



**City of Buckeye
Public Works Department**

Stormwater Management Program (SWMP)

**For Permit AZG2016-002
LTF: 65661**

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Introduction

This Stormwater Management Program (SWMP) document is completed in compliance with Arizona Department of Environmental Quality (ADEQ) Permit No. AZG2016-002, 2016 Arizona Pollutant Discharge Elimination System (AZPDES) Small Municipal Separate Storm Sewer System (MS4) General Permit (the permit), Part 5.0. This document shall be retained current as required by the permit, shall be at the office or facility identified on the Notice of Intent (NOI), and shall be available upon request by ADEQ or U.S. Environmental Protection Agency (EPA), or their authorized representatives. This document defines the processes and methods to be employed by the City of Buckeye to ensure compliance with the stormwater permit and submitted Notice of Intent (NOI). This documented, supported by 40 CFR 122.34(a), shall also be known as the storm water quality management program, and shall be a guide for the Stormwater Quality Program of Public Works of the City of Buckeye.

A copy of the most up-to-date SWMP shall be made available to the public during normal business hours and posted on the permittee's website. Contents of the SWMP are defined in Part 5.1 of the permit, and are quoted below:

AZG2016-002 Permit Part 5.1

- a. Listing of all receiving waters, their classification under the applicable state water quality standards, any impairment(s) and associated pollutant(s) of concern, applicable TMDLs and WLAs, and number of outfalls from the MS4 that discharge to each waterbody;*
- b. The process and schedule for creating and maintaining an up-to-date map that includes, at a minimum, the storm sewer system, outfalls, and receiving waters;*
- c. Listing of all discharges that cause or contribute to the exceedance of an applicable surface water quality standard;*
- d. Description of any other practices to achieve compliance with Parts 6.1 and 6.2;*
- e. Description of practices to achieve compliance with Parts 6.3 and 6.4 (MEP and MCM requirements). For each permit condition identify:
 - 1. The personnel, position or department responsible for the measure,*
 - 2. The BMPs for each control measure or permit requirement, and*
 - 3. The measurable goal(s) for each BMP. Each measurable goal shall include milestones and timeframes for its implementation and have a quantity and/or quality associated with its endpoint. Each goal shall have a measure of assessment.**
- f. Description of practices to achieve compliance with applicable TMDLs or waste load allocation, including measurable goal(s) for each BMP and corresponding milestones and timeframes. Each goal must have an associated measure of assessment;*
- g. Analytical monitoring program for impaired or not-attaining waters, and for Outstanding Arizona Waters to ensure compliance with permit limitations, waste load allocation(s), and surface water quality standards.
The analytical monitoring program shall include a Sampling and Analyses Plan (SAP) that includes the following minimum components: sample collection, equipment and containers, decontamination, calibration procedures, sample frequency (based on illicit discharge characteristics), document site conditions, field notes, sample preservation, tracking (chain-of-custody), and handling;*
- h. Protocol for annual program evaluation (Part 8.1). Update annually and maintain copies; and*
- i. Identification of personnel (department, position, etc.) responsible for program implementation.*

Permit History

The Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), Section 402(p), issued by Congress, provides authority to the Federal government to enact rules and regulations regarding the control of stormwater pollution.

In response to this act, the U.S. EPA developed federal code 40, specifically 40 Code of Federal Regulations (CFR) 122.30 – 122.37, detailing permit requirements for municipalities in a phased approach to regulate stormwater discharges under the NPDES program.

In December 1999, the EPA finalized the Phase II rule that requires certain Small MS4s to participate in the NPDES program and obtain a stormwater permit. The intent of the rule is to reduce pollutants in stormwater runoff through actions implemented by the operators of MS4s.

In 2002, ADEQ was authorized to implement the NPDES program, retitled, Arizona Pollutant Discharge Elimination System (AZPDES) program in Arizona, and issued their first five year permit, AZG2002-002.

The second permit, AZG2016-002, issued on September 30, 2016, was issued with significant stakeholder feedback. The City of Buckeye became a permittee under this program immediately upon issuance of the ADEQ Permit No. on September 30, 2016.

The City provided a timely NOI in March 2017, and it was promptly approved by ADEQ on March 21, 2017. This document presents the SWMP required from the City of Buckeye in response to the Permit issued by ADEQ, Permit No. AZG2016-002, and consistent with 40 CFR 122.34(a).

Key Terms and compliance:

There are three key terms/ ideas necessary for proper understanding and implement of the AZPDES MS4 Phase II Permit in the City. These are MS4, Maximum Extent Practicable, Minimum Control Measure, Point Source, and Waters of the United States.

MS4 – Municipal Separate Storm Sewer System - 40 CFR 122.26(b)(8) (underlining added)

(8) Municipal separate storm sewer means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

- (i) Owned or operated by a... designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
- (ii) Designed or used for collecting or conveying storm water;
- (iii) Which is not a combined sewer; and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

MEP – Maximum Extent Practicable (MEP)

The MEP is a required level of achievement of pollution prevention by implementing an approved Stormwater Management Program 40 CFR 122.34 (a) and 40 CFR 122.33. Implementation of best management practices consistent with the provisions of the storm water management program (*approved SWMP*) required pursuant to this section and the provisions of the permit required pursuant to § 122.33 (*approved SWMP*) constitutes compliance with the standard of reducing pollutants to the “maximum extent practicable.”

- For additional consideration:40 CFR 230.3(q) The term practicable means available and capable of

being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

- “Maximum” “extent” is the “greatest quantity” and “the scope of a thing” respectively according to Merriam Webster; therefore, the city takes on the following definition for MEP:

Performing work to the maximum extent practicable is implementation of an approved stormwater management program, while acting to the greatest extent that is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall purpose.

For the purpose of MS4 compliance the term includes a consideration of evaluation on an iterative process, as required by the annual review from the permit (Parts 8.1.1, 8.1.2, and 8.1.3) and the reissuance of the permit from the permitting authority every five years (40 CFR 122.41(b)) .

MCM - Minimum Control Measure

- As required in Part 6.2 and 6.4 of the permit, the MCMs are the minimum activities that must be performed, to the maximum extent practicable, to protect water quality, and to satisfy water quality requirements of the Clean Water Act, including attainment of surface water quality standards.
- If it is found that the MCMs are insufficient to stop stormwater discharges from exceeding applicable water quality standards, ADEQ may require more stringent MCMs.

MCM(s) and its relation to MEP

If the minimum control measures are implemented as described in a SWMP (this document), and the SWMP contains the minimum provisions required in the permit, then the municipality will be in compliance with implementation of the permit to the maximum extent practicable. This is described in 40 CFR 122.34 (underline added):

- *Your storm water management program must include the minimum control measures... (MCM 1 - 6)... narrative effluent limitations requiring implementation of best management practices (BMPs) are generally the most appropriate form of effluent limitations when designed to satisfy technology requirements (including reductions of pollutants to the maximum extent practicable) and to protect water quality. Implementation of best management practices consistent with the provisions of the storm water management program required pursuant to this section and the provisions of the permit required pursuant to § 122.33 constitutes compliance with the standard of reducing pollutants to the “maximum extent practicable.” Your NPDES permitting authority will specify a time period of up to 5 years from the date of permit issuance for you to develop and implement your program.*

Point source

The stormwater permit is issued to address point discharges to surface waters.

40 CFR 122.1 (b) *Scope of the NPDES permit requirement. (1) The NPDES program requires permits for the discharge of “pollutants” from any “point source” into “waters of the United States.” The terms “pollutant”, “point source” and “waters of the United States” are defined at § 122.2.*

According to 40 CFR 122.2, Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Other Compliance: The state has issued *R18-9-D904.13.*, which adopts the July 1, 2003 version of the federal regulations for the AZPDES programs.

AZPDES MS4 Phase II Permit Requirements

The Phase II Regulations established requirements called Minimum Control Measures (MCMs) for MS4s. The MCMs are:

1. Public education and outreach
2. Public involvement/participation
3. Illicit discharge detection and elimination
4. Construction site runoff control
5. Post-construction stormwater management
6. Pollution prevention/good housekeeping

ADEQ's Permit No. AZG2016-002 provides specific requirements for each of these MCMs that the City must perform. The City must implement actions that demonstrate compliance with the permit requirements.

City of Buckeye Stormwater Planning and Demographics

The City has long held sustainability as a key value when looking at current activity and future planning, and firmly believes in maintaining infrastructure and the environment for the benefit of citizens. This care may be seen in the many city ordinances that protect Buckeye's infrastructure and environmental health, and have existed irrespective of the requirement for the stormwater permit. It also may be seen in the city slogan and ideal of "Live, work, and play in Buckeye."

Although program implementation is shared citywide, the coordination for the stormwater permit activity has been placed under the direction of the Public Works Department, Environmental Services Division. Public Works has participated in the stormwater planning process since 2012, when the city recognized its population would require implementation of the permit. The City proactively participated with stakeholders, has been active in the Phoenix valley organization STORM, STormwater Outreach for Regional Municipalities, since 2013, and has pursued meetings with ADEQ since 2014 regarding permit compliance understanding and concerns. In mid-2015, the city took the lead role of facilitator of the Phase II Coalition to pursue cohesion and understanding in the MS4 community as ADEQ worked to complete of the Phase II permit, and the city continues in this role today. Additionally, the City created an internal Environmental Issues Task Force to encourage various City departments to become aware of the stormwater pollution prevention requirements that the City would face.

With approximately 600 square miles (and close to 640 square miles in the proposed 2018 General Plan), the City of Buckeye has the largest planned land area in the state of Arizona. According to the 2010 decennial census, the City had a population just over 50,000 people, and 18,000+ homes. Based on 2017 estimates, the population is 70,000 people with 23,000 homes. The EPA and the National Census Bureau have defined the urbanized area in Buckeye, based on the decennial census, as an extension of the Phoenix urbanized area, which is considered to cover portions of the south eastern part of the City.

Approximately 70% of home ownership in the City consists of first-time home buyers, most residents average a high school education with an annual income of under \$100,000, and there is an even spread of population among the following age groups: 0-19, adults, and senior citizens.

Legal Authority

The City of Buckeye has authority over illicit discharges and potential illicit discharges to the MS4 through existing City Code including ordinances found in Chapters 7, 9, 10, 16, 19, and 20 as required under Arizona Revised Statute (ARS) §9-499. This combination of codes gives the City authority over any pollutant that enters, or might enter, the right of way, and the MS4 including any wastewater, solid waste, or other potential illegal dumping.

Specifically, the City prohibits encroachment onto public rights-of-way by any material in City Code §19-2-1-D., and authority over the right-of-way is reaffirmed in City Code §20-5-C. Additionally, the City prohibits discharges and requires treatment of wastewater of any kind in City Code §16-5-3 and -4; requires sanitary conditions for solid waste in: §9-1-11-K, §9-1-11-L, §9-2-6-A., §9-4-3-B.1., §9-4-3-B.9, and §9-4-3-B.10; and also has authority over any illegal dumping anywhere within the City as reaffirmed in §10-3-5 and §10-3-8.

Authority is shared between the following departments: Public Works Department (Environmental Services), Water Resources Department, Police Department (Code Enforcement), City Engineer, Construction and Contracting Division, and the Development Services Department, with the Public Works Department as the overall responsible point of contact to administer the permit requirements.

Construction/Land Disturbance

The City of Buckeye has authority over construction sites through existing City code: Chapters 7, 19, 20, and 23.

Specifically, the City prohibits any encroachment onto public right-of-way, and provides authority over any activity that is causing or may cause an encroachment in §19-2-1-D., the City's permitting authority is reaffirmed in §20-5-C, and the City's engineering standards, set in §23-2-1 and specifically in the Stormwater Drainage System Design Manual 500 (DM500), which contains drainage and design standards adopted by City Council in 2007.

All plan reviews are performed with DM500 as the guide. Additionally, the Public Works Department reviews construction plans and comments on construction activities using the Flood Control District of Maricopa County's, *Drainage Design Manual, Erosion Control*.

The City Engineer, Development Services Department, Construction and Contracting Division and Public Works Departments have authority over Construction Site runoff enforcement, per City Code.

Post Construction

The City of Buckeye has authority over development through existing City code: Chapters 7, 19, 20, and 23.

Specifically in Chapter 19, the City prohibits any encroachment onto public right-of-way of any material, and provides authority over any activity that does or will cause an encroachment in §19-2-1-D., the City's permitting authority is reaffirmed in §20-5-C, additionally the City's engineering standards are set in §23-2-1, and specifically in the Stormwater Drainage System Design Manual 500 (DM500) which contains drainage and design standards adopted by City Council in 2007.

All plan reviews are performed with DM500 as the guide. Additionally, development guidelines are listed in Chapter 7 of the City code.

The City Engineer and Public Works Department have authority of property design standards, and Public Works and Police Department, Code Enforcement have authority over maintenance of property after it has been developed.

The design standards require development to store all stormwater that falls in a subdivision within its borders in retention basins owned by the Home Owners Association (HOA). These basins are designed with no overflow structures, and instead use dry wells and percolation to allow the water to flow into the ground. Similarly, stormwater flow from uphill areas is redirected to flow around development so that it may pass by developed areas. This system of development creates as small footprint as possible into the natural flow of stormwater through the City and also significantly decreases the possibility of true MS4 with discharges to surface waters.

As of June, 2020, mapping of the City's stormwater infrastructure (including curb, gutter, inlets, outlets, pipes, culverts, drains, etc.) has determined flow from one area is channeled to one irrigation canal that flows to the Arlington Canal. This area watershed area is noted as the City's MS4. All other stormwater structures discharge to private retention basins that have no flow to Waters of the US (WOUS) or a Water of the State.

Receiving Waters - Impaired or Outstanding Arizona Waters

There are no known impaired or OAWs receiving discharges from the City of Buckeye

In accordance with PERMIT NO. AZG2016-002, part 5.1.a. *Listing of all receiving waters, their classification... impairment(s) and associated pollutant(s) of concern, applicable TMDLs and WLAs, and number of outfalls from the MS4 that discharge to each waterbody;*

Water Classifications

“Aquatic and Wildlife (cold water) (A&Wc)” means the use of a surface water by animals, plants, or other cold-water organisms, generally occurring at an elevation greater than 5,000 feet, for habitation, growth, or propagation.

“Agricultural Livestock watering (AgL)” means the use of a surface water as a water supply for consumption by livestock.

The following are recognized receiving waters for the City of Buckeye:

Waterbody	Classification	Impairment	Pollutant of concern	TMDL	WLA	# of Outfalls
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Hassayampa	A&Wc	N	NA	NA	NA	0
Gila River	A&Wc	N	NA	NA	NA	0
Wagner Wash	A&Wc	N	NA	NA	NA	0
Arlington Canal	AgL	N	NA	NA	NA	1*

Additionally, per Arizona Administrative Code (AAC) R18-11-101.41.e., and AAC R18-11-105, all associated tributaries to waters that may be Waters of the United States must also be considered, this applies to tributaries of waters listed in Appendix B – Surface Waters and Designated Uses of R18-11. The City recognizes many un-named washes and historically named washes and works diligently to determine which, if any, of these washes may be tributaries to named surface waters. Named and un-named washes will be added to maps as they storm system mapping occurs and determination of connectivity to surface water, and thereby defining washes as tributaries and adding them to this list of receiving waters will occur concurrent with the system mapping and will be updated annually.

* This point is now recognized as a Field Screening Point as seen in definition part 10.16 of the permit. This discharge point flows to an irrigation canal. This canal, intersected by multiple other irrigation inputs, finally flows to a named surface water, Arlington Canal. As of June 2020 there are no other locations where municipal stormwater leaves city owned stormwater systems in the permitted area and discharges directly or indirectly to a Water of the United States. Additionally, there is no Outfall, per Part 10.31., and as defined by 40 CFR 122.2, where a municipal separate storm sewer system discharges to a water of the United States.

Mapping

In accordance with the permit, part 5.1.b., as well as 40 CFR 122.34(b)(3), the city has the following process and schedule for creating and maintaining an up-to-date map that includes, at a minimum, the storm sewer system, outfalls, and receiving waters.

