



STORM WATER MANAGEMENT PLAN

June, 2023

This Storm Water Management Plan has been prepared by the City of Mesa Environmental & Sustainability Division in response to the conditions established by the Arizona Department of Environmental Quality's Municipal Separate Storm Sewer System Permit No. AZS000004-2021 issued to the City of Mesa, effective July 1, 2021.

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ACRONYMS AND ABBREVIATIONS

2021 MS4 Permit – City of Mesa MS4 Stormwater Permit, AZS000004-2021

AAC – Arizona Administrative Code

ADEQ – Arizona Department of Environmental Quality

APP – Aquifer Protection Permit

ARS – Arizona Revised Statutes

AZPDES – Arizona Pollutant Discharge Elimination System

BMP – Best Management Practice

CFR – Code of Federal Regulations

CGP – Construction General Permit

City – City of Mesa

DMGP – De Minimis General Permit

EMF – East Maricopa Floodway

FOG – Fats, Oils, and Greases

FSP – Field Screening Point

GRD – Grease Removal Device

HHW – Household Hazardous Waste

LID – Low Impact Development

MEP – Maximum Extent Practicable

MS4 – Municipal Separate Storm Sewer System

MSGP – Multi-Sector General Permit

NAICS - North American Industry Classification System

NOI – Notice of Intent

NPDES – National Pollutant Discharge Elimination System

SARA – Superfund Amendments Reauthorization Act

SIC – Standard Industrial Classification

STORM – Stormwater Outreach for Regional Municipalities

SWPPP – Stormwater Pollution Prevention Plan

SWMP – Storm Water Management Plan

TRI – Toxic Release Inventory

USEPA – United States Environmental Protection Agency

EXECUTIVE SUMMARY

This Storm Water Management Plan (SWMP) has been prepared by the City of Mesa (City) in response to the conditions established by the Arizona Department of Environmental Quality's (ADEQ) Municipal Separate Storm Sewer System (MS4) permit issued to the City, effective July 1, 2021 (Permit No. AZS000004-2021; herein referred to as the 2021 MS4 Permit). The 2021 MS4 permit allows the City to operate a storm sewer system in a manner that reduces the discharge of pollutants to waters of the United States and Arizona Protected Surface Waters to the maximum extent practicable.

The 2021 MS4 Permit establishes that the City implement, maintain and periodically review this SWMP and develop, as needed, elements to comply with requirements for authorized stormwater discharges from the MS4. At a minimum, this SWMP document must include the following information

1. Ordinances, or other regulatory mechanisms, providing the legal authority necessary to implement and enforce the requirements of the MS4 permit
2. Written procedures describing how the City will implement provisions described in Section 4 of the MS4 permit

It should be noted that all records demonstrating compliance with the 2021 MS4 Permit are retained by the City in accordance with the Arizona State Library Archives & Public Records (ASLAPR) using approved retention schedules.

1 INTRODUCTION

This Storm Water Management Plan (SWMP) has been prepared by the City of Mesa (City) in response to the conditions established by the Arizona Department of Environmental Quality's (ADEQ) Municipal Separate Storm Sewer System (MS4) permit issued to the City, effective July 1, 2021.

1.1 MS4 PERMITTING SUMMARY

An MS4 permit allows municipalities to operate a storm sewer system in a manner that reduces the discharge of pollutants to waters of the United States to the maximum extent practicable (MEP). The following sections are a summary of the City's stormwater compliance history.

1.1.1 1997 Phase I MS4 Stormwater Permit

The United States Environmental Protection Agency (USEPA) designated the City a Phase I community and an operator of a medium sized MS4 and was required to receive permit coverage for stormwater that is discharged from their storm sewer system to waters of the United States under the National Pollutant Discharge Elimination System (NPDES) program. In order to obtain coverage, the City was required to submit a two part permit application. The City's Part I permit application was submitted to the USEPA in 1991. The City's Part II permit application was submitted to the USEPA in 1993.

Based on the information supplied in the Part I and Part II permit applications, the USEPA issued the City's Municipal Stormwater Permit No. AZS000004 on February 14, 1997 and became effective as of March 19, 1997. Under this permit, the City was required to meet all conditions provided in the Part I and Part II permit applications and would be considered operating their storm sewer system in compliance with this permit as long as the City continued to do so.

1.1.2 Arizona Pollutant Discharge Elimination System

In 2002, the USEPA granted primacy of NPDES permitting to the ADEQ. The ADEQ established the Arizona Pollutant Discharge Elimination Systems (AZPDES) program

requirements in the Arizona Revised Statute (ARS) Title 49, Chap 2, Article 3.1 and the Arizona Administrative Code (AAC) Title 18, Chapter 9, Article 9.

1.1.3 2010 Phase I MS4 Permit

Between 2002 and 2008, the City, as well as representatives from other Phase I MS4 operators (collectively, the Coalition of Cities, or Coalition), participated in permit negotiations with the ADEQ on the conditions for the issuance of the first Phase I MS4 stormwater permits under the AZPDES program. On July 30, 2010, the ADEQ issued the 2010 MS4 Permit (Permit No. AZS000004-2010) under the AZPDES program to the City of Mesa. The 2010 MS4 Permit became effective on August 30, 2010.

1.2 STORMWATER CODE

The 1997 Phase I permit required the City to establish, maintain and enforce adequate legal authority to control discharges to the City's storm sewer system as provided in the Code of Federal Regulations [CFR; specifically, 40 CFR 122.26(d)(2)(i)] as summarized below.

- Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the MS4 by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity;
- Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer;
- Control through ordinance, order or similar means the discharge to a MS4 of spills, dumping or disposal of materials other than stormwater;
- Control through interagency agreements among co-applicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system;
- Require compliance with conditions in ordinances, permits, contracts or orders; and
- Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the MS4.

Proper legal authority is necessary for the City to effectively implement compliance programs to reduce pollutants in stormwater runoff to the MEP. Additionally, the 1997 MS4 Permit requires the City to prohibit all non-stormwater discharges except for those specified in the permit documents.

To meet the above requirements, the City established through ordinance Title 8 - Health, Sanitation, and Environment, Chapter 5 - Storm Water Pollution Control of the Mesa City Code (Stormwater Code) as provided in [Appendix A](#).

The ADEQ and USEPA have also established legal authority for certain stormwater and non-stormwater flows to and from the City's storm sewer system. These include, but are not limited, to the following:

- Stormwater and non-stormwater associated with construction activities covered under the ADEQ's Construction General Permit (CGP);
- Stormwater and non-stormwater associated with industrial activities covered under the ADEQ's Multi-Sector General Permit (MSGP);
- Non-stormwater associated with the ADEQ's De Minimis General Permit (DMGP);
- Stormwater and non-stormwater associated with other permits (individual or general) issued by either the ADEQ or USEPA [ex. certain pesticide applications, other regulated MS4s (i.e. county islands), etc.]; and,
- Stormwater and non-stormwater associated with state owned and operated facilities, federal owned and operated facilities, Native American tribal lands, or permitted utilities, special districts, and other wastewater management agencies.

As such, the ADEQ and USEPA are independently responsible for ultimately enforcing their own legal authorities over stormwater and non-stormwater flows from these sources.

1.3 WATERS OF THE UNITED STATES/ARIZONA PROTECTED SURFACE WATERS

The 2021 MS4 Permit, initially authorized the City to discharge stormwater from the MS4 to "Waters of the United States". Between authorization of the permit by ADEQ in

January 2021 and the permit's effective date, the Arizona legislature introduced and passed House Bill 2691 (HB 2691). Signed into law by Governor Doug Ducey on May 5, 2021, HB 2691 requires ADEQ to conduct rulemaking to develop a state surface water protection program. Included in the rulemaking process was a requirement for ADEQ to finalize a Protected Surface Waters list. The Protected Surface Waters list includes known WOTUS and waters as defined in HB 2691 49-211(G).

In 2022, ADEQ finalized the process of amending the City's MS4 Permit to update language to reflect the City's authorization to discharge stormwater from the MS4 to "protected surface waters". The permit language was edited to reflect these changes and to indicate that ADEQ is solely responsible for enforcing discharges to non-WOTUS protected surface waters. In effect, the changes to the 2021 MS4 permit created a definition of the two types of surface waters that the permit was intended to protect:

- *"Protected Surface Waters means waters of the state listed on the Protected Surface Water List under Section 49-221, Subsection G and all WOTUS [A.R.S. § 49-201(38)]."*
- *"WOTUS Protected Surface Water means a protected surface water that is a WOTUS [A.R.S. § 49-201(54)]."*
 - *"Waters of the United States (WOTUS) means those waters as defined in 40 CFR 122.2"*

In August of 2021, the U.S. District Court for the District of Arizona issued an order vacating and remanding the Navigable Waters Protection Rule. In effect, this ruling required agencies to interpret WOTUS consistent with the pre-2015 regulatory regime until further notice. In response to this ruling, the EPA has announced the intention to move forward with a rulemaking process to create a durable WOTUS definition.

Further litigation and court decisions have complicated the EPA's rulemaking process, resulting in considerable uncertainty to the regulated community. In light of these rulings and upon implementation of Arizona's Surface Waters Protection Program, the water bodies described below are the protected Arizona surface waters that the City has determined that receive flow from its MS4.

