Arizona Department of Transportation

STORMWATER MANAGEMENT PLAN

Prepared by ADOT Environmental Planning, Water Resources

AZPDES Permit No. AZS000018-2021, as modified in May 2022 and January 2023

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EXECUTIVE SUMMARY

The Arizona Department of Transportation (ADOT) is subject to several stormwater permits under Section 402 of the Clean Water Act (CWA). The CWA sets forth the authorities, rules and regulations designed to protect the nation's surface waters from point-source pollutants. This is accomplished through the issuance of permits that regulate the discharges of wastewater and stormwater runoff from municipal, industrial, and commercial sources. Under the Arizona Pollutant Discharge Elimination System (AZPDES), facilities that discharge pollutants from a point source into waters of the US (WOTUS) are required to obtain coverage under an AZPDES permit. The AZPDES program is implemented under delegated authority from the US Environmental Protection Agency (EPA) to the Arizona Department of Environmental Quality (ADEQ) on non-tribal lands, and the US EPA retains the authority for the National Pollutant Discharge Elimination System (NPDES) on tribal lands in Arizona.

An AZPDES Municipal Separate Storm Sewer System (MS4) Permit (no. AZS0000018-2021) was issued to ADOT by ADEQ for the discharge of stormwater from ADOT's facilities and roadway system to Protected Surface Waters. This Stormwater Management Plan (SWMP) is a required component of the MS4 Permit issued to ADOT and details how ADOT will implement its program of activities and procedures to comply with the Permit's requirements. The current MS4 Permit went into effect on July 1, 2021, and was modified to include state-listed Protected Surface Waters with an effective date of May 13, 2022. A second permit modification updating 24-hour permit notification requirements went into effect on January 25, 2023. The Permit and associated fact sheet can be found on Stormwater Discharge Permit | Department of Transportation.

The MS4 Permit requires ADOT to minimize, to the maximum extent practicable (MEP), the release of pollutants to and the discharge of pollutants from ADOT's MS4. This Permit applies to ADOT's operations statewide on non-tribal lands. There is no corresponding permit for ADOT's operations on tribal lands. In practice, ADOT's SWMP is applied consistently throughout the state on both tribal and non-tribal lands and the only distinctions made are in regard to reporting, notification processes, or other specific tribal environmental authority requirements as appropriate.

This SWMP identifies the major program activities and procedures implemented to achieve compliance with ADOT's MS4 Permit. The SWMP follows the order of the MS4 Permit sections. Each section begins with an overview of the program requirements, followed by a discussion of the control measures and activities to be implemented and, if applicable, the methods or mechanisms by which the activities are tracked for assessment and reporting.

1.0 AUTHORIZATION

The MS4 Permit authorizes ADOT to discharge stormwater runoff from its MS4 to Protected Surface Waters, subject to the terms and conditions of the MS4 Permit. Protected Surface Waters, as defined in the 2022 Permit modification, include both WOTUS and non-WOTUS, state-listed Protected Surface Waters in accordance with the Arizona Revised Statutes (ARS) Title 49, Chapter 2, Article 3.1

The authorization indicates the following discharges that are excluded from coverage by the MS4 Permit and therefore must be permitted separately through the applicable AZPDES program:

- *Part 1.2.A. Stormwater discharges associated with industrial activity.* ADOT owns and operates one "industrial" facility as defined in the associated regulations, the Grand Canyon National Park Airport, and as such has obtained an AZPDES Multi-Sector General Permit coverage for that facility (Permit No. AZMS80633, issued February 12, 2020).

- *Part 1.2.B. Stormwater discharges associated with construction activities.* Although the MS4 Permit includes requirements for the agency's overall construction program, individual projects are subject to separate permitting under the AZPDES Construction General Permit (CGP).

- *Part 1.2.C. Non-stormwater discharges except the allowable discharges listed in Permit Section 4.6.B.* In the event a non-stormwater discharge that is not listed as allowable is necessary for an ADOT operation, ADOT Water Resources will evaluate the situation and assist with the permit application in coordination with the appropriate ADOT unit(s). Permits that may be applicable in this situation include AZPDES Pesticide General Permit and/or the AZPDES De Minimis General Permit.

The excluded discharges are subject to the specific requirements of the applicable permit programs and are not addressed in this SWMP unless explicitly stated.

2.0 LEGAL AUTHORITY

The MS4 Permit requires ADOT to develop, maintain, and enforce adequate legal authority to control discharges of pollutants to and from its MS4, and stipulates that ADOT must review its legal authority within 12 months of the effective date of the current permit. A legal authority review was completed by the State Attorney General's office in June 2022, and found that ADOT's basis of legal authority as described in the SWMP is current and remains adequate for purposes of the MS4 Permit.

As a non-traditional MS4, ADOT relies on state statutes, administrative code, contract specifications, and agreements with other public agencies in lieu of ordinances. ADOT has control over the highway system, either by ownership, easement, lease agreement or title transfer, and is responsible to maintain and operate the system according to a myriad of laws, statutes, and codes. The Legislature has granted the ADOT Director the complete and exclusive operational control over the state highway system. This authority is delegated to the Deputy of Transportation, also known as the State Engineer. The responsibility for the highways and yards, or support activities, is further delegated to District Engineers and Administrative Services, with support from several headquarters divisions.

ADOT maintains authority to regulate discharges to its MS4 from third parties through the ARS Title 28: Transportation, and the Arizona Administrative Code (AAC) Title 17, Chapter 3, Article 5: Highway Encroachments and Permits. In addition, ADOT's contract specifications for construction projects contain supplementary details that identify the Engineer's authority to hold contractors to the requirements of ADOT's SWMP. The requirements are included in sections 104.09 and 104.16 of the *2021 Arizona*

Department of Transportation Standard Specifications for Road and Bridge Construction. Information on contracts and specifications for ADOT projects can be viewed at Specifications & Pay Items List | Department of Transportation. More information on the role of contract specifications in ADOT's stormwater program is provided in Section 4.9, Construction.

3.0 PROTECTION AND COMPLIANCE WITH ARIZONA SURFACE WATER QUALITY STANDARDS

This section defines ADOT's responsibility to protect water quality by reducing discharges of pollutants from its MS4 and the applicable surface water quality standards (SWQS) for the associated receiving waters. SWQS, defined in AAC Title 18, Chapter 11, Article 1, establish the quantity of a given pollutant that a system can manage, shown in terms of a numeric standard. Waterways and standards are evaluated periodically by ADEQ and EPA.

The MS4 Permit requires ADOT to reduce the discharge of pollutants, to the MEP, that may cause or contribute to an exceedance of a SWQS. To accomplish this, ADOT is required to implement the following measures:

- *Part 3.1.B. Analyze stormwater monitoring data from identified outfalls.* Data from the ADOT MS4 monitoring program is collected and submitted to ADEQ via Discharge Monitoring Reports (DMRs), and compared with the applicable SWQS for the associated receiving water. More information on the monitoring program is provided in Section 5.0 of this SWMP.

- *Part 3.1.C. Evaluate the effectiveness of existing control measures.* The data collected from the monitoring program is analyzed to determine if the control measures at the outfalls are performing as appropriate for the land use and the pollutant of concern. Based on the analysis, existing controls may be modified or new controls installed to address any identified issues.

