ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
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FACT SHEET

GENERAL PERMIT FOR STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS

Permit Number AZG2015-00X

Public Comment Period: xxxxxxxxxxx

SECTION A – Program Background

1. Proposed Action

The Arizona Department of Environmental Quality (ADEQ) is proposing to reissue the Arizona Pollutant Discharge Elimination System (AZPDES) general permit for the discharge of stormwater from Small Municipal Separate Storm Sewer Systems (MS4s) to waters within the State of Arizona, pursuant to Arizona Administrative Code (A.A.C.), Title 18, Article 9.

In preparing the draft permit, ADEQ held a series of stakeholder meetings with interested parties during the period May 2014 through October 2014. The draft permit includes the result of stakeholder discussions and input to a reasonable and appropriate extent.

2. Program Background

The conditions in the draft permit are established pursuant to the Clean Water Act (CWA or Act) §402(p)(3)(iii) to ensure that pollutant discharges from small municipal separate storm sewer systems (MS4s) are reduced to the maximum extent practicable (MEP), protect water quality, and satisfy the appropriate water quality requirements of the CWA.

Part 6.3 of the draft permit sets forth the requirements for the MS4 to "reduce pollutants in discharges to the maximum extent practicable, including management practices, control techniques, and system, design and engineering methods…" (See Section 402(p)(3)(B)(iii) of the CWA). MEP is the statutory standard that establishes the level of pollutant reductions that MS4 operators must achieve. ADEQ believes implementation of best management practices (BMPs) designed to control storm water runoff from the MS4 is generally the most appropriate approach for reducing pollutants to satisfy the technology standard of MEP. Pursuant to 40 CFR §122.44(k), the draft permit contains BMPs, including development and implementation of a comprehensive stormwater management program (SWMP) as the mechanism to achieve the required pollutant reductions.

Section 402(p)(3)(B)(iii) of the CWA also authorizes the implementing agency (ADEQ) to include in an MS4 permit "such other provisions as [ADEQ] determines appropriate for control of …pollutants." ADEQ believes that this provision forms a basis for imposing water quality based effluent limitations (WQBELs), consistent with the authority in Section 301(b)(1)C) of the CWA. *See Defenders of Wildlife v. Browner.* 191 F.3d 1159 (9th Cir. 1999): *see also* EPA's preamble to the Phase II regulations, 64 Fed. Reg. 68722, 68753, 68788 (Dec 8, 1999). Accordingly, Part 2.1 of the draft permit contains the water quality based effluent limitations, expressed in terms of BMPs, which ADEQ has determined are necessary and appropriate under the CWA.

ADEQ's 2002 Phase II MS4 general permit required small MS4s to develop and implement stormwater management programs (SWMP) designed to control pollutants to the maximum extent practicable (MEP) and protect water quality. This draft general permit builds on the requirements of the previous general permit.

Neither the CWA nor the stormwater regulations provide a precise definition of MEP. The lack of a precise definition is to allow maximum flexibility in MS4 permitting. Small MS4s need flexibility to optimize reductions in stormwater pollutant loads on a location-by-location basis.

The process of optimization will include consideration of factors such as receiving waters, specific local concerns, size of the MS4, climate, and other aspects. Pollutant reductions that represent MEP may be different for each small MS4 given the unique hydrologic and geologic concerns or features that may exist.

Consistent with implementing rules and guidance, ADEQ views the MEP standard in the CWA as an iterative process. MEP should continually adapt to current conditions and BMP effectiveness. ADEQ believes that compliance with the requirements of this draft permit will meet the MEP standard. The iterative process of MEP consists of a municipality developing a program consistent with specific permit requirements, implementing the program, evaluating the effectiveness of BMPs included as part of the program, then revising those parts of the program that are not effective at controlling pollutants, then implementing the revisions, and evaluating again. This process continues until the goal of meeting water quality requirements is achieved. The changes contained in the draft general permit reflect the iterative process of MEP. Accordingly, the draft general permit contains more specific tasks and details than the 2002 general permit.

3. General Permit Authority

Section 301(a) of the Act, 33 U.S.C. § 1311(a), and Arizona Revised Statute (A.R.S.) §49-255.01 prohibits the discharge of pollutants into waters of the United States, except in compliance with certain sections of the CWA including, among others, Section 402, 33 U.S.C. §1342. Section 402 of the Act provides the Administrator (ADEQ) may issue NPDES permits for discharges of any pollutant into waters of the United States according to such specific terms and conditions as the Administrator may require. Although such permits are generally issued to individual discharges, ADEQ's regulations authorize the issuance of "general permits" to cover one (1) or more categories or subcategories of discharges, including stormwater point source discharges, within a geographic area (see 40 CFR §122.28(a)(1) and (2)(i)). Violations of a general permit condition constitute a violation of the CWA and may subject the discharger to the enforcement remedies provided in both State and Federal law, including injunctive relief and penalties.

SECTION B – Coverage Under this General Permit

1. Permit Area

This permit is available to eligible MS4 operators seeking authorization to discharge stormwater and allowable non-stormwater from small MS4s.

A small municipal separate storm sewer system means all separate storm sewers that are:

1. 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, stormwater, or other wastes including special districts under State law such as a sewer, 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 United States.

2. Not defined as "large" or "medium" municipal separate storm sewer systems pursuant to 40 CFR § 122.26(b)(4) or (b)(7) or designated under 40 CFR § 122.26(a)(1)(v).

3. This term includes systems similar to separate storm sewer systems in municipalities, such as 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.

Pursuant to 40 CFR 122.26(b)(16), A municipal separate storm sewer system means:

A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains):

1. Owned or operated by [a municipality];
2. Designed or used for collection or conveying stormwater; and
3. Which is not part of a Publicly-Owned Treatment Works (POTW)

This permit covers small MS4 operators located either fully or partially within an urbanized area as determined by the most recent census conducted by the Bureau of Census, or located in a geographic area designated by ADEQ as requiring a permit, within the State of Arizona, including the following:

a) City or Town – Municipal boundary, including areas annexed during the permit term;
b) County – Un-incorporated urbanized area based on the most recent census;
c) State University – All areas of the main university campus and satellite campuses, including those that have student housing;
d) Military Base – All areas of the main military installation as well as satellite installations, including those that have personnel housing;
e) Veterans Affairs Hospital – All areas of the main VA campus, as well as satellite installations, including those that have personnel or patient housing.

3. Municipal Separate Storm Sewer System Expected to be Covered by this Permit

This general permit is issued to provide coverage of existing and new MS4s permit coverage. Existing MS4s (those which obtained coverage under Arizona's small MS4 general permit, AZG2002-002) include:

Existing MS4s:

Apache Junction	Avondale	Arizona State University
Camp Verde	Chandler	Coconino County
Cottonwood	Davis Monthan Air Force Base	Douglas
El Mirage	Flagstaff	Fountain Hills
Gilbert	Goodyear	Guadalupe
Lake Havasu	Litchfield Park	Luke Air Force Base
Marana	Maricopa County	Marine Corps Air Stn
Nogales	Northern Arizona State Univ	Oro Valley
Paradise Valley	Peoria	Pinal County
Prescott	Prescott Valley	Sedona
Sierra Vista	South Tucson	Surprise
Tolleson	University of Arizona	Veterans Hospital, Phoenix
Veterans Hospital, Tucson	Yavapai County	Youngtown
Yuma	Yuma County	

New MS4s:

Buckeye	Carefree	Casa Grande
Cave Creek	Queen Creek	Cochise County
Mohave County		

Other MS4s:

Additional MS4s may be subject to coverage under this permit based on a more recent census, as determined by the U.S. Census Bureau, or be designated a regulated MS4 by the director of ADEQ pursuant to A.A.C. R18—9-A902(D).

