STORMWATER MANAGEMENT PROGRAM FOR MOHAVE COUNTY, ARIZONA

Submitted to:
Arizona Department of Environmental Quality
Surface Water Section/Stormwater and General Permits Unit (5415A-1)
1110 Washington Street
Phoenix, Arizona 85007

To fulfill requirements of the
Small Municipal Separate Storm Sewer System (MS4)
General Permit (AZG2021-002)

Prepared:
August 2017

Updated:
April 21, 2026

Mohave County:
Development Services Department
Public Works Department
Flood Control District

Certification Statement

Permittee: Mohave County

Permit Number: AZG2021-002

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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 provide direction and training to qualified personnel who gathered and evaluated the information submitted. Based on my inquiry or the person or persons who manage the system, or those directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware there are significant penalties for false information, including the possibility of fine and imprisonment for knowing violations.

Scott Holtry – Director
Mohave County Development Services

5-14-26
Date

Steven Latoski, P.E. – Director
Mohave County Public Works

5/14/2026
Date

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Glossary of Acronyms

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ALERT	Automated Local Evaluation in Real Time
A.R.S.	Arizona Revised Statute
AZPDES	Arizona Pollution Discharge Elimination System
BMP(s)	Best Management Practices
CFR	Code of Federal Regulations
CGP	Construction General Permit
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
E.R.A.C.E.	Environmental Rural Area Cleanup Enforcement
GIS	Geographical Information System
GHKP	Good Housekeeping Program
H6	Horizon Six
ID	Illicit Discharge
IDDE	Illicit Discharge Detection and Elimination
IDDEP	Illicit Discharge Detection and Elimination Program
IW	Impaired Waters
MCFCD	Mohave County Flood Control District
MCM	Minimum Control Measures
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer Systems
MSGP	Multi-Sector General Permit (non-mining)
NLH	North Lake Havasu
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollution Discharge Elimination System
OAW	Outstanding Arizona Water
PCSMP	Post-Construction Stormwater Management Program
POTW	Public Owned Treatment Works
SMO	Stormwater Management Ordinance
SWMP	Stormwater Management Program
SS-SWMP	Site Specific Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load

Glossary of Commonly Used Terms

Best Management Practice(s): Methods, measures or practices to prevent or reduce discharges and includes both structural and nonstructural controls and operation and maintenance procedures.

Facility: Any "point source" or any other facility (including land or appurtenances thereto) that is subject to regulation under the AZDES/NPDES program.

Illicit Discharge: Any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to an AZPDES/NPDES permit.

Impaired water: Waters that have been assessed by ADEQ, under the Clean Water Act, as not attaining a water quality standard for at least one (1) designated use and are listed in Arizona's current 303(d) list or on the 305(b) Category 4 List.

Mohave County MS4: A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) which are owned and operated by Mohave County, which discharge into waters of the United States, and are designed or used for collecting or conveying stormwater, but are not part of a combined sewer system and are not part of a publicly-owned treatment works (POTW).

Not Attaining Water: A surface water that has been determined to be impaired but is not placed on Arizona's 303(d) list.

Outfall: A point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges into waters of the United States. Outfall does not include open conveyances connecting two municipal separate storm sewers, pipes, tunnels or other conveyances which connect the same stream or other waters of the United States and are used to convey waters of the United States.

Outstanding Arizona Water: A surface water that has been designated by ADEQ as an outstanding state resource under A.A.C R18-11-112.

Point Source: Any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collections system, vessel or other floating craft from which pollutants are or maybe discharged, excluding return flows from irrigated agriculture or agriculture stormwater runoff.

Pollutant: Sediment, fluids, toxic waste, dredged spoil, solid waste, substances and chemicals, pesticides, herbicides, fertilizers, and other agricultural chemicals, incinerator residue, sewage, garbage, sewage sludge, munitions, petroleum products, equipment, rock, sand, cellar dirt (e.g., overburden material) and mining, industrial, municipal and agricultural waste or any other liquid, solid, gaseous or hazardous substance which has the capacity to degrade water quality.

Receiving Water: Waters of the United States as defined by 40 CFR 122.2. Also referred to as Navigable Waters.

Introduction and Background

In 1972, Congress passed the Clean Water Act (CWA) with the intent of improving the water quality of the Nation's waterways. Through this act, the discharge of pollutants to the waters of the United States was prohibited unless authorized under the National Pollution Discharge Elimination System (NPDES) permit.

Recognizing that polluted stormwater is ultimately discharged into a local water body (i.e., river, stream, lake, wash, arroyo) from a municipal separate storm sewer system (MS4), the EPA instituted, as part of the NPDES, a regulatory program that focused on reducing pollutant runoff discharged from the MS4 system. This program was introduced in two phases based on the population of the urbanized area in which the MS4 is located. Phase I, implemented in 1990, covered stormwater runoff associated with large and medium municipal separate storm sewer systems serving populations of 100,000 or greater. Phase II, which took effect in December of 1999, covered those systems serving populations of less than 100,000.

This regulatory permitting process was delegated to the states. The State of Arizona, upon receiving primacy of the program, created the Arizona Pollutant Discharge Elimination System (AZPDES) to be administered by the Arizona Department of Environmental Quality (ADEQ).

Previously, Mohave County has not been required to obtain authorization prior to discharging stormwater runoff from its system. However, the most recent Decennial Census identified several areas within the unincorporated limits of Mohave County as "urbanized areas." Under this designation, the municipal separate storm sewer system (MS4) associated with these areas is subject to regulation. As such, Mohave County is required to obtain authorization to discharge stormwater runoff from its MS4 into a receiving water or a water of the United States. This authorization is granted through the Arizona Pollutant Discharge Elimination System (AZPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (AZG2021-002).

Program Objective

This document, which will be referred to as the Mohave County Stormwater Management Program (SWMP), has been created in fulfillment of requirements set forth by AZG2021-002. Its purpose is to describe Mohave County's effort to reduce the discharge of pollutants to the maximum extent practicable (MEP), for the purpose of satisfying the requirements of the CWA, while promoting public awareness of water quality issues and the importance of managing stormwater.

It should be noted that not all of the unincorporated limits of Mohave County have been designated as urbanized areas by the Decennial Census. In accordance with 40 CFR 122.32, only those portions designated as urbanized areas by the Census are regulated by AZG2021-002 and subjected to the requirements of the SWMP. Areas not considered to be urbanized are not regulated under the permit and as such are not subjected to the requirements placed herein.

Urbanized Area - Geographical Limits

The regulated areas that make up the MS4 for Mohave County lie outside the incorporated limits of Lake Havasu City, within the Colorado River – Lower Gila Watershed. The MS4 area consists of portions of Sections 8, 16, 17 & 21 of Township 14 N Range 20 W and Section 9, Township 13 N, Range 19 W of the Salt and Gila River Base and Meridian, Mohave County, Arizona.

Urbanized Area - General Description

Two non-contiguous areas constitute Mohave County's MS4 Permit Area. The first area, referred to as North Lake Havasu (NLH) for the purpose of this document, consists of a combination of residential communities and clusters of commercial development. A large portion of the area included in the MS4 is owned by the Arizona State Land Department and is undeveloped. The storm sewer system within NLH consists of primarily surface water conveyance elements (e.g., paved roads, earthen channels, culverts, and at-grade crossings). The second area, to be referred to as Horizon Six (H6), consists entirely of a residential community platted in 1961. The lots, which are developed with single-family residences, are approximately 1 acre in size. The H6 MS4 contains a large storm sewer system owned and maintained by Mohave County Flood Control District (MCFCD). This system consists of a single channel and a series of culverts located within a public drainage right of way. Ancillary components of the H6 MS4 include a public road network and several local culverts that convey flow beneath the roadways. There are very few designated stormwater retention areas within the MS4 boundaries of either NLH or H6, though a regional detention/retention system does lie north of the H6 boundaries. The MS4 areas are depicted on Figure 1.

Receiving Waters and Outfalls

For the purpose of Mohave County's Storm Water Management Program, the receiving waters for this project are Lake Havasu and the Colorado River.

The tributaries to these water bodies have been identified as part of the mapping effort by both ID and common name. The tributaries and outfall ID are outlined in Table 1. Figure 2 and Figure 3 show the locations of all MS4 outfalls.

Table 1: Tributaries contributing to impaired waters in MS4 area and identified outfalls

Permit Region	NAME	OUTFALL MAP ID
NLH	Unnamed Wash 1	1UW1-O1
NLH	Unnamed Wash 2	1UW2-O1
NLH	Unnamed Wash 3	1UW3-O1
NLH	Unnamed Wash 4	1UW4-O1
NLH	Unnamed Wash 5	1UW5-O1
NLH	Unnamed Wash 6	1UW6-O1
NLH	Unnamed Wash 7	1UW7-O1
H6	Mockingbird Channel	2MB-O1
H6	Unnamed Tributary to Mockingbird Channel	2MBT-O1
H6	Mockingbird Channel	2MB-O2

It has been determined that portions of the Colorado River are listed as impaired for selenium. In compliance with the Permit, analytical sampling will be conducted in accordance with the procedures outlined in the Sampling and Analysis Plan (see Attachment 8).

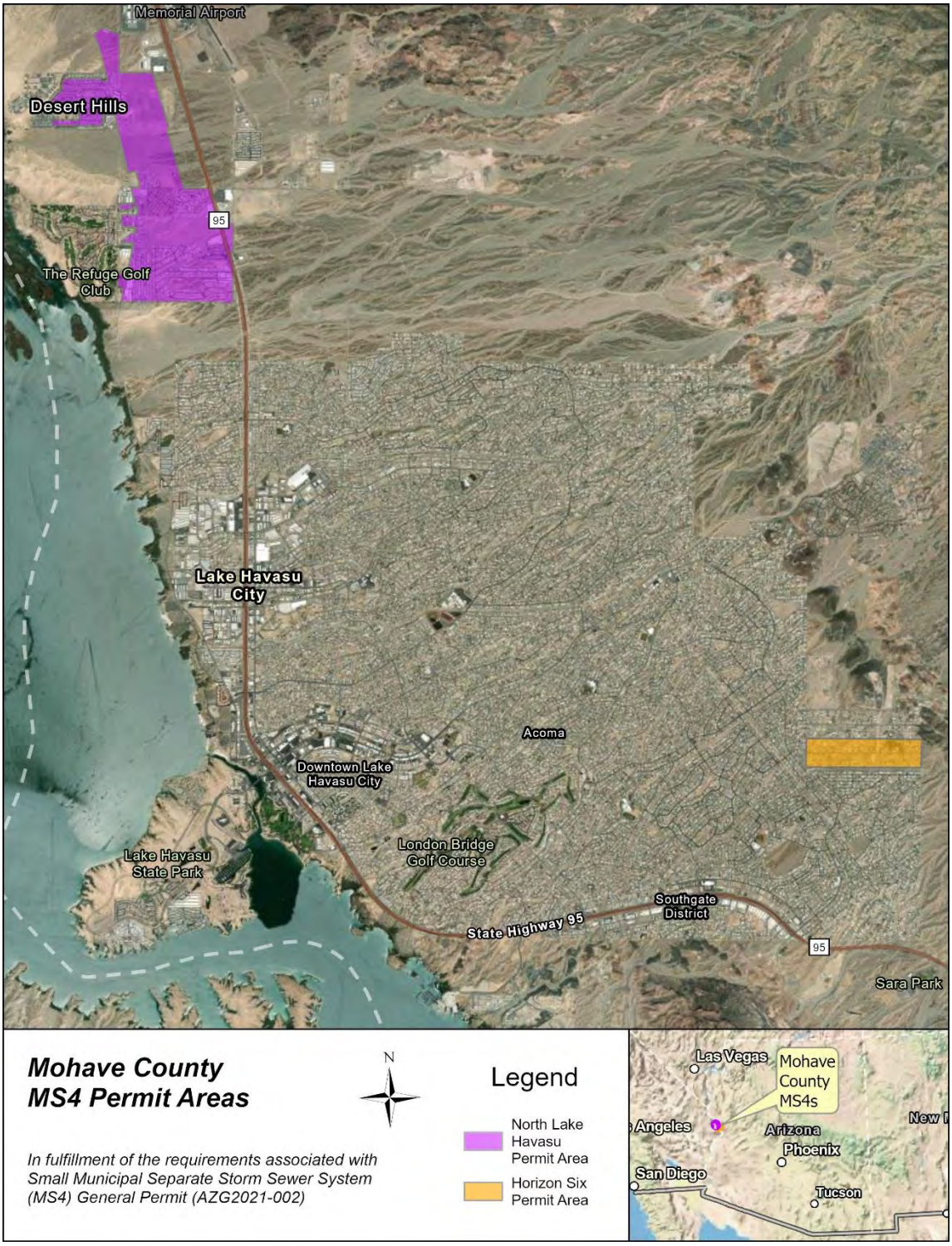


Figure 1: Mohave County MS4 Permit Areas

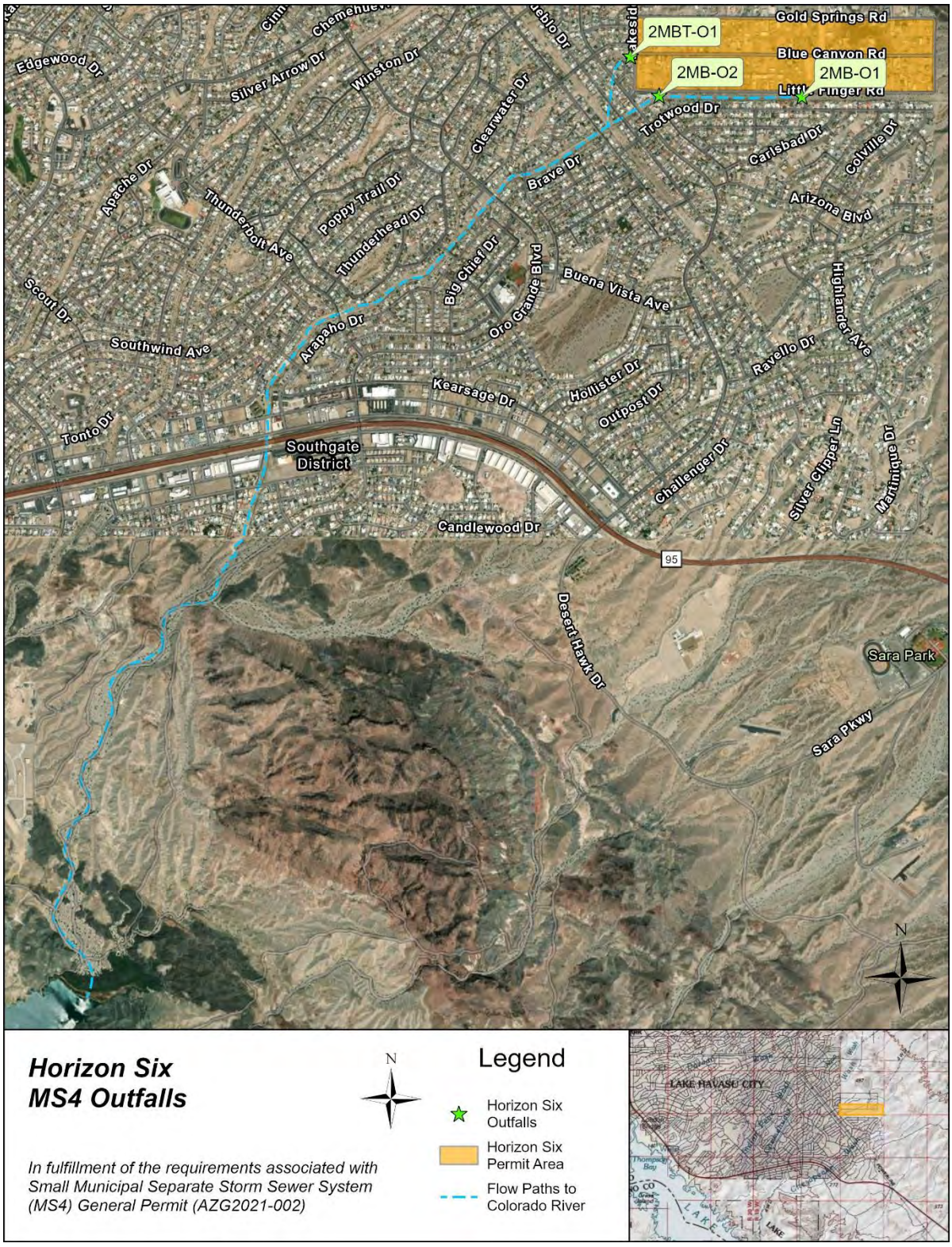


Figure 2: Horizonal Six MS4 outfall locations

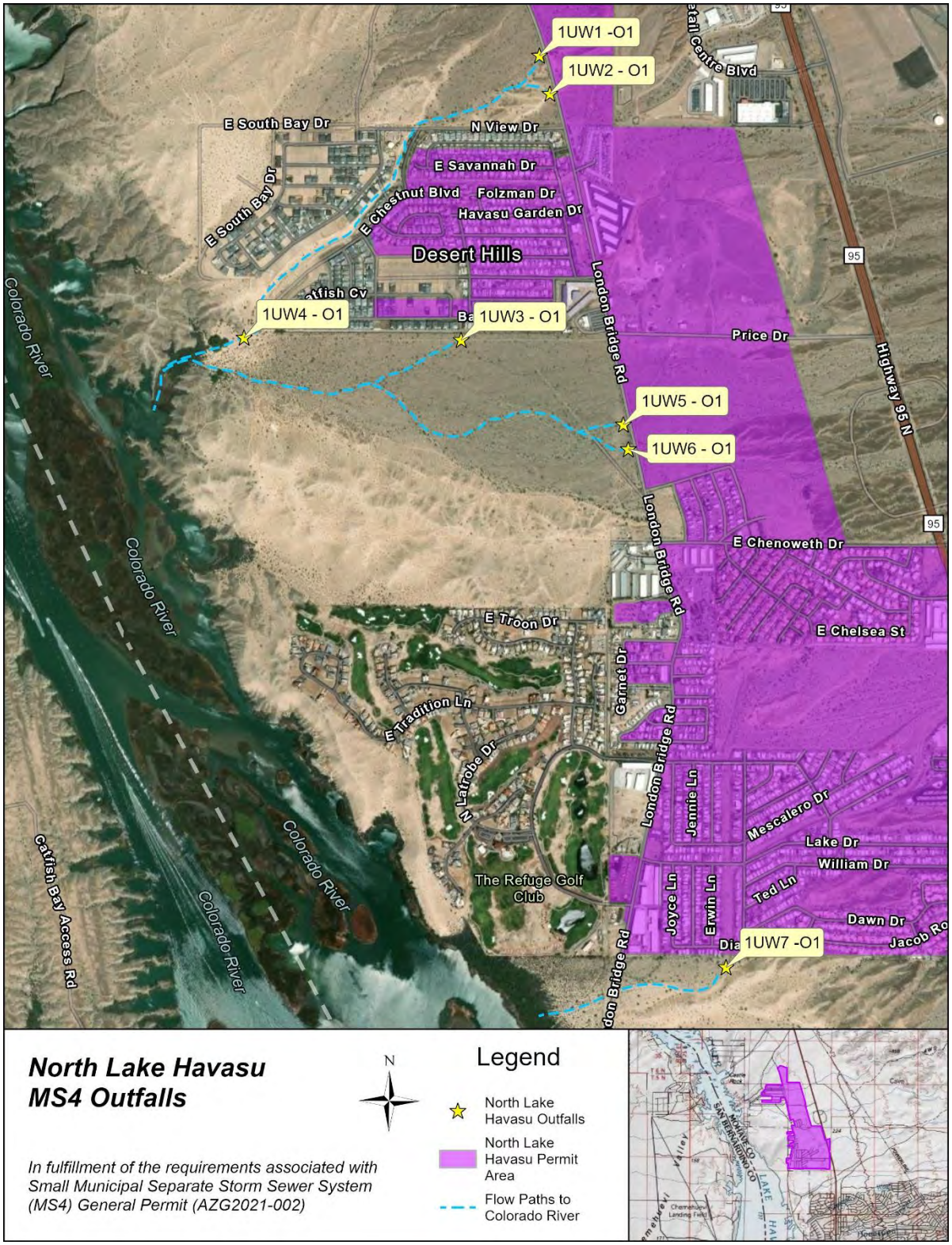


Figure 3: North Lake Havasu MS4 outfall locations

Program Management

Responsibility for administering the Permit and SWMP will reside within the Public Works Department and the Development Services Department. Given that each department or division may be responsible for only a small facet of this SWMP, the department responsible for each MCM is identified in the following sections to help define roles and responsibilities. An organization chart of SWMP responsibilities is presented on Figure 4.