The City has scheduled mapping of 25% of the storm system within the urbanized area (as defined by the decennial census) each year for completion by the end of Permit Year 4, June 2020. All known receiving waters listed as Waters of the United States in AAC R18-11 Article 1, Appendix B, and as defined by R18-11-101.41., have been identified. As the City grows, Public Works will continue to review surface water connections and will adopt Waters of the United States and their tributaries, and enter this data into the annual report and the updated SWMP as they are found.

The mapping activities include field investigation of all applicable stormwater structures including mapping of curb and gutter, inlets, pipes, retention basins, outfalls, receiving waters. These stormwater structures and outfalls are collected and input into GIS for current and future use.

The following items will not be included in the mapping program: non-stormwater structures including irrigation canals, bridges and culverts for surface waters.

- As of June, 2020, there are no impaired waters within the City of Buckeye’s MS4 jurisdiction.
- As of June, 2020, all stormwater structures in the MS4 permitted area have been mapped.

Exceedances of Surface Water Standards

In accordance with Permit No. AZG2016-002, Part 5.1.c., the city is required to list all discharges that cause or contribute to the exceedance of surface water quality standards.

- As of June, 2020, there are no known exceedances.

Additional Practices

In accordance with Permit No. AZG2016-002, Part 5.1.c., the city is to report any other practices to achieve compliance with required control measures. The City recognizes Parts 6.4 of the permit requiring the six (6) Minimum Control Measures, and will fully implement programs to apply these programs.

- As of June, 2020, there are no known discharges that cause or contribute to an exceedance to surface water quality, the City has no other practices implemented other than the six (6) Minimum Control Measures.

Water Quality Based Effluent Limitations, Surface Water Quality Standards, and Requirements to Reduce the Discharge of Pollutants – the Permit Parts 6.1, 6.2, and 6.3

According to the CWA 402(p)(3)(B)(iii), the Permit includes provisions to ensure discharges from the MS4 do not cause or contribute to an exceedance of surface water quality standards.

This is in addition to requirements to reduce the discharge of pollutants to the maximum extent practicable. If surface water quality standards are not met, actions to expand the BMPs to achieve progress toward attainment of surface water quality standards are required. As there are no impaired waters, no known contributions of pollutants in violation of surface water quality standards, and in accordance with the Permit parts 5.1.e., 6.3 and 6.4, the City provides the following information under Part 6.4 for actions and activities as the MCMs to be performed to satisfy the requirements of the CWA:

Minimum Control Measures – AZG2016-002 Permit Part 6.4

The following sections, as described in the City’s NOI, approved by ADEQ on May 23, 2017, let for public comment, and finally accepted without comment on April 24, 2017; contain the MCMs the City of Buckeye shall perform to remain in compliance with Permit AZG2016-002. Per the Permit, part 5.1.e., the City provides the personnel, position or department responsible for the measure, the BMPs for each control measure or permit requirement, and the measurable goal(s) for each BMP, including milestones and timeframes for its implementation and a quantity and/or quality associated with its endpoint along with a measure of assessment.

MCM 1 – Public Education and Outreach

40 CFR 122.34(b)(1) / ADEQ Permit section 6.4.1 “Public Education and Outreach”

The City continues to develop and implement an awareness campaign of the issues and problems created as a result of careless pollution, including improper disposal and handling of hazardous and non-hazardous materials. Targeted materials are developed and utilized to address specific audiences based on the City’s demographics. Examples could include school groups, developers, food establishments, automotive repair and maintenance facilities, as well as hazardous materials such as paints, solvents, pesticides, animal waste, etc.

Methods of implementation include in-person meetings and presentations, distribution of printed materials, and online/electronic media distribution.

Based on an efficiency matrix, the City will evaluate this portion of the program on an annual basis to see where improvements, if any, may be incorporated.

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
6.4.1.1 6.4.1.2	Demographics Determination	The Department shall determine the demographics to gain an understanding of the population that is to be educated to answer the	Measurable goal will be to list the target audiences based on age groups, language types, education boundaries/concerns, geographic patterns, and other demographics as available. To be completed by June 2017, to be updated every 5 years.	Public Works Department, Environmental Services / Community Development/City Management. Documentation: Census Report

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
		question "Who is our audience?"		
6.4.1 6.4.4.3	Program Resources	Fund and support the outreach program.	Measurable goal shall be a funded and staffed program, with a budget, equipment and resources to reach target audiences. This activity is to be completed by December 2017.	Public Works Department, Environmental Services. Documentation: Approved City budget
6.4.1.2	Targeted Outreach	Planned and Targeted Outreach	Beginning in January 2018 the Department shall use discovered pollution sources through implementation of MCM3 and demographics determined in FY17 to choose and perform outreach activities. Measurable goals will be number of targeted audiences addressed, the number of people reached. Additional goals may include a measure of change of volume of pollution over time as pollution becomes known and measurable. This is an ongoing activity.	Public Works, Environmental Services/Community Services. Documentation: Summary report.
6.4.1.1	General Educational Activity and Materials	General Stormwater Pollution Prevention Education and Outreach.	General topics shall include the definition of the MS4, the impacts of stormwater pollution on our environment, and what the general public may do to prevent pollution. Activities may include email blasts, media postings (internet and local newspaper), billing inserts, public kiosks, and other venues as found and determined effective, as well as activities performed by STORM, the Stormwater Outreach of Regional Municipalities. Measurable goals shall include the type of outreach method used, and the number of people reached.	Public Works Department, Environmental Services/Utility Billing/Community Services. Documentation Method: summary report
6.4.1.1 6.4.1.2	Special Event(s)	Public Works Week outreach event and other outreach events.	The City will continue to provide and conduct at least one outreach event each year. The City currently performs a Public Works Week outreach event to a target audience (primarily school aged	Public Works, Environmental Services Documentation Method: summary report

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
			<p>children, grades K-8) that includes a Stormwater Pollution Prevention message. Additional outreach events shall be performed as they become available, such as special speaking events with the Chamber of Commerce. Measurable goals will include the number of events or outreach activities held, the number of people directly spoken to, and types of outreach materials provided.</p>	
6.4.1.3 8.0	Annual Evaluation, 40 CFR 122.34(g)	Modification of ineffective messages and techniques.	<p>An annual review of the outreach programs will be performed to determine the effectiveness of the activities using an efficiency matrix of the resources expended compared to the number of people reached.</p> <p>Measurable goal shall be annual results of the efficiency matrix, and evaluation and adjusting the program based on these results.</p>	Public Works, Environmental Services/Community Services Documentation: summary report and/or update of procedures.

MCM 2 – Public Involvement and Participation

40 CFR 122.34(b)(2) / ADEQ Permit section 6.4.2 “Public Involvement and Participation”

The City has created volunteer opportunities for citizens to participate in throughout the year to help keep Buckeye clean, and actively promotes communication methods for feedback to city officials regarding pollution prevention and implementation of programs.

Participation in the City’s residential quarterly bulk trash pick-ups, and spring clean-up event, allows citizens to properly dispose of bulkier waste items in a clean and convenient manner, preventing these items from polluting our community and waterways. Citizens and businesses can volunteer for the Adopt-A-Road program. Citizens have the opportunity to contact the City to report concerns and issues with illegal dumping, spills onto roadways, etc. through various avenues of communication such as website, email, and phone/voicemail.

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
6.4.2.1	Public Participation through volunteerism	Volunteer events and activities shall be performed annually including bulk trash improper disposal cleanup events and Adopt-a-Road.	The Department shall hold and invite the public to assist in a cleanup event of improper disposal problem areas throughout the city including but not limited to individual cleanup activities and Adopt-a-Road. Measurable goals shall be the amount of material collected and the number of volunteers involved.	Public Works Department, Environmental Services. Documentation method: summary report
6.4.2.3	Public Involvement through Complaints, Reports, and Environmental Task Force Committee	Complaint/ report methods shall be made available for the general community to communicate concerns and opinion to the City.	Measurable goals shall be: Maintain methods for citizens to issue complaints, record the number of surveys or reports placed out for the public and the number received, and posting annual reports and the Stormwater Management Program online.	Public Works Department, Environmental Services. Documentation method: complaint records and/or summary reports

6.4.2.1 6.4.2.2	Public Involvement through posting of public notices	Posting of stormwater related documents such as Annual Report, SWMP, etc. online.	Annually, when complete, post the annual report and other stormwater-related documents to the City's website. Citizens may review and comment.	Public Works Environmental Services. Documentation method: samples of printed or web material with date.
8.0	40 CFR 122.34(g) Annual Evaluation	Modification of ineffective messages and techniques.	Measurable goals shall be a comparison of the number of volunteer activities performed, the number of volunteers, and the number of reports of illegal dumping as it relates to previous years and in regards to type of problems noted, and regions impacted. Also, the number of days to respond to complaints.	Public Works Department, Environmental Services. Documentation method: summary report, complaint records

MCM 3 – Illicit Discharge Detection and Elimination

40 CFR 122.34(b)(3) / ADEQ Permit section 6.4.3 “Illicit Discharge Detection and Elimination (IDDE) Program”

Per the Permit Part 6.4.1.2 Enforcement Procedures, Part 6.4.3.3 Statement of IDDE Program Responsibilities, and Part 6.4.3.4 Illicit Discharge Prevention and Reporting, the City has created a Stormwater Quality Program to address the required items, also including:

- Enforcement Procedures, 6.4.3.3 - see Attachment – Enforcement Response Plan
- Statement of IDDE Program Responsibilities, 6.4.3.4
- Illicit Discharge Prevention and Reporting, 6.4.3.5
- Eliminating Illicit Discharges, 6.4.3.6
- Non-Stormwater Discharges, 6.4.3.8
 - Visual Monitoring
 - Visual Dry Weather Outfall Monitoring
 - Visual Stormwater Discharge Monitoring
- Follow-up Screening, 6.4.3.9
- Indicators of IDDE Program Progress, 6.4.3.10
- Staff Training, 6.4.3.11
- Unpermitted (Illicit) Discharges to the MS4

Mapping of the stormwater system inventory is a critical part of the detection and elimination program. The inventory includes curb and gutter, inlets, culverts and pipes, and outfalls to Waters of the US or tributaries of Waters of the US. It is the City’s goal to have the mapping complete by end of permit year 4 (June 30, 2020). The mapping program identifies storm drainage system discharge points (outfalls to washes) and provides opportunities for educational discussions with citizens and property owners about the importance of clean stormwater runoff.

Staff will incorporate illicit discharge inspections into regular inspection duties and note IDDE sightings and citizen complaints and respond accordingly.

Public Works will continue operation of its Adopt-A-Road and Adopt-A-Neighborhood programs, quarterly bulk item collection, and area clean-ups, Household Hazardous Waste collection, and public education on the hazards of improper waste handling to engage citizens in collection and disposal of larger, bulkier items to prevent those items from being illegally dumped into a wash or the stormwater system. This plan follows the EPA’s guidelines of educating and assisting residents with the ‘pollution prevention’ messaging.

The City is continuing to document and monitor flow to the Tuthill/Acacia Wash from the Verrado subdivision. The goal of the project is to identify any IDDE entering the wash and is a continuation from the city’s pilot program in conjunction with ADEQ. Evidence is collected through

a trail camera set-up. Images are documented, camera and outfall areas are inspected routinely. This pilot program occurred during FY18. See *DMR report submitted with FY18 Annual Report to ADEQ for report summary and results. The report is named "Apollo"*.

Dry and wet weather screenings of identified outfalls take place throughout the year. When discovered, identification of IDDE is documented and appropriate action is taken based on severity of the situation.

The City provides annual stormwater training for staff about the proper identification and reporting of IDDE.

The City has a website dedicated to stormwater and provides monthly newsletters to citizens educating them on the importance of clean stormwater and pollution prevention. Citizens are provided opportunity to report IDDE concerns through the City’s website, via email, phone/voicemail, or in person during normal business hours. The City has a full-time Environmental Compliance Officer working with residents to advise of illegal dumping, improper waste disposal, etc. to help educate and eliminate IDDE.

An *Enforcement Response Plan* provides guidance and outlines the City’s policies and procedures for inspection and prosecution of IDDE.

The City Public Works Department, Environmental Division, through City Code Chapter 9 establishes procedures through which the City seeks to ensure compliance with the provisions of the Development Code and obtain corrections for violations. This Article sets forth remedies and penalties that apply to violations of the Development Code. The purpose of Chapter 9 is also to (1) protect the health and safety of the citizens of the City, and (2) protect the environment by establishing minimum standards for the safe and sanitary inspection, collection, storage, treatment, transportation, processing, and disposal of solid waste and recyclables generated within the City.

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
6.4.3.8	MS4 Mapping	MS4 Mapping	Information entered into GIS or other usable mapping format. Measurable goal shall include 25% of the developed areas to be mapped each year for completion in Permit Year 4, June of 2020.	Public Works Department, Environmental Services. Documentation: GIS maps
6.4.3.8	Outfall Inventory	Record outfall structures to all	Measurable goals shall be:	Public Works Department,

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
		Waters of the United States.	<ul style="list-style-type: none"> Mapping of all Waters of the United States as listed in AAC R18-11 Appendix B, to be completed by January, 2017. Map all outfalls from the MS4 to all waters of the US (as determined by ADEQ and Federal Law and as it complies with R18-11-101.41., and other pertinent regulation). To be completed in Permit Year 4, June 2020. 	Environmental Services. Documentation: GIS maps
6.4.3.3 6.4.3.4 6.4.3.5 6.4.3.6 6.4.3.8c 6.4.3.11	Implement IDDE Program	Proactive Inspection Program (PIP)	<p>The purpose of the Proactive Inspection Program (PIP) is to prohibit illicit discharges and improper disposal to the MS4. This activity shall include:</p> <ul style="list-style-type: none"> Maintain regulatory authority, Create and maintain a written enforcement procedure, Perform inspections of businesses and residential areas, Maintain a list of all commercial and industrial facilities that discharge to the MS4, Relate effectiveness of reduction of illegal dumping to educational activities, Respond to and eliminate complaints and findings of illicit discharges and improper disposal as they are found. <p>The City will maintain a list of all business licenses issued within the City, and maps of all residential areas that discharge to the City's MS4. Inspections shall be performed on the entire MS4, and shall include documentation of signs of encroachment of illicit discharges and improper disposal (IDID) into the right-of-way and MS4, and for storage of pollutant material that will encroach onto the right-of-way and thereby into the MS4.</p> <p>Any areas of concern (staining or poor BMPs of stormwater pollution) shall be placed on a priority list for annual inspections</p>	Public Works Department, Environmental Services. Documentation method: SWMP, SOP, ERP documents. Inspection forms and associated documentation (NOC, NOV, fines, etc.), lists, complaint reports, and/or summary reports.

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
			<p>and education to responsible parties, and active IDID shall be stopped when observed.</p> <p>Measurable goals shall be the amount of the storm system observed, the number of proactive inspections of businesses performed, number of illicit discharges found, number of facilities that discharge without an AZPDES/NPDES permit, number of illicit discharges stopped, number of Enforcement actions taken (including Notices of Violation, civil citation, fines, or other education and enforcement actions).</p> <p>The program shall be in place by June 2017.</p>	
6.4.3.10	Training	Use existing web training modules to provide and record training to all employees annually. Human Resources Department.	Measurable goal includes number of staff that who taken the annual web training vs number of staff that work in the ROW or facilities including Public Works, Water Resources, and Community Services Department staff. Number of contractors present in a pre-construction meeting and/or City workshop	Human Resources Department. Documentation method: report and/or individual test results.
6.4.3.8 6.4.3.8.a 6.4.3.8.b 8.3	Dry Weather Screening	Review up to 5 outfalls during dry weather for signs of IDID, if we have more than 5 outfalls we shall chose representative outfalls and	Measurable goal shall be designation of outfalls as the storm system continues to be mapped, to be completed in Permit Year 4, June 2020. Note: Dry weather screening must be conducted at least 72 hours after a storm event that has resulted in a discharge from the storm sewer system. Summer wet season is classified by the state as June 1 through October 31. Winter wet season is classified as November 1 through May 31.	Public Works Department, Environmental Services. GIS mapping, report

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
		designate such to the state.		
6.4.3.8 8.3	Wet Weather Monitoring	Proactive Inspection Program to be performed in place of Wet Weather Monitoring upon ADEQ approval.	Measurable goal shall be the Proactive Inspection Program results...the stormwater system inspections, number of illicit discharges found, and number of actions taken to remove the pollutants. Summer wet season is classified by the state as June 1 through October 31. Winter wet season is classified as November 1 through May 31	Public Works Department, Environmental Services. Documentation method: report, inspection form(s), and photograph(s).
7.0 7.4 8.3	Analytical Monitoring	Analytical monitoring of all flows that are not able to be stopped, but are determined to be illicit discharges.	Measurable goals shall be: <ul style="list-style-type: none"> • Process in place to be able to perform analytical monitoring as needed. • Ability to record and finally reporting the number of illicit discharge/improper disposal (IDID) flows requiring sampling. • Number of enforcement actions taken, type of enforcement action, and schedule to stop the IDID. 	Public Works Department, Environmental Services. Documentation method: report, inspection form(s), and photograph(s).
6.4.3.8 6.4.3.9	Written IDDE Procedures, activities and analysis	MS4 mapping, Outfall inventory, Hot Spot Inspection (HSI), IDDE Program (PIP), Training, Dry Weather Screening, and Analytical Monitoring shall be written into a procedure. Activities shall be analyzed annually.	Measurable goals shall be: Have procedures written by the end of permit year 1, FY17. To have an Enforcement Response Plan completed by September 2018, and to perform an annual analysis of the program activities. Perform quarterly bulk trash inspections of residential areas. Within MS4, perform commercial and industrial property inspections 20% annually	Public Works Department, Environmental Services. Documentation method: GIS maps, ERP plan documentation, and report.

