engineering Section has developed the Green Street active guidelines which helps to reduce Stormwater pollutants. The Tucson Million Trees initiative, led by City of Tucson Mayor, also helps to reduce stormwater pollution.

C. Plan Review and Approval

1. Plan Review:

All roadway projects, new development and redevelopment plans are reviewed for conformance with planning documents, City Code, City of Tucson Floodplain and Stormwater ordinances, development standard design manuals and state regulations.

2. Plan Approval:

Building permits, grading permits are issued and/or a notice to proceed provided, following plan approval. All projects that are subject to the requirements of the Arizona Construction General Permit are required to submit a SWPPP for review. Verification that the SWPPP is complete is a requirement for the issuance of a grading permit or provided a notice to proceed. Planning and Development Services also administers the International Building Code (IBC), including the dedicated chapter on Excavation and Grading. This chapter includes requirements for structural and nonstructural post construction controls.

3. Pre-Construction Meetings:

Pre-construction meetings for private construction projects provides an opportunity for the Contractor, PDSF Floodplain and Grading Inspector, and the Stormwater Inspector to review the SWPPP together and to make sure the developer understands the

stormwater controls that must be utilized and verify the SWPPP is complete (including a copy of ADEQ's authorization number). Similarly, prior to breaking ground, DTM holds a preconstruction meeting ensuring the SWPPP is complete and a copy of ADEQ's authorization number(s) are included.

D. Inventory

1. Permits Plus Database:

DTM – Engineering reviewers and PDS D Engineering reviewers currently use the ENERGOV Permitting system, which is an update to the Permits Plus Database, to track development plans and construction sites. The new permitting system called ENERGOV replaced Permits Plus in 2022. Information in the database includes a requirement for a Construction General Permit, plan and SWPPP review comments, number of submittals, site location, and construction inspections.

2. Updating Database:

The ENERGOV Database will be updated as plans are submitted and reviewed, permits are issued, and construction sites are inspected.

3. Identifying and Documenting Non-filers:

During the first site visit, Stormwater Construction Inspectors verify that the SWPPP has been implemented prior to the start of construction, and that the site has an ADEQ authorization number. If this is not the case, PDS D will promptly notify the DTM - Stormwater Management Section. Non-filers to AZPDES@azdeq.gov within five (5) business days of identification.

4. City Department for NOIs:

PDS D and the DTM receive and maintain copies of NOIs for development and capital improvement projects greater than 1-acre. DTM requires all projects to implement stormwater BMPs regardless of the size of the project. However only projects greater than 1-acre, or projects under 1-acre that are part of a larger planned project for development, are required to have a SWPPP.

E. Construction Site Prioritization

The City has established a process for construction site inspection priorities. Inspection priorities are ranked by utilizing three concepts: history of discharges or exceedances, proximity from the Santa Cruz River or Lakeside Lake, and length of time since the most recent inspection. This last concept also includes first time inspection locations. An inspection schedule is discussed below.

F. Inspections

Construction site inspections performed by PDS staff are inspected for compliance with the IBC that details requirements and enforcement procedures for construction activities. DTM and PDS have an AZPDES inspection program for construction sites that fall under the AZPDES Construction General Permit requirements.

1. Description of Inspection Program:

The City's AZPDES inspection program for construction sites within the City that disturb one or more acres, or projects under 1-acre that are part of a larger planned project for development, includes the following objectives:

- Verifying existence of a SWPPP for that construction site.
- Verifying that all substantial elements required by AZPDES Construction General Permit were addressed in the SWPPP.
- Verifying that the SWPPP was implemented; and
- Verifying that the SWPPP evolves to meet changing construction conditions.

During inspections, PDS or DTM Inspectors look for proper storage and use of construction site materials such as oils, hydraulic fluid, and gasoline. The Inspectors also check outfalls, construction entrances, BMPs for temporary stockpiling, concrete wash area, tire wash-off areas, and construction material storage areas. City Inspectors make every effort to ensure that any compliance issues are quickly handled before enforcement action is needed. The City of Tucson uses codes such as the Floodplain, Stormwater, and Erosion Hazard Management Ordinance to assist in the enforcement of AZPDES construction site requirements. High priority sites are those that disturb over an acre of land or sites with hazardous materials.

2. Inspection Schedules:

At a minimum, high priority construction sites are inspected once every three months, before and after a rain event, depending on the construction activity. Low priority sites are inspected at least once every six months.

3. Follow-up Inspections:

In instances where Stormwater Inspectors observe stormwater quality issues that require action, the site is re-inspected within a month to ensure that the issues identified have been addressed.

4. Records of Inspections:

Records of stormwater inspections are kept for a period of three years after the project has been completed. Additional records kept may include the Notice(s) of Intent, the authorization number(s), and the Notice(s) of Termination.

G. Stormwater Control Measures

1. Additional Structural and Nonstructural Practices:

The City requires that plans conform to City of Tucson grading technical standards and IBC and include these erosion and sediment control requirements:

- Maximum fill and cut slopes.
- Maximum bench heights and widths.
- Types of allowable fill materials.
- Fill compaction requirements.
- Setbacks of fill slopes from property boundaries.
- Treatment of fill slopes and other slopes to prevent erosion from stormwater runoff.
- Requirements for maximum fill/cut slopes for drainage channels.
- Terracing drainage requirements, including erosion controls.
- Subsurface drainage controls for stability.
- Drainage way erosion control provisions.
- Requirements for interceptor drains at top of slopes to prevent erosion.
- City amendment prohibiting grubbing without first obtaining a grading permit.
- City amendment for reseeding requirements, including the posting of bond; and
- City amendment for proper construction of drainage facilities.