- *Part 3.1.D. Report exceedances in the Annual Report.* More information on the reporting requirements for the MS4 Permit is provided in Section 6.0 of this SWMP.

In accordance with MS4 Permit Part 3.2, ADOT Water Resources has developed standard operating procedures (SOPs) for DMR submission, monitoring data analysis, and exceedance notification as controls to ensure that the monitoring program continues to be effective in its purpose of reducing discharges that may cause or contribute an exceedance of SWQS. The SOPs stipulate roles and responsibilities of ADOT personnel and contractors conducting the monitoring work, as well as data requirements, reporting timeframes and follow up procedures for identified exceedances. The SOPs are evaluated and updated as needed on an annual basis in accordance with this SWMP.

MS4 Permit Part 3.3 requires that ADOT develop and implement control measures to minimize discharges of any listed parameters from the MS4 to protected surface waters that are designated as impaired or not-attaining in the most current version of ADEQ's 303(d) list and 305(b) Assessment Report. Control measures that are in use or under development to address discharges to impaired or not-attaining waters from the ADOT MS4 consist of the following:

- *Integration of Geographic Information Systems (GIS) into ADOT's SWMP.* The ADOT stormwater GIS program was initiated during Fiscal Year (FY) 2022, and continues to be developed. The GIS program supports many aspects of the SWMP, including the use of available geospatial data to assist in the identification, tracking, and evaluation of highway projects and maintenance activities that are conducted in proximity to impaired or not-attaining waters. For the purposes of the MS4 Permit, ADOT defines proximity as having a potential point of discharge that is upstream and within 0.25 mile of the ordinary high water mark of the listed waters.

- *Stringent stormwater specifications for "sensitive projects."* Construction projects requiring coverage under the CGP in proximity to listed waters are classified as sensitive, and are subject to contract specifications that require the contractor to employ an Erosion Control Coordinator (ECC) with more rigorous professional qualifications than for standard ADOT projects. More information on the role of contract specifications in ADOT's SWMP is provided in Section 4.9, Construction.

- *Project programming model*. ADOT developed a statewide erosion control project programming model that features a weighted value for proximity to impaired waters to increase the likelihood of developing and funding erosion control and related projects in those areas. The model was designed to evaluate projects that address severe and repetitive erosion locations identified in each District, with the goal of protection of water quality through the reduction of erosion in those locations. More information on the project programming process is provided in Section 4.10, Post-Construction.

- *Stormwater monitoring at certain ADOT facilities*. ADOT continues to conduct sampling and monitoring at three maintenance yard sites that are within 0.25 mile of listed impaired or not-attaining waters in order to characterize discharges and monitor the effectiveness of control measures implemented at the facilities. More information on monitoring is provided in Section 5.0, Monitoring Requirements.

Part 3.3 of the MS4 Permit also identifies stipulations for discharges to surface waters with an established Total Maximum Daily Load (TMDL). TMDL is an estimate of the amount of a pollutant impairing a water body can assimilate and still meet the applicable water quality standards. The TMDL for a water body accounts for all potential sources of the pollutant in the watershed and assigns a load allocation to each Permittee that may discharge stormwater to the impaired receiving water. In the absence of a load allocation for ADOT, then ADOT will be held to the applicable SWQS for the pollutant of concern at the point of discharge. Table 1 summarizes the TMDL information applicable to ADOT, including control measures pertinent to ADOT MS4 activities.

Table 1: TMDL Information Applicable to ADOT

TMDL (reference)	Stream Segment HUC	Waste Load Allocation (WLA)	Area Where TMDL Requirements Apply	Control Measures
Gila River (OFR 15-03)	#15070101-008 (Centennial Wash to Gillespie Dam)	2.0 µg/L Total Selenium Chronic; 1,000 µg/L Total Boron	Portions of SR 85	Comply with AZPDES permits. Use control measures specific for the pollutant(s) in SWPPPs. Monitor on construction projects within 0.25 mile of the impaired reach, as required. Conduct public outreach/education, coordinate with adjacent MS4s.
Upper Granite Creek (OFR 14-08)	#15060202-059A	*E. coli 235 cfu/100ml;* 4.3 G-cfu/day: Upper USGS Gauge; 14.5 G-cfu/day: Lower USGS Gauge	Portions of SR 89	Comply with AZPDES permits, conduct public outreach/education, coordinate with adjacent MS4s, identify construction site-specific measures in project SWPPP (per ADOT Erosion and Pollution Control Manual), and conduct monitoring as necessary.
Little Colorado River (OFR 12-05)	#15020002-004	235 cfu/100ml *E. coli* - FBC; 575 cfu/100ml *E. coli* - PBC; Suspended Sediment Concentration	Portions of SR 77, SR 277, SR 260, US 180, and SR 61	Comply with AZPDES permits. Use control measures specific for the pollutant(s) in SWPPPs. Monitor on construction projects within 0.25 mile of the impaired reach, if necessary. Conduct public outreach/education, coordinate with adjacent MS4s.
Oak Creek (OFR 10-01)	#15060202-019, #15060202-18A, #15060202-18B, #15060202-18C, #15060202-01, #15060202-022, #15060202-017	Exempt from WLA (MS4 only): Due to surface area of the highways (~0.1%) being small area versus other dischargers	Portions of SR 89A and SR 179	Comply with AZPDES permits, conduct public outreach/education, coordinate with adjacent MS4s, Identify construction site specific measures in project SWPPPs (per ADOT Erosion and Pollution Control Manual), and conduct monitoring as necessary.
San Pedro (Lower) (OFR 12-01)	#15050203-001	*E. coli*: 235 cfu/100ml (FBC); *E. coli:* 575 cfu/100ml (PBC)	Portions of SR 77 and SR 177	Comply with AZPDES permits. Use control measures specific to the pollutant. Preserve, enhance, or establish buffers that provide water quality benefits.
Santa Cruz River (EQR 18-12)	#15050301-009, #15050301-008A , #15050301-008B , #15050301-011, #15050301-500B	*E. coli*: 235 cfu/100ml (FBC); *E. coli:* 575 cfu/100ml (PBC)	Portions of I-19	Comply with AZPDES permits. Use control measures specific to the pollutant. Preserve, enhance, or establish buffers that provide water quality benefits.
Watson Lake (OFR 14-03)	#15060202-1590	Total Nitrogen: 1.0mg/L, pH; Total Phosphorus: 0.10 mg/L; Dissolved Oxygen (not applicable to ADOT)	Portions of SR 89	ADOT is not required to sample for Dissolved Oxygen per ADEQ SWGP16-0251. Comply with AZPDES permits. Identify pollutant specific control measures in SWPPPs. Monitor on construction projects within 0.25 mile of the impaired reach, if necessary. Conduct public outreach/education, coordinate with adjacent MS4s.