2. Eligibility and Allowable Stormwater Discharges

This permit authorizes all discharges of stormwater from small MS4s except those excluded under Limitations on Coverage of the permit. Coverage under this permit is authorized for municipal stormwater discharges from the permitted area.

3. Non-Stormwater Discharges

The draft permit lists sources of non-stormwater discharges described in 40 CFR §122.26(b)(3)(iii). The permittee must control or prohibit these sources of non-stormwater as part of its illicit discharge detection and elimination (IDDE) program if the permittee determines that these sources are significant contributors of pollutants to the system. The draft permit does not require any action regarding these discharges if the permittee determines that these sources are not significant contributors of pollutants to the MS4. The permittee must document its determinations in its SWMP and must prohibit any sources identified as a significant contributor. In accordance with 40 CFR § 122.34(b)(3)(iii), discharges or flows from firefighting activities are excluded from the effective prohibition against non-stormwater and need only be addressed where they are identified as significant sources of pollutants to waters of the United States.

This permit does not prohibit the use of reclaimed water on-site for dust control, soil compaction or for landscape irrigation. However, such activities shall be managed in a way that they are not discharged off site or applied during rain events consistent with A.A.C. R18-9-704(G)(3)(c) of the reclaimed water rules. Therefore, they are not permissible ‘discharges’.

4. Limitation of Coverage

Not all stormwater discharges from MS4s are authorized by this permit. Specifically excluded are:

Discharges Mixed With Non-Stormwater. Stormwater discharges that are mixed with non-stormwater sources, other than those identified in, and in compliance with, the permit are prohibited. Non-stormwater discharges that are authorized under a different NPDES/AZPDES permit may be commingled with discharges authorized under this permit.

Discharges Covered by Another Permit. Stormwater discharges associated with construction activity, industrial activity or that are covered under an individual permit or discharges required to be covered under an alternative general permit are prohibited.

Discharging into Impaired Waters. Eligibility for permit coverage is dependant upon the inclusion of provisions in the SWMP that are consistent with the assumptions and requirements of the TMDL and are protective of water quality. Also, in cases where a TMDL has not been established for a 303(d) listed water that receives municipal stormwater, the permittee must address control of pollutants of concern such as oil, grease, sediment, pesticides and metals, and any other contaminants known to be common in municipal stormwater runoff.

Discharges Causing Degradation. A discharge is not allowed to be inconsistent with Arizona’s anti-degradation policy. This policy addresses the degradation of waters that occurs due to a discharge. In the future, determination of consistency with this policy may involve ambient water monitoring or discharge monitoring.

5. Permit Compliance

Part 1.5 of the draft permit explains that any failure to comply with the conditions of this permit constitutes a violation of the CWA. For provisions specifying a time period to remedy noncompliance, the initial failure constitutes a violation of the permit and the CWA and subsequent failure to remedy such deficiencies within the specified time periods constitutes an independent and additional violation of the CWA. ADEQ notes that it retains its authority to take enforcement action for noncompliance with the 2002 Small MS4 permit.

SECTION C – Authorization Under this Permit

1. Obtaining Authorization to Discharge

In order for a small MS4 to obtain authorization to discharge, it must submit a complete and accurate Notice of Intent (NOI) containing the information specified in the permit and the ADEQ issued NOI form. The NOI must be signed in accordance with the requirements of Part 9.9 of the permit.

Existing permittees must submit their NOI within 45 days from the effective date of the permit.

New permittees must submit their NOI within 90 days from the effective date of the permit.

Regulated Phase II MS4s that do not submit a complete NOI within the specified timeframes do not have coverage. Any stormwater discharge until the NOI is submitted and authorization is issued by ADEQ is a violation of A.R.S. 49-255.01.

2. Availability of Notice of Intent Forms

ADEQ will make NOIs available for public review and comment on the ADEQ website. In the event there is significant public comment on a MS4's NOI, ADEQ will contact the permittee and require a revised NOI, or that the MS4 make necessary changes to its stormwater program.

3. Permit Fees

As of July 1, 2011, MS4 permittees are subject to initial and annual fees pursuant to Arizona Administrative Code, Title 18, Chapter 14, Article 1. Existing permittees are not required to submit a fee with their NOI for coverage under the final permit and will continue with billing cycle established under the previous permit.

New permittees are not required to submit a fee with their NOI, but will be billed by the department in the amount pursuant to A.A.C. R18-14-109.

4. Terminating Coverage

The operator of a small MS4 covered by this general permit may submit a Notice of Termination (NOT) to closeout permit coverage. If the operator fails to obtain coverage under an alternative permit issued by ADEQ or U.S. EPA for municipal stormwater discharges, the operator will be considered to be discharging without a permit and in violation of state and federal law.

5. Coverage Under an Individual Permit

After reviewing information regarding permit eligibility contained in the NOI, ADEQ has the authority to notify a construction site operator that it is required to apply for an individual permit on a case-by-case basis if the Department determines that the operator does not meet the conditions for coverage. A situation that might trigger such a determination would be that the

proposed discharge has the reasonable potential to cause or contribute to an exceedance of an applicable water quality standard. In some cases, ADEQ may allow the operator to proceed with coverage under the general permit provided additional control measures designed to address the specific issues at hand are adopted. Additionally, operators have the option to apply for an individual permit. See 40 CFR 122.28(b)(3).

When the activity does not conform to the general permit requirements or if ADEQ determines that the discharge is a significant contributor of pollutants, an individual AZPDES permit may be required so that permit conditions can be customized to the site. See A.A.C. R18-9-C902(A).

Likewise, any discharger may request to be covered under an individual permit rather than seek coverage under an otherwise applicable general permit. See A.A.C. R18-9-C902(B).

See A.A.C. R18-9-B901 for the requirements for an individual permit application and issuance or denial.

6. Continuation of Expired Permit

Part 2.5 of the draft permit describes the procedure that applies if ADEQ does not reissue the permit by its expiration date. If this permit is not reissued or replaced prior to its expiration date, existing discharges are covered under an administrative continuance and the conditions of the permit remain in force and in effect for discharges covered prior to expiration. If coverage is provided to a permittee prior to the expiration of this permit, the permittee is automatically covered by this permit until the earliest of: (1) the authorization for coverage under a reissuance or replacement of this permit, following timely and appropriate submittal of a complete NOI; (2) issuance of denial or an individual permit for the permittee's discharge; or (3) formal permit decision by ADEQ not to reissue this general permit, at which time the permittee must seek coverage under an alternative general permit or an individual permit.