To the City’s knowledge, none of these water bodies have been identified as being listed as impaired, having established total maximum daily load requirements, listed as an outstanding Arizona water, or are a perennial water body. A description of the designated uses of these water bodies is also provided below.

Water Body	Segment Description	Designated Uses		
		Aquatic & Wildlife	Human Health	Agricultural
Salt River	2 km below Granite Reef Dam to City of Mesa NW WRF outfall at 33°26'22"/111°53'14"	A&We	PBC	--
Salt River (EDW)	City of Mesa NW WRF outfall to Tempe Town Lake	A&Wedw	PBC	--
East Maricopa Floodway	From Brown and Greenfield Rds to the Gila River Indian Reservation Boundary	A&We	PBC	--

Notes:

A&We – Aquatic & Wildlife Ephemeral

A&Wedw – Aquatic & Wildlife Effluent Dependent Water

PBC – Partial Body Contact

1.4 ANNUAL REPORTING

The 2021 MS4 Permit requires the City to prepare annual reports summarizing the implementation of the programs described in this SWMP. Annual reports must be provided in the format provided by the ADEQ in Appendix A of the 2021 MS4 Permit. Annual reports include activities conducted during the reporting period which coincides with the City’s fiscal year (July 1 through June 30th) and are due by September 30th of each year.

1.5 UPDATES TO THE SMWP

The 2021 MS4 Permit requires the City to review this SWMP at least annually to modify or revise, as needed, existing elements and/or develop new elements to comply with requirements for authorized stormwater discharges to the MS4. The SWMP may be updated greater than annually if the City determines that despite full implementation, discharges of pollutants above SWQS are observed.

The 2021 MS4 Permit also requires the City to post the most current version of this SWMP on the City's website within one year from the permit's effective date and to be accessible to the general public (see [Section 3.2](#)).

2 PUBLIC EDUCATION AND OUTREACH

Public education is an important element of the City's MS4 program. Increasing public awareness about stormwater issues and requirements is essential in controlling the discharge of pollutants to waters of the United States.

2.1 MS4 PERMIT REQUIREMENTS

The 2021 MS4 Permit requires the City to implement on-going and planned outreach activities to educate the community on stormwater management practices, impacts to stormwater discharges, and steps that can be taken to reduce stormwater pollution. Additionally, target audiences and topics for the Public Education & Outreach Program are identified. It should be noted that the target groups and topics presented in sections 2.1.1 and 2.1.2 are not exclusive and the City may focus its efforts on target groups and topics most relevant to the MS4.

2.1.1 General Public

The 2021 MS4 Permit requires the City to target at least one of the following groups during each permit year (July 1 through June 30):

1. General Public;
2. Residential Community;
3. Home Owners;
4. HOAs; or,
5. Schools.

The 2021 MS4 Permit requires that at least one of the following topics be addressed for these target groups:

- Post-construction ordinances and long-term maintenance requirements for permanent stormwater controls
- Stormwater runoff issues and residential stormwater management practices
- Potential water quality impacts of application of pesticides, herbicides and fertilizer and control measures to minimize runoff of pollutants in stormwater

- 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
- Illicit discharges and illegal dumping, proper management of non-stormwater discharges, and to provide information on reporting spills, dumping, and illicit discharges
- Spill prevention, proper handling and disposal of toxic and hazardous materials, and measures to contain and minimize discharges to the storm sewer system
- Installation of catch basin markers or stenciling of storm sewer inlets to minimize illicit discharges and illegal dumping to the storm sewer system
- Proper management and disposal of used oil
- Community activities such as monitoring programs, environmental protection organization activities, etc.

The requirements under this part of the 2021 MS4 Permit provide the City an opportunity to select which topics (i.e. options or menu choices) to choose among during each year of the permit without modification to the permit. However, the City must report the outreach approach selected, the topic, the target group, and an estimated number of participants reached in each annual report.

2.1.2 Business Sectors

The 2021 MS4 Permit also requires the City to target at least one of the following business sector groups during each permit year:

1. Development Community;
2. Construction Site Operators;
3. Targeted Sources or Types of Businesses (industrial or commercial)

The 2021 MS4 Permit requires that at least one of the following topics be addressed for these target groups:

- Planning ordinances, and 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 requirements under this part of the 2021 MS4 Permit provide the City an opportunity to select which topics to choose from during each year of the permit without modification to the permit. However, the City must report the outreach approach selected, the topic, the target group and an estimated number of participants reached in each annual report.

2.2 Evaluation of Public Outreach Efforts

The 2021 MS4 Permit requires the City to evaluate and measure the understanding and adoption of targeted behaviors for at least one target audience in at least one subject area no later than the fourth year of the Permit term. The results of the evaluation will then be used to direct education and outreach resources most effectively and to evaluate changes in targeted behaviors in target audiences. This Permit requirement will be performed along with other MS4 Permittees and member of AZSTORM (see Section 2.3 below).

In the fourth-year annual stormwater report, the City will include an evaluation of the target audience in a subject area and any changes adopted in response to targeted behaviors in order to maximize the effectiveness of our MS4 program. This evaluation will be tailored to the City's program and will not be performed along with other MS4 Permittees.

2.3 STORMWATER OUTREACH FOR REGIONAL MUNICIPALITIES

The City's stormwater public education and outreach method is managed through the Arizona Stormwater Outreach for Regional Municipalities (AZSTORM) organization. AZSTORM is comprised of Phase I and Phase II MS4 operators in the greater Phoenix Metropolitan Area. AZSTORM was founded in 2002 largely in response to the Phase II MS4 stormwater regulations (i.e. small MS4 operators) and was spearheaded by the Phase I MS4 operators as a method of assisting all regulated small MS4 operators in the development of their public education programs. The City played a key role in the early years of the development of the AZSTORM organization and continues to be a major participant and proud supporter to this day.

The traditional approach to public stormwater education and outreach is for individual communities to work independently. AZSTORM encourages a new perspective at a regional level to improve public outreach and education. Members meet monthly to discuss ideas, gather information, and share results of stormwater management tools, techniques, programs, and initiatives.

Benefits of this collaborative effort include:

- Increased public awareness of the impacts of stormwater pollution;
- Consistent messaging (“Only rain in the storm drain”);
- Shared information and experiences;
- Pooled financial resources;
- Protection of the environment; and,
- Improved quality of life.

The City realizes a great economic benefit from their membership investment. For a relatively small contribution, the City receives a significant return in public outreach and education, much more than the City would have gained working independently. Membership in AZSTORM also provides increased buying power that helps achieve bulk pricing on storm water pollution awareness promotional items. Additionally, the ability to cooperatively apply for grants and other financial assistance helps further the common goal of public education to reduce stormwater pollutants and ultimately improve regional surface water quality.

AZSTORM uses a multimedia approach targeting audiences through radio, television, special events, and providing permit information to the general public and the regulated community. These approaches include, but are not limited to, radio and television public service announcements (PSAs), developing brochures and other handouts, and attending public events.

Additionally, AZSTORM has created a comprehensive website that includes the copies of outreach materials and PSAs ([link](#)).

The STORM website provides detailed information pertaining to:

- General stormwater requirements (Permits - MS4 Programs);
- The general public (FAQs and What Can I Do?);
- Education (school) programs (Kids Corner);
- Regulated business sectors, including construction and other industrial activities (Permits); and,
- The organization itself and specific information for each member organization (About Us & Contact Us).

AZSTORM operates primarily through fees paid by each municipal member. The choice of audiences and topics that will be targeted each fiscal year are decided by the membership through consensus. The City has one vote in deciding what the targets will be. However, AZSTORM understands that Phase I MS4s have been directed to target at least two separate groups per reporting year and are aware of the listing of topics that are required to be addressed. As such, AZSTORM has indicated a willingness to adjust their schedule to target at least one category of each audience identified in [Section 2.1.1](#) and [Section 2.1.2](#) and at least one of the topics identified in those sections. The City will attend monthly STORM meetings to voice any concerns over what audiences and topics should be targeted in order to ensure compliance with the 2021 MS4 Permit.

3 PUBLIC INVOLVEMENT AND PARTICIPATION

The 2021 MS4 Permit requires the City to do the following:

1. Provide and publicize a reporting system to facilitate and track public reporting of spills, discharges or dumping to the storm sewer system (i.e., storm water hotline, web page, etc.) on a continuous basis.
2. Post this SWMP and latest annual report on the City's website within one (1) year from the effective date of this permit.
3. Create opportunities for citizens to participate in the implementation of the following stormwater controls
 - Stream clean-ups
 - Storm drain stenciling
 - Volunteer monitoring
 - Disposal of household hazardous waste
 - Educational activities
 - Facilitation of Adopt-A-Wash, Adopt-A-Park, and Adopt-A-Street litter control activities

3.1 ENVIRONMENTAL HOTLINE AND ONLINE REPORTING TOOLS

The City established an Environmental Hotline (480-644-3599) as a method to receive calls regarding stormwater as well as other environmental issues [air quality, hazardous material disposal, illegal dumping, and public nuisances (i.e. mosquitoes)]. During normal business hours, calls are answered by personnel trained to understand the nature of the types of calls they receive and can address questions that are informational in nature. Where a complaint is filed, the record is turned over to appropriate personnel trained in code enforcement procedures for inspection. All complaints are logged into the City's Accela® database system for tracking purposes. During off-business hours, callers are provided an opportunity to leave a message which is retrieved and processed the following business day.