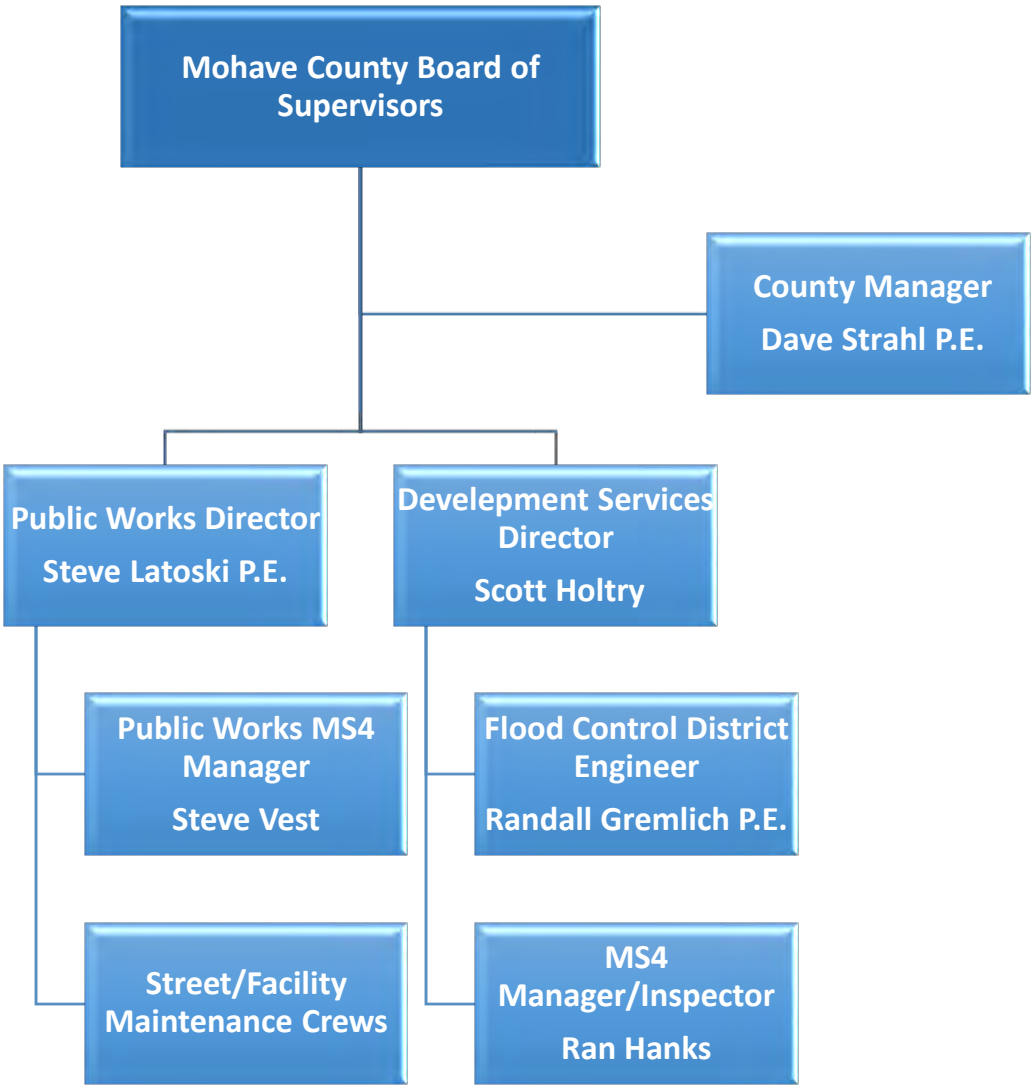


Figure 4: Mohave County SWMP Organizational Chart

Staffing and Resources Allocations

The Mohave County Flood Control District, Public Works, Development Services, and Board of Supervisors will share responsibility for the implementation of the measures described within this SWMP.

Mohave County Flood Control District will serve as the primary contact for the program. In addition, the District will oversee the public outreach and public education efforts, maintain the library of education materials and maintain and host the stormwater quality web pages. The District will be responsible for inspecting and maintaining the MS4 components that collect storm-water-quality-related data for MS4 infrastructure located within the public easements dedicated specifically to the District. The District will respond to stormwater quality complaints and concerns submitted by the public. The District will also be responsible for collecting data used to track the goals outlined within the SWMP and for preparing and submitting the Annual Report.

The Mohave County Public Works Department will provide inspection services for the components within the MS4 that lie within County-maintained rights-of-way. In addition, the Department will inspect, operate and maintain post-construction control measures located on County owned or operated, municipal facilities within the MS4.

The Mohave County Development Services will serve as the reviewing entity for new development and redevelopment. Through the permitting process, Development Services will assist in implementing the construction and post-construction aspects of the SWMP. This implementation process will include enforcing the requirements associated with controlling stormwater as well as educating the public on the importance of stormwater management and the requirements associated with doing so. The Department will assist in the public participation events, such as household hazardous waste collection days, brush and bulky collection days and tire collection days.

The Mohave County Development Services and Public Works, along with the Mohave County Board of Supervisors, will serve as the authoritative arm of the Mohave County Stormwater Management Program. The Board will review and adopt the regulatory measures needed to ensure compliance with the permit as discussed in the SWMP. Mohave County Development Services and Public Works will act upon reported violations. The Board will respond to Mohave County staff requests for the undertaking of legal action and, when necessary, direct the County attorney to pursue legal action in accordance with the adopted Ordinances.

The initial funding for the program including development, implementation, training, and enforcement will be through the General Fund and will primarily utilize County Staff. Other sources, such as additional permit review fees, may be used to offset the cost of the program.

Minimum Control Measures (MCM)

The program will address the six minimum control measures outlined in the Permit, which are:

1. Public Education and Outreach (AZG2021-002, Section 6.1)
2. Public Involvement and Participation (AZG2021-002, Section 6.2)
3. Illicit Discharge Detection and Elimination Program (IDDE) (AZG2021-002, Section 6.3)
4. Construction Site Stormwater Runoff Control (AZG2021-002, Section 6.4)
5. Post-Construction Stormwater Management in New Development and Redevelopment (AZG2021-002, Section 6.5)
6. Pollution Prevention and Good Housekeeping for Municipal Operations (AZG2021-002, Section 6.6)

Details on each MCM and the selected BMP's can be found in the following sections.

MCM 1. Public Education and Outreach

Mohave County will implement a public education and outreach program that will distribute educational materials and provide outreach to the small municipal separate storm sewer systems (MS4) community. This program is required by Section 6.1 of the General Permit AZG2021-002. Educational materials are required to provide messages for specific groups regarding the impact of stormwater discharges on surface water quality within the community. Measurable goals must also be developed to assess the effectiveness of the BMPs. The purpose of the public education and outreach programs is to increase public knowledge regarding stormwater, change public behavior, and reduce pollutants in the stormwater system.

In implementing the Public Education and Outreach program, Mohave County will target at least one of the following groups within the community at large:

- General Public (private citizens)
- Residential Community
- Homeowners and Landowners
- Schools

In addition, the Public Education and Outreach Program will target at least one of the following groups within the business sector:

- Developers/Contractors/Property Managers
- Homeowners and Neighborhood Associations
- Construction Site Operators and Supervisors
- Commercial and Industrial Businesses and their owners

The privately owned property within the Mohave County MS4 permit area is almost entirely developed with single-family housing, small commercial businesses, and a series of small parcels owned by a privately operated water utility. There is no heavy industry within the permit area. In addition, there are no libraries, County-owned/operated community centers, or gathering places in the permit area. The lone County-owned facility is a sheriff substation, located in the NLH region. Based on this, the target audiences primarily consist of the general public, residential and commercial developers/contractors, automotive and boat repair, service and storage facilities, and homeowners.

The selected BMPs for the public education and outreach programs are outlined below.

Table 2: Summary of MCM 1 BMPs

BMP	Description
MCM 1.1	Educational Materials
MCM 1.2	Educational Events
MCM 1.3	Stormwater Webpage
MCM 1.4	Public Notifications

MCM 1.1 EDUCATIONAL MATERIALS

Description: Mohave County staff will promote an education program that increases the public's knowledge of stormwater quality and stormwater pollution prevention. One element of the program will be the availability and distribution of brochures targeted at specific audiences within the general public and business sectors.

Responsible Department(s)/Personnel:

Mohave County Flood Control District (Randall Hanks)
Mohave County Development Services (Scott Holtry)
Mohave County Public Works (Steven Latoski)

Measurable Goals: The County has developed brochures for several target groups within the private and business sectors. The brochures are available on the County Website (Mohave County Stormwater) and will be made available at facilities such as the Development Service Review Office, the Flood Control District, and the Sheriff's Sub-Station. The brochures will also be distributed at educational events as described in MCM 1.2. A minimum of two (2) brochures (one targeting the general public and one targeting the business sector) will be distributed via direct mail from the Mohave County Flood Control Section on an annual basis. The brochures will be reviewed and updated as necessary to modify any ineffective message or distribution techniques. Effectiveness will be based on comments from the general public during the review period or by soliciting feedback during outreach events as listed in MCM 2.3.

Target Groups: Residents, homeowners, farmers, boat repair shops, contractors, and industries. A minimum of one (1) group within the general public and one (1) group within the business sector will be targeted each permit year for the outreach.

Metrics: The number of brochures distributed in the mail each permit year, and the target audiences will be tracked and included in the Annual Report. Modifications to the materials and distributions techniques will also be tracked and included in the annual report.

MCM 1.2 EDUCATIONAL EVENTS

Description: Mohave County staff will organize presentations for both school age children and local real estate agents to promote stormwater quality and stormwater pollution prevention.

Responsible Department(s)/Personnel:

Mohave County Flood Control District (Randall Hanks)
Mohave County Development Services (Scott Holtry)
Mohave County Public Works (Steven Latoski)

Measurable Goals: The County organizes an annual "Floodplain 101" presentation for local real estate agents. The County will include at least one topic related to stormwater quality or stormwater pollution prevention in their annual presentation. Mohave County has an ongoing program for school-age children geared towards stormwater quality, flood safety, and ALERT information. The County will also organize a minimum of two (2) presentations (one per sector) during each permit year. It should be noted that

there are no schools within the Mohave County's MS4 area. However, Mohave County will continue to engage schools, which are located outside the MS4, as part of the public outreach efforts.

Target Groups: Residents, homeowners, farmers, boat repair shops, contractors, and industries. A minimum of one (1) group within the general public and one (1) group within the business sector will be targeted each permit year for the outreach.

Metrics: The number of events, the number of attendees, and the topics presented will be tracked and included in the Annual Report.

MCM 1.3 STORMWATER WEBPAGE

Description: Mohave County staff has created and will maintain a webpage dedicated to promoting education and communication on stormwater related topics (Mohave County Stormwater).

Responsible Department(s)/Personnel:

Mohave County Flood Control District (Randall Hanks)
Mohave County Development Services (Scott Holtry)

Measurable Goals: The Stormwater Webpage will contain a current electronic copy of the Stormwater Management Plan, and the Annual Reports as required by ADEQ. The website also contains videos and educational materials specific to stormwater quality and stormwater pollution prevention geared towards several target audiences within the general public and the business sector. The County will review and update the stormwater webpage annually.

Target Groups: General public, residents, homeowners, farmers, boat repair shops, contractors, and industries.

Metrics: The number of annual website visitors, and any updates made to the website will be tracked and included in the Annual Report.

MCM 1.4 PUBLIC SERVICE ANNOUNCEMENTS

Description: Mohave County will publish advertisements in the local shopper ad magazine to raise awareness of stormwater quality or stormwater pollution prevention.

Responsible Department(s)/Personnel:

Mohave County Flood Control District (Randall Hanks)
Mohave County Development Services (Scott Holtry)

Measurable Goals: The County will publish a minimum of one (1) advertisement in the local shopper ad magazine with a relevant topic related to stormwater quality or stormwater pollution prevention.

Target Groups: General Public

Metrics: The number of advertisements per year and the topic presented will be tracked and documented in the Annual Report.

MCM 2. Public Participation and Involvement

In accordance with Section 6.2 of General Permit, Mohave County will implement a program to encourage public participation and involvement in the review and implementation of the SWMP.

The selected BMPs for the Public Participation and Involvement Program are summarized in the table below:

Table 3: Summary of MCM 2 BMP's

BMP	Description
MCM 2.1	Community Reporting Link and Email
MCM 2.2	Cleanup Events
MCM 2.3	Local Outreach for SWMP Public Review

MCM 2.1 Community Reporting Link and Email

Description: To encourage public participation, Mohave County provides an email and phone number on the Stormwater Webpage. Mohave County also has a link on the Stormwater Webpage to the Environmental Rural Area Cleanup Enforcement (E.R.A.C.E) contact information to encourage the public to report a stormwater violation.

Responsible Department(s)/Personnel:

Mohave County Flood Control District (Randall Hanks)
Mohave County Development Services (Scott Holtry)
Mohave County Public Works (Steven Latoski)

Measurable Goals: Mohave County will provide a phone number and email address on the stormwater website to allow the general public to inquire about the County's SWMP, including, but not limited to general information, reporting illicit discharges, comments on the SWMP, and answering other SWMP related questions. The number of calls, emails and the type of inquiry (violation reporting or general question) received will be tracked and documented.

Target Groups: General Public

Metrics: The number of calls, emails and the type of inquiry (violation reporting, comment, or general question) received will be tracked and documented.

MCM 2.2 CLEANUP EVENTS

Description: To encourage public participation Mohave County stormwater will organize or participate in a minimum of one (1) clean-up event in the MS4 area annually.

Responsible Department(s)/Personnel:

Mohave County Flood Control District (Randall Hanks)
Mohave County Development Services (Scott Holtry)
Mohave County Public Works (Steven Latoski)

Measurable Goals: Mohave County will participate in a minimum of one (1) clean up event annually. This event will be part of the E.R.A.C.E. program, the Mohave County Public Works Department Trash Collection Program, the Environmental Quality Hazardous Waste Pickup Event or the Public Works Department Litter Removal Program.

Target Groups: General Public

Metrics: The event location(s), date(s), and activities will be recorded and included in the Annual Report.

MCM 2.3 LOCAL OUTREACH FOR SWMP PUBLIC REVIEW AND COMMENT

Description: To encourage public participation Mohave County stormwater will solicit and process public feedback on the SWMP through a dedicated page on the Mohave County Stormwater website, and via email to the Mohave County Flood Control District.

While access to the SWMP and the ability to comment on the SWMP will be available throughout the year via the website, Mohave County will reach out to the public starting on July 1 and ending on August 1 to encourage the public to review the SWMP.

Responsible Department(s)/Personnel:

Mohave County Flood Control District

Measurable Goals: Mohave County will have a current electronic copy of the SWMP and annual reports available on the website year-round. Acknowledgement of the receipt of public comment will be sent to the participant and tracked for inclusion the Annual Report. Updates to the SWMP will be made as appropriate. The current SWMP and annual report in subsequent years will be posted no later than 30 days after the due date of the annual report.

Target Groups: General Public

Metrics: The number of comments received, and revisions made to the SWMP will be documented and included in the Annual Report.

MCM 3. Illicit Discharge Detection and Elimination Program (IDDE)

In accordance with Section 6.3 of the General Permit, Mohave County will implement a program to detect and eliminate illicit and non-stormwater discharges into the MS4.

IDDE Program Responsibilities

Responsibilities Assigned to Mohave County Flood Control District:

1. Serve as the primary contact for the IDDE Program.
2. Receive, log, and route illicit discharge complaints to the appropriate departments for inspection.
3. Schedule visual dry-weather and stormwater monitoring.
4. Inspect illicit discharge complaints or perform stormwater discharge monitoring in the event Public Works Inspectors are unavailable.
5. Collect, compile, and review initial inspection reports, plans of action, notices of violation, follow-up inspections, and visual monitoring reports.
6. Prepare discharge monitoring reports for submittal to ADEQ.
7. Train staff on applicable ordinances, programs, and inspection procedures.
8. Compile, review, and update the GIS database to actively identify industrial facilities and construction activities that discharge to the MS4.
9. Notify industrial and construction facility operators of the requirement to obtain AZPDES (NPDES) permit coverage.
10. Compile and maintain IDDE Program documentation for inclusion in the Annual Report.