Additionally, pursuant to A.R.S. §49-255.01(M), if the director commences proceedings for the renewal of the expired permit, new operators may obtain coverage under the expired permit.

SECTION D – Legal Authority

1. Establishing Legal Authority

Adequate legal authority is required to implement and enforce most parts of the SWMP. (See 40 CFR 40 CFR 122.34(b)(3)(ii)(B), (b)(4)(ii)(A), and (b)(5)(ii)(B)). Without adequate legal authority the MS4 would be unable to perform many vital permit requirements and SWMP functions such as performing inspections and requiring installation of control measures. In addition, the permittee would not be able to penalize and/or attain remediation costs from violators.

The permit specifies the legal authority requirements, primarily associated with the illicit discharge detection and elimination requirements and for the construction site stormwater control requirements.

For cities and counties, the authority is provided by the state legislature to meet the minimum requirements of the municipal stormwater program. Specifically, for Phase II MS4 counties, this authority is provided in A.R.S. 49-371 and 372, and authorizes the county to designate and authorize an administrative director for the program or plan prescribed by section 49-371 to perform enforcement duties.

Non-traditional MS4 permittees often cannot pass "ordinances" nor do they have enforcement authority like a typical municipality, so legal authority may consist of policies, standards, or specific contract language. Non-traditional MS4 permittees also do not generally have the

authority to impose a monetary penalty. Although these differences exist, just like traditional MS4s, non-traditional MS4s must have the legal authority to develop, implement, and enforce the program.

2. Enforcement Response Plan

This permit requires the permittee to develop and implement an Enforcement Response Plan (ERP). The ERP must provide guidelines for personnel in determining appropriate enforcement actions toward violations encountered in enforcing the provisions of the MS4 regulations (codes, ordinances, permits, contracts, and other mechanisms).

The ERP must describe how the MS4 operator will investigate instances of noncompliance, describes the types of enforcement actions that may be taken in response to anticipated types of violations and the time periods within which these enforcement actions will be taken and followed up. The plan must include a general discussion of the criteria to be used in determining a proper response in various noncompliant situations. This “road map” will provide clarity and consistency to personnel at all levels of the MS4s stormwater program. ADEQ encourages the permittee to also develop a tabular guide or flow chart to represent an escalated enforcement program.

SECTION E – Storm Sewer System Mapping

Arizona’s initial Phase II MS4 permit required permittees to develop a storm sewer system map, showing the locations of all outfalls and the names and locations of all waters of the United States that receive discharges from those outfalls. This permit requires existing permittees to update their storm sewer system maps within six (6) months of permit issuance and allows additional time if the MS4 has annexed land. New permittees are to include their mapping schedule in their Stormwater Management Plan (SWMP) and must have mapping completed by the end of year four (4) of the permit term.

Storm sewer system maps must include linear drainage structures above and below ground (such as streets, pipes, and other conveyance mechanisms), storm drain inlets, and associated assets. The mapping and inventory must also include a coding system to identify outfalls and have sufficient detail to allow for investigating and identifying the source of illicit discharges. MS4 operators have the flexibility to determine the type (e.g., topographic, GIS, hand drawn, computer drafted, etc.) and size of maps which best meet their needs.

This permit does not require the permit to submit storm sewer system maps, only up-to-date outfall maps are required to be submitted with the annual report. The permittee is required to also include in the annual report a discussion of mapping efforts, including percent complete. Storm sewer system maps must also be available for review by ADEQ or U.S. EPA upon request.

SECTION F – Stormwater Management Program

The Stormwater Management Program (SWMP) is a written document required by the permit. The SWMP is a mechanism used to document the practices the permittee is implementing to meet terms and conditions of the permit.

The draft permit requires that the SWMP be a written document and signed in accordance with Permit Part 9.9.

The SWMP must be available at the office or facility of the person identified on the NOI as the contact person for the SWMP. The SWMP must be immediately available to ADEQ or U.S. EPA. The permittee must also make the SWMP available to any member of the public who makes a request in writing. ADEQ encourages the permittee to post the SWMP online or make it available

at a public location such as the library or town/city hall. The SWMP must contain, at a minimum, the elements listed in Part 5.1.1 of the permit.

The written program provides a central accessible source for all information relating to the SWMP. The SWMP required by this draft permit builds on the requirements of the previous permit. While updating the SWMP required by this draft permit, the permittee must continue to enforce the SWMP that was required by the previous permit. This permit does not provide additional time for completing the requirements of the previous permit.

Existing permittees must update or rewrite their SWMP and submit it to ADEQ for review and approval within six (6) months of permit issuance while new permittees have one (1) year from permit issuance to develop their SWMP and submit it to ADEQ for review and approval.

The draft permit requires that the permittee reduce the discharge of pollutants from the MS4 to the maximum extent practicable, protect water quality, and satisfy the requirements of the CWA. The SWMP must document the actions the permittee has taken to demonstrate compliance with the control measures and other conditions of the permit.

SECTION G – Effluent Limitations (Part 6)

1. Water Quality Based Effluent Limitations (Part 6.1)

The permit includes provisions to ensure that discharges do not cause or contribute to exceedances of water quality standards. The purpose of this part is to establish the broad inclusion of water quality based effluent limitations for those discharges requiring additional controls in order to achieve water quality standards and other water quality related objectives, consistent with 40 CFR § 122.44(d). The water quality based effluent limitations supplement the permit's nonnumeric effluent limitations. The nonnumeric effluent limitation requirements of this permit are expressed in the form of control measures and BMPs (see Part 6.3).

2. Surface Water Quality Standards (Part 6.2)

If an MS4 discharges into waters that are not impaired, the draft permit employs a presumptive approach to ensure that the permittee's MS4 discharges do not cause or contribute to exceedances of water quality standards. For MS4 discharges into waters that are not impaired, ADEQ presumes that the conditions in the draft permit will meet applicable water quality standards when fully satisfied. ADEQ considers this approach valid since, despite ongoing discharges form the permittee's MS4 and other potential sources, these waters have not been categorized as impaired and failing to meet water quality standards.

The permit requires permittees to comply with any additional water quality related requirements for impaired waters, regardless of whether the discharge is to an impaired water with or without an approved Total Maximum Daily Load (TMDL). As required by the Clean Water Act, Arizona has developed a list of water bodies that are not meeting the water quality standard applicable to the water body. This list, the "303(d) List," refers to the section of the CWA that requires the listing of the water bodies. The 303(d) list is part of an overall assessment of the water quality called the Integrated Report. The Integrated Report includes both the 303(d) list and the 305(b) assessment (section 305(b) of the CWA identifies the assessment requirement).

EPA's regulations require that TMDLs be developed for water bodies not meeting applicable standards (see 40 CFR § 130.7 for the regulations associated with TMDLs). A TMDL specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards. The TMDL allocates pollutant loadings to the impaired waterbody from all point and nonpoint pollutant sources. Regulations at 40 CFR §130.2 define the TMDL as "the sum of the

individual wasteload allocations (WLA) for point sources and load allocations (LAs) for nonpoint sources."

The TMDL must also include a margin of safety to account for any lack of data or information concerning the relationship between effluent limitations and water quality.