During FY 2023, ADOT finalized a pro-active, multi-year research project to use field data and modeling to characterize discharges and determine what, if any, is ADOT's contribution to pollutants of concern for the TMDL waters. In 2021, ADOT began evaluating pollutant loadings in stormwater runoff sampled from ADOT rights-of-way from five drainage basins to assess the need for potential stormwater management and treatment activities to reduce pollutant levels in runoff. The drainage basins with established TMDLs being sampled, modeled and analyzed for this research project consist of:

- Granite Creek
- San Pedro River
- Oak Creek
- Gila River
- Little Colorado River

The research project included sampling and analytical analysis of the monitoring data, as well as evaluating the data, determining contributions, and developing potential control measures to implement as appropriate. Results of the study are presented in ADOT Research Center Report number SPR-761, *Evaluating Total Maximum Daily Load Pollutants from ADOT's Storm Sewer System Discharges*, available at https://adotrc-agic.hub.arcgis.com/documents/ea06f35d3d1b4c5b85db536dadf03ae1/explore.

4.0 STORMWATER MANAGEMENT PROGRAM

4.1 Program Implementation

Section 4.1 of the MS4 Permit specifies the requisite elements of ADOT's SWMP and implementation thereof. This SWMP describes the control measures implemented by ADOT to meet the MS4 Permit requirements for each program area. ADOT's SWMP is continually updated as necessary, and an evaluation of the SWMP is conducted on an annual basis. Revisions and/or modifications to the SWMP are implemented as needed. Record keeping to demonstrate compliance with the Permit is conducted as described in Section 6.0 of this document. ADOT's legal authority to implement the SWMP is described in Section 2.0. Contractors that are hired by ADOT are contractually obligated to comply with ADOT's SWMP through the use of specifications as described in Section 4.9.

4.2 Training

This section of the SWMP outlines the training activity requirements that ADOT implements to ensure compliance with the MS4 Permit. ADOT continues to implement a stormwater awareness training regimen that includes the relevant details and topics related to reducing and eliminating pollutants from entering stormwater runoff to reduce their impacts to the MEP. This training applies to all new hires and ADOT staff who have duties that directly involve maintenance, construction, housekeeping activities, are involved with waste disposal, spill response activities and/or are in field positions that may witness an illicit discharge while on the job at ADOT facilities, roadways, or project locations. In addition, there is more in-depth training that is completed for those ADOT personnel that are directly involved with storm sewer system maintenance, repair and/or construction that includes more detailed information on the potential contaminants, their sources and proper maintenance techniques. Also included in training is

course content specific to those that conduct construction site inspections, Best Management Practice (BMP) installation and/or maintenance or are contractors on ADOT sites and projects.

The records for training, subject areas, applicable personnel/job duties for each subject, refresher training intervals, and contractor training/certification are tracked and aggregated using a database system by the ADOT Environmental Planning Training Officer. Training content is reviewed on an as-needed basis by Water Resources in coordination with the Training Officer to ensure the educational material is consistent, up-to-date, and effective. A review of all stormwater course offerings was initiated by ADOT Water Resources in FY 2024 and will continue into FY 2025, with course updates anticipated to be implemented during FY 2025 and FY 2026. ADOT's stormwater training program currently includes the following courses that have been developed to address the required SWMP elements at a level appropriate for various personnel based on job responsibilities and duty location.

- *Stormwater Awareness.* This training is provided for personnel at all levels of responsibility who are involved in activities that may impact stormwater quality. It includes the basics of recognizing and addressing illicit discharges and illegal dumping, good housekeeping, and non-stormwater discharges.

- *Environmental Awareness.* This training is provided to all Highway Operations personnel and covers several elements of the SWMP in the two-day activity-based course, including stormwater awareness and the BMPs that apply to ADOT's highway maintenance operations such as spill prevention and response, proper waste handling and disposal, and good housekeeping.

- *Highway Storm Sewer System Maintenance*. This training is provided to all maintenance field staff and focuses on storm sewer system maintenance, including roadway repair and related activities such as facility inspections, pollutant source investigations, documenting investigations, activity tracking, and reporting procedures.

- *Post-Construction Water Quality Control Measures.* This training is provided for personnel who are involved in identifying and selecting appropriate stormwater control measures during design and construction.

- *Maintenance Yard Stormwater Pollution Prevention and Spill Response/Prevention*. This training covers implementation of site-specific Stormwater Pollution Prevention Plans (SWPPPs), spill response/prevention plans, and waste disposal.

- *ECC Certification* is required of contractors working on ADOT projects subject to the CGP. This training program is administered through the Arizona Association of General Contractors, and includes inspection and maintenance requirements that pertain to erosion and sediment control when working on ADOT projects. The training is also provided to ADOT personnel who are involved in construction SWPPP implementation.

- *Construction Site Inspector* training is a new course specifically targeting ADOT personnel whose job responsibilities include construction site inspections. The draft for this training was

developed during FY 2024, and finalization and implementation of the course is anticipated to be completed in FY 2025.

In addition to formal training, ADOT's Water Resources personnel provide regular updates, guidance, and mentoring on stormwater program topics to affected personnel such as District Environmental Coordinators (DECs), Construction Resident Engineers, Environmental Planning staff, District Permit staff, Project Management, Development/Design staff, Engineers in Training, and other staff as needed or requested.

4.3 Enforcement Measures and Tracking

This section of the SWMP sets forth the ADOT plan to implement and document enforcement responses to violations of permit conditions, including the escalation process when needed for more problematic cases. ADOT developed a Stormwater Enforcement Response Plan (ERP) to meet the requirements listed in Part 4.3.A of the MS4 Permit. The ERP can be viewed at Manuals and Agreements - Water Resources | Department of Transportation. The ERP is reviewed annually for needed updates as a part of the annual SWMP evaluation. ADOT Water Resources personnel track instances of non-compliance statewide in coordination with Districts and ADOT's Hazmat Response Team through the use of online forms as described in Section 4.6, Illicit Discharge Detection and Elimination (IDDE). This process is currently being transitioned to the Stormwater GIS program.

MS4 Permit Part 4.3.C requires ADOT to include a statement of the Enforcement Authority Framework in the SWMP with specific information as follows:

- ADOT is a multimodal transportation agency responsible for planning, building and operating a complex highway system, as well as motor vehicle and related enforcement services, across the state of Arizona. The organizational chart for the agency can be viewed at Organization Chart | Department of Transportation. The agency is divided into various divisions to manage the numerous aspects of ADOT's mission. The majority of ADOT's stormwater-related activities fall under the purview of the Deputy Director of Transportation, also called the State Engineer. Due to ADOT's wide geographic coverage and large number of employees, stormwater-related activities are conducted, tracked and documented at various levels and in multiple units, organizations, and divisions. However, a single steward of the program, the MS4 Stormwater Program Coordinator, is assigned to coordinate all the Permit requirements on behalf of ADOT, with assistance from the other members of ADOT Water Resources, Environmental Planning, and DECs working within each District leadership team. Key personnel and contact information for the ADOT Water Resources Program is provided in Table 2. Contact information for each of ADOT's DECs is available at District Contacts | Department of Transportation.

- The administrative and legal procedures, rules and statutes available to mandate compliance with the ADOT SWMP are detailed in Section 2.0, Legal Authority, and the ERP.

- A description of how stormwater-related requirements are implemented is provided in each section of this SWMP within the applicable program component description.

