ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM (AZPDES)

FACT SHEET

General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems

Permit Number AZG2016-002

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SECTION A – Program Background

1. Proposed Action

The Arizona Department of Environmental Quality (ADEQ) is reissuing 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 permit, ADEQ held a series of stakeholder meetings with interested parties during the period May 2014 through October 2014.

A draft permit was published in the Arizona Administrative Register (A.A.R.) on July 17, 2015 for formal public comment and closed on August 17, 2015. Formal written comments were received by various cities, counties, U.S. EPA, and other persons. Subsequent to close of the public comment period, the typical process is for ADEQ to evaluate and respond to significant comments, modify the permit (as necessary or appropriate), issue the final permit, and provide final notice in the A.A.R. (see A.A.C. R18-9-A908(E))

However, based on comments received during the public comment period, ADEQ determined it would be beneficial to stakeholders to provide an additional informal meeting. ADEQ modified the draft permit and provided a copy to stakeholders on October 9, 2015 via ADEQ's MS4 "listserve." The additional stakeholder meeting was held on October 15, 2015 at ADEQ's Phoenix, Arizona office location.

Subsequent to the October 15, 2015 stakeholder meeting, ADEQ made modifications to the draft permit (as appropriate), and prepared the draft permit for a second (new) public comment period. The revised draft permit was scheduled to be published in the A.A.R. on Friday, December 4, 2015 with a close of public comment date of Wednesday, January 20, 2016. As specified in the December 4 notice of public comment, comments submitted in response to the July 2015 comment period were not considered. The department's Response to Comment addresses those comments submitted pursuant to the December 2015 public notification.

Additionally, pursuant to Arizona Administrative Code R18-9-908(B), ADEQ scheduled a public hearing on the draft permit for Wednesday, January 20, 2016. Notice of the public hearing was provided in a local newspaper of general circulation and also in the A.A.R.

2. Program Background

The conditions in the 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 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 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 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 MEP and protect water quality. This 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 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 general permit reflect the iterative process of MEP. Accordingly, the 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 (Permit Part 1.0)

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:

a) 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.

b) 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).

c) 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 state, city, town, borough, county, parish, district, association, or other public body;
2. Designed or used for collection or conveying stormwater; and
3. Which is not part of a Publicly-Owned Treatment Works (POTW)

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

This general permit is issued to provide coverage for existing and new MS4s. 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 AFB	Douglas
El Mirage	Flagstaff	Fountain Hills
Gilbert	Goodyear	Guadalupe
Lake Havasu	Litchfield Park	Luke AFB
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 (Based on 2010 Census):

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).

3. Eligibility and Allowable Stormwater Discharges

This permit authorizes municipal stormwater discharges from small MS4s, when in compliance with permit conditions, except those excluded under Limitations on Coverage of the permit. Coverage under this permit is authorized for municipal stormwater discharges from the permitted area.

4. Non-Stormwater Discharges

The permit lists sources of non-stormwater discharges listed 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 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. Any non-stormwater discharge form the storm sewer system where the permittee fails to take action to prevent or eliminate exceedance(s) of applicable surface water quality standard constitutes a permit violation.

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. The exclusion of firefighting activities does not extend to training and other activities that result in a discharge to Waters of the U.S.

This permit does not prohibit the use of reclaimed water on-site for dust control, soil compaction or 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.

5. 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 co-mingled 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 (Category 4 [not-attaining] and Category 5 [303(d) list]). Eligibility for permit coverage is dependent upon the inclusion of provisions in the Notice of Intent (NOI) and SWMP that are consistent with the assumptions and requirements of the total maximum daily load (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. Visit ADEQ's website for current listings of impaired waters at www.azdeq.gov.

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.

6. Permit Compliance

Part 1.5 of the 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 general permit.

SECTION C – Authorization Under this General Permit (Permit Part 2.0)

1. Obtaining Authorization to Discharge

Existing and New Small MS4s are automatically covered under ADEQ's Small MS4 general permit (AZG2016-002) upon the permit issuance date for up to 180 days.

In order for a small MS4 to retain authorization to discharge, the operator 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 and submitted to ADEQ with 180 days from the permit effective date.

Regulated Small MS4 operators who do not submit a complete NOI within 180 days of the effective date of the permit 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.

