STORMWATER MANAGEMENT PROGRAM

Revised - September 2023

To fulfill the requirements of the
General Permit for Stormwater Discharges from
Small ASU Separate Storm Sewer System (MS4)
Permit No. AZG2021-002

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ABBREVIATIONS / ACRONYMS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ASU	Arizona State University
AZ	Arizona
AZPDES	Arizona Pollutant Discharge Elimination System
CSS	Construction Support Services
BMP	Best Management Practice
CFR	Code of Federal Regulation
CPMG	Capital Programs Management Group
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EH&S	Environmental Health and Safety
EPA	Environmental Protection Agency
IDDE	Illicit Discharge Detection and Elimination
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MS4	ASU Separate Storm Sewer System
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
SWMP	Stormwater Management Program

EXECUTIVE SUMMARY

This Stormwater Management Program (SWMP) has been prepared by Arizona State University (ASU). This SWMP was prepared in general conformance with the Arizona Department of Environmental Quality (ADEQ), Arizona Pollutant Discharge Elimination System (AZPDES) General Permit Number AZG2021-002 (Permit) for Stormwater Discharges from Small ASU Separate Storm Sewer Systems (MS4). The Permit was issued by ADEQ effective September 30, 2021.

This SWMP describes the policies and procedures ASU implements to reduce, to the maximum extent practicable (MEP), pollutant discharges to and from the small ASU Separate Storm Sewer System (MS4). The overall goal of the program is to ensure to the MEP that discharges from the MS4 do not cause or contribute to exceedances of surface water quality standards.

As required by the Permit, this SWMP addresses the six minimum control measures:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Activity Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention and Good Housekeeping for ASU Operations

This SWMP is designed to be a comprehensive program document outlining how the stormwater program is implemented and maintained and includes other Permit-required support activities, including training, SWMP evaluation and revision, reporting, and signatory requirements.

This SWMP describes the best management practices ASU implements and also describes the overall approach to stormwater pollution prevention planned by ASU.

This SWMP addresses the requirements of the Permit and reflects the needs and constraints of ASU. The SWMP complies with the provisions of the Arizona Revised Statutes (A.R.S.), Title 49, Chapter 2, Article 3.1, the Arizona Administrative Code (A.C.C.), Title 18, the Clean Water Act as amended (33 U.S.C. 1251 *et seq*, and the requirements specified in the Code of Federal Regulations Chapter 40 Part 122.34 and A.R.S. Title 49 Chapter 2, Article 3.1 *et seq*, This SWMP has been prepared to meet the requirements identified in the Permit and is certified according to Permit Section 9(9)(c).

1.0 CERTIFICATION STATEMENT

Permittee Name: Arizona State University

Permit Number: AZG2021-002

Stormwater Management Program Contact:	Certifying Official:
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I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Alexander Kohnen, Vice President
Arizona State University
Facilities Development and Management

9/21/23
Date

2.0 INTRODUCTION

This SWMP has been prepared by ASU in general conformance with the ADEQ's AZPDES Permit (AZG2021-002) as promulgated on September 30, 2021. A copy of the Permit is included in Attachment A. ASU desires to discharge under that permit and thus has submitted the Notice of Intent (NOI) and prepared and implemented this SWMP in accordance with Sections 2 and 5 of the Permit. ASU filed the NOI on November 8, 2021. A copy of the NOI is included as Attachment B.

ASU owns and operates state-owned storm sewer systems; therefore, it meets the definition of a Non-Traditional Small MS4. Because of the unique structure and features of a Non-Traditional Small MS4, some of the traditional SWMP elements have been modified or may not be entirely applicable.

The SWMP describes the policies and procedures ASU implements to reduce, to the MEP, pollutant discharges to and from the Non-Traditional Small MS4. The overall goal of the program is to ensure to the MEP that discharges from the Non-Traditional Small MS4 do not cause or contribute to exceedances of surface water quality standards.

ASU has developed best management practices for the six minimum control measures (MCMs) to reduce the discharge of pollutants to the MEP. The MCMs are discussed in detail in Section 3 and include:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Activity Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention and Good Housekeeping for ASU Operations

2.1. Regulatory Background

In response to concern over the pollution in America's waterways, Congress passed the Clean Water Act (CWA) in 1972. The CWA is the primary federal law that protects our nation's surface water bodies or waters of the United States. Polluted stormwater runoff was addressed specifically under the CWA by a two-phase program that relies on the National Pollutant Discharge Elimination System (NPDES) permit coverage. The two phases of the NPDES stormwater program are known as Phase I and Phase II.

In 1990, the Environmental Protection Agency (EPA) implemented Phase I of the NPDES Stormwater Program under the CWA. Phase I relies on National Pollutant Discharge Elimination System (NPDES) permit coverage to address stormwater runoff pollution from medium and large MS4s generally serving populations over 100,000 or greater, construction activities disturbing 5 acres of land or greater, and 10 categories of industrial activities.

To expand the protection of water bodies and promote cleaner water, Phase II Final Rule was published in 40 Code of Federal Regulation (CFR) on December 8, 1999. This rule extends the NPDES permit coverage to include Small MS4s serving urbanized areas with residential population of at least 50,000 with an overall density of at least 1,000 people per square mile and small construction activities. Public universities are included in the Phase II Final Rule under 40 CFR 122.26 (b)(16)(iii), as "…systems similar to separate storm sewer systems in public areas, such as systems at military bases, large hospitals or prison complexes..." and therefore, is required to comply with the Phase II Final Rule requirements.

The goals of the Phase II Final Rule are similar to the Phase I program, which are to reduce the discharge of pollutants to the MEP, protect water quality, and satisfy the water quality requirements of the CWA. The Arizona Department of Environmental Quality (ADEQ) has primacy and administers the NPDES program in Arizona through their AZPDES program. ASU submitted its original NOI application prior to the March 29, 2017 deadline to the ADEQ. By submitting the NOI, ASU effectively applied for coverage under Permit No. AZG2016-002. ASU's original SWMP dated March 2003 and revisions dated July 2006, September 2008 March 2011 and June 2017, were submitted to ADEQ as part of the general permit requirements.

Subsequently, the Arizona Department of Environmental Quality amended the Arizona Pollutant Discharge Elimination System General Permit for Stormwater Discharges from Small Municipal Separate Sewer Systems to Protected Surface Waters to implement the State of Arizona's new state Surface Water Protection Program (SWPP) in accordance with A.R.S. Title 49 Chapter 2, Article 3.1. The new permit includes updated and new definitions including the terms Protected Surface Water, Waters of the United States (WOTUS) and non-WOTUS protected surface waters. Per the new provisions, Protected Surface Waters means waters of the State listed on the protected surface water list under Section A.R.S. Section 49-221, Subsection G and all WOTUS. WOTUS means a protected surface water that are also navigable waters as defined by the federal Clean Water Act and are federally regulated. Non-WOTUS protected surface water means a protected surface water that is not a WOTUS, and is regulated solely by the State of Arizona. The state issued the revised general permit, AZG2021-002 effective September 30, 2021. The 2021 general permit incorporates the provisions of the previous general permit and includes new provisions reflecting the state's new surface water protections.

ASU applied for permission to discharge under the new 2021 general permit prior to the November 30, 2021 deadline, receiving coverage approval November 8, 2021.

2.2. Climate and Geographic Setting

ASU has three campuses covered by the Permit in Maricopa County: Main campus (Tempe), Polytechnic campus (Mesa) and West campus (Phoenix) hereafter referred to as "ASU" (Attachment C).

Average annual precipitation ranges from between 6 and 8 inches per year for the Maricopa County Flood Control District precipitation stations located near each campus. There are two characteristic types of rain events: winter storms and summer storms. Winter storms generally occur between October and May with light to moderate precipitation extending over relatively large areas and lasting several hours. The heaviest precipitation occurs between December and March. Summer storms generally occur between June and September, and include the summer monsoon season. These storms are characterized by bands of locally heavy rain within larger areas of light to moderate rainfall. Localized heavy storms are generally of shorter duration than winter storms, often lasting less than one hour.

The geographic settings of each campus are described below:

2.2.1. Main Campus

The Main campus is located within the City of Tempe and is comprised of approximately 661 acres, bounded on the north by Tempe Town Lake, on the west by Mill Avenue, on the east by McClintock Road and on the south by Vista del Cerro Drive and Southern Pacific Railroad (Attachment C). The majority of the Main campus is fully developed, encompassing more than 300 facilities, which include buildings and parking structures. The majority of the open space is located in the Student Recreation Center sports fields in the southeast. The Tempe campus is located 0.6 miles south of the Salt River. The Tempe campus is relatively flat, with a slight slope from the northeast towards the southeast.

In conformance with the City of Tempe regulations, it is ASU's intent that all runoff from a 100-year, 1-hour storm event is retained within the boundaries of the Tempe campus. The Main campus stormwater runoff is retained on campus with an engineered drainage system consisting of drywells, retention basins, underground retention vaults and arch chamber retention basins. Any flow in excess of the design storm would flow along topographic lows toward the Salt River. The details of the Main campus drainage system were described in a report prepared in February 2007. Since that report was completed, ASU has added significant additional retention.

2.2.2. Polytechnic Campus

The Polytechnic campus is located within the former Williams Air Force Base, now referred to as the Phoenix-Mesa Gateway Airport (Attachment C). The Phoenix-Mesa Gateway Airport complex is located in the southeastern portion of the City of Mesa, Maricopa County, Arizona. The Polytechnic campus is approximately 574 acres in size, and is roughly bounded on the north by Ray Road, on the east by Sossaman Road, on the south by the Pecos Road alignment, and on the west by Power Road and the East Maricopa Floodway.

Details of the Polytechnic drainage system are presented in the GLHN Architects & Engineers' 2005 report. In general, the Polytechnic campus is located within a larger master-planned development called the Williams Gateway Mesa Airport Complex. The Polytechnic campus land use is primarily comprised of student housing, sports fields, educational

facilities, paved roads, and parking systems. Aside from the sports field areas, the open space is landscaped with native desert plants. When redevelopment is undertaken on the Polytechnic campus, drainage designs will conform to Mesa's current drainage regulations. The Polytechnic campus has drywells that ASU routinely monitors and maintains. The Polytechnic stormwater runoff is discharged into the East Maricopa Floodway via three outfalls (see map in Attachment C).

2.2.3. West Campus

The West campus consists of approximately 278 acres and is located within the City of Phoenix, Maricopa County, Arizona (Attachment C). The West campus is bounded by Thunderbird Road to the north, 43rd Avenue to the east, Sweetwater Avenue to the south, and 51st Avenue to the west.