Responsibilities Assigned to Mohave County Public Works:

1. Conduct inspections for illicit discharge complaints and perform visual monitoring of outfalls.
2. Identify sources of illicit discharges.
3. Provide spill response and cleanup for non-hazardous materials.
4. Perform maintenance activities to remediate illicit discharges within public facilities.
5. Issue Notices of Violation and Cease and Desist Orders.
6. Assist in educating the public regarding the IDDE Program and the Stormwater Management Ordinance.

Responsibilities Assigned to Mohave County Development Services:

1. Supervise work performed by the Mohave County Flood Control District.
2. Respond to public inquiries by educating residents and business owners within the MS4 area.
3. Assist in the enforcement of the IDDE Program.
4. Conduct emergency inspections.

Responsibilities Assigned to Mohave County Board of Supervisors:

1. Serve as the authoritative body by pursuing civil penalties or criminal proceedings, and by hearing appeals associated with illicit discharge violations.
2. Adopt procedures and policies necessary for the implementation, enforcement, and funding of the IDDE Program.

Allowable Non-Stormwater Discharges

Non-stormwater discharges that not considered 'illicit' and are allowed under the Permit include:

a. Water line flushing
b. Landscape irrigation
c. Diverted stream flows
d. Rising ground waters
e. Uncontaminated groundwater infiltration
f. Uncontaminated pumped groundwater
g. Discharges from potable water sources
h. Foundation drains
i. Air conditioning condensate
j. Irrigation water
k. Springs
l. Water from crawl spaces
m. Footing drains
n. Lawn watering
o. Individual residential car washing
p. Discharges from riparian habitat and wetlands
q. Dechlorinated swimming pool discharges
r. Street wash water
s. Discharges of flows from firefighting activities, excluding those from firefighting training exercises

Mohave County has determined that the above list of potential non-stormwater discharges are not significant contributors of pollutants to the MS4 and are considered to be allowable non-stormwater discharges.

AZPDES Non-Filers

In accordance with the Permit, Mohave County will report any suspected non-filers to ADEQ within 30 days. The report will be submitted to ADEQ at AZPDES@azdez.gov and will include, at a minimum, the facility name and location.

Enforcement Authority

The IDDE Program will be enforced in accordance with the Mohave County Stormwater Management Ordinance (SMO). Per Section 10, Article 1 of the ordinance:

> *It is unlawful for any person to violate any provision or fail to comply with any of the requirements of this ordinance. Any person who violates or continues to violate any provision or requirement of this ordinance, any order, approval, or permit issued under this ordinance, or Arizona Revised Statutes (A.R.S.) §§ 49- 255.01, -263, or -263.01, is subject to the enforcement actions provided herein.*

Selected BMPs

The full IDDE program can be found in Attachment 6. The selected BMP's are outlined in the following table and summarized below.

Table 4: Summary of MCM 3 BMP's

BMP	DESCRIPTION
MCM 3.1	Storm Sewer Mapping
MCM 3.2	Establish and Review Enforcement Procedures
MCM 3.3	Visual Dry Weather Outfall Monitoring
MCM 3.4	Visual Wet Weather Outfall Monitoring
MCM 3.5	Analytical Monitoring
MCM 3.6	IDDE Complaint Reporting Procedures
MCM 3.7	Illicit Discharge Elimination
MCM 3.8	Staff Training

MCM 3.1 Storm Sewer Mapping

Description: Mohave County will maintain and update the storm sewer system map containing all MS4 infrastructure to reflect new public and private structures constructed during the permit year to use as reference during inspections. The current storm sewer mapping can be found in Attachment 2.

Responsible Department(s)/Personnel:

Mohave County Flood Control District
Mohave County Development Services
Mohave County Information Technology

Measurable Goals: GIS features reflecting all new infrastructure will be added to Mohave County's storm sewer map annually. Throughout the year, features may be added or revised and as part of the annual review the map will be evaluated to ensure it reflects all new drainage infrastructure.

Metrics: All infrastructure added to the storm sewer map will be documented in the Annual Report for each permitted year.

MCM 3.2 Establish and Review Enforcement Procedures

Description: Mohave County will follow and annually review the 'Illicit Discharge Response Procedures' outlined in the IDDE program.

Responsible Department(s)/Personnel:

Mohave County Flood Control District
Mohave County Development Services
Mohave County Public Works
Mohave County Board of Supervisors

Measurable Goals: Mohave County will document the number of illicit discharges identified by way of submitted complaint or during a visual monitoring effort. Response procedures including mitigation, investigation (and legal action as necessary), and follow-up will also be documented. Mohave County will review and update their response procedure annually.

Metrics: Number of identified illicit discharges identified, and subsequent response procedures will be documented in the annual report. Any updates to the response procedures will be included in the annual report.

MCM 3.3 Visual Dry Weather Outfall Monitoring

Description: Mohave County will staff will conduct annual visual monitoring of the outfalls during dry weather periods with the intent of detecting and eliminating potential illicit discharges.

Responsible Department(s)/Personnel:

Mohave County Flood Control
Mohave County Public Works

Measurable Goals: Annual dry-weather monitoring of the ten (10) outfalls will occur throughout the year with the goal of monitoring a minimum of 20% of the outfalls annually. Additional monitoring may occur in response to a filed complaint. The dry-weather monitoring efforts will be documented using a standardized form created as part of the IDDE program (Attachment 6).

Metrics: The number of visual monitoring efforts (routine, complaint response, or follow-up), as well as any findings, will be documented in the Annual Report for each permitted year.

MCM 3.4 Visual Wet Weather Outfall Monitoring

Description: Mohave County will staff will conduct annual visual monitoring of the outfalls during wet weather periods with the intent of detecting and eliminating potential illicit discharges.

Responsible Department(s)/Personnel:

Mohave County Flood Control District
Mohave County Public Works

Measurable Goals: Annual wet-weather monitoring of outfalls will occur throughout the year with the goal of monitoring a minimum of 20% of the outfalls each permit year. Wet-weather monitoring should occur during the first flush of a qualifying storm event when possible. Outfalls will be inspected for color,

odor, clarity, floatables, debris, and sheen. Visual wet-weather monitoring may occur at the same time as active sampling used for analytical monitoring. Additional monitoring may occur in response to a filed complaint. The wet-weather monitoring efforts will be documented using a standardized form created as part of the IDDE program (Attachment 6).

Metrics: The number of visual monitoring efforts (routine, complaint response, or follow-up), as well as any findings, will be documented in the Annual Report for each permitted year.

MCM 3.5 Analytical Monitoring

Description: Mohave County will collect and analyze samples for analytical monitoring following the procedures outlined in the Sampling and Analysis Plan (Attachment 8).

Responsible Department(s)/Personnel:

Mohave County Flood Control District
Mohave County Public Works

Measurable Goals: Analytical monitoring will occur once per wet season as summarized in the Analytical Monitoring section of this document and outlined in detail in the SAP (Attachment 8).

Metrics: The results of analytical monitoring will be recorded in the SAP (Attachment 8) and included in the annual report.

MCM 3.6 IDDE Complaint Reporting Procedures

Description: Mohave County will provide multiple methods for reporting suspected illicit discharge violations.

Responsible Department(s)/Personnel:

Mohave County Flood Control District

Measurable Goals: The IDDE program (Attachment 6) outlines four available methods for reporting suspected illicit discharge violations including electronic, phone, direct mail, and in person. Complaints will be documented using a standardized form (Attachment 1 in the IDDEP).

Metrics: All documented complaints will be included in the Annual Report.

MCM 3.7 Illicit Discharge Elimination

Description: Mohave County will implement a process to detect and eliminate illicit discharges and unpermitted connections to the MS4.

Responsible Department(s)/Personnel:

Mohave County Flood Control District
Mohave County Public Works

Measurable Goals: In the event that an illicit discharge is detected, Mohave County staff will act immediately to eliminate and mitigate the discharge as outlined in the IDDE (Attachment 6). Mohave County will investigate the source of the discharge and will follow up within two (2) days to ensure that the mitigation has been completed.

Metrics: A summary of the mitigation activities for all detected illicit discharges will be documented and include in the Annual Report.

MCM 3.8 Staff Training

Description: Mohave County will implement a staff training program as part of the IDDE program.

Responsible Department(s)/Personnel:

Mohave County Flood Control District

Measurable Goals: Staff training on the IDDE Program will be conducted on a routine basis for existing employees and during the probationary period for new hires.

Metrics: Training activities will be documented and summarized in the Annual Report

MCM 4. Construction Activity Stormwater Runoff Control

As outlined in Section 6.4 of the Permit, Mohave County will implement, maintain, and enforce a construction activity stormwater runoff control program to minimize pollutant discharges to the MS4 from construction activities that will disturb one (1) or more acres of land, including sites less that one (1) acre that are part of a common plan of development or sale. The full Construction and Post-Construction Stormwater Management Plan can be found in Attachment 7, but it is summarized below.

Inspections

Inspections are the key to ensuring successful implementation of Construction Stormwater Management Program.

Construction Sites

An inspection schedule for private projects greater than 1 acre is set based on the requirements set forth by Section 6.4.2(f), which is as follows:

Sites located within ¼ mile of an Impaired or Not-Attaining Surface that is impaired for Turbidity or SSC**:**

a) Weekly
b) Or within 24 hours of a 0.5" rain in a 24-hour period

Sites NOT located with ¼ mile of an Impaired or Not-Attaining Surface that is impaired for Turbidity or SSC:

c) Within 1 month from the start of construction
d) Every quarter thereafter
e) Completion of project and prior final approval or occupancy.

Note: Lake Havasu is impaired for selenium.

Reduced Frequency**:**

a) Once every 6 months for sites where one or more of the following is true,
    i. The nearest downstream receiving water is ephemeral
    ii. Where on-site runoff is directed to a one or more retention basins that has the capacity to retain the volume generated during a "extreme event" (i.e., 100-yr, 2-hr storm)
    iii. The owner/operator complies with erosion and sediment control measures
    iv. The owner/operator maintains the capacity of the basin(s)
    v. Construction conforms to the standards prescribed in Section 6.4.2(f)

The inspections will be performed by Mohave County Staff. However, these inspections do not replace the inspections to be performed by the owner/operator in compliance with the site's Construction General Permit (CGP).

The inspection schedule will be provided to the owner/operator of the construction site to ensure that they are aware that Mohave County staff will be on-site to perform inspections.

Inspections forms are provided with this document. If a qualified third-party inspector is contracted to assist in this effort, they may use the forms created by ADEQ or their own, provided that the necessary information required is documented on the form.

Mohave County Public Works Flood Control Section will perform a minimum of 80% of the scheduled inspections annually during the permit term.

The inspections will be documented as part of the Annual Report.

Program Responsibilities

The responsibilities associated with the Program extend to multiple departments within Mohave County, including, but not limited to, the Mohave County Flood Control District, Mohave County Public Works, Mohave County Development Services, and Mohave County Board of Supervisors. The responsibilities assigned to these departments are as follows:

Mohave County Development Services – Flood Control District

1) Serve as a resource to the other departments for compliance with the MS4 Permit, the Stormwater Management Ordinance, and the Construction and Post-Construction Stormwater Management Program for New Development and Redevelopment.
2) Perform inspections on construction sites based on the frequency schedule documented below. During this time, staff will distribute brochures and discuss the requirements associated with stormwater quality on with construction sites.
3) Perform follow-up inspections at non-compliant privately initiated construction activities located within the MS4 to ensure that the accepted Stormwater Pollution Prevention Plan is being implemented and that BMPs are functioning as intended.
4) Work with Mohave County Development Services to revoke permits, and/or issue Notice of Violations and Cease Orders for construction activities that are out of compliance with the Stormwater Management Ordinance or the accepted Stormwater Pollution Prevention Plan.
5) Collect, compile, and review inspection reports, plans of action, notices of violation, and follow-up inspections associated with monitoring stormwater runoff from construction activities.
6) Compile and store C&PCSWP documentation to be included in the Annual Report.
7) Train staff on various ordinances, programs, and inspection procedures.

Mohave County Development Services

1) Review Development Plans, Site Plans and Grading Plans to ensure compliance with stormwater quality requirements.
2) As part of the permitting issuance, distribute information to contractors/owners/operators on how to comply with Mohave County's Stormwater Management Plan and more specifically on how to prevent the discharge of pollutants into Mohave County's MS4 area from active construction sites. For electronically issued permits, the electronic permit package will include a Contractor's Guide to Stormwater Quality Brochure in English and Spanish. For permits issued over the counter, the written permit will be accompanied by hard copies of the Contractor's Guide to Stormwater Quality Brochure in English and Spanish will be provided.
3) Provide education to owner/operators on the Construction and Post-Construction Stormwater Management Program for New Development and Redevelopment, AZPDES, the Construction General Permit, and the Stormwater Ordinance.
4) Interact with the public by answering questions and educating residents and business owners in the MS4 area, including those business owners/operators whose business activities require an MSGP from ADEQ.
5) Review and accept Stormwater Pollution Prevention Plans for construction activities within the MS4 Permit Area.
6) Verify that NOI's have been submitted to ADEQ and that ADEQ has provided the operator with an AZCON Number.
7) Review Post-construction Stormwater Management Plans and Operation and Maintenance Plans to ensure that the pollutants carried in stormwater discharges are reduced to the maximum extent practicable in perpetuity.
8) Establish, on a per project basis, an inspection schedule for construction activities located within the MS4 Permit Area.
9) Assist in the education of the owners/operators on the Construction and Post-Construction Stormwater Management Program, AZPDES, the Construction General Permit and the Stormwater Ordinance.
10) Report non-filers to ADEQ (CGP and MSGP) within thirty (30) days.

Mohave County Public Works

1) Prepare Stormwater Pollution Prevention Plans and Post-Construction Stormwater Management Plans for public projects to be initiated within the MS4 Permit Area.
2) Prepare and submit to ADEQ, Stormwater Pollution Prevention Plans for public funded construction activities occurring within the unincorporated limits of Mohave County that will disturb more than one (1) acre of land. Routine maintenance activities are excluded from this requirement.
3) Assure that when issuing permits (e.g., Special Events, Right-of-way Use), the owner/operators have met the requirements of the AZPDES.
4) Assist in enforcing the Construction and Post-Construction Stormwater Management Plan.
5) Provide emergency inspection services.
6) Provide emergency cleanup and maintenance services within public right-of-way.

Mohave County Board of Supervisors

1) Adopt all procedures and policies necessary for the implementation and enforcement of the Construction and Post-Construction Stormwater Management Program.
2) Serve as the authoritative arm, seeking Civil Penalties or Criminal Proceeding or hearing to appeals associated with privately operated construction activities that are in violation of the Stormwater Ordinance and/or not in compliance with the accepted Stormwater Pollution Prevention Plan, Post-Construction Plan, and/or Operation and Maintenance Plan.
3) Establish a means to continuously fund the Construction and Post-Construction Stormwater Management Plan.

Enforcement Authority

The IDDE Program will be enforced in accordance with the Mohave County Stormwater Management Ordinance (SMO). Per Section 10, Article 1 of the ordinance:

> *It is unlawful for any person to violate any provision or fail to comply with any of the requirements of this ordinance. Any person who violates or continues to violate any provision or requirement of this ordinance, any order, approval, or permit issued under this ordinance, or Arizona Revised Statutes (A.R.S.) §§ 49- 255.01, -263, or -263.01, is subject to the enforcement actions provided herein.*

Selected BMPs

The selected BMP's are outlined in the following table and summarized below.

Table 5: Summary of MCM 4 BMP's

BMP	DESCRIPTION
MCM 4.1	Construction Site Inventory
MCM 4.2	Plan Review
MCM 4.3	Educational Materials
MCM 4.4	Inspection and Enforcement Procedures
MCM 4.5	Staff Training

MCM 4.1 Construction Site Inventory

Description: Mohave County will prepare and maintain an up-to-date inventory of active construction sites and construction activities located within the MS4 boundary.

Responsible Department(s)/Personnel:

Mohave County Flood Control District
Mohave County Public Works Department

Measurable Goals: Mohave County will develop and maintain a spreadsheet or database to keep an inventory of all construction activities that disturb or will disturb one (1) or more acres within the permitted area; including those that are less than one (1) acre but are part of a larger common plan of development or sale if the larger common plan will ultimately disturb greater than one (1) acre. Construction sites will no longer be tracked once the final inspection has been completed.

Metrics: The number of active construction sites during the permit year will be documented in the Annual Report

MCM 4.2 Plan Review

Description: Mohave County staff will develop and implement a plan review process for reviewing civil plans to ensure compliance with the ADEQ's AZPDES CGP and Mohave County's Stormwater Management Ordinance.

Responsible Department(s)/Personnel:

Mohave County Flood Control District

Mohave County Public Works Department

Measurable Goals: Develop and implement a plan review process to review civil plans to ensure compliance with ADEQ's AZPDES CGP and Mohave County's Stormwater Management Ordinance. The number of plans reviewed throughout the year will be documented.

Metrics: The number of plans reviewed will be tracked and documented in the Annual Report for each permitted year

MCM 4.3 Educational Materials

Description: The County has developed a brochure that educates contractors and construction site owner/operators on erosion and sediment control procedures and best management practices.

Responsible Department(s)/Personnel:

Mohave County Flood Control District

Measurable Goals: The brochures are available on the County Website (Mohave County Stormwater) and will be made available at facilities such as the Development Service Review Office, the Flood Control District, and the Sheriff's Sub-Station. The brochures will also be distributed at educational events as described in MCM 1.2. As outlined in MCM 1.1, at least two (2) brochures (one targeting the general public and one targeting the business sector) will be distributed via direct mail from the Mohave County Flood Control Section on an annual basis. The brochures will be reviewed and updated as necessary to modify any ineffective message or distribution techniques.

Metrics: The number of brochures distributed in the mail each permit year and included in the Annual Report. Modifications to the materials and distributions techniques will also be tracked and included in the annual report.

MCM 4.4 Inspection and Enforcement Procedures

Description: Mohave County staff will conduct inspections of construction sites and construction activities at frequencies specified the Permit.