- A description of procedures to issue administrative orders and injunctions through the Arizona Attorney General's Office is provided in the ERP.

Table 2: Contact Information for the ADOT Water Resources Team

Name	Role	Contact Information
Eileen Dunn	Water Resources Manager	602-245-0725 EDunn@azdot.gov
Vacant	MS4 Stormwater Program Coordinator	
David Mack	Industrial Stormwater and Spill Prevention Control and Countermeasure Program Coordinator	602-376-7935 DMack@azdot.gov
Richard Mendolia	Groundwater and Drinking Water Coordinator	602-290-2200 RMendolia@azdot.gov

4.4 Public Outreach and Education

This section of the SWMP details ADOT's approach to public outreach and education in order to provide information to the general public about actions individuals can take to reduce transportation-related pollutants and improve water quality. Educating and involving the general public and transportation system users are key components to the success of the program. Certainly if ADOT can gain the support of the traveling public in a reduction of litter, or if local residents that utilize the highway infrastructure to commute are asked to participate in making a difference in how much oil and grease are deposited on the roadway by maintaining leaky vehicles, then a cost savings is realized and may direct the flow of cash into restoration of infrastructure. Talking about and getting people involved in the management of state-owned assets are tricky because the audience is aged 16 to 80 and priorities are vastly different. Therefore, a targeted approach by communications professionals is necessary.

ADOT Communications partners with ADOT Water Resources in public outreach and education efforts and plays a crucial role in designing and delivering stormwater pollution prevention messaging. Additionally, Communications assists with messages regarding ways to minimize impacts to transportation facilities that may include bilingual and bicultural versions when appropriate based on the targeted group's demographics. Various forms of social media are utilized for messaging based on subject matter and target audience. In addition, videos on ADOT's YouTube channel includes subjects and past events such as ADOT's Environmental Resources Roadshows, the Adopt-a-Highway Volunteer

Program, and other transportation- related impacts on natural resources that outline ADOT's efforts taken to protect the environment, public safety, and transportation systems (ArizonaDOT - YouTube).

Source control, such as removing lead from gasoline, and/or replacing copper brake pads with ceramic ones happens at a national level. Local outreach activities to curb litter, vehicle maintenance, report dumping, and protecting roadsides have great potential to make a positive impact. Staying involved and connected with the communities that our roadway system impacts is made possible through partnerships with nonprofits, non-governmental organizations, and other municipal entities. Examples of non-governmental organizations ADOT partners with include various university departments and colleges such as the ASU School of Geographical Sciences & Urban Planning, and the Arizona State University Metis Center for Infrastructure and Sustainable Engineering. A few that ADOT participates with and the estimated municipal memberships are listed here:

- STormwater Outreach for Regional Municipalities (STORM) – 28 member organizations
- Pima Association of Governments Stormwater Management Working Group – 8 members
- Phase I Coalition – 7 members

ADOT continues to be an active participant in STORM (STormwater Outreach for Regional Municipalities (STORM)), which provides tangible messages in the form of promotional items and educational materials, as well as media campaigns throughout Arizona. STORM uses a multimedia approach targeting audiences through radio, television, special events, and providing educational information to the general public and the regulated community.

MS4 Permit Part 4.4.A.2 stipulates that, by Year 4 of the permit term, ADOT shall evaluate and measure the understanding and adoption of the targeted behavior and use the results to direct future education and outreach resources most effectively and to evaluate changes in adoption of the targeted behaviors. A research study is currently underway to address this requirement. Titled *Enhancing ADOT Communications to Reduce Highway Litter in Arizona*, the study will identify and document the current litter situation along the state transportation system and recommend strategies to inform Communications in its messaging campaigns aimed at reducing litter. This study is anticipated to be completed during FY 2025.

4.5 Public Involvement and Participation

This section of the SWMP describes ADOT's efforts to engage the public, to undertake group activities that highlight storm drain pollution, and volunteer community actions to restore and protect local water resources. The MS4 Permit requires the following components of the public involvement strategy be detailed in the SWMP:

- *Annual public SWMP workshop.* ADOT will host a virtual workshop each year to inform and engage interested members of the public about the development and implementation of the SWMP. The 2024 workshop, which presented the topic of ADOT's IDDE program, along with previous year workshops are available at Stormwater Discharge Permit | Department of Transportation.

- *Opportunities for participation in the implementation of stormwater controls.* ADOT provides an opportunity for community members and businesses to help keep our highways litter free through the Adopt a Highway program (Adopt a Highway | Department of Transportation). The Adopt a Highway Volunteer Program Manager assists with public involvement and participation through program activities, educational outreach, and stakeholder engagement about keeping trash and debris out of the storm sewer system and off the roadways. Currently, about 850 volunteer groups take responsibility for cleaning almost 2,000 miles of landscape along state highways each year.

- *Public reporting system*. ADOT maintains a public reporting system to facilitate and track public reporting of spills, discharges and/or dumping to the MS4 on a continuous basis. During FY 2023, ADOT decommissioned the Arizona Litter Hotline due to high costs and demonstrated lack of effectiveness. However, the ability to report stormwater issues by the public has been maintained. Public reports, comments and questions on stormwater issues are handled through an online contact form available at Contact ADOT. ADOT Communications receives the submitted information and distributes it for response according to the content. In addition, the list of ADOT personnel in the *Contact Us* section of the Water Resources web pages (Contact Water Resources | Department of Transportation) indicates the types of inquiries handled by each member of the Water Resources Team and includes an email link to each.

- *Posting SWMP information online.* ADOT's SWMP, annual reports, MS4 Permit, manuals and outreach materials are available on Water Resources | Department of Transportation. The webpage is managed by the ADOT web team and updated as Water Resources provides new information or updates any portion of the program.

4.6 Illicit Discharge Detection and Elimination

This section of the SWMP details ADOT's program to detect, investigate and eliminate non-stormwater discharges, including dumping and spills, into its system. "Illicit discharge" is defined as any discharge to an MS4 that is not composed entirely of stormwater, except discharges authorized under separate AZPDES or NPDES permits or listed allowable discharges in Permit Part 4.6.B, including emergency firefighting activities.

Detection and elimination of illicit discharges requires that ADOT maintain a comprehensive documentation, inspection, and follow-up program. Mapping the storm sewer system and identifying where discharges to WOTUS are expected to occur are the first steps in minimizing pollutants in stormwater discharge. The infrastructure of ADOT's highway system is linear in configuration, except for maintenance yard facilities and other support activities such as administrative offices and public customer service locations. Narrow stretches of highway right-of-way are developed with roadway and support assets, including but not limited to pavement, shoulders, bridges, ditches, culverts, catch-basins, spillways, retention basins, and various signage, communications and lighting features. All these assets, including drainage components that are part of the MS4, are cataloged in a centrally available database known as the Features Inventory System (FIS). As new construction and rehabilitation and/or retrofits are completed within the existing highway system, the database is updated by the FIS Team in coordination with ADOT Project Management and District personnel.