Details of the West campus drainage system are presented in the report issued in 2019. According to this report, off-site stormwater runoff does not impact the West campus. Additionally, the West campus has constructed on-site landscaping berms that further prevent off-site stormwater flows from impacting ASU property. The West campus drainage system generally conforms to the City of Phoenix Stormwater Policies and Standards. The West campus generally slopes from the northeast, towards the southwest, and stormwater is retained on site via a series of retention basins. Overflow structures in the two southern-most retention basins discharge to the City of Phoenix MS4 (see map in Attachment C). Stormwater from this area of Phoenix discharges to the Arizona Canal, then to Skunk Creek which discharges to the Agua Fria River.

2.3. Receiving Waters

The receiving waters for the three campuses are described in Section 2.2 and listed below:

Main Campus	Tempe Town Lake/Salt River via the City of Tempe MS4
Polytechnic Campus	East Maricopa Floodway
West Campus	Arizona Canal via City of Phoenix MS4

None of these receiving waters are impaired or Outstanding Arizona Waters

2.4. SWMP Implementation

Overall responsibility for administering the Permit and SWMP rests with ASU FDM-Construction Support Services (CSS); however, implementing the SWMP requires participation from multiple departments throughout ASU. Key supporting departments include Facilities Management, Environmental Health and Safety, Parking and Transit Services, and Facilities Management Grounds Services. A Stormwater Organizational Chart of the personnel involved in supporting the SWMP is included in Attachment D. Also included in Attachment D is a table of responsibilities for SWMP implementation. The department responsible for each best management practice (BMP) has been identified on the

implementation schedule in Attachment E. This SWMP is meant to be a living document and as departments, responsibilities, personnel, and procedures/practices change at ASU, this information will be updated accordingly. Completed and renamed BMPs from the 2017 SWMP are listed in Attachment F. Changes to the SWMP are documented in the SWMP Modification Log provided in Attachment G.

2.5. Modifications from 2017 SWMP

ASU's previous SWMP was last revised in June 2017 and was designed to comply with the provisions of the AZPDES Non-Traditional Small MS4 General Permit (AZG2016-002). This revised SWMP complies with the provisions of the AZPDES Non-Traditional Small MS4 General Permit (AZG2021-002). Attachment F consists of a table summarizing the completed and renamed or reorganized BMPs from the 2017 SWMP.

3.0 MINIMUM CONTROL MEASURES

ASU has evaluated the permit requirements for the six MCMs specified in Section 6.0 of the Permit. Based on that review, ASU has selected best management practices for each MCM that will accomplish the goal of minimizing pollution from stormwater runoff to the maximum extent practicable. Each BMP is then broken down into measurable goals.

ASU has identified BMPs, frequency for each BMP, target audiences (where applicable), measurable goals, indicators of progress or success, and responsible persons for each action. A table summarizing the BMPs and listing measureable goals for each MCM is provided in Attachment E.

3.1. MCM 1 – Public Education and Outreach

ASU's educational program focuses on the impacts of stormwater discharges to and from the MS4. ASU will provide public education, outreach to at least one (1) target group, and focus its efforts on conveying relevant messages using one (1) or more appropriate topics during each year of the permit term.

Stormwater pollution prevention leads to an informed and knowledgeable community that is more likely to support and comply with BMPs. This section identifies the target audiences, the messages for each audience, indicators of success, and the method of distribution. The implementation schedule, responsible party and measureable goals are provided in Attachment E.

The target audience for this MCM consists of ASU faculty, staff, students, visitors and contractors at the campuses on any given day. Of these, only students in residence halls live on campus. All others reside in other areas, generally covered by other MS4s. The target pollutants for the public education and outreach campaign consist of: hazardous waste; pesticides, herbicides, and fungicides; pet waste; plant waste; waste automotive fluids; litter; and sediment.

The following table summarizes the target audiences, the message for each audience, and the method of distribution.

MCM	Distribution Method	Target Audience	Message
1-1	Stormwater Website	Students, faculty, staff, and visitors	General stormwater awareness; identifying and reporting spills and releases
1-2	School of Sustainability Website	Students living on campus	Proper waste disposal; identifying and reporting spills
1-3	Parking and Transit permit holders email	Campus parking permit holders	Keep parking areas clean and free of debris

These are discussed in more detail in the remainder of this section.

MCM 1-1 Stormwater Website

FDM-Asset Management maintains a stormwater website at https://cfo.asu.edu/stormwater-program. This website lists the mission of the stormwater program and provides links to numerous documents including:

- Stormwater Management Program (SWMP)
- Notice of Intent
- Illicit Discharge Detection and Elimination (IDDE) Plan
- Annual Report
- Construction Site Procedures for Contractors

The site also includes links to ADEQ's Construction Stormwater Permit website as a guide for contractors seeking coverage under the Construction General Permit for work on campus.

In addition, the site includes a section entitled "Reduce runoff pollution." This section provides information about nonpoint source pollution from households and general stormwater pollution prevention. Measurable goals for this MCM are provided in Attachment E.

MCM 1-2 Sustainable Campus Webpage

ASU maintains a Sustainable Campus websites at https://sustainability-innovation.asu.edu/ and https://cfo.asu.edu/sustainable-sun-devils which describe various sustainability efforts at ASU. Measurable goal for this MCM is provided in Attachment E.

MCM 1-3 Parking Permit Holders Email

ASU Parking and Transit Services notifies parking permit holders via general email of the need to keep parking areas clean and free of debris. Permit holders must agree to adhere to stormwater best management practices for pollution prevention as part of the university's parking agreement. Measurable goal for this MCM is provided in Attachment E.

3.2. MCM 2 – Public Involvement and Participation

This section describes ASU's on-going and planned processes for the campus community to play an active role in the development and implementation of the SWMP. The ASU community can provide valuable input and assistance to the program. The objective of this MCM is to engage the public to participate in the review and implementation of the SWMP. Community participation encourages broader support for the SWMP.

The following table summarizes the target audiences and activity for each public involvement and participation MCM.

MCM	Title	Target Audience	Activity
2-1	SWMP Public Inquiries	Students, faculty, staff, contractors, and visitors	Respond to all inquiries about stormwater pollution prevention requirements
2-2	SWMP Annual Update	Students, faculty, staff, and public	Solicit input during annual SWMP evaluation and update
2-3	Stormwater Pollution Prevention Activities	Students, faculty and staff	Support activities to clean-up campuses and malls, properly dispose of waste, and reduce waste
2-4	Spill Reporting	Students, faculty and staff	Provide a hotline for reporting spills and releases potentially impacting stormwater

These are discussed in more detail in the remainder of this section.

MCM 2-1 SWMP Public Inquiries

ASU has designated principal contacts for verbal and written inquiries, comments, concerns, or requests for information about stormwater pollution prevention. The designated principal contacts are:

Ken Lufkin (Main campus-construction)
Suzanne Kennedy (Main campus-hazardous waste)
Ivan Lybarger (Polytechnic campus)
John Herrera (West campus)

Measurable goal for this BMP is provided in Attachment E.

MCM 2-2 SWMP Annual Update

ASU will assess, evaluate, and update the BMPs and the SWMP annually in conjunction with the preparation of the annual report. During the annual evaluation, ASU will solicit input from all departments with specific responsibilities under the SWMP. Additionally, a request for SWMP revisions from students and the public will be posted on the stormwater website.

Measurable goal for this MCM is provided in Attachment E.

MCM 2-3 Stormwater Pollution Prevention Activities

There are a number of on-going activities addressing waste management and pollution prevention under a university-wide program designed to reach a zero waste goal. These activities involve students, faculty and staff, and include but is are not limited to:

Zero Waste Ambassadors – Student volunteers circulate through tailgating areas at home football games to educate people and encourage recycling.

Composting – Grounds Services composts all landscaping waste and uses the compost on campus.

Ditch the Dumpster – Student program at the end of each term to encourage students moving on- or off-campus to recycle, re-use or donate small items, appliances and furniture.

Hazardous Waste Disposal – A single, university-wide hazardous waste disposal program where students, faculty and staff can use their Asurite ID (issued to all students) to schedule a hazardous waste pick up on-line.

Measurable goals for this MCM are provided in Attachment E.

MCM 2-4 Spill Reporting

In the case of a spill of hazardous materials, students, faculty and staff are instructed to call 911 to reach ASU police. The ASU police notify Environmental Health and Safety, which is available 24/7 to respond to hazardous spills and releases. For non-hazardous incidents, the Facilities Management Service Center phone line is operational 24/7 for all campuses (480-965-3633). Non-hazardous incidents may also be sent to the Facilities Management Service Center on line at: https://cfo.asu.edu/requests-for-service.

Measurable goals for this MCM are provided in Attachment E.

3.3. MCM 3 – Illicit Discharge Detection and Elimination

The IDDE program is designed to systematically find and eliminate non-stormwater to the MS4 and to implement procedures to prevent illicit connections and discharges. An illicit discharge (ID) is any discharge to an MS4 that is not composed entirely of stormwater except discharges pursuant to an AZPDES permit and certain allowable non-discharges listed in the SWMP. An illicit connection is any man-made structure connecting an ID directly to an MS4.

ASU has an Illicit Discharge Detection and Elimination (IDDE) Plan that describes the interconnected programs meeting the requirement for a written IDDE document in Permit Section 6.3 contained within this plan by reference.

3.3.1. Allowable Non-Stormwater Discharges

ASU considers the following non-stormwater discharges allowable. This list includes occasional, incidental non-stormwater discharges that the university does not expect to be a significant contributor of pollutants to the stormwater/sewer system.

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration
- Uncontaminated pumped groundwater
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensate
- Irrigation water

- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual residential car washing
- Discharges from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Street wash water
- Discharges or flows from firefighting activities
- Discharges authorized by another NPDES or AZPDES permit

If ASU should identify any of these discharges as significant contributors of pollutants to stormwater, the category will be addressed as an illicit discharge.

3.3.2. Statement of IDDE Program Responsibilities

ASU ‘s IDDE Plan describes the interconnected programs meeting the requirement for a written IDDE document in Permit Section 6.3 and contains a statement of IDDE program responsibilities.

3.3.3. Illicit Discharge Prevention and Reporting

ASU maintains an educational website and spill reporting contact information that is designed to prevent, identify, report and mitigate illicit discharges on campus under MCM 1-1 and MCM 2-4. Training for ASU employees involved in the IDDE program is covered under MCM 3-3.