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
8.0	40 CFR 122.34(g) BMP - Annual Evaluation	Modification of ineffective messages and techniques.	Measure a review of the type of illegal discharges observed from one year to the next including the types of illegal discharges, repeat offenders, and the ability of the City to respond to reports of illegal discharges.	Public Works Department, Environmental Services. Documentation method: summary report, and complaint records.

MCM 4 – Construction Activity Stormwater Runoff Control

40 CFR 122.34(b)(4) / ADEQ Permit section 6.4.4 “Construction Activity Stormwater Runoff Control”

The City Engineer, Development Services, Construction and Contracting, and Public Works Department all work together to achieve pollution prevention of the MS4.

The City operates a website, phone system, and email system for citizens to report construction site concerns. The City offers educational opportunities to the contract/development community through the permit review process and site plan review processes in addition to workshops and the City’s website.

Site Plan Review – See Attachment: Construction Plan Review Standard Operating Procedures

The City requires all development applicants to follow a site plan review process. All applicants follow a Pre-Application Conference (PAC) and for sites that are an acre or larger, a comment is issued alerting the applicant to follow AZPDES Construction General Permit requirements and copy their approved application to the City. All submitted plans that are within the MS4 must include an approval of a Waste, Erosion, and Sediment Control Plan of BMPs. BMPs are inspected as a part of land development and building construction inspections in the MS4. Failure to maintain WES control BMPs are noted on plan inspection notes, and significant failure of BMPs is forwarded from the City Engineer and Development Services Departments to the Public Works Department for follow-up inspections and enforcement.

The City Plan Review process:

- a) The Contractor and the City will determine if the site is within the MS4,
- b) If it is unknown, the contractor is to contact Public Works to confirm. Information on the MS4 boundaries are available online.
- c) If the construction site is in the MS4, the developer is to create and submit an waste, erosion and sediment control plan
- d) If the construction site is not in the MS4, then the developer assumes responsibility to protect any adjacent ROW from encroachment, and is responsible to implement the adopted list of BMPs on their own. If encroachment occurs, the contractor may be subject to enforcement by Public Works.

The City maintains a digital inventory of issued permits and active construction sites requiring inspections.

Contractors/developers are offered information and/or training during the site plan review processes, printed material distribution, and at City-sponsored workshops.

AMEC is working alongside the City to update its BMP manual. During this process, it was discovered an MS4 does not exist within the City of Buckeye. Should an MS4 be discovered within a construction area, Public Works will inspect.

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
6.4.4.4 6.4.4.5	Public Involvement	Maintain a method for residents to issue complaints about encroachment of pollutants on the ROW from construction sites.	Measurable goal shall be number of complaints received.	City Engineer, Development Services, Public Works – Environmental Services Documentation method: complaint report
6.4.4.4 6.4.4.5	Education	Provide education to applicants and permittees on stormwater pollution prevention requirements for construction practices.	Measurable goals shall be the number of applicants or potential applicants (contractors/developers) who have received educational information on construction Stormwater BMPs, number of web pages with construction Stormwater BMPs, and the number of hits those pages receive annually as well as participation in City-offered workshops. Information distributed at Pre-Application Conference (PAC) meetings.	City Engineer, Development Services, Construction and Procurement Documentation method: report, website analytics
6.4.4.1 6.4.4.2.a 6.4.4.2.f 6.4.4.2.g	Erosion, Sedimentation, and Waste BMP controls	Require construction site operators to maintain erosion, sedimentation and waste controls on their construction sites.	Measurable goals shall be the code authority to require erosion, sedimentation, and waste control on land disturbance sites.	City Engineer, Development Services, Construction and Procurement, Public Works – Environmental Services Documentation method: City Code document.
6.4.4.2.c 6.4.4.3 6.4.4.5	Inspection Process	Perform construction site inspections ensuring erosion, sedimentation, and waste controls on land development sites.	Measurable goals shall include written procedures for site inspections and enforcement for land disturbance that is an acre or larger, or part of a common plan of development that is one acre or larger. All such plans that include discharges to the MS4 shall follow a Standard Operating Procedure for BMP inspections, and	City Engineer, Development Services, Construction and Procurement Documentation method: Standard Operating Procedure for standard inspections, and complaint report, and/or NOV.

			documentation and enforcement for significant failure to follow BMPs.	
6.4.4.2.c 6.4.4.3 6.4.4.5	Frequency of Inspections	Perform inspections following a planned frequency based on size of land disturbance, location of impaired waters, history of noncompliance of a developer, and the phase of construction.	Measurable goal shall be a written schedule for frequency of inspections and recording inspections based on this schedule. To be implemented by September 2017. Minimum inspection schedule: Once per quarter for areas that contain MS4.	City Engineer, Development Services, Construction and Procurement, Public Works – Environmental Services Documentation method: inspection report, written documentation procedure
6.4.4.2.b 6.4.4.5	Inventory	Maintain a list of all land disturbances underway in the City.	Measurable goal shall be the number of sites under development/disturbed soil for land disturbance that is an acre or larger, or part of a common plan of development that is one acre or larger.	City Engineer, Development Services, Construction and Procurement Documentation method: report
6.4.4.1 6.4.4.2.d 6.4.4.2.f 6.4.4.2.h 6.4.4.3	Site Plan Review	Maintain and perform a process of plan review for erosion, sedimentation, and waste control for all sites that are an acre or larger or part of a common plan of development that are an acre or larger.	Measurable goal shall be the number of plans reviewed that include erosion, sedimentation and waste controls.	City Engineer, Development Services, Construction and Procurement, Public Works – Environmental Services Documentation method: plan review requests
6.4.4.1 6.4.4.2.c 6.4.4.2.e 6.4.4.3 6.4.4.5	Enforcement	Maintain a method of increasing enforcement on land development that refuses to follow erosion, sedimentation, and waste controls per development plan and inspection requirements.	Measurable goals shall be the number of inspections, scheduled re-inspections, and follow-up compliance inspections performed, number of Notices of Violation issued, stop work orders issued, or other enforcement actions performed to stop encroachment of pollutants into the MS4.	City Engineer, Development Services, Construction and Procurement, Public Works – Environmental Services Documentation method: inspection form, NOV, and/or complaint report
6.4.4.3 6.4.4.5	Training	All staff associated with erosion, sedimentation, and waste control plan review, inspections, and enforcement shall receive	Measurable goal shall be total number of staff associated with plan review, inspections, and enforcement versus the number of staff trained.	City Engineer, Development Services, Construction and Procurement, Public Works – Environmental Services

		training on these subjects and City policy and processes for any staff that will be working, or performing plan review in an area where an MS4 has been identified.	Training may also include classes for the construction industry, including pre-construction meetings.	Documentation method: report
6.4.4.2.c 6.4.3.11	Written Procedures	All policies, processes, and procedures shall be written.	Measurable goal shall be to have all policies in place by permitted deadline	City Engineer, Development Services, Construction and Procurement, Public Works – Environmental Services Documentation method: written documents
6.4.3.9	40 CFR 122.34(g) BMP - Annual Evaluation	Modification of ineffective messages and techniques.	Annually review the activities performed and compare the effectiveness of programs vs the number of complaints received, number of inspections performed, and number of violations noted and responded to and resolved compared to previous year's activities.	City Engineer, Development Services, Construction and Procurement, Public Works – Environmental Services Documentation method: summary report

MCM 5 – Post-Construction Stormwater Management

40 CFR 122.34(b)(5) / ADEQ Permit section 6.4.5 “Post-Construction Stormwater Management in New Development and Redevelopment”

During the site plan review process, City staff reviews design criteria ensuring protection of stormwater infrastructure and waste controls. The City ensures the post-construction design and runoff controls meet local, state, and/or federal design guidelines. In addition to City Code, the City references Design Manual DM500.

The City is developing a process to inventory and inspect sites that discharge to the MS4 for post-construction maintenance, and reviews the processes and procedures annually at the conclusion of each fiscal year to make updates as needed.

- As of June, 2020, there is one watershed recognized as MS4, with one Field Screening Point structure, discharging to an irrigation tail water canal that flows to the Arlington Canal.

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
6.4.5.1 6.4.5.4	Runoff Control Authority	All new and re-development is required to follow existing development requirements. All new construction is to receive runoff from 1/2 of the ROW and hold the 100 year 2 hour event. This rule is currently in place, and active for all construction. As such, all development with the exception of residential properties will receive stormwater from the ROW, and not discharge to it. In residential areas, the Home Owners Association will operate the receiving area for	Measurable goal, review the Storm Water Drainage System Design Manual, DM500-1.3 and update as necessary. City currently has Code in place to address stormwater runoff controls and design criteria.	City Engineer, Development Services, Construction and Procurement, Public Works – Environmental Services Documentation method: summary report

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
		stormwater generated in the subdivision.		
6.4.5.2	Site Plan Reviews	Implement and maintain a site plan review process. City Engineer/Development Services Department/ Construction and Procurement.	Measurable goals will include maintaining a plan review process for all public and private construction occurring within the City, and the number of applications received and reviewed.	City Engineer, Development Services, Construction and Procurement, Public Works – Environmental Services Documentation method: summary report
6.4.5.3	Inventory	An inventory of post construction stormwater control measures.	An inventory of post-construction structural stormwater control measures will be maintained. Measurable goal will be an inventory of post-construction controls in place.	City Engineer, Development Services, Construction and Procurement, Public Works – Environmental Services Documentation method: summary report
6.4.5.3	Inspections	Perform inspections on post-construction stormwater structural controls that discharge into the MS4.	Measurable goal will be the number of structures and the number of inspections performed.	Public Works – Environmental Services Documentation method: inspection report
8.0	40 CFR 122.34(g) BMP - Annual Evaluation	Evaluate and modify ineffective methods and techniques.	Annually review the activities performed, compare the violations observed.	City Engineer, Development Services, Construction and Procurement, Public Works – Environmental Services Documentation method: summary report

MCM 6 – Pollution Prevention/Good Housekeeping for Municipal Operations

40 CFR 122.34(b)(6) / ADEQ Permit section 6.4.6 “Pollution Prevention and Good Housekeeping for Municipal Operations”

The City has developed an operations and maintenance procedure to inventory, prioritize, and inspect City facilities on a routine basis. SWPPPs for each facility will be developed and maintained. These items will be reviewed annually, or as needed, at the conclusion of the fiscal year.

Staff is trained on good housekeeping procedures to help eliminate and remove pollutants from entering the City’s right-of-way storm sewer system.

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
6.4.6.a	Inventory	Maintain a list of all facilities owned or operated by the City that discharges.	Measurable goal will be an updated list of municipal facilities, updated annually.	Public Works Department, Environmental Services and GIS. Documentation method: GIS map
6.4.6.b	Facility Prioritization	Determine activities performed at each facility, the existence of potential pollutants at each facility, and steps necessary to contain pollutants or BMPS necessary to maintain pollution prevention.	Measurable goal will be a prioritization of the municipal facilities including the reason for the prioritization, and the frequency of inspections. To be updated annually.	Public Works Department, Environmental Services. Documentation method: report
6.4.6.c	Inspections	Perform stormwater Pollution prevention inspections of each facility owned or operated by the municipality	Measurable goal will be to perform inspections of 20% of all facilities each permit year, to be completed in Permit Year 5.	Public Works Department, Environmental Services. Documentation method: GIS map
6.4.6.d	Facility BMP Update	Perform inspections on high priority facilities	Measurable goal will be to perform inspections on all high priority facilities annually, and to implement recommended	Public Works Department, Environmental Services. Documentation method: GIS map

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
		owned or operated by the municipality.	best management practices to control pollution from municipal operations.	
6.4.6a 6.4.6b 6.4.6c 6.4.6d	O&M Procedures	MS4 maintenance activities.	Measurable goals shall include a schedule for inspections, maintenance procedures and schedules, to be completed by September 2017.	Public Works Department, Streets Division. Documentation method: inspection reports, procedure document
6.4.6.e	MS4 Operations and Maintenance Activities	MS4 maintenance	Measurable goal shall include number of stormwater structures inspected, the number maintained, and shall include but not limited to the number of miles swept and number of inlets inspected and cleaned. An ongoing activity.	Public Works Department, Streets Division. Documentation method: report
6.4.3.10 6.4.6.f	Training	Staff training on stormwater pollution prevention and good housekeeping techniques.	Measurable goals shall include the number of staff trained on stormwater pollution prevention and good housekeeping annually.	Human Resources. Documentation method: report and/or individual test results
6.4.6.g	SWPPP	Develop and maintain a Stormwater Pollution Prevention Plan (SWPPP).	Measurable goals shall be: To create a SWPPP for this site by the end of Permit Year 1. To fulfill the requirements as detailed in the SWPPP including all actions, schedules, and objectives, as well as an annual evaluation of the effectiveness of the SWPPP. The following yards have been noted by the department as potential sources of pollutants; however, none of these yards have discharges to an MS4 as described in the permit 6.4.6.a. <ol style="list-style-type: none"> 1. Public Works Fleet Management and Water Resources Yard 2. Earl Edgar Maintenance Building 3. Public Works Yard 	Public Works Department, Environmental Services. Documentation method: SWPPP

Permit Citation	BMP	BMP Description/Action	Measurable Goals (include milestones, timeframes and frequencies)	Department / Division responsible and Documentation method
8.0	40 CFR 122.34(g) BMP - Annual Evaluation	Evaluate and modify ineffective methods and techniques	Annually review the activities performed, compare the violations observed.	Public Works, Environmental Services. Documentation method: report

TMDL, Waste Load Allocations, and Outstanding Arizona Waters

The City must maintain practices to achieve compliance with applicable TMDLs or waste load allocation, including measurable goal(s) for each BMP and corresponding milestones and timeframes. Each goal must have an associated measure of assessment;

- As of March 2018, the City has no recorded impaired waters within the jurisdiction.

Analytical Monitoring

The City must maintain an analytical monitoring program for impaired or not-attaining waters, and for Outstanding Arizona Waters to ensure compliance with permit limitations, waste load allocation(s), and surface water quality standards.

The analytical monitoring program shall include a Sampling and Analyses Plan (SAP) that includes the following minimum components: sample collection, equipment and containers, decontamination, calibration procedures, sample frequency (based on illicit discharge characteristics), document site conditions, field notes, sample preservation, tracking (chain-of-custody), and handling;

- As of February 2019, the City maintains the ability to hire a contractor to perform analytical monitoring should a need arise.

Annual Evaluation

The City must maintain a protocol for annual program evaluation per Part 8.1 of the Permit. The program must be updated annually.

Following completion of the fiscal year, Public Works will spearhead review of that fiscal year's program and make changes as needed to remain in compliance with the AZG2016-002 Permit. These program updates will be noted within the annual report submitted to ADEQ. Copies of documentation shall be kept by the Public Works Environmental Division.