Mapping of ADOT's MS4 assets and outfalls for the entire state is a massive undertaking in terms of geographic area covered and the resources needed to complete the entire system, as well as keeping the system information updated as the system grows and changes. ADOT began mapping its MS4 in 2005 in the Phoenix and Tucson areas. ADOT continued to map MS4 assets and outfalls, as well as identify priority outfalls, over an expanded area each year in compliance with previous MS4 Permits. The results of previous mapping efforts are available on Stormwater Discharge Permit | Department of Transportation in the respective annual reports for the year the mapping was completed.

The current MS4 Permit Part 4.6.C.5.a lists the highway corridors that will be mapped during the current term, based on ADOT's MS4 Route Mapping Proposal approved by ADEQ in 2019: US 60, State Route (SR) 77, SR 85, SR 260, US 95, SR 69, SR 87, and SR 89. Mapping efforts for these corridors was initiated in Fall 2021 and is now complete. The data is currently being integrated with previous mapping within the Stormwater GIS program. ADOT Water Resources has developed a standard process for mapping MS4 assets and identifying and evaluating outfalls in coordination with the ADOT FIS Team, ADOT GIS Team, and consultant contractors that perform the technical work. The process for each corridor begins with a desktop assessment of ADOT's FIS and GIS information in comparison to available land surface imagery and relevant GIS layers from ADEQ. Areas where field verification may be required are identified, and a workflow process is used to identify and categorize priority outfalls. Field verification is conducted on an as-needed, ongoing basis by ADOT Water Resources staff, DECs, and consultant contractors.

Through the approach described above, ADOT has developed an inventory of all known MS4 outfalls, interconnections with other MS4s, and those outfalls that are considered "Priority" for illicit discharges or other non-stormwater flows. Priority outfalls are defined as those with the following characteristics:

- History of illicit discharges and any cause for prioritization identified by ADOT
- Discharges to/within another regulated MS4
- Located within 0.25 mile and upstream of listed impaired, Outstanding Arizona Water (OAW)s, and/or perennial waters

ADOT performs outfall inspections as a major component of its IDDE program. As required in the MS4 Permit, outfall inspections are conducted as follows:

- All priority outfalls are inspected by ADOT Water Resources personnel, DECs, or qualified consultants using the Dry Weather Screening Method each year
- A minimum of 20% of non-priority outfalls are inspected during the course of routine maintenance drainage inspections each year

For non-priority outfalls, maintenance units conduct Level of Service inspections to ensure that infrastructure is performing as designed. Routine inspections are tracked in a resource management system called PeCoS (Performance Controlled System). ADOT has developed an SOP for priority outfall inspections, outlining the Dry Weather Screening Method, as well as the processes for response to non-stormwater flows, investigation methods and timelines, source detection, and elimination.

Uncommonly there are illegal connections to the ADOT MS4. It is difficult to hide a connection in the linear right-of-way and even more difficult to force a connection to an ADOT storm sewer channel that is open and concrete lined. Potential illicit discharges may be identified during outfall inspections, in the normal course of duty during roadway maintenance and/or construction activities, or by receiving a notification or report from an outside source. The majority of illicit discharges occur as releases due to incidents on the freeway or highway routes. Other common scenarios include deposition of litter at rural traffic interchanges and vacant, excess land parcels. Often these are reported by third parties or discovered by personnel during routine activities. When a District discovers a routine or non-emergency situation, such as a non-stormwater flow or a suspicious connection, the District will take steps to investigate and eliminate the issue in accordance with ADOT SOPs. In all cases, documentation and follow-up visits are required. Once an illicit discharge is discovered, ADOT Water Resources and DECs coordinate to investigate the case and document the findings. They will contact the responsible party and work with them as described in the ERP to stop the discharge from continuing.

Coordination with interconnecting MS4s and other local jurisdictions is required in many cases, since ADOT's highway system is a narrow right-of-way that crosses through many municipalities, counties, and land jurisdictions. ADOT Water Resources maintains a list of appropriate personnel and agency departments that handle stormwater management for lands adjacent to the right-of-way to contact in the event of an IDDE case that crosses a jurisdictional boundary. ADOT Water Resources staff typically make notifications via email or phone, and some cases require on-site meetings and follow up with adjacent jurisdictions staff.

Reports of material releases, such as fuel, sediment or debris, may be reported to the Traffic Operations Center (TOC) or Department of Public Safety. The TOC is staffed 24 hours per day and provides the most consistent tracking service. Release information is routed to qualified personnel that will begin the necessary protocol to protect human health and the environment. Either hazardous materials staff or Environmental Planning and the DEC will be contacted to remediate and report the incident. The TOC can be reached by calling 602.257.1563. ADOT responds to releases in compliance with the Arizona State Emergency Response and Recovery Plan. ADOT Safety and Risk handles hazardous materials and other releases to the highway. ADOT Environmental Planning takes care of facilities and yards that experience issues with material handling or releases.

Records for IDDE program activities are maintained by ADOT Water Resources staff in a database system. The IDDE tracking system meets the requirements of Permit Part 4.6.J and will be submitted with the annual report each year.

4.7 Pollution Prevention and Good Housekeeping Practices for Facilities

This section of the SWMP describes ADOT's process for preventing pollutant discharges from its off-highway system support facilities such as maintenance yards, port of entry inspection facilities, and Motor Vehicle Department customer service locations. Each facility is included in a master inventory maintained by ADOT Water Resources in a database system. ADOT Water Resources continually evaluates ADOT's facilities in accordance with a risk-based schema that identifies sites with high, medium or low risk potential, or with no exposure. The prioritization scheme for facilities entails doing a

risk assessment for each facility based on a set of criteria such as type and quantity of materials stored on site, potential pollutant-generating activities taking place at the location, and site characteristics including proximity to Protected Surface Waters including those listed as impaired, not-attaining and/or OAW.

All ADOT facilities with potential stormwater risk are inspected at a frequency corresponding to its assessment as high, medium, or low range. Basically, the higher the risk, the more frequent facility inspections are conducted. For example, a facility determined to have a high level of stormwater risk is assigned an inspection frequency of four times per year or quarterly, while those facilities with lower risk assessments are inspected on an annual or bi-annual basis. Facility inspections are completed using a standard form provided by ADOT Water Resources. Inspection reports and associated documentation and records are maintained by the Districts. ADOT Water Resources is currently implementing an online inspection form and tracking system to centralize the facility inspection tracking process.

Site-specific SWPPPs have been developed for all ADOT facilities with potential stormwater pollutant generating sources or activities. The SWPPPs are maintained and are updated as site conditions change by District staff. ADOT Water Resources, in coordination with DECs, continues to review and update the site-specific SWPPPs to ensure the documents continue to meet all requirements of the current MS4 Permit Part 4.7.B and this SWMP. During FY 2023, ADOT began the transition of the facility inventory and site-specific information to the ADOT Stormwater GIS Program for ease of access and centralized tracking of changes, deficiencies, and follow up activities. This effort is ongoing.

4.8 Measures to Control Discharge from Highway Operations and Maintenance

This section of the SWMP describes ADOT's programs for roadway and storm sewer system maintenance, cleaning and repair, vegetation management, erosion abatement and winter storm policies to reduce the discharge of pollutants to and from the MS4. After the infrastructure is built and is being operated, routine inspections and scheduled maintenance activities will occur. To preserve the built environment and protect the state's investment, all aspects of the system will periodically require repair or restoration.