The City also operates an online citizens engagement tool called City Sourced. Citizens can access the City Sourced platform through the City of Mesa website to report environmental complaints as well as graffiti, code compliance issues, illegal dumping,

potholes, and more. Environmental personnel are immediately emailed when an environmental complaint is received, and all complaints are followed up within three business days. If a complaint is deemed to be best handled by Environmental personnel, the progress is tracked in the Accela® database similar to how a hotline call is handled.

3.2 STORMWATER WEBSITE

The City maintains a website specifically for stormwater [\[link\]](#). That website has information specific to the City's stormwater program. For more background information pertaining to stormwater education, permits, etc., a link is provided to the AZSTORM webpage.

The City will post this SWMP document on the website no greater than one year from the permit's effective date. The City will also provide a link to the most recent annual report drafted under the 2021 MS4 Permit within ten (10) business days of submittal of that document to the ADEQ.

3.3 HOUSEHOLD HAZARDOUS MATERIAL FACILITY

In 2018 the City opened our fully operational Household Hazardous Materials Facility which provides Mesa residents the opportunity to dispose of household hazardous wastes (HHW) at a convenient central location. By providing a proper disposal option to the City's residents, the City has kept these materials from potentially being illegally dumped into the City's storm sewer system or improperly disposed of into solid waste receptacles, which then may be spilled onto City streets.

The Household Hazardous Material Facility, which is located at 2412 North Center Street, is open year-round, four days a week. Residents are restricted to household amounts of waste each visit but are allowed unlimited visits. Additionally, usable materials are set aside in the facility's "swap shop" where they are made available to citizens free of charge. The swap shop feature allows the responsible re-use of hazardous materials to reduce the amounts and quantities of materials shipped off as waste. The City maintains a webpage detailing all the services available at the Household Hazardous Materials Facility [\[link\]](#).

3.4 CITIZEN OPPORTUNITIES

The City's public engagement personnel continuously reach out to the public through various mechanisms such as social media, mailings, and newsletters. The City intends to use these means to gauge public involvement interest and to will continue offer citizens and groups opportunities to get involved with stormwater management.

4 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

The 2021 MS4 Permit requires the City to implement a program to detect, investigate, and eliminate non-stormwater discharges, including dumping and spills, into its system. An illicit discharge is any discharge to the City's MS4 that is not composed entirely of storm water except discharges that are allowable under NPDES or AZPDES permits, firefighting activities, or other allowable non-stormwater discharges that are described in section 4.1 of this document.

Chapter 5 of Title 8 of the City of Mesa's code of ordinances prohibits the release of "any pollutant, directly or indirectly, to the City storm sewer system where such release would result in or contribute to a violation of any AZPDES or NPDES Storm Water Permit issued to the City, either separately considered or when combined with other releases". The City drafted an Environmental Code Enforcement Standard Operating Procedures manual that provides more detail on how the City addresses illicit discharge enforcement. These procedures also address other environmental program areas and similar Mesa City Code requirements.

4.1 NON-STORMWATER FLOWS

In order to properly implement an illicit discharge detection and elimination program, non-stormwater flows must be defined. Non-stormwater flows can be categorized into two classifications: allowable non-stormwater discharges and illicit discharges.

4.1.1 Allowable Non-Stormwater Flows

Non-stormwater flows or pollutants that are authorized to be released to the City's storm sewer system or discharged from the City's storm sewer system to waters of the United States as provided below. The 2021 MS4 permit requires the City to address any of these discharges should they be considered sources of pollutants to an Arizona protected surface water:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters

- Uncontaminated groundwater infiltration (as defined under 40 CFR 35.2005(b)(20))
- Uncontaminated pumped groundwater
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensation
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Street wash water
- Discharges or flows from emergency firefighting activities
- Discharges authorized by another NPDES or AZPDES permit

4.1.2 ADEQ Permitted Non-Stormwater Flows

The ADEQ issues permits to construction operations through the CGP, select industrial facilities through the MSGP, and de minimis discharges through the DMGP. Each of these permits provide for certain non-stormwater flows.

The de minimis sources are most likely to be the types of releases permitted by the ADEQ that will be identified as part of a public report or dry-weather screening processes. Most of these are related to construction or utility operations (i.e. installation, maintenance, and repair of potable water supply systems, well development and maintenance and/or aquifer testing, hydrostatic testing, etc.).

However, under the “Other Category” in the DMGP, the ADEQ allows for the following discharges when the discharge is to an ephemeral or effluent-dependent water (as is the case with the Arizona protected surface waters that receive discharges from the City; see [Section 1.3](#)):

- Residential non-contact cooling water (including overflow from residential evaporative coolers or air conditioning condensate);
- Charitable noncommercial car washes when only the exterior of vehicles are being washed, and only biodegradable soaps and/or water are used;
- Building and/or street wash water (where only biodegradable soap and/or water are used, and accumulations of pollutants, if present, have been physically removed prior to conducting washing activities that will result in a discharge); or
- Freshwater swimming pool drainage that has been dechlorinated/debrominated before release. Such pool drainage must be visually clear, colorless, and free of suspended solids, floating material, and debris.

The ADEQ does not require a permit application for these types of discharges as long as the responsible party takes appropriate measures to reduce pollutants. Releases associated with residential non-contact cooling water and street wash water noted in the above is already specifically provided for in the City's Stormwater Code ([Appendix A](#)).

Charitable car washes and building wash water are also allowed to be released to the City's storm sewer system since these sources are authorized under an AZPDES permit [see Section 8-5-2(B) of the City's Stormwater Code as provided in [Appendix A](#)]. Swimming pool discharges are not expressly allowed under the City's Stormwater Code since these discharges can also be a violation of the City's public nuisance code (Title 8, Chapter 6 of the Mesa City Code).

4.1.3 Management of Non-Stormwater Flows

The City does not operate as a permitting agency for stormwater or non-stormwater flows. However, the City has identified the following non-stormwater releases to target through the training of City stormwater code enforcement personnel. This training was developed to equip City staff with the correct information to provide the public when targeted releases are discovered or reported. The following table summarizes the City's approach to non-stormwater flows and the impacts of improper management.

Targeted Release	Targeted Pollutant(s)	Targeted Areas
Flood Irrigation Water	Sediment	Irrigation over areas that are exposed to bare soils.
Individual Car Washing	Sediment Solvents	Washing heavily soiled trucks. Washing undercarriage or engine compartments.
Street Wash Water	Sediment Oils	Washing dirt covered paved surfaces. Washing paved surfaces with standing liquid oil spills.
Swimming Pools & Hot Tub Water (generally not allowed)	Chlorine Bromine Sediment Bacteria	Flows must remain on site (irrigation usage) go to sanitary sewer, or be pumped and hauled away for disposal.

4.1.4 Private Detention/Retention Basins and Drywells

Non-stormwater flows to detention basins or retention basins (i.e. surface impoundments) and drywells are regulated under the ADEQ's Aquifer Protection Permit (APP) program. Under that program, a clean closure may be required wherever a pollutant (other than that exempted under ARS Title 49, Section 250) is released to surface impoundments or drywells to ensure that no migration of pollutants directly to the aquifer (groundwater) or to the vadose zone has occurred. As such, the City will report the release of any pollutant to privately owned surface impoundments or drywell systems to the ADEQ for enforcement under the APP program instead of addressing these non-stormwater releases under the City's Stormwater Code.

4.1.5 Illicit Discharges

An illicit discharge is defined as any discharge to the MS4 that is not composed entirely of storm water except the allowable non-stormwater flows detailed in [Section 4.1](#) of this document. Examples of illicit discharges include the following:

- Discharges of septic waste either through interconnection or through mobile sources (e.g., septic haulers or RVs)
- Discharges of mobile business's process water (e.g., carpet cleaners, painters)
- Concrete equipment cleanout
- Industrial process water
- Chlorinated or eutrophic swimming pool water

- Illicit sanitary sewer cross-connections
- Discharges of stormwater from secondary containment structures that contains visible sheen or other pollutants

4.2 INSPECTIONS AND SCREENING

The 2021 MS4 Permit requires the City to implement an ongoing program designed to detect and identify non-stormwater discharges into the City's MS4. Inspections and screenings for non-stormwater discharges will be conducted using the *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments* or another method of equal effectiveness.

The 2021 MS4 Permit requires the City to inspect "priority" major outfalls or field screening points (FSPs) (if applicable) once each year of the permit term. Priority outfalls and FSPs are defined as those that discharge to an impaired and/or outstanding Arizona water (OAW) or other perennial water; all major outfalls and FSPs that have been a source of illicit discharges in the past five years (unless the source has been eliminated or has been shown not to be a significant source of pollutants; and all major outfalls identified by the City as a priority for illicit discharges.

