

# **STORMWATER MANAGEMENT PROGRAM (SWMP) Revised September 2008**

To fulfill requirements in the  
Small Municipal Separate Storm Sewer System (MS4)  
General Permit (AZG2002-002)



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Attachment 1, 2, 3 - Campus Maps; Attachment 4- Construction Inspection Checklist

## **1.0 INTRODUCTION**

The purpose of this Stormwater Management Program (SWMP) is to comply with Arizona Department of Environmental Quality's (ADEQ) general permit (AZG2002-002) for the discharges of stormwater from the Municipal Separate Storm Sewer Systems (MS4s) of the three Arizona State University Campuses (Tempe campus, Polytechnic campus and West campus), hereafter described as "University". The University desires to discharge under that permit and thus has completed the Notice of Intent (NOI) and this SWMP in accordance with Part III and Part V of the permit. The University intends to fully implement the conditions in this SWMP no later than June 30, 2009.

## **2.0 STORMWATER MANAGEMENT PROGRAM**

The University has evaluated the permit requirements for the six minimum control measures specified in Part V.B. of the general permit. Based on that review, the University has selected Best Management Practices (BMP's) for each control measure that the University believes will accomplish the goal of reducing pollution from stormwater runoff to the maximum extent practicable (MEP). The University has identified dates by which implementation of each BMP will begin, targeted completion dates for full implementation of each BMP, measurable goals and responsible persons for each action.

The action plan is itemized separately by control measure.

### ***2.1 QUALIFYING STATE OR LOCAL PROGRAM***

The University has developed new Best Management Practices in response to the need to apply for a municipal stormwater discharge permit. The University is not aware of any qualifying local or state programs that would adequately address the requirements of the Small MS4 General Permit.

### ***2.2 SHARING RESPONSIBILITY***

The University will have the responsibility to implement all measures within this SWMP. The individuals responsible for each program element are listed in the Tables and collectively presented within Table 4.7 Stormwater Program Contact Information.

### ***2.3 REVIEWING AND UPDATING THE SWMP***

The University will review the SWMP each summer, in conjunction with its preparation of the Annual Report, due September 30<sup>th</sup> annually, and evaluate the implementation status of the SWMP components as well as the effectiveness of each component or combination of components. If the SWMP needs to be revised, the University will identify these modifications in its Annual Report. If components of the SWMP need to be replaced, the University will provide ADEQ with proposed revisions including an explanation of why the practice is ineffective and how the replacement is expected to achieve the goals of the management practice.

## **2.4 MONITORING**

The University will evaluate program compliance, the appropriateness of identified BMP's, and progress towards achieving identified measurable goals. ASU's Tempe campus has retention areas for stormwater that eventually drain to the Salt River; ASU's West campus has a detention area (100-year, 2-hour storm) that drains to Sweetwater Avenue and eventually to the Agua Fria River; and ASU's Polytechnic campus drains into the East Maricopa Floodway through the North Perimeter Channel. At this time, a Total Maximum Daily Load (TMDL) has not been established for the referenced receiving waters. Also, none of these areas are listed on Arizona's 303(d) list. Therefore, the University will not sample and analyze the discharge from the small MS4 at this time.

## **2.5 ANNUAL REPORTS**

The University will submit Annual Reports to ADEQ by September 30 of each year for the preceding period of July 1 through June 30. The University will report on the information required in Part V.G. of the permit.

## **3.0 SITE INSPECTION PROCEDURES**

The University Services-Capital Programs Management Group (CPMG) Policy will cite the authorities of the University to control sediment, erosion and waste (particularly concrete wastes) and will also refer to the penalties associated with non-compliance. A schedule for publishing this University Services-CPMG Policy is explained in Table 4.3.1.

At the time of inspection, if there are any stormwater infractions, the University will refer these non-compliance activities to ADEQ.

Inspections will begin with an office review of maps including a familiarization with area roads, land uses and natural features. Inspectors will then review any documents pertaining to construction such as SWPPPs, site plan maps, other permits granted to the contractor, records of previous compliance, or NOIs. Inspections will be conducted according to the contract documents. Inspectors will follow the actions described below:

1. Introduce himself/herself as the University inspector and communicate with the contractor on the types of storm water management practices they'll be looking for while on the inspection.
2. Locate the on-site copy of the SWPPP and become familiar with any changes that have been made to the SWPPP.
3. Walk (or slowly drive) the perimeter of the site and note outfalls to water and/or drainage channels.
4. Inspect outfalls for signs of wastes and sediment. Document any waste or sediment.
5. Inspect active and inactive portions of the construction areas for properly installed BMP's and material storage.
6. Communicate with the contractor the status of compliance and if the site will be referred to ADEQ for further investigation.

#### **4.0 CONTROL MEASURES: BEST MANAGEMENT PRACTICES (BMPs) AND MEASURABLE GOALS**

The following pages provide tables identifying the six minimum control measures specified in Part V.B. of the general permit, the BMPs, measurable goals, responsibility party and pertinent dates. Table 4.7 provides a list of all program contacts.