WLAs and LAs make up portions of a receiving water's loading capacity. The TMDL is a strategy designed to meet the loading capacity of the water body and ultimately result in achievement of water quality standards.

TMDLs may establish a specific waste load allocation (WLA) for a specific source, or may establish an aggregate WLA that applies to numerous sources. Typically stormwater sources are expressed as an aggregate in a WLA. The permittee must identify in its SWMP (see permit Part 5) how it will achieve any applicable WLA established in the TMDL. This should include specific BMPs and specific measures to meet the WLA, if applicable. The permittee's demonstration of meeting the requirements of the WLA should focus on evidence that shows that the BMPs are implemented properly and adequately maintained. This demonstration may be an iterative process.

The draft permit requires permittees to identify any additional or modified BMPs to be implemented to address any discharge from its MS4 in the event the permittee becomes aware that the discharge causes or contributes to an exceedance of applicable water quality standards. The permittee should use any available information, and add or modify BMPs in its SWMP to abate pollutants sufficiently to meet applicable water quality standards.

3. Non-Numeric Effluent Limitations – Requirements to Reduce the Discharge of Pollutants to the Maximum Extent Practicable (MEP) – (Part 6.3)

In addition to water quality based effluent limitations, NPDES permits are required to contain technology based limitations (40 CFR 122.44(a) (1)). If an operator is discharging a pollutant not covered by an effluent guideline, permit limitations may be based on the best professional judgment (BPJ) of the agency or permit writer. For this permit, effluent limits are based on BPJ. The BPJ limits in this permit are in the form of nonnumeric control measures, commonly referred to as best management practices (BMPs).

Nonnumeric limits are employed under limited circumstances, as described in 40 CFR 122.44(k), which provides that permits may include BMPs to control or abate the discharge of pollutants when: "(1)[a]uthorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) [a]uthorized under section 402(p) of the CWA for the control of stormwater discharges; (3) [n]umeric effluent limitations are infeasible; or (4) [t]he practices are reasonable to achieve effluent limitations and standards or to carry out the purpose of the CWA."

The draft permit requires MS4s to control stormwater discharges from the municipal system in a manner designed to reduce pollutants to the maximum extent practicable, and to protect water quality and to satisfy the appropriate water quality requirements of the CWA.

In order to reduce pollutants to the maximum extent practicable and protect water quality, MS4s must implement a SWMP consisting of the control measures in Part 6.3 of the permit.

Implementation of the SWMP involves the identification of BMPs and measurable goals for each BMP. The permittee must implement the control measures and document actions in the SWMP demonstrating progress towards achievement of the objective of the control measure. The permittee must identify interim goals as steps towards achievement of the objective/long term goal.

Goals identified as part of the SWMP must be measurable. A measurable goal for the program or control measure is a goal for which progress can be tracked or measured. A well-defined goal will have an outcome associated with it. Goals can be expressed as short term, midrange or long term. The permittee must evaluate the success of each goal. The permittee can evaluate the goals using a variety of indicators including: programmatic; social; physical; hydrological; or environmental.

Measurable goals may be expressed either quantitatively or qualitatively. The method used to assess whether a goal has been met should be measurable, reliable, relevant, and an actual measure of the outcome. There are various methods to measure outcome. This includes confirmation or documentation that a task has been completed; tabulation, tracking an absolute number or value of something; surveying, determining the knowledge or awareness of a group; inspections, actual observations of an event; and monitoring, actual measurement of a pollutant in-stream or in an outfall.

4. Relying on Another Entity (Part 6.3.1)

In accordance with 40 CFR§122.35, the general permit allows an MS4 to rely on another entity for implementation of all or part of a permit condition or control measure. The permittee may rely on the other entity if the other entity is actually implementing the control measure or permit condition. The other entity must agree to implement the measure or condition for the MS4 and in accordance with permit requirements. This agreement must be included as part of the SWMP. If the other party fails to implement the measure or permit condition, the permittee is ultimately responsible for its implementation.

5. Public Education and Outreach (Part 6.3.2)

The MS4 must implement a public education program to distribute educational materials to the community or conduct other outreach activities about the impacts of stormwater discharges on water bodies and steps the public can take to reduce pollutants in stormwater runoff. The education program must be specific to the MS4 and include a focus on the pollutants of concern associated with impaired waters affected by discharges from the small MS4. The overall long term goal of an effective education program is to change behavior and increase the knowledge of the community.

An education program must have a defined and targeted message for each of the different audiences and must include a measure to evaluate effectiveness of the educational messages. Based on review of annual reports and the results of MS4 audits conducted by ADEQ and U.S. EPA, ADEQ found that some of the education programs developed by MS4s did not incorporate these expectations. In order to achieve the objective of this measure, the permit requires the permittee to provide educational materials to residents, commercial entities, institutional facilities, businesses, industrial facilities, and construction and development companies.

The permit includes topics for consideration for all audiences. The permittee may use those topics listed or may focus on other topics specific to the small MS4. The permittee must distribute a minimum of two (2) educational messages to at least two (2) different audiences each year of the permit term beginning in year one (1).

The educational messages must reflect the needs and characteristics of the area served by the MS4. Permittees can form partnerships with other organizations to assist in the implementation of its education and outreach programs. These partnerships may include other MS4s in a watershed, environmental groups, watershed associations, or other civic organizations, but the MS4 must ensure that the outreach is applicable and meets a local education needs.

6. Public Involvement and Participation (Part 6.3.3)

This control measure is closely related to the public education and outreach control measure. ADEQ supports the idea that if the public is given an opportunity to understand and participate in a stormwater protection program, the public generally will become supportive of the program. The objective of this measure is to provide and engage the public with opportunities to participate in the review and implementation of the SWMP. Permittees are encouraged to provide interactive opportunities for public participation. Examples include volunteer water quality monitoring, community clean up days, hazardous waste collection days, and adopt a drain/adopt a stream programs.

The draft permit requires that the permittee annually provide an opportunity for the public to participate in SWMP review and updates. Participation efforts should attempt to engage all groups serviced by the MS4. This effort may include creative public information messages such as announcements in neighborhood newsletters, use of television spots on the local cable channel, or announcements or displays at civic meetings. One goal of public participation is to involve a diverse cross-section of people and businesses in the community to assist in development of a program that meets the needs of the permittee.

7. Illicit Discharge Detection and Elimination (Part 6.3.4)

This measure requires the MS4 to detect and eliminate illicit discharges from its municipal separate storm sewer system. The regulations at 40 CFR §122.26(b)(2) define an illicit discharge as "…any discharge to a municipal separate storm sewer system that is not composed entirely of stormwater 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."

The requirement for Phase II MS4s to identify and eliminate illicit discharges is found in 40 CFR 122.34(b)(3), which specifies the permittee "…must develop, implement, and enforce a program to detect and eliminate illicit discharges (as defined at §122.26(b)(2)), into your storm sewer system."

To implement this program to the maximum extent practicable, this permit requires the permittee to develop, implement, and maintain an IDDE program to identify facilities or activities within the permitted MS4 area that do not have an AZPDES permit to discharge (e.g., ADEQ CGP, or MSGP), see permit part 6.3.4.10. Consistent with the regulatory definition of an illicit discharge, those facilities or activities that discharge to the MS4, but do not have permit coverage are illicit discharges. Failure to identify and eliminate illicit discharges to the storm sewer system to the MEP constitutes a permit violation.