The City discharges stormwater to two distinct segments of the Salt River and to the EMF (see [Section 1.3](#)). To the City's knowledge, none of these water bodies have been identified as being an impaired water, outstanding Arizona water, or perennial water body. Previous dry-weather screening activities conducted during the past five years of the 2010 MS4 Permit at identified outfall and FSP locations did not result in the determination of a release of significant pollutants to either the City's storm sewer system or a water of the United States. Lastly, no major outfalls have ever been identified by the City as a priority for illicit discharges. Therefore, as of the date of this SWMP, no priority outfalls have been identified by the City. Should the City identify priority outfalls during the 2021 MS4 Permit term, these outfalls will be placed on the annual inspection list for dry weather screening.

4.2.1 Outfall and Field Screen Point Locations

The City has identified fourteen (14) distinct drainage areas as they related to dry-weather screening purposes. These drainage areas are defined, in general, by

highways irrigation canals, and flood control structures that generally create hydrological barriers; through, under, or over which few connections, if any, exist. The drainage area map is provided in [Appendix B](#).

Outfall locations were determined as point source locations that “discharge” stormwater from the City’s storm sewer system directly to an Arizona protected surface water (see [Section 1.3](#)). FSPs were determined as point source locations that “release” stormwater from the City’s storm sewer system to another regulated MS4 operator’s infrastructure where the same release then either directly discharges to a water of the United States, or where the City determines that there is a reasonable probability of the release discharging to a water of the United States.

The 2021 MS4 Permit requires the City to provide a map or inventory of major outfall and FPS locations (with latitude and longitude and associated drainage areas). The general locations of the City’s outfall and FSP locations are provided in [Appendix B](#). An inventory of the outfall and FSP locations, including latitude and longitude, is provided in [Appendix C](#).

4.2.2 Existing Dry-Weather Flows

The 2021 MS4 Permit requires the City to re-evaluate known dry-weather flows not eliminated or investigated in the past five (5) years. While operating under the 2010 MS4 Permit, the City conducted dry-weather screening activities at outfall and FSP locations identified as part of that permit at a frequency that resulted in 100% of all locations being screened during the past five year period. Dry-weather screening activities conducted at these locations did not result in the determination of a release of significant pollutants to either the City’s storm sewer system or a water of the United States (see City of Mesa stormwater annual reports dated September 2016 through September 2020).

4.2.3 Inspection Schedule

The 2021 MS4 Permit requires the City to inspect all priority outfalls annually while inspecting 100% of all major outfalls and FSPs within the five-year MS4 Permit term. The City has tentatively scheduled outfall and FSP inspections based on drainage area, the proximity of the drainage areas to one another, and targeting those drainage areas

that contain actual outfalls (i.e. discharge directly to an Arizona protected surface water) and/or FSPs in closest proximity to an Arizona protected surface water.

The order in which the outfalls and FSPs are inspected in each drainage area is roughly established by the sequencing order of each asset within that drainage area (example: Drainage Area 5, assets: 501, 502, 503, etc.). In taking this approach, the City identified four target areas as provided in the following subsections. In inspecting one of the four target areas annually, the City intends to meet the requirement that all outfalls and FSPs be inspected at least once during the five-year term, leaving the fifth year open to inspection of newly identified “priority” outfalls, new outfalls that were constructed during the permit term, and any previously unidentified outfalls which may have been missed during the initial mapping evaluation. The following target areas will be evaluated annually during the first four years of the permit term:

4.2.3.1 Target Area A

Target area A includes outfalls and FSPs in drainage areas 11, 9, 8, and 2. The City will start in drainage area 11 (southernmost) and work their way north (up-gradient) through the EMF (i.e. drainage areas 9 and 8) and to drainage area 2, with outfalls that drain directly the Salt River.

4.2.3.2 Target Area B

Target area B includes FSPs located in drainage areas 1, 4 and 14, since these FSPs are in close proximity to the Salt River and discharge either through pipe-to-pipe connections or through concrete-lined channels (offering little treatment).

4.2.3.3 Target Area C

Target area C includes FSPs located in drainage areas 5 and 7 since these FSP locations drain to the ADOT channel at the US 60.

4.2.3.4 Target Area D

Target area D includes FSPs located in drainage area 6 and 11 since the closest FSP location in each of these drainage areas is approximately 20,000 feet from the Salt River and the EMF, respectively. The only remaining drainage area with an FSP is

drainage area 7, which only has one FSP and can be inspected as part of the inspection sequence for drainage area 5 or 6.

4.2.4 Dry-Weather Screening Methods

During dry weather screening activities, the City will:

- visually inspect each outfall and FSP location for flow, trash, suds, and odor;
- collect a sample for dry-weather screening where the flow rate is found to be sufficient; and,
- re-inspect within 24 hours where flow was present.

40 CFR 122.26 requires this visual inspection to include color, turbidity and the presence of oil sheen or surface scum and is specific with respect to the re-inspection timeframe (requires a re-inspection between four (4) and twenty-four (24) hours where flow was present).

The City collects samples for dry-weather screening where significant flow exists (generally greater than 0.3 gallons per minute). Dry-weather screening samples are collected as discrete (i.e. grab) samples. For quantitative analyses, the City purchased the HACH Company Storm Water Test Kit Model SW-1 for the analysis of pH, total chlorine, total copper, total phenol, and detergents. The City purchased a HACH Company 2100Q Portable Turbidimeter to measure turbidity of dry-weather screening samples. For qualitative analyses, parameters are estimated based on visual observations. A description of the methods used for quantitative analyses, including the name of the manufacturer of the test method along with the range and accuracy of the test for field analysis, is provided in [Appendix D](#).

4.2.5 Investigation Timelines

The 2021 MS4 Permit requires the City to immediately respond to all reports of illicit discharges which constitute a threat to human health or the environment and that 90% of all reports of illicit discharges shall be investigated within five business days. Reporting sources are discussed in [Section 3.1](#) of this document but can also include reports received from City personnel or other outside public employees (e.g., Maricopa County or adjacent cities). The City generally responds to all public reports (i.e.

complaints) within three (3) business days, including those related to stormwater issues. Investigations include responding to the address of the reported issue and assessing conditions at that location. For non-stormwater releases, it may be necessary to conduct a drainage area investigation to identify the source.

4.2.6 Tracking

Dry-weather screening and associated investigations are documented on the Dry-Weather Screening Report Form specific for each location. The City has developed a database with the functionality to retrieve data and generating reports required for the annual report and to better track results at these locations. Additionally, all reports of illicit discharges generated from outside sources are tracked in Accela as an environmental complaint.

4.3 ENFORCEMENT AND ELIMINATION

The 2021 MS4 Permit requires the City to initiate corrective actions and/or enforcement mechanisms to eliminate any illicit discharge within 60 calendar days of identification of the source. If a source is fully investigated and determined to not cause or contribute to an exceedance of a SWQS, this 60-day timeframe will not apply. All source investigations will be documented and will include the results of the investigation plus any sampling and reasoning used to determine whether such discharges do not contain significant levels of pollutants.

In the event of the discovery of a source of an illicit discharge that contributes to an exceedance of a SWQS, the 2021 MS4 Permit requires the City to implement and follow enforcement procedures that incorporate escalating actions for violations of municipal stormwater requirements, ordinance, or code identified during inspections. The City is required to resolve at least 80% of these cases within one calendar year from the original enforcement action.

The City's Stormwater Code is consistent with other sections of the Mesa City Code to make enforcement more consistent at the inspector level and to ensure compliance with the 2021 MS4 Permit requirements. The City developed Basic Case Enforcement Process Work Instructions to provide a general schedule for obtaining compliance with

stormwater violations, as well as other sections of the Mesa City Code. A copy of the Basic Case Enforcement Process Work Instructions is included in [Appendix E](#).

4.4 EMPLOYEE TRAINING

The 2021 MS4 Permit requires existing employees directly involved with stormwater management activities, including dry-weather screening and associated investigations, be trained at least once every two (2) years and to provide an opportunity for new employee training at least one (1) time per year.

As such, all City staff who conducts these types of operations must meet the following requirements:

- Review the procedures detailed in the Environmental Code Violation Standard Operating Procedures;
- Have knowledge of:
 - Ordinances, rules, and regulations governing stormwater discharges, particulate pollution, and hazardous materials;
 - Principles and practices for field monitoring protocols, sample collection, preservation, analysis, and documentation requirements;
 - Occupational and safety precautions at industrial and construction work sites; and,
- Have a basic knowledge of the impact of chemicals on human and ecological systems.

Select staff are required to remain current on stormwater regulatory requirements through reviewing regulations; attending seminars; participating in stakeholder meetings, public meetings, and other networking group events; and receiving newsletters and information through distribution lists related to stormwater programs.

Additionally, and in order to meet the training requirements associated with the 2021 MS4 Permit, all existing City staff who conduct dry-weather screening and associated investigations shall be provided a training opportunity by supervisory personnel at least once a year. Where new employees are hired, a training opportunity shall be provided within one year of service. All training shall be documented by the City in the form of

retaining a sign-in sheet or other form of documentation including the date these training opportunities were provided and the staff attending the training.