## 4.1 PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS

**TABLE 4.1.1**

**Public Education and Outreach: BMP's and Measurable Goals**

Permit Condition	BMP's	Measurable Goal(s)	Responsibility	Start Date	Target Date for Achievement / Implementation
<i>Part V.B.1.a.</i>	Collect brochures, fact sheets, and other educational materials from federal, state, and local agencies or other MS4 web sites.	<ul style="list-style-type: none"> <li>University staff will contact agencies to obtain educational materials. The University Stormwater Management Program web page will be updated quarterly to ensure that the most current information is available.</li> </ul>	CPMG, Engineering Services, Program Manager, Joanne Rollins	03/03	06/09
<i>Part V.B.1.a.</i>	Distribute information to the university employees, students, and vendors.	<ul style="list-style-type: none"> <li>State Press (distributed to students, staff, faculty), Insight (distributed to faculty, staff), and Residence Life (residence hall students) will include education/outreach information in their publications. Copies of the materials used and number of individuals targeted for each publication are documented. As of March 2004, approximately 35,000 brochures had been distributed.</li> <li>University staff will update materials and include revised information in publications and meetings as they become available. Copies of the materials distributed and the number of individuals receiving the information will be documented.</li> </ul>	CPMG, Engineering Services, Program Manager, Joanne Rollins	03/03  04/04	03/04 achieved  06/09
<i>Part V.B.1.a.</i>	Establish a web page for the Stormwater Management Program.	<ul style="list-style-type: none"> <li>University staff has developed a Stormwater web page, which is on-line using available web info and additional input. The date and proof of establishment of the website will be documented. <a href="http://uabf.asu.edu/stormwater_program">http://uabf.asu.edu/stormwater_program</a></li> <li>University staff will update or work with a consultant to update the webpage as necessary. Copies of articles used, dates posted and website hits will be documented.</li> </ul>	CPMG, Engineering Services, Program Manager, Joanne Rollins	03/03  06/05	06/05 achieved  06/09

**4.1 PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS (continued)**

<b>TABLE 4.1.1 (continued)</b>					
<b>Public Education and Outreach: BMP's and Measurable Goals</b>					
<b>Permit Condition</b>	<b>BMP's</b>	<b>Measurable Goal(s)</b>	<b>Responsibility</b>	<b>Start Date</b>	<b>Target Date for Achievement / Implementation</b>
<i>Part V.B.1.a.</i>	Establish a library of educational materials on relevant stormwater matters.	<ul style="list-style-type: none"> <li>•University staff will collect materials and place the materials in public areas on campus, residence halls, and in the University Library as needed.</li> <li>•University staff will update these materials as needed and redistribute. Details on the updates made and number redistributed will be documented.</li> </ul>	CPMG, Engineering Services, Program Manager, Joanne Rollins	03/04  04/05	03/05 achieved  06/09
<i>Part V.B.1.a</i>	Respond to verbal or written public inquiries, comments, or concerns, about illicit disposal of wastes, etc., and/or requests for information.	<ul style="list-style-type: none"> <li>•The University will identify a principal contact and devise the best method for handling public inquiries. The method of handling inquiries will be documented.</li> <li>•The University contact will review the information and determine the best response. Response may be given over the phone, email or regular mail. The information will be referred to EH &amp; S personnel for follow-up. The number of comments received and issues addressed will be recorded.</li> </ul>	Environmental Health & Safety, Associate Director, Steven Hunter	03/03  03/04	03/04 achieved  06/09

**4.1 PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS (continued)**

**TABLE 4.1.2  
Public Education and Outreach: Additional Information**

<b>Permit Citation</b>	<b>Plan</b>
<i>Part V.B.1.b.i.</i>	The University consists of approximately 75,000 people (65,000 students, 5,000 staff and 5,000 faculty). An education and outreach program will be created and presented to the students, staff, faculty, and vendors. These people will be made aware of the hazards and costs of improper disposal of chemicals and products such as, but not limited to, motor oil, paints, solvents, and pesticides.
<i>Part V.B.1.b.ii.</i>	Public education and outreach will be conducted by a variety of methods that may include in-service training programs, distribution of brochures, and newspaper articles. Members of the University staff and/or paid students, as appropriate, will conduct meetings or deliver materials.
<i>Part V.B.1.b.iii.</i>	A Stormwater webpage has been added to the University website. The webpage addresses relevant stormwater topics.
<i>Part V.B.1.b.iv.</i>	Documents related to the SWMP and NOI will be made available on file at University Services-CPMG.
<i>Parts V.B.1.b.v. and V.B.1.b.vi.</i>	A list of measurable goals and dates scheduled to begin activities and to achieve the goals are specified in Table 4.1.1.
<i>Part V.B.1.b.vii.</i>	ASU Designee will have ultimate responsibility for implementing and coordinating the education activities. They may delegate this authority to other University staff.