Program Implementation

The City must identify the personnel responsible for program implementation (department, position, etc.)

Departments, and/or divisions within those departments responsible for implementation of various requirements throughout the City of Buckeye's stormwater program are noted within each MCM section. Each department or division head will assign tasks as they arise.

The City operates an Environmental Task Force headed up by the Public Works Department's Environmental Manager to discuss creation and implementation of pollution prevention opportunities on all levels of City activities. This group also reviews the City's stormwater program procedures to provide suggested input on program improvement.

Department, Division and Personnel for each MCM may be found in section 6.4 MCM table.

See Organizational Charts in attachments for additional information on departmental coverage.

Discharge Monitoring

In accordance with Section 8.3 Discharge Monitoring Report, the City shall report all analytical monitoring and visual monitoring results on a Discharge Monitoring Report (DMR). This is a separate activity from responses to illicit discharges to the MS4 found in part 6.4.3 of the permit and this SWMP.

FY18, the City partnered with ADEQ to visually monitor (via a camera system) a discharge point to the Tuthill/Acacia Wash from the Verrado subdivision. FY19 and beyond, the City will continue this format of visual monitoring at this location. The Tuthill/Acacia Wash drains to a private retention basin at the southeast corner of the Verrado development. Adjacent to this private retention basin is a detention basin designed to assist overtopping flow from the retention basin to drain underneath McDowell Road (currently closed to traffic as this area has not been developed) and on into a drainage channel underneath Interstate directly to the Maricopa County Flood Control District's White Tanks Dam/Flood Relief Structure #4 (FRS #4), a designed retention basin for a 500-year flood. This structure does not have a direct discharge to HOA owned and maintained stormwater structures in the Blue Horizons subdivision which borders the Flood Control District's structure. Future plans may direct FRS#4 dam flow to an ADOT stormwater system located in the City of Goodyear.

The City will provide data captured in the annual DMR report.

Dry and Wet Weather Visual Screenings – Monitoring and Assessment

Dry Weather Visual Screenings

The City will document discharges to an agriculture tail water ditch at the intersection of Belloat Road and 7th Street. This area receives runoff from some portions of historic downtown Buckeye as well as private irrigation tailwater. This is noted as a Field Screening Point, an area where the MS4 discharges to a private conveyance that eventually discharges to a Water of the United States. This is the only discharge point from the city MS4, and is the only applicable location to record a discharge, there being no other Field Screening Point, and no other outfall.

This location is recorded on the DMR.

As previously stated, the City will also monitor the Verrado discharge location. This area receives runoff from an approximate 3 ½ acre area within the Verrado subdivision.

This location is not recorded on the DMR as it has been determined that the discharge location is not connected to a water of the United States.

Discharge Monitoring Assessment

It is not always practical or necessary to track discharges that are a non-significant source of pollutants back to their source, therefore the inspector may utilize professional judgment in determining whether the discharge should be investigated further. Inspectors track flows back to potential dischargers and conduct aboveground inspections to look for abnormal water flows during the dry season. Should a source of the flow be established, the City will work alongside a confirmed property owner to eliminate any illicit discharges, if applicable. Should the discharge not be stopped, the city will address analytical monitoring.

The summer wet season is June 1 – October 31 and the winter wet season is November 1 – May 31. Minimum inspection schedule: two times per season at each location and/or within 72 hours of a significant rainfall resulting in a discharge from the location via a stormwater system.

Analytical Monitoring

The City must maintain an analytical monitoring program for impaired or not-attaining waters, and for Outstanding Arizona Waters to ensure compliance with permit limitations, waste load allocation(s), and surface water quality standards.

The analytical monitoring program shall include a Sampling and Analyses Plan (SAP) that includes the following minimum components: sample collection, equipment and containers, decontamination, calibration procedures, sample frequency (based on illicit discharge characteristics), document site conditions, field notes, sample preservation, tracking (chain-of-custody), and handling;

- As of February 2019, the City maintains the ability to hire a contractor to perform analytical monitoring should a need arise.

Annual Report

The City of Buckeye will submit an annual report each year of the permit term to ADEQ. The reporting period is from July 1 through June 30 each year, which coincides with the State and City fiscal year. The annual report is due to ADEQ on or before September 30 each year for the reporting period. Reports shall be submitted to ADEQ as follows:

Arizona Department of Environmental Quality
1110 West Washington Street, Mail Code 5451A-1
Phoenix, Arizona 85007

In the event electronic reporting becomes available, the City will submit the Annual Report as prescribed by ADEQ (or U.S. EPA). While assembling documentation and creation of the annual report, the City will also review this Stormwater Management Program to ensure it is up-to-date with the most current and effective pollution prevention measures and permit requirements. The Public Works Department will be the main point of contact for these documents.

Federal and State Legal Authority

Federal and State Authority over the program are paramount to the purposes and requirements found in the Permit. The Federal authority is derived from the Clean Water Act and subsequent regulations from this act. The State was granted authority to implement the program through state regulatory update and approval by the Federal government in 2002. This system of responsibility and responsiveness of the municipality to the state and federal governments are clearly defined in the regulations of each entity. They are listed below for clarity of understanding of the programs, their relation to the permit, the permits relation to the state code, and the corresponding federal code; the Clean Water Act and the Code of Federal Regulations (40 CFR).

The state of Arizona has the Arizona Administrative Code (AAC 49) and Arizona Revised Statute (ARS 18), and has adopted federal rules by reference necessary to implement the stormwater program. These state rules require program requirements to be equal to the federal rules – not more stringent, and not

less stringent.

The permit and all activities required by it are specifically performed to afford pollution prevention protection to the Municipal Separate Storm Sewer System (MS4). The MS4 is specifically defined, and must include a discharge to a Water of the State or a tributary to a Water of the State.

Limitations to legal authority

The following is recorded to designate the authority and limitations of the state to implement the AZPDES permit requirements:

Permit requirements to be consistent with the clean water act - AAC 49-255.01

B. The director shall adopt rules to establish an AZPDES permit program consistent with the requirements of sections 402(b) and 402(p) of the clean water act. This program shall include requirements to ensure compliance with section 307 and requirements for the control of discharges consistent with sections 318 and 405(a) of the clean water act. The director shall not adopt any requirement that is more stringent than or conflicts with any requirement of the clean water act. The director may adopt federal rules pursuant to section 41-1028 or may adopt rules to reflect local environmental conditions to the extent that the rules are consistent with and no more stringent than the clean water act and this article.

Stringency authorized by Arizona law - AAC 49-104.A.17

Unless specifically authorized by the legislature, ensure that state laws, rules, standards, permits, variances and orders are adopted and construed to be consistent with and no more stringent than the corresponding federal law that addresses the same subject matter.

AZPDES Program Standards follows 40 CFR of July 1, 2003

ARS R18-9-A905 - A. Except for subsection (A)(11), the following 40 CFR sections and appendices, July 1, 2003 edition, as they apply to the NPDES program, are incorporated by reference, do not include any later amendments or editions of the incorporated matter, and are on file with the Department.

General program requirements:

- a. 40 CFR 122.7;*
- b. 40 CFR 122.21, except 40 CFR 122.21(a) through (e) and (l);*
- c. 40 CFR 122.22;*
- d. 40 CFR 122.26, except 40 CFR 122.26(c)(2), and 40 CFR 122.26(e)(2);*
- e. 40 CFR 122.29;*
- f. 40 CFR 122.32;*
- g. 40 CFR 122.33;*
- h. 40 CFR 122.34;*
- i. 40 CFR 122.35;*
- j. 40 CFR 122.62(a) and (b).*

Federal Regulation – A Summary

The following are a bulleted summary of requirements of the CFR for small MS4s (Phase II MS4s). The guidance listed in the CFR is not addressed herein as guidance is not enforceable.

At a minimum, municipalities must perform the following activities and requirements:

122.30

- Phase II regulations are comprised of 122.30 – 122.37
- Phase II regulations include guidance, but guidance is not legally binding
- Watershed approaches are strongly encouraged

122.32

- Permit jurisdiction is in urbanized area only (defined by federal decennial census)

122.33

- 122.33(b)(1) [= 122.34(d)] For the general permit, applicants must submit an NOI that includes the [SWMP] BMPs for each minimum control measure with measurable goals, time frame for implementation, milestones, frequencies of action, person responsible for coordinating the management program.

122.34(a)

- Develop implement and enforce a SWMP to reduce pollutants to the MS4 to the MEP – to protect water quality and follow CWA-Implementation of BMPs consistent with the SWMP when impaired waters are not present constitutes compliance to the MEP
- Phase I [122.26(d)] is different from phase II
- Narrative effluent limitations of BMP implementation are appropriate for protecting water quality (as opposed to numeric)
- Implement in 5 years

122.34(b)(1)

- Implement program to distribute education

122.34(b)(2)

- Involve the public in the program

122.34(b)(3)

- Sewer system map
- Include Outfalls with locations of Waters of the United States
- Prohibit illicit discharges to the MS4
- Develop a plan to detect and address non stormwater discharges to your system
- Inform public employees, business, and general public of hazards of pollution
- Applicant identifies “allowable” discharges if they believe they are pollutants

122.34(b)(4)

- Develop implement and enforce a construction program to reduce pollutants to the MS4
- Have E&S enforcement ability, and require E&S BMPs, waste control, site plan review, and public input

122.34(b)(5)

- New and redevelopment that discharge to the MS4
- Develop implement and enforce a program to protect the MS4
- Require controls to be in place to prevent water quality impacts
- Have a BMP Strategy, have a regulatory mechanism, Ensure long term operation and maintenance

122.34(b)(6)

- Have an Operations and Maintenance program for pollutant reduction from municipal facilities
- Training to “staff” on O&M
- (no MS4 mentioned!)

- Include: Park and open space, fleet, facilities (building maintenance), construction, MS4 maintenance

122.34(d)

- See 122.33
- EPA or state will provide a menu of BMPs (EPA Menu came out in 2000)
- Applicant may choose from the menu or select others that satisfy the MCMs
- If there is an approved TMDL or equivalent, the applicant must comply with more stringent requirements of permit
- General permit conditions must meet 122.41 – 49 (standard for all permit requirements)

122.34(g)

- Applicant must annually evaluate compliance and appropriateness of BMPS, and progress to meet measurable goals
- Keep records for 3 years
- Follow state regulations for reporting or report in year 2 and 4
- Report must have:
 - Status of compliance
 - Assessment of appropriateness of BMPs
 - Progress to achieve measurable goals
 - Results of information collected
 - Summary of activities to be performed in next reporting cycle
 - Changes in BMPs or measurable goals
 - Notice if relying on other agencies for permit obligation

Acronyms and Abbreviations

ACRONYM/ABBREVIATION	DEFINITION
A&Wc	Aquatic and Wildlife cold-water
AAC	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
AgL	Agricultural livestock Watering
ARS	Arizona Revised Statute
AZPDES	Arizona Pollutant Discharge Elimination System
BMP	Best Management Practice
CE	City of Buckeye Engineering Department
CFR	Code of Federal Regulations
CP	City of Buckeye Construction and Procurement Division
CWA	Clean Water Act
DEP	Department of Environmental Protection
DM	Drainage Manual
DMR	Discharge Monitoring Report
DS	City of Buckeye Development Services Department
E&S	Erosion and Sediment
EPA/USEPA	United States Environmental Protection Agency
ESD	Environmental Services Division of Public Works
FY	Fiscal Year
IDDE	Illicit Discharge Detection and Elimination
IDID	Illicit Discharge Illegal Dumping
LTF	Licensing Time Frame
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and Maintenance
OAW	Outstanding Arizona Waters
PAC	Pre-Application Conference
PIP	Proactive Inspection Program
POTW	Public Operated Treatment Works
PW	City of Buckeye Public Works Department
ROW	Right-of-Way
SAP	Sampling and Analyses Plan
STORM	STormwater Outreach for Regional Municipalities
SWMP	Stormwater Management Program
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
USGS	United States Geological Service
WLA	Waste Load Allocation

Stormwater Management Program Review and/or Revision Dates

Annually, the City will review this plan and make updates as needed. Review and/or document revision will be noted in the table above. Review of this document occurs during the annual report review and preparation.

A copy of this document is made available online at www.buckeyeaz.gov.

Revision Number	Date	Required Review Completion date	Review/Revised By	Reason for Revision	Sections Revised
1.0	6-20-2016	-	Rv	Pre-Permit Draft	N/A
2.0	10-26-2017	9-30-2017	AM	Initial Draft	Entire document
2.1	3-15-2018	-	Rv	Draft Update	6.4.4 6.4.5 6.4.6
2.2	4-3-2018	-	SL/Rv	Update	Minor wording, entire document
2.3	6-25-18 and 7-18-18	7-1-2018	AM	Update	MCM4, MCM6
2.4-2.7	3-18-2019 through 6-30-19	7-1-2019	Rv	Review/Update	Minor wording, entire document
2.8	6-20-20	7-1-2020	Rv	Review /Update	Minor wording, entire document
		7-1-2021			

Attachments Index

- i. ADEQ Stormwater Permit AZG2016-002
- ii. Notice of Intent
- iii. City of Buckeye Code
- iv. City of Buckeye Urbanized Area Map (based on census data)
- v. Drainage Manual DM-500
- vi. Enforcement Response Plan
- vii. Emergency/Incident Response
- viii. Sampling Analysis Plan
- ix. Complaint Response Flowchart
- x. City of Buckeye Organizational Charts
- xi. Stormwater Pollution Prevention Plans (City Facilities)
- xii. Definitions and Abbreviations

i. **Attachment - ADEQ Stormwater Permit AZG2016-002**

http://www.buckeyeaz.gov/wp-content/uploads/2017/05/sm_ms4_-permit_final.pdf

ii. Attachment - Approved Notice of Intent

<http://www.buckeyeaz.gov/wp-content/uploads/2017/05/NOI-Final-Approved-4-24-2017.pdf>

iii. Attachment - City of Buckeye Code

https://library.municode.com/az/buckeye/codes/code_of_ordinances

iv. Attachment - City of Buckeye Urbanized Area Map and General Land Use Map

The Urbanized Area, referenced in 40 CFR 122.32 (a)(1) is based on the decennial census:

40 CFR 122.32 (a)(1) - Your small MS4 is located in an urbanized area as determined by the latest Decennial Census by the Bureau of the Census. (If your small MS4 is not located entirely within an urbanized area, only the portion that is within the urbanized area is regulated)

Urbanized Area Map

The Urbanized area map is not currently available online – Please contact the City Public Works Department for more information

Urbanized area maps will be made available on this website

<https://buckyearizona.maps.arcgis.com/apps/PublicGallery/index.html?appid=99906b184b2b46d08d7977ecad0045e3>

Land Use Map

<http://www.buckeyeaz.gov/home/showdocument?id=500>

v. Attachment - Drainage Manual DM-500

http://www.buckeyeaz.gov/wp-content/uploads/2014/12/2.5.3_Design-Standard-Section-5-1-Grading-Drainage.pdf

vi. **Attachment - Enforcement Response Plan**

**Standard Operating Procedure
Enforcement Response Plan
Environmental Services**

CREATED: 5-16-2016

UPDATED: 8-7-2018

REVIEW: every two years

- I. **Purpose:**
To establish uniformity in applying legal authority.
- II. **Applicability:**
Applies to all Environmental Services (ES) personnel involved in regulating the City of Buckeye Public Works Sanitation Regulation.
- III. **Background:**
This ERP is to be applied to all enforcement procedures within the Environmental Program unless otherwise specified in City Code.
The Arizona Pollutant Discharge Elimination System General Permit for stormwater discharges from small municipal separate storm sewer systems to water of the United States requires an Enforcement Response Plan (ERP) that specifies how legal authority will be prioritized and applied.
- IV. **References:**
City of Buckeye, City Code, Chapter 9, Sanitation
- V. **Policy:**
 - A. Staff shall read, understand and comply with procedures described herein, and City Code and regulations.
 - B. This SOP is intended as guidance for Staff pursuing legal action against an individual, facility or business.
 - C. This policy is to be used to enforce any violation of the Environmental Services Program, or other sanitation related code enforcement activity unless otherwise allowed by City Code.
 - D. When requesting legal action, staff must include the appropriate standard legal comments and supporting documentation in the report.
- VI. **Procedures:**
 - A. Enforcement Measures
 - i. The Stormwater Quality Program will use the following three measures in the order shown, until the regulated entity resolves the violation. The three steps of enforcement are 1) Inspector informs the owner of violation and provides an opportunity to meet with owner, 2) Program supervisor issues two notices of violation (NOV) to the owner. First, a Notice of Opportunity to Correct (NOC). The NOC should be issued after all communication with the responsible party(ies) have proven to not create a resolution or mitigation of the pollution or failure to protect environmental quality. Second, a Notice of Violation and requirement to correct (NOV)), and finally, 3) the Inspector submits a Legal Action Request to the Environmental Manager, which may include a civil citation, an administrative penalty, or a cease and desist order.