Upon receipt of a Notice of Intent, ADEQ will evaluate it for accuracy, completeness, and to verify that the identified BMPs and measurable goals are consistent with the requirement to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, and to satisfy the appropriate requirements of the Clean Water Act. If necessary, ADEQ will notify the Small MS4 operator of the need to revise their mix of BMPs and resubmit a revised NOI.

2. Availability of Notice of Intent Forms

ADEQ will make NOIs available for public review and comment on the ADEQ website for a minimum of 30 days. In the event there is significant public comment on a MS4's NOI or if there is a request for a public hearing, ADEQ will contact the permittee and require that a revised NOI be submitted, to schedule a public hearing, or other appropriate actions be taken.

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 an initial fee with their NOI for coverage under the 2016 permit and will continue with the annual billing cycle established under the previous permit.

New permittees must submit their appropriate fee (based on population of permitted area) with their NOI 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 close out 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 will notify a MS4 operator that they must 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 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 effective date of a reissuance or replacement of this permit; (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 – Stormwater Program Enforcement (Permit Part 3.0)

1. Establishing Enforcement Procedures

Adequate enforcement authority is required to be developed and implemented, and enforced for many parts of the permittee's 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, eliminating illicit discharges, and requiring installation of control measures.

The permit specifies enforcement authority requirements, primarily associated with the illicit discharge detection and elimination program, and for the construction activity stormwater control program areas.

For cities and counties, the authority is provided by the state legislature to meet the minimum requirements of the municipal stormwater program. Specifically, for small 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 authority may consist of other mechanisms such as policies, standards, or specific contract language. Non-traditional MS4 permittees do not generally have the authority to impose a monetary penalty. Although these differences exist, just like traditional MS4s, non-traditional MS4s must develop, implement, and enforce the program, often by use of other regulatory mechanisms.

2. Enforcement Requirements

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, describe 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 (Permit Part 4.0)

Arizona's initial small 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 twelve (12) months, including annexed areas. New permittees are to include their mapping schedule in their NOI 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, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels and storm drains. The mapping and inventory must 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.

The third mapping component is receiving waters (waters of the U.S. that receive stormwater from the regulated small MS4).

This permit does not require the permittee to submit storm sewer system maps to ADEQ. However, the permittee is required to 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 (Permit Part 5.0)

Permittees must develop, implement, and enforce a stormwater management program (SWMP) designed to reduce the discharge of pollutants to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate requirements of the Clean Water Act.

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 during normal business hours, and also have the SWMP available on the Small MS4s website. The SWMP must contain, at a minimum, the elements listed in Part 5.1 of the permit.

The written program provides a central accessible source for all information relating to the SWMP. While updating the SWMP required by this permit, existing permittees 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 their SWMP within six (6) months of the effective date of the final permit while new permittees have one (1) year from the effective date of the final permit to develop their SWMP.

SECTION G – Effluent Limitations (Permit Part 6.0)

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 nonnumeric effluent limitation requirements of this permit are expressed in the form of control measures and BMPs (see Part 6.3). An exceedance of a surface water quality standard does not necessarily constitute a permit violation when the permittee is in compliance with permit conditions, including developing, implementing, and enforcing a stormwater management program that is designed to reduce the discharge of pollutants to the maximum extent practicable.

2. Surface Water Quality Standards (Part 6.2)

If an MS4 discharges into waters that are not impaired, the 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 permit will meet applicable water quality standards when fully satisfied. ADEQ considers this approach valid since, despite ongoing discharges from 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 and not-attaining waters. 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 in ADEQ's water quality assessment report. The 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 applicable 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 permit requires Small MS4 operators 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 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 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.

The 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 confirming or documenting 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, observations of an event; monitoring, and the measurement of a pollutant in-stream or from an outfall.

4. Minimum Control Measures (Permit Part 6.4)

The permittee must implement a stormwater management program to reduce the discharge of pollutants to the maximum extent practicable by, at a minimum, implementing best management practices for each of the six (6) minimum control measures in part 6.4 of the permit.

In accordance with 40 CFR§122.35, the general permit allows a Small MS4 operator 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 in the NOI. If the other party fails to implement the measure or permit condition, the permittee is ultimately responsible for its implementation and potential compliance action.

It is important to note that Arizona's definition of "pollutant" is inclusive of many types of materials and wastes, and includes solid waste and garbage (commonly referred to as "trash").