## 4.2 PUBLIC INVOLVEMENT/PARTICIPATION

**TABLE 4.2.1**  
**Public Involvement/Participation: BMP's and Measurable Goals**

Permit Condition	BMP's	Measurable Goal(s)	Responsibility	Start Date	Target Date for Achievement / Implementation
<i>Parts V.B.2.a.</i>	University Services-CPMG will develop the SWMP.	University Services-CPMG is responsible for developing the SWMP, BMPs, measurable goals, and advising University staff on NPDES issues. A copy of the SWMP will be made available on the University's stormwater webpage.	CPMG, Engineering Services, Program Manager, Joanne Rollins	03/03	06/05 achieved
<i>Parts V.B.2.a.</i>	Create activities for students, faculty, and staff to clean-up campus and malls through ASU Clean & Beautiful.	<ul style="list-style-type: none"> <li>• University staff encourages students and staff to participate in activities such as ASU Clean &amp; Beautiful. ASU Clean &amp; Beautiful holds a minimum of one organized activity per year. The recommended cleanup activities; methods for engaging students, faculty and staff; and dates of program activities are documented.</li> </ul>	Facilities Management, Grounds Services, Assistant Director, Ellen Newell	03/04	06/09
<i>Parts V.B.2.a.</i>	Respond to verbal or written inquiries, comments, or concerns about illicit disposal of wastes, etc., and/or requests for information.	<ul style="list-style-type: none"> <li>•The University will identify a principal contact and devise the best method for handling the inquiries.</li> <li>• The University contact will review the information and determine the best response. Response may be given over the phone, email or regular mail. The information will be referred to EH &amp; S personnel for follow-up. The number of comments received and action taken will be documented.</li> </ul>	Environmental Health & Safety, Associate Director, Steven Hunter	03/03  03/04	03/04 achieved  06/09
<i>Parts V.B.2.b.</i>	Make the SWMP and Notice of Intent available to students and employees on campus.	•The SWMP and Notice of Intent will be made available to the public through campus publications and on the Stormwater webpage upon completion. The date of publication and proof of establishment of the website will be documented.	CPMG, Engineering Services, Program Manager, Joanne Rollins	03/03	06/05 achieved

## 4.2 PUBLIC INVOLVEMENT/PARTICIPATION (continued)

**TABLE 4.2.2**  
**Public Involvement/Participation: Additional Information**

Permit Citation	Plan
<i>Part V.B.2.c.i.</i>	The University has procedures for making students and employees aware of involvement and participation opportunities within the campus. These opportunities are published in posted notices throughout campus, newspapers, and/or listed on the University webpage. Generally, the meetings are open to students and University employees to voice comments on the proceedings. All relevant comments are considered. In some instances, students and employees are invited to apply to a committee or commission so that their ideas and voices can be provided to the elected officials. Interested applicants may apply in writing or via electronic applications. Applicants are interviewed by appropriate University staff and selected based on specific criteria.
<i>Part V.B.2.c.ii.</i>	The University provides opportunities for students, faculty, and staff involvement through programs such as, but not limited to, ASU Clean & Beautiful and Adopt a Mall. In an effort to capitalize on the beauty of the ASU campus, members of the university community organized a broad-based group called the ASU Clean & Beautiful Campaign Committee to study ways in which the campus setting could be improved through litter control both on the campus grounds and within the buildings. This group recommended that an ongoing effort be initiated to keep the campus litter free. This effort was launched in August 1998 with a campaign co-sponsored by the Associated Students of ASU and the Office of the Vice Provost for Administrative Services.
<i>Part V.B.2.c.iii.</i>	The University website will have a contact/comment option. The extent of review and response will be determined by the volume and subject matter of comments. The methods to handle comments will be developed as described in measurable goals, see Table 4.2.1.
<i>Part V.B.2.c.iv.</i>	Notices of meetings and important documents (SWMP, NOI) will be available on the University website at <a href="http://uabf.asu.edu/stormwater_program">http://uabf.asu.edu/stormwater_program</a> .
<i>Parts V.B.2.c.v. and V.B.2.c.vi.</i>	A list of measurable goals and dates scheduled to begin activities and to achieve the goals are specified in Table 4.2.1.
<i>Part V.B.2.c.vii.</i>	ASU Designee will be responsible for implementing and coordinating public involvement/participation activities. They may delegate this authority to other University staff personnel.

### 4.3 ILLICIT DISCHARGE DETENTION AND ELIMINATION

**TABLE 4.3.1  
Illicit Discharge Detection and Elimination: BMP's and Measurable Goals**

Permit Citation	BMP's	Measurable Goal(s)	Responsibility	Start Date	Target Date for Achievement/ Implementation
<i>Part V.B.3.a.</i>	Clean University parking areas to reduce possible contaminated runoff.	<ul style="list-style-type: none"> <li>•Prior to onset of the summer monsoon and winter rainy seasons, University staff will encourage people to clean impervious areas for the purpose of reducing contaminated runoff. Signage is being considered to educate and encourage those who utilize the parking lots to dispose of trash appropriately. The methods used to notify individuals, number of people contacted and benefits provided will be documented.</li> </ul>	Parking & Transit Services, Program Manager, Judi Nelson	03/03	12/07
<i>Part. V.B.3.b.</i>	Stormwater generally drains into on-campus retention basins (Tempe Campus, see Attachment 4B, C, D, & E), North Perimeter Channel (Polytechnic campus), and 100-year, 2-hour storm detention area (West campus). The West campus detention area drains into the storm drain at Sweetwater Avenue.	<ul style="list-style-type: none"> <li>•The University has engaged a civil engineering firm to map the storm drainage system and identify discharge points. The number of outfalls identified and percent of the overall storm drainage system mapped will be documented.</li> </ul>	CPMG, Architecture & Engineering Services, Associate Director, Vance Linden	04/06	12/07 achieved
<i>Part V.B.3.c.</i>	The University is developing a section in the Environmental Health & Safety Policy that addresses illicit discharges and dumping. The section will address identification and notification of the violator, and punitive measures, if applicable, that can be taken to correct the violation. The University will list the EPA/AZ categories of non-Stormwater discharges within the University boundaries as non-significant contributors of pollutants.	<ul style="list-style-type: none"> <li>•The University will review/revise the section of the Policy. Revisions will include updated enforcement policies/penalties.</li> <li>•University staff will incorporate illicit discharge inspections into regular inspection duties and take reports on illicit discharge sightings and complaints. The number and extent of complaints and results of action taken will be documented.</li> <li>•Enforcement action will be taken on those who violate the Policy in accordance with the University's policy enforcement code. The number of incidents recorded and actions taken will be documented.</li> </ul>	<p>Environmental Health &amp; Safety, Associate Director Steven Hunter</p> <p>Facilities Management, Grounds Services, Assistant Director, Ellen Newell</p> <p>Parking &amp; Transit Services, Program Manager, Judi Nelson</p>	<p>06/03</p> <p>04/04</p> <p>01/07</p>	<p>06/05 achieved</p> <p>6/06 achieved</p> <p>12/07 achieved</p>