2. Standards for Construction Site Controls:

The City utilizes the 2015 version of the "PAG Standard Specifications for Public Improvements" along with the 2020 version of "ADOT Erosion and Pollution Control Manual for Highway Design and Construction."

3. Review of Construction Inspection Procedures:

The City reviews stormwater inspection procedures for construction sites and has added best management practices for development and utility construction within the road ROW.

4. Escalation Protocol:

Construction Inspection Procedures include enforcement timeframes identified in the compliance process and escalation for corrective actions. Enforcement timelines focus on resolving the highest level of enforcement within one year. Typically, compliance includes a written NOV to property owner or contractor, requesting compliance to permit or requesting obtaining a ROW use permit.

H. Compliance Activities and Enforcement

1. Compliance Flow Chart:

The City's enforcement process is illustrated by the Compliance Flow Chart, included in

the Appendix G. The City of Tucson Stormwater Management utilizes the Corrective Action Plan code as one of the most effective forms of compliance. The flow chart shows escalation actions in response to the severity of the infraction, repeat offenses, and willful negligence.

2. Formal Enforcement Protocol:

The City has established a formal enforcement escalation protocol that focuses on having the highest level of enforcement resolved or turned over to the City court system within one year.

VIII. Post-Construction

A. Employee Training

The City will continue to provide new employee training with direct stormwater responsibilities at least one (1) time per year and shall provide refresher training for existing employees directly involved in these activities at least once every two (2) years. Training topics shall include the following:

Site Plan Review Staff with Stormwater Responsibilities:

- Grading and City of Tucson drainage design standards
- City of Tucson Floodplain, Erosion and Stormwater Management Code, which are City ordinances related to stormwater and post-construction
- City of Tucson Water Harvesting Manual and Green Streets active practice guidelines
- Requirements for structural and non-structural management practices in new development and redevelopment
- Post-construction stormwater controls

Inspection Staff with Stormwater Responsibilities:

- Grading and City of Tucson drainage design standards
- City of Tucson Floodplain, Erosion and Stormwater Management Code, which are Grading and City of Tucson ordinances related to stormwater and post-construction
- City of Tucson, Water Harvesting Manual and Green Streets active practice guidelines
- Requirements for structural stormwater control practices in new development and redevelopment
- Post-construction stormwater controls
- Maintenance responsibilities through agreements and policies
- Inspection procedures; and
- Enforcement procedures

Checklists have been developed for staff to use in their day-to-day review and inspection duties as reminders of what to look for and consider. The checklists shall be reviewed to ensure comprehensive application.

B. Post-Construction Controls

The City has implemented a program to control stormwater discharges from areas of new development and redevelopment projects one acre or greater discharging to the MS4 after construction is complete. This program began about twenty-five years ago and includes requirements for public and private development or redevelopment. It will be reviewed at least in the first permit year.

The current program requires all applications for new development and redevelopment projects one acre or greater discharging to the MS4 have controls in place that will reduce stormwater pollution to the maximum extent practicable (MEP).

Adequate post-construction BMPs, Stormwater Ordinances, and policies are currently met through requirements described in the City of Tucson's current Stormwater Detention/Retention Manual. City of Tucson Code from several decades ago, requires maximizing capture of on-site stormwater runoff in all development (regardless of the size). Stormwater is also regulated in Tucson Technical Standards Manual 4-01, 4-02, 4-03, 4-03, 4-04 as well as other stormwater related regulations.

The site design strategies, control measures, and other practices deemed necessary by the City of Tucson to maintain or improve pre-development hydrology have been established by City Code. The site design strategies are discussed in the Uniform Development Code Technical Standards, Section 4 includes a reduction in stormwater discharge by all uses through detention, retention and water harvesting techniques and does not limit it to one acre or more. Detention design provides the most sustainable approach in the City of Tucson due to Hydrologic Soil Group C and D which make up approximately 80% of the soils within the City limits. Hydrologic Soil Groups A and B are found in the larger washes and regional watercourses where aquifer infiltration occurs the most. Since surface water quality can impact groundwater quality, the City of Tucson SWMP is crucial for helping to keep the City's water clean. Due to the high density of public and private wells within the City limits, it is imperative that our storm drain system is maintained for clean surface water quality as it can impact groundwater quality.

Three areas that may be contributing to the SWQS of the MS4 have been identified and in need of modification or improvement.