This provision serves to implement, in part, the statutory requirement that MS4 permits effectively prohibit non-stormwater discharges. Spills, leaks, sanitary sewer overflows, and illicit dumping or discharges can introduce a range of stormwater pollutants into the storm system. Prompt response to these occurrences is the best way to prevent or reduce negative impacts to surface waters. The permittee must develop a Standard Operating Procedure (SOP) for spill response. The SOP must include an investigation procedure similar to or in conjunction with the investigation SOP developed for illicit discharges in general. Often, a different entity might be responsible for spill response in a community (i.e., fire department), therefore, it is imperative that adequate communication exists between stormwater and spill response staff to ensure that spills are documented and investigated in a timely manner.

Some illicit discharges enter the storm system directly such as incorrectly connected wastewater discharge lines, while others may enter indirectly, such as through infiltration from cracked sanitary lines or spills collected by drain outlets. Both types of discharges can contribute pollutants to the system that in turn affect water quality. An illicit discharge, typically, is any discharge to a municipal separate storm sewer system that is not stormwater. The draft permit contains a list of sources of non-stormwater that permittees must evaluate to determine whether they are significant contributors of pollutants. If the permittee determines that the source is a significant contributor of pollutants, the permittee must implement measures to control or prohibit that source.

The permit describes required components of an illicit discharge detection and elimination program. The permit requires MS4s to develop a written IDDE protocol that includes specific requirements, procedures, and approaches. Examples of these requirements are a detailed map, a written prioritization of areas with a potential of illicit discharges, wet and dry weather outfall monitoring, record keeping, and thorough and complete storm drain network investigations that systematically and progressively evaluate manholes in the storm system to narrow the location of a suspected illicit connection or discharge to an isolated pipe segment. These requirements are described in the following paragraphs.

Similar to ADEQ's 2002 permit, this permit requires MS4s to develop a map and maintain a storm sewer system map that includes outfalls and names and locations of all waters that receive discharges from the MS4 outfalls (see also Part 4). The system map(s) are an integral component to assist the MS4 operator with identifying the source of illicit discharges that originate upstream of the outfall.

The MS4 must have adequate legal authority to implement the following activities as part of the IDDE program: prohibit illicit discharges; investigate suspected discharges; eliminate illicit discharges and enforce the IDDE program. The previous permit required development of a code, ordinance, or other regulatory mechanism to address these components. This permit requires existing permittees to evaluate existing codes/ordinances and revise them as necessary to ensure adequate legal authority. New permittees are required to develop, adopt, and implement codes or ordinances, to the extent allowed under state and local law, and to establish legal authority. The permittees must include a discussion of their legal authority and include relevant codes, permits, etc., in their SWMP.

Permittees must assess and prioritize outfalls and conduct dry and wet weather visual screening to identify illicit discharges, and must develop written protocol that clearly identifies responsibilities with regard to identifying, characterizing, and eliminating illicit discharges. This permit includes the specific requirement to conduct wet weather screening that should occur as part of the first flush. This requirement is included in the permit because an illicit discharge to the MS4 may not discharge until a storm event of sufficient intensity and/or duration causes a discharge, thereby giving the pollutants time to accumulate in the system.

The permittee must have in place a written procedure or protocol that clearly identifies methodologies and responsibilities with regard to eliminating illicit discharges. The protocol/procedure must identify who is responsible to pay for removal of an illicit connection/discharge. The permittee may incur the costs or the owner of the illicit connection may be responsible or a combination of the two depending on circumstances.

ADEQ does not require a specific methodology, only that one exists and that the staff responsible for locating and removing illicit connections is familiar with it. The protocol/procedure must also define appropriate methods for removal of the illicit discharge or connection. Finally, there must be procedures for confirmation of removal of illicit discharges or connections. The permittee must develop a written procedure that details a systematic approach for locating and removing illicit discharges. The systematic procedure includes three (3) parts. The first part is the outfall

inventory; the second part is tracking a discharge to a source; and finally, removal of the source. Each of these parts is discussed in the paragraphs below.

The outfall inventory may include walking all stream miles within the MS4 boundary that receive a discharge from the MS4 and locating all the outfalls. The permittee must complete the inventory during dry weather. The permittee should use the definition of outfall found at 40 CFR §122.26(b) for purposes of identifying outfalls. When an outfall is located, the permittee must observe the outfall and record specific information. The information that must be recorded includes: the dimensions, shape, material, and spatial location; and the physical condition of the outfall. Each outfall must have a unique identifier. In addition to the physical observations, the permittee must also record any sensory observations. This includes color, odor, floatables, oil sheens or evidence of flow. If flow is observed at an outfall, a sample should be taken and the source of the dry weather flow must be determined. The flow should be analyzed for conductivity, turbidity, pH, chlorine, temperature, surfactants (as MBAS), potassium, ammonia and *E. Coli* or enterococcus. If the source is not readily determined, a more intensive investigation must be undertaken.

If an outfall has evidence of a flow, but there is not an actual flow during the inventory or dry weather monitoring, there may be an intermittent discharge. Intermittent discharges are difficult to track because they can occur at any time. There are monitoring techniques a municipality can use to try to address a suspected intermittent discharge. These techniques include: (1) odd hour monitoring; (2) optical brightener monitoring (OBM) traps; (3) caulk dams; (4) pool sampling; and (5) toxicity monitoring.

Odd hour monitoring includes mornings and afternoons, weekday evenings and weekends. OBM traps have an absorbent unbleached cotton pad or fabric swatch and an anchoring device. Traps are placed in an outfall suspected of an intermittent discharge and then collected after several days of dry weather. When an OMB is placed under fluorescent light, it will indicate exposure to detergents, an indicator for wash waters. The caulk dam is used to create a small dam inside the pipe and then collect a sample of any water that is collected. Pool sampling is when a sample is collected right below the area where an outfall discharges and a sample is also collected upstream in a location not affected by the outfall. The samples are analyzed and compared. Finally, toxicity monitoring involves monitoring for toxicity in the pool below the outfall of a suspected intermittent discharge. Due to the complexities associated with toxicity testing, this method is not recommended unless the municipality has prior experience or an indication of the suspected source.

In addition to the use of indicators to help identify the source of an illicit connection or discharge, the permittee may use dye testing, video testing, smoke testing or other appropriate methods to aid in locating illicit connections or discharges.

In addition to detecting and removing illicit discharges, the permittee must also develop and implement mechanisms and procedures for preventing illicit discharges. This includes training to inform public employees, businesses, and the general public of the hazards associated with illegal discharges. The requirement to prevent illicit discharges can be incorporated into the public education and public participation control measures. Examples of mechanisms to prevent illicit discharges include identification of opportunities for pollution prevention or source control; distribution of information concerning car washing or swimming pool draining; routine maintenance activities; and inspections of facilities.

A stormwater hotline can be used to help permittees become aware of and mitigate spills or dumping incidents. Spills can include everything from an overturned gasoline tanker to sediment leaving a construction site to a sanitary sewer overflow entering into a storm drain. Permittees must set up a hotline consisting of any of the following (or combination thereof): a dedicated or non-dedicated phone line, E-mail address, or website.