### 4.3 ILLICIT DISCHARGE DETENTION AND ELIMINATION (continued)

**TABLE 4.3.1 (continued)**  
**Illicit Discharge Detection and Elimination: BMP's and Measurable Goals**

Permit Citation	BMP's	Measurable Goal(s)	Responsibility	Start Date	Target Date for Achievement / Implementation
<i>Part V.B.3.d.</i>	The University will train employees in the detection, collection, and identification of illicit discharges. If discharges or dumping are discovered, appropriately trained staff will determine if illicit discharging has occurred and, if necessary, will collect samples and send the samples to appropriate facilities for analyses. Sampling will be performed using "in-the-field" test kits. When samples are taken to a laboratory for analysis, the collection, preservation and analytical method will comply with the appropriate methods specified in the Arizona Department of Health Services rules.	•The University will develop a plan for systematic review of streets utilizing appropriate University staff. The plan will identify who will do various tasks, how these tasks will be done, what streets to inspect and how often.	Environmental Health & Safety, Associate Director, Steven Hunter	03/03	06/06 achieved
		•The University staff will evaluate street conditions and prioritize areas that appear more heavily impacted by illicit discharge activity.	Facilities Management, Grounds Services, Assistant Director, Ellen Newell	09/04	6/06 achieved
		•If offenders can be identified, they will be notified and held responsible for clean up. The number of incidents and actions taken will be documented.		01/07	12/07 achieved
<i>Part V.B.3.e.</i>	Notify University students, employees, and individuals of the hazards and costs of illicit discharges and improper disposal of waste through seminars and/or published and distributed information.	•University staff will be trained on the hazards of improper waste disposal and dumping. Dates of training and materials used will be documented.	Environmental Health & Safety, Associate Director, Steven Hunter	07/05	06/09
		•University staff will identify areas that are most likely to contribute illicit discharges to the storm sewer system.	Facilities Mgmt, Grounds Services, Assistant Director, Ellen Newell	03/05	06/05 achieved
		•University staff will notify the people responsible in the identified areas of the forthcoming section in the University Services-CPMG Policy that prohibits illicit discharges. Literature identifying costs and hazards will be developed.	Parking & Transit Services, Program Manager, Judi Nelson	07/05	12/07 achieved

**4.3 ILLICIT DISCHARGE DETENTION AND ELIMINATION (continued)**

<b>TABLE 4.3.1 (continued)</b>					
<b>Illicit Discharge Detection and Elimination: BMP's and Measurable Goals</b>					
<b>Permit Citation</b>	<b>BMP's</b>	<b>Measurable Goal(s)</b>	<b>Responsibility</b>	<b>Start Date</b>	<b>Target Date for Achievement / Implementation</b>
<i>Part V.B.3.f.</i>	The University has engaged the services of an engineering firm to design a master drainage plan that will retain all stormwater run-off on property, thereby eliminating outfalls. The University anticipates this design will be complete by 2007.	100% of outfalls will be screened and sampled annually. The location of outfalls screened, sampling information collected and action taken will be documented.	CPMG, Architecture & Engineering Services, Associate Director, Vance Linden	04/04	12/07 achieved
	While outfalls still exist the University staff will conduct dry weather field screening of the outfalls on a continual basis. When screening identifies the potential for an illicit discharge, trained University staff will perform a follow-up investigation within 15 days of receiving the information to study the information, to determine the source, and to take appropriate action to remedy the situation.	ASU has engaged a civil engineering firm to develop a Master Drainage Plan. A map identifying outfall locations and receiving streams will be developed as part of the Master Drainage Plan. The MDP is expected to recommend methods for reducing, or eliminating, outfalls.	Environmental Health & Safety, Associate Director, Steven Hunter  Facilities Mgmt, Grounds Services, Assistant Director, Ellen Newell	04/06	12/07 achieved