3.3.4. IDDE MCMs

ASU's IDDE Plan describes the interconnected programs meeting the requirement for a written IDDE document in Permit Section 6.3 and contains a statement of IDDE program responsibilities.

MCM	Title	Responsible Party	Activity
3-1	Drainage system mapping	FDM-Asset Management	Update Master Drainage Plans for the Main, West, and Polytechnic campuses as needed. Institute procedures to add new construction to the mapping database.
3-2	Enforcement	ASU Police, EH&S, CPMG, FDM-CSS	Enforce all illicit discharge rules and policies with an escalating series of penalties.
3-3	IDDE Training	FDM-Construction Support Services	Conduct annual IDDE training for personnel with responsibilities in the IDDE Plan.
3-4	Dry weather visual monitoring	FDM-Asset Management/ EH&S	Conduct visual screening at outfalls from each campus during dry weather.
3-5	Wet weather visual monitoring	FDM-Construction Support Services/ EH&S	Conduct visual screening on a minimum of 2 stormwater discharge events during each wet season at every outfall on the Main, Polytechnic and West campuses.
3-6	Written IDDE procedures	FDM-Construction Support Services	Update the IDDE Plan as needed.

MCM 3-1 Drainage System Mapping

ASU completed the initial drainage system mapping in 2007. There are Stormwater Master Plans for Main (2007), Polytechnic (2005) and West (2019) campuses. ASU building permits require on-site retention for 100-year, 1-hour storm events. This is generally accomplished through a combination of retention basins, drywells, underground retention, and bioswales.

ASU updated its stormwater infrastructure mapping as part of an Infrastructure Utility Master Plan initiative for the central portions of the Tempe and Polytechnic campuses. This effort utilized ground-penetrating technologies to verify and map the location of existing utility infrastructure including storm sewer system pipes. Integration of this new data into the university's GIS database is ongoing. New construction information will be included as it is completed. Measurable goals for this MCM are provided in Attachment E.

MCM 3-2 Enforcement

As a Non-Traditional Small MS4, ASU has ownership power and authority over all activities, including construction on campus properties. Buildings on campus were built under ASU control or supervision and are owned or operated by ASU or by companies under contract to ASU. Illicit connections are not a significant risk and access authority is assumed.

Regulatory authority and enforcement capability are also different from traditional MS4s. There are several different sets of policies and rules with different enforcement mechanisms in operation at ASU:

Policy/Rule	Enforcement Arm	Enforcement Actions
Arizona Revised Statutes	ASU Police	Citations with referrals to Dean of Students/Department Heads for additional disciplinary action
Student Code of Conduct	Dean of Students	Suspension or expulsion
Policies and Procedures Manuals	ASU Administration	Disciplinary action up to and including termination
Erosion, Sediment Control and Grading Policy (Attachment H)	FDM-Construction Support Services	Stop work order, revocation of site development permit, and report of violations to ADEQ

Enforcement procedures are codified in ASU's Stormwater Enforcement Response Plan. Measureable goal for this MCM is provided in Attachment E.

MCM 3-3 IDDE Training

The University provides annual training to employees involved in the IDDE program (e.g., Parking and Transit workers, Grounds, Facilities Maintenance, etc.). The training includes the IDDE program components (including monitoring procedures) and how to recognize illicit discharges.

The measurable goal for this MCM is provided in Attachment E.

MCM 3-4 Visual Monitoring

ASU maintains a visual monitoring program that includes both dry weather and wet weather stormwater discharges. ASU's visual monitoring program is described in the IDDE Plan.

Measureable goals and indicators of IDDE Program Progress for this MCM are provided in Attachment E.

MCM 3-5 Wet Weather Visual Monitoring AZPDES Non-Filers

As a Non-Traditional Small MS4, ASU has ownership power and authority over all activities, including construction on campus properties. Buildings on campus were built under ASU control or supervision and are owned or operated by ASU or by companies under contract to ASU.

ASU requires entities to provide a copy of their approved AZPDES permit prior to issuing a building permit for construction. ASU's permit program serves to ensure that facilities and activities comply with ADEQ requirements.

Measurable goals for this MCM are provided in Attachment E.

MCM 3-6 Revise Written IDDE Procedures

ASU's IDDE Plan has been revised to meet the requirements in the Permit for a written IDDE plan. ASU will assess, evaluate, and update the IDDE Plan as needed in conjunction with the annual evaluation of the SWMP. During the annual evaluation, ASU will solicit input from departments with specific IDDE responsibilities.

Measurable goals for this MCM are provided in Attachment E.

3.4. MCM 4 – Construction Activity Stormwater Runoff Control

This section describes ASU's procedures for plan review, site inspection, and stormwater enforcement at construction sites. The objective is to reduce transport of sediment and other pollutants from construction sites greater than or equal to one acre. ASU is different from traditional MS4s in that it is typically the owner of all construction projects within their MS4. ASU's FDM-Construction Support Services oversees all construction projects and maintains an inventory of projects under their management and enforces AZPDES requirements. Projects are required to be designed and constructed according to ASU's Project Guidelines. SWMP implementation and enforcement is conducted through the construction contracting process.

Target construction sites are those that result in the disturbance of one (1) or more acres, as well as those disturbing less than one acre if those activities are part of a larger common plan of development or sale with an overall planned area of disturbance equal to or greater than one acre.

MCM	Title	Responsible Party	Activity
4-1	Construction Contractor SWMP Education	CPMG and FDM-Construction Support Services	Maintain and make available updated information on stormwater pollution prevention requirements for construction contractors.

MCM	Title	Responsible Party	Activity
4-2	Construction Plan Review	FDM-Construction Support Services	Review construction plans and building permit applications for adherence to ASU construction policies.
4-3	Construction Inspection and Enforcement	FDM-Construction Support Services	Conduct construction site inspections and provide escalating enforcement as needed.

MCM 4-1 Construction Contractor SWMP Education

FDM-Construction Support Services maintains a stormwater website at https://cfo.asu.edu/stormwater-program with information about stormwater pollution prevention requirements for construction contractors. The site also includes a description of the construction general permit requirements and the overall requirements for a construction SWPPP:

- ASU Erosion, Sediment Control and Grading Policy
- ASU Stormwater Management Construction Site Procedures for Contractors
- ADEQ Stormwater Construction General Permit AZG2020-001
- ADEQ Stormwater Pollution Prevention Plan (SWPPP) Guidance Check List
- ADEQ Notice of Termination (NOT)

Information for design and construction professionals is provided at https://cfo.asu.edu/design-professionals and includes the most recent Project guidelines, Engineering design guidelines and Sustainable design guidelines.

There is additional information about stormwater requirements for construction contractors under the Building Permit and Inspection Requirements at https://cfo.asu.edu/bldg-permit-requirements. This document includes requirements for Building Permit application submittal, plan review and construction inspections.

CPMG project managers routinely present stormwater information to contractors and operators in pre-construction meetings.

The measurable goal for this MCM is provided in Attachment E.

MCM 4-2 Construction Plan Review

ASU's Construction Support Services (CSS) reviews all building plans submitted as part of the permit process for adherence to ASU Building Permit and Inspection Requirements, accepted codes and standards and ASU's Project Guidelines. Procedures for plan review are in Sections 4 and 5, respectively, of the Building Permit and Inspection Requirements. ASU's Building Permit Application process requires contractors to submit stormwater documents before a Building Permit is issued. Stormwater documents required for construction are the Stormwater Pollution Prevention Plan, NOI and authorization to discharge. This review also includes confirming that the plans include adequate post-construction controls.

FDM-CSS has specific protocols for plan review. These are provided in Attachment I.

Measurable goals for this MCM are provided in Attachment E.

MCM 4-3 Construction Inspection and Enforcement

ASU's construction inspection program is described for construction contractors in Section 7 of the Building Permit and Inspection Requirements, and made available to contractors on the website https://cfo.asu.edu/bldg-permit-requirements.

ASU's Erosion, Sediment Control and Grading Policy describes the stormwater inspection and enforcement process. University construction projects are inspected at four milestones:

1. Placement of erosion and sediment control measures
2. Sediment control measures are relocated or revised
3. Final grading complete
4. Final landscaping

According to the policy, any construction work that is not approved must be corrected and re-inspected before construction may continue to the next stage. Enforcement mechanisms include Stop Work Order and revocation of the Building Permit. Final payment is withheld until the final inspection is successfully completed. ASU also maintains the right to report serious violations to ADEQ for prosecution and possible fines.

Measurable goals for this MCM are provided in Attachment E.

3.5. MCM 5 – Post-Construction Stormwater Management in New Development and Redevelopment

This section identifies ASU's procedures to address stormwater runoff management following construction. The objectives are to reduce the discharge of pollutants to stormwater runoff from areas of new development and redevelopment after construction is complete and to provide for long-term BMPs maintenance and inspection programs to improve stormwater quality. Universities are different from traditional MS4s in that they are typically the owners of all development and redevelopment projects taking place within their MS4. As such, ASU automatically assumes responsibility for the maintenance of post-construction stormwater controls after projects are complete. Accordingly, the inspection, operation, and maintenance of stormwater controls within the MS4 fall under Section 3.6 ASU Operations.

MCM	Title	Responsible Party	Activity
5-1	Regulatory Mechanism for Post-Construction Controls	CPMG	Ensure post-construction stormwater control measures through construction contracting.
	Post-Construction BMP Site Plan Review	FDM-Construction Support Services	Review construction plans and building permit applications for adherence to ASU post-construction stormwater BMP requirements included in MCM 4-2.
5-2	Post-Construction Stormwater Control Inventory	FDM-Asset Management	Develop and maintain an inventory of post-construction controls.
	Operation and Maintenance of Post-Construction BMPs	Since operation and maintenance of all post-construction BMPs on campus is the responsibility of ASU, this BMP is covered under MCM 6 which covers MS4 operations.	

MCM 5-1 Regulatory Mechanism for Post-Construction Controls

New development and redevelopment are subject to the on-site retention and post-construction controls in the most recent Project guidelines.

The measurable goal for this MCM is provided in Attachment E.

Post-Construction Plan Review

Site plans are reviewed for compliance with the on-site retention and post-construction controls in the most recent Project guidelines. Review for conformance to those standards is covered under MCM 4-2.