Responsible Department(s)/Personnel:

Mohave County Flood Control District
Mohave County Public Works Department
Mohave County Board of Supervisors

Measurable Goals: Regular inspections will be conducted on active construction sites during the permit year with the goal of achieving at least 80% of the scheduled inspections annually. The inspections will be documented using the standardized form provided in the Construction Site Management Plan in Attachment 7.

Metrics: The number of sites inspected, and the results will be documented as part of the Annual Report for the permit year

MCM 4.5 Staff Training

Description: Mohave County will implement a staff training program as part of the Construction Stormwater Management Program

Responsible Department(s)/Personnel:

Mohave County Flood Control District

Measurable Goals: Staff training on the Construction and Post-Construction Management Plan will be conducted on a routine basis for existing employees and during the probationary period for new hires.

Metrics: Training activities will be documented and summarized in the Annual Report.

MCM 5. Post-Construction Activity Stormwater Runoff Control

As outlined in Section 6.5 of the Permit, Mohave County will implement, maintain, and enforce a post-construction activity stormwater runoff control program to minimize pollutant discharges to the MS4 from construction activities that will disturb one (1) or more acres of land, including sites less than one (1) acre that are part of a common plan of development or sale. Post-construction stormwater control measures are required to be operated and maintained in perpetuity to ensure continued effectiveness in reducing pollutant discharges to the MS4. The full Construction and Post-Construction Stormwater Management Plan can be found in Attachment 7 and is summarized below.

Inspections

Inspections are the key to ensuring successful implementation of the Post-Construction Stormwater Management Program.

Post-Construction Stormwater Management Inspections

Standard Frequency**:**

a) Yearly

Increased Frequency:

a) Once per wet season

Inspections associated with managing post-construction stormwater can be performed by a qualified third-party and submitted to Mohave County Development Services. The results of the inspection will determine if a follow-up action is needed and to determine if the frequency of the inspections needs to be modified.

Sites that fail to provide required inspection documentation for two consecutive years will be considered to be in violation of the Stormwater Management Ordinance and subject to enforcement actions.

Should the inspections determine that the management of the post-construction stormwater is deficient to the point that site places Mohave County in jeopardy of being in violation of its MS4 permit, staff may perform maintenance and repair on the existing structural measures to ensure compliance. The cost of this work may be charged back to the entity named on the Operations and Maintenance Plan.

Third-party inspectors may use the forms created by ADEQ or their own provided that the necessary information to ensure compliance with the Post-Construction Stormwater Management Plan is documented on the form.

Mohave County retains the authority to verify and enforce compliance regardless of third-party inspection submittals**.**

Enforcement Authority

The IDDE Program will be enforced in accordance with the Mohave County Stormwater Management Ordinance (SMO). Per Section 10, Article 1 of the ordinance:

> *It is unlawful for any person to violate any provision or fail to comply with any of the requirements of this ordinance. Any person who violates or continues to violate any provision or requirement of this ordinance, any order, approval, or permit issued under this ordinance, or Arizona Revised Statutes (A.R.S.) §§ 49- 255.01, -263, or -263.01, is subject to the enforcement actions provided herein.*

Selected BMPs

The selected BMP's are outlined in the following table and summarized below.

Table 6: Summary of MCM 5 BMP's

BMP	DESCRIPTION
MCM 5.1	Site Plan Review
MCM 5.2	Staff Training
MCM 5.3	Inspection and Enforcement Procedures

MCM 5.1 Site Plan Review

Description: Mohave County staff will develop and implement a plan review process to evaluate and approve post-construction stormwater controls to ensure compliance with the ADEQ's AZPDES CGP and Mohave County's Stormwater Management Ordinance.

Responsible Department(s)/Personnel:

Mohave County Flood Control District
Mohave County Public Works Department

Measurable Goals: Develop and implement a plan review process to evaluate and approve post-construction stormwater controls to ensure compliance with ADEQ's AZPDES CGP and Mohave County's Stormwater Management Ordinance. The number of plans reviewed throughout the year will be documented.

Metrics: The number of plans reviewed will be tracked. The data will be documented in the Annual Report for each permitted year

MCM 5.2 Inspection and Enforcement Procedures

Description: Mohave County staff will conduct inspections of post-construction sites and construction activities at frequencies specified in the Permit.

Responsible Department(s)/Personnel:

Mohave County Flood Control District
Mohave County Public Works Department
Mohave County Board of Supervisors

Measurable Goals: Regular inspections will be conducted on active construction sites during the permit year with the goal of achieving at least 80% of the scheduled inspections annually. The inspections will be documented using the standardized form provided in the Construction Site Management Plan in Attachment 7.

Metrics: The number of sites inspected, and the results will be documented as part of the Annual Report for the permit year

MCM 5.3 Staff Training

Description: Mohave County will implement a staff training program as part of the Post-Construction Stormwater Management Program

Responsible Department(s)/Personnel:

Mohave County Flood Control District

Measurable Goals: Staff training on the Construction and Post-Construction Management Plan will be conducted on a routine basis for existing employees and during the probationary period for new hires.

Metrics: Training activities will be documented and summarized in the Annual Report.

MCM 6. Pollution Prevention and Good Housekeeping Program for Municipal Operations

Section 6.6 of the General Permit AZG2021-002 (Permit) outlines the requirements for minimum control measures (MCM) used in developing, implementing and maintaining a program whose goal is to prevent or reduce pollutant runoff from municipal operations and ultimately protect water quality of the runoff discharged into Mohave County's small municipal separate storm sewer systems (MS4). The full Pollution Prevention and Good Housekeeping Program can be found in Attachment 9.

In accordance with Section 6.6.2 the program will include:

- **Develop** an inventory of municipal operations.
- **Prioritize** risk of municipal facilities based on risk to discharge pollutants.
- **Implement** an inspection schedule based on prioritized risk (following table).

Table 7: Inspection Schedule for Municipal Facilities

RISK	INSPECTION SCHEDULE
HIGH	4 TIMES/YEAR
MEDIUM	2 TIMES/YEAR
LOW	1 TIME/YEAR

- **Update** municipally owned or operated facilities priority status.
- **Modify** inspection frequency based on inspection findings.
- **Implement** stormwater controls to reduce or eliminate the discharge of pollutants.
- **Implement** an employee training program.
- **Develop** maintenance activities, maintenance schedules, and long-term inspection procedures.

Selected BMPs

Table 8: Summary of MCM 6 BMP's

BMP	DESCRIPTION
MCM 6.1	Inventory and Prioritize Municipal Facilities
MCM 6.2	Site Specific SWPPPs
MCM 6.3	Staff Training

MCM 6.1 Inventory and Prioritize Municipal Facilities

Description: Mohave County has not identified any occupied municipal buildings, maintenance yards, fleet storage areas, or similar facilities within the MS4 boundary that have the potential to discharge pollutants to the MS4. However, the County will annually review

Responsible Department(s)/Personnel:

Mohave County Flood Control District
Mohave County Public Works Department

Measurable Goals: The inventory of municipal facilities will be reviewed and prioritized annually. All new municipal facilities will be documented.

Metrics: All changes to the inventory of municipal facilities within the MS4 boundary will be documented and included in the annual report.

MCM 6.2 Site-Specific Stormwater Pollution Prevention Plans (SWPPP)

Description: Mohave County will create site specific SWPPP's as high and medium risk sites are identified.

Responsible Department(s)/Personnel:

Mohave County Flood Control District

Measurable Goals: Site specific SWPPP's will be created and added to the Pollution Prevention and Good Housekeeping Plan as needed.

Metrics: New SWPPPs will be incorporated in Pollution Prevention and Good Housekeeping Plan and added to Attachment 9 of the SWMP. Any changes will be summarized in the Annual Report.

MCM 6.3 Staff Training

Description: Mohave County will implement a staff training program as part of the Good Housekeeping Program.

Responsible Department(s)/Personnel:

Mohave County Flood Control District

Measurable Goals: Staff training on the Good Housekeeping Plan will be conducted on a routine basis for existing employees and during the probationary period for new hires.

Metrics: Training activities will be documented and summarized in the Annual Report.

Analytical Monitoring Program

In compliance with the requirements set forth in Section 7.2 of AZPDES Small MS4 General Permit (AZG2021-002), Mohave County has created a Sampling and Analysis Plan (SAP) to document the processes and procedures for analytical monitoring including stormwater sample collection, handling, analysis, and reporting to ensure generation of representative and defensible water quality data. The program is designed to evaluate stormwater discharges from the County's MS4 areas and assess potential impacts to receiving waters, including the Colorado River, which is impaired for selenium. These requirements are summarized in this section, and the full SAP can be found in Attachment 8.

The results of the testing associated with the SAP will be submitted electronically within 30 days after receiving the laboratory results to the Arizona Department of Environmental Quality through the myDEQ portal as a Discharge Monitoring Report (DMR). The results of the testing will be retained for a period of three (3) years following the expiration of the current permit.

Monitoring Objectives

The objectives of the monitoring program are to:

- Characterize stormwater quality from representative MS4 outfalls
- Monitor pollutants of concern associated with impaired waters and TMDLs (e.g., selenium)
- Fulfill analytical and characterization monitoring requirements under the permit
- Provide data to support regulatory reporting and stormwater management decisions

Monitoring Locations

Monitoring is conducted at designated outfalls representing drainage areas with varying land uses (e.g., residential, commercial, industrial).

- **Analytical Monitoring:** Five (5) outfalls
- **Characterization Monitoring:** Three (3) outfalls

These outfalls discharge to the Colorado River (Lake Havasu) and were selected to represent MS4 discharge conditions. Mohave County will collect stormwater samples at four (4) outfall locations in the North Lake Havasu MS4 area and one (1) location in the Horizon Six MS4 area (General Permit AZG2021-002 Section 7.2.4) as presented in TABLE 7. Maps illustrating the location of the analytical and characterization monitoring outfalls are provided on FIGURES 5 and 6.

Table 9: Characterization and Analytical Monitoring Outfalls

Permit Region	Name	Map ID	Type of Monitoring Needed
Horizon Six	Mockingbird Channel	2MB-O2	Analytical AND Characterization
North Lake Havasu	Unnamed Wash 1	1UW1-O1	Analytical
North Lake Havasu	Unnamed Wash 4	1UW4-O1	Analytical AND Characterization
North Lake Havasu	Unnamed Wash 6	1UW6-O1	Analytical
North Lake Havasu	Unnamed Wash 7	1UW7-O1	Analytical AND Characterization

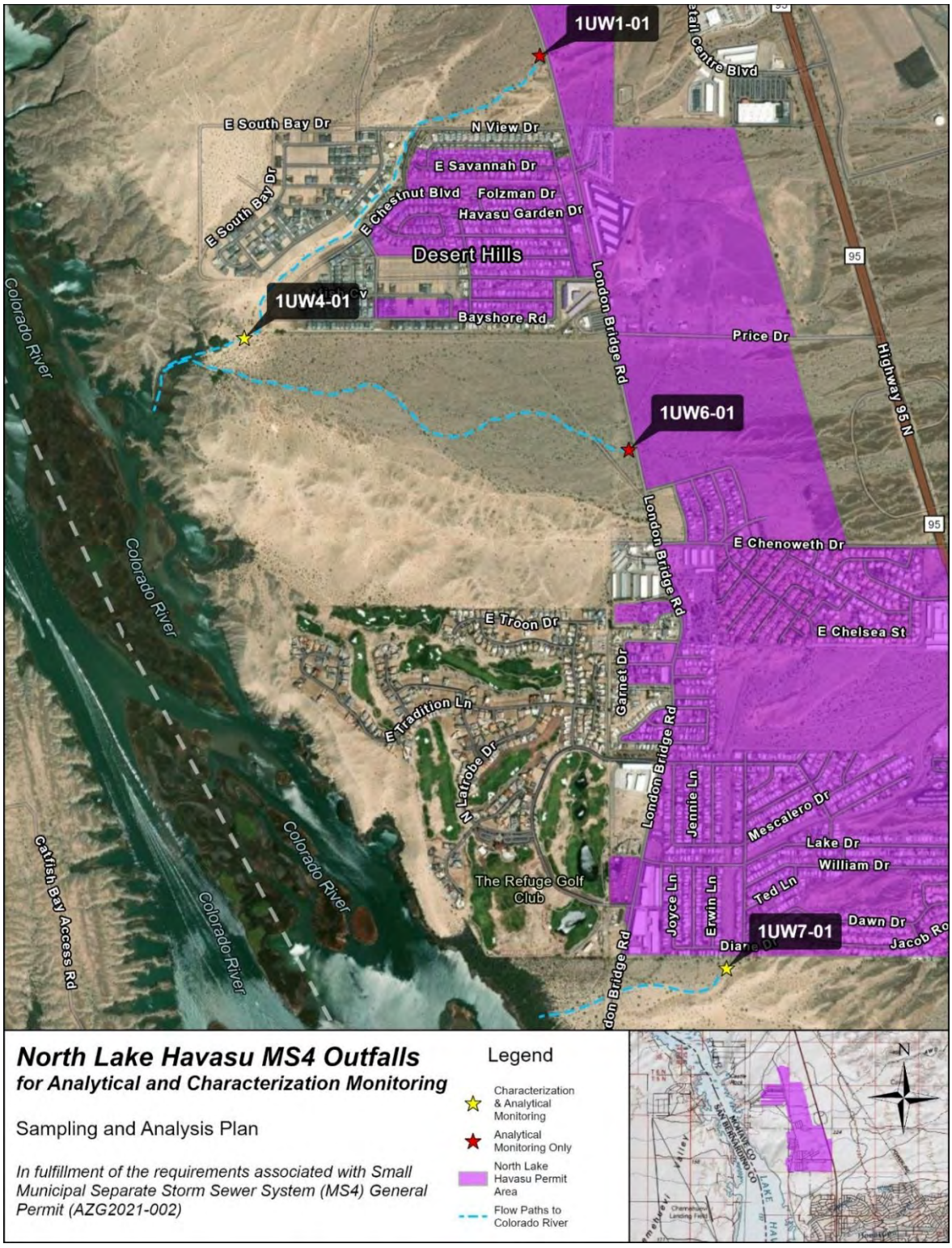


Figure 5: North Lake Havasu MS4 outfall sampling locations

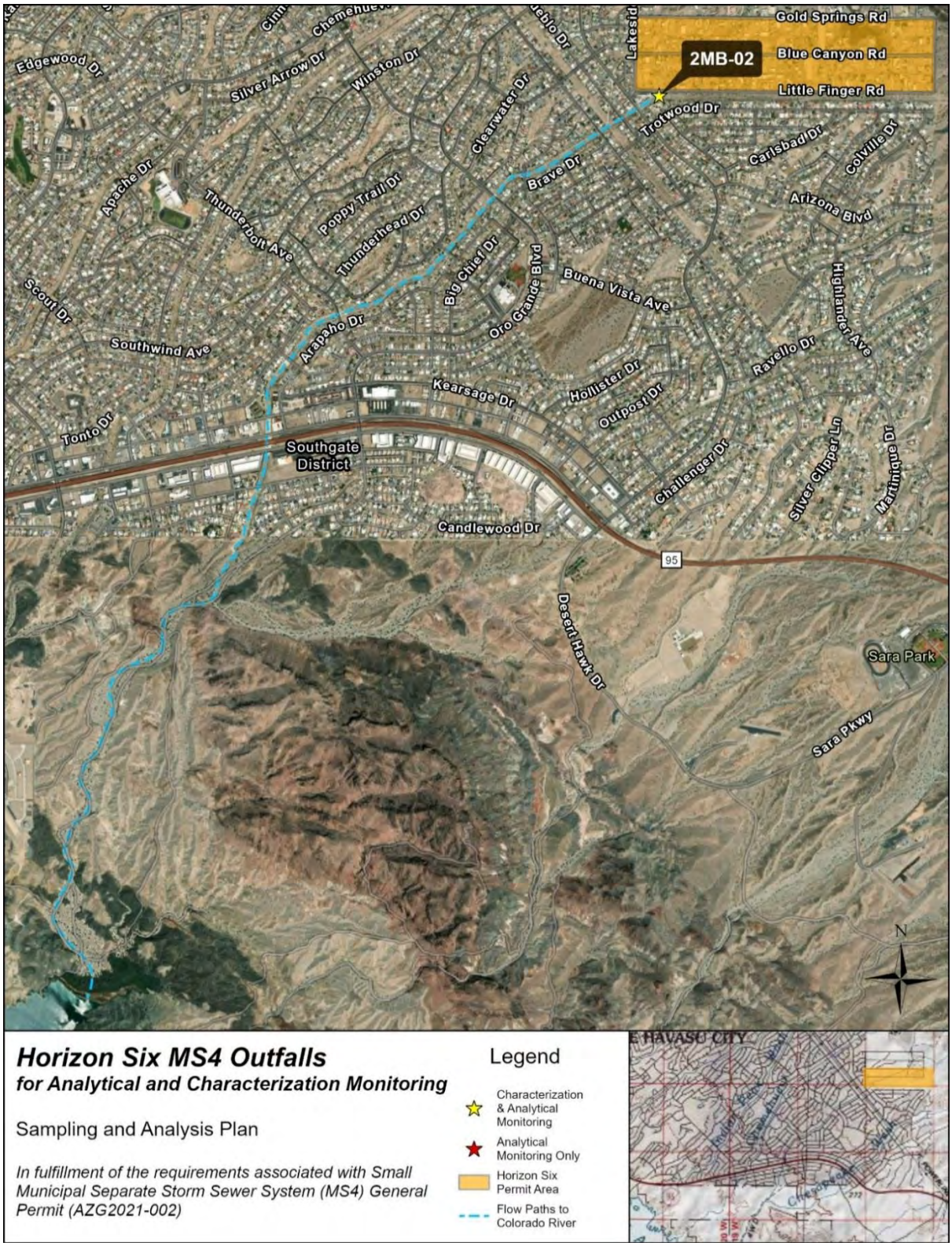


Figure 6: Horizon Six MS4 outfall sampling location

Sampling Frequency and Schedule

- Analytical monitoring is conducted **twice per year (once per wet season)** in accordance with Section 7.2.4 of the Permit
- Wet seasons are defined as:
  - **Winter:** November 1 – May 31
  - **Summer:** June 1 – October 31
- Sampling must occur:
  - Within **90 days of permit authorization**, and
  - During a **qualifying storm event** (≥0.1 inches of rainfall producing discharge)
- Characterization monitoring is conducted **once during the permit term (within 3.5 years of permit coverage)** (General Permit AZG2021-002 Section 7.2.1)

Sampling Procedures

Stormwater samples are collected using standard methods designed to capture representative runoff conditions:

- **Sample Type:** Grab samples (primary method)
- **Timing:** Within the **first 30 minutes** of discharge ("first flush") (General Permit AZG2021-002 Section 7.2.2)
- **Storm Criteria:**
  - Minimum 0.1-inch rainfall
  - ≥72-hour antecedent dry period (unless justified otherwise)

Field personnel follow standardized procedures for:

- Equipment calibration
- Sample collection and preservation
- Chain-of-custody documentation
- Safe access to outfalls

All samples are delivered to a certified laboratory, typically within the same day.