### 4.3 ILLICIT DISCHARGE DETENTION AND ELIMINATION (continued)

**TABLE 4.3.2**  
**Illicit Discharge Detection and Elimination: Additional Information**

Permit Citation	Plan
<i>Part V.B.3.g.i.</i>	The University will utilize dry weather field screening by students and University staff and other periodic inspections/screening by University staff to identify illicit discharges.
<i>Part V.B.3.g.ii.</i>	The University has policies and procedures to prohibit illicit discharges through University Services-CPMG. University Services-CPMG will place restrictions on illicit discharges, construction site waste/runoff, and post-construction design and long-term maintenance. Details that will address illicit discharges are located in Table 4.3.1 BMP for Part V.B.3.c.
<i>Part V.B.3.g.iii.</i>	The Tempe campus has retention areas for stormwater that eventually outfall to the Salt River; ASU's West campus has a detention area (100-year, 2-hour storm) that outfalls to Sweetwater Avenue and eventually to the Aqua Fria River; and ASU's Polytechnic campus outfalls into the East Maricopa Floodway through the North Perimeter Channel. At this time, a Total Maximum Daily Load (TMDL) has not been established for the referenced receiving waters. Also, none of these areas are listed on Arizona's 303(d) list. Therefore, the University will not sample and analyze the discharge from the small MS4 at this time. The University intends to enforce against illicit discharges that occur within the University boundaries. The University has jurisdiction over the land within the University boundaries. A map depicting the jurisdictional boundary for inspection and enforcement purposes is in Attachment 1, 2, and 3.
<i>Part V.B.3.g.iv.</i>	The University considers the discharges listed in Part I.C.2. of the permit to be allowable non-stormwater discharges. These discharges will be allowed by the MS4 Permit unless the University identifies them as a significant contributor of pollutants to the MS4.
<i>Part V.B.3.g.v.</i>	The University considers non-commercial or charitable events such as charity car washes to be insignificant contributors of pollutants and therefore, these discharges are not prohibited.
<i>Part V.B.3.g.vi.</i>	The University will hold a training course for appropriate University employees that involve class and field work. The University also will inform the staff about the proper channels for relaying information about illicit discharges.
<i>Part V.B.3.g.vii.</i>	The University will place information about prohibited discharges on the University website, distribute information brochures in key areas of campus, and in on-campus publications.
<i>Parts V.B.3.g.viii. and V.B.3.g.ix.</i>	A list of measurable goals and dates scheduled to begin activities and to achieve the goals are specified in Table 4.3.1.
<i>Part V.B.3.g.x.</i>	The Associate Director of Architecture & Engineering CPMG (Tempe campus), the Director of Facilities Management & Services (Polytechnic campus), and the Director of Finance & Auxiliary Services (West campus) are responsible for overseeing, implementing, and coordinating illicit discharge detection and elimination activities. They may delegate this authority to other University staff personnel. See Table 4.7 Stormwater Program Contacts.

#### 4.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

**TABLE 4.4.1  
Construction Site Stormwater Run-off Control: BMP's and Measurable Goals**

Permit Citation	BMP's	Measurable Goal(s)	Responsibility	Start Date	Target Date for Achievement/ Implementation	
<i>Part V.B.4.a.</i>	The University requires construction site contractors to submit a Stormwater Pollution Prevention Plan (SWPPP) that includes BMP's for erosion and sediment control on the construction site prior to beginning construction. The SWPPP must include a combination of structural and/or non-structural erosion and sediment control BMP's appropriate to the site. The requirements will be for one or more acres, as well as sites less than 1 acre that are a part of a larger development. The University uses a checklist to assess the contractor's plans. Upon receiving a copy of the Authorization Certificate issued by ADEQ from the contractor, a grading permit will be issued by the University.	<ul style="list-style-type: none"> <li>• University staff will prepare a brochure to explain the new requirements for 1 acre and larger sites, as well as sites less than 1 acre that are part of a larger development.</li> </ul>	CPMG, Engineering Services, Program Manager Joanne Rollins	03/03	06/03 achieved	
		<ul style="list-style-type: none"> <li>• University staff will inform operators in pre-construction meetings that a SWPPP will be required for 1 acre and larger sites, as well as sites less than 1 acre that are part of a larger developments.</li> </ul>		03/03	06/09	
<i>Part V.B.4.b.</i>	The University follows State requirements that address discharge violations that occur during construction activities and provisions for authority to inspect construction sites.	<ul style="list-style-type: none"> <li>• A new Stormwater section of the University Services-CPMG Policy will be developed and implemented. This will address sediment and erosion control, enforcement policies/penalties and other construction related issues.</li> </ul>	CPMG, Engineering Services, Program Manager Joanne Rollins	07/03	06/06 achieved	
		<ul style="list-style-type: none"> <li>• University staff will define construction site inspection procedures, incorporate them into regular inspection duties and take reports on illicit discharge sightings and complaints.</li> </ul>		CPMG, Architecture & Engineering Services, Associate Director, Vance Linden	01/06	12/07 achieved
		<ul style="list-style-type: none"> <li>• Enforcement action will be taken on those who violate the University Services-CPMG Policy. The number of violations and actions taken will be documented.</li> </ul>		Vance Linden	01/07	12/07 achieved