MCM 5-2 Post-Construction Stormwater Control Inventory

ASU is typically the owner of all development and redevelopment projects taking place within the MS4, and automatically assumes responsibility for the maintenance of post-construction stormwater controls after projects are complete. ASU maintains an inventory of post-construction controls, including drywells, catch basins, retention tanks, arch chamber basins, and underground retention areas to support the inspection and maintenance program described in MCM 5-3.

Measurable goals for this MCM are provided in Attachment E.

Operation and Maintenance of Post-Construction BMPs

Since operation maintenance of all post-construction BMPs on campus is the responsibility of ASU, this BMP is covered under MCM 6 which covers such activities conducted by the MS4 on MS4 facilities. Specifically, this activity is captured under BMPs MCM 6-2 University Facility Inspection and MCM 6-3 MS4 Maintenance.

3.6. MCM 6 – Pollution Prevention and Good Housekeeping for ASU Operations

This section outlines ASUs program for preventing and/or reducing pollutant runoff from University operations. The BMPs within this MCM address activities in the operation and maintenance of drainage systems, roadways, parking lots and open spaces to help reduce the pollutants entering the storm drain system. Since all facilities and post-construction controls are owned by the MS4 (ASU), the inspection, operation, and maintenance of stormwater controls within the MS4 falls under operations as indicated below.

MCM	Title	Responsible Party	Activity
6-1	Inventory of Discharging University Facilities	CPMG, EH&S, FDM-Asset Management	Update as needed.
6-2	University-Owned Facility Inspection	Facilities Maintenance Grounds	Conduct campus litter patrols twice daily and report spills and releases when found.
6-3	MS4 Maintenance	Contractor under CPMG, FDM-Construction Support Services or Facilities Maintenance	After annual inspection or as needed, refer needed repairs to third party contractor.
6-5	O&M Employee Training	FDM-Construction Support Services	Conduct annual training for personnel with responsibilities for facility inspection, operation, and maintenance.

MCM 6-1 Inventory of Discharging University Facilities

ASU has no facilities required to obtain AZPDES coverage under the Multi-Sector General permit. There are no other high risk facilities commonly found in MS4s such as fleet maintenance garages. All fleet vehicle maintenance is conducted off-site at commercial vehicle repair shops. There are no permanent areas with outdoor storage subject to significant discharge. Campus shuttle bus service is provided by a third party with an off-site facility. ASU will continue to monitor activities on its campuses for possible discharging facilities.

Measurable goals for this MCM are provided in Attachment E.

MCM 6-2 University–Owned Facility Inspection

As described in MCM 5-2, ASU maintains an inventory of post-construction controls, including drywells, catch basins, retention tanks, arch chamber basins, and underground retention areas. FDM-Construction Support Services has written Stormwater Inspection and Maintenance Procedures for these controls provided in Attachment J. Controls are inspected annually and if standing water remains in any drainage area or retention basin for longer than 36 hours.

The Facilities Maintenance grounds crews visually inspect campuses during twice daily litter pickups. Illicit discharges and/or dumping are reported to ASU's Environmental Health & Safety Department (EH&S). Measurable goals for this MCM are provided in Attachment E.

MCM 6-3 MS4 Maintenance

As described in MCM 6-2, post-construction controls, such as drywells, catch basins, retention tanks, arch chamber basins, and underground retention areas are inspected annually and if standing water remains in any drainage area or retention basin for longer than 36 hours. Needed maintenance and repairs are referred to a third party contractor working for ASU.

In addition to third party maintenance, ASU Parking and Transit cleans parking lots and other impervious surfaces prior to onset of the summer monsoon and winter rainy seasons.

Measurable goals for this MCM are provided in Attachment E.

MCM 6-4 O&M Employee Training

The University provides annual training to employees involved in the operations and maintenance program (e.g., Facilities Maintenance, Grounds, Parking and Transit workers, CPMG, etc.). The training includes incorporating good housekeeping techniques into routine operations and maintenance activities.

The measurable goal for this MCM is provided in Attachment E.

4.0 ANALYTICAL MONITORING PROGRAM

The 2021 Permit includes Stormwater Characterization Monitoring for Priority Pollutants, as defined by the Environmental Protection Agency. These additional requirements for small MS4s are anticipated to allow the ADEQ to establish a baseline of pollutants conveyed in stormwater across the state.

ASU is not required to monitor for impairments. ASU does not discharge to impaired or not-attaining waters, Outstanding Arizona Waters, or waters with Total Maximum Daily Load requirements.

ASU developed a Sampling and Analysis Plan (SAP) to characterize stormwater discharges and identify specific pollutants and any sources of elevated pollutant loads in compliance with applicable Permit requirements. The plan includes procedures for sample collection, equipment and containers, decontamination, calibration procedures, sample frequency, site conditions documentation, associated field notes, handling and sample preservation protocols, and chain-of-custody tracking, as appropriate.

As part of the SAP, ASU will sample stormwater discharges to obtain discharge characterization data at identified field screening points at least one (1) time by ADEQ's permit-required date. Stormwater will be sampled during a qualifying storm event, as defined in the ADEQ permit, AZG2021-002. Storm event records will be completed including the date of the qualifying storm event; the amount of rainfall; and sample collection information. It is recognized that sampling of a qualifying storm event is not required during adverse climatic conditions. Analytical monitoring results will be submitted on ADEQ's Discharge Monitoring Report within 30 days after receiving laboratory results from characterization monitoring.

5.0 PROGRAM ASSESSMENT, RECORDKEEPING, AND REPORTING

This section presents the program evaluation, recordkeeping and reporting requirements from Section 8.0 of the Permit.

5.1 Program Evaluation

ASU will review the SWMP each year and evaluate its compliance with the terms and conditions of the Permit. The annual review will include an evaluation of the appropriateness of the selected BMPs in achieving the objectives of each control measure and the defined measurable goals.

BMPs may be added (but not subtracted or replaced) at any time. Changes replacing ineffective or infeasible BMPs specifically identified in the SWMP with an alternative BMP may be made if the proposed changes meet the criteria of the Permit.

During the annual evaluation, ASU will determine if the SWMP needs to be revised. ASU will develop documentation explaining why the original BMP was ineffective or infeasible, expectations for the effectiveness of the replacement BMP, and why the replacement achieves the defined goals of the replaced BMP.

All changes to the SWMP made during the annual evaluation will be discussed in the Annual Report, as applicable, and documented in the SWMP Modification Log, Attachment G.

5.2 Recordkeeping

ASU will keep all records required by this permit for at least three (3) years. These records include but are not limited to information used in the development of any written program; any monitoring results; copies of reports, records of screening, follow-up and elimination of illicit discharges; maintenance records; inspection records; enforcement actions; and data used in the development of the Notice of Intent, Storm Water Management Plan and Annual Reports.

Records other than those required to be included in the discharge monitoring report (Section 5.3.1) and Annual Report (Section 5.3.2), shall be submitted upon request by ADEQ or U.S. EPA.

ASU will make the records relating to this permit, including the SWMP, available to the public by posting them on-line as indicated under MCM 1-1.

5.3 Reporting

Unless otherwise requested by ADEQ, ASU is required to submit two types of reports to ADEQ: Discharge Monitoring Reports and Annual Reports. All reports must be submitted within the required timeframe(s) and/or no later than September 30 of each year and shall include results for the period July 1 through June 30 of the preceding calendar year.

5.3.1.1 Discharge Monitoring Report

ASU must submit all visual monitoring results on a discharge monitoring report (DMR) in a manner prescribed by ADEQ (electronic, paper format, etc.).

5.3.1.2 Annual Reporting

To comply with Permit Section 8.3, ASU will submit annual reports by September 30th of each year for the preceding period of July 1 through June 30. The Annual Report will include information as prescribed in the Permit's Appendix A for annual report requirements. The information will include, but is not limited to, some or all of the following:

- Narrative description of the status of storm sewer mapping, outfall mapping, and water of the U.S. that receive discharges from the outlets, including percent complete
- Status of compliance with permit terms and conditions
- Assessment of the appropriateness and efficacy of the selected BMPs
- Assessment of progress towards achieving the measureable goals and objectives of each MCM including a description of the targeted messages for each audience; method of distribution and dates of distribution; methods used to evaluate the program; and any changes to the program
- Description of activities used to promote public participation
- Description of the activities related to implementation of the IDDE program including: status and results of the illicit discharge potential protocols described in the IDDE Plan, number and identifier of assets inspected or evaluated, number and identifier of

outfalls screened, number of illicit discharges located, number of illicit discharges removed, and employee training
- All outfall screening and monitoring data collected during the reporting period and cumulative for the permit term
- The status of any plans or activities required in the IDDE Plan including identification of all discharges determined to be causing or contributing to an exceedance of water quality standards and description of response
- Status of the construction runoff management including number of project plans reviewed, number of inspections, and number of enforcement actions
- Status of stormwater management for new development and redevelopment including status of ordinance development and review
- Status of the operation and maintenance programs required by MCM 6
- Description of any changes in identified BMPs or measurable goals
- Any additional reporting requirements
- Description of activities to be conducted during the next reporting cycle

Reports must be submitted to ADEQ online through ADEQ's MyDEQ portal.

5.3.1.3 Other Reporting

Section 9 (12) of the Permit contains other reporting requirements.

Planned Changes

ASU shall give notice to ADEQ as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b) (incorporated by reference at Arizona Administrative Code (A.A.C.) R18-9-A905(A)(1)(e)); or
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1) (incorporated by reference at A.A.C. R18-9-A905(A)(3)(b)).

Anticipated Noncompliance

ASU shall give advance notice to ADEQ of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

Twenty-Four Hour Reporting

ASU shall report to ADEQ any noncompliance with this permit which may endanger human health or the environment. ASU shall orally notify the office listed below within 24 hours:

Arizona Department of Environmental Quality – Water Quality Division
1110 W. Washington Street
Phoenix, AZ 85007
Office: (602) 771 – 1440

A written submission shall also be provided to the office identified above within five (5) days of the time the operator becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

The following shall be included as information which must be reported within 24 hours under this paragraph:

- Any upset which exceeds any effluent limitation in the permit.
- Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. (See 40 CFR 122.44(g) which is incorporated by reference at A.A.C. R18-9-A905(A)(3)(d)).

ADEQ may waive the written report on a case-by-case basis for reports under this subsection if the oral report has been received within 24 hours.

Other Noncompliance

ASU shall report all instances of noncompliance not otherwise required to be reported under this subsection at the time monitoring reports are submitted. The reports shall contain the information listed in the 24-hour reporting period section of the Permit.

Other information

When ASU becomes aware that it failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to ADEQ, ASU shall promptly submit the facts or information to ADEQ.