- ii. The legal action may be addressed administratively, between Public Works and the responsible party, or the legal action may be approved for a citation to be issued, either by the Environmental Compliance Officer, or by the Buckeye Police Department Code Enforcement Officer. A citation will require an appearance in civil court.
- B. Escalating Enforcement Measures
- i. Exceptions for skipping steps may be approved by the Environmental Manager based on severity of the assumed violation, as well as specific program standards. In determining the severity of legal action, the following criteria will be considered:
 - a. Composition of discharge.
 - b. Proximity of violation to receiving water.
 - c. Proximity of violation to a storm sewer system structure.
 - d. Volume of discharge to the right-of way.
 - e. Documentation of repeated non-compliance.
 - f. A risk to a person, the public, health, safety or welfare or the environmental quality.
 - g. Any other direct observations, test results, photos or other pertinent documentation.
- C. Steps for initiating Legal Actions - The Environmental Services Division will seek legal action:
- i. When a violation is discovered - staff shall use means such as providing an inspection report, a letter, a phone call to an owner informing the owner of the issue. Email may also be used, but may only be accepted as a communication method if the responsible party(ies) respond.
 - ii. When the issue is not resolved by first contact, the first Notice of Violation (NOV) in the form of a Notice of an Opportunity to Correct is sent out, signed by either the inspector or manager and sent to the owner/operator. The letter must contain the alleged violation(s), a summary and citation of the codes violated, and a request for the owner/operator to contact the Department by a specific date to dispute the violation, correct the violation, or complete and sign a compliance plan. A copy of all NOCs issued must be filed by the department in an enforcement folder (either digital or hard copy).
 - iii. When the issue is not resolved by the NOC, a second NOV is issued, the NOV is sent by Staff, signed by either the inspector or manager and sent to the owner/operator, and copied to the land owner(s) if different. The letter must contain the alleged violation(s) and a request for the owner/operator to contact the Department by a specific date to dispute the violation, correct the violation, or complete and sign a compliance plan.
 - iv. When the issue is not resolved, the staff will coordinate with the Manager for further legal action via a Legal Action Request. The staff submitting a Legal Action Request must include all documented evidence. If an NOC and NOV was prepared, it (they) shall be attached to serve as the justification for legal action. In addition to the NOC/NOV, the legal action documentation shall contain a list of recommended corrective actions and a suggested compliance schedule. Other documentation shall be attached as deemed necessary and pertinent to the issue. After the legal action documentation is submitted, staff will take

responsibility for further actions; however, all applicable inspections will continue to be performed including technical reviews and inspections.

vii. Attachment - Emergency/Incident Response

For all emergency or incident response activities, the City shall respond using the following procedure:

- I. Stop and control the spill with the intent of protection of immediate life, immediate health, and the environment, in that order.
- II. Use spill and cleanup equipment to stop a pollutant from entering a storm drain or prevent a discharge from a storm drain to a water of the state.
- III. Reporting Requirements
 - a. The following shall be included as information which must be reported within 24 hours under this paragraph:
 - i. Any discharge which exceeds the effluent limitations of the permit, including non-stormwater discharges except those listed in Part 1.3.2 of the Permit.
 - ii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit per 40 CFR 122.44(g) which is incorporated by reference at A.A.C. R18-9-A905(A)(3)(d).
 - iii. Spills of hazardous materials to the storm system will be orally/verbally reported to ADEQ Emergency Response within 24 hours of the discharge
 - b. Reporting method: calling (602) 771-4163 during normal business hours (MST M-F 8a – 5p) or by contacting ADEQ’s after-hours emergency reporting at (602) 771-4508 or (602) 390-7894. A spill of any quantity of hazardous materials that impacts a waterway within Arizona must be reported. Emergencies include oil and chemical spills as well as accidents causing a release of pollutants.
 - c. Additional reporting:
 - i. All spills that enter the MS4 will be reported in written form (email, hard copy, or other method suitable to the permitting authority) to ADEQ’s NPDES Permit manager within five (5) days of the discharge to ADEQ – Water Quality Division, 1110 W. Washington Street, Phoenix, AZ 85007. The written submission shall contain:
 1. A description of the noncompliance and its cause,
 2. The period of noncompliance including exact dates and times, and
 3. If the noncompliance has not yet been corrected, the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance
 - ii. All spills, referred in the Permit as “upsets/discharges,” will also be reported in the annual report.
- IV. The following form will be used as a standard operating procedure for all spills responded to by the Public Works Department.

Emergency/Incident Response to Right of Way and Storm Drain

A. Responder information

Date	Time	Responder	
Incident address and nearest intersection			

B. Incident information

Police report obtained?	Y N
Report number (required)	
Responsible Person: Name	
Address and phone	
Description of incident:	

C. Did any hazardous material enter a storm drain owned by the City? Y N

If NO, forward form to Environmental Services on next business day. **If Yes**, do the following:

1. Inform Env. Mngr., Robert van den Akker: 623-208-3640, rvandenakker@buckeyeaz.gov
2. **Alert ADEQ emergency on call: (602) 390-7894**
3. Provide this page to Public Works, Environmental Services, for written notification requirements.
4. Obtain as much of the following information as possible for Risk Management:

RISK information – information from the person responsible for the incident – when in doubt, get information from all involved persons. Obtain any invoice or costs that the city has incurred from clean-up or disposal.

Responsible Person/Party name	
Insurance name and address	
Insurance contact number	
Labor hours:	
Equipment costs:	
Other:	

D. Is cleanup required by the City?

If spills occur on private property (HOA, residence, or business) it is the property owner's responsibility to clean-up their area.

Emergency Responder companies if needed

Karyenvironmental.com (preferred) 480-945-0009, Clean Harbor 800.645.8265, Enviro Response Inc. Phone: 480-967-2802

What cleanup company did you call?

Cleanup Company Name			
Date of call	Time	Contact name	

viii. Attachment - Construction Plan Review Standard Operating Procedures

**City of Buckeye
Construction Plan Review Standard Operating Procedures**

This Standard Operating Procedure (SOP) is intended to be used/referenced when reviewing Waste, Erosion, and Sediment (WES) Control Plans.

Step 1. Review the Construction Information Form to confirm if it is completed in its entirety. The information in the checklist should match other application package components (i.e., development type, disturbed area, owner/applicant).

Step 2. Review drawings to understand all elements affecting local drainage in and around the project area. Elements could include: the development type, location, steep slopes, existing drainage patterns, proposed drainage patterns, discharge points from project, entrance/exit to the construction site, flood hazard areas, etc.

Step 3. Understand the proposed Best Management Practices (BMPs). This step includes non-structural (actions/activities) as well as structural controls, slated for installation to understand how each of these elements will be managed.

- Does WES Control Plan fit the type of development?
- Is there project phasing presented and are control measures depicted for each phase?
- Does the construction schedule provided seem appropriate for the size, scope, and complexity of the project?
- Does the construction schedule address temporary and final site stabilization?

Step 4. Identify all BMPs proposed for the site. Questions that the Reviewer should begin to ask include:

- How does existing topography change?
- Are perimeter BMPs, installed before mass grading, clearly identified?
- Are all discharge points (areas where storm water runoff enters the City right of way or property, washes, or adjoining property) protected with appropriate BMPs to control waste, erosion, and sediment?

Step 5. Prepare written documentation and any applicable red-lines of the review findings.

Perform rounds of comment review/resolution until adequately resolved by the Applicant.

Step 6. Attend the Pre-Construction meeting to discuss WES Control Plans. During the Pre-Construction meeting, the following items should be discussed:

- Which waste, erosion, and sediment control measures must be installed at the beginning of the project before calling for a Pre-Construction Inspection?
- Which pollution prevention measures are to be installed during and following construction activities?
- How will inspection documentation findings be included with WES Control Plans?
- Do contractor and sub-contractors have a clear understanding of WES control requirements including right-of-way protection and cleanliness regardless if a WES Control Plan is or is not required? Identify how City infrastructure, washes, and other stormwater systems within or adjacent to the project will be protected.
- Explain applicable inspection requirements.

- Verify the Contractor understands his/her responsibilities.
- Discuss any outstanding WES Control Plan or BMP questions.

Target review goals

The following table outlines the target plan review goals for each type of permit reviewed. Plan resubmittals should also follow these review goals. However, the reviewer should try to work minor submittals into the plans review schedule when possible.

Table 1. Target Review Goals

Permit Type	Review Goal
Residential building permit	First submittal: 16 days Subsequent Submittals: 8 days
Non-residential building permit	First submittal: 16 days Subsequent Submittals: 8 days
Subdivisions	First submittal: 16 days Subsequent Submittals: 8 days

Record Keeping

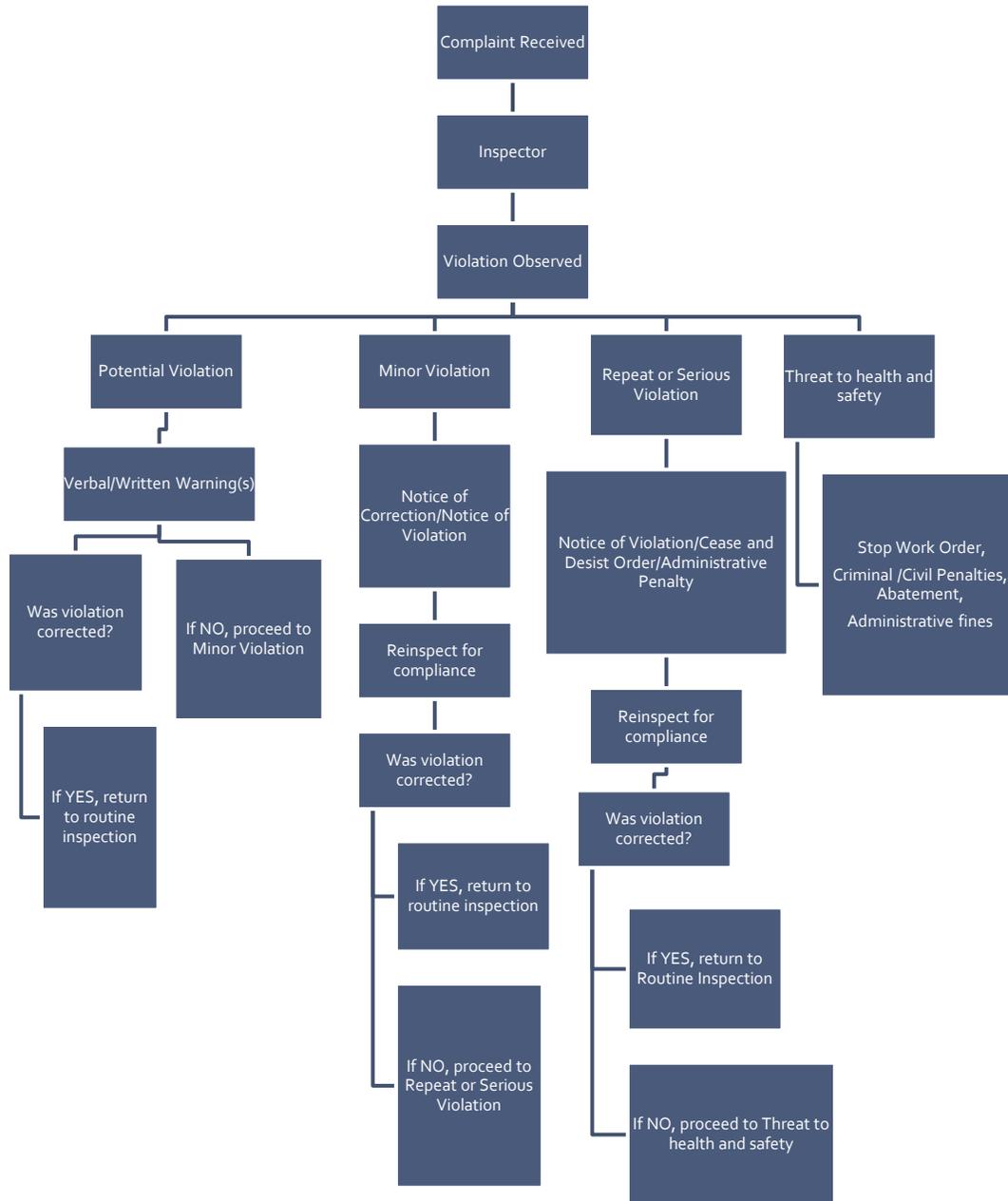
Maintaining thorough records is vital to any program inventory, Plan review process, and inspection program. The City maintains records using internal City software. Documentation for WES Plan compliance is to be maintained by Public Works. Not only are records necessary to document enforcement actions from a legal perspective, WES Control Plan records document activities undertaken for compliance with City’s Phase II Municipal Separate Storm Sewer System (MS4) Permit. The City’s Stormwater Management Program (SWMP) was developed for compliance with the MS4 Permit and outlines WES Control Plan review, inspection and enforcement Control Measures. Recordkeeping is a critical element to document compliance with program activities for inclusion or reference in the City’s Stormwater Annual Report.

ix. Attachment - Sampling Analysis Plan

Upon finding of a discharge to an MS4 that is unable to be controlled or stopped, the City will call on a licensed contractor to take a sample. All contractors currently available under state contract are available for service as needed.

As of June, 2020, 100% of the urbanized, developed area has been mapped to show the city's stormwater infrastructure. Up-to-date data is located online via the City's GIS at <https://buckyearizona.maps.arcgis.com/apps/opsdashboard/index.html#/d0965135ce7c4f98916d4bc9da8841f9> . Newer developed neighborhoods (2000 and beyond) require all stormwater retention to be contained on site.