**4.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL (continued)**

**TABLE 4.4.1 (continued)**  
**Construction Site Stormwater Run-off Control: BMP's and Measurable Goals**

<b>Permit Citation</b>	<b>BMP's</b>	<b>Measurable Goal(s)</b>	<b>Responsibility</b>	<b>Start Date</b>	<b>Target Date for Achievement/ Implementation</b>
<i>Part V.B.4.c.</i>	The University will consider the "site plan" to be the SWPPP created by the contractor. The University will hold pre-construction meetings to describe elements that must be included in the SWPPP (which the contractor will provide) to address the University Services-CPMG Policy. The University will use a checklist to verify completeness of SWPPPs, call the contractor to confirm that the SWPPP is in compliance with the University Services-CPMG Policy and send a form letter to the contractor to confirm the telephone contact.	•University staff will develop a checklist for SWPPP completeness. In the meantime, the contractor will use ADEQ's checklist for completeness of the SWPPP prepared for the ADEQ Construction General Permit.	CPMG, Engineering Services, Program Manager, Joanne Rollins	03/03	10/03 achieved
		•The University will establish protocols for who reviews the plans, how much time staff should spend reviewing the plans, filing, and tracking. The number of plans reviewed and enforcement actions taken will be documented.	CPMG, Architecture & Engineering Services, Associate Director, Vance Linden	01/04	12/07 achieved
<i>Part V.B.4.d.</i>	The Stormwater section of the University Services-CPMG Policy addresses discharge violations that occur during construction activities, including discharges of trash oil, and grease. The Stormwater section of the University Services-CPMG Policy also has provisions for an authority to inspect construction sites. Site inspections are performed per contract documents. Inspections will be extended to include sites larger than 1 acre, as well as sites less than 1 acre that are part of a larger development.	•A pre-construction stormwater retention plan was implemented for the new Lattie F. Coor Building.	CPMG, Architecture & Engineering Services, Associate Director, Vance Linden	04/02	11/03 achieved
		• The University will review/revise the Stormwater section of the University Services-CPMG Policy to address discharge violations. Revisions will include updated enforcement policies and penalties.		03/04	12/07 achieved

#### 4.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL (continued)

**TABLE 4.4.2**  
**Construction Site Stormwater Run-off Control: Additional Information**

Permit Citation	Plan
<i>Part V.B.4.e.i.</i>	The University will ensure proper management of wastewater on construction sites per State regulations under their General Permit (See BMP's under Table 4.4.1). The University plans to adopt restrictions, particularly for concrete truck washout and trash on the construction site.
<i>Part V.B.4.e.ii.</i>	The State requirements provide the University with the authority to identify items that do not comply with the SWPPP and notify the contractor to correct them. The University proposes to include similar conditions in the Stormwater section of the University Services-CPMG Policy. The University Services-CPMG Policy will place restrictions on illicit discharges, construction site waste/runoff, and post-construction design and long-term maintenance. Details that will address construction site waste/runoff are located in Table 4.4.1 BMP's for Part V.B.4.d.
<i>Part V.B.4.e.iii.</i>	The procedures for Site Inspections and site plan review along with enforcement of control measures are specified in Attachment 4.
<i>Part V.B.4.e.iv.</i>	BMP's for <i>Public Information and Outreach on Stormwater Impacts</i> and for <i>Public Involvement/Participation</i> address methods by which the students, staff, and faculty can report on construction site activities to the University.
<i>Parts V.B.4.e.v. and V.B.4.e.vi.</i>	A list of measurable goals and dates scheduled to begin activities and to achieve the goals are specified in Table 4.4.1.
<i>Part V.B.4.e.vii.</i>	The Associate Director of Engineering CPMG (Tempe campus), the Director of Facilities Management & Services (Polytechnic campus), and the Director of Finance & Auxiliary Services (West campus) are responsible for overseeing construction site activities. They may delegate this authority to other University staff personnel. See Table 4.7 Stormwater Program Contacts.

## 4.5 POST CONSTRUCTION STORMWATER MANAGEMENT

**TABLE 4.5.1**  
**Post Construction Stormwater Management: BMP's and Measurable Goals**

Permit Citation	BMP's	Measurable Goal(s)	Responsibility	Start Date	Target Date for Achievement/ Implementation
Part V.B.5.a.	The University is in the process of updating the Master Drainage Plan. Recent rains have shown several drainage problem areas. The Master Plan can be used to develop other relevant stormwater run-off and drainage ordinances that may not yet be written or approved. The University plans to incorporate the findings of the Master Drainage Study into the University Services-CPMG Policy. Building inspectors will be trained to look for compliance with the stormwater drainage design criteria.	<ul style="list-style-type: none"> <li>• University staff will review all current information related to long-term drainage control.</li> <li>• A new Stormwater section will be added to the University Services-CPMG Policy.</li> <li>• Enforcement action will be taken on those who violate the Policy in accordance with the University's enforcement code. The number of violations and enforcement actions taken will be documented.</li> <li>• University staff will train building inspectors to judge compliance with the Policy's design criteria. The training materials used, persons in attendance, and dates of training will be documented.</li> <li>• Future construction projects will address post-construction stormwater retention.</li> </ul>	CPMG, Architecture & Engineering Services, Associate Director, Vance Linden	07/03	12/06 achieved
				01/06	12/06 achieved
				04/04	12/07 achieved
				01/07	12/07 achieved
				04/03	12/07 achieved
Part V.B.5.b.	University Services-CPMG will meet quarterly to discuss an approach to management of water quality and water quantity.	<ul style="list-style-type: none"> <li>• University staff will investigate training opportunities for water management issues. The training materials used, persons in attendance, and dates of training will be documented.</li> <li>• The panel will update policies and provide technical input for the University Services-CPMG Policy and revisions to the stormwater drainage design criteria on an annual basis.</li> </ul>	CPMG, Architecture & Engineering Services, Associate Director, Vance Linden	01/05	12/07 achieved
				02/05	06/09