Parameters and Analytical Methods

Analytical Monitoring

- Primary parameter: **Selenium** (due to TMDL impairment)
- Standard: **2.1 µg/L** maximum daily concentration

Characterization Monitoring

Includes a broader suite of pollutants:

- Metals
- Inorganics
- VOCs and SVOCs
- PCBs and pesticides

All analyses must be performed by an Arizona-certified laboratory using EPA-approved methods (40 CFR 136).

Data Management and Reporting

- Monitoring data are recorded using standardized field forms and laboratory reports
- Results are submitted via **electronic Discharge Monitoring Reports (eDMRs)** within **30 days of receipt**
- Reporting deadlines:
    - **Winter season:** June 30
    - **Summer season:** November 30

All records, including QA/QC data, calibration logs, and chain-of-custody forms, are maintained as part of the SWMP.

Quality Assurance and Documentation

To ensure data quality:

- Field data are documented using standardized collection forms
- Calibration and maintenance of instruments are performed prior to sampling
- Chain-of-custody procedures are followed for all samples
- Field parameters (e.g., pH, temperature, conductivity, turbidity) are recorded at time of collection

Missed or unsafe sampling events (e.g., due to adverse weather) are documented and reported.

Adaptive Monitoring

ADEQ may require additional monitoring if:

- There is evidence of pollutant exceedances, or
- Additional data are needed to protect receiving waters

Additional parameters, locations, or frequencies may be specified as part of permit compliance.

Program Evaluation

Internal Evaluation Procedures

The annual program evaluation protocol shall follow these steps:

1. Thirty (30) days prior to the submittal of the Annual Report, the Mohave County Environmental Compliance Team Leader (Team Leader) will meet with members of other departments within the organization to solicit feedback on the effectiveness of the best management practices (BMPs) and procedures and to track the progress made on each BMP over the course of the permit year. Meeting notes will be documented and retained for audit purposes.
2. The Team Leader will review the information received and compare it to the BMP requirements outlined in this SWMP to ensure that the BMPs are being implemented. Effectiveness of BMPs, including outreach materials, will be measured against their defined measurable goals in the SWMP. For outreach BMPs, effectiveness indicators may include: number of materials distributed, attendance at outreach events, website traffic analytics, public survey responses, and stormwater-related service requests
3. The Team Leader will discuss with the other departments the efficacy of the BMPs and whether any modifications are needed or recommended.
4. Revisions made to the SWMP or the BMPs will be documented, with the information stored in Attachment 9.
5. The Team Leader will compile the information received into an Annual Report. The Annual Report will be submitted on or before September 30 of each permit year to the Arizona Department of Environmental Quality (ADEQ) through the myDEQ portal.
6. The authorized Annual Report will be posted on Mohave County's Stormwater Webpage for public viewing.

External Evaluation Procedures

Mohave County will allow the public to provide feedback as to the effectiveness of the Stormwater Management Program and BMPs (including outreach materials and procedures).

1. Feedback will be solicited through the Stormwater Webpage via an online form that will allow for comments and recommendations for improving the program's effectiveness.
2. Throughout the year, comments and recommendations will be collected and reviewed. All public feedback will be logged, categorized, and addressed as part of the annual evaluation process.
3. Thirty (30) days prior to the Annual Report and as part of the internal review, the Team Leader will meet with other departments to discuss revisions to the SWMP and BMPs based on comments and recommendations. Meeting notes will be documented and retained for audit purposes.
4. The Team Leader will compile the information received into an Annual Report. The Annual Report will be submitted on or before September 30th of each permit year to ADEQ through the myDEQ portal.
5. The authorized Annual Report will be posted on Mohave County's Stormwater Webpage for public viewing.

6. Revisions made to the SWMP or the BMPs will be documented, with the information stored in Attachment 9.

Revision Procedures

Revisions made in response to the Internal and External Evaluation Procedures will be made in accordance with Section 8.1 of the Permit.

Minor updates will occur at the staff level and will consist of bookkeeping matters, such as changes in who is responsible for a specific BMP.

Major updates will include changes in the SWMP, such as the implementation of new BMPs, the discontinuance of ineffective ones, or policy changes.

Documentation justifying a BMP modification will include the following:

1. Any analyses or supporting information used in determining that the BMP was ineffective or infeasible.
2. Expectations on the effectiveness of the replacement BMP.
3. An analysis or supporting information as to why the replacement BMP is expected to achieve the defined goals of the BMP to be replaced.
4. All revisions will be conducted in accordance with Permit Section 8.1 to ensure compliance with regulatory obligations.
5. All revisions will be made in a manner that maintains compliance with the requirements of the AZPDES Small MS4 General Permit.

Record Keeping

Mohave County will retain the records required by this permit for a period of no less than three (3) years from the expiration of the permit. The records to be retained include, but are not limited to, information used to develop the requisite programs (i.e., IDDEP etc.), monitoring results, copies of reports, records of screening, illicit discharge complaints and records of the follow-up action undertaken, maintenance records, inspection reports, enforcement action, submitted SWPPP and Post-Construction Plans, Notice of Intent, Site-Specific Stormwater Management Programs (SS-SWMP), previous Stormwater Management Programs (SWMP), Discharge Monitoring Reports (DMR) and Annual Reports.

The public shall be able to review the current SWMP and associated program documents electronically via the Stormwater Webpage. Back up documentation will be available in the Mohave County Development Services office and can be viewed during normal business hours. Copies of information may be obtained in accordance with Mohave County policies and applicable public records laws.

The records (hardcopy and electronic copy) can be accessed at:

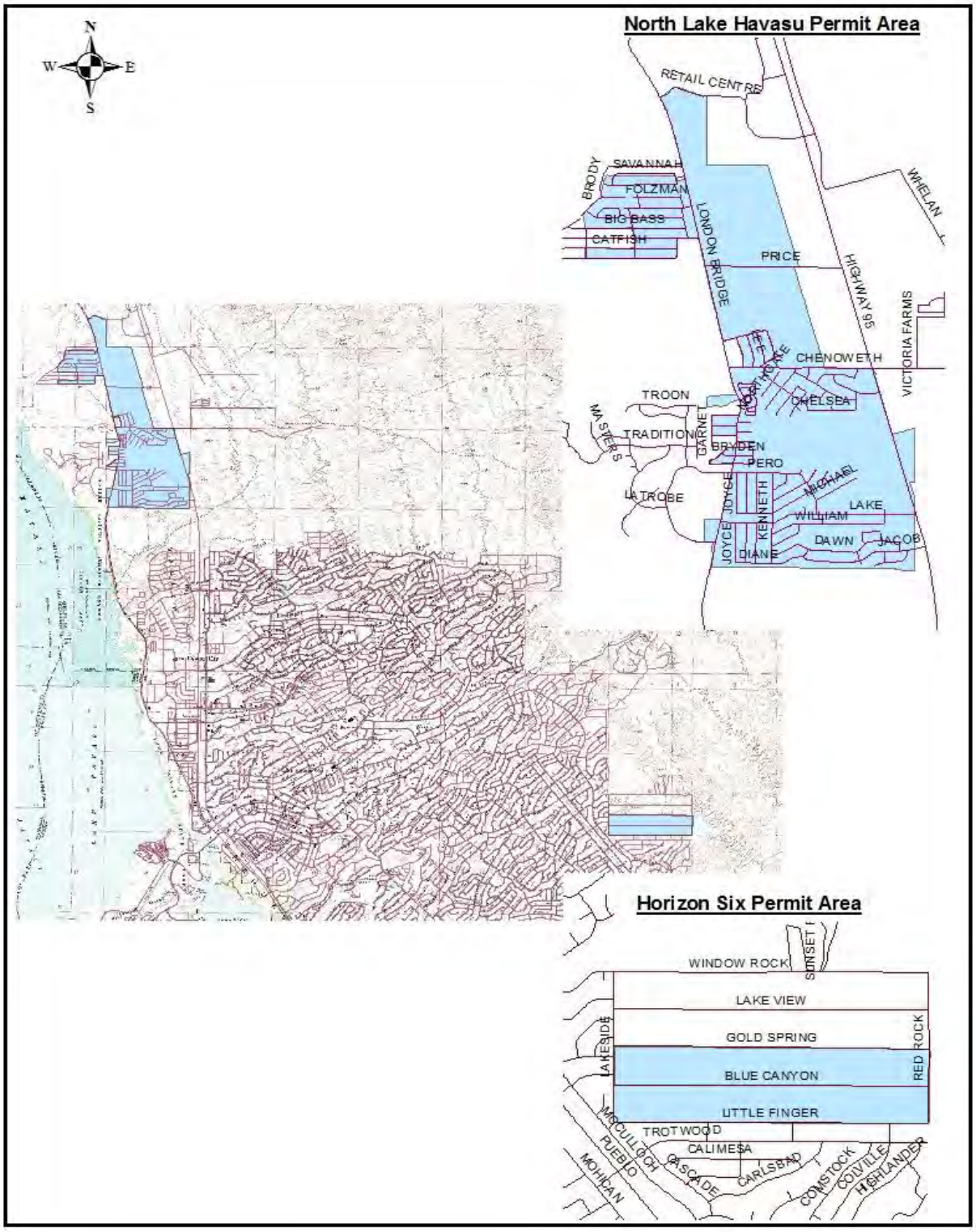
Mohave County Development Services
3250 E. Kino Avenue
Kingman AZ, 86409

The ADEQ Director or an authorized representative may request access to the records during normal business hours.

Annual Reports

Mohave County will submit Annual Reports by September 30 of each year for the permit period extending from July 1 through June 30 to the Arizona Department of Environmental Quality through the myDEQ portal. The report shall, at a minimum, contain the information listed in Appendix A of the AZG2021-002. Supporting documents will be attached to the Annual Report, as necessary.