6 SIGNATORY REQUIREMENTS

As described in Permit Section 9 (9), documentation required by the permit must comply with signatory requirements. As a public entity, NOIs and NOTs must be signed by a principal executive officer. For purposes of this section, a principal executive officer of a federal (or state) agency includes: (1) The chief executive officer (or director) of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

All required reports required by the Permit (including this SWMP, reports, plans, inspection reports, monitoring reports, etc.) must be signed by the principal executive officer or by their duly authorized representative. A person is duly authorized if:

- The authorization is made in writing by a principal executive officer
- The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of manager, operator, superintendent, or position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the university
- The signed and dated written authorization is included in the SWMP. A copy must be submitted to ADEQ upon request.

The Authorized Representative Signature form is maintained in the SWMP as Attachment K.

Any person signing documents under the terms of the Permit must include the following certification statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

ATTACHMENT A

AZPDES Phase II MS4 Permit

ATTACHMENT B

Notice of Intent

ATTACHMENT C

Maps

NOT TO SCALE
NOTE: ALL LOCATIONS ARE APPROXIMATE
DATE: 9.27.2023 / PROJ #: C-1032

LEGEND

CAMPUS PROPERTY BOUNDARY

RECEIVING WATER

ASU TEMPE CAMPUS

TEMPE, AZ

Arizona State University

NOT TO SCALE
NOTE: ALL LOCATIONS ARE APPROXIMATE
DATE: 9.27.2023 / PROJ #: C-1032

LEGEND

- CAMPUS PROPERTY BOUNDARY
- RECEIVING WATER
- POLY FSP 1 ● DISCHARGE TO MARICOPA FLOODWAY

ASU POLYTECHNIC CAMPUS
RECEIVING WATERS AND FIELD SCREENING POINTS

MESA, AZ

Arizona State University

NOT TO SCALE
NOTE: ALL LOCATIONS ARE APPROXIMATE
DATE: 9.27.2023 / PROJ #: C-1032

LEGEND

- CAMPUS PROPERTY BOUNDARY
- RECEIVING WATER
- WEST FSP 1 DISCHARGE TO PHOENIX MS4

ASU WEST CAMPUS
RECEIVING WATERS AND FIELD SCREENING POINTS
PHOENIX, AZ

Arizona State University

ATTACHMENT D

Stormwater Organizational Chart and SWMP Responsibilities

ATTACHMENT D
STORMWATER ORGANIZATIONAL CHART AND
SWMP RESPONSIBILITIES

CONTACT NAME	TITLE	RESPONSIBILITIES
Kenneth Lufkin	Assistant Director, FDM-Asset Management, Construction Support Services	Administers Stormwater Management Program. Ensures stormwater permit requirements are applied.
Lynn Favour	Program Manager, FDM-Asset Management, Construction Support Services	Coordination and implementation of Stormwater Management Program to include public education, outreach, participation; contractor information dissemination; stormwater illicit discharge prevention, inspections and data reporting; stormwater website updates; training; post construction control inventory maintenance.
Ivan Lybarger	Director, Facilities Management Polytechnic campus	Inspection and maintenance, spill reporting, response and enforcement.
John Herrera	Director, Facilities Management West campus	Inspection and maintenance, spill reporting, response and enforcement.
Suzanne Kennedy	Interim Assistant Vice President, Environmental Health & Safety	Spill reporting, response and enforcement.
Michael Ochs	Associate Director, Environmental Health & Safety	Spill reporting, response and enforcement.
E.L. Cortez	Director, Facilities Management Residential Life	Spill reporting, response and enforcement.
Frank G. Castro, III	Associate Director, Parking and Transit Service	Parking permit holder education, oversees parking lot and roadway inspection and cleaning; spill reporting, response and enforcement.
Alana Levine	Director, Facilities Management Grounds Services	Inspection and maintenance; spill reporting, response and enforcement.
Brian Kerkman	Director, FDM-Asset Management	Oversees administration of Stormwater Management Program. Ensures stormwater permit requirements are applied. Oversees teams that identify and map stormwater drainage systems.

ATTACHMENT E

BMP Implementation Schedule

ATTACHMENT F

Completed, Renamed, and Reorganized BMPs from 2017 SWMP

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
PUBLIC OUTREACH AND EDUCATION						
2011 1a	Collect brochures, fact sheets, and other educational materials from federal, state, and local agencies or other MS4 websites.	ASU staff will contact agencies to obtain educational materials and will update the web page, as needed	Jun-09	Mar-03	Combined with 2011 1c-1g and retained as MCM 1-1.	Active
2011 1b	Distribute and update information to University employees, students, and vendors.	State Press (students, staff, and facility), and Residence Life (residence hall students) will include stormwater related information in their publications.	Oct-06	Mar-03	Completed March 2004. Changed to updates to the Sustainable Campus website instead of newsletter and included as MCM 1-2.	Active. Updated websites to FDM Sustainability and Environmental Health and Safety Emergency Response Guide.
2011 1c	Distribute and update information to University employees, students, and vendors.	University staff will update materials and include revised information in publications and meetings as they become available.	Jun-00	Apr-04	Included in MCM 1-1.	Active
2011 1d	Establish a web page for the Stormwater Management Program (SWMP).	University staff will develop or work with consultants to develop a stormwater web page and bring it on-line using available web information and additional input.	Jun-05	Mar-03	Completed June 2005. Ongoing updates included as MCM 1-1.	Active
2011 1e	Establish a web page for the SWMP.	ASU SWMP web page will be reviewed on a quarterly basis to ensure that the most current information is available. The web page will be updated as necessary.	Jun-10	Jun-05	Included in MCM 1-1.	Active

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 1f	Establish a library of educational materials on relevant stormwater matters.	ASU staff will collect materials and place the materials in public areas on campus, residence halls, and in ASU libraries as needed.	Jun-10	Mar-04	Completed March 2005. Ongoing updates included in MCM 1-1.	Active – Information provided online through stormwater website
2011 1g	Establish a library of educational materials on relevant stormwater matters.	ASU staff will update stormwater related materials when new information becomes available and redistribute.	Jun-10	Apr-05	Included in MCM 1-1.	Active – Information provided online through stormwater website
2011 1h	Clean University parking areas to reduce possible contamination to runoff.	ASU Parking & Transit Services notifies parking permit holders via general email of the need to keep parking areas debris free and clean on an annual basis.	Jun-10	Mar-03	Retained as MCM 1-3.	Active
PUBLIC PARTICIPATION AND INVOLVEMENT						
2011 2a	Respond to verbal or written public inquiries, comments, or concerns about illicit disposal of wastes, etc., and/or requests for information.	ASU will identify a principal contact and devise the best method for handling public inquiries.	Jun-10	Mar-03	Completed March 2004. And included in MCM 2-1.	Active – Inquiries can be received online through stormwater website, via phone, email or staff contact
2011 1b	Respond to verbal or written public inquiries, comments, or concerns about illicit disposal of wastes, etc., and/or requests for information.	ASU contact person will review the information and determine the best response. Response may be given over the phone, by email, or by regular mail. The information will be referred to University site inspectors for follow up.	Jun-10	Mar-04	Included in MCM 2-1.	Active – Inquiries can be received online through stormwater website, via phone, email or staff contact

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 1c	FDM-Asset Management will develop the SWMP.	FDM-Asset Management will develop the SWMP and advise staff on AZPDES issues. A copy of the SWMP will be made available on the Stormwater Management web page.	Jun-10	Mar-03	Completed June 2005. Participation in annual SWMP updates is included as MCM 2-2.	Active. SWMP administration moved from CPMG to FDM-Asset Management
2011 2d	Create activities for students, faculty, and staff to clean up campus and malls. A volunteer event "Adopt a Mall" is held weekly. This event allows clubs, individuals, departments, and staff to sign-up for a specific mall for cleaning once a week.	University staff will encourage students and staff to participate in activities.	Jun -10	Mar-04	Retained as MCM 2-3.	Active. Volunteer cleanup event opportunities provided during the school year with rotating topics.
2011 2e	Make the SWMP and Notice of Intent (NOI) available to students and employees on campus.	The SWMP and NOI will be made available to the public through campus publications and on the stormwater web page upon its completion.	Jun-10	Mar-03	Included in MCM 2-2 and MCM 1-1.	Active – Information provided online through stormwater website
ILLICIT DISCHARGE AND ELIMINATION						
2011 3a	Clean University parking areas to reduce possible contamination to runoff.	Prior to onset of the summer monsoon and winter rainy seasons, parking lots and other impervious areas will be cleaned.	Jun-10	Mar-03	Included in MCM 6-3.	Active.

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 3b	Map storm drainage system and identify discharge points.	ASU will utilize its resources to map the storm drainage system and identify discharge points.	Dec -07	Jul-04	Completed Dec-07. Update Master Drainage Plans is included as MCM 3-1.	Active. West Master Plan updated 2019. Utility Mapping updates ongoing.
2011 3c	Develop sections in the FDM-Asset Management policies that address illicit discharges and dumping.	ASU will approve the newly created sections of the FDM-Asset Managemenet policies as appropriate.	Jun-05	Jun-03	Completed Jun-05.	Active. Updated as needed. SWMP administration moved from CPMG to FDM-Asset Management
2011 3d	Develop sections in the FDM-Asset Management policies that address illicit discharges and dumping.	University staff will incorporate illicit discharge inspections into regular inspection duties and take reports on illicit discharge sightings and complaints.	Jun-10	Apr-04	Inspections moved to MCM 6-2.	Active. SWMP administration moved from CPMG to FDM-Asset Management
2011 3e	Develop sections in ASU's policies that address illicit discharges and dumping.	Enforcement action will be taken on those who violate the policy in accordance with ASU's enforcement policies.	Jun-10	Jan-07	Included as MCM 3-2 Enforcement.	Active. Enforcement Response Plan linked to stormwater website fall 2021.
2011 3f	Train employees in the detection, collection, and identification of illicit discharges.	Develop a plan for systematic review of streets utilizing appropriate University staff.	Jun-10	Mar-03	Inspections moved to MCM 6-2.	Active.
2011 3g	Train employees in the detection, collection, and identification of illicit discharges.	Evaluate street conditions and prioritize areas that appear more heavily impacted by illicit discharge activity.	Jun-10	Sep-04	Prioritization of inspections moved to MCM 6-2.	Active.