4.5 RECORDKEEPING AND REPORTING

The City of Mesa has developed a cloud-based electronic document management system (EDMS) and follows a standard operating procedure for retention of all environmental documents. In accordance with the 2021 MS4 Permit, the City will continue to track and maintain all records of the activities associated with IDDE in accordance with the Arizona State Library Archives and Public Records (ASLAPR) approved retention schedules.

The 2021 MS4 Permit requires the City to report annually the following information as it pertains to the City's IDDE program:

1. City of Mesa AZPDES Number
2. Date incident reported or discovered
3. Date of the beginning of each response
4. Date of the end of each response
5. Did the discharge reach an Arizona Protected Surface Water
6. Incident location (address or latitude and longitude)
7. Pollutants
8. Source
9. Corrective actions(s)

5 MUNICIPAL FACILITIES POLLUTION PREVENTION AND GOOD HOUSEKEEPING PRACTICES

5.1 SPECIFIC FACILITY REQUIREMENTS

The 2021 MS4 Permit requires the City to continue to update and maintain an inventory, database, list, map, or other equivalent tracking system of specific City-owned and operated facilities identified in the permit and described below

The inventory must include the following types of facilities:

- Equipment storage and maintenance facilities;
- Fleet maintenance facilities (vehicle washing and maintenance, chemical handling, waste storage);
- Hazardous waste disposal facilities;
- Hazardous waste handling and transfer facilities;
- Landfills;
- Materials and waste storage yards and processing facilities;
- POTWs and sludge handling areas;
- Recycling facilities;
- Street repair yards and street maintenance yards; and
- Other sites or sources that the City determines may be a significant source of pollutants to the MS4

It should be noted that some municipally owned facilities, such as water treatment plants and the Falcon Field Airport are covered under separate AZPDES permit programs and according to the 2021 MS4 permit, are governed by these other permits and not this section of the SWMP.

5.1.1 Industrial Facility Identification, Review, and Prioritization

By developing a list from the City-owned properties database, the City has identified approximately 111 facilities that are specifically identified in [Section 5.1](#) and/or have the potential to discharge pollutants to the MS4. Information with respect to these facilities is included in [Appendix F](#).

The 2021 permit requires the City to implement a system to review and prioritize this municipal facility inventory. The municipal facility inventory will be reviewed at least annually, and prioritization shall be considered using the following considerations:

- Type and location of materials used and/or stored at the facility;
- Potential for exposure to stormwater; and
- Potential to discharge a substantial pollutant load to the MS4 or to a water of the U.S.

Facilities covered under separate AZPDES permit programs shall be ranked as a low priority for consideration under this permit.

5.1.2 Inspections

The 2021 Permit requires the City to inspect all the facilities identified in Section 5.1 at least once within the five-year permit term. It is the City of Mesa's intention to inspect all the facilities identified in the initial review within the first four years of the permit term while inspecting any missed, newly identified, or newly built or acquired facilities in the fifth year of the permit term.

5.2 GOOD HOUSEKEEPING MEASURES

The 2021 MS4 Permit requires the City to implement practices, policies, and procedures that reduce stormwater impacts associated with runoff from all lands owned and operated by the City. For the purpose of this section, the definition of lands owned and operated by the City include parking lots, streets, roads, highways, buildings, parks, open space, road right-of-way, maintenance yards, and stormwater treatment and flow control BMPs and facilities. The following activities are required to be addressed:

- Pipe culvert and ditch maintenance and cleaning;
- Street cleaning;
- Road repair and resurfacing;
- Utility installation;
- Maintaining roadside areas, including vegetation management;
- Dust control

- Application of fertilizers, pesticides, and herbicides according to the instructions for their use, including reducing nutrients and pesticides using alternatives that minimize environmental impacts;
- Sediment and erosion control;
- Landscape maintenance and vegetation disposal;
- Trash and pet waste management;
- Building exterior cleaning and maintenance

The City of Mesa has developed a set of Standard Operating Procedures (SOPs) to address the requirements of this section. The Municipal Operations SOP and the City Field Operations SOP address environmental requirements, including stormwater requirements, for City facilities and operations covered under this section. These SOPs provide working knowledge for facility and field staff to address stormwater related activities, and a means to address and correct any non-compliance issues they may encounter in the course of their work.

5.3 TRAINING

The 2021 MS4 Permit requires the City to provide new-employee training at least once per year to employees with direct stormwater responsibilities. These same employees shall be provided refresher training at least once every other year. The City of Mesa has developed an environmental programs training SOP which provides a procedure to identify and schedule specific employees involved with direct stormwater responsibilities to be trained under the following topics, as required by the 2021 MS4 Permit:

- The importance of protecting water quality;
- Pollutants and their sources;
- Operations and maintenance standards;
- Inspection procedures;
- Selecting appropriate BMPs;
- Ways to perform job activities to prevent or minimize impacts to water quality;
- Procedures for reporting water quality concerns

All training will be documented by the City in the form of retaining a sign-in sheet or other form of documentation including the date these training opportunities were

provided and the staff attending the training. In the event that there are no new employees with direct stormwater responsibilities hired within a given year, the City intends to document this in the annual report.

5.4 RECORDKEEPING

The City of Mesa has developed a cloud-based electronic document management system (EDMS) and follows a SOP for retention of all environmental documents. In accordance with the 2021 MS4 Permit, the City will continue to track and maintain all records of the activities associated with this section in accordance with the Arizona State Library Archives and Public Records (ASLAPR) approved retention schedules.

6 PRIVATE INDUSTRIAL AND COMMERCIAL FACILITIES (NON-MUNICIPALLY OWNED)

The purpose of the industrial and commercial facility inspection program is to document those private operations within the City that have the potential to discharge pollutants to the MS4 while establishing a means to review and correct any pollutant sources which may be in violation of the City's stormwater ordinances. The City drafted a Commercial & Industrial Facility Inspection Standard Operating Procedures (SOP) manual that provides greater detail on how the City addresses the requirements associated with the inspections of private commercial and industrial facilities referenced in Section 4.6 of the City's MS4 Permit. Those procedures also address other environmental program areas and similar Mesa City Code requirements.

6.1 INDUSTRIAL AND COMMERCIAL FACILITY INSPECTIONS

The 2021 MS4 Permit requires the City to continue to update and maintain an inventory, database, list, or map tracking system of private commercial and industrial sites that have the potential to discharge stormwater pollutants to the City's MS4. The inventory of commercial and industrial facilities includes industrial facilities identified in 40 CFR 122.26(d)(2)(iv)(C) and any other sources which the City has determined to be a significant source of pollutants. The City has interpreted the clause "other sources which the City has determined to be a significant source of pollutants" to include all facilities within the City that are subject to the 2019 ADEQ Multi-Sector General Permit (MSGP).

The facilities identified in 40 CFR 122.26(d)(2)(iv)(C) include municipal landfills, hazardous waste treatment, disposal, and recovery facilities, and industrial facilities that are subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III). Facilities subject to SARA Title III are those that meet the following criteria:

- The facility that has 10 or more full time employees;
- The facility has manufactured, processed or otherwise used any toxic chemical above threshold amounts in the course of a calendar year; and

- The facility has a primary Standard Industrial Classification (SIC) code in any of the 27 industry sectors known to be most likely to contribute pollutants to surface waters

6.1.1 Identifying Industrial Facilities

The City identified all industrial facilities within the City's boundaries that met the requirements established under 40 CFR 122.26(d)(2)(iv)(C) [Superfund Amendments and Reauthorization Act (SARA) Title III facilities]. The City will continue to conduct an annual review of the USEPA Toxic Release Inventory (TRI) database in order to keep the City's inventory updated. The City continues to add newly identified industrial facilities into the industrial inspection process, and remove any facilities that were known to no longer operate within the City's jurisdiction. At any point of time, the City's industrial inventory ranges from approximately 25 to 50 facilities.

In 2021, the City engaged with personnel and the Arizona Commerce Authority to provide information on facilities subject to the MSGP based on Standard Industrial Classification (SIC) codes. The list provided by the ACA featured approximately 4,000 facilities. By identifying duplicate, defunct, or incorrectly listed facilities, the City was able to further refine the list to about 700 active facilities. As of the date of this publication, the City's industrial facility inventory included approximately 800 facilities, of which approximately 680 were active facilities, and of those approximately 480 facilities are currently listed as MSGP facilities [i.e. those having a SIC code identified in the 2019 MSGP]. A listing of the facilities currently included on the City's industrial facilities database is provided in [Appendix G](#).

6.1.2 Inspection Prioritization

The City believes that the inspection of industrial facilities should not be conducted in a manner that provides a financial advantage to other industrial owners/operators in the same business [i.e. industrial sector, SIC, or North American Industry Classification System (NAICS)]. As such, with the exception of complaint inspections and TRI listed facilities, the City intends to randomly inspect all facilities listed in the industrial facility database at least once per the five-year term of the 2021 MS4 permit.

The following criteria are used to determine categories and establishing a prioritization for conducting industrial inspections.

1. Complaints.
2. Newly identified TRI listed facilities that have not been previously inspected.
3. Current TRI listed facilities that were not previously inspected within the last 5 years.
4. Industrial facilities identified as subject to the 2019 MSGP (randomly selected by a random number generator).