- 1) Student Housing Retrofitting and Associated Development Regulatory Assessment
- 2) Stormwater Pollutant Issues from Homeless in Storm drain Systems
- 3) Joint Stormwater Projects: Jurisdictional I-10 Boundary IDDE Cooperation Project (ADOT-Tucson-South Tucson)

Further information on these City of Tucson projects are listed below:

- 1) Student Housing Retrofitting and Associated Development Regulatory Assessment

Student Housing near the university is a targeted area for addressing commercial-residential related stormwater discharge issues. Discharges are conveyed through the student housing area where new high-rise buildings have been built and runoff is then conveyed through surface drainage within downstream neighboring residential properties. This area that is west and downstream of the university campus has stormwater compliance complaints. Student Housing sites have had to be asked to look at retrofitting their sites in Corrective Action Plan Reports to come into compliance with Stormwater Codes. This proposed project will be especially helpful to develop better stormwater review requirements based on City of Tucson's stormwater regulations to assist in new development so that post-construction retrofitting can be reduced and stormwater quality downstream of Student Housing projects can be improved. This project can also be further extrapolated to assess similar impacts to residential properties downstream of commercial or industrial development areas. Discharges from the Student Housing areas include:

 - a. Pool and jacuzzi backwash runoff issues
 - b. Pool and jacuzzi flushing runoff issues
 - c. Trash receptacle discharge issues (multiple issues)
 - d. Water testing discharges that are required annually and are compliant with code, make downstream neighborhood concerned
 - e. Fire testing discharges that are required annually and are compliant with code, make downstream neighborhood concerned
 - f. Irrigation line design issues
 - g. SWPPP issues during construction due to various challenges including limited construction area due to little-to-no building setback requirements and limited allocated construction area
 - h. Sump drainage systems within parking areas need to be checked to assure proper use and function
 - i. Pipe cross connection issues - years ago one construction site had cross connected storm drainpipe to another plumbing system and had to immediately correct issue
 - j. Pet waste issues occur, even though there are allocated pet waste areas for student housing residents, residents bring pets instead to the roof on some structures where storm runoff on the roof directs non-compliant discharge to roof drains and then into public storm drain system / street
 - k. Condensation discharges occasionally seen – illegal per IRC code

- 2) Stormwater Pollutant Issues from Homeless in Storm drain Systems

Surface Water Quality Exceedances within the City of Tucson show the following analytes having exceedances for further assessment and discussion including Copper and

Escherichia coli. For Copper, due to no large anomaly seen over the years, City is not taking action at this time. For E coli, all sampling sites had over 2,400 except for Site 5 with 820 and Site 2 with 2,000. These levels have been high and show a more predominant increase since around 2015 and may be due to increase in homeless activity in the watercourses around that time. E coli is a City-wide issue being looked at for Stormwater Management at our Floodplain & Stormwater Management Plan Annual Meetings (open to the public). Stake holder meeting will determine a more refined scope for this project. Other pollutants related to chemicals used by homeless in storm drain systems that may be impacting stormwater quality include: various drugs, pesticides for treating lice (Lindane - Gamma-Hexachlorocyclohexane, Permethrin - 3-phenoxybenzyl (1RS,3RS;1RS,3SR)-3- (2,2-dichlorovinyl)-2,2-dimethyl-cyclopropanecarboxylate, and other chemicals. Pollutants that are not listed in the surface quality standard list of analytes for surface quality and are being looked at to see if these chemicals can be tested in the lab. This project is especially important as the increase of homeless in the Tucson area presents concerns for the city with the large number of public and private potable water wells in the area.

3) Joint Municipal Stormwater Project Options

These two projects were proposed by other municipalities and were also being considered:

a. Jurisdictional Boundary IDDE Cooperation Project

ADOT asked to join City of Tucson to look at how IDDE can be better coordinated at our jurisdictional boundaries. City of Tucson believes this project is especially important as this assessment can improve procedures and communication between jurisdictions during discharge incidents along the I-10 corridor. South Tucson is being considered to join in this project due to proximity of Interstate I-10 ADOT right-of-way to stormwater connection points along the ADOT, Tucson, and South Tucson jurisdictional limits.

b. Multi-jurisdictional GIS based stormwater analysis

PCDEQ asked City of Tucson to join the Pima County Unincorporated MS4 in a water quality standard project that will look at developing a GIS based analysis for unincorporated Pima County area and perhaps other municipalities in the Pima County area to compare mean concentrations and land use of specific analytes (Copper, Zinc, Silver, Lead, E coli, Fecal coliform, TSS, pH, oil and grease). As of April 29, 2022, Pima County had been unable to pursue this joint project as the county was unable to select a good watershed as they found an imbalance in the median event mean concentration for each of their 5 watersheds. Therefore, the City decided to continue partnership with ADOT.

These areas were evaluated by ADEQ after submittal in September 2022 in the first year of the new permit term, but these areas were rejected in March 2023. Although the City of Tucson already has a Mayor and Council adopted green infrastructure program called Storm to Shade (S2S), ADEQ required that the City provide green infrastructure projects

instead of the above three projects for the retrofit Feasibility Report requirement per the MS4 permit.

Feasibility Report Permit Requirement

The additional three project sites below were submitted and accepted by ADEQ in June 2023 for the Feasibility Report Permit Requirement. These additional projects include sampling Sites 1, 4 and 5.

While all sites, and indeed the majority of Tucson could benefit from stormwater related improvements, Sampling Sites 1, 4 and 5 were identified as optimal candidates to fulfill the retrofit feasibility objectives found in section 4.8.B of the City's MS4 Permit, for the following reasons:

- 1) Existing monitoring infrastructure for reporting
- 2) A mix of land uses including Industrial, Commercial and Residential
- 3) Ample public land area for retrofit projects

Options for retrofit will involve close coordination between the City of Tucson DTM, who oversees the City's MS4 permit, and TW who manages the City's S2S (green stormwater infrastructure) program.