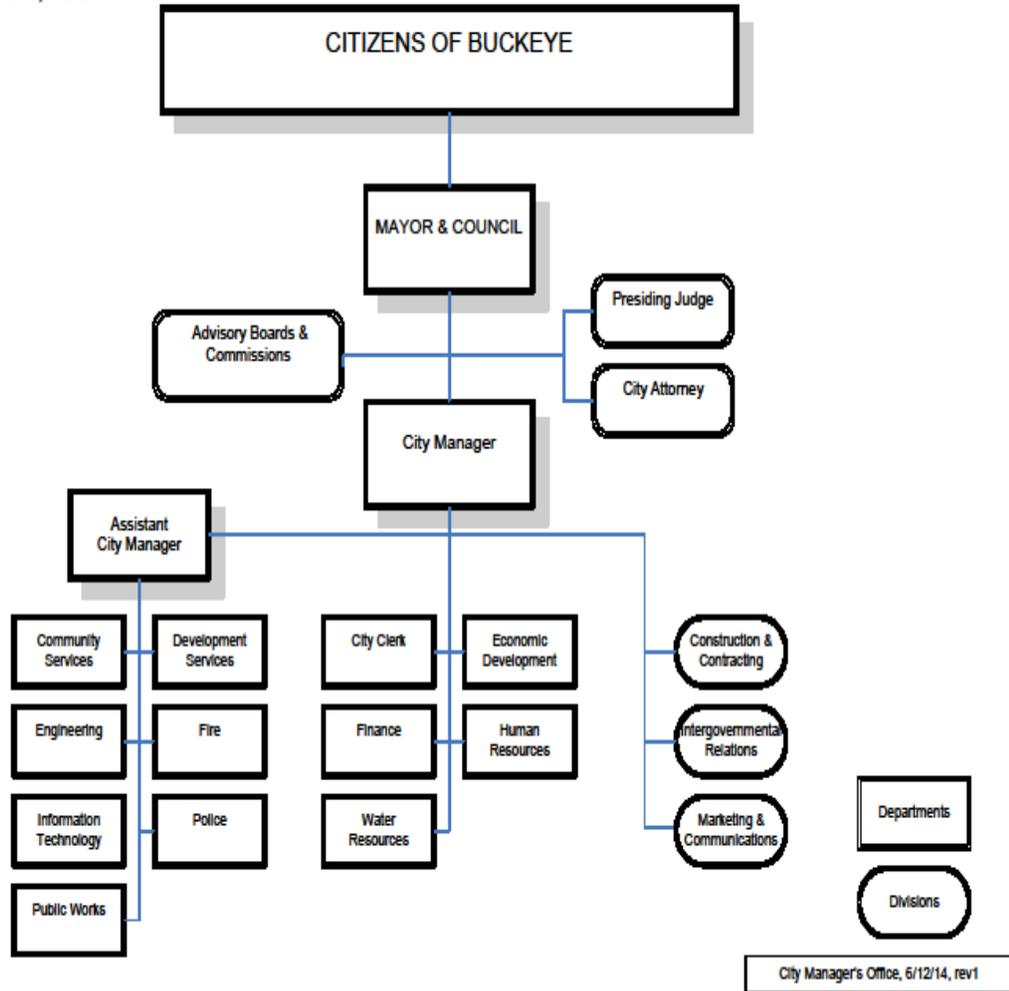
x. Attachment - Complaint Response Flowchart



xi. Attachment - City of Buckeye Organizational Charts

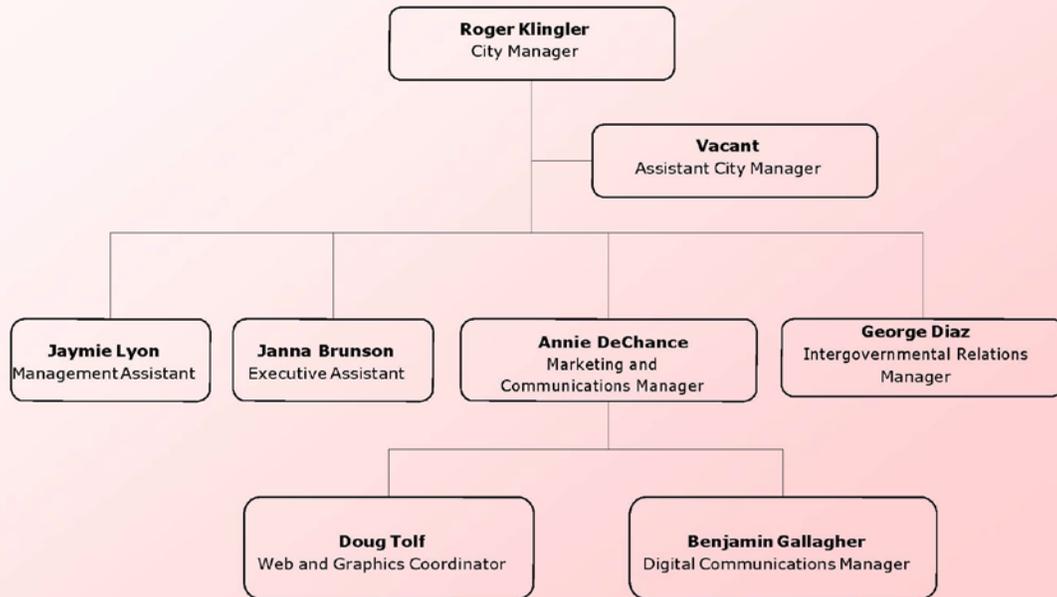


City of Buckeye Organizational Chart
June, 2015





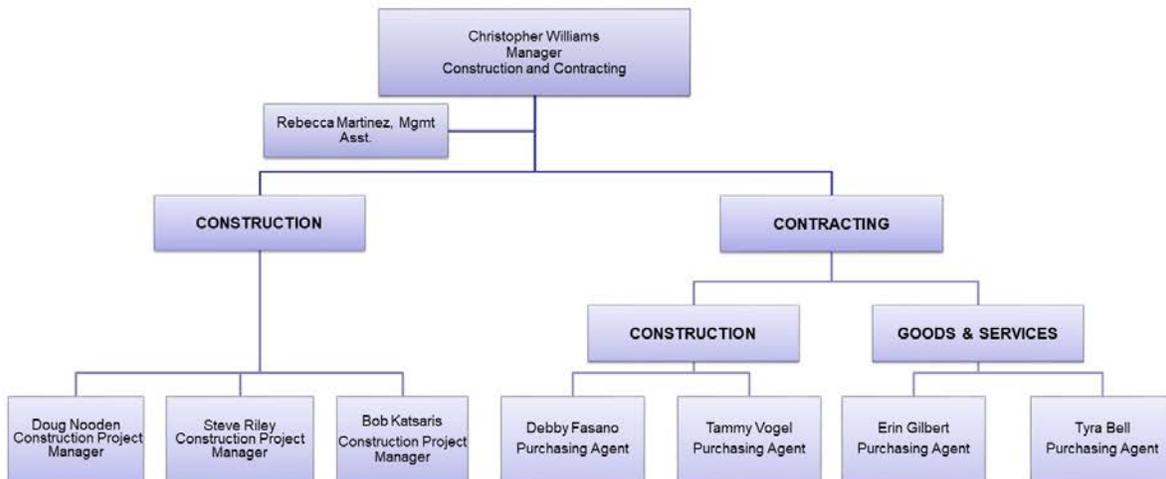
City of Buckeye City Manager's Office



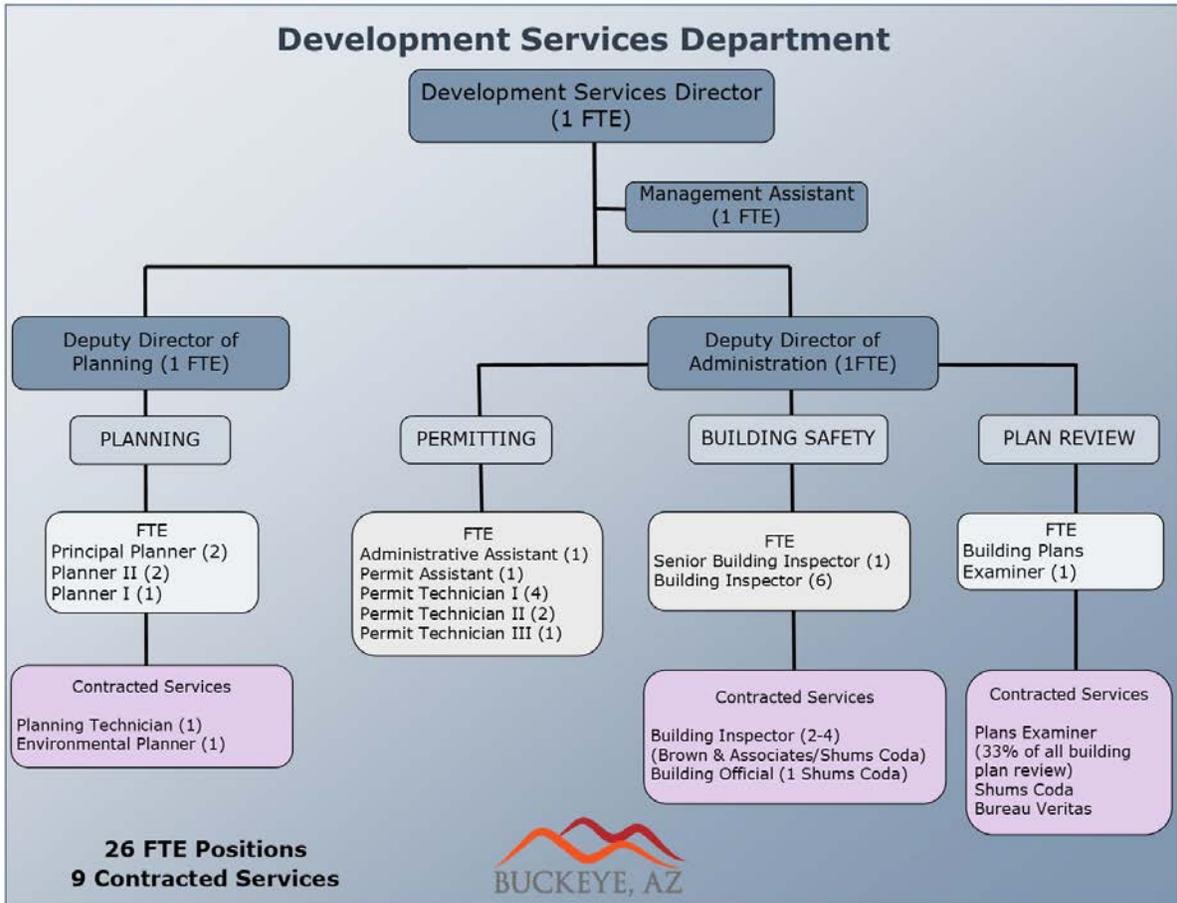
November 1, 2017

Roger Klingler, City Manager
530 E. Monroe Av.
Buckeye, AZ 85326
(623) 349-6000

City of Buckeye Construction and Contracting Division Organization Chart



Chris Williams, Manager
Construction and Contracting
530 E. Monroe Av.
Buckeye, AZ 85326
(623) 349-6225

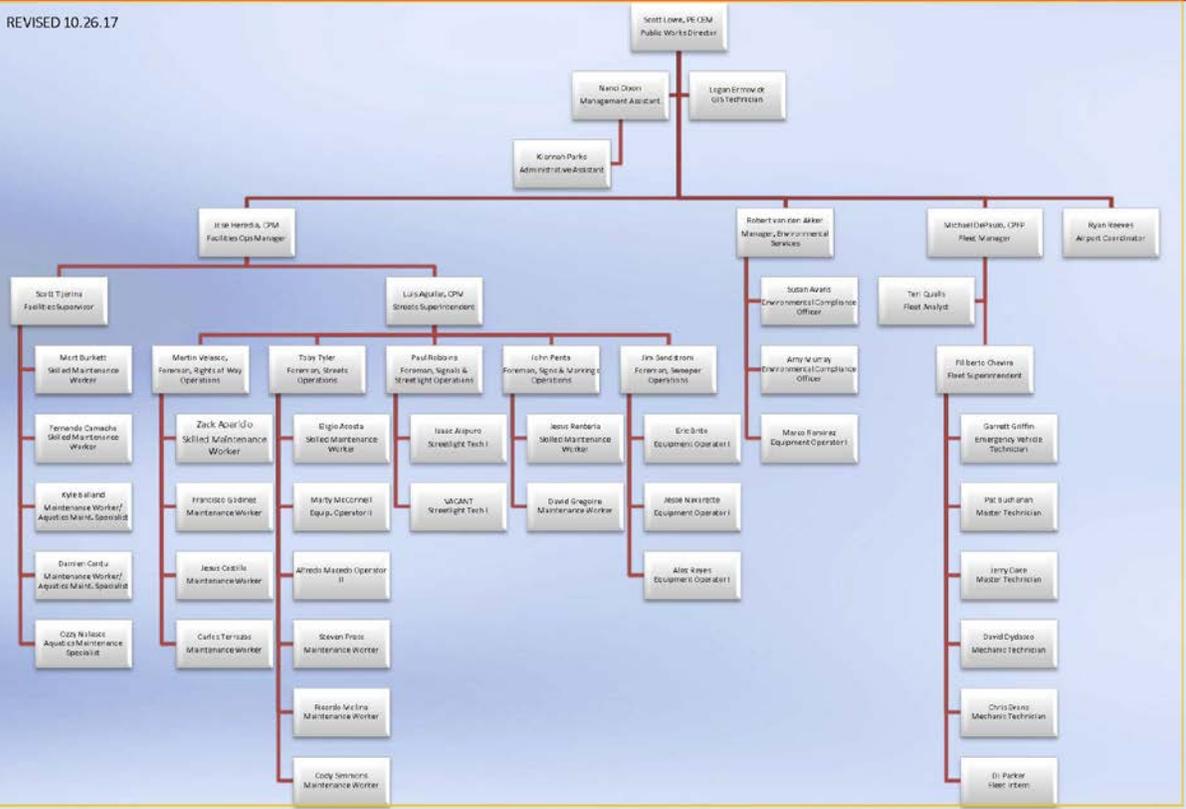


George Flores, Director
 530 E. Monroe Av.
 Buckeye, AZ 85326
 (623) 349-6209

Public Works Department



REVISED 10.26.17



Scott Lowe, PE, CEM, Director
23454 MC 85
Buckeye, AZ 85326
(623) 349-6800

Implementation of the City's SWMP is developed by the Public Works Department. Scott Lowe is the Director of Public Works. Stormwater program management is handled on a daily basis by the Environmental Manager, Robert van den Akker. There are two Environmental Compliance Officers who report to the Environmental Manager. Public Works will coordinate with various departments to implement and/or management specific areas of the operation and management of the stormwater program.

xii. Attachment - Stormwater Pollution Prevention Plans (City Facilities)

According to part 6.4.6 Pollution Prevention and Good Housekeeping for Municipal Operations, the city must:

- a. Develop an inventory of municipal operations that discharge;
- b. Prioritize municipal facilities based on their risk to discharge pollutants and develop and implement a site inspection schedule (example, more frequent inspections for higher risk facilities, less frequent inspections for lower risk facilities);
- c. Develop and implement an inspection schedule for municipally-owned and operated facilities and activities to ensure stormwater controls are effective and being properly maintained;
- d. Based on inspection findings, update municipally-owned or operated facilities priority status and modify inspection frequency, as appropriate;

Inventory:

- 1. Public Works Fleet Management and Water Resources Yard
- 2. Earl Edgar Maintenance Building
- 3. Public Works Yard

Findings:

Public Works Fleet Management and Water Resources Yard

In September 2017, it was determined this yard has no discharge. All flood waters remain onsite, ponding in the South West corner of the property. No SWPPP is needed for this property.

Earl Edgar Maintenance Building

In March 2018, it was determined this yard has no discharge. All stormwater is retained onsite and discharges to a dry well on property. No SWPPP is needed for this property.

Public Works Yard

In March 2018, it was determined this yard discharges some portions of the yard to the Right-of-Way along Watson Road. This area does not have a discharge location and overflow from this area would discharge to an irrigation channel. This yard does not discharge to a stormwater structure. No SWPPP is needed for this property.

Other City Facilities

The following facilities have SWPPPs (or certificates of no exposure) under separate AZPDES Multisector General Permits (MSGPs):

- Buckeye Municipal Airport/Ensign John C. Butler Memorial Field – Original created in 2006 and operated by the Public Works Department
- Central Water Reclamation Facility – operated by the Water Resources Department
- Sundance Water Reclamation Facility – operated by the Water Resources Department
- Festival Ranch Water Reclamation Facility – operated by the Water Resources Department
- Tartesso Water Reclamation Facility – operated by the Water Resources Department

xiii. Attachment - Definitions and Abbreviations

Note: Although this Definitions and Abbreviations document contains many references to local, state, and federal code and agency documents, some references are generally accepted definitions for the NPDES or AZPDES program. Unless countermanded by a Municipal Regulation or state issued permit, these definitions will be used for the Environmental Services Division.

ABC

Aggregate Base Course - often referred to as ABC, AB or road base is a blend of gravel ranging in size from 1" down to sand size particles. It's used in many applications as a compaction material under concrete slabs and roads. ABC is also the product you will find on gravel roads and because it has minimal clay content is less likely to become muddy than native soil. ABC varies in color and type of rock depending on its source, and the percentages of large and small gravel within the product.