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 3h	Notify students and employees of the hazards and costs of illicit discharges and improper waste disposal via seminars and/or published and distributed information.	Staff will identify what areas are most likely to contribute illicit discharges to the stormwater sewer system.	Jun-10	Mar-05	Prioritization of inspections moved to MCM -2.	Active.
2011 3i	Notify students and employees of the hazards and costs of illicit discharges and improper waste disposal via seminars and/or published and distributed information.	Staff will notify the people responsible in the identified areas of the ~~CPMG~~ FDM-Asset Management policy that prohibits illicit discharges. Literature identifying the hazards and costs will be developed.	Jun-10	Jul-05	Incorporated under MCM 1 and MCM 3-3 Training.	Active.
2011 3j	A SWMP will be designed to retain all stormwater runoff on property.	Mapping of stormwater system will be developed in the Stormwater Master Plans.	Jun-10	Apr-06	Incorporated in MCM 3-1.	Active.
2011 3k	Staff will conduct dry weather field screening on a continual basis.	When screening identifies a potential illicit discharge, a trained staff person will perform a follow up investigation within 15 days of receiving the information.	Jun-10	Apr-04	Included in MCM 2-4.	Active.
CONSTRUCTION ACTIVITY STORMWATER RUNOFF CONTROL						

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 4a	Construction site contractors must submit a Stormwater Pollution Prevention Plan (SWPPP) prior to beginning construction that includes Best Management Practices (BMPs) for management of the site.	Staff will prepare a brochure to explain the new requirements for one acre and larger sites, as well as sites less than one acre that are part of a larger development.	Jun-03	Mar-03	Included in MCM 4-1.	Active – Information provided online through stormwater website.
2011 4b	Construction site contractors must submit a SWPPP prior to beginning construction that includes BMPs for management of the site.	Staff will inform operators in pre- construction meetings that a SWPPP is required for one acre and larger sites, as well as sites less than one acre but part of a larger common plan of development.	Jun-10	Mar-03	Included in MCM 4-1.	Active.
2011 4c	Follow state requirements that address discharge violations during construction activities and provisions for authority to inspect construction sites.	New stormwater sections of the FDM-Asset Management construction policies will be developed and implemented as appropriate.	Jun-10	Jul-03	Included in MCM 4-1.	Active.

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 4d	Follow state requirements that address discharge violations during construction activities and provisions for authority to inspect construction sites.	Staff will incorporate construction site inspections into regular duties and take reports on illicit discharge sightings and complaints.	Jun-10	Jan-06	Included as MCM 4-3.	Active.
2011 4e	Follow state requirements that address discharge violations during construction activities and provisions for authority to inspect construction sites.	Put corrective action in place for implementation should University policies be violated.	Jun-10	Jan-07	Included in MCM 4-3.	Active. Enforcement Response Plan linked to stormwater website
2011 4f	Using contractor's SWPPP as the "site plan," ensure completeness and compliance with policy.	Staff will develop a checklist to verify SWPPP completeness and compliance with University and Arizona Department of Environmental Quality (ADEQ) Construction General Permit. In the meantime, the contractor will use ADEQ's checklist.	Oct-03	Mar-03	Included in MCM 4-1.	Active. ADEQ approval and SWPPP required as part of permit construction documents.
2011 4g	Using contractor's SWPPP as the "site plan," ensure completeness and compliance with policy.	Staff will establish protocols for who reviews the plans, how much time staff should spend reviewing the plans, filing, and tracking.	Dec-07	Jan-04	Included in MCM 4-2.	Active

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 4h	Have in place policies that address discharge from construction sites and ensure compliance.	Pre-construction stormwater retention plans are implemented for new construction.	Jun-10	Apr-02	Included in MCM 4-2.	Active.
2011 4i	Have in place policies that address discharge from construction sites and ensure compliance.	ASU will approve the stormwater section of the FDM-Asset Management Program that addresses discharge violations that occur during construction activities, including discharges of trash, oil, and grease and has provisions for inspections for all sites over an acre or that are part of a development larger than an acre.	Dec-07	Mar-04	Included in MCM 4-3.	Active.
POST-CONSTRUCTION STORMWATER MANAGEMENT						
2011 5a	Have updated Stormwater Master Plans incorporated into FDM-Asset Management/IDDE Plan. Ensure compliance with stormwater drainage design criteria.	Staff will review all current information related to long-term drainage control.	Jun-10	Jul-03	Initially completed Dec-06. Revised Stormwater Master Plans are in process. SWMP will be updated with information on long-term drainage control from that effort as part of MCM 3-1.	Active with updates completed, as needed.

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 5b	Have updated Stormwater Master Plans incorporated into FDM-Asset Management/IDDE Plan. Ensure compliance with stormwater drainage design criteria.	Stormwater section will be added to the FDM-Asset Management/IDDE construction policies.	Dec-06	Jan-06	Completed Dec-06. These sections of the FDM-Asset Management/IDDE construction policies will be updated as needed under MCM 4-1.	Active.
2011 5c	Have updated Stormwater Master Plans incorporated into FDM-Asset Management/IDDE Plan. Ensure compliance with stormwater drainage design criteria.	Put corrective action into place to be taken on those who violate ASU Policies.	Dec-07	Apr-04	Completed Dec-07 in the Erosion, Sediment Control and Grading Policy. This document will be updated as needed under MCM 4-1.	Active
2011 5d	Have updated Stormwater Master Plans incorporated into FDM-Asset Management/IDDE Plan. Ensure compliance with stormwater drainage design criteria.	Staff will train building inspectors to monitor compliance with the Policy's design criteria.	Dec-07	Jan-07	Completed Dec-07. Included as MCM 5-5.	Active

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 5e	Have updated Stormwater Master Plans incorporated into FDM-Asset Management/IDDE Plan. Ensure compliance with stormwater drainage design criteria.	Future construction projects will be required to have stormwater retention design.	Dec-07	Apr-03	Completed Dec-07. Retention requirements are included in documents that are revised and updated as needed under MCM 4-1. Review of plans for adequate retention is included in plan review under MCM 5-2.	Active.
2011 5f	FDM-Asset Management will meet to discuss an approach to water quality and quantity management.	Staff will investigate training opportunities for water management issues.	Jun-10	Jan-05	Included in MCM 5-5.	Active.
2011 5g	FDM-Asset Management will meet to discuss an approach to water quality and quantity management.	University will update and provide technical input for the FDM-Asset Management Plan on an annual basis. Additionally, the panel will address revisions to the stormwater drainage design criteria.	Jun-10	Feb-05	Update to FDM-Asset Management policies on construction included in MCM 4-1.	Active.
2011 5h	Consider cumulative impact of stormwater quantity and quality using design criteria; include a maintenance requirement.	Staff will review all current information related to long-term drainage control.	Dec-07	Jun-06	Completed Dec-07. Updated Stormwater Master Plans are being completed and will be updated under MCM 3-1.	Active.

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 5i	Consider cumulative impact of stormwater quantity and quality using design criteria; include a maintenance requirement.	Put corrective action into place to be taken on those who violate ASU Policies.	Jun-10	Apr-03	Included as MCM 5-1.	Active.
2011 5j	Consider cumulative impact of stormwater quantity and quality using design criteria; include a maintenance requirement.	A new stormwater section will be added to ASU Policies.	Dec-07	Jan-07	Completed Dec-07. Stormwater sections of the ASU policies will be updated as necessary under MCM 4-1.	Active.
2011 5k	Require that contractors institute long-term operation and maintenance (O&M) BMPs.	Conduct annual drywell inspections. Drywell servicing, maintenance, and repair are dictated by the inspection results.	Jun-10	Apr-03	Included as MCM 6-4.	Active.
2011 5l	Require that contractors institute long-term O&M BMPs.	University will notify contractors to continue maintenance and repair BMPs until Notice of Termination (NOT) is received by ADEQ, and will require a copy of the NOT.	Jun-10	Apr-03	Included in MCM 4-1.	Active.
POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR ASU OPERATIONS						

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 6a	Develop a Pollution Prevention Plan (P3) to address storage of materials, proper material handling and drainage, drywell cleaning procedures, and safety/environmental inspections.	FDM-Asset Management will review current applicable documents and procedures. The initial meeting will determine what further meetings are necessary.	Jun-10	Jan-04	Included in MCM 4-1.	Active.
2011 6b	Develop a P3 to address storage of materials, proper material handling and drainage, drywell cleaning procedures, and safety/environmental inspections.	An initial training will be scheduled for new staff. Refresher training will occur on an annual basis. New employees will be trained, along with training on safety and other aspects of the EH&S Hazardous Waste P3.	Jun-10	May-06	Included in MCM 6-6.	Active
2011 6c	Develop a P3 to address storage of materials, proper material handling and drainage, drywell cleaning procedures, and safety/environmental inspections.	Several drywells have been installed, and the condition of existing wells inspected annually.	Jun-10	Mar-03	Included in MCM 6-3.	Active

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 6d	ASU will identify streets needing drainage repair and will incorporate water-quality improvements into new drainage designs per the Master Drainage Plan.	ASU Grounds Services will be asked to assess drainage systems for oil, grease, odor, algae growth, and trash and to provide EH&S with information on problematic issues.	Jun-10	Jun-03	Included in MCM 6-3.	Active
2011 6e	ASU will identify streets needing drainage repair and will incorporate water-quality improvements into new drainage designs per the Master Drainage Plan.	University departments will work together to address existing and planned drainage systems per the Stormwater Master Plan and Master Drainage Plan.	Jun-10	Feb-05	Included as MCM 3-1.	Active
2011 6f	Parking lots and storage yards will be monitored for oil and grease runoff.	Staff will qualitatively monitor oil and grease sheens on parking lots and storage yards, and make recommendations to the CPMG Director regarding possible upgrades.	Jun-10	May-06	Included in MCM 6-3.	Active
2011 6g	Parking lots and storage yards will be monitored for oil and grease runoff.	CPMG will investigate potential system upgrades as appropriate.	Jun-10	Jan-07	Included in MCM 6-3.	Active
2011 6h	Parking lots and storage yards will be monitored for oil and grease runoff.	Incorporate any BMPs for road maintenance into the P3 and associated training.	Jun-10	May-06	Included in MCM 6-6.	Active

ID#	BMP	Description	New or Revised	Start Date	Status in 2017 SWMP	Status in 2022 SWMP
2011 6i	ASU 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 ASU's waste disposal services.	As part of the illicit discharge detection efforts, maintenance staff will remove floatable material. These personnel will be educated in proper methods for disposal of floatables and other waste materials. Floatable material will be removed in conjunction with routine grounds maintenance activities.	Jun-10	Sep-04	Included in MCM 6-4.	Active

ATTACHMENT G

SWMP Modification Log

ARIZONA STATE UNIVERSITY
SWMP MODIFICATION LOG

Modification Made By:

Kenneth Lufkin, Assistant Director

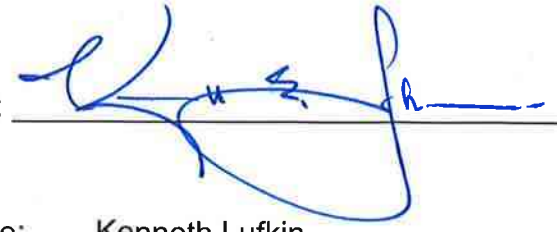
Purpose for Modification:

The 2022 Stormwater Management Program was modified in accordance with the provisions of the AZPDES Non-Traditional Small MS4 General Permit AZG2021-002.