6.1.3 Types Of Inspections & Notification Procedure

The inspection notification procedure is different depending on whether this is the first requested inspection, a follow-up inspection, or a complaint inspection.

6.1.3.1 Initial Inspections

The City provides notification to industrial facilities in advance to determine if they are still in operation at that location and to ensure the facility will have knowledgeable personnel available.

The following steps detail the initial inspection process:

1. **Initial Notification:** The City places a phone call to the owner/operator of the facility to request a date to perform an inspection. If the facility owner/operator is unable to commit to a scheduled date and time at the time of the initial phone call, the City will allow them 20 calendar days to return the call with a desired inspection schedule.
2. **Follow-Up Notification:** If no response is received during the initial notification phone call, the City will attempt to contact the facility a second time via telephone to schedule an inspection.
3. **No Contact*:** If the City is unable to contact the owner/operator within thirty (30) calendar days, the City will conduct an unannounced inspection of the facility at the inspector's convenience.
4. **Uncommitted or Overly Delayed Response*:** If the facility owner/operator has contacted the City but is uncommitted or repeatedly delays the inspection date in exceedance of forty-five (45) calendar days of the initial notification, the City will establish an inspection date on or about the forty-sixth (46th) calendar day following the date of the initial notification.

5. **Delayed Inspections at Fault of the City:** If a scheduled inspection is missed by the City due to lack of manpower or emergency response requirements, the City will work with the facility owner/operator to establish another inspection date not to exceed 60 calendar days from the date of initial notification.
 - * **NOTE:** The ‘No Contact’ types of inspections may require the use of two or more inspectors, possibly some from different departments or divisions, to ensure personal safety.

6.1.3.2 Complaint Inspections

The City attempts to inspect all industrial facilities that are called in on a complaint basis within one working day of receiving that call, whenever possible. Where industrial operations seem questionable, the City inspector may require the use of two or more inspectors, possibly some from different departments or divisions, to ensure personal safety. The presence of a police officer may also be provided at the request of the City inspector.

6.1.3.3 Follow-Up Inspections

Follow-up inspections are conducted when an initial inspection, complaint inspection, or a previous follow-up inspection result in the identification of deficiencies that have not been, or could not be, corrected in the presence of the City inspector. Follow-up inspections are generally conducted within one (1) business day for serious violations where such violations can reasonably be expected to be addressed in that timeframe.

For less serious violations, a follow-up inspection is generally addressed by developing a compliance schedule with the owner/operator, usually within ten (10) business days. However, the City inspector may set a longer inspection window in cases where the owner/operator may reasonably be expected to be limited by others (e.g. time lags associated with having materials delivered to the facility or where permits are required).

6.2 INSPECTION PROCESS

The inspection process is generally divided into two separate activities. The first step is to conduct a document review; this is followed by the second step, which is to perform a facility field inspection.

6.2.1 Document Review

Most industrial facilities inspected by the City require coverage under the MSGP. The MSGP requires operators of regulated industrial activities to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) prior to submitting a Notice of Intent (NOI) form to apply for coverage under the permit. A SWPPP is a “living document” and as such, it should be designed to be flexible enough to change as site conditions change. Additionally, the City does not have the authority to review the SWPPP for compliance with federal or state requirements or permit conditions. Therefore, the City does not require operators of regulated industrial activities to submit a copy of their SWPPP prior to inspection.

Instead, the City conducts a cursory review of SWPPP and/or other documentation during industrial facility inspections to identify areas that require inspection to ensure compliance with Mesa City Code. The City has drafted an inspection checklist that provides a list of documents that may be reviewed as part of this process.

6.2.2 Field Inspection

Industrial facility inspections are limited to areas that are exposed to stormwater and other areas where operations take place where such operations may be regulated under the City’s other environmental program areas and similar Mesa City Code requirements. Industrial facility staff familiar with facility operations are asked to accompany the City inspector through the field inspection. The results of the inspection are noted on a City of Mesa Industrial Facility Inspection Form.

6.2.3 Inspection Disclaimer

The City only conducts inspections of industrial facilities for compliance with the City’s Stormwater Code and other parts of the Mesa City Code. As such, the owner/operator is provided a copy of an Industrial Facility Inspection Disclaimer form stating that the inspection was limited to these aspects of the City of Mesa Code and not to determine compliance with permit or other regulatory agency requirements.

6.2.4 Compliance Review Approval

Once an industrial facility has been inspected and determined to be operating in compliance with the City’s Stormwater Code, the City will send out an Inspection Results Letter to the owner/operator.

6.3 COMPLIANCE ACTIVITIES AND ENFORCEMENT

The 2021 MS4 Permit requires the City to implement an effective compliance and enforcement program that incorporates escalating actions for violations of municipal stormwater requirements, ordinance, or code. The escalated enforcement protocol is required to focus on having at least 80% of cases with the highest level of enforcement action resolved within one (1) calendar year of the initial inspection or violation.

The City's Stormwater Code has been implemented to be consistent with other sections of the Mesa City Code, to make enforcement more consistent at the inspector level, and to ensure compliance with the 2021 MS4 Permit requirements. The City developed Basic Case Enforcement Process Work Instructions to provide a general schedule for obtaining compliance with stormwater violations, as well as other sections of the Mesa City Code. A copy of the Basic Case Enforcement Process Work Instructions is included in [Appendix E](#).

6.4 NON-FILERS

The 2021 MS4 Permit requires the City to notify the ADEQ of any industrial operations that are known by the City to be occurring without obtaining coverage under the MSGP (i.e. "non-filers"). Where an industrial facility owner/operator is unable to provide proof of coverage under the MSGP, where the City determines that coverage might be required, or when the facility owner/operator voluntarily discloses that MSGP coverage is required (i.e. self-identification of a covered SIC sector), the City will request a copy of any missing documentation (No Exposure Certification or No Discharge Certificate) or require a signed letter from the owner/operator that the MSGP regulations do not apply to them within 30 calendar days. Where a facility operator/owner does not believe that the regulations apply to them due to a "no-discharge" or "zero-discharge" claim, the City may request a letter signed and stamped by an Arizona registered professional (i.e. P.E. or R.G.).

The City will report any industrial facility that is non-responsive to the ADEQ as a "non-filer" within 30 days of identification as required by the 2021 MS4 Permit. Where a permit authorization or no-exposure certification is provided, no further action will be taken.

6.5 RECORDKEEPING

The City of Mesa has developed a cloud-based electronic document management system (EDMS) and follows a SOP for retention of all environmental documents. In accordance with the 2021 MS4 Permit, the City will continue to track and maintain all records of the activities associated with this section in accordance with the Arizona State Library Archives and Public Records (ASLAPR) approved retention schedules.

Additionally, City personnel prepare monthly reports detailing the status of the industrial inspections that include the status of the facility inventory and a summary of inspections, enforcement actions, and findings. That information is then summarized annually.

6.6 TRAINING

The 2021 MS4 Permit requires the City to provide new-employee training at least once per year to employees with direct stormwater responsibilities. These same employees shall be provided refresher training at least once every other year. The City of Mesa has developed an environmental programs training SOP which provides a procedure to identify and schedule specific employees involved with direct stormwater responsibilities to be trained under the following topics, as required by the 2021 MS4 Permit:

- The importance of protecting water quality;
- Pollutants and their sources;
- Operations and maintenance standards;
- Inspection procedures;
- Selecting appropriate BMPs;
- Ways to perform job activities to prevent or minimize impacts to water quality;
- Procedures for reporting water quality concerns

7 CONSTRUCTION SITES

The City drafted a Standard Operating Procedures for Construction Activities of City Projects manual to meet the requirements of the 2021 MS4 Permit, the CGP, and other environmental regulatory requirements associated with construction operations, as well as to address other environmental program areas established under the Mesa City Code. The City also drafted a Standard Operating Procedures for Construction Activities of Private Projects manual to meet the requirements of the 2021 MS4 Permit. These manuals provide more details on the how the City addresses the requirements associated with the inspections of City and private construction sites. Those procedures also address other environmental program areas and similar Mesa City Code requirements.

The City understands that all requirements provided in the 2021 MS4 Permit as it pertains to the construction activities are limited to those construction projects that will result in a land disturbance of one (1) acre or more, including those less than one (1) acre, but are part of a larger common plan of development. Regardless of a construction project's area of land disturbance, the City will continue to enforce its stormwater ordinances as they relate to stormwater discharges to the City's MS4.

Details of the Standard Operating Procedures, fact sheets, and FAQs related to the City's environmental requirements for construction activities are organized and linked on the City's website ([Link](#)).

7.1 PLAN REVIEW

The 2021 MS4 Permit requires that at least 80% of plans for new development and redevelopment shall be reviewed to ensure that controls are implemented to reduce the discharge of pollutants to the MS4. Typically, these plans are reviewed by the City's Development Services Department (DSD) as part of the municipal planning process and are submitted as part of the developers' grading and drainage plans. It should be noted that the City has implemented a process whereby 100% of all projects are evaluated for land disturbance area and if conditions of the project include disturbance of greater than one (1) acre or less than one (1) acre but part of a larger common plan of development, 100% of these projects' grading and drainage plans are reviewed.