- The retrofit feasibility assessment shall be developed by the end of the fourth year of the permit term and prioritized for retrofitting based upon Feasibility, cost effectiveness, impervious area potentially treated, maintenance requirements, landowner cooperation, and expected improvement to water quality. The project results will be submitted with the fourth-year annual report.

C. Compliance Activities and Enforcement

The City of Tucson has developed and will continue to follow the program for tracking inventory, inspection, and maintenance for post-construction stormwater BMPs. The details are discussed in the Engineering Active Practice Guidelines for the DTM Engineering.

- The City of Tucson shall inspect 100% of sites discharging to the MS4 that received city permits within one (1) year after construction completion for to determine the compliance of their post-construction stormwater controls with the requirements of 4.8.B.1. PDSD performs private basin inspections on 100% of the private development sites annually.

- Stormwater facilities/BMPs for any given year must meet the required standards established by the most current permit. Achievement of 80% of the BMP's design standard for detention, retention, or treatment shall constitute compliance.
- The City of Tucson shall document non-compliance with post- construction stormwater BMPs. Follow-up actions taken by the City of Tucson to achieve compliance. The City of Tucson has assigned maintenance responsibility with enforceable means through development agreements, code requirements, and maintenance policies. The City of Tucson Drainage Manual requires the owners of Commercial and Residential developments to hire a Civil Engineer to perform annual stormwater infrastructure maintenance inspections and recommendations. Specific requirements for these reports are listed in the City's regulations. These reports must be available for the City of Tucson upon request.

APPENDICIES

Appendix A - Protocols for Dry-Weather Screening of Outfalls (FSO)

In the early 1990s, the City followed the procedures outlined in 40 CFR 122.26 to identify 500 outfalls that have been subsequently utilized to detect non-storm flows. Over the years, development and infrastructure improvements have eliminated or replaced several outfalls, and new outfalls have been added to the inventory, to maintain the 500 outfalls required under the municipal stormwater permit. The City of Tucson has evaluated 514 outfalls and are inspecting for additional outfalls. These outfalls have been mapped on the City's Geographic Information System (GIS) Stormwater Map, and can be viewed by accessing the map online:

<https://maps2.tucsonaz.gov/Html5Viewer/?viewer=maptucson>

Also, during this reporting period, new major outfalls to the regional watercourses are being inventoried and added to the list that outfall to the (WOTUS) Santa Cruz River. Data is being added to the new SAMS software system.

Additional information on outfalls inspected, priority outfalls inspected, results of dry weather screening, elimination of illicit discharges, and dry weather flows can all be found in our Stormwater Annual Report at the following link:

<https://www.tucsonaz.gov/Departments/Transportation-Mobility/Stormwater-Management>

Appendix B- Pool and Spa Flyer

(See next page)



DISCHARGE GUIDELINES FOR POOL & SPA WATER

A Message from the City of Tucson, Department of Transportation

Sanitary Sewer Discharge of Water from Swimming Pools: Pima County's Regional Wastewater Reclamation Department has approved swimming pool water discharge into the public sewer (sanitary sewer) collection system using the following guidelines:

- Plan discharge for low-use times of sewer flow such as afternoon or late night hours.
- Use small volume pump and control discharge so it doesn't spill out.
- Discharge with hose into access "cap" of the private property sewer cleanout. **DO NOT** use public manholes or cleanouts.

Sanitary sewer discharge is a preferred method to manage this water. Pima County treats what is collected in the sewer system, and much of this water can be reclaimed for irrigation use.

Irrigation Use of Backwash Water: Filter backwashing results in frequent, small quantity release (approx. 75 gallons) of impure water from a pool or spa. Backwash water commonly contains elevated levels of chlorine, pathogens and other potential contaminants that should not be released off-site. In most cases, the amount of backwash water generated by pools and spas can be readily absorbed into soil around the pool area. This water can be used to irrigate salt-tolerant plants (see the back of this flyer for further information). Remember to move the drain hose frequently, since backwash water discharge to one location can create stagnant water areas that can produce mosquitoes. Surface flow of filter backwash off of your property is not allowed under state and local discharge permit requirements.

Emptying Pools & Spas by Drainage to Street, Stormdrain, or Wash Only When No Other Disposal Option is Available: It is still wise to use pool drainage water for landscape irrigation on your property whenever possible. And, wherever available, the sanitary sewer should be used to accept pool water you need to drain. If no other alternative exists, follow the guidelines below:

In the City of Tucson, you may drain your pool or spa using off-site surface flow only if you meet ALL of the following conditions from state and local regulations:

- You do not have access to a private sewer cleanout.
- Owner shall allow the pool or spa to remain untreated for at least 72 hours (3 days) after the last chlorine addition. This waiting period meets the requirement to de-chlorinate prior to the discharge.
- The pH level of the water must be monitored by the owner and must fall in the range of 7-8. The owner or pool company servicing the pool shall measure pH prior to discharge and adjust it to the acceptable range with standard pool chemicals. Monitor pH throughout the discharge and adjust it, as necessary. Easy to use pH kits are available at stores that sell pool chemicals.
- If a pool or spa has been acid washed, this highly acidic water cannot be discharged off-site.
- Discharged water shall be clear (not cloudy or discolored) and free of algae and any contaminants.
- Discharge should be directed by means of a temporary flexible hose, to a stormdrain, drainage channel, or along the curb-line gutter of a paved street. Pool or spa discharge may not drain into unpaved/strip-

paved alleys or streets where it can cause erosion or contribute to ruts as vehicles drive on wet muddy surfaces.