AZPDES

Arizona Pollution Discharge Elimination System - The state of AZ was authorized to operate the NPDES program in December of 2002. Note: ADEQ has adopted the 2003 CFR

AZDEQ

Arizona Department of Environmental Quality (aka ADEQ)

Best management practice (BMP)

- In general, activities and practices to mitigate negative impacts.
- Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural. A BMP policy may affect limits on a development.
33CFR330, March 9, 2000
- Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, other management practices to prevent or reduce the introduction of pollutants directly or indirectly to the County MS4 or Storm Drainage Systems connected to the MS4 and the prohibition of specific activities, practices, and procedures and such other provisions as the Department determines appropriate for the control of pollutants. BMPs also include treatment practices, operating procedures, and practices to control the following; site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

CGP

- Construction General Permit – designed to protect surface waters from stormwater pollution flow off of construction sites.
- A general permit required to protect surface water from pollution created on construction sites per 40CFR122.26(b)(14)(x); 40CFR122.26(b)(15); ARS, Title 49, Chapter 2, Article 3.1; AAC, Title 18, Chapter 9, Articles 9 and Chapter 11, Article 1; and the Clean Water Act (33 U.S.C. 1251) [not to be confused with the construction plan review and inspection program required by municipalities to protect their MS4 per ARS Title 49, Chapter 2, Article 3.1; AAC Title 18, Chapter 9, Articles 9 and 10; and 40CFR122.34(b)(4)].

Common Plan of Development

- A construction activity is part of a larger common plan of development if it is completed in one or more of the following ways: in separate stages, in separate phases, in combination with other construction activities
- It is identified by the documentation that identifies the scope of the project including such things as the following: plats, blueprints, marketing plans, contracts, building permits, public notice or hearing, zoning requests.
- It can include one operator or many operators and may be commonly found in subdivisions and shopping plazas.
- A "larger common plan of development or sale" is a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
<http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-FAQs.cfm#305>

Construction Activity

40CFR122.26(b)(15)(i) (and (b)(14)(x)) Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one acre... (and also includes)...the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one ... acre. ... construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

CWA

Clean Water Act – The Federal Water Pollution Control Act: Legislation that provides statutory authority for the NPDES program, which is Public law 92-500; 33U.S.C. 1251.

Culvert

A short pipe or covered channel that crosses under a road, railway, etc...

DG

Decomposed Granite - made of granite aggregates a 1/4" or smaller. Sometimes DG is so fine that it resembles sand. Decomposed granite is the least expensive way to pave a patio, walkway, or driveway.

Documentation

Process of recording maintenance activities, work accomplished, problems encountered the condition of equipment, and other activities.

Drainage System

A system of natural or constructed conveyances for stormwater flow

Draw Down

The designed slow release of stormwater from a storage area

Dry Detention

Usually a dry stormwater area used to store runoff for a short period of time and release the water at a controlled rate to surface water.

Dry weather field screening

- Screening for non-stormwater flows during dry weather. In the Sonoran Desert and with current regulation from Planning and Development, dry weather in MC is longer than 36 hours of no rain.
- For Construction sites: According to permit AZG2002-002, screening must include field tests of observed discharges for of selected chemical parameters as indicators of discharge sources. The permittee must investigate the illicit discharge within 15 days of its detection, and must follow up investigation with an action to further study the source of the discharge and ultimately eliminate the discharge.
- For Maricopa County, a discharge is either from an approved source, per the Maricopa County Stormwater Quality Discharge Control Regulation (a "non-polluted" discharge) or written permit, or it is to be stopped by inspection, education, and enforcement as needed.
- Any inspection performed \geq 48 hours after a rain should be considered a dry weather field screening inspection in MC and any observed flow should be inspected as an illicit discharge.

Drywell

An excavated pit often filled with stone or gravel that temporarily stores stormwater runoff until it soaks into the surrounding soil. Normally less than 100 feet, but may be up to 180 feet deep. The average is 20 feet deep. Drywells are designed so that the bottom is at least 10 feet above groundwater – which in many parts of the Sonoran Desert could be very deep. The drywell normally consists of a sump that is 10 to 20 feet deep with a 4 inch pipe raised and screened at the opening near the top. This pipe allows any accumulated water to flow down into ground but must not discharge less than 10 feet from groundwater.

Regulating Drywells

Drywells can only receive stormwater runoff or discharges that are exempted by A.R.S. § 49-250(23). If other fluids have been directed to the drywell, it is subject to the aquifer protection program (APP) and/or closure requirements and may be considered an underground injection well that requires both ADEQ and USEPA

permitting. Spills to the drywell may also trigger permitting, clean closure, or enforcement actions. Regulations governing drywell operation, etc. are found in:

- A.R.S. § 49-331 through 49-336 (laws regulating drywells);
- A.R.S. § 49-201(5) (clean closure definition);
- A.R.S. § 49-241 (permit required to discharge); and
- A.R.S. § 49-245.02 (general permit for certain discharges associated with man-made bodies of water).

An APP permit is required for any drywell located in an area where hazardous substances, including motor fuels, are used, stored, treated, or loaded.

The permitting requirement may not apply if the Site Plan clearly demonstrates that the site is graded or engineered such that drywell(s) cannot receive runoff or spills from chemical handling areas.

Erosion

A natural process of weathering or wearing away of land by water or wind.

Exfiltration

Loss of water from a drainage system as result of percolation or absorption into the surrounding soil.

EPA

Environmental Protection Agency

Formed on December 2, 1970 due to concern about air quality and surface water quality pollution, the EPA consolidated a variety of federal research, monitoring, standard-setting and enforcement activities into one agency devoted to ensure environmental protection.

Ephemeral stream

An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow. (33 CFR 330, March 9, 2000)

Eutrophication

The natural progression of a natural waterbody as minerals and nutrients increase due stormwater runoff washing material into the waterbody, and as life in and around the waterbody produces waste. This process may be greatly increased as population increases around waterbody, and as soil disturbance and runoff occurs. Eutrophication (Greek *eutrophos*, "well-nourished"), dystrophication or hypertrophication, is when a body of water becomes overly enriched with minerals and nutrients inducing excessive growth of algae. This process may result in oxygen depletion of the water body.

Field Screening Point

Per AZPDES PERMIT NO. AZG2016-002, Part 10.16..."location(s) where municipal stormwater leaves a Small MS4 operator's permitted area and goes to a Waters of the U.S. by way of a conveyance (such as another municipal storm sewer system)."

First-flush

Stormwater flow occurring at the beginning of a storm when rain washes pollutants (gas, oil, dirt, leaves, trash) from streets and parking lots into lower lying areas. This stormwater contains a high concentration of pollutants.

FOG

Fats Oils and Grease

Grade

The elevation or slope of a road or ground

Groundwater

The supply of fresh water under the earth's surface that forms a natural low reservoir

GSA

Ground, screened asphalt

Ground Screened Asphalt or Reclaimed asphalt pavement (RAP) is the term given to removed and/or reprocessed pavement materials containing asphalt and aggregates. These materials are generated when asphalt pavements

are removed for reconstruction, resurfacing, or to obtain access to buried utilities. When properly crushed and screened, RAP consists of high-quality, well-graded aggregates coated by asphalt cement. Asphalt pavement is generally removed either by milling or full-depth removal.

Hazardous Materials

Potentially harmful chemicals such as pesticides, herbicides, or fuel that may be hazardous and must be labeled, mixed, loaded, transported, applied, stored, and disposed of properly.

Headwaters

Non-tidal rivers, streams, and their lakes and impoundments, including adjacent wetlands, that are part of a surface tributary system to interstate or navigable water of the United States upstream of the point on the river or stream at which the average annual flow is less than five cubic feet per second. This may be estimated from available data by using the mean annual area precipitation, area drainage basin maps, and the average runoff coefficient, or by similar means. For streams that are dry for long periods of the year, the headwaters may be established as that point on the stream where a flow of five cubic feet per second is equaled or exceeded 50 percent of the time (DE=District Engineer). 33 CFR 330.2(d)

High Risk Facilities

Facilities that use chemicals that would be harmful if released into surface waters or storm sewers.

Hydrologic Cycle

The continuous circular process, in which the water of the Earth evaporates from the oceans, condenses, falls to the Earth as rain or snow, and eventually returns to the oceans through run-off in rivers or streams. Some water is absorbed by plants and returned to the atmosphere as vapor.

IDDE

Illicit Discharge Detection and Elimination - The acronym stands for the program referenced by the EPA in the code of federal regulations that defines the Phase II MS4 permit method for addressing illegal discharges to their storm system.

IDID

Illicit Discharge and Improper Disposal- The acronym stands for the program referenced by the EPA in the code of federal regulations that defines the Phase I MS4 permit method for addressing illegal discharges to their storm system.

IGA

Intergovernmental Agreement - An agreement between agencies of different government entities to perform activities for mutual benefit

Illicit Connection

The discharge of pollutants or non-stormwater materials into a storm sewer system via a pipe or other direct connection

Illicit Discharge

The discharge of pollutants or materials other than stormwater to storm sewers via overland flow or direct dumping

Impervious

Impenetrable materials such as asphalt, concrete, brick, stone, or caliche soils. Impervious surfaces do not allow runoff to pass through them and into the soil (percolation).

Infiltration

The process by which water flows through a permeable surface such as sand or gravel

Inlets

Transitional structures that allow stormwater to move into a different part of a storm system

Inspections

On-site examination of a system to determine its condition. Inspections are one of the most important aspects of maintenance to an efficiently run system.

Intermittent stream

An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow. 33 CFR 330 March 9, 2000

Isolated waters

Those non-tidal waters of the United States that are:

- 1) Not part of a surface tributary system to interstate or navigable waters of the United States; and
- 2) Not adjacent to such tributary waterbodies.

33 CFR 330.2(e)

Iterative – repetitive

For the purpose of NPDES and AZPDES MS4 permits the term takes on an additional meaning of more stringency or severity as each repetition occurs; similar to refining a practice through project management techniques.

Maintenance

A schedule of regular inspections and repairs of a system

Maintenance of Traffic (MOT)

A designed plan to provide a safe environment in those areas where workers and the motoring public may compete for common or adjacent space

Maintenance Standard

A measure of when or how often a system will be maintained

Measurable goal

An activity that is desired to be achieved; it must be documented and quantifiable.

MCM

Minimum Control Measure

- No specific CFR definition exists although the term is referenced throughout 40CFR122 as being required to be performed to the MEP.
- From an MS4 compliance perspective: The smallest amount of an activity a permittee must perform to the maximum extent practicable in order to achieve permit compliance.

MEP

Maximum Extent Practicable Per Permit No. AZG2016-002 “means maximum extent practicable, the technology-based discharge standard for municipal separate storm sewer systems to reduce pollutants in storm water discharges.”

- For the City of Buckeye, MEP shall be: *Implementation of an approved stormwater management program while acting to the greatest amount or scope that is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall purpose.*
- 40 CFR 230.3(q): the term practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.
- 40 CFR does not define maximum. The Merriam Webster Dictionary is used to define the terms maximum and extent; therefore, “maximum,” is *the greatest quantity*, and “extent” is *the scope of a thing*.
- For the purpose of MS4 compliance, the term includes a consideration of evaluation on an iterative process.

How does one achieve a MEP standard of activity? MEP may be achieved by implementing an approved Stormwater Management Program 40CFR122.34(a) and 40CFR122.33

- Implementation of best management practices consistent with the provisions of the storm water management program (*approved SWMP*) required pursuant to this section and the provisions of the permit required pursuant to § 122.33 (*approved SWMP*) constitutes compliance with the standard of reducing pollutants to the “maximum extent practicable.”

Milling

Milling includes the removal of the pavement surface using a "milling" machine, which can remove up to 50 mm (2 in) thickness in a single pass. Full-depth removal involves ripping and breaking the pavement using a rhino horn on a bulldozer and/or pneumatic pavement breakers. In most instances, the broken material is picked up and loaded into haul trucks by a front-end loader and transported to a central facility for processing. Millings broken to small size are frequently used as a temporary road cover and soil stabilizer.

Mitigate

Reducing impact with protective steps to repair or restore the affected environment.

MSDS (see Safety Data Sheets) (SDS)

MS4 – Municipal Separate Storm Sewer System

40 CFR 122.26(b)(8)

(8) Municipal separate storm sewer means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

(i) Owned or operated by a... designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying storm water;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

MSGP

Multi Sector General Permit

Storm water associated with industrial activity:

The discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program. For the categories of industries identified in paragraphs (i) through (x) of this definition, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites, sites used for the application or disposal of process waste waters (as defined at 40 CFR Part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in paragraph (xi) of this definition, the term includes only storm water discharges from all areas (except access roads and rail lines) listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the storage, loading and unloading, transportation, or conveyance of any of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in paragraphs (i) to (xi) of this definition) include those facilities designated under 122.26 (a)(1)(v). The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic pollutant effluent standards that are exempted under category (xi) of this definition);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3441, 373; (iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(l) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of noncoal mining operations that have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; inactive mining operations are mining sites that are not actively being mined, but that have an identifiable owner/operator;

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C or RCRA;

(v) Landfills, land application sites, and open dumps that have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under Subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but not limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 that have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or that are otherwise identified under paragraphs (i) to (vii) or (ix) to (xi) of this subsection are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the

storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR Part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and that are not physically located in the confines of the facility, or areas that are in compliance with 40 CFR Part 503;

(x) Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than 5 acres total land area that are not part of a larger common plan of development or sale;

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37, (except 373), 38, 39, 4221-4225, (and that are not otherwise included within categories (i) to (x)).

FROM: Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999. (The Phase II Final Rule), Page 68840.

Municipal

The term "municipality" means a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 1288 of this title.

- Clean Water Act, Section 502 General Definitions

NPDES

National Pollution Discharge Elimination System

Ordinary High Water Mark –

14 geographic features used to identify jurisdictional waters (**Waters of the United States**) in many arid geographic regions:

1. clear, natural line impressed on the bank
2. the presence of litter and debris
3. changes in the character of soil
4. destruction of terrestrial vegetation
5. shelving
6. presence of wrack line
7. vegetation matted down, bent, or absent
8. sediment sorting
9. leaf litter disturbed or washed away
10. scour
11. sediment deposition
12. multiple observed or predicted flow events
13. water staining
14. abrupt change in plant community

The Ordinary High Water Mark (OHWM) is a defining element for identifying the lateral limits of non-wetland waters....Federal jurisdiction over a non-wetland WoUS extends to the OHWM, defined in 33 CFR Part 328.3 as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, or the presence of litter and debris. In the Arid West region of the United States..., waters are variable and include ephemeral/intermittent and perennial channel forms. The most problematic ordinary high water (OHW) delineations are associated with the commonly occurring ephemeral/intermittent channel forms that dominate the Arid West landscape. The climate of the region drastically influences the hydrology, channel-forming processes, and distribution of OHWM indicators such that delineations can be inconsistent (over space and time) and problematic.

(ACE OHWM AWR*)

Outfall

A point source that discharges to Waters of the United States

40 CFR 122.26(b)(9) - Outfall means a point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

Operations and Maintenance

The decisions and actions regarding the control and upkeep of property and equipment. These are inclusive, but not limited to, the following: 1) actions focused on scheduling, procedures, and work/systems control and

optimization; and 2) performance of routine, preventive, predictive, scheduled and unscheduled actions aimed at preventing equipment failure or decline with the goal of increasing efficiency, reliability, and safety.

(Department of Energy, **FEDERAL ENERGY MANAGEMENT PROGRAM Release 3.0 Operations & Maintenance Best Practices**)

Operator

Per ADEQ CGP

Who must obtain coverage (Part 2.1):

- Any person that meets the definition of “operator” must submit their own NOI;
- Many sites will have more than one operator

Section 2.1.1

...an “operator” is any person associated with a construction project that meets either of the following two criteria:

1. The person has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
2. The person has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the permit).

Subcontractors generally are not considered operators for the purposes of this permit.

(Section 2.0 of the permit contains more wording on issues related to operator definition)

Overland Conveyance

Conveyances direct runoff moving over impervious surfaces such as parking lots, rooftops, and hard ground into the drainage system.

Overland Flow

Water flowing over the ground surface

Peak Discharge Rate

The maximum flow which passes through a conveyance.

Perennial stream

A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow. 33 CFR 330 March 9, 2000

Point source

40 CFR 122.2

- Any discrete conveyance (open or closed) that may discharge pollutants
- Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.
- “The term “point source” means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.” Clean Water Act, Section 502 General Definitions

Point Source Pollution

Pollution from a single identifiable source such as a factory or a sewage-treatment plant. Most of this pollution is highly regulated at the state and local levels.