Districts manage all aspects of roadway maintenance and utilize work plans and Level of Service analyses to prioritize work types and locations based on available staff, equipment, and funding. Work plans are prepared at the maintenance unit level by the Highway Operations Supervisor, evaluated by District management, and supported by the central Maintenance Management Service. Documentation is completed by individuals performing the work. ADOT's Maintenance Management Service provides performance guidelines for the highway system assets and uses activity codes to track daily work in the PeCoS resource management database. These codes are reviewed annually to identify roadway and facility activities that may generate or manage pollutants, and are relevant to stormwater tracking and reporting requirements. ADOT's maintenance programs include routine inspections, maintenance and cleaning of drainage assets and all identified components of the ADOT MS4.

ADOT follows multiple control measures when performing highway and storm sewer system maintenance activities, including vegetation management and winter storm activities. ADOT's Maintenance and Facilities Best Management Practices Manual, available on Manuals and Agreements - Water Resources | Department of Transportation, provides guidance for stormwater protection for activities conducted by highway operations. The manual includes detailed information about how to

decide which BMPs are best employed for specific activities and the site specific conditions for the work. Details about the installation and maintenance activities related to each structural BMP are included in the manual. The manual is reviewed on an annual basis and is currently under revision.

Control measures applicable to vegetation management include herbicide and fertilizer application by licensed professionals, use of approved materials and chemicals, consideration of the application timing with respect to precipitation and proximity to water bodies, chemicals are applied in accordance with manufacturer's recommendations, and reviewing procedures annually. More information on ADOT's Roadside Vegetation Management Guidelines is available at Roadside Vegetation Management Guidelines | Department of Transportation.

Control measures for erodible slopes where sediment is leaving the highway include stabilization through different methods such as application of hydroseeding or rock mulch. Commonly sediment and rocks are removed from a roadside ditch, or an eroded slope is backfilled, compacted, and revegetated or covered with rock. Areas identified by Districts as having a persistent erosion issue are documented for inclusion in retrofit projects through the Priority Programming process as described in Section 4.10 of this SWMP.

Winter storm management includes application of deicing and anti-icing chemicals and/or combination with abrasives (salt/cinder blend) to protect the traveling public during inclement weather. ADOT has fully evaluated the environmental impact from this activity and performs annual training to equipment operators that apply chemicals or abrasives and who drive snow plows or otherwise manage the storage of anti- and deicing materials. More information on ADOT's Winter Storm Management program is available at Winter Storm Management | Department of Transportation.

4.9 Construction

This section of the SWMP outlines ADOT's program to reduce potential pollutant discharges from construction projects taking place within the ADOT MS4. The highway transportation system is continually being improved, rehabilitated, and retrofitted to improve public safety and meet the needs of the traveling public. Thus, construction and related support activities will occur in and adjacent to the ADOT system of stormwater conveyances. The measures described in this section are implemented on an agency-wide basis, in conjunction with project-specific CGP requirements. Although the MS4 Permit includes requirements for the agency's overall construction program, individual projects are subject to separate permitting under the AZPDES CGP, as described in Section 1.0, Authorization.

The majority of construction projects in the ADOT highway system are performed by a contractor and designed, administered and overseen by ADOT. For projects that require coverage under the AZPDES or NPDES CGP, both ADOT and the contractor must obtain permit coverage as operators, and share responsibility for implementing all required permit conditions. For these projects, ADOT's role is administrative and supervisory, while the contractor is responsible for on-the-ground operations and physical implementation of stormwater BMPs. Therefore, for all projects that require authorization under the CGP, ADOT will submit a separate and accurate Notice of Intent (NOI) in accordance with CGP requirements, and ADOT will require contractors to file a separate NOI as well. Procedures for NOI review, approval, and submission are detailed in ADOT's Construction Manual, available at ADOT

Construction Manual Index. The Construction Manual contains standard administration practices and inspection procedures for ADOT construction personnel, and is currently being updated with input from ADOT Water Resources on stormwater compliance related content. For each project, specifications are included to address stormwater requirements in Part 104.09 of ADOT's Standard Specifications for Road and Bridge Construction and Stored Specifications, available at Specifications & Pay Items List | Department of Transportation.

All projects that are constructed within the ADOT system are designed, reviewed and approved by various technical sections at ADOT based on the project scope, purpose and need. For erosion control details and related specifications, ADOT's Roadside Development Section has developed the Erosion and Pollution Control Manual for Highway Design and Construction. The manual and detail sheets for standard BMPs are available at Manuals and Agreements - Water Resources | Department of Transportation. The manual is reviewed at least annually and updated as needed.

All projects are also reviewed for National Environmental Policy Act compliance and other environmental regulatory requirements, including stormwater, by ADOT Environmental Planning (Environmental Planning | Department of Transportation). Stormwater permitting requirements are reviewed by ADOT Water Resources during the project clearance process, and the relevant information is noted on the List of Environmental Commitments for each project. Environmental Planning has implemented a standard detail for plan sets, called the "EPIC" sheet, that conveys all environmental commitments and environmental regulatory requirements in an easy-to-read summary for engineering and construction personnel to ensure consistent and accurate permit requirement information is provided for all projects.

Once a construction project is awarded, ADOT will review and approve contractor-prepared SWPPPs prior to the commencement of ground-disturbing activity, as described in the construction manual and contract specifications. ADOT Water Resources has developed a construction project SWPPP template for use on all ADOT projects that require CGP coverage, as well as a template for Monitoring and Sampling Analysis Plans and construction site inspection report forms, available on Construction SWPPP Forms | Department of Transportation. ADOT Water Resources is currently finalizing guidance and reference documents for ADOT construction personnel to assist in reviewing SWPPPs, and preparing NOIs and Notices of Termination in accordance with CGP requirements.

ADOT Water Resources continues to maintain an inventory of construction projects with CGP coverage to identify new projects, completed projects, and those that are awaiting final stabilization. The inventory is compiled using email notifications from myDEQ and ADOT Construction Operations, and supplemented by information from Districts and/or contractors when needed. Suspected non-filers, although rare, are identified by DECs and submitted to ADOT Water Resources for follow up. The information is researched by ADOT Water Resources and an appropriate response is prepared, including contacting the operator to inform them of their responsibility to comply as needed. Non-filers will be reported to ADEQ in accordance with Permit Parts 4.9.C.2 and 6.4.

During project construction, ADOT will monitor contractor activities to ensure compliance with CGP requirements including inspections, follow up activities and documentation. If ADOT determines that the

contractor is not meeting requirements, ADOT will follow the escalation process described in the ERP in Section 4.3 of this SWMP to remedy the situation. Along with the information previously described in specifications and guidance materials, compliance with CGP requirements on ADOT projects is also achieved through contractor ECC training and certification, described in Section 4.2 of this SWMP, as well as support for construction personnel provided by ADOT Water Resources staff in the form of guidance, individual training, educational stormwater inspections, routine stormwater program updates and enhanced review of projects as requested by Districts.