- Discharge shall be monitored and controlled to ensure that it does not transport sediment or cause erosion of the banks or bottoms of the affected drainage channels or washes.
- Discharge shall not run onto other private property, across a sidewalk, or impair street access!!

ONLY when all of these conditions are met, may the pool or spa be drained to surface drainage. Under no circumstances will a pool or spa be allowed to be permanently connected to a stormdrain or wash.

To learn more about the state’s De Minimis General Permit, which allows this type of discharge, visit the ADEQ website at: https://legacy.azdeq.gov/environ/water/permits/download/final_dmgp_2016.pdf If you have any questions regarding this notice, please contact the City of Tucson, Department of Transportation, Stormwater Management office at 791-4251.

Where should I use my pool/spa drain or backwash water?

Swimming pool and spa backwash water contains chemicals used to control microorganisms and the pH level of the water. Many species of plants are sensitive to these chemicals. However, water from swimming pools and spas can be used to irrigate several salt tolerant plants.

The following lists of sensitive, moderately sensitive, and salt tolerant plants provided below are derived from various publications provided by the University of Arizona Cooperative Extension Service.

Plants sensitive to salt: Do not use backwash water water	Moderately sensitive plants: Limited use of backwash water	Salt-tolerant plants: Can use backwash
Fruit Trees	Glossy Privet	Oleander
Star Jasmine	Pyracantha	Evergreen Euonymas
Roses	Lantana	Rosemary
Algerian Ivy	Xylosma	Bougainvillea
Fraser’s Photinia	Juniper	Natal Plum
Chinese Hibiscus	Bottlebrush	Texas Ranger
Willow	Most Acacia Species	Olive
Hopbush	Palo Verde	Native Mesquite
Jojoba	Yucca	Desert Broom
		Saltbush
		Aloe
		Deer Grass
		Bear Grass
		Ice Plant
		Japanese Honeysuckle

When using backwash water, observe the plants and soil for symptoms of salt accumulation:

For the soil, watch for a dense, hard, cracked appearance or grayish-white color indicating a possible salt accumulation. A common symptom of salt accumulation is slower water infiltration.

For the plants, look for dry, dead areas on the edges and tips of the leaves or a blotched appearance. These symptoms may indicate salt accumulation in the soil. However, symptoms can also be caused by a variety of other factors including disease, herbicides, or insects.

To avoid salt buildup, remember to move the discharge hose frequently.

A good source of further information on salt tolerance and related issues is your local Cooperative Extension Agent (626-5161). Feel free to contact the City of Tucson, Department of Transportation, Stormwater Management Section at 791-4251 or stormwater@tucsonaz.gov

Appendix C - Spill Response Program

As part of the City's Hazard Communications OSHA training, the City developed a Spill Response Program, S-020C, used to provide direction on how to handle spills. Part of the program includes tracking of the number of spills that occurred at City facilities. Vehicular fluid releases (mostly hydraulic oil spills) reported by Environmental/General Services, continue to occur. Each release is evaluated; and remediated by on-site staff utilizing spill kits located on the vehicles or were remediated by Tucson Fire Department with support from DTM, as required by the program. The Spill Response Procedure S-020C was updated, with an effective date of September 19, 2023, to the SD-022 safety document and reviewed by interdepartmental administrative staff September 12, 2023 and is expected to be re-evaluated annually (next re-evaluation: summer of 2024).

The City of Tucson Spill Response Procedure, SD-022, is found on the following pages.

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1.0 PURPOSE

The purpose of this directive is to minimize hazards to health, safety, and the environment at sites or facilities where regulated or potentially hazardous substances and chemicals are used, stored and handled and to provide direction when regulated, or hazardous materials are spilled or released.

2.0 SCOPE

This directive applies to all City of Tucson employees and are intended to assist in identifying and complying with the regulations and rules set forth by the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), Arizona Department of Environmental Quality (ADEQ), the Tucson Code Chapter 26, the International Fire Code (IFC), as well as other applicable local, state, and federal regulations. In all cases where there is a conflict between information contained in this program and/or regulatory requirements, the strictest policy/regulation shall apply.

3.0 DEFINITIONS AND ABBREVIATIONS

Absorbent: A biodegradable substance that is applied to mitigate a spill or release of a regulated or potentially hazardous substance. Trade names may include Dri-sorb, Magic-Sorb, and Star Dust, MicroBlaze or similar product. Contaminated dry-type absorbents shall be recovered to the best practicable manner and disposed of in a manner appropriate for the spilled or released materials.