Attachment 1 - Jurisdictional Boundaries Map



Attachment 2 - Mohave County Storm Sewer Mapping

Figure 2a - North Lake Havasu MS4 Facilities

N

1 inch = 300 feet

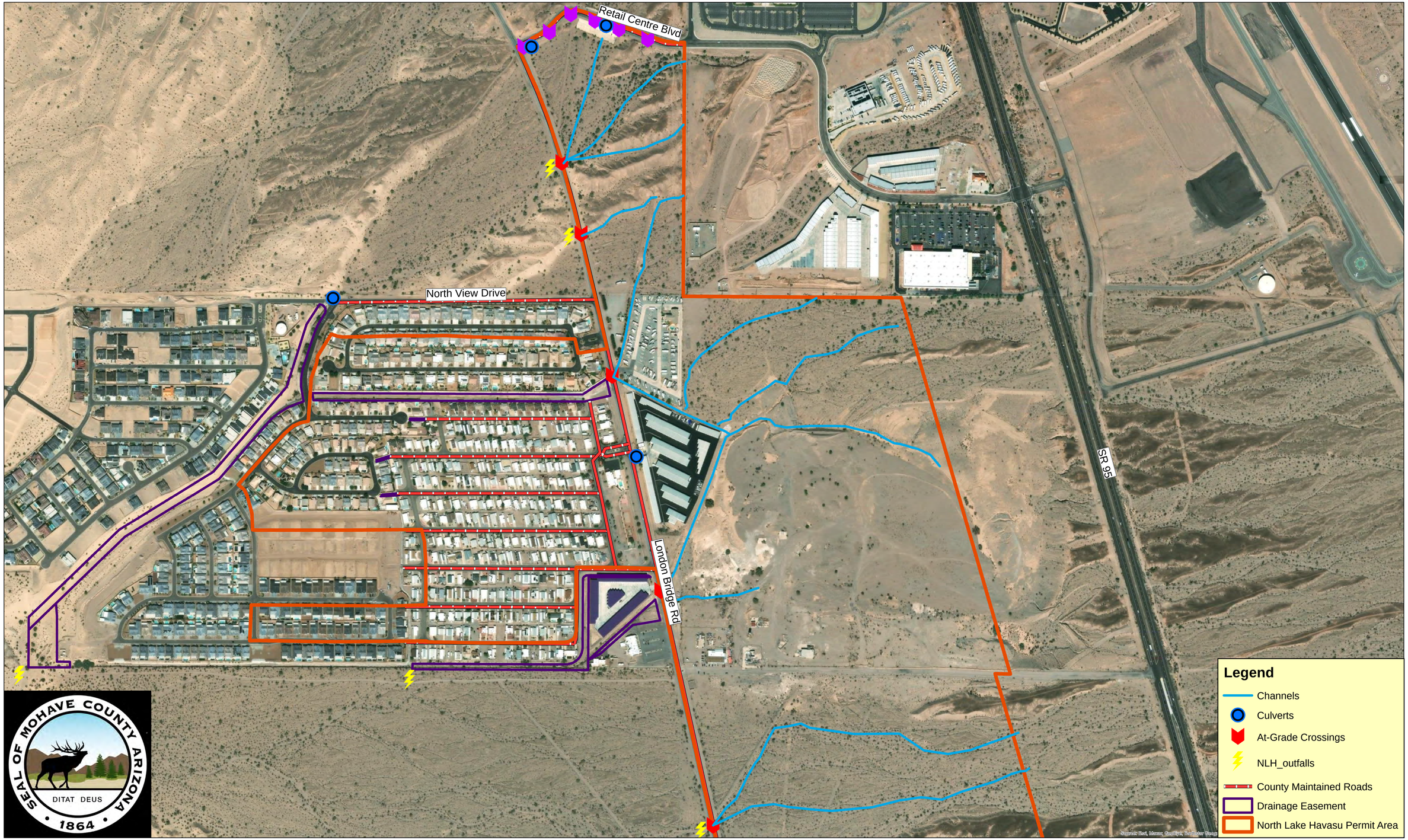


Figure 2a - North Lake Havasu MS4 Facilities

N

1 inch = 300 feet

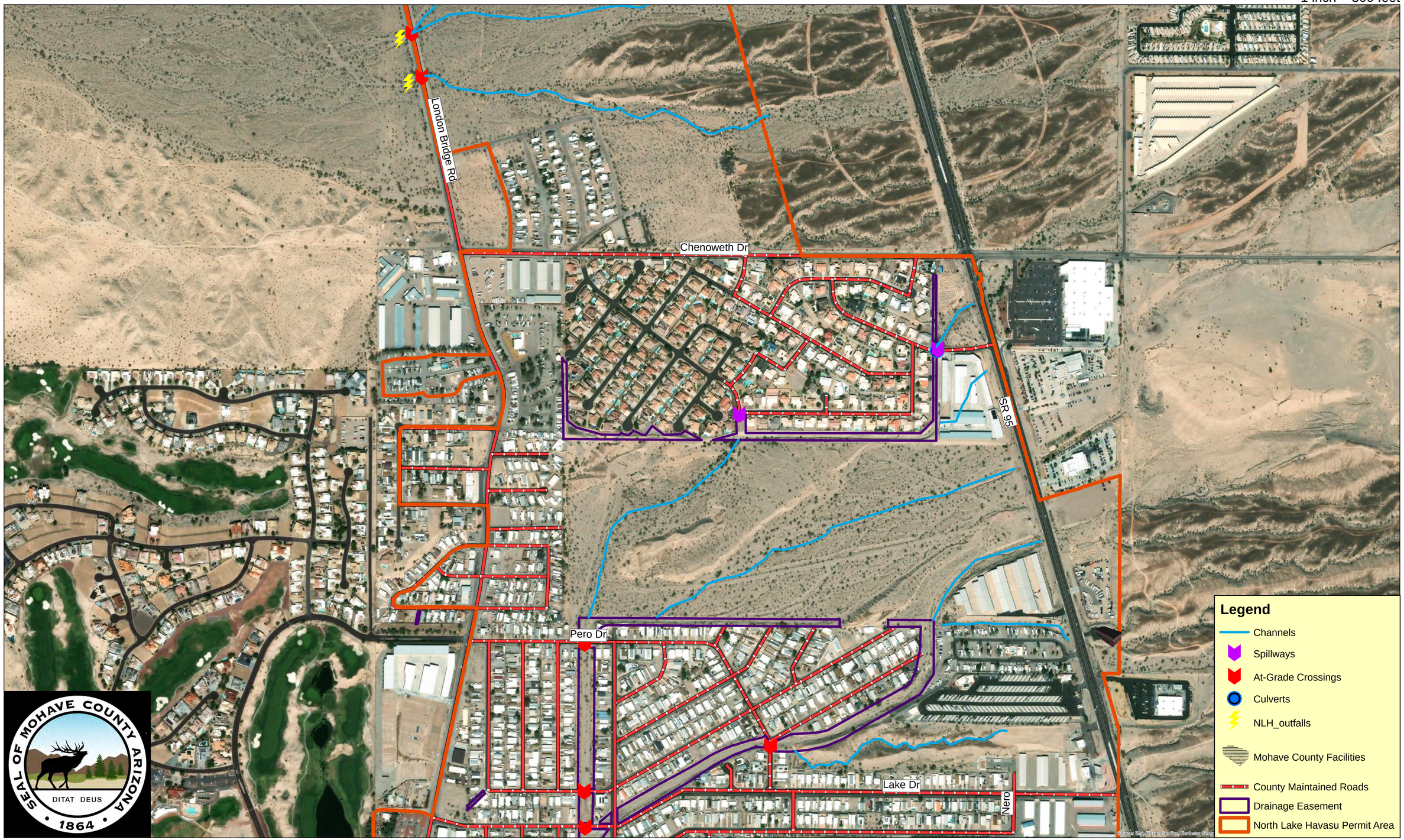


Figure 2a - North Lake Havasu MS4 Facilities

N

1 inch = 300 feet

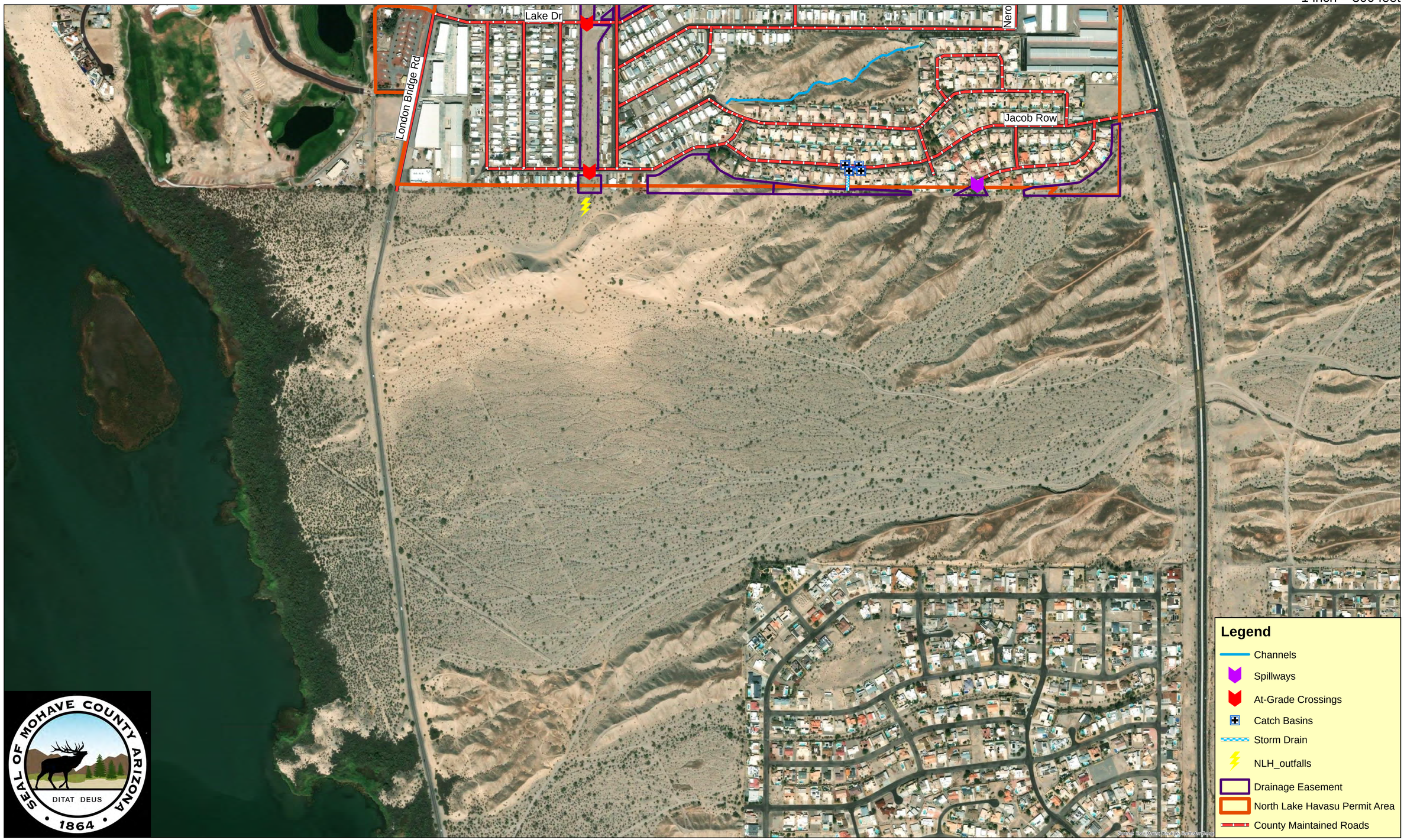


Figure 2b - Horizon Six MS4 Facilities

N

1 inch = 300 feet

Window Rock Pipe 1
Window Rock Box 1
2WR-RW
Lakeview Pipe 1
Lakeview Box 1
2LV-RW
Goldspring Box 1
2GS-RW
Red Rock Pipe 1
2LS-RW
Lakeside Pipe 1
Lakeside Pipe 1
Blue Canyon Box 1
2BC-RW
2RR-RW
Little Finger Box 1
2LF-RW
Little Finger Box 2

SEAL OF MOHAVE COUNTY ARIZONA
DITAT DEUS
1864

Legend

- Culverts
- County Maintained Roads
- Horizon Six Permit Area

Attachment 3 - ADEQ MS4 Permit (AZG2021-002)

ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY

Arizona Pollutant Discharge Elimination System
General Permit for Stormwater Discharges
From Small Municipal Separate Sewer Systems
to Protected Surface Waters

This permit provides authorization to discharge under the Arizona Pollutant Discharge Elimination System (AZPDES) program, in compliance 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, Chapter 9, Article 9, and Chapter 11, Article 1; and the Clean Water Act as amended (33 U.S.C. 1251 *et seq.*). This general permit authorizes stormwater discharges of pollutants from small municipal separate storm sewer systems (MS4s) in Arizona to Protected Surface Waters, pursuant to federal conditions in 40 CFR § 122.34 and A.R.S. Title 49 Chapter 2, Article 3.1 *et seq*. State requirements for discharges to non-WOTUS protected surface waters are enforceable solely by the Arizona Department of Environmental Quality (ADEQ). All discharges authorized by this general permit shall be consistent with the terms and conditions of this general permit.

This general permit is effective on September 30, 2021.

This general permit and the authorization to discharge expires at midnight on September 29, 2026.

This general permit was modified on Sep 16, 2022

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Trevor Baggiore, Director
Water Quality Division

Contents

1.0 COVERAGE UNDER THIS GENERAL PERMIT

1.1 Permit Area (40 CFR 122.28(a)(1))

This permit covers and applies to traditional and non-traditional regulated, Small Municipal Separate Storm Sewer Systems (MS4s) in Arizona except those located in Indian Country. This permit is not authorized for use by sites with stormwater discharges associated with MS4s on any Indian Country lands in Arizona. Authorization for discharges in Indian Country must be obtained through US EPA Region IX or other appropriate authority.

- City or Town – Urbanized area(s) determined by the most recent Decennial Census by the Bureau of Census, including areas annexed during the permit term;
- County – Unincorporated urbanized area determined by the most recent Decennial Census by the Bureau of Census;
- State, federal, and other publicly-owned properties that the Director determines contributes to a violation of a water quality standard or is a significant contributor of pollutants to protected surface waters; and
- Areas outside of an urbanized area as designated by the Director pursuant to Arizona Administrative Code (A.A.C.) R18-9-A902(D).
- If your small MS4 is not located entirely within an urbanized area, only the portion that is within the urbanized area is regulated, pursuant to 40 CFR 122.32(1)(a).

1.2 Eligibility (40 CFR 122.32)

This permit authorizes the discharge of stormwater from MS4s to all waters on the protected surface water list, including discharges to waters of the U.S. (WOTUS) and non-WOTUS protected surface waters. The requirements of discharges to non-WOTUS protected surface waters are state-only, and enforceable solely by ADEQ. An MS4 requiring coverage:

1. Is located fully or partially within an urbanized area as determined by the latest Decennial Census by the Bureau of Census; or
2. Is designated for permit authorization by the department under the A.A.C. R-18-9-A902(D)(1), R18-9-A902(D)(2), R-18-9-A902(E), R18-9-A905(A)(1)(f) which incorporates 40 CFR §122.32.
3. Existing permittees shall implement all requirements of this permit within one (1) year of the effective date of the permit. Existing permittees shall maintain their Stormwater Management Program (SWMP) implemented under the 2016 Phase II MS4 permit until requirements of this permit are implemented.
4. New permittees shall implement all requirements of this permit within two (2) years of obtaining permit coverage. During the first two permit years, new

permittees may request, in writing to ADEQ, a one-time extension of one (1) additional year to complete a specific permit requirement. Requests should be emailed to AZPDES@azdeq.gov.

1.3 Limitations of Coverage

This general permit does not authorize:

1. Discharges mixed with sources of non-stormwater unless the non-stormwater discharges comply with an applicable NPDES or AZPDES permit, as addressed in Part 6.3(6), IDDE;
2. Stormwater discharges associated with industrial activity as defined in 40 CFR §122.26(b)(14)(i)-(ix) and (xi);
3. Stormwater discharges associated with construction activity as defined in 40 CFR §122.26(b)(14)(x) or 40 CFR §122.26(b)(15);
4. Stormwater discharges currently covered under another permit;
5. Discharges to impaired or not-attaining waters, listed in the Clean Water Act 303(d) list of Impaired Waters, if discharge(s) from the MS4 contain, or may contain, pollutant(s) for which the receiving water is listed except:
    a. If a TMDL has been established and the stormwater management program (SWMP) is consistent with the requirements of the TMDL, including any wasteload allocation or load allocation in the TMDL. (See Appendix C for specific TMDL wasteload allocations.) The SWMP shall also identify Best Management Practices (BMPs) the permittee will use to meet wasteload allocations or load allocations and include monitoring for associated pollutant(s); and
    b. If a TMDL has not been established and the SWMP includes a section describing how the program will control the discharge of 303(d) listed pollutants and ensure to the maximum extent practicable that discharges from the MS4 will not cause or contribute to exceedances of surface water quality standards (SWQS). The SWMP shall also identify BMPs the permittee will use to control discharges and include monitoring of their effectiveness.
6. New or expanded point-source discharges directly to water classified as an Outstanding Arizona Water (OAW) under A.A.C. R18-11-112.

1.4 Permit Compliance (40 CFR 122.36)

Non-compliance with any requirement of this permit constitutes a violation of the permit and may result in an enforcement action, including notices of violation, consent orders, injunctive relief and/or penalties under state and federal laws.

2.0 AUTHORIZATION UNDER THIS PERMIT

Existing permittees that have coverage as of the effective date of this permit:

1. Within the first year of this permit, the permittee shall update the SWMP as necessary to comply with the requirements of Part 4 of this permit; and
2. Within the first 60 calendar days from the effective date of this permit, the permittee shall submit a new NOI in myDEQ. The MS4 may continue to comply with the terms and conditions of the expired permit (AZG2016-002) until the NOI is submitted and payment is made for the permit application fee.

New permittees shall submit a NOI in myDEQ and pay the permit application fee to obtain coverage under this permit.

2.1 Notice of Intent (NOI)

1. A person seeking authorization to discharge under this general permit shall submit to the department a complete and accurate NOI on a form provided by the department and includes, at a minimum, the following information:
   a. Name of MS4;
   b. Operator name and title;
   c. Mailing address;
   d. Annual fee billing information;
   e. Contact person;
   f. Contact information;
   g. Estimated population of regulated area (based on most recent decennial census by the Bureau of Census);
   h. Protected surface water(s);
   i. The number of outfalls that discharge to a protected surface water(s); and
   j. Outfall name or identification, for outfalls required in "i" above.
2. If the department notifies the applicant of deficiencies or inadequacies in any portion of the NOI, or requests additional information, the applicant shall correct the deficient or inadequate portions and submit a revised NOI that addresses the deficiencies within seven (7) days of receiving notification.
3. The permittee shall submit a revised NOI to the department within fifteen (15) days whenever there is a change of information (certifying official, mailing address, contact information, etc.).

2.2 Permit Fees

Permittees are subject to fees established in A.A.C. R18-14-109, Table 6. The department will issue an invoice annually to the permittee at the address identified on the NOI. Permittees shall submit the applicable fee when submitting an NOI to obtain coverage under this permit.

2.3 Terminating Coverage (NOT)

A permittee may terminate coverage under this general permit by submitting a NOT on a form provided by the department. Authorization to discharge terminates at midnight on the day the NOT is received by the department.

If the operator does not obtain coverage under an alternate AZPDES permit that authorizes the discharge of stormwater prior to submitting the NOT, the operator will be considered discharging without a permit.

NOTs shall be signed in accordance with Part 9.9 and shall be submitted to ADEQ via email at AZPDES@azdeq.gov. The email subject line must include "Termination – MS4 Permittee Name."

2.4 Coverage under an Individual Permit

Pursuant to A.A.C. R18-9-C902, a person may request, or be required by the Director, to obtain coverage under an individual permit.

2.5 Continuation of this General Permit

If this permit is not reissued prior to the expiration date, it will be administratively continued in accordance with A.A.C. R18-9-C903 and remain in force and effect for discharges that were authorized prior to expiration.

If the MS4 operator does not submit a timely, complete, and accurate NOI requesting authorization to discharge under a reissued permit or a timely request for authorization under an individual or alternative general permit, authorization under this permit will terminate on the effective date of the reissued permit unless otherwise specified in this permit. See Part 2.0.

3.0 STORMWATER PROGRAM ENFORCEMENT

3.1 Establish Enforcement Procedures (40 CFR 122.34(b)(3)(B))

Permittees shall adopt and implement local ordinance(s) or other regulatory mechanism(s) that provide adequate enforcement procedures to satisfy the requirements of this permit to control pollutant discharges into its MS4.

3.2 Enforcement Requirements

If not already developed, the permittee shall establish and exercise enforcement procedures to comply with this permit. To be considered adequate, enforcement procedures shall, at a minimum, address the following:

1. Prohibit and eliminate illicit connections and discharges to the MS4;
2. Control the discharge of spills, and prohibit dumping or disposal of material other than stormwater into the MS4;
3. Require compliance with conditions in the permittee's ordinances, permits, contracts, or orders;
4. Require owners/operators of construction activities, new or redeveloped land, and industrial and commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, and maintenance of stormwater control measures;
5. To the extent allowed under State law, the permittee shall have methods to enter private property for the purpose of inspecting at reasonable times any facilities, equipment, practices, or operations related to stormwater discharges to determine whether there is compliance with local stormwater control ordinances/standards;
6. The permittee shall promptly require violators cease and desist illicit discharges or discharges of stormwater in violation of any ordinance or standard and/or cleanup and abate such discharges;
7. To the extent allowable under State and federal law, the permittee shall impose civil or criminal sanctions (including referral to a city or district attorney) and escalate corrective response, consistent with its enforcement response;
8. Identify departments within the permittee's jurisdiction that conduct stormwater-related activities and their roles and responsibilities under this permit. Include an up-to-date organizational chart specifying these departments and key personnel positions;
9. Identification of the local administrative and legal procedures and ordinances available to mandate compliance with stormwater-related ordinances and therefore with the conditions of this permit; and

10. A description of how stormwater related-ordinances are implemented and appealed.

3.3 Enforcement Response Plan(s)

The permittee shall develop an enforcement response plan (ERP) that specifies how it will exercise its legal authority to comply with this permit. The ERP shall include a prioritization schedule that establishes escalated enforcement for non-compliance of illicit discharges and construction activities. In developing the ERP, the permittee shall include the following factors in prioritizing escalated enforcement:

1. Severity of non-compliance;
2. Repeated non-compliance;
3. Proximity to a receiving water or storm sewer system; and
4. Other appropriate factors.

4.0 STORMWATER MANAGEMENT PROGRAM

The permittee shall develop, implement, and enforce a Stormwater Management Program (SWMP) that is designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the federal Clean Water Act and A.R.S Title 49 Chapter 2, Article 3.1 *et seq*. The program shall be documented and available for review by ADEQ, U.S. EPA, and interested persons.

1. Existing permittees shall modify or update their existing SWMP to meet the terms and conditions of this permit within one (1) year of the effective date of this permit.
2. New permittees shall develop a SWMP that meets the conditions of this permit within two (2) years of the effective date of their coverage.
3. At a minimum, and at least annually, all permittees shall assess, evaluate, and update the SWMP and incorporate any revisions necessary to maintain permit compliance. The annual SWMP review shall occur in connection with preparing the annual report (see Parts 8.1 and 8.3).

4.1 Contents of the Stormwater Management Program

At a minimum, the SWMP shall contain the following:

1. Listing of all protected surface waters, their classification under the applicable state surface water quality standards (SWQS), any impairment(s) and associated pollutant(s) of concern, applicable TMDLs and WLAs, and number of outfalls from the MS4 that discharge to each waterbody;
2. The process and schedule for creating and maintaining an up-to-date map that includes, at a minimum, the storm sewer system, outfalls, and protected surface waters;
3. Illustrate any areas that are not subject to the MS4 and identify why there is no discharge within the MS4 boundaries;
4. Listing of all known, ongoing discharges that cause or contribute to the exceedance of an applicable surface water quality standard;
5. Description of practices to achieve compliance with the permit. For each permit condition identify:
    a. The personnel, position or department responsible for implementing the measure; and
    b. The BMPs for each control measure or permit requirement.
6. Description of practices to achieve compliance with applicable TMDLs or waste load allocation, including measurable goal(s) for each BMP and

corresponding milestones and timeframes. Each goal shall have an associated measure of assessment;

7. Analytical monitoring program for impaired or not-attaining waters, and for Outstanding Arizona Waters to ensure compliance with permit limitations, wasteload allocation(s), and SWQS;
8. The analytical monitoring program shall include a Sampling and Analysis Plan (SAP) that includes the following minimum components: sample collection, equipment and containers, decontamination, calibration procedures, sample frequency (based on illicit discharge characteristics), document site conditions, field notes, sample preservation, tracking (chain-of-custody), and handling;
9. Protocol for annual program evaluation (Part 8.1). Update annually and maintain copies; and
10. Identification of personnel (department, position, etc.) responsible for program implementation.

4.2 Stormwater Management Plan Availability

The permittee shall retain a copy of the current SWMP required by this permit at the office or facility identified on the NOI and shall be available upon request by ADEQ or U.S. EPA, or their authorized representatives.

A copy of the most up-to-date SWMP shall be made available to the public during normal business hours and posted on the permittee's website.

5.0 WATER QUALITY STANDARDS

The permittee shall develop, implement and enforce a program to reduce the discharge of pollutants from the MS4 to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of federal and state laws.

5.1 Water Quality Based Effluent Limitations

Pursuant to Clean Water Act 402(p)(3)(B)(iii) and A.R.S 49-255.04, this permit includes provisions to ensure that discharges from the permittee's small MS4 do not cause or contribute to an exceedance of SWQS, in addition to requirements to reduce the discharge of pollutants to the maximum extent practicable.

To assure compliance with permit limitations, ADEQ may require the permittee to conduct analytical monitoring and will provide notice to the permittee in writing (see Part 7).