Description of Modification:

The modification captures completed and reorganized BMPs from the 2017 SWMP and internal organizational changes.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:  Date: 09.21.23

Print Name: Kenneth Lufkin

ATTACHMENT H

Erosion, Sediment Control, and Grading Policy

Erosion, Sediment Control and Grading Policy

I. INTRODUCTION / PURPOSE

During the construction process, soil is the most vulnerable to erosion by wind and water. This eroded soil endangers water resources by reducing water quality, and causing the siltation of aquatic habitat for fish and other desirable species. Eroded soil also necessitates repair of sewers and ditches, and the dredging of lakes. In addition, clearing and grading during construction causes the loss of native vegetation necessary for terrestrial and aquatic habitat.

The purpose of this local regulation is to safeguard persons, protect property, prevent damage to the environment and promote the public welfare by guiding, regulating, and controlling the design, construction, use, and maintenance of any development or other activity which disturbs or breaks the topsoil or results in the movement of earth on land within Arizona State University (ASU) campuses; and to provide a healthy living/working environment for students, workers and residents at ASU.

II. DEFINITIONS

Certified Contractor. An individual who has received training and is licensed by the State of Arizona to inspect and maintain erosion and sediment control practices.

Clearing. Any activity which removes the vegetative surface cover.

Drainage Way. Any channel that conveys surface runoff throughout the site.

Erosion Control. Measures that prevent erosion.

Erosion and Sediment Control Plan. A set of plans prepared by or under the direction of a licensed professional engineer indicating the specific measures and sequencing to be used to control sediment and erosion on a development site before, during and after construction.

Grading. Excavation or fill of material, including the resulting conditions thereof.

Perimeter Control. A barrier that prevents sediment from leaving a site either by filtering sediment-laden runoff, or diverting it to a sediment trap or basin.

Phasing. Clearing a parcel of land in distinct phases, with the stabilization of each phase before the clearing of the next.

Sediment Control. Measures that prevent eroded sediment from leaving the site.

Site. A parcel of land, or a contiguous combination thereof, where grading work is performed as a single unified operation.

Site Development Permit. A permit issued by the Authority Having Jurisdiction for the construction or alteration of ground improvements and structures for the control of erosion, runoff and grading.

Stabilization. The use of practices that prevent exposed soil from eroding.

Start of Construction. The first land-disturbing activity associated with a development, including land preparation such as clearing, grading and filling; installation of streets and walkways; excavation for basements, footings, piers or foundations; erection of temporary forms; and installation of accessory buildings such as garages.

Watercourse. Any body of water, including, but not limited to lakes, ponds, rivers, streams, and bodies of water delineated by ASU.

Waterway. A channel that directs surface runoff to a watercourse, or to the public storm drain.

III. PERMITS

At ASU, site development permits are issued by ASU Facilities Development and Management, Construction Support Services according to the following requirements.

A. No person shall be granted a site development permit for land-disturbing activity which would require the uncovering of 43,560 or more square feet without the approval of an Erosion and Sediment Control Plan by ASU FDM-Construction Support Services.

B. No site development permit is required for the activities listed below. ASU may choose to exempt other activities at their discretion.

   1. Any emergency activity which is immediately necessary for the protection of life, property or natural resources.

   2. Existing nursery and agricultural operations conducted as a permitted main or accessory use.

C. Each application shall bear the name(s) of the general contractor or developer of the site, and of any consulting firm retained by the applicant together with the name of the applicants principal contact at such firm, and shall be accompanied by a filing fee, as applicable.

D. Each application shall include a statement that any land clearing, construction, or development involving the movement of earth shall be in accordance with the Erosion and Sediment Control Plan, and that a Certified Contractor shall be on site on all days where construction or grading activity takes place.

E. Review and approval

   1. ASU FDM-Construction Support Services will review each application for a site development permit to determine its conformance with the provisions of this local regulation. Within thirty (30) days after receiving an application, ASU shall, in writing:

      a. approve the permit application;

b. approve the permit application subject to such reasonable conditions as may be necessary to secure substantially the objectives of this regulation, and issue the permit subject to these conditions; or

c. disapprove the permit application, indicating the deficiencies and the procedure for submitting a revised application and/or submission.

IV. EROSION AND SEDIMENT CONTROL PLAN

A. The Erosion and Sediment Control Plan shall include:

1. A sequence of construction of the development site, including stripping and clearing, rough grading, construction of utilities, infrastructure, and buildings, and final grading and landscaping. Sequencing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, and the sequence of clearing, installation of temporary erosion and sediment measures, and establishment of permanent vegetation.

3. All erosion and sediment control measures necessary to meet the objectives of this local regulation throughout all phases of construction and after completion of development of the site. Depending upon the complexity of the project, the drafting of intermediate plans may be required.

4. Seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, and kind and quantity of mulching for both temporary and permanent vegetative control measures, as applicable.

5. Provisions for maintenance of control facilities, including easements and estimates of the cost of maintenance.

B. Modifications to the Plan

1. Major amendments of the erosion and sediment control plan shall be submitted to ASU FDM-Construction Support Services and shall be processed and approved, or disapproved, in the same manner as the original plans.

2. Field modifications of a minor nature may be authorized by ASU FDM-Construction Support Services by written authorization to the permitee.

V. DESIGN REQUIREMENTS

Grading, erosion control practices, sediment control practices, and waterway crossings shall meet the design criteria set forth in the most recent version of the *Flood Control District of Maricopa County (FCDMC) Drainage Design Manual – Erosion Control*, the most recent Project Guidelines Division 31 – Earthwork, and shall be adequate to prevent transportation of sediment and other pollutants from the site to the satisfaction of ASU.

A. Clearing and Grading

1. Clearing and grading of natural resources shall not be permitted, except when in compliance all other ASU Project Guidelines and applicable state laws.

2. Clearing techniques that retain natural vegetation and retain natural drainage patterns, as described in the *FCDMC Drainage Design Manual – Erosion Control*,, shall be used to the satisfaction of ASU.

3. Phasing shall be required on all sites disturbing greater than *thirty* acres, with the size of each phase to be established at plan review and as approved by ASU.

4. Clearing, except that necessary to establish sediment control devices, shall not begin until all sediment control devices have been installed and have been stabilized.

5. Cut and fill slopes shall be no greater than 2:1, except as approved by ASU FDM-Construction Support Services to meet other community or environmental objectives.

B. Erosion Control

1. Soil must be stabilized within fourteen days of clearing or inactivity in construction.

2. If vegetative erosion control methods, such as seeding, have not become established within two weeks, ASU may require that the site be reseeded, or that a non-vegetative option be employed.

3. On steep slopes or in drainage ways, special techniques that meet the design criteria outlined in the *FCDMC Drainage Design Manual – Erosion Control* shall be used to ensure stabilization.

4. Soil stockpiles must be stabilized or covered at the end of each work day.

5. Techniques shall be employed to prevent blowing dust or sediment from the site.

6. Techniques that divert upland runoff past disturbed slopes shall be employed.

C. Sediment Controls

1. Sediment controls shall be provided in the form of settling basins or sediment traps or tanks, and perimeter controls.

2. Where possible, settling basins shall be designed in a manner that allows adaptation to provide long-term stormwater management.

3. Adjacent properties shall be protected with perimeter controls.

D. Waterways and Watercourses

1. When a wet watercourse must be crossed regularly during construction, a temporary stream crossing shall be provided, and an approval obtained from ADEQ.

2. When in-channel work is conducted, the channel shall be stabilized before, during and after work.

3. All on-site stormwater conveyance channels shall be designed according to the criteria outlined in the *FCDMC Drainage Design Manual – Erosion Control.*

4. Stabilization adequate to prevent erosion must be provided at the outlets of all pipes and paved channels.

E. Construction Site Access

1. A temporary access road shall be provided at all sites.

2. Other measures may be required at the discretion of ASU FDM-Construction Support Services in order to ensure that sediment is not tracked onto public streets by construction vehicles, or washed into storm drains.

VI. INSPECTION

A. ASU FDM-Construction Support Services representative or designated agent shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the permitee wherein the work fails to comply with the erosion and sediment control plan as approved. Plans for grading, stripping, excavating, and filling work bearing the stamp of approval of ASU FDM-Construction Support Services shall be maintained at the site during the progress of the work. In order to obtain inspections, the permitee shall notify ASU FDM-Construction Support Services, at least two (2) working days before the following:

1. Erosion and sediment control measures are in place and stabilized

2. Significant changes have been made in the location of erosion and sediment control measures

3. Final grading has been completed

4. Final landscaping

The Stormwater Inspection Report form used by ASU inspectors is included as Attachment J.

B. The permitee or his/her agent shall make regular inspections of all control measures in accordance with the inspection schedule outlined on the approved erosion and sediment control plan(s) and any Stormwater Pollution Prevention Plan prepared to meet the requirements of the AZPDES Construction General Permit. The purpose of such inspections will be to determine the overall effectiveness of the control plan, and the need for additional control measures. All inspections shall be documented in written form and submitted to ASU FDM-Construction Support Services at the time interval specified in the approved permit.

C. ASU FDM-Construction Support Services or its designated agent shall enter the property of the applicant as deemed necessary to make regular inspections to ensure the validity of the reports filed under Section B.

VII. ENFORCEMENT

A. Stop-Work Order; Revocation of Permit

In the event that any person holding a site development permit pursuant to this ordinance violates the terms of the permit, or implements site development in such a manner as to materially adversely affect the health, welfare, or safety or persons residing or working in the neighborhood or development site so as to be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, ASU FDM-Construction Support Services may suspend or revoke the site development permit.