Emergency Uncontrolled Release: An occurrence that results, or is likely to result, in an uncontrolled spill or release of a regulated or potentially hazardous substance that may cause a safety, health, or environmental hazard (e.g., fire, explosion, chemical exposure, leak into sewers and/or storm drains or other drainage conveyance systems including washes) or that may impact (contaminate) public property and may result in a liability claim against the City of Tucson. An Emergency Uncontrolled Release cannot be controlled or contained with the contents of a Spill Kit. An Emergency Uncontrolled Release of a regulated or potentially hazardous substance shall require immediate 9-1-1 and supervisory staff notification following EMP Policy and Incident Notification Procedure, AD 8.01-6.

Facility: Any building, structure, installation, equipment, pipe, or pipeline, well, pit, pond, lagoon, impoundment, ditch, storage, container, motor vehicle, rolling stock, or aircraft, or any site or area where a hazardous substance has been stored, disposed of,

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or placed, or otherwise potentially located.

Hazardous Substance: Any biologic or chemical agent that after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly or indirectly from the environment or ingestion through food chains, will or may reasonably be anticipated to cause injury or death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions, or physical deformations in such persons, animals, or their offspring. A typical example would be gasoline.

Incidental Release: A spill or release of a hazardous substance other than fluid droplets that are normally associated with parked or normally operated mechanical equipment, that is absorbed, neutralized, or otherwise controlled and contained at the time of release by employees in the immediate release area, or by maintenance personnel.

Notification: Contact made to 9-1-1 and/or supervisory staff in the event of an Emergency Uncontrolled Release or Incidental (Controlled) Release of a regulated or potentially Hazardous Substance.

Marshal 31 (MA31): Tucson Fire Department, Fire Prevention Captain of the Hazardous Waste Disposal Unit.

Mitigation: The control and cleanup of any Hazardous Materials substance resulting from an Emergency Uncontrolled Release or Incident Release.

Release: All Emergency Uncontrolled Releases, Incidental Releases, Ribbon Spills, and Spray Releases.

Reporting: All Emergency Uncontrolled Releases and Incidental Releases of regulated or potentially Hazardous Substances shall be reported to MA31, Stormwater Management, and the Environmental Services Emergency Management Program (EMP) Coordinator via the Environmental Spill Incident/Release Form.

Ribbon Spill: A trail of potentially Hazardous Material/Substance released from a moving vehicle. A Ribbon Spill release on the public right-of-way or public/private property will require 9-1-1 notifications, the completion of an Environmental Spill Incident/Release Form, and may require completion of Form 103 in Origami.

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Spill Kit: A combination of absorbent pads and personal protective equipment normally provided to department Supervisors that will contain and control minor hazardous material spills (preventing liquid spread and further contamination of public or private property, sanitary sewers, storm drains or washes.

Spray Release: A release of a regulated or potentially hazardous substance, (typically hydraulic fluid), from a pressurized hose or line. A Spray Release will normally require completion of an Environmental Spill Incident/Release Form and mitigation and may require the completion of Form 103.

4.0 SPILL RESPONSE PROGRAM

The majority of these incidents relate to fuel, hydraulic fluid, or anti-freeze that are spilled or released in the field and can be contained with a spill kit. If containment is not possible, utilize the EMP Policy and Incident Notification Procedure, AD 8.01-1.

Where applicable, this program shall be used in conjunction with the Environmental Management Program (EMP) Policy and Incident Notification Procedure Emergency Response Guidebook and the safety data sheet (SDS) system.

5.0 RESPONSIBILITIES

A. Department Leadership

Department's where employees work with regulated, potentially, or known hazardous substances shall be responsible for the following:

1. Assigning one individual and one alternate, as a Safety Officer/Representative, responsible for implementation of the Spill Response Program in their department. These individuals shall be afforded adequate time, resources, and authority to implement the requirements of this program including implementing policies that encourage waste minimization and minimizing the amount of hazardous material/waste in the workplace.
2. Compliance with the Spill Release Program.

B. Emergency Control Officer/Safety Officer – Department and Division

The person responsible for spill control in each department shall be responsible for the following:

1. Evaluate every Incident and make immediate and proper notifications as defined

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in this Spill Response Program.

2. Ensure that where applicable, a Facility Emergency Response Plan (FERP) has been developed in direct consultation with Environmental Services, for all sites utilizing and/or storing hazardous materials.
3. Providing a facility diagram for all work areas where hazardous substances are used, stored, or handled. These diagrams shall be in the FERP, ensuring that all items listed in the example form are clearly identified (i.e., exit doors, sprinkler control valves, etc.) and provide safe and orderly emergency evacuation of occupants. Additionally, the plan shall include the direction of flow if there were a release. Identify where absorbent materials and spill kits would be utilized to prevent the material from entering the storm drain system including washes.
4. Documenting each incident, whether it is an emergency or an incidental release of hazardous materials.
5. Reviewing this program with each new employee to ensure familiarization with evacuation routes and safe zones. Annual training on Employee Evacuation is available from Risk Management and is posted on the City Intranet.
6. Reviewing this program periodically to determine relevance to departmental activities with existing conditions and regulatory rules.