5.2 Surface Water Quality Standards (SWQS)

1. The permittee shall implement the six (6) Minimum Control Measures (MCMs) specified in Part 6 to the maximum extent practicable to protect water quality, and to satisfy water quality requirements of the Clean Water Act, including attainment of SWQS.
2. If the permittee discovers, or is otherwise notified by ADEQ or U.S. EPA, that a discharge from the MS4 is causing or contributing to an exceedance of an applicable surface water quality standard, the permittee shall expand or better tailor its BMPs within the scope of the six (6) minimum control measures in Part 6.0 to achieve progress toward attainment of SWQS. The requirements for discharges to non-WOTUS protected surface waters are state-only, and enforceable solely by ADEQ.

6.0 MINIMUM CONTROL MEASURES

The permittee shall reduce the discharge of pollutants to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate requirements of the Clean Water Act and A.R.S 49-255.04 by implementing the six (6) minimum control measures (MCMs) in parts 6.1 – 6.6 below.

1. Existing permittees shall continue to implement their existing SWMPs while making updates pursuant to this permit. This permit does not extend the compliance deadlines set forth in previous permits.
2. Implementation of one (1) or more of the minimum control measures described in Parts 6.1 – 6.6 or other permit requirements may be shared with another entity (including another interconnected MS4) or the other entity may fully implement the measure or requirement, if the following requirements are satisfied (See 40 CFR 122.35(a)):
   a. The other entity implements the control measure as specified in the SWMP;
   b. The particular control measure or component thereof undertaken by the other entity is at least as stringent as the corresponding permit requirements
   c. The other entity agrees to implement the control measure on the permittee's behalf. The SWMP shall specify that the permittee is relying on another entity to satisfy some of its permit obligations and specify what those obligations are;
   d. The permittee remains responsible for compliance with all permit obligations if the other entity fails to implement the control measures (or component thereof). The permittee may enter into a legally binding agreement with the other entity regarding the other entity's performance of control measures, but the permittee remains ultimately responsible for permit compliance.

6.1 Public Education and Outreach (40 CFR 122.34(b)(1))

The permittee shall identify and implement an educational program that focuses on the impacts of stormwater discharges to and from the MS4.

1. At a minimum, the permittee shall 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 listed below during each year of the permit term. Topics listed are not exclusive, and the permittee may focus its effort on one (1) or more target group(s) and topic(s) most relevant to the MS4.
   a. *Target Groups:*

      General Public, Residential Community, Homeowners, , Schools

b. *Topics:*

i. Post-construction ordinances and long-term maintenance requirements for permanent stormwater controls;

ii. Stormwater runoff issues and residential stormwater management practices;

iii. Potential water quality impacts of application of pesticides, herbicides and fertilizer and control measures to minimize runoff of pollutants in stormwater;

iv. Potential impacts of animal waste on water quality and the need to clean up and properly dispose of pet waste to minimize runoff of pollutants in stormwater;

v. Illicit discharges and illegal dumping, proper management of non-stormwater discharges, and to provide information on reporting spills, dumping, and illicit discharges;

vi. Spill prevention, proper handling and disposal of toxic and hazardous materials, and measures to contain and minimize discharges to the storm sewer system;

vii. Installation of catch basin markers or stenciling of storm sewer inlets to minimize illicit discharges and illegal dumping to storm sewer system;

viii. Proper management and disposal of used oil; or

ix. Community activities (monitoring programs, environmental protection organization activities, etc.).

2. At a minimum, the permittee shall provide business sector education/outreach to at least one (1) target group and focus its efforts on conveying relevant messages using one (1) or more appropriate topic(s) listed below during each year of the permit term. Topics listed are not exclusive, and the permittee may focus its efforts on one (1) or more target group(s) and topic(s) most relevant to the MS4.

1. *Target Groups:*

Development, Community/Home Owner Association, Construction Site Operators, Targeted Sources or Types of Businesses (industrial or commercial)

2. *Topics:*

i. Planning ordinances and grading and drainage design standards for stormwater management in new developments and significant redevelopments;

ii. Post-construction ordinances and long-term maintenance requirements for permanent stormwater controls;

iii. Municipal stormwater requirements and stormwater management practices for construction sites;

iv. Illicit discharges and proper management of non-stormwater discharges;

v. Spill prevention, proper handling of toxic and hazardous materials, and measures to contain and minimize discharges to the storm sewer system;

vi. Proper management and disposal of used oil and other hazardous or toxic materials, including practices to minimize exposure of materials/wastes to rainfall and minimize contamination of stormwater runoff;

vii. Stormwater management practices, pollution prevention plans, and facility maintenance procedures; or

viii. Water quality impacts associated with land development (including new construction and redevelopment).

3. The program shall focus on messages for specific audiences as well as show progress toward the defined educational goals of the program. The permittee shall identify methods that it will use to evaluate the effectiveness of the educational messages and the overall education program.
4. The permittee shall modify any ineffective messages or distribution techniques on an annual basis. See Part 8.1(3) for record keeping requirements.

6.2 Public Participation and Involvement (40 CFR 122.34(b)(2))

The permittee shall provide opportunities to engage the public to participate in the review and implementation of the permittee's SWMP.

1. All public involvement activities shall comply with state and local public notice requirements. The SWMP and all annual reports shall be available to the public. The current SWMP and annual report in subsequent years shall be posted no later than 30-days of the due date of the annual report. See 1.2(3) and (4).
2. The permittee shall annually provide the public an opportunity to participate in the review, revisions, updates, and implementation of the SWMP.
3. The permittee shall create opportunities for citizens to participate in the implementation of stormwater controls, for example, but not limited to:
   a. Stream clean-ups;
   b. Storm drain stenciling;

c. Volunteer monitoring;

d. Disposal of household hazardous waste;

e. Educational activities; and

f. Facilitation of Adopt-A-Wash, Adopt-A-Park, and Adopt-A-Street litter control activities.

4. The permittee shall provide and publicize a reporting system to facilitate and track public reporting of spills, discharges and/or dumping to the MS4 on a continuous basis.

5. The permittee shall document the details of the public involvement and participation program in the SWMP.

6.3 Illicit Discharge Detection and Elimination (IDDE) Program

(40 CFR 122.34(b)(3))

The permittee shall identify, develop, implement and enforce a program to detect and eliminate illicit discharges into the MS4. The IDDE program shall be recorded in a written document and maintained in the SWMP. The IDDE program shall include each of the elements listed in this section.

1. Storm Sewer Mapping

   The permittee shall prepare and maintain an up-to-date map of the MS4. At a minimum, the storm sewer map shall be sufficient in scope and detail to identify and isolate illicit discharges. The permittee is not required to submit storm sewer system mapping infrastructure to ADEQ unless specifically requested, and shall make mapping information available to ADEQ or EPA to assess permit compliance.

   The permittee shall develop a map that includes, at a minimum, the following:

   a. Storm sewer system including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains that are owned or operated by the permittee and convey stormwater to protected surface waters.

   b. The location of all outfalls; and

   c. The name and location of all protected surface waters that receive discharges from outfalls.

   Existing permittees shall review and update maps within one (1) year from the effective date of this permit, including areas annexed within the previous permit term.

   For existing permittees that have an increase of their "Urbanized Area" (UA) based on the 2020 Census, mapping shall be completed as following:

a. Within three (3) years from the effective date of the updated UAs from the Decennial Census;
b. At a minimum of 33% each year (permit years 1-3) and will be updated in the annual report; and
c. Supporting documentation should be maintained in the SWMP.

New permittees must include a mapping schedule in their NOI. The schedule must include how the permittee will conduct the mapping process, a timeline, and estimated completion dates.

2. Enforcement Procedures

a. The permittee shall prohibit non-stormwater discharges into the storm sewer system by implementing appropriate enforcement procedures and actions authorized by current ordinances, by-laws or other regulatory mechanisms. See Part 3.2 Enforcement Requirements for additional requirements on ordinances.

b. The written IDDE program shall include a reference or citation of the authority (ordinance or other regulatory mechanism) the permittee will use to implement all aspects of the IDDE program.

3. Statement of IDDE Program Responsibilities

The permittee shall establish a written statement that clearly identifies responsibilities with regard to eliminating illicit discharges. The statement shall identify the lead municipal agency or department responsible for implementing the IDDE Program as well as any other agencies or departments that may have responsibilities for aspects of the program. Where multiple departments and agencies have responsibilities to the IDDE program, specific areas of responsibility shall be defined and processes for coordination and data sharing shall be established and documented.

4. Illicit Discharge Detection and Elimination Reporting

The Permittee shall track and maintain records of the activities conducted to meet the requirements of Parts 6.1 – 6.6. The Permittee shall submit as part of each annual report a summary of IDDE activities in tabular format. The required fields are:

a. MS4 Name;
b. Date incident reported or discovered;
c. Date of the beginning of your response;
d. Date of the end of your response;
e. Did the discharge reach a protected surface water (yes, no, or unknown);
f. Incident location (address or latitude and longitude);
g. Pollutants;

h. Source; and

i. Correction method(s).

5. Eliminating Illicit Discharges

Illicit discharges to the MS4 are prohibited and constitute a violation of this permit, when the permittee is not fully implementing applicable permit requirements and the SWMP.

Upon detection of an illicit discharge, or receipt of a complaint regarding a discharge, the permittee shall eliminate the discharge as expeditiously as possible. The permittee shall identify and notify all responsible parties for any such discharge and require immediate cessation in accordance with its legal authorities. Where elimination of an illicit discharge is not immediately possible, the permittee shall establish an expeditious schedule for its elimination and report the dates of identification and schedules for removal in the permittee's annual reports. The permittee shall immediately commence actions necessary for elimination. In the interim, the permittee shall take all reasonable and prudent measures to minimize the discharge of pollutants to its MS4.

6. Non-Stormwater Discharges

The following categories of non-stormwater discharges or flows shall be addressed when such discharges are identified by the permittee as sources of pollutants to a protected surface water:

a. Water line flushing;

b. Landscape irrigation, including flood irrigation;

c. Diverted stream flows;

d. Rising ground waters;

e. Uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(b)(20)) to separate storm sewers;

f. Uncontaminated pumped groundwater;

g. Discharges from potable water sources;

h. Foundation drains;

i. Air conditioning condensation;

j. Irrigation water;

k. Springs;

l. Water from crawl space pumps;

m. Footing drains;

n. Lawn watering;

o. Individual residential car washing;

p. Flows from riparian habitats and wetlands;

q. Dechlorinated swimming pool discharges;

r. Street wash water;

s. Discharges or flows from emergency firefighting activities;

t. Discharges authorized by another NPDES or AZPDES permit.

7. Visual Monitoring

The permittee shall develop, implement, and maintain a visual monitoring program that includes both dry weather and wet weather stormwater discharges to identify, monitor, and eliminate illicit discharges; and to ensure compliance with effluent limitations in this permit. The ratio of dry weather and wet weather screenings conducted each year will be determined by the permittee.

a. The monitoring programs shall include written procedures for conducting visual monitoring of outfalls from the MS4. Monitoring procedures shall include, at a minimum, the following information/observations: outfall identification, personnel, time, date, weather conditions at time of inspection, estimated flowrate, apparent odor, color, clarity, debris, floatables, and other necessary information to characterize the screening.

b. The permittee shall visually monitor at least 20% of all outfalls each year including both dry and wet weather screenings. The ratio of dry weather and wet weather screenings conducted each year will be determined by the permittee. Re-inspection of outfalls may be included in the annual monitoring percentage. In the event an illicit discharge is discovered, the permittee shall implement measures to eliminate the illicit discharge (parts 6.3(1) - 6.3(6)); and

c. Follow-up Screening: The permittee shall establish a follow-up screening schedule for identified or suspected illicit discharges to ensure they do not recur.

d. In the event a Small MS4 has fewer than five (5) outfalls, a minimum of five (5) screening points, or combination of outfalls and screening points, shall be utilized for the visual monitoring requirement. Screening points shall be at locations where stormwater leaves the Small MS4's permitted area including locations where stormwater may discharge to another MS4 or other conveyance.

8. Indicators of IDDE Program Progress

   The permittee shall define or describe indicators for tracking program success. At a minimum, indicators shall include measures that demonstrate efforts to locate illicit discharges that were identified and removed. Such measures may include response time to inspection, an increase in public awareness, time from discovery to elimination, and other appropriate factors. The permittee shall evaluate the overall effectiveness of the program at least annually and incorporate improvements as necessary.

9. Staff Training

   The permittee shall, at a minimum, provide annual training to employees involved in the IDDE program (e.g., street workers, inspectors, solid waste personnel, etc.). The training shall include the IDDE program components and how to recognize illicit discharges.

10. AZPDES Non-Filers

    The permittee shall implement a program to identify illicit discharges to the MS4 identified in accordance with the IDDE program established in Section 6.3. The permittee shall report suspected non-filers to ADEQ within 30 days. The report provided to ADEQ shall include, at a minimum, the facility name and the location of the suspected non-filer. The reports shall be submitted to ADEQ at AZPDES@azdeq.gov. If more than one non-filer is identified within a 30-day period, the notifications may be combined into a single report.

6.4 Construction Activity Stormwater Runoff Control (40 CFR 122.34(b)(4))

The permittee shall develop, implement, maintain, and enforce a construction activity stormwater runoff control program to minimize or eliminate pollutant discharges to the MS4s from construction activities that will disturb one (1) or more acres of land, including sites less than one (1) acre that are part of a common plan of development or sale.

1. Construction Activity Stormwater Runoff Implementation

   The permittee shall assess existing legal authority, codes, and other relevant mechanisms and adopt, and implement measures to ensure compliance with construction activity runoff timeframe(s) specified in Part 3.1.

2. Construction Activity Stormwater Runoff Program Components

   The construction activity stormwater runoff control program shall include, at a minimum, the elements in paragraphs a. through h. of this part:

   a. An ordinance or other regulatory mechanism that requires the use of sediment and erosion control practices and allows the permittee, to the extent authorized by law, to impose sanctions ensuring compliance with the local program. See Part 3.2 Enforcement Requirements for additional requirements on ordinances.

b. An inventory of all construction activities that disturb or will disturb one (1) or more acres within the permitted area, including those that are less than one (1) acre but are part of a larger common plan of development or sale if the larger common plan will ultimately disturb greater than one (1) acre.

c. Written procedures for site plan review shall include:

   1. A review of the site design;
   2. The planned operations at the location of the construction activity;
   3. Planned stormwater controls during each construction phase; and
   4. The planned controls to be used to manage runoff created after development. (see 6.5)

d. Written procedures for site inspections and enforcement of sediment and erosion control measures. The procedures shall clearly define who is responsible for site inspections as well as who has authority to implement enforcement procedures. The program shall allow the MS4, to the extent authorized by law, to impose sanctions ensuring compliance with the local program. These procedures and regulatory authorities shall be documented in the SWMP.

e. In developing procedures for site inspections and enforcement control measures, the permittee shall consider, at a minimum, the following:

   1. The phase of construction;
   2. Proximity to an impaired, not-attaining or OAW;
   3. Size of the construction activity (acreage disturbed); and
   4. History of non-compliance (site or operator).

f. Implement procedures for site inspections of public and private construction projects in accordance with the frequency specified below:

   1. Sites (1) one acre or larger that are within 1/4 mile of an impaired or not-attaining protected surface water, that is impaired for turbidity or Suspended Sediment Concentration (SSC), shall be inspected a minimum of once per week, and within 24 hours of the occurrence of each storm event of 0.5 inches or greater in a 24 hour period;
   2. Site inspection frequency for sites not subject to part f.1 (above) may follow section a or b below, or any combination thereof:
      a. Sites shall be inspected within one month of the start of construction. This inspection may count towards quarterly inspections.
         i. Sites shall be inspected quarterly; and
         ii. Sites shall be inspected upon completion of construction and prior to final approval or occupancy. This inspection may count towards quarterly inspections.

b. Sites meeting the below i - v requirements may reduce inspection frequency to every six months. The permittee must document which sites are inspected under this reduced frequency section:

   i. The nearest downstream receiving water is ephemeral;

   ii. The construction activity occurs on a site designed so that all stormwater generated by disturbed areas of the site exclusive of public rights-of-way is directed to one or more retention basins that are designed to retain the runoff from an extreme event. For the purposes of this subsection, "extreme event" means a rainfall event that meets or exceeds the local one hundred-year, two-hour storm event as calculated by an Arizona registered professional engineer using industry practices;

   iii. The owner or operator complies with erosion and sediment control measures;

   iv. The owner or operator maintains the capacity of the retention basins; and

   v. Construction conforms to the standards prescribed by this section.

Compliance during this permit term shall be determined by achieving at least 80% of scheduled inspections annually.

g. Based on construction activity inspection findings, the permittee shall take all necessary follow-up actions (i.e., re-inspection, enforcement) to ensure compliance in accordance with the permittee's enforcement response plan required under Part 3.3.

h. The permittee shall require construction operators to implement sediment and erosion control BMPs appropriate for the conditions at the construction site. Examples of appropriate sediment and erosion control measures for construction activities include local requirements to:

   1. Minimize the amount of disturbed area and protect natural resources;

   2. Stabilize sites when projects are complete or operations have temporarily ceased;

   3. Protect slopes on the site of the construction activity;

   4. Protect storm drain inlets and armor all newly-constructed outlets;

   5. Use perimeter controls at the site;

   6. Stabilize entrance(s) and exit(s) at the location of the construction activity to prevent off-site tracking; and

   7. Inspect stormwater controls at consistent intervals.

i. The permittee shall require construction operators to control wastes, including but not limited to: discarded building materials, paints, fertilizers, concrete washout, chemicals, litter, equipment leaks, and sanitary wastes.

3. Personnel Qualifications

The permittee shall ensure staff who conduct activities related to implementing the construction stormwater program (permitting, plan review, construction activity inspections, enforcement, etc.) have the knowledge, skills, and abilities to proficiently carryout their assigned duties.

4. Construction Activity Operator Education and Public Involvement

The permittee must develop and implement a program to provide education to construction activity operators on erosion and sediment control BMP requirements and establish procedures for receipt of, and consideration of, information submitted by the public.

6.5 Post-Construction Stormwater Management in New Development and Redevelopment (40 CFR 122.34(b)(5))

The permittee shall develop, implement, and enforce a program to address post-construction stormwater runoff from new development and redevelopment projects that disturb one (1) or more acres of land (or less than one (1) acre if part of a common plan of development) that discharge into the permittee's MS4.

1. The post-construction stormwater management program shall include a combination of structural and/or non-structural best management practices, as well as the components identified in this section.