In order for a MS4 to have an effective illicit discharge identification and elimination program, it is critical to have properly trained personnel. The permit requires the permittee to train field staff, who may come into contact or observe illicit discharges, on the identification and proper procedures for reporting illicit discharges. Field staff to be trained may include, but are not limited to, municipal maintenance staff, inspectors, and other staff whose job responsibilities regularly take them out of the office and into areas within the MS4 area. Permittee field staff are out in the community every day and are in the best position to locate and report spills, illicit discharges, and potentially polluting activities. With proper training and information on reporting illicit discharges easily accessible, these field staff can greatly expand the reach of the IDDE program.

8. Construction Site Stormwater Runoff Control (Part 6.3.5)

MS4s are required to continue to review and enforce a program to reduce pollutants in stormwater runoff from construction activities that result in a land disturbance of greater than or equal to one(1) acre and discharge to the MS4, including those construction activities that are less than one (1) acre if that construction activity is part of a larger common plan of development or sale that will disturb one (1) or more acres (see 40 CFR 122.26(b)(15) and 40 CFR 122.34(b)(4)).

A common plan of development or sale comes into being upon the time when there is documentation showing plans to disturb earth regardless of how many phases or how long it will take. Common documents used to confirm such a plan include plats, blue prints, marketing plans, and contracts.

Sometimes a new operator will want to perform some earth disturbing activities at a facility that originally was a common plan of development or sale, but wants to know if it still is a common plan of development or sale for which they would need to apply for permit coverage even if under one (1) acre. ADEQ follows a two-prong assessment to determine if a facility is no longer a common plan of development or sale:

1. Was the original plan, including modifications, ever substantially completed with less than one (1) acre of the original "common plan of development or sale" remaining (e.g., <one (1) acres of the "common plan" were not built out at the time)?

2. Is there a clearly identifiable period of time where there is no on-going construction, including meeting the criteria for final stabilization (e.g., a couple of years or more)?

If the new operator at a facility evaluates his project and determines that the original facility meets the two (2) criteria above, then the original common plan of development or sale has ended and the operator should evaluate only their new construction plans. If the new plans are less than one (1) acre and not part of another common plan of development or sale, then no permit is needed.

Examples of larger common plan include the following (adapted from U.S. EPA, Region 6 – Compliance Assurance and Enforcement, February 2009)*:

Example 1: A residential subdivision was started in the 1980's. 97 of 100 houses were built at that time. A new operator comes some time later and wants to build the last three (3) houses and they are less than one (1) acre. Does the builder need a permit? Using the two (2) criteria test above, the original purposes was substantially completed (there is less than one (1) acre total remaining from the original "common plan") and there has been a clearly identifiable period of time of no on-going construction. So the new operator would not need a permit.

Example 2: A residential subdivision was started in the 1980's. Due to bankruptcy, only 40 of the 100 lots were ever completed. There has been no earth disturbing since the mid

1980's. Does this facility need a permit if a new operator wants to come build two (2) new houses on 0.25 acre lots? Yes, the new operator needs a permit no matter how few of acres he's disturbing because the original common plan of development or sale was never substantially completed. To build out the remaining 60 lots from the original "common plan" would disturb more than one (1) acre.

Example 3: A large mall was started last year and finished last month. At the last minute, the developer is able to buy two (2) acres of adjacent property and wants to add some additional parking spaces to the new parking lot. He hires a new general contractor to build this parking lot. Does this new two (2) acre parking lot need permit coverage? The original purposes may have been substantially completed, but there is no clearly identifiable time of no on-going construction. So the operators of the new parking lot would need a permit.

Example 4: A large industrial plant covering 15 acres was competed two (2) years ago. The company has grown, so the owners have decided to expand the facility and bought two (2) acres adjacent to the facility to add a new building, parking, etc. that will disturb 0.75 of the two (2) acres. He hires a general contractor to build this expansion. Does this facility expansion need permit coverage? The original purpose was substantially completed, there is a clearly identifiable time of no ongoing construction, and the expansion will disturb less than one (1) acre. The expansion projects will not need a permit.

* See also the preamble to EPA's 1998 Stormwater Construction General Permit at 63 Fed. Reg. No. 128, July 6, 1998, p. 36491.

The overall objective of an effective construction runoff management program is to have a program that minimizes or eliminates erosion and maintains sediment on site and reduces or eliminates the discharge of other pollutants associated with construction projects (e.g., concrete / washout, paints, solvents, fuels, lubricants, solid waste, etc.).

The construction program required by this permit is different from ADEQ's Stormwater Construction General Permit (CGP). ADEQ's CGP applies to construction projects that have one (1) or more acres of disturbed land and discharge directly to a water body or indirectly through an MS4. The MS4 program must address the discharges from construction projects that discharge directly to its storm sewer system.

The permittee must have an ordinance or other regulatory mechanism requiring proper sediment and erosion control. In addition to addressing sediment and erosion control, the ordinance must include controls for other wastes on constructions sites such as demolition debris, litter and sanitary wastes. ADEQ encourages permittees to include design standards in local regulations for sediment and erosion control BMPs. The department recommends that design standards focus on reducing stormwater exposure to pollutants, maintaining pre- and post-construction stormwater water quality, volume, and intensity rather than focusing on maintaining stormwater on-site.

The construction program must have procedures for preconstruction review and approval of site plans. Permittees should make every effort to ensure that qualified personnel review plans. The procedures must ensure that plan reviews include consideration of water quality impacts. The review procedures must be included in the SWMP.

The construction program must have procedures for site inspections and enforcement. Qualified personnel should perform inspections. Inspections should occur during construction as well as after construction to ensure that BMPs are installed and operating as described in approved

plans. The permittee shall have clearly defined procedures regarding who is responsible for inspections and what aspects of the construction site are to be inspected.

To effectively conduct inspections, the permittee must know where construction activity is occurring. A construction site inventory tracks information such as project size, disturbed area, distance to any waterbody or flow channel, when the erosion and sediment control/stormwater plan was approved by the Permittee, and whether the project is covered by the permitting authority's construction general permit. This inventory will allow the permittee to track and target its inspections.

In order to ensure proper implementation and maintenance by site operators, a rigorous inspection protocol is necessary. This protocol must include written procedures for site inspections and enforcement to ensure inspections and enforcement actions are conducted in a consistent manner.

ADEQ recommends that MS4s prioritize site inspections and frequency of inspection based on construction site attributes such as potential for erosion, proximity to a receiving water (including Outstanding Arizona Waters and impaired waters), size of the construction project/activity, and previous experience with contractors.

The permittee must have authority to impose sanctions if construction projects are found not to be in compliance with the local ordinance. Sanctions can include monetary penalties or stop work orders.

An MS4 should look at the various components of the local government and whenever possible, optimize coordination between municipal offices and other MS4s as appropriate to ensure adequate review of plans and other documents associated with a construction project.

The permit requires staff whose primary job duties are related to implementing the construction stormwater program to be trained to help ensure that review and inspection requirements are understood and consistently applied.