4.10 Post-Construction

This section of the SWMP details ADOT's Program to control stormwater discharges from areas of new development and redevelopment after construction is complete. As stated in the current permit, "Adequate post-construction BMPs, and policies are presumptively met if the Permittee follows the 2016 ADOT Post-Construction Best Practices Manual." ADOT utilizes this manual (available at ADOT Post-Construction Best Management Practices Manual for Water Quality) to reduce pollutant discharges associated with development and/or redevelopment of the statewide transportation system to the MEP. The manual, a comprehensive planning and design process guide, includes site design strategies, control measures, and other practices that are considered on a site-specific basis during the project development process.

In support of the requirements in Section 4.10, ADOT is in the process of revising the 2016 manual to include the additional requirements set forth in the current MS4 permit, as well as to provide guidance on maintenance standards for meeting the goal of 80% design for detention, retention, and treatment. With consultant support, ADOT is developing new work flow mechanisms to ensure the manual is being implemented consistently throughout the transportation planning and project development/design process, and to track outcomes for specific projects.

ADOT is working with management in various stages of the Project Delivery process (ADOT's planning and design procedures) to provide additional tools and checklists to support decision-making throughout the process to ensure that post-construction stormwater control BMPs will be designed and constructed. A key tool in this effort is the Stormwater Quality Control Form for Permanent Stormwater Control Design. This form's purpose is to clearly define the decision point, considerations, and coordination within the development process for the ADOT Project Delivery Project Managers, Design Engineers, Drainage Engineers, and Consultants involved in the evaluation and design process. This form will apply to New Development and Redevelopment projects (called "Expansion" and "Modernization," respectively, in ADOT's long-range planning process) that have one acre or more of ground disturbance associated with the project. Factors that influence the addition of post-construction stormwater quality controls include but are not limited to proximity to waters that are designated by ADEQ as Impaired, OAW, or have a TMDL. Other factors to consider are soil conditions, geology, available right-of-way, safety, and whether the control measure discharges directly into another MS4. For every post-construction stormwater quality control chosen, ADOT will identify on the Form if the control measure(s) is intended for Volume Control, Pollutant Control, Erosion Control or Velocity Control and will identify any maintenance requirements for the control measure.

Additional tools in development for further design and development incorporation and decision-making include outreach and training for relevant staff and a workflow guide for use as a reference and in training. Key internal stakeholder groups have been identified as Drainage Design, Roadside Development, Project Management, Environmental Planning and the District Construction and Maintenance. ADOT Water Resources will target these groups for training opportunities.

ADOT Water Resources continues to refine the process of conducting annual assessments of retrofit projects and has improved the documentation of the inventory and project prioritization results submitted with the Annual Report. The definition of retrofit as it applies to ADOT's MS4 Program is as follows: Stormwater Retrofit Controls incorporate stormwater permanent best management practice installation in the ADOT highway system where none previously existed, or improvement/upgrade of existing conditions to improve water quality in or adjacent to ADOT right-of-way. Stormwater retrofit projects are those that will be incorporated into ADOT expansion or modernization (redevelopment) projects as part of project planning and development. It is unlikely that a stormwater project alone will drive a development project for retrofit, but rather that retrofit needs can be addressed through projects that are being planned as part of ADOT's mission. As such, ADOT's Five-Year Program serves as part of the foundation for the identification and prioritization of retrofit projects.

ADOT's annual retrofit assessment process reflects the existing ADOT Project Delivery Process as much as possible. The process is split into four phases: Project Planning and Programming; Project Design; Project Construction; and Operation and Maintenance. In the Project Planning and Programming Phase of ADOT's Project Delivery Process, proposed projects are pre-scoped and evaluated for funding and programmed into ADOT's Five-Year Transportation Facilities Construction Program. In the Project Design Phase, the programmed project goes through all the stages of design, environmental clearances, utility clearances, right of way clearances, and is advertised and awarded to the selected contractor(s). The project then moves into the Project Construction Phase where the project is constructed and completed. After construction is complete, the project moves into the Operation and Maintenance Phase at which time system operation and maintenance is primarily handled by ADOT Districts.

During the Project Planning and Programming Phase, potential projects go through the Planning to Programming (P2P) Process in which projects are prioritized based on a scoring process that incorporates technical, policy, safety, and ADOT District considerations. This informs ADOT's Five-Year Program and identifies projects that are prioritized for funding, development, and construction. Within the program, projects are categorized as system preservation, expansion, modernization, or administration. Expansion and modernization projects are considered to be new development or redevelopment under the definition of the ADOT MS4 Permit. Projects identified in the ADOT Five-Year Program must be evaluated early in the Project Delivery Process. Much of the prioritization criteria required by the Permit are included early through the P2P Process and development of ADOT's Five-Year Program. Within the P2P Process, ADOT has incorporated the use of a Statewide Stormwater & Erosion Control Study (Statewide Stormwater & Erosion Control Study | Department of Transportation) that developed a prioritization model, project scoping elements, and planning costs for prioritized projects in each ADOT District. The study identified and prioritized statewide stormwater management and erosion control needs for initial planning purposes. This study delivered a data model that operates within a defined project prioritization framework. This prioritization model was developed to provide ADOT a quantitative, comprehensive, systematic, and replicable approach to augment stormwater management activities and

provide a prioritized program of projects to incorporate into the annual P2P Process in support of ADOT's Five-Year Program. Once the project moves into the Project Design Phase, additional criteria are incorporated into the design process to determine the specific details of the project. During this process, engineers and the Design Project Manager work to assess the specific location and type of permanent stormwater quality control. After the design phase, the project moves into the Construction Phase, followed by Operations and Maintenance.

Key tools and information that are incorporated into the annual retrofit assessment inventory include the completed MS4 mapping to date, current post-construction stormwater control structures, and priority outfalls, the MS4 permit criteria, and any updated information resulting from updated water quality data from ADEQ's website. Additionally, information from the recently completed TMDL research project (SPR-761) described in Section 3 is being used to inform relevant findings into the Post-Construction Stormwater Control Program.

The next steps in ADOT's Post-Construction Stormwater Control Program development include the development of the process by which the controls identified and designed during Project Delivery are tracked in the construction and post-construction stages. ADOT will be using existing workflows with the Project Delivery Project Manager, Environmental Planner, and Environmental Commitments Coordinator to inventory and track the project through construction. At that point, the District Environmental Coordinator, District Maintenance Staff, other relevant District staff, and consultants will be involved to conduct inspections, maintenance, and tracking to ensure that the measures are being properly maintained per the design standards and permit requirements. ADOT will use existing maintenance databases for tracking. Lastly, ADOT will be working with the District Maintenance staff to identify a clear procedure for addressing non-compliance with BMPs standards.

5.0 MONITORING REQUIREMENTS

Stormwater monitoring is used to characterize ADOT's stormwater quality and identify pollutants, detect and eliminate illicit discharges, and evaluate the effectiveness of control measures and the SWMP as a whole in reducing the discharge of pollutants to the MEP. ADOT's procedures ensuring adequate quality assurance/quality control (QA/QC) for stormwater monitoring are documented in the Quality Assurance Manual, available at Manuals and Agreements - Water Resources | Department of Transportation.