B. Violation and Penalties

No person shall construct, enlarge, alter, repair, or maintain any grading, excavation, or fill, or cause the same to be done, contrary to or in violation of any terms of this ordinance. In addition to any other penalty authorized by this section, any person, partnership, or corporation convicted of violating any of the provisions of this ordinance shall be required to bear the expense of such restoration.

VIII. SEPARABILITY

The provisions and sections of this ordinance shall be deemed to be separable, and the invalidity of any portion of this ordinance shall not affect the validity of the remainder.

ATTACHMENT I

Plan Review Protocols

ARIZONA STATE UNIVERSITY
AZPDES Permit AZG2021-002
Plan Review Checklist

Building Name: Click here to enter text. **Building Number:** Click here to enter text.

Building Permit Number: Click here to enter text. **Project Number:** Click here to enter text.

Reviewed By: FDM-Construction Support Services

Engineer: Click here to enter text. **Phone Number:** Click here to enter text.

Construction sites over 1 acre (or those sites that will disturb less than one acre, but are part of a common plan of development or sale that will ultimately disturb one acre or more) are subject to the Arizona Department of Environmental Quality (ADEQ) Arizona Pollution Discharge Elimination System (AZPDES) requirements for construction sites under Construction General Permit (CGP) AZG2020-001. This checklist is for reviewing Building Permit Applications and construction site plans for compliance with current ASU Project Guidelines, Building Code Requirements, and ASU's Erosion, Sediment Control and Grading Policy.

GENERAL REQUIREMENTS

Yes	No	
☐	☐	Is a copy of the Stormwater Pollution Prevention Plan included?
☐	☐	Is a copy of the Notice of Intent (NOI) included?
☐	☐	Has a copy of the Authorization Certificate been provided?
☐	☐	Do the plans or schedule include provision for FDM-Construction Support Services to conduct inspections after erosion and sediment control measures are in place and stabilized, when sediment control measures are relocated or revised, when final grading has been completed, and after final landscaping?
☐	☐	Does the final site drainage plan meet ASU Project Guidelines for retention without adversely impacting campus-wide retention?

PROPOSED CONTROL MEASURES

Verify whether proposed control measures are present (Pres) and appropriate (App) or Not Applicable (NA)

Pres	App	NA	
☐	☐	☐	Perimeter controls
☐	☐	☐	Storm drain inlet protection
☐	☐	☐	Stockpile discharge controls
☐	☐	☐	Track in/track out controls
☐	☐	☐	Run-off management
☐	☐	☐	Minimize soil disturbance

Date notification provided to applicant that BMPs for the site are appropriate: Click here to enter a date.

Stormwater Review Completion Date: Click here to enter a date.

ATTACHMENT J

Stormwater Inspection and Maintenance Procedures

Attachment J

ASU Stormwater Inspection and Maintenance Procedures

ASU is required to maintain stormwater on site by way of drywells, catchbasins, retention tanks, arch chamber basins, underground retention areas, etc. Drywells are engineered drainage systems that are specifically designed to dispose of only stormwater or discharges that are exempted by A.R.S. 49-250(23). If a drywell is used to dispose of anything other than stormwater, it is subject to the Aquifer Protection Program (APP) and/or closure requirements and may be considered an underground injection well that requires both ADEQ and USEPA permitting. Spills to the drywell may also trigger permitting, clean closure or enforcement actions. The University will cite the authorities to control sediment, erosion and waste. If there are stormwater infractions at the time of inspection, the University will refer these non-compliance activities to ADEQ.

Annual Inspections:

Inspections are performed annually and after a rain event if water remains standing on the surface of the drainage area or retention basin for longer than 36 hours.

Inspections include a review of maps including a familiarization with area roads, land uses and natural features. Inspectors will review any documents pertaining to construction such as the Stormwater Pollution Prevention Plan (SWPPP), site plan maps, other permits granted to the contractor, records of previous compliance and the Notice of Intent (NOI). Inspections will be conducted according to the contract documents. Inspectors will follow the actions described below:

- Verify location of unit to be inspected
- Observe areas for staining, sediment, mud, debris and proper material storage
- Measure drywell depth; inspect lids, rings, PVC standpipes, concrete walls, screens, plumbing, filters, bio cloths, petrochemical absorbents and condition of bottom of drywell
- Complete an Annual Inspection form for each unit with a description of the condition
- Immediately notify the ASU Program Manager and Environmental Health and Safety about any hazardous materials discovered
- Deliver Annual Inspection forms and pictures to the ASU Program Manager for recordkeeping

Annual Maintenance and Repairs

- Maintenance and repairs needs identified in the annual inspection report are managed by FDM-Asset Management.
- Once work is complete, maintenance reports are delivered to the ASU Program Manager at SWMP@asu.edu for recordkeeping.

Ad Hoc Maintenance and Repairs:

- Stormwater Inspection form is submitted by the ASU Certified Stormwater Inspector documenting the drainage issue and emailed directly to the ASU Program Manager or at SWMP@asu.edu.
- ASU Program Manager will send a Request for Service to Facman for minor drywell and drainage repairs or CPMG for major drainage repairs
- Facman or CPMG will assign the project to a project manager
- Facman or CPMG Project Manager to notify Program Manager when work is complete and provide documentation and final inspection report

Recordkeeping:

Inspection and maintenance/repair records are maintained by the ASU Program Manager. The records are retained for a minimum of three years. If an area is subject to an Aquifer Protection Program permit, records shall be retained for at least 10 years.

Contamination Notification

- EHS provides 24-hour, on-call response in conjunction with the ASU Police Department to resolve emergency situations involving hazardous materials or life-safety issues
- Testing of questionable or suspect hazardous materials will be in accordance with EH&S protocol
- Disposal of removed materials will be at a landfill or facility approved to accept this type of debris in accordance with EH&S protocol
- Refer to the EH&S website for testing and removal information at: https://cfo.asu.edu/ehs
- Notification will be made by EH&S to the ASU Program Manager with documentation related to the removal of the hazardous materials for SWMP recordkeeping
- Refer to the SWMP Pollution/Illicit Discharge Prevention Plan at https://cfo.asu.edu/stormwater-program

Definitions

Best Management Practices - In general, facility owners/operators of these sites are required to develop and employ a Best Management Practices Plan (BMPP) to ensure that unauthorized discharges to drywell will not occur. The BMPP should conform to the ADEQ BMPP guidelines and should describe the methods, practices and employee training used to prevent unauthorized discharges, including structural and non-structural controls, and operation and maintenance procedures.

Bubble Up Box – Bubble up boxes act as a trap to collect stormwater. They are concrete cylinders or boxes in the ground with concrete bottoms and a grate on top. They are usually connected to roof drain leaders by pipes to drain rain water from roofs and disperse it to retention areas. When the pipes are full of rain water, it causes pressure to force the water up and out of the bubble up box and disperse it to the retention area. When it's not raining and there is no pressure to push all the water out, the water sits and stagnates in the bubble up box and may become a mosquito breeding area.

Catchbasin (aka interceptor or storm drain inlet) – Inlet to the storm drain system that typically includes a grate or curb inlet where stormwater enters the catch basin and sump to capture sediment, debris and associated pollutants. Acts as a temporary channel to direct

water to drywell or elsewhere (sometimes catchbasins are on top of drywell called a double chamber drywell with catch basin lid)

Clean Closure – Areas that have drained hazardous waste: make application to ADEQ for clean closure permit, requires a $1,000 fee; remove drywell parts from the ground including collars and grate cover, and perform tests before closure.

Two Types of Drywell Decommission:

- Drywell Decommission (aka Abandon) – Leave collars in ground, pour in cement, can leave grate cover. Becomes sump and performs as a bubble up.
- Drywell Decommission (aka Closure) – Remove standpipe, rings, collars, grate and backfill. If standpipe is too deep, backfill with grout (may test, if any suspect materials may have drained in the area).

Drywell – A drywell is defined as a bored, drilled or driven shaft or hole in which the depth is greater than the width and is designed specifically for the disposal of stormwater. Typical drywells are made up of an upper settling chamber and a lower gravel-filled section. An injection pipe may connect the two sections.

Groundwater Investigation - ADEQ may request groundwater sampling if soil sampling is inadequate to determine the extent of impact. Example, the drywell shaft is completed in or close to the water table, or impact to groundwater is suspected.

Injection Well - A drywell is considered an injection well if it is constructed or used for the purpose of injecting fluids containing pollutants (other than stormwater) into the subsurface. Limited general permit categories apply to injection wells according to A.A.C. R18-9-129.E. Otherwise, an individual APP is required for continuing operation.

Maxwell Drywell – Has single and double chambers – tubular means of getting groundwater/stormwater below the ground

Outlets – Gathers water from roofs and drains to grassy retention areas

Parking Lot Pavement Drywell – Pavement drywell, concrete or asphalt surface, needs absorbent (petro pillows, etc.) for oil

Retention Basin – Dry pond with or without a drywell. Temporarily stores water after a storm and eventually empties at a controlled rate.

Rockfilled Retention - 8” drain cover opening over an 18” pipe to a river gravel bed and filled with river rock. River rock is too big to remove and clean the rockfilled retention through the 8” drain cover opening. If the rockfilled retention is 10’ deep, it is qualified as a drywell and needs to be registered.

If the rockfilled retention is so deep that it intersects with the water table it’s a water well that injects into the water table and needs to be registered as a well. If ADEQ measures it on a rainy day, it could be classified as a well, if measured during a drought, could be classified as a drywell.

Storm Drain – Designed to drain excess rain and ground water from paved streets, parking lots, sidewalks and roofs.

Storm Drain Line - Flows to catch basin then drywell.

Storm Drain Inlet - Receives water and flows to storm drain line to catchbasin, drywell, bubble-up, retention area or retention tank.

Storm Drain Manhole – Storm sewer for emergency repairs and cleaning.

ATTACHMENT K

Authorized Representative Form

Arizona State University
Authorized Representative

In accordance with the Arizona Pollutant Discharge Elimination System (AZPDES) General Permit Number AZG2021-002, Section 9(9), the Vice President of Facilities Development and Management position is a duly authorized representative of Arizona State University.

9/21/23

Alexander Kohnen, Vice President
Arizona State University
Facilities Development and Management

In accordance with the Arizona Pollutant Discharge Elimination System (AZPDES) General Permit Number AZG2021-002, Section 9(9), the Assistant Director of FDM-Asset Management position is a duly authorized representative of Arizona State University.

09.21.23

Kenneth Lufkin, Assistant Director
Arizona State University
FDM-Asset Management