Trash and litter are a pervasive problem throughout Arizona, particularly in urbanized areas. Controlling trash is a priority because trash adversely affects the use of waterways. Trash impacts aquatic life in streams, rivers, and lakes as well as terrestrial species in adjacent riparian and shore areas. Trash, particularly plastics and polystyrene, persists for years in the environment. It concentrates organic toxins, entangles and ensnares wildlife, and disrupts feeding when animals mistake plastic for food and ingest it. Additionally, trash creates aesthetic impacts, impairing our ability to enjoy our waterways and natural environment.

Trash is one of the more ubiquitous forms of pollutants and can be found at nearly every component of a municipal storm sewer system (from roads and streets, to inlets, and underground infrastructure) and can ultimately be discharged at an outfall.

The issue of trash provides a unique and important focus point for an effective stormwater program because it can be applied to all six (6) of the minimum control measures.

Small MS4 operators should include components in its stormwater management program to reduce trash in its system by conducting public education (billboards, educational material, etc.), finding ways to involve the public (such as "adopt as street" or "adopt a stream"), ensure trash is properly managed at construction sites, at municipal operations (such as parks, maintenance facilities, etc.), as well as integrating trash management into its illicit discharge detection and elimination program.

5. Public Education and Outreach (Part 6.4.1)

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 permittees did not incorporate these expectations. In order to achieve the objective of this measure, the permit must provide educational materials to residents, commercial entities, institutional facilities, businesses, industrial facilities, and construction and development companies.

The educational messages must reflect the needs and characteristics of the area served by the MS4, and may include industrial and commercial areas, recreational areas, sporting venues, classrooms, and other venues, activities, and opportunities. 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 local education needs.

6. Public Involvement and Participation (Part 6.4.2)

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 or stream program.

The permit requires the permittee 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/displays at civic meetings. Ideally, public participation should involve a diverse cross-section of people, groups, and businesses in the community to assist in developing, implementing, and maintaining a comprehensive and effective stormwater program.

7. Illicit Discharge Detection and Elimination (IDDE) Program (Part 6.4.3)

This measure requires the permittee 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 small MS4 permittees 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 meet the minimum requirements of this control measure, the permittee must develop, implement, and enforce an IDDE program to identify facilities or activities within the permitted MS4 area that discharge to the permittee's small MS4. Consistent with the regulatory definition of an illicit discharge, facilities or activities that discharge to the MS4, but do not have authorizing AZPDES/NPDES permit coverage constitutes an illicit discharge. Failure to identify and eliminate illicit discharges to the storm sewer system to the MEP constitutes a permit violation. Permittees are required to have a program to identify illicit discharges. Examples of a program include site visits, phone calls, mailers, and other effective means. The number of contacts made are to be reported in the annual report and include, to the extent known, facility name, contact information, address, and whether or not the facility/activity has permit coverage.

This provision serves to implement, in part, the statutory requirement that MS4 permits effectively prohibit non-stormwater discharges to their storm sewer system. 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. An effective response program will have Standard Operating Procedures (SOP) for spill response, including investigation and corrective action procedures. 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 mitigated, investigated, corrected, and documented in a timely manner.

Illicit discharges can enter the storm system in a variety of ways, such as incorrectly connected wastewater discharge lines and surface runoff. The permit includes requirements to identify sources of illicit discharges, including unpermitted discharges. Upon detection or identification of an illicit discharge, the permittee must implement measures to control or prohibit such discharges. Failure to do so constitutes a potential small MS4 permit violation.

The permit describes required components of an illicit discharge detection and elimination program. Permittees are required to develop an IDDE protocol as part of the SWMP that includes specific requirements, procedures, and approaches to identify and eliminate illicit discharges, including escalated enforcement procedures. Examples of these requirements are a storm sewer system map, prioritization of areas with illicit discharges, wet and dry weather visual outfall monitoring, record keeping, and thorough and complete storm drain network investigations that systematically and progressively evaluate the storm sewer system to isolate the location of a suspected illicit connection or discharge. These requirements are described in the following paragraphs.

Similar to ADEQ's 2002 permit, this permit requires MS4s to develop 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 enforcement 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 document their legal authority and cite relevant codes, permits, etc., in their NOI.