ADOT will collect stormwater samples from the first representative storm event of each wet season and subsequent representative storm events as necessary to collect at least one stormwater sample for each wet season from each outfall or monitoring location. Sampling will be conducted over the first 3 hours of the discharge or for the entire discharge period, if the discharge lasts less than 3 hours. Sampling efforts include the "first flush" (first 30 minutes of stormwater discharge) whenever possible. Samples are collected from qualifying events at least 72 hours after a previous qualifying storm event. A qualifying storm event is defined in the MS4 Permit as:

- a storm event of greater than 0.1 inches of rainfall; and
- a measurable discharge
- at least 72 hours after a previous qualifying storm event

There are two defined wet seasons per the MS4 Permit. Wet seasons, for the purpose of monitoring, are defined as:

- Summer wet season – June 1st – October 31st (153 Days)
- Winter wet season – November 1 – May 31st (212 Days)

Five monitoring locations have been established as representative of ADOT highway system drainage. Each roadway runoff monitoring location is equipped with an ISCO auto-sampler system that takes flow-weighted composite samples within the first three hours of a storm (or snow melt). In addition, grab samples are required for some parameters. Sampling and maintenance activities are contracted by a consultant. Parameters are dictated based on the type of the system and the status of the receiving water. Numeric water quality standards and exceedance thresholds vary as a result. All storm events are recorded by the monitoring location's rain gauge. Location and land use information for the monitoring locations are listed in Table 3.

Table 3: Monitoring Locations/Characterization - Highway

Location Name	Physical Address	Latitude/ Longitude	Area Drained (acres)	Land Use (%)	Receiving Water/ Designated Use	Monitoring Equipment
Flagstaff 2	West side of S Beulah Blvd between the I-40 mainline and I-40 eastbound to I-17 ramp	35 10 20.1N/ 111 39 56.4W	22.0	Urban highway 100%	AZ15020015-004A Rio de Flag: PBC, A&We	ISCO Auto-Sampler
Sedona	Below western abutment of SR 179 bridge over Oak Creek	34 51 43.93N/ 111 45 42.68W	7.35	State/business route 90%, commercial streets 10%	AZ15060202-18C Oak Creek: OAW, FBC, DWS, FC, AgI, AgL, A&Ww; Impaired: *E. coli*	ISCO Auto-Sampler
Phoenix	East of SR 101 on north bank of Skunk Creek	33 37 19.84N/ 112 14 21.61W	17.5	Urban highway 90%, commercial streets 10%	AZ15070102 Skunk Creek: PBC, A&We	ISCO Auto-Sampler
Tucson	West of I-10, north of Grant Road within ADOT Yard	32 15 17.17N/ 110 59 49.39W	4.8	Urban highway 90%, ADOT facility 10%	AZ15050301 Santa Cruz River: PBC, A&We, AgL; Impaired: *E. coli*	ISCO Auto-Sampler
Nogales	Morley Road & SR 82	31 21 02.10N/ 110 55 24.48W	59.5	Urban highway 80%, residential streets 20%	AZ15050301-011 Tributary to Nogales Wash: PBC, FC, A&Ww; Impaired: ammonia, chlorine, copper(d), *E. coli*	ISCO Auto-Sampler

If an adverse climatic condition is encountered which prohibits the collection of samples, ADOT will document the adverse condition in a technical memorandum and report this to ADEQ with the DMRs.

In addition to the highway system monitoring locations, ADOT conducts monitoring at three ADOT maintenance yards located within 0.25 mile of a listed impaired or non-attaining waters, as described in Table 4 below. These locations are subject to grab sample monitoring.

Table 4: Monitoring Locations/Characterization - ADOT Facilities

Location Name	Physical Address	Latitude/ Longitude	Area Drained (sq ft)	Land Use (%)	Receiving Water/ Designated Use	Monitoring Equipment
Superior Office	951 Main Street, Superior	33 17 14.12N/ 111 06 40.27W	55,321	ADOT maintenance facility (100%)	AZ15050100-014A Queen Creek: PBC; Impaired: Copper(d)	Manual
Superior Fuel	952 Main Street, Superior	33 17 17.10N/ 111 06 43.45W	37,026	ADOT maintenance facility (100%)	AZ15050100-014A Queen Creek: PBC; Impaired: Copper(d)	Manual
Nogales Maintenance	1340 Hohokam Drive, Nogales	31 21 22.97N/ 110 55 38.96W	114,998	ADOT maintenance facility (100%)	AZ15050301-011 Nogales Wash: PBC; Impaired: ammonia, chlorine, copper(d), *E. coli*	Manual

After samples are collected and analyzed at the lab, the consultant/contractor performs necessary QA/QC assessments and the reports are provided to Water Resources. The data is reviewed for comparison of prior events and exceedances, and qualifiers that suggest whether additional samples should be taken.

In most cases, ADOT will not resample for bacteria (*E. coli* and fecal). ADOT does not have an identified source of this pollutant, and most detection is coincidental with adjacent development. The results of analysis are consistent with land uses such as parks, recreation, pet play areas, older neighborhoods with septic systems, wildlife, and historic occupation. Additionally, adjacent municipalities also report detections of high *E. coli*. Therefore, ADOT typically samples for missed parameters due to insufficient flow, and prioritizes analysis for the pollutants more indicative of transportation pollutants – metals, and sediment.

If a pollutant repeatedly exceeds the numeric water quality standard, Water Resources staff and/or their consultant/contractor will investigate potential causes for the exceedance of the pollutant. Should the detection be isolated, a technical memorandum is prepared that provides details of the investigation. If there are multiple incidents, and it becomes evident that the transportation activities or infrastructure are contributing to the exceedance, ADOT will address the issue as needed.

6.0 REPORTING REQUIREMENTS

This section of the SWMP describes ADOT's processes to comply with the Permit reporting requirements for DMRs, Annual Report, Renewal Application, and Non-filer Reporting. All documentation required in this section is tracked centrally by ADOT Water Resources in a database system.

ADOT Water Resources has developed SOPs for DMR submission. The SOPs stipulate roles and responsibilities of ADOT personnel and contractors conducting the monitoring work, as well as requirements as outlined in the permit. The SOPs are evaluated and updated as needed on an annual basis in accordance with this SWMP. ADOT will submit the DMR to ADEQ within 30 business days of the end of the respective storm season within the permit. The DMRs are submitted electronically using a form provided to ADOT from ADEQ.

Annual Reports will be submitted to ADEQ in an electronic format as stipulated in Permit Part 6.2. A renewal application will be submitted to ADEQ 180 days prior to the expiration of the current MS4 Permit, as stipulated in Permit Part 6.3. Non-filer reporting will be conducted on a continuous basis as needed by submitting the required information from Permit Part 6.4 to ADEQ via email.

7.0 STANDARD AZPDES PERMIT CONDITIONS & NOTIFICATION

ADOT Water Resources will evaluate the SWMP and all related SOPs and related documents to ensure compliance with the standard requirements included in Permit Part 7.0 on an annual basis and as needed in the event that the standard conditions are modified.

The SWMP is signed below.

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.

DocuSigned by:
Eileen Dunn
88728DE9770046F...

9/27/2024

Eileen E. Dunn, MS, CPMSM

Date

ADOT Water Resources Manager