Education of construction site operators regarding stormwater management and regulatory requirements is an essential part of controlling stormwater discharges from construction sites. Making brochures, guidance documents and trainings available will increase the knowledge of operators and compliance in the field and can help them choose the correct structural control and processes, correctly install the controls, and successfully implement control measures. The permit requires the permittee to provide appropriate outreach materials to construction site operators. These materials can be made available during the normal course of business (e.g., in BMP manuals, plan notes, during meetings) or via brochures or websites. In addition, the permittee must either provide training or notify the operators of available training opportunities.

Public involvement requirements include the development of a hotline or other telephone number for the public to call regarding stormwater concerns at construction sites.

9. Post Construction Stormwater Water Management in New Development and Re-Development (Part 6.3.6)

This control measure requires the MS4 to continue to review and enforce a program to address post construction stormwater runoff from areas of new development and redevelopment that disturb one (1) or more acres. The MS4 must implement an ordinance or other regulatory mechanism to manage post construction stormwater runoff.

This measure applies in areas of new development and redevelopment one (1) acre or more in size. The long term objective of this measure is to have the hydrology associated with new development closely mirror the predevelopment hydrology and to improve the hydrology of redeveloped sites. Studies have indicated that prior planning and design for the minimization of pollutants in post construction stormwater discharges is the most cost effective approach to stormwater quality management.

Post construction stormwater runoff may cause two (2) types of impacts. One is an increase in the type and the quantity of pollutants. The alteration of the land by development can increase the discharge of pollutants such as oil and grease, heavy metals, and nutrients, and by high stormwater velocity runoff.

A trend in Arizona has been to retain a large portion of stormwater on-site which has the potential to reduce the amount of stormwater that reaches streams, rivers, and lakes. This reduction in runoff reaching water bodies can also negatively impact riparian ecosystems and hydrologic resources. The intent of the permit and this part of the permit is to reduce pollutant loads in stormwater runoff and also reduce runoff of velocity. The MS4's post construction stormwater runoff program should focus on building codes, ordinances, allowances, credits and other measures to ensure and promote that post-construction stormwater runoff is similar to pre-construction stormwater runoff in quality, quantity, and velocity.

Management of stormwater can be accomplished in many ways. Low Impact Development (LID) focuses on using practices that imitate the natural water cycle. Rather than directing stormwater to a pipe or conveyance, the stormwater is managed onsite. LID practices can work at the site level as well as the watershed level. The permit requires the permittee to evaluate existing local regulations and make determinations as to whether the existing local regulations allow LID practices and what changes could be adopted to better promote LID practices.

10. Pollution Prevention and Good Housekeeping for Municipal Operations (Part 6.3.7)

This part of the permit applies to municipal facilities that are not otherwise subject to separate stormwater permitting (i.e., industrial activities subject to coverage under Arizona's Multi-Sector General Permit, MSGP).

Some municipal facilities are not currently subject to separate stormwater permit (e.g., facilities that primarily work on police cars, fire trucks, and others associated with justice, public order, and safety). Municipal facilities are subject to MSGP coverage if it resembles a kind of facility with an Standard Industrial Classification (SIC) code that is covered by the MSGP (e.g., bus maintenance yard, airport maintenance facility).

ADEQ's approach to permitting applicability for municipal facilities that conduct a mix of covered/not covered vehicles is to assess if the more than 50% of the activities conducted at the facility are subject to MSGP coverage. For example, if 55% of the vehicle maintenance conducted at the municipal facility is on equipment associated with police cars, fire trucks, and other equipment associated with justice, public order, and safety, then the facility is subject to the MS4 permit. However, if 55% of the activities are associated with garbage trucks, snow plows, and similar/other equipment, then the facility is subject to separate permitting under Arizona's MSGP. See also 40 CFR 122.26(b)(14) which states "Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the *description* of the facilities listed in paragraphs (B)(14)(i) through (xi) of this section) include those facilities designated under the provisions of paragraph(a)(1)(v) of this section."

This measure requires small MS4s to develop and implement an operations and maintenance program that includes facility inspections and employee training. The ultimate goal of this

measure is preventing or reducing pollutant runoff from all municipal operations. The permit includes the minimum requirements for the implementation of this control measure.

As part of the evaluation, the permittee must consider and include all facilities that have a potential to contribute stormwater pollutants. The permittee should evaluate the use and storage of petroleum products, management of dumpsters, and other wastes. Examples of typical municipal facilities or activities subject to this permit part include: parks and open spaces, fire stations, police stations, buildings and facilities, roadways, storm systems, schools, festivals, and public events.

Each municipal facility or activity will require a different set of control measures depending on the nature of activities that occur there and the types of materials or potential pollutant sources. Developing and maintaining a site-specific Standard Operating Procedure (SOP) for each facility will help to ensure that employees responsible for facility operation are aware of the stormwater controls required for the site. The best way to avoid pollutant discharges from these sources is to keep precipitation and runoff from coming into contact with pollutant sources.

The permittee must establish and implement maintenance schedules and inspection frequencies for all permittee owned facilities or activities subject to operation and maintenance and pollution prevention activities. ADEQ encourages the permittee to develop a facility / activity risk priority and conduct operations and maintenance and inspections based on risk. The minimum facility or activity inspection frequency is one (1) time per year, however, higher risk facilities or activities should be more frequent (e.g., monthly, quarterly, two (2) times per year)

Permittees must develop a Stormwater Pollution Prevention Plan (SWPPP) for municipal facilities. The specific SWPPP components are specified in permit Part 6.3.7.2, but must include BMPs implemented at each facility or discharge activity, facility listing, stormwater inspection frequency, staff training topics and frequency, and spill prevention and response procedures.

The regulations found at 40 CFR 122.34(b)(6) specifically requires the permittee to develop a “training component” that trains employees “to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.” This permit requires employee training for existing and new employees who are involved in performing pollution prevention and good housekeeping practices. All training must include a general stormwater educational component, including an overview of the requirements with which the municipality needs to comply. The permittee is responsible for identifying which staff must attend trainings based on the applicability of the topics listed, and they are required to conduct refresher training.

If the permittee uses third-party contractors to conduct municipal maintenance activities in lieu of using municipal employees, those contractors performing activities that can affect stormwater quality must be held to the same standards if the permittee uses its own personnel. Not only must these expectations be defined in contracts between the permittee and its contractors, but the permittee is responsible for ensuring, through contractually-required documentation or periodic site visits, that contractors are using stormwater controls and following standard operating procedures.

The permittee must include documentation of facility inspections, training sessions, and related information in the annual report (see Permit Part 8).

SECTION H – ANALYTICAL MONITORING (Permit Part 7)

Monitoring is performed to determine compliance with effluent limitations established in NPDES permits, establish a basis for enforcement actions, assess treatment efficiency, characterize effluents and characterize receiving water. Regulations requiring the establishment of monitoring and reporting conditions in NPDES permits are at Title 40 of the *Code of Federal Regulations* (CFR) 122.44(i) and 122.48.

Regulations at § 122.44(i) require permittees to monitor pollutant mass (or other applicable unit of measure) and effluent volume and to provide other measurements (as appropriate) using the test methods established at Part 136.