## 4.5 POST CONSTRUCTION STORMWATER MANAGEMENT (continued)

**TABLE 4.5.1 (continued)**  
**Post Construction Stormwater Management: BMP's and Measurable Goals**

<b>Permit Citation</b>	<b>BMP's</b>	<b>Measurable Goal(s)</b>	<b>Responsibility</b>	<b>Start Date</b>	<b>Target Date for Achievement/ Implementation</b>
Part V.B.5.c.	The University will use the University Services-CPMG Policy design criteria to address stormwater quality and quantity for projects greater than or equal to one acre, and sites less than one acre that are part of a larger development, giving consideration to the impact downstream. The University Services-CPMG Policy will include a maintenance requirement for structural or non-structural BMP's, i.e., detention basins, sediment run-off controls, landscaping or vegetation restoration, etc.	•University staff will review all information related to long-term drainage control.	CPMG, Architecture & Engineering Services, Associate Director, Vance Linden	06/06	12/07 achieved
		•Action will be taken on those who violate the University Services-CPMG Policy in accordance with the University's enforcement code. The number of violations and enforcement actions taken will be documented.		04/03	12/07 achieved
		• A new Stormwater section will be added to the University Services-CPMG Policy.		01/07	12/07 achieved
Part V.B.5.d	The University Services-CPMG Policy will require that contractors institute long-term operation and maintenance BMP's on projects greater than or equal to one acre, as well as sites that are less than one acre and part of a larger development.	•The University will educate developers, designers and the general public about the University Services-CPMG Policy's alternative design options and long-term maintenance requirements as part of the Public Education program. Contractors, Developers and Architects will be given information during pre-construction meetings. The materials used and number of pre-construction meetings will be documented.	CPMG, Engineering Services, Program Manager, Joanne Rollins	04/03	06/09
		•The University conducts periodic drywell maintenance. 100% of the drywells are maintained by an outside drywell contractor and are inspected annually.		04/03	06/09
		•The University requires operators to maintain BMP's at the site until Notice of Termination (NOT). The University requires the operator to provide a copy of the NOT as well as file with ADEQ. A procedure to ensure compliance through contractual obligation with penalties is being developed.		04/03	06/09

**4.5 POST CONSTRUCTION STORMWATER MANAGEMENT (continued)**

**TABLE 4.5.2**

## Post Construction Stormwater Management: Additional Information

Permit Citation	Plan
<i>Part V.B.5.e.i.</i>	The University will include post-construction stormwater management measures in its University Services-CPMG Policy. The University plans to establish a technical committee of water quantity and quality for the purpose of integrating requirements of both programs. The committee will use the Master Drainage Plan as a basis for evaluating appropriate recommendations for the University Services-CPMG Policy.
<i>Part V.B.5.e.ii.</i>	The University has policies and procedures to control post-construction runoff through its University Services-CPMG Policy. The Policy will place restrictions on illicit discharges, construction site waste/runoff, and post-construction design and long-term maintenance. Details on the portion of the Policy that will address post-construction is located in Table 4.5.1 BMP's, Part V.B.5.c.
<i>Part V.B.5.e.iii.</i>	Compliance procedures are specified in the Site Inspection Procedures. These procedures apply to current and new construction, and may change depending upon University Services-CPMG Policy language.
<i>Part V.B.5.e.iv.</i>	BMP's for <i>Public Information and Outreach on Stormwater Impacts</i> and for <i>Public Involvement/Participation</i> address methods by which contractors, developers, architects and the general public will learn about project designs that minimize water quality impacts. University Services-CPMG Policy requirements will be explained initially during the construction review stage, during preconstruction conferences, and as required thereafter based on contractor needs, problems uncovered during site inspections, or University Services-CPMG Policy modification.
<i>Parts V.B.5.e.v. and V.B.5.e.vi.</i>	A list of measurable goals and dates scheduled to begin activities and to achieve the goals are specified in Table 4.5.1.
<i>Part V.B.5.e.vii.</i>	The Associate Director of Engineering, CPMG (Tempe campus), the Director of Facilities Management (Polytechnic campus), and the Director of Finance & Auxiliary Services (West campus) are responsible for overseeing post construction stormwater management. They may delegate this authority to other University staff personnel. See Table 4.7 Stormwater Contact Information

#### 4.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING

**TABLE 4.6.1  
Pollution Prevention/Good Housekeeping: BMP's and Measurable Goals**

Permit Citation	BMP's	Measurable Goal(s)	Responsibility	Start Date	Target Date for Achievement
<i>Part V.B.6.a.i.</i>	Revise existing University policies and documents related to pollution prevention that includes maintenance activities, schedules, and inspection procedures for structural and non-structural controls to reduce floatable and other pollutants dumped into streets, etc. University Services-CPMG will oversee the development of a University Pollution Prevention Plan. The revised University Pollution Prevention Plan will address storage of materials, proper materials handling, drainage, drywell cleaning procedures and in-house safety/environmental inspections.	<ul style="list-style-type: none"> <li>• University Services-CPMG will review current applicable documents and procedures. The initial meeting will determine what further meetings are necessary. The University anticipates that the meetings will occur every 6 months. Meeting dates and items reviewed/revised are documented.</li> <li>•The University selected a knowledgeable staff member as a trainer.</li> <li>•An initial training will be scheduled upon completion of a revised University Pollution Prevention Plan. Refresher training will occur on an annual basis. New employees will be trained along with training on safety and other aspects of the University Pollution Prevention Plan. The training materials used, persons in attendance, and dates of training will be documented.</li> <li>•Several drywells have been installed and condition of existing wells have been documented.</li> </ul>	EH & S, Associate Director, Steven Hunter	01/04	01/06 achieved
				02/06	12/07 achieved
				05/06	06/09
				03/03	03/04 achieved
<i>Part V.B.6.a.ii.</i>	The University will identify streets needing drainage repair and will incorporate water quality improvements into new drainage designs per the Master Drainage Plan.	<ul style="list-style-type: none"> <li>•The University Grounds Services will be asked to assess drainage system for oil, grease, odor, algae growth and trash and to provide the pollution prevention coordinator with information on problematic areas.</li> <li>•The University public works and transportation departments will work together with the technical committee of water quality and water quantity programs to address existing and planned drainage systems per the Master Drainage Plan.</li> </ul>	Facilities Management, Grounds Services, Assistant Director, Ellen Newell	06/03	06/09
			CPMG, Architecture & Engineering Services, Associate Director, Vance Linden	02/05	06/09