Permittees must assess outfalls and conduct dry weather monitoring as well as visual stormwater discharge monitoring to identify illicit discharges, and must develop protocol that clearly identifies responsibilities with regard to identifying, characterizing, and eliminating illicit discharges. This permit includes the specific requirement to conduct visual stormwater discharge monitoring at a minimum of five (5) representative outfalls (or screening points) and to the extent practicable must include the first flush. This requirement is included in the permit because an illicit discharge to the MS4 may not result in a discharge to a Waters of the U.S. until a storm event of sufficient intensity and/or duration results in a discharge to a receiving water, thereby giving the pollutants time to accumulate in the system. This is particularly the case in many parts of Arizona due to infrequent storm events.

The permit allows for the option to conduct alternative visual stormwater discharge monitoring (such as analytical monitoring). If the permittee elects for an alternative to visual stormwater discharge monitoring, the alternative must be included in the NOI and be at least as effective as visual stormwater discharge monitoring.

The permittee must have procedures or protocol established and implemented that clearly verify methodologies and responsibilities with regard to eliminating illicit discharges. It is expected that protocol will vary between permittees and may include one (1) or more departments within any given permittee's organizational structure. Such divisions and responsibilities must be coordinated and clearly documented to ensure the program is effective in identifying and responding to illicit discharges.

The permit does not require a specific methodology, only that one exists and that the staff responsible for locating and removing illicit connections are familiar the program and responsibilities. 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 procedures that detail 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 stream miles within the MS4 boundary that receive a discharge from the MS4 and locating all the outfalls. 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 record specific information. Example information that should be documented 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 should 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 be determined. The flow should be analyzed for conductivity, turbidity, pH, chlorine, temperature, surfactants (as MBAS), potassium, ammonia and *E. Coli* or enterococcus to help identify potential source(s). If the source is not readily determined, a more intensive investigation should 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 can be difficult to track because they can occur at various times. 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 or website 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 activity 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 permittee to have an effective illicit discharge identification and elimination program, it is critical to have properly trained personnel. Permittees are required 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. Field staff are out in the community are in an effective position to locate and report spills, illicit discharges, and potentially polluting activities without increasing staff. With proper training and information on reporting illicit discharges easily accessible, these field staff can greatly expand the reach of the IDDE program.

Additional sources of illicit discharges include stormwater and non-stormwater discharges to the MS4 from construction activities, industrial activities, and others that do not have appropriate Clean Water Act permit coverage. Permittees are required to

contact site or activity operators that discharge to discharge to the MS4. Permittees are given the flexibility to develop and implement a program suited to their small MS4 area. Contact may be done by various means, including site visits, phone calls, mailers, or combination.

ADEQ encourages permittees to coordinate the IDDE program requirement with public education and outreach to inform businesses and the general public about the hazards associated with illegal discharges and improper disposal of waste.

To the extent known, the permittee must include in the annual report the number of illicit discharges to the storm sewer system, the number of contacts made and method of contact, facility/activity name, address, and contact person, whether or not the facility/activity has an appropriate AZPDES permit, and other pertinent information.

8. Construction Site Stormwater Runoff Control (Part 6.4.4)

Permittees must develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the storm sewer system 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)).

This permit does not cover stormwater discharges associated with construction activities conducted by the small MS4. If the small MS4 operator meets the definition of "operator," as defined in Arizona's Stormwater Construction General Permit (CGP), the small MS4 operator must obtain separate CGP coverage for those projects. Examples include roadways, parks, and other capital improvement projects.

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 purpose 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 construction 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 onsite.

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. Inspection and enforcement program elements are to ensure construction activities are in compliance with local stormwater codes/ordinance or other regulatory mechanisms. The regulated MS4 is not expected, nor is it authorized, to enforce Arizona's Stormwater Construction General Permit.

To effectively conduct inspections, the permittee must know where construction activity is occurring. A construction activity 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 identify projects for 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 activity 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.

To the extent allowable, 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 have the knowledge, skills, and ability to carry out their assigned duties. An effective part of this program relies on adequate training, both for new employees and for ongoing training for existing employees.

Education of construction activity operators regarding stormwater management and regulatory requirements is an essential part of controlling stormwater discharges from construction activities. 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..

Procedures for public involvement are required and should include tools such as a hotline, email, website, and/or mobile application for the public to access regarding stormwater concerns associated with construction activities.

9. Post Construction Stormwater Water Management in New Development and Re-Development (Part 6.4.5)

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. Permittees must implement an ordinance or other regulatory mechanism to manage post construction stormwater runoff into the MS4.