In addition to impaired water monitoring, ADEQ retains the authority to require analytical monitoring. Reasons that ADEQ may require analytical monitoring include assess permit compliance, to identify or characterize an illicit discharge, or ensure attainment of applicable surface water quality standards.

This permit requires those MS4s that discharge to an impaired water or water identified as non-attaining to conduct wet weather analytical monitoring at representative outfall or monitoring locations. At a minimum, the permittee must sample for those parameters for which the receiving water is impaired or identified as non-attaining. Analytical monitoring is required to be conducted a minimum of two (2) times per wet season for the duration of permit coverage.

If there is a total maximum daily load (TMDL) for the receiving water and the TMDL conflicts with any portion of the analytical monitoring requirements specified in this permit, the permittee shall follow whichever element of the permit or TMDL is more descriptive or inclusive (e.g., additional monitoring events, analytical parameters, etc.).

Permittees who are required to conduct analytical monitoring shall develop a sampling and analyses plan (SAP) to ensure samples are collected consistently and are representative of the discharge from the MS4. The SAP must include, at minimum, sampling procedures, sample preservation, chain-of-custody procedures, and a validation report from the analytical laboratory. The SAP must also include procedures for equipment calibration and usage for field parameters (pH, conductivity, temperature, etc.).

If the permittee can justify that it has three (3) or more outfalls that discharge to an impaired water or water identified as non-attaining, the permittee may reduce the number of outfalls that it monitors. Each sampling event must include a minimum of two (2) outfalls and shall be rotated on the following example:

<u>Rotating Substantially Identical Outfall Monitoring Example:</u>

Event Number 1:	Outfall “A” and “B”
Event Number 2:	Outfall “B” and “C”
Event Number 3:	Outfall “C” and “A”

Rotating outfall monitoring will assist in correlating outfall data from each monitoring event. If the permittee determines a different approach to rotating outfall monitoring locations will provide better data, the permittee must include their proposed monitoring approach in the SWMP.

Additionally, permittees that discharge stormwater to an Outstanding Arizona Water (OAW) must also conduct analytical monitoring and also are eligible for monitoring at a reduced number of locations utilizing the substantially identical outfall allowance.

The permit also allows the permittee to propose an alternate monitoring program instead of rotating substantially identical outfalls. An example of alternative sampling program may include a proposal to install "permanent" monitoring stations at two (2) or more locations with documentation (e.g., analytical data) supporting the selected monitoring locations.

The permit specifies that, unless otherwise required by ADEQ, permittees that are required to conduct analytical monitoring must do so a minimum of two (2) times per wet season. Wet seasons are identified as:

Summer wet season:	June 1 – October 31
Winter wet season:	November 1 – May 31

Existing permittees who were required to conduct monitoring under Arizona's previous Phase II MS4 general permit must continue with their monitoring program until the beginning of the first full wet season after the issuance date of the new permit. As of the beginning of the first full wet season following the issuance date of this permit, existing permittees must have a monitoring program that meets the requirements of the new permit fully developed and implemented.

New permittees and those who were not required to conduct monitoring under the previous permit have until the beginning of the second full wet season after issuance of this permit to have their monitoring program fully developed and implemented.

Analytical data from each monitoring event, including monitoring conducted in addition to the four (4) required events, must be included in the annual report.

SECTION I – PROGRAM EVALUATION, RECORDKEEPING, AND REPORTING (Permit Part 8)

1. Program Assessment (Part 8.1)

A key requirement in the stormwater Phase II rule is a report (40 CFR 122.34(g)(3)) that includes "the status of compliance with permit conditions, an assessment of the appropriateness of identified [control measures] and progress towards achieving identified measurable goals for each of the minimum control measures." This assessment is critical to the stormwater program framework which uses the iterative approach of implementing controls, conducting assessments, and designating refocused controls leading toward attainment of water quality standards.

The permittee must periodically evaluate its SWMP for the following: compliance with the terms of the permit, the appropriateness of the identified BMPs and progress towards achieving the objective of the control measure and the permittee's measurable goals. The permittee may need to change its selected BMPs identified in the SWMP based on this evaluation process in order to ensure compliance with the terms of the permit including water quality based requirements.

ADEQ recommends that permittees utilize U.S. EPA's *MS4 Program Evaluation Guidance* document (EPA-833-R-07-003) to assist with its annual program evaluation and self-audits. This document provides helpful information to identify and proactively address program deficiencies and improved effectiveness of the SWMP. An electronic copy of the MS4 Evaluation Guide may be obtained at:

http://www.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf

2. Record Keeping (Part 8.2)

The permittee must keep all records required by this permit for a period of five (5) years and must submit records as specified in the permit, and when requested by ADEQ or U.S. EPA.

3. Annual Report (Parts 8.3 and 8.4)

The annual report must document and summarize implementation of the SWMP during the previous year and evaluate program results and describe planned changes towards continuous improvement. The annual report also can serve as a "state of the SWMP" report for the general public or other stakeholders in the community. While records are to be kept and made available to the public, the annual report is an excellent summary document to provide as well.

The annual report must be submitted to ADEQ by September 30 each year and must cover activities for the period July 1 through June 30, and must be submitted to the address identified in the permit. Some information is cumulative and must be reported on annually.

Permittees must summarize and analyze data concerning the effectiveness of the SWMP and submit the analysis to ADEQ.

- **Summary of the Year's Activities**. The summary should describe and quantify program activities for each SWMP component. Responsible persons, agencies, departments or co-permittees should be included. Each activity should be described in relation to achievement of established goals or performance standards, including:
    - For illicit discharge data, what are the most prevalent sources and pollutants in the illicit discharge data, and where are these illicit discharges occurring? How many illicit discharges have been identified, and how many of those have been resolved? How many outfalls or screening points were visually screened, how many had dry weather discharges or flows, at how many were field analyses completed and for what parameters, and at how many were samples collected and analyzed? Identify if increased inspections are necessary and develop more specific outreach targeting these sources and pollutants.
    - For the construction data, what are the most common construction violations, and are there any trends in the data (e.g., construction operators who receive more violations than others, areas of the MS4 with more violations, need to refine guidance or standards to more clearly address common violations). How has the permittee responded to these trends? Over the last year, how many construction site plan reviews were completed and approved? How many inspections were conducted, how many noncompliant.
- **Description of SWMP Effectiveness**. An annual report should not only describe the previous year's activities, but should also highlight the SMWP's effectiveness (see Part 8.3) using the indicators required in Part 8.2.
- **Planned Activities and Changes**. The annual report should describe activities planned for the next year highlighting any changes made to improve control measures or program effectiveness.

The fourth year annual report has additional reporting requirements (see permit Part 8.4) on assessment of additional measures the permittee can implement to advance stormwater protection within the permitted area.

J. STANDARD PERMIT CONDITIONS (Part 9)

40 CFR §§ 122.41 and 122.42, and A.A.C., Title 18, Chapter 9, Article 9,establish requirements that must be in all NPDES/AZPDES permits. Part 9 of the general permit includes these requirements.

K. DEFINITIONS (Part 10)

Part 10 of the permit includes definitions of terms used in the permit and this fact sheet.