7.1.1 Stormwater Control Measures

Along with the submission of the required ADEQ CGP Permit Authorization Certification, Permit Waiver, or No Discharge Certificate, development applicants' plans for projects greater than one (1) acre or less than (1) acre but part of a larger common plan of development are required to submit Erosion and Sediment Control plans. The Erosion and Sediment Control Plan should include all boundaries of the project as well as areas where supporting activities will occur. The Erosion and Sediment Control Plan shall include BMPs that the project will implement to prevent the release of pollutants to the City's MS4. Elements of Erosion and Sediment Control Plans that are protective of water quality include the following:

- Maximum fill and cut slopes
- Maximum bench heights and widths
- Types of allowable fill materials
- Fill compaction and 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 draining requirements, including erosion controls
- Subsurface drainage controls for stability
- Drainage way erosion control provisions

7.1.2 Private Construction Operations

The City has developed an Engineering and Design Standards Manual that provides specific direction and guidelines to the design professionals preparing construction documents for private land development projects. That manual generally adopts the Uniform Drainage Policies and Standards for Maricopa County as published by the Flood Control District of Maricopa County with modifications as specified within that manual.

City regulations requiring the retention of the 50-year, 24-hour run-off volume were adopted in 1997 and were based on three (3) inches of precipitation. Retention standards requiring the 100-year 2-hour volume were adopted in the late 1980's. The

current design storm is based on the 100 year frequency, 2-hour duration storm event which is equivalent to 2.2 inches of rainfall, except in the Mesa Town Center where the retention standard only requires 2/3 of the 100 year, 2 hour rainfall depth, or 1.5 inches.

The primary purpose of onsite stormwater retention standard is to manage stormwater runoff flow rates and volumes resulting from urban development. Stormwater disposal can occur through direct percolation into subsurface soils (full retention) or be released to the City's MS4 through gravity or pressurized bleed-off systems (detention). Bleed-off to the City's MS4 can only occur after the peak of the storm event has passed. Maintenance of private retention/detention infrastructure is the responsibility of the property owner.

When plans are submitted to the City, information on the construction project is entered into a database and tracked from the plan review and inspection process through the completion of the process (i.e. issuance of a Certificate of Completion or Certificate of Occupancy). The City reviews all construction plans for compliance with all aspects of the City's Engineering and Design Standards Manual and City ordinances. Stormwater drainage and infrastructure are generally detailed in grading and drainage plans. Approval of these plans is required before a permit is issued by the City. A copy of the contractor's ADEQ Authorization Certificate is also required before a permit is issued by the City, where applicable.

7.1.3 City Projects

For City projects, the City is deeply involved in the project through all phases of development (i.e. conception, planning, construction, and completion). In general, City projects are designed to meet the requirements provided in the City's Engineering and Design Standards Manual. Grading and drainage plans are required for most engineering projects, and all projects that disturb one or more acres of land. The City approves all plans drafted by outside consultants before the project is approved and issued for bid.

The City maintains a separate database for environmental inspections of City construction projects that disturb more than 0.1 acres. This is the threshold disturbance limit where a dust control permit would be required. For projects that disturb one or more acres, the City requires the general contractor to submit a copy of their SWPPP

for review and approval along with a copy of their ADEQ Authorization Certificate before the contractor is authorized to conduct any land disturbance activities.

7.1.4 Employee Training

Department management overseeing plan review staff is responsible for ensuring that training is provided at least once every two (2) years for existing employees and provided for new employee training at least once (1) per year. Such training will include reviewing grading and drainage design standards and plan review procedures.

Additional training including the requirements for the submittal of the ADEQ Authorization Certificate, the City's Stormwater Code, requirements for structural and non-structural control measures, post-construction stormwater controls, and other environmental issues will be provided by experienced stormwater staff.

All training shall be documented by the City in the form of retaining a sign-in sheet or other form of documentation including the date these training opportunities were provided and the staff attending the training.

7.1.5 Construction Site Inventory

The 2021 MS4 Permit requires the City to develop and update a comprehensive inventory of construction sites that disturb greater than one (1) acre or less than one (1) acre but part of a larger common plan of development that discharge stormwater to the MS4. Permit conditions also require the City to maintain and update this inventory annually. DSD utilizes Accela planning software to assist in the workflow of development planning and permitting. Since 100% of all City-permitted projects are evaluated for stormwater permitting applicability using the Accela software, the inventory of applicable construction sites is continuously current and will remain current throughout the MS4 Permit term.

7.2 CONSTRUCTION SITE INSPECTIONS

The 2021 MS4 Permit requires the City to create an inspection prioritization plan and to establish an inspection schedule based on the prioritization ranking. It is the City's position that all CGP eligible projects are considered the highest priority and, as

required by the 2021 MS4 Permit, are inspected at least one (1) time every three (3) months.

All construction site inspections (private and City) are generally categorized as “routine” and “follow-up” inspections. The City also responds to complaints regarding private and City construction operations. The following sections describe the City’s stormwater construction inspection procedures.

7.2.1 Routine Inspections

7.2.1.1 Private Construction Projects

The initial routine inspections of private construction projects generally occur within three (3) weeks of the issuance of any permit for projects that involve a surface/land disturbance of one (1) acre or more. During this visit, the City will review the operator’s plans, identifying active disturbance areas and stormwater best management practices (BMPs). The City then inspects all active areas of the project to ensure that BMPs and other environmental ordinance issues identified on the operator’s plans are in place and maintained, and to ensure there are no illicit discharges to the City’s storm sewer system.

Subsequent routine environmental compliance inspections are automatically scheduled 84 days following the previous routine environmental compliance inspection for projects that disturb one acre or greater of land. The scope of the inspection is generally the same as the initial inspection except that if the City of Mesa Environmental and Sustainability (ESD) inspector had previously inspected the project the review of the operator’s documents may not be necessary.

7.2.1.2 City Construction Projects

All City staff involved in any inspection of City construction projects are trained in identifying and addressing environmental issues associated with these operations, including stormwater issues. Select City staff having authority to enforce the City’s Stormwater Code also conduct routine inspections in the form of a compliance audit of these operations. Compliance audits are generally conducted within two weeks of the approval of the City to the general contractor (i.e. issuance of a Notice to Proceed) or the disturbance of land associated with the project. Subsequent compliance audits of

City construction projects are conducted a minimum of one (1) time every three (3) months.

7.2.2 Follow-Up Inspections

Follow-up inspections are conducted when a routine inspection or a previous follow-up inspection results in the identification of deficiencies that have not been or could not be immediately addressed. The scope of the follow-up inspection is limited to inspecting only those issues that were identified as deficient in the previous inspection. However, if other significant issues are observed, the City shall address these issues as appropriate.

Follow-up inspections are generally conducted within 24-hours for serious violations where the deficiency was not addressed in the presence of the City inspector. Follow-up inspections for less serious violations are addressed by developing a compliance schedule with the operator. Under any circumstance, follow-up inspections must occur within 30 calendar days of the identification of the original deficiency.

7.2.3 Prioritization

It is the City's decision to conduct inspections of private construction projects and compliance audits of City construction projects a minimum of one (1) time every three (3) months as opposed to spending time and resources developing a prioritization scheme. The City believes this process will allow for more frequent inspections overall and will benefit the City's stormwater program instead of spending resources on methods for planning these inspections.

7.2.4 Inspection Records

Inspections of private construction projects are entered into the same database that stores the information entered as part of the plan review process. This provides a detailed record of the construction operations from the point of plan submittal through inspection and approval (i.e. issuance of a Certificate of Completion or Certificate of Occupancy). Compliance audits of City construction projects are entered into a separate database since these inspections tend to be more comprehensive in nature.

7.2.5 Training

Training of City staff involved in conducting construction inspections will include:

1. Brief overview of ADEQ stormwater permit requirements associated with construction operations, concentrating on permitted non-stormwater discharges;
2. Identifying releases of non-stormwater to the City's MS4 and eliminating releases that are not allowed;
3. City's Storm Water Pollution Control ordinance and other applicable ordinances;
4. Requirements for structural and non-structural BMPs and post-construction stormwater controls, including maintenance requirements; and,
5. Inspection and enforcement procedures.

All training shall be documented by the City in the form of retaining a sign-in sheet or other form of documentation including the date these training opportunities were provided and the staff attending the training.

7.3 COMPLIANCE AND ENFORCEMENT

The 2021 MS4 Permit requires the City to:

1. Establish an enforcement procedure that provides timeframes and escalation for corrective actions and compliance with Mesa City Code Title 8, Chapter 5;
2. Establish an effective compliance and enforcement program that incorporates escalating actions for violations of the City's Storm Water Pollution Control ordinance that provides timeframes and escalation for corrective actions; and,
3. Focus the escalated enforcement protocol on having the highest level of enforcement action resolved within one (1) year of the initial inspection/violation.

The City's Stormwater Code has been developed to be consistent with other sections of the Mesa City Code, to make enforcement more consistent at the inspector level, and to ensure compliance with MS4 Permit requirements. The City developed Basic Case Enforcement Process Work Instructions to provide a general schedule for obtaining compliance with stormwater violations, as well as other sections of the Mesa City Code. A copy of the Basic Case Enforcement Process Work Instructions is included in [Appendix E](#).