C. Tucson Fire Department

The Tucson Fire Department (TFD) is responsible for providing the technical expertise, trained and equipped personnel, for the prevention, mitigation, and resolution of incidents involving hazardous substances and wastes. TFD shall:

1. **NOTIFY ENVIRONMENTAL MANAGEMENT PROGRAM (EMP) COORDINATOR OF ALL SPILL INCIDENTS AS SOON AS POSSIBLE AT 520-403-0295. Contacting MA31 via dispatch as soon as possible during the incident can facilitate EMP Coordinator notification.**
2. Provide emergency response personnel to control and mitigate workplace hazardous substance spills. These personnel are assigned to the Fire Suppression Division, Hazardous Materials Control Team, and are available for emergency response 24 hours per day.
3. Provide an inspector knowledgeable in hazardous materials. The individual who responds to emergency scenes shall be knowledgeable of the fire code and other pertinent regulations including Arizona Pollution Discharge Elimination Systems (AZPDES) Stormwater regulations, as required.
4. MA31 or designee shall contact EMP, and Tucson Stormwater personnel as defined under "Reporting". Large spills or releases of regulated or potentially

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hazardous materials shall be evaluated by the TFD and EMP to develop a mitigation or remediation plan.

5. MA31 or designee shall act as the contact person to access the Tucson Fire Department's Hazardous Waste Disposal program after normal business hours. MA31 may be reached by notifying City Communications at (520)-791-4144 and requesting MA31.
6. Provide Hazardous Materials Disposal Technicians. These personnel are available to assist with the proper handling, storage, and disposal of hazardous substances and wastes found in the workplace.
7. Provide a supervisor to evaluate and supervise cleanup of incidents that are the result of City operations or are discovered on City property or rights-of-way and are determined to be a threat to the City's storm drains or other drainage conveyance systems including washes. The supervisor or his/her designee shall be available 24 hours per day. The supervisor shall be a Fire Captain assigned to the Fire Prevention Division and can be reached at (520)-791-4502 during normal working hours or through City Communications at (520)-791-4144 after hours. This individual shall work closely with the EMP Coordinator (520)-403-0295 to ensure that all required notifications both internal and external are made in a timely manner. All City caused emergency uncontrolled releases and/or incidental releases reported to the Fire Department will be forwarded to EMP Coordinator or Environmental Services (ES) Deputy Director.
8. MA31 shall coordinate, review and debrief the release with all affected departments to ensure proper and timely notifications are made including the filing of all required reports and notices.
9. MA31 shall be responsible for replacement of Spill Kits, absorbent or other mitigation materials and shall require an Environmental Spill Incident/Release Form prior to replacement of used and/or contaminated materials.

D. Environmental Management Program

The EMP is responsible for assisting with the City's compliance to applicable environmental regulations. EMP is responsible for the following:

1. EMP will notify the City Manager of incidents when appropriate. EMP and Stormwater Management shall receive a copy of ALL Environmental Spill Incident/Release Forms within 48 hours from MA31.
2. EMP shall notify Stormwater Management Section of any releases that threaten storm drains or other drainage conveyance systems including washes.

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E. Risk Management

Risk Management will assist departments in the development and review of work practices, procedures, and the evaluation of exposure control strategies for employees working with hazardous substances. Risk Management will assist departments/divisions/sections in determining appropriate training requirements and PPE selection for employees assigned to duties involving work with hazardous substances and waste. Risk Management shall coordinate and assist user departments with this training and coordinate and conduct periodic review of this program in conjunction with affected departments, TFD, EMP and Stormwater Management.

F. Tucson Department of Transportation and Mobility (DTM)

Tucson Stormwater Management shall respond to releases of hazardous materials that may enter the storm water conveyance system through storm drains, washes, arroyos or similar, during normal working hours. DTM Streets Division shall respond to incidents of hazardous materials in accordance with the Memorandum of Understanding (MOU)–Spill Response by TFD and DTM as revised.

G. Employees

City of Tucson employees shall be responsible for following the policies and procedures outlined in this program.

6.0 TRAINING

Risk Management shall assist and coordinate training for all Safety Officers/Representatives, Supervisors and employees. The training shall include but not be limited to:

1. Release characterization – Emergency Uncontrolled Release and Incidental Release;
2. Notification procedures;
3. Control and Mitigation strategies; and
4. Documentation requirements specified in this program.

7.0 RECORDKEEPING

A. Departments

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Department's shall develop a process to document spill release and training attendance and retain on file according to the Arizona Retention Schedule.

B. Risk Management

Risk Management may audit and review each report for completeness and retain a copy according to the Arizona Retention Schedule.

8.0 APPENDICIES

Appendix A: Environmental Spill Incident / Release Form

9.0 REFERENCES

Administrative Directive 8.01-1 *Environmental Management Policy (EMP) and Incident Notification Procedure*

OSHA 29 CFR 1910.120 *Hazardous Waste Operations and Emergency Response*

10.0 REVIEW RESPONSIBILITY AND FREQUENCY

Risk Management will review this directive annually, based on date of publication, and revise as needed.