Pollution

Any illicit discharge as seen in 40 CFR 122.26(b)(2)

Contamination of the air, water, or soil by the addition of harmful substances.

Any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from firefighting activities.

Pollutant Load

The amount of pollution in stormwater runoff.

POST-CONSTRUCTION SITE PLAN:

A plan or set of plans clearly identifying the site and depicting the placement of BMPs that are to remain permanently on the site following completion of the construction phase.

PRE-CONSTRUCTION AND CONSTRUCTION PHASE SITE PLAN:

A plan or set of plans clearly identifying the site and depicting the placement of BMP's to be used during the preconstruction land disturbance and during construction phase of a construction project. The plan will cover the complete interior and perimeter of the construction site during all phases of the project.

Record keeping –

AZPDES Permit AZG2002-002, Part IV.G.1. Records for the annual report shall be kept for the duration of the permit plus 3 years.

Recordkeeping

1. The permittee shall retain records of all monitoring information, including, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, copies of Discharge Monitoring Reports (DMRs), a copy of the NPDES permit, and records of all data used to complete the application (NOI) for this permit, for a period of at least three years from the date of the sample, measurement, report or application, or for the term of this permit, whichever is longer. This period may be extended by request of the permitting authority at any time.
2. The permittee shall submit its records to the permitting authority only when specifically asked to do so. The permittee must retain the SWMP required by this permit (including a copy of the permit language) at a location accessible to the permitting authority. The permittee must make its records, including the notice of intent (NOI) and the SWMP, available to the public if requested to do so in writing.

Retention System

A stormwater storage area used to hold runoff and allow it to percolate through the soil and evaporate into the air instead of releasing the flow to another structure or system. This system does not discharge through conveyances.

Safety Data Sheet – SDS (AKA - Material Safety Data Sheets)

A document that contains information on the potential hazards (health, fire, reactivity and environmental) and how to work safely with the chemical product. It is an essential starting point for the development of a complete health and safety program

Saltation

noun - intermittent, leaping motion

- Downwind movement of particles in a series of jumps or skips. (USGS)
- In arid regions this term describes natural forces at work in normal stormwater, surfacewater and wind activity.

Scour

Soil and debris movement. (ACE OWHM AWR*)

Scupper

A sidewalk culvert (a small box culvert)

Sheetflow

Overland flow occurring in a continuous sheet; a relatively high-frequency, low-magnitude event. (ACE OWHM AWR*)

Preventative maintenance

A regular cycle of cleaning, repair, and replacement of stormwater structures.

Sediment

Soil, sand, and minerals washed from land into water, usually after rain. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

Slope

Changes in the surface pitch of the land.

Spill Prevention Control and Countermeasure Plan (SPCC Plan)

A set of measures undertaken to decrease the chances and effects of a spill in a municipal facility.

Street Sweeping

An effective method of removing both the large and microscopic pollutants that collect on streets. Sweeping also serves as one of the Best Management Practices (BMP) to control and improve water quality.

Stormwater management

Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

33 CFR 330 March 9, 2000

Stormwater Runoff

Water that flows over paved and unpaved surfaces during and after rain (or snow). Stormwater runoff is moved or controlled by both natural (non-structural) and constructed systems.

Small municipal separate storm sewer system

40 CFR 122.26 (b) (16), all separate storm sewers that are:

- (i) Owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.
- (ii) Not defined as "large" or "medium" municipal separate storm sewer systems pursuant to paragraphs (b)(4) and (b)(7) of this section, or designated under paragraph (a)(1)(v) of this section.
- (iii) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

SPCC

Spill Prevention Control and Countermeasures

Site Map

a map or series of maps completed to scale, used to review construction sites. The Site Map contains:

1. Topography of the site including existing types of cover (e.g., forest, pasture, pavement, structures), and drainage pattern(s) of flow onto, over, and from the site property before and after major grading activities. Drainage divides and direction of stormwater flow (i.e., use arrows to show which way stormwater will flow).
2. Areas of soil disturbance and areas that will not be disturbed.
3. Boundaries of the property and of the locations where construction activities will occur, noting any Phasing of construction activities; locations where sediment or soil will be stockpiled; locations of any crossings of surface waters; designated points on the site where vehicles will exit onto paved roads and locations of construction support activity areas covered by this permit.
4. Locations of temporary and permanent stormwater control measures (identified in the SWPPP) including:
5. Locations where stabilization control measures are expected to be implemented.
6. Areas protected by buffers (i.e., either the 50-foot buffer or other buffer areas retained on site when within 50 feet of a perennial water), including the boundary line of all such buffers.
7. Locations of on-site material, waste, borrow areas, or equipment storage areas, and other supporting activities.
8. Locations of all potential pollutant-generating activities (see Part 6.3(9)).
9. Locations of all surface waters and any impaired waters or OAWs within 1/4 mile of the facility.

10. Stormwater discharge location(s), using arrows to indicate discharge direction. Include: location(s) where stormwater and/or allowable non-stormwater discharges are discharged to waters of the U.S. and location(s) of any discharges to municipal separate storm sewer systems (MS4s) from the construction site. Note: Where surface waters and/or MS4s receiving stormwater will not fit on the plan sheet, they shall be identified with an arrow indicating the direction and distance to the surface water and/or MS4.
11. Locations and registration numbers of on-site drywells and drywells on adjacent properties that have the potential to receive stormwater from the site.
12. Areas where final stabilization has been established and no further construction permit requirements apply.
13. Location and boundaries of environmentally sensitive areas and buffer zones to be preserved including the nearest receiving water(s), ephemeral and intermittent streams, dry washes, and arroyos, including such areas offsite that could potentially receive discharges from disturbed areas of the project. Indicate if the receiving water(s) is listed as impaired, or an Outstanding Arizona Water.

This information is from the ADEQ description of a sitemap as of 9/2013

Stormwater

Naturally occurring precipitation that may cause water flow over ground (originally written as two words but has become one word nationally since the 1990s).

SWMP

Stormwater Management Program *per 40 CFR 122.34(a)*

A program produced by the municipality and agreed upon by the permitting authority that describes activities by which a permittee shall comply with an MS4 permit. This program must be updated annually as activities are performed and evaluated for effectiveness. It is required to be created and submitted with the Phase II MS4 application according to the CFR, and required to be approved by the permitting agency.

SWPPP

Stormwater Pollution Prevention Plan

A document required by the CGP that is to contain the following

1. Signature of operator(s)/Certification
2. Site Identification
3. list of responsible party/Operator(s)
4. Description of the construction activities
5. Phases of Construction events
6. Site Map(s)
7. Stormwater Control Measures
8. Potential Pollutant Sources
9. Description of Chemicals to be used on site
10. Pollution Prevention Procedures
11. Inspection program description
12. Monitoring program description
13. Methods for Corrective Actions

This information is from the ADEQ webpage as of 9/2013 - A full checklist for the SWPPP may be obtained from ADEQ.

Structural System

For stormwater – an engineered or constructed system to control volume, peak discharge rates and pollution in stormwater flow. They are usually engineered and built rather than using natural formations or good practices. Several BMPs may be combined into a stormwater management system.

System

a related group of elements, a network of structures that interact or function together.

TMDL

Total Maximum Daily Load

A water quality standard required by the Clean Water Act, and represent the highest pollutant load a waterbody can accept and still meet its intended use

A TMDL is the Total Maximum Daily Load (amount) of a water quality parameter which can be carried by a surface waterbody, on a daily basis, without causing an exceedance of surface water quality standards. TMDL calculations

are made for waters listed as impaired on the state's 303(d) List (impaired waters list). Every two years, states submit a list of impaired waters and a schedule to establish TMDLs to the U.S. EPA. The U.S. EPA reviews and approves the 303(d) Lists and schedules. (Source - ADEQ website as of 9/2013)

Track Dozer/Crawler

A vehicle that moves on tracks of metal plates. This piece of equipment is used in the maintenance of slope/spoil site maintenance.

Transitional

A location where a pipe or channel changes size. The change in cross sectional area results in the change in velocity which would result in loss of head flow.

Turbidity

Water mixed with suspended particles or sediment.

Measured in the degree to which water loses its transparency due to the presence of suspended particulates.

Turbidity is usually measured in nephelometric turbidity units (NTU) or Jackson turbidity units (JTU), depending on the method used for measurement. The two units are roughly equal. In environmental sampling, a Secchi dish or turbidity meter may be used.

Cross Connection

A connection made between two or more distinct things, typically parts of different networks or circuits, in the Stormwater reference it refers to sanitary sewer and storm sewer system lines.

Stormwater Structural Controls

Structures used to control the flow, reduce pollution, and reduce flooding concerns associated with stormwater runoff

Non-structural Stormwater Controls

A series of actions that encompass an idea of stormwater pollution prevention:

- **Management planning controls** - such as the use of management instruments to promote water quality sensitive design features.
- **Strategic planning controls** - such as the use of strategic, regional or urban wide stormwater management plans.
- **Pollution prevention procedures** - Maintenance practices, operational processes, and staff training to minimize the risk of stormwater pollution.
- **Education and participation programs** – Outreach, training, and involvement programs in development and implementation of stormwater management plans.
- **Regulatory controls** - such as enforcement of local laws to improve erosion and sediment control on building sites, the use of environmental permits to help manage premises likely to contaminate stormwater or groundwater, and programs to minimize illicit discharges to stormwater management systems.

UA (Urbanized Area)

The boundaries of a developed area declared to be urbanized based on population density. Set by the Federal Census Bureau. The MS4 programs must follow the Decennial Census – no other census data is applicable according to the CFR.

Urbanized Area Definition (1990 Census)

NOTE: EPA published this Bureau of the Census definition in 63 FR 1568, January 9, 1998, The Proposed Phase II Rule with this guidance: "The full definition of an 'urbanized area' has been included primarily for informational purposes. Because the Bureau of Census determines urbanized areas based on the latest decennial census, the owner or operator of a municipal separate storm sewer system does not need to make any calculations to determine eligibility as a regulated small municipal separate storm sewer system." The Bureau of the Census provides detailed maps and comprehensive listings of all the political entities within a given urbanized area.

FROM 55 FR 42592, October 22, 1990

The Bureau of the Census definition of "urbanized area," adopted by EPA for the purposes of the NPDES Phase II Final Rule.

An urbanized area (UA) comprises a place and the adjacent densely settled surrounding territory that together have a minimum population of 50,000 people. The "densely settled surrounding territory" adjacent to the place

consists of the following:

1. Territory made up of one or more contiguous census blocks having a population density of at least 1,000 people per square mile provided that it is:
 - a. Contiguous with and directly connected by road to other qualifying territory, or
 - b. Noncontiguous with other qualifying territory, and:
 - (1) Within 1 1/2 road miles of the main body of the urbanized area and connected to it by one or more non-qualifying census blocks that [a] are adjacent to the connecting road and [b] together with the outlying qualifying territory have a total population density of at least 500 people per square mile, or
 - (2) Separated by water or other undevelopable territory from the main body of the urbanized area, but within 5 road miles of the main body of the urbanized area, as long as the 5 miles include no more than 1 1/2 miles of otherwise non-qualifying developable territory.
2. A place containing territory qualifying on the basis of criterion 1 [above] will be included in the urbanized area in its entirety (or partially, if the place is an extended city) if that qualifying territory includes at least 50 percent of the population of the place. If the place does not contain any territory qualifying on the basis of the above criterion, or if the qualifying territory includes less than 50 percent of the place's population, the place is excluded in its entirety.
3. Other territory with a population density of less than 1,000 persons per square mile, provided that it:
 - Eliminates an enclave of no more than 5 square miles in the territory otherwise qualifying for the urbanized area when the surrounding territory qualifies on the basis of population density, or
 - Closes an indentation in the boundary of the territory otherwise qualifying for the urbanized area when the contiguous territory qualifies on the basis of population density, provided that the indentation is no more than 1 mile across the open end, has a depth at least two times greater than the distance across the open end, and encompasses no more than 5 square miles.

UUA

Unincorporated Urbanized Area

Underground Conveyance

A system of pipes and culverts used to move runoff.

Unscheduled Maintenance

Maintenance performed as needed; often on an emergency basis. non-repetitive maintenance

Waters of the United States

(WOTUS) – 40CFR230.3(s)

- (a) All waters which are currently used, were used in the past, or may be susceptible of use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide
- (b) All interstate waters including interstate "wetlands"
- (c) All other waters such as intra-state lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (d) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;
- (f) The territorial sea; and
- (g) "Wetlands" adjacent to water (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. [See Note 1 of this section.] Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Wash

A broad gravelly dry bed of an intermittent stream. (ACE OWHM AWR*)

Water Table

The depth to which the ground below is saturated with water.

Watershed

(drainage basin) An area of land that drains to a single outlet and is separated from other watersheds by a divide. (ACE OWHM AWR*). A geographic region enclosed by elevated areas creating a drainage area or collection of drainage areas, normally discharging to washes or rivers. Also known as drainage area or river basin.

Weir

A designed opening that allows water to flow to another section of the system

Wet Detention

Wet Detention systems detain water in a permanent pond releasing the water at a controlled rate. The longer water is held the more settling and biological processes occur to treat the stormwater.

Wetland

In Arizona – it is an area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. A wetland includes a swamp, marsh, bog, cienega, tinaja, and similar areas.

AAC 18-11-101.49 - Wetland delineation criteria correspond to §404 of the CWA, relying on the U.S. Army Corps of Engineers' 1987 *Wetlands Delineation Manual*

Work Order

Document that is used to schedule jobs and record the actual labor, equipment, and materials needed to complete it.

AZ Rules of note and other references**AAC Title 18, Chapter 11, R18-11-117. Canals and Urban Park Lakes**

A. Nothing in this Article prevents the routine physical or mechanical maintenance of canals, drains, and the urban lakes identified in Appendix B. Physical or mechanical maintenance includes dewatering, lining, dredging, and the physical, biological, or chemical control of weeds and algae. Increases in turbidity that result from physical or mechanical maintenance activities are permitted in canals, drains, and the urban lakes identified in Appendix B.

B. The discharge of lubricating oil associated with the start-up of well pumps that discharge to canals is not a violation of R18- 11-108(B).

Historical Note

Adopted effective February 18, 1992 (Supp. 92-1). Amended effective April 24, 1996 (Supp. 96-2). Amended by final rulemaking at 14 A.A.R. 4708, effective January 31, 2009 (Supp. 08-4).

R18-11-118. Dams and Flood Control Structures

Increases in turbidity that result from the routine physical or mechanical maintenance of a dam or flood control structure are not violations of this Article. Nothing in this Article requires the release of water from a dam or a flood control structure.

Historical Note

Adopted effective February 18, 1992 (Supp. 92-1). Amended effective April 24, 1996 (Supp. 96-2). Amended by final rulemaking at 8 A.A.R. 1264, effective March 8, 2002 (Supp. 02-1). Amended by final rulemaking at 14 A.A.R. 4708, effective January 31, 2009 (Supp. 08-4).

R18-11-119. Natural background

Where the concentration of a pollutant exceeds a water quality standard and the exceedance is not caused by human activity but is due solely to naturally-occurring conditions, the exceedance shall not be considered a violation of the water quality standard.

State Authority over the MS4 permits

State's requirement to remain no more stringent than the CFR and CWA may be found in ARS 49-104.A.17* and ARS 49-255.01.B**

* "17. Unless specifically authorized by the legislature, (the department shall) ensure that state laws, rules, standards, permits, variances and orders are adopted and construed to be consistent with and no more stringent than the corresponding federal law that addresses the same subject matter...."

** "B...The director shall not adopt any requirement that is more stringent than or conflicts with any requirement of the clean water act. The director may adopt federal rules pursuant to section 41-1028 or may adopt rules to reflect local environmental conditions to the extent that the rules are consistent with and no more stringent than the clean water act and this article."

Historical Note

Adopted effective February 18, 1992 (Supp. 92-1).

AAC Chapter 18 Section 9 and 10

ARS Chapter 49-255-255.03

ARS Chapter 49-371

CFRs of note: 40 CFR 122

In the state of AZ, the 2003 CFR has been adopted by reference in ARS18. No later CFR has been adopted.

Other documentation of interest:

A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States