The 2021 MS4 Permit requires the City to develop a mechanism to identify and document facilities subject to the CGP that do not file a timely NOI. City of Mesa staff

are currently tasked with inspecting all construction projects in the City for all environmental ordinances including stormwater and dust control. The threshold for scheduling environmental construction inspections is when a site is required to obtain a Maricopa County Air Quality Department dust control permit when a project's disturbance area is greater than 1/10 of an acre (4,356 square feet). City inspectors are trained to evaluate project disturbance areas during inspection activities and any projects found to have not filed an NOI will be treated as a non-filer. Non-filers will be reported to ADEQ within 5 business days if they do not voluntarily come into compliance within that time. Proof of CGP coverage, waivers, or No Discharge Certificates shall be considered sufficient evidence of complying with this section.

Although it is extremely rare, certain CGP eligible projects aren't subject to the DSD permitting process (i.e., parking lot grading, disced weed abatement, etc.) and are not included on the City's construction project inventory. In these cases, City staff are trained to identify these projects in the field or through the citizen complaint process. Additionally, City staff periodically review Maricopa County Air Quality dust control permit databases to confirm that dust permitted projects have been through the DSD permitting process.

8 POST-CONSTRUCTION

Post-construction stormwater management in areas undergoing new development or redevelopment provides opportunities for stormwater quantity and quality improvements by minimizing impacts to stormwater through thoughtful stormwater control design, construction, and maintenance. Stormwater quantity can be addressed by examining the impacts of runoff flows through areas altered or made impermeable by development. As runoff quantity increases over these impermeable surfaces, stormwater quality can be affected as the waters pick up pollutants that are more prevalent in developed areas. The 2021 MS4 Permit addresses these issues and requires the City to thoroughly manage post-construction stormwater controls associated with private and public development or redevelopment.

8.1 POST-CONSTRUCTION CONTROLS

The City of Mesa authorizes private development and redevelopment through the Development Services Department (DSD) permitting process. The City of Mesa periodically updates a set of design standards to which all proposed developments projects must meet in order to be permitted. Chapter 8 of the City's Engineering and Design Standards manual details the City's stormwater drainage and retention requirements and all permitted projects approved by the City must meet these standards. The 2021 MS4 Permit requires the City to implement a program to control stormwater discharges to the City's MS4 and that this program shall apply to all public and private development permit applications.

8.1.1 Design Requirements

The 2021 MS4 Permit requires the City to ensure that all applications for new development or redevelopment which are one acre or greater and discharge to the MS4 design adequate BMPs to ensure the reduction of stormwater pollution to the maximum extent practicable. This requirement is further simplified by stating that adequate post-construction BMPs are presumptively met if the development is designed, built, and maintained in accordance with the 2019 City of Mesa Engineering and Design Standards manual. It is the position of the City of Mesa that since all development and redevelopment projects are required to be permitted through the DSD process, and since all permitted projects are reviewed to be in accordance with the Engineering and

Design Standards manual, that this requirement is adequately met for each project approved by the City.

8.1.2 Design Strategies and Control Measures

The ultimate goal of post-construction design strategies and control measures is to maintain the natural pre-development hydrology of the developed area. To achieve this goal, the City Code of Ordinances and Engineering and Design Standards have been developed to curtail flooding and introduction of pollutants to the City's managed stormwater. In fact, Chapter 33, Title 11 of the City's Code of Ordinances requires that all new development and redevelopment be designed so that all stormwater within certain parameters is retained on site. The main design strategy required by the City includes the implementation of on-site retention which aims to prevent off-site stormwater flows, thus reducing impact to the quantity and quality of flows to the City's MS4.

A subset of on-site stormwater retention includes Low Impact Development (LID) techniques which aim to mimic natural hydrologic processes and result in increased infiltration of stormwater. LID techniques include such practices as rain gardens, bio-swales, curb extensions, and permeable pavement. None of the LID techniques are specifically addressed in the City's Engineering and Design Standards, yet all are approvable when designed to meet and address other on-site retention standard requirements such as addressing retention volume in relation to the 100-year, 2-hour duration storm event.

8.2 COMPLIANCE ACTIVITIES AND ENFORCEMENT

The 2021 MS4 Permit requires the City to develop and implement an inventory, inspection, maintenance and tracking program to evaluate the effectiveness of installed post-construction stormwater BMPs. Additionally, the City is required to inspect at least 90% of all sites that discharge to the MS4 within one year after construction final stabilization to determine the adequacy of their post-construction stormwater controls. It should be noted that the 2021 MS4 Permit defines the compliance of post-construction controls is met if the site meets 80% achievement of the BMP's design standard for detention, retention, or treatment. Non-compliance with post-construction stormwater BMPs are required to be addressed through assigned maintenance responsibility, or

through other enforceable means such as ordinances, policies, maintenance agreements, or easements.

8.2.1 Methods of Compliance

As stated in Section 8.1.1, 100% of all permitted projects in the City are reviewed to ensure that stormwater retention requirements are met. Upon permit approval, all qualifying projects are referred to the Environmental Management and Sustainability Division to meet the construction inspection requirements found in Section 7 of this SWMP document. Concurrently, DSD assigns a building inspector to each project to ensure that the development at the site is in compliance with the permitted activities and other building code requirements. Upon completion of every project, each site will receive a final inspection from by the ESD (certifying final stabilization) and DSD (approval for certificate of completion or occupancy) inspectors. It is the City of Mesa's position that 100% of all projects will be inspected by both inspectors within the required one-year deadline, and that when signed off by both inspectors, the achievement of 80% BMP design standard is presumptively met. Should detention, retention, or treatment not perform as designed, the City has adequate authority under its Code of Ordinances to coerce compliance as needed.

For private construction projects, the City requires a third-party inspection of construction projects where post-construction stormwater management (i.e. on-site retention) infrastructure is required as provided in the City's Engineering and Design Standards Manual. City staff ensures such documentation has been received prior to issuing final approval (generally the issuance of a Certificate of Occupancy). These inspections must be received within one (1) year after construction has been completed.

8.3 STORMWATER RETROFIT ASSESSMENT

The 2021 MS4 Permit requires the City to undertake a multi-stepped process to identify and develop a feasibility assessment for addressing areas contributing to exceedances of SWQSs. The first step in this process is to evaluate and document three areas which contribute to SWQS exceedances. These areas can be areas draining to existing wet weather monitoring locations or be areas which represent similar residential, commercial, and industrial land uses. The City is required to submit these three areas to ADEQ within one year of the MS4 permit's effective date (July 1, 2022).

Upon review and approval by ADEQ, the City is required to develop a feasibility assessment to retrofit existing developed sites within each area that are impacting discharges to Arizona Protected Surface Waters. The retrofit feasibility assessment is required to develop an inventory of potential locations within each area and consider the following:

- Locations contributing to MS4 discharges at concentrations higher than SWQS
- Locations that contribute pollutants to an impaired or not-attaining waterbody, or Outstanding Arizona Waters, and
- Locations with significant erosion contributing pollutants to Arizona Protected Surface Waters

Additionally, the feasibility assessment must include a ranking of inventoried locations to assist in prioritizing potential retrofitting which includes an evaluation of stormwater pollutant control measures, feasibility, cost-effectiveness, impervious area potentially treated, maintenance requirements, landowner cooperation, and expected improvements to water quality.

8.3.1 Year One Stormwater Retrofit

In the first year of the permit term, the City has initiated discussions amongst the ESD, Transportation, and Engineering departments to begin identifying areas which meet the requirement of contributing to SWQS exceedances and areas where infrastructure upgrades can contribute to stormwater co-benefits such as flood control. For areas that are not draining wet weather monitoring locations, the City will include supporting documentation which ties specific laboratory analysis at wet weather monitoring locations to SWQS exceedances at the selected areas based on land uses types. Additional supporting documentation will include a narrative detailing the hydrologic settings, land use types, existing infrastructure, and a description of existing drainage or retention problems at each selected area.

8.3.2 Year Three Feasibility Assessment

Upon approval by ADEQ of the three initial proposed areas, the City will commence the feasibility assessment activities described above. The City intends to engage the various City departments, consultants (as necessary), and public stakeholders during

the feasibility assessment phase. As this phase of the retrofit assessment proceeds, this section of the SWMP will be updated annually.

8.4 EMPLOYEE TRAINING

The 2021 MS4 Permit requires the City to provide training to employees with direct post-construction stormwater responsibilities at least one (1) time per year for all new staff and refresher training once every two (2) years. For employees with post-construction stormwater responsibilities, the permit breaks down the training requirements into two categories based on the employees' job functions as described below:

- Site Plan Review Staff with Stormwater Responsibilities:
 - Grading and drainage design standards;
 - Municipal ordinances related to stormwater and post-construction;
 - Requirements for structural and non-structural management practices in new development and redevelopment; and
 - Post-construction stormwater controls
- Inspection Staff with Stormwater Responsibilities
 - Municipal ordinances related to stormwater and post-construction;
 - Requirements for structural stormwater control practices in new development and redevelopment;
 - Maintenance responsibilities through agreements and policies;
 - Inspection procedures; and
 - Enforcement procedures