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**APPENDIX A
Environmental Spill Incident/Release Form**

A. General Information	
1. Location of Incident: _____	
2. City of Tucson Department involved? <input type="checkbox"/> Yes <input type="checkbox"/> No Vehicle Number _____ Name of Department: _____ Division: _____	
3. Non-City Party Involved? <input type="checkbox"/> Yes <input type="checkbox"/> No Name: _____ Phone Number: _____ Address: _____	
Weather Conditions: <input type="checkbox"/> Wet, <input type="checkbox"/> Dry, <input type="checkbox"/> Hot, <input type="checkbox"/> Cool, <input type="checkbox"/> Cold, <input type="checkbox"/> Sunny, <input type="checkbox"/> Rainy	
B. Incident Description	
1. Date: _____	2. Time Started: _____ <input type="checkbox"/> AM <input type="checkbox"/> PM Ended _____ <input type="checkbox"/> AM <input type="checkbox"/> PM
3. Type(Name) of Material Released: _____	4. Amount of Material Released: _____
5. Enter Storm Drain? <input type="checkbox"/> Yes <input type="checkbox"/> No	6. Quantity Entered Storm Drain: _____
7. Nearest Wash or Stream: _____	
8. Describe Incident: _____	<input type="checkbox"/> Spill, <input type="checkbox"/> Container Failure, <input type="checkbox"/> Hose Failure
C. Corrective Action (CA)	
1. Incident Corrected? <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Date of CA: _____ Time: _____ <input type="checkbox"/> AM <input type="checkbox"/> PM
3. Corrected By: <input type="checkbox"/> TFD, <input type="checkbox"/> COT Department _____ <input type="checkbox"/> Contractor Name _____ Phone Number _____	
4. Describe CA: _____	
5. Magic Sorb Used: _____ (bags/lbs.)	6. Dry Sorb Used: _____ (bags/lbs.)
Incident Reporter's Information	
1. Last Name: _____	2. First Name: _____
3. Employee Number: _____	4. Phone Numbers: _____
5. Contacted: <input type="checkbox"/> 911, <input type="checkbox"/> TFD (520-791-4014), <input type="checkbox"/> EMP (520-403-0295), <input type="checkbox"/> Supervisor _____ <input type="checkbox"/> Stormwater (520-791-4251), <input type="checkbox"/> Risk Management Safety (520-791-4728), _____	
103 Incident form completed? <input type="checkbox"/> YES <input type="checkbox"/> NO Other Date/Time: _____ <input type="checkbox"/> AM <input type="checkbox"/> PM	
6. Photos Taken of Incident? <input type="checkbox"/> Yes <input type="checkbox"/> No....Attach to Report	
7. Waste Disposal Method: _____	
8 Signature: _____ Date: _____	

SEND COMPLETED FORM TO: TFD_SpillReports@Tucsonaz.gov

Appendix D - Map of Field Screen Outfalls

In the early 1990s, the City followed the procedures outlined in 40 CFR 122.26 to identify 500 outfalls that have been subsequently utilized to detect non-storm flows. Over the years, development and infrastructure improvements have eliminated or replaced several outfalls, and new outfalls have been added to the inventory, to maintain the 500 outfalls required under the municipal stormwater permit. The City of Tucson has evaluated 514 outfalls and is inspecting for additional outfalls. These outfalls have been mapped on the City's Geographic Information System (GIS) Stormwater Map, and can be viewed by accessing the map online:

<https://maps2.tucsonaz.gov/Html5Viewer/?viewer=maptucson>

Appendix E- Compliance Activities and Enforcement

1. PRIVATELY OWNED RETENTION/DETENTION BASINS ENFORCEMENT

Verbal and/or written requests for basin and other drainage facility maintenance are given to property owners. Basins that have “poor” condition results shall have corrective actions requested. With the new stormwater software, digital inspection forms are being developed so that at time of inspection, letters will be automatically generated as needed. DTM Stormwater Management is working with PDS staff to develop the boiler-plate letters for the new SAMS software. Letters will be generated based on input into the SAMS Stormwater software during inspections by the PDS Inspectors. Besides being inspected by PDS Inspectors annually, these drainage facilities are also privately maintained, with required annual inspections and assessment for maintenance by a private Civil Engineer hired by the subdivision’s homeowners’ association or commercial development owner’s property management, per City regulations. These annual inspection reports are to be made available to the City upon request. Dry wells that do not follow all 17 regulatory criteria are considered non-compliant (criteria from requirements in the detention/retention manual and City’s Drainage Manual).

2. SUMMARY OF FOLLOW-UP ACTIONS

Upon follow-up, all requested maintenance had been performed to keep basins functional. Additional information on compliance can be found in the City of Tucson’s Annual Stormwater Report located at the following link:

<https://www.tucsonaz.gov/Departments/Transportation-Mobility/Stormwater-Management>

Appendix F - Stormwater Industrial Inspection Program (Summary)

DTM maintains a list of Industrial and Commercial facilities that have the potential to discharge pollutants to the City's storm sewer system. Currently the list consists of 191 facilities that are targeted by the Multi-Sector General Permit (MSGP). The Industrial Facility list currently includes the following facilities: • Industrial facilities identified in 40 CFR 122.26(d)(2)(iv)(C); • Industrial facilities subject to MSGP requirements, including those facilities that have submitted for a no exposure exclusion; and • Other industrial and commercial sources (or categories of sources) that the City has inspected over the last permit term.

More information regarding the City of Tucson's Industrial Inspection Program and information on Higher Risk Industrial Facilities, AZPDES Non-Filers, Inspection Findings, and information on enhancing our Industrial Facility Program can be found at the following link.

<https://www.tucsonaz.gov/Departments/Transportation-Mobility/Stormwater-Management>

Appendix G – Enforcement Flow Chart

(See next page)

City of Tucson – Stormwater Management Section Enforcement Guidance