**4.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING (continued)**

**TABLE 4.6.1 (continued)  
Pollution Prevention/Good Housekeeping: BMP's and Measurable Goals**

<b>Permit Citation</b>	<b>BMP's</b>	<b>Measurable Goal(s)</b>	<b>Responsibility</b>	<b>Start Date</b>	<b>Target Date for Achievement</b>
<i>Part V.B.6.a.ii.</i>	Campus parking lots and storage yards will be monitored for oil and grease runoff. The University may consider adding oil/water separators to some facilities.	<ul style="list-style-type: none"> <li>•University staff will be asked to qualitatively monitor for oil and grease sheens leaving the parking lots and storage yards. Staff will be asked to make recommendations to the Parking &amp; Transit Services, Program Manager concerning possible installation of oil/water separators.</li> </ul>	Facilities Management, Grounds Services, Assistant Director, Ellen Newell	05/06	06/09
		<ul style="list-style-type: none"> <li>•The Facilities Management Assistant Director will investigate potential for installation of oil/water separators. If oil/water separators are to be installed, the University will address the schedule to do so in future annual reports and/or revisions to the SWMP.</li> </ul>	Parking & Transit Services, Program Manager, Judi Nelson	01/07	06/07 achieved
		<ul style="list-style-type: none"> <li>•The University staff member selected as the trainer will incorporate any BMPs for road maintenance into the Pollution Prevention Plan and associated training.</li> </ul>		05/06	06/09
		<ul style="list-style-type: none"> <li>•Currently ASU outsources the street sweeping activities. The existing street sweeping program will be reviewed and revised, if necessary, to target problem areas. The miles of street cleaned, amount of trash removed and frequency of street cleaning will be documented.</li> </ul>		01/07	06/09
		<ul style="list-style-type: none"> <li>•The existing catch basin cleaning program will be reviewed and revised, if necessary. The number of basins cleaned, amount of trash removed and frequency of cleaning will be documented.</li> </ul>		01/07	06/09
<i>Part V.B.6.a.iii.</i>	The University will use existing waste disposal services to remove waste. Floatables and other debris collected on site and as part of drainage clean-up efforts will be taken to dumpsters that are served by the University's waste disposal services.	<ul style="list-style-type: none"> <li>•As part of the illicit discharge detection efforts, maintenance staff will remove floatables. These persons will be educated in proper methods for disposal of floatable and other waste materials. Floatables will be removed in conjunction with dry weather field screenings. The amount of floatable/debris removed will be documented.</li> </ul>	Facilities Management, Grounds Services, Assistant Director, Ellen Newell  Environmental Health & Safety, Associate Director, Steven Hunter	09/04	06/09

**4.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING (continued)**

**TABLE 4.6.2**  
**Pollution Prevention/Good Housekeeping: Additional Information**

Permit Citation	Plan
<i>Part V.B.6.b.i.</i>	The following operations impacted by this operation and maintenance program are: University Parking and Transit Services University Services-CPMG and Facilities Management
<i>Part V.B.6.b.ii.</i>	The employee training will include aspects of the University Pollution Prevention Plan that is to be developed by University Services-CPMG. BMP's in Table 4.6.1 address various aspects of employee training.
<i>Parts V.B.6.b.iii. and V.B.6.b.iv.</i>	A list of measurable goals and dates scheduled to begin activities and to achieve the goals are specified in Table 4.6.1.
<i>Part V.B.6.b.v.</i>	The EH&S Associate Director (Tempe campus), The Facilities Management Director (Polytechnic campus), and the Finance & Auxiliary Services Director (West campus) are responsible for implementing and coordinating employee training and pollution prevention activities. They may delegate this authority to other University staff personnel

#### **4.7 STORMWATER PROGRAM CONTACT**

<b>TABLE 4.7 Contact Information</b>				
Name	Title	Department	Telephone	Email
Vance Linden, AIA	Associate Director	Capital Programs Mgmt Group, Architecture & Engineering Services	(480) 965-1845	vance.linden@asu.edu
Joanne Rollins	Program Manager	Capital Programs Mgmt Group, Engineering Services	(480) 727-0918	joanne.rollins@asu.edu
Russell Flaherty	Director, Finance & Auxiliary Services	ASU West campus	(602) 543-7750	russell.flaherty@asu.edu
Steven Hunter	Associate Director	Environmental Health & Safety	(480) 965-1893	steven.hunter@asu.edu
Judi Nelson	Program Manager	Parking & Transit Services	(480) 965-0472	juliet.nelson@asu.edu
Ellen Newell	Assistant Director	Facilities Mgmt, Grounds Svcs	(480) 965-2682	ellen.newell@asu.edu
Kevin Shafer	Director, Facilities Management	ASU Polytechnic campus	(480) 727-1112	kevin.shafer@asu.edu