This measure applies in areas of new development and redevelopment of construction activities that disturb one (1) acre or more. 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 minimizing 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 onsite 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 the concept that post-construction stormwater runoff be 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 6.4.6)

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 a 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 a Standard Industrial Classification (SIC) code that is covered by the MSGP (e.g., bus maintenance yard, airport maintenance facility), see 40 CFR 122.26(b)(14).

ADEQ's approach to permitting applicability for municipal facilities that conduct a mix of covered/not covered vehicles is to assess if 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 are a source of 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 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. This permit requires the permittee to develop a facility / activity risk priority schedule for operations, maintenance, and inspections. The inspection frequency may include daily site walks to ensure material are properly stored, equipment is operating as designed, and personnel are following established procedures.

For the program to be effective, permittees should develop a Stormwater Pollution Prevention Plan (SWPPP) or similar document for each municipal facility. A boilerplate can be utilized for basic information, but then tailored to each facility for specific needs. The SWPPP should 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 require 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 conduct initial and 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 as 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.

This permit requires permittees who discharge to an impaired water, a water listed as not-attaining, or to an Outstanding Arizona Water (OAW) to conduct analytical monitoring. Additionally, ADEQ retains the authority to require other analytical monitoring. Reasons that ADEQ may require analytical monitoring include assessing permit compliance, to identify or characterize an illicit discharge, or ensure attainment of applicable surface water quality standards. In the event ADEQ requires additional analytical monitoring, the permitted will be notified in writing of the frequency, duration, methods (grab sample, composite sample, flow weighted, etc.), reporting requirements, and other applicable details.

At a minimum, the permittee must sample for those parameters for which the receiving water is impaired or identified as not-attaining, or other parameter resulting in the impairment.

For the purpose of this permit, discharges to an impaired water, not-attaining water, or OAW means that the permittee's regulated MS4 discharges directly to one or more of

these waters, or is otherwise identified in an approved total maximum daily load (TMDL).

Impaired and not-attaining surface waters are those waters included in Categories 4 and 5, and require special consideration to ensure appropriate actions are implemented to achieve attainment of designated use(s). A discussion of Category 4 and 5 classifications is provided below. Additional information may be obtained from ADEQ's Clean Water Act Assessment, which is available on ADEQ's website at www.azdeq.gov.

Category 4: Impaired for one or more designated uses but a TMDL is not necessary
Assessment units with at least one use assessed as "impaired" but development of a TMDL analysis is not needed (at this time), for the following reasons:

Category 4A – Assessment units where TMDLs have been completed and the pollutants covered under those TMDLs. The TMDL is an investigative study of pollutant sources that includes recommendations for pollutant reductions; however, even after recommended improvements have begun, it may take several years to see the effects. Therefore, the assessment unit remains impaired and listed in Category 4A until it is attaining standards again.

Category 4B – Assessment units where alternative pollution control requirements are being used to meet standards, rather than a TMDL. To be placed on 4B, ADEQ must submit to EPA for evaluation and review the following information:

- Statement of the problem causing the impairment, identifying pollutants and their sources;
- Description of the alternative pollution controls being implemented, including the funding mechanism for any associated costs and binding agreements to complete implementation;
- Reasonable time schedule for implementation of controls;
- Projection of when water quality standards will be met;
- Description of and schedule for monitoring, that will show progress with the control strategy; and
- Commitment to revise the control strategy if progress towards meeting water quality standards is not being shown.

Category 4C – Assessment units where the impairment is not caused by a pollutant, but instead by other types of pollution. For example, a designated use may be impaired solely due to lack of adequate flow or stream channelization. In such cases, the specific cause and source of the impairment has been carefully studied, generally through the TMDL process.

Although low dissolved oxygen is not a pollutant, under EPA assessment guidance it is listed as the cause of impairment and a TMDL is required when the low dissolved oxygen is caused by the presence of a pollutant (e.g., nutrients or chemical oxygen demand). Similarly, low or high pH is listed as the cause of impairment in Category 5, rather than

4C, when pollutants are thought to be causing or contributing to the impairment. To date ADEQ has not used Category 4C.

Category 5: Impaired for one or more designated uses by a pollutant, and a TMDL needs to be developed or revised.

Assessment units with at least one designated use impaired by a pollutant and a Total Maximum Daily Load analysis needs to be completed. The assessment unit remains on Category 5 until EPA has approved the TMDL or the pollutant is otherwise delisted.

The other uses may be any combination of attaining, inconclusive, and even impaired but not on the 303(d) List (see Category 4 above). For example, as TMDL's are completed those parameters are moved to Category 4A; however, additional parameters may be impairing the assessment unit. In such cases the surface water may appear both in Category 5 and in one or more of the Category 4s.

EPA has added several surface waters to the 303(d) List. Because these waters were listed based on criteria not available to ADEQ (e.g., fish consumption advisories, fewer exceedances or samples than required under Arizona's methods), these waters are kept on or removed from the impaired water list at EPA's discretion.

If there is a 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 analysis 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.).

The permittee must identify and select locations where analytical monitoring will be conducted and must include outfalls or screening points that are representative of the permittee's stormwater discharge(s).

Permittees who discharge to an impaired water and not-attaining water should conduct analytical monitoring a minimum of two times per year. Permittees who discharge to Outstanding Arizona Water are required to conduct analytical monitoring a minimum of two times per wet season. ADEQ will evaluate each monitoring plan to assess whether it is adequate to meet the requirements of this permit. 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 Small MS4 general permit must continue with their monitoring program until June 1, 2017, the beginning of the first summer wet season. As of June 1, 2017, 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 November 1, 2017, beginning of the winter wet season, 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.

If after a representative number of samples are collected and analyses indicate the municipal stormwater discharges are not a source of pollutants causing or contributing to an impairment or are protective of existing water quality for OAWs, the permittee may petition ADEQ to reduce or discontinue the analytical monitoring program. The petition must be submitted to ADEQ in writing and include the rationale and justification for requesting reduced or suspension of analytical monitoring.

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. Recordkeeping (Part 8.2)

The permittee must keep all records required by this permit for a minimum period of three (3) years and must submit records as specified in the permit, and when requested by ADEQ or U.S. EPA. Records of monitoring information must include, at a minimum, the date, exact place, and time of monitoring event; the individual(s) who performed the monitoring; the dates analyses were performed; the individuals who performed the analyses; the analytical techniques or methods used; and the results.

Analytical monitoring must be conducted using test procedures in accordance with A.A.C. R18-9-A905(B).

3. Discharge Monitoring Report (Permit Part 8.3)

Permittees are required to report monitoring results using a Discharge Monitoring Report, as required pursuant to 40 CFR 122.41(l)(4), The permittee must include visual and analytical monitoring results on the DMR. The DMR is due on September 30 of each year and must include monitoring results for the period July 1 through June 30 of the preceding year.

4. Annual Report (Permit Part 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.

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

- **Description of Program Activities**. The description must identify and quantify program activities for each SWMP component. Responsible persons, agencies, departments or co-permittees should be included. Each activity is to be described in relation to achievement of established measurable goals or performance standards, including:

    - Status of Storm Sewer System Mapping – Including percent complete
    - Public Education and Outreach – Number and type of education and outreach events, target audience, effectiveness, compliance with measurable goal

- Public Involvement/Participation – Number and type of public involvement/participation events, effectiveness, and compliance with measurable goals
- Illicit Discharge Detection and Elimination – Status of legal authority, number of illicit discharge detected, responded to, eliminated, enforcement actions, contacts (site visits, training components, dry and wet weather visual monitoring activities, number of outfalls evaluated, findings, follow up actions, etc.), and other pertinent information
- Construction Site Stormwater Runoff Control – inventory of active construction activities, number of site visits, enforcement actions taken, status of legal authority, training component, and other pertinent information
- Post-Construction Stormwater Control Management in New Development and Redevelopment – status of regulatory authority / mechanism to control pollutants in stormwater runoff from sites after construction is complete, number of enforcement actions, number of site visits conducted, and other pertinent information
- Pollution Prevention and Good Housekeeping for Municipal Operations – inventory of municipal facilities and prioritization and frequency of stormwater inspections for each facility, training component, and other pertinent information.

- A summary of the stormwater activities planned for the next reporting cycle
- A change in any identified BMPs or measurable goals for any of the MCMs
- The status of compliance with permit conditions
- An assessment of the appropriateness of existing BMPs and progress toward achieving identified measurable goals for each MCM, and
- Notice that the permittee is relying on another government entity to satisfy some of the permit obligations (if applicable)

SECTION 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.

SECTION K - DEFINITIONS (Part 10)

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