2. An ordinance or regulatory mechanism shall be implemented to address runoff from new development and redevelopment projects. The regulatory mechanism shall specify that owners or operators of new development and redevelopment sites discharging to the MS4, design, install, and maintain post-construction stormwater controls that reduce or eliminate the discharge of pollutants from the site after construction activities are completed. See Part 3.2 Enforcement Requirements for additional requirements on ordinances.

   Permittees shall evaluate existing ordinance or other regulatory mechanism(s) to address post-construction stormwater runoff from new development and redevelopment projects. If it is determined existing ordinances or other regulatory mechanism(s) shall be modified, the permittee shall develop, adopt and implement a revised ordinance or other mechanism within the timeframes(s) specified in Part 3.1.

   The permittee's new development/redevelopment program shall have procedures to ensure any stormwater controls or management practices for new development and redevelopment will prevent or minimize impacts to water quality from stormwater runoff.

3. Site Plan Review

   The permittee shall design, implement, and maintain a site plan review process to evaluate and approve post-construction stormwater controls. See permit part 6.4(2)(c) for site plan review requirements.

4. Post-Construction Stormwater Control Inventory

   The permittee shall implement and maintain an inventory system of all post-construction structural stormwater control measures installed and implemented at new development and redeveloped sites, including both public and private sector sites located within the permit area that discharge into the MS4. The inventory must be searchable by property location (either on paper or electronic) and other relevant criteria (e.g., type: retention, detention, green stormwater infrastructure, permeable pavement, dry well, size: feet, acre, volume; and, purpose: sediment removal, metals treatment, oil and grease).

5. Operation and Maintenance of Post-Construction BMPs

   The permittee shall establish processes, procedures, and other such provisions necessary, such as routine inspections of post-construction BMPs to ensure the long-term operation and maintenance of post-construction stormwater BMPs.

6.6 Pollution Prevention and Good Housekeeping for Municipal Operations (40 CFR 122.34(b)(6))

The permittee shall develop, implement, and maintain an operations and maintenance program that includes a training component with the ultimate goal of preventing or reducing pollutant runoff and protecting water quality from municipal facilities and activities. The provisions in this part apply to facilities and activities that are not subject to separate AZPDES permitting.

1. At a minimum, the program shall include control measures for reducing or eliminating the discharge of pollutants from:
   a. streets, roads, highways;
   b. municipal parking lots;
   c. maintenance and storage yards;
   d. fleet or maintenance shops with outdoor storage areas;
   e. salt/sand storage locations and snow disposal areas operated by the permittee;
   f. waste transfer stations; and
   g. disposal of waste removed from the separate storm sewers and areas listed above (such as dredge spoil, accumulated sediments, floatables, and other debris).

2. Operation and Maintenance of Pollution Prevention and Good Housekeeping BMPs

The permittee shall establish processes, procedures, and other such provisions necessary to ensure the long-term operation and maintenance of stormwater BMPs. At a minimum, the processes and procedures shall include:

a. Development of an inventory of municipally-owned and operated facilities and activities that discharge;

b. Prioritize municipal facilities based on their risk to discharge pollutants and develop and implement a site inspection schedule (example, more frequent inspections for higher risk facilities, less frequent inspections for lower risk facilities);

c. Develop and implement an inspection schedule for municipally-owned or operated facilities and activities, based on priority, to ensure stormwater controls are effective and being properly maintained. Inspections shall be implemented with the following frequencies:

   i. High risk facilities shall be inspected at least once every quarter;

   ii. Medium risk facilities shall be inspected at least twice per year; and

   iii. Low risk facilities shall be inspected at least once per year.

d. Based on inspection findings, update municipally-owned or operated facilities priority status and modify inspection frequency, as appropriate;

e. Develop and implement stormwater controls at municipally-owned or operated facilities and discharge activities to reduce or eliminate the discharge of pollutants;

f. Develop and implement an annual employee training program to incorporate pollution prevention and good housekeeping techniques into everyday operations and maintenance activities; and

g. Develop maintenance activities, maintenance schedules, and long-term inspections procedures for structural and non-structural stormwater controls to reduce floatables, trash, and other pollutants discharged from the MS4.

Existing permittees shall continue to implement established operation and maintenance programs while updating those programs, as necessary, to comply with the requirements of this permit.

7.0 MONITORING REQUIREMENTS

All MS4s are required to perform Stormwater Characterization Monitoring as set forth in this section. Additionally, MS4s that have stormwater discharges to impaired or not-attaining waters, OAWs, or waters with TMDLs shall monitor for the impairments, as outlined in this section.

Additionally, ADEQ may notify the MS4 in writing of any additional monitoring requirements to ensure protection of receiving water quality or to ensure permit compliance. Additional monitoring will be required if there is evidence that a pollutant is being discharged by the permittee that may be causing or contributing to exceedances of a water quality standard. Any such notice will provide an explanation of the reasons for the monitoring, locations, and parameters to be monitored, frequency and period of monitoring, sample types, and reporting requirements.

Analytical monitoring shall be conducted using approved test methods in accordance with A.A.C. R18-9-A905(B).

7.1 Monitoring and Assessment Program

1. The monitoring provisions of this section apply to all permittees that must conduct analytical monitoring. The permittee shall implement, and revise as necessary, a comprehensive monitoring and assessment program that includes a Sampling and Analysis Plan (see 7.3).

   A description of this program shall be included in the SWMP. The monitoring and assessment program shall be designed to meet the following objectives:

   a. Assess the impacts to impaired, not-attaining, or Outstanding Arizona Waters (OAWs) resulting from stormwater discharges from Small MS4 outfalls;

   b. Characterize stormwater discharges;

   c. Identify sources of elevated pollutant loads and specific pollutants; and

   d. Assess the overall health and evaluate long-term trends in water quality of impaired, not attaining, or OAWs.

2. The permittee shall identify outfall locations in the SWMP that:

   a. Discharge to impaired waters (Category 5);

   b. Discharge to not-attaining waters (Category 4);

   c. Discharges to OAWs listed in A.A.C. R18-11-112; and

   d. Are subject to additional monitoring required by ADEQ.

7.2 Stormwater Characterization Monitoring Requirements

1. Stormwater Sampling

The permittee shall conduct stormwater characterization monitoring of discharges from the MS4 to protected surface waters at the outfalls identified by the permittee in Part 7.2(4). The permittee shall sample stormwater discharges from the MS4, as required in Appendix B, one (1) time within the first three and one-half (3.5) years of the effective date of the permit; new permittees shall sample stormwater discharges from the MS4 within the first three and one-half (3.5) years after obtaining permit coverage. This monitoring requirement shall provide discharge characterization data of stormwater discharges from the MS4.

2. Qualifying Storm Event

The permittee shall conduct the required stormwater characterization monitoring for qualifying storm events. A qualifying storm event is rainfall in the amount of 0.1 inches or more and a resulting discharge, within the first 24-hours of the event. The permittee shall design stormwater sampling procedures to include the "first flush" (first 30 minutes of storm event discharge) of a qualifying storm event, to the maximum extent practicable.

3. Storm Event Records

The sampled qualifying storm event is 0.1 inches or more of rainfall and resulting in a discharge at the outfall. The permittee shall include the sampled qualifying storm event data in the DMR, including the following information:

a. Date of the qualifying storm event; and

b. Amount of rainfall (in inches) in the drainage area for each stormwater monitoring location identified in 7.2(4).

4. Monitoring Locations

The permittee shall identify at least three (3) outfalls or locations within the MS4, representative of stormwater pollution from the MS4 for stormwater characterization monitoring. The identified outfalls for this one-time characterization monitoring must be reported in a discharge monitoring report (DMR), including the identification of the land use for the area served by the outfall from the following three uses: residential, commercial, industrial. The permittee's selected outfalls must be representative MS4 discharges and discharge to a protected surface water.

5. Adverse Climatic Conditions

Sampling of a qualifying storm event is not required during adverse climatic conditions. Adverse climatic conditions which prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, electrical storms, etc.). Information on the conditions that prevented sampling shall be reported to ADEQ with the DMRs. Where additional stormwater sampling is required, the

permittee shall continue to monitor subsequent storm events during the monitoring season and perform storm water sampling of a qualifying storm event if another occurs during the same wet season.

6. Stormwater Characterization DMR

All parameters listed in Appendix B shall be monitored. Any additional parameters may be monitored as determined by the permittee. All parameters monitored must be reported to ADEQ via the DMR provided in myDEQ.

ADEQ will provide an electronic DMR in myDEQ for each permittee to record their stormwater characterization monitoring.

a. This DMR shall be submitted within 30 days after receiving laboratory results from characterization monitoring.

b. For existing permittees, this DMR will be available from October 1, 2021 through March 30, 2024, allowing the entry of data and/or no discharge codes throughout the first three and one-half (3.5) years of permit coverage.

c. For new permittees, a DMR will be made available for the first three and one-half (3.5) years after obtaining permit coverage.

The permittee shall retain records of all stormwater monitoring information with the SWMP.

7.3 Sampling and Analysis Plan (SAP)

The permittee shall develop a written SAP for analytical monitoring of stormwater discharges, including but not limited to:

1. The name(s) and title of the person(s) who will perform the monitoring;
2. Locations of monitoring sites;
3. A map showing the segments or portions of the protected surface water that are most likely to be impacted by the discharge of pollutant(s);
4. Water quality parameters and pollutants to be sampled;
5. The citation and description of the sampling protocols to be used; and
6. Identification of the analytical methods and related method detection limits (if applicable) for each parameter required. The permittee shall use analytical methods with a Limit of Quantitation (LOQ) that is lower than the effluent limitations, Assessments Levels, Action Levels, or other water quality criteria, if any, specified in this permit. If all methods have LOQs higher than the applicable water quality criteria, the permittee shall use the approved analytical method with the lowest LOQ.

7.4 Discharges to Impaired or Not-Attaining Waters or Outstanding Arizona Waters

1. Discharges to impaired or not-attaining waters:

   a. If an outfall discharges to an impaired or not-attaining water, the permittee shall develop and implement a monitoring program for all pollutants for which the waterbody is listed.

   b. If the waterbody is listed for suspended solids, turbidity or sediment/sedimentation and the discharge occurs for more than 72 hours after the storm event, the permittee shall monitor for suspended sediment concentration (SSC). If the pollutant causing the impairment is expressed in the form of an indicator or surrogate pollutant, the permittee shall monitor for that indicator or surrogate pollutant.

   c. The permittee shall comply with all applicable waste load allocations established in approved TMDLs. In the event monitoring requirements (frequency, analytical parameters, etc.) are established in an approved TMDL, the permittee shall comply with the specifications in the approved TMDL.

2. Discharges to OAWs:

   a. The permittee shall perform analytical monitoring for the following parameters, if the MS4 has discharges to an OAW:

      1. Biochemical oxygen demand (BOD)
      2. Total suspended solids (nonfilterable) (TSS)
      3. pH
      4. Fecal coliform
      5. Oil and grease

   b. The permittee shall also sample for any pollutants for which the OAW is impaired or not-attaining.

   Note - this condition does not apply for discharges to OAWs that are non-WOTUS protected surface waters.

3. Discharges to a Lake:

   If the protected surface water is a lake that is impaired or not-attaining, a site-specific proposal for sampling the impact area shall be implemented and kept as part of the SWMP.

7.5 Monitoring Frequency and Deadlines

All MS4s that have discharges to impaired or not-attaining waters or OAWs shall perform analytical monitoring as per the frequencies and deadlines stated in this permit part.

1. The operator shall conduct analytical monitoring a minimum of one (1) time per wet season throughout the duration of permit coverage. Analytical monitoring is only required when stormwater or snowmelt discharges from an outfall in sufficient quantity to allow for sample collection and analysis.

   For the purposes of analytical monitoring, wet seasons are defined as follows:

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

2. The operator shall conduct analytical monitoring at outfalls observed or suspected to discharge the greatest amount of pollutants using Table 7 below:

Table 7 Minimum Number of Samples to Collect	
Number of Outfalls	Number of Samples
1 to 4	All
5 to 20	5
over 20	10

3. Calibration and Maintenance of Equipment and Monitoring Methods:

   a. All monitoring instruments and equipment (including operators' own field instruments for measuring pH and turbidity) shall be calibrated and maintained in accordance with manufacturers' recommendations. All laboratory analyses shall be conducted according to test procedures specified in 40 CFR Part 136. The permittee shall use analytical methods with a Limit of Quantitation (LOQ) that is lower than the effluent limitations, Assessments Levels, Action Levels, or other water quality criteria, if any, specified in this permit. If all methods have LOQs higher than the applicable water quality criteria, the Permittee shall use the approved analytical method with the lowest LOQ.

   b. All samples collected for analytical monitoring shall be analyzed by a laboratory that is licensed by the Arizona Department of Health Services (ADHS) Office of Laboratory Licensure and Certification. This requirement does not apply to parameters that require analysis at the time of sample collection as long as the testing methods used are approved by ADHS or ADEQ. These parameters may include flow, dissolved oxygen, pH, temperature, and total residual chlorine.

c. The permittee may conduct field analysis of turbidity if the permittee has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to properly perform the field analysis.

d. The permittee may conduct field analysis of E. coli if the permittee has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to properly perform the field analysis using Colilert or an equivalent.

7.6 Analytical Monitoring DMR

All permittees subject to analytical monitoring shall submit the results on the electronic Discharge Monitoring Report (DMR) in myDEQ. The permittee shall retain records of all stormwater monitoring information with the SWMP.

The DMR shall be submitted within 30 days after receiving laboratory results. In the event no samples are collected during a wet season, the DMR indicating "no data" using the appropriate No Discharge Information (NODI) code(s) shall be submitted no later than:

- June 30 (for winter sampling)
- November 30 (for summer sampling)

8.0 PROGRAM ASSESSMENT, RECORDKEEPING, AND REPORTING

8.1 Program Evaluation

1. The permittee shall annually self-evaluate its compliance with the terms and conditions of this permit. The permittee shall maintain the annual evaluation documentation as part of the SWMP.
2. The permittee shall evaluate the appropriateness of the selected BMPs in achieving the objectives of each control measure and the defined measurable goals. The permittee may change BMPs in accordance with the following provisions:
    a. Adding (but not subtracting) components or controls may be made at any time;
    b. Changes replacing an ineffective or infeasible BMP specifically identified in the SWMP with an alternative BMP may be made if the proposed changes meet the criteria of this Part, 8.1.
3. BMP modification documentation shall include the following information and all documentation shall be kept in the SWMP:
    a. An analysis of why the BMP is ineffective or infeasible;
    b. Expectations on the effectiveness of the replacement BMP; and
    c. An analysis of why the replacement BMP is expected to achieve the defined goals of the BMP to be replaced.
4. ADEQ may require the permittee to add, modify, repair, replace or change BMPs or other measures described in SWMP to address the following:
    a. Impacts to receiving water quality caused or contributed to by discharges from the MS4;
    b. To satisfy conditions of this permit;
    c. To include more stringent requirements necessary to comply with new state or federal legal requirements; or
    d. Attainment of SWQS.
5. Any changes requested by ADEQ will be in writing and will require the permittee to develop a schedule to implement the changes and will offer the permittee the opportunity to propose alternative program changes to meet the objective of the requested modification.

8.2 Recordkeeping

1. The permittee shall keep all records required by this permit for a period of three (3) years from the date the record is created. Records include

information used in the development of any written program required by this permit, 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 NOI, SWMP, plans, and annual reports. This list provides examples of records that should be maintained, but is not all inclusive.

2. Records other than those required to be included in the discharge monitoring report (Part 8.3) and annual report (Part 8.4) shall be submitted upon request by ADEQ or U.S. EPA. Requirements for discharges to non-WOTUS protected surface waters are state-only and records need only be submitted to ADEQ.

3. The permittee shall make the records relating to this permit, including the written stormwater management program, available to the public. The public may view the records during normal business hours. The permittee may charge a reasonable fee for copying requests. The permittee is encouraged to satisfy this requirement by posting records online.

8.3 Annual Report

The permittee shall submit an annual report each year of the permit term to ADEQ. The reporting period is from July 1 through June 30 each year. The annual report is due to ADEQ on or before September 30 each year for the reporting period. Please see Appendix A for the annual report requirements.

9.0 STANDARD PERMIT CONDITIONS

Standard permit conditions in Part 9 are consistent with the general permit provisions required under 40 CFR 122.41 and A.A.C. R-18-9-A905(A)(3).

1. **Duty to Comply:** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR122.41(a)(1) and A.R.S. §§ 49-261, 262, 263.01, and 263.02.]
   a. The operator shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act, A.R.S. Title 49, Chapter 2, Article 3.1, and A.A.C. Title 18, Chapter 9, Article 9, and is grounds for enforcement action, permit termination, revocation and reissuance, or modification, or denial of a permit renewal application.
   b. The issuance of this permit does not waive any federal, state, county, or local regulations or permit requirements with which a person discharging under this permit is required to comply.
   c. The operator shall comply with any effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

2. **Duty to Reapply / Continuation of the Expired General Permit:** [A.A.C. R18-9-A905, which incorporates 40 CFR 122.41(b) and A.A.C. R18-9-C903]
   a. Upon reissuance of the general permit, the permittee shall file an NOI, within the timeframe specified in the new general permit, and shall obtain new written authorization to discharge from the Director.
   b. If the Director does not reissue the general permit before the expiration date, the current general permit will be administratively continued and remain in force and effect until the general permit is reissued.
   c. Any operator granted authorization to discharge under the general permit before the expiration date automatically remains covered by the continued general permit until the earlier of:
      i. Reissuance or replacement of the general permit, at which time the operator shall comply with the NOI conditions of the new general permit to maintain authorization to discharge; or
      ii. The date the operator has submitted a NOT; or
      iii. The date the Director has issued an individual permit for the discharge; or
      iv. The date the Director has issued a formal permit decision not to reissue the general permit, at which time the operator shall seek coverage under an alternative general permit or an individual permit, or cease discharge.

3. **Need to Halt or Reduce Activity Not a Defense:** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(c)]

   It shall not be a defense for an operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. **Duty to Mitigate:** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(d)]

   The operator shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment per A.R.S. § 49-255.01(E)(1)(d).

5. **Proper Operation and Maintenance:** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(e)]

   The operator shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the operator to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures.

6. **Permit Actions:** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(f)]

   This permit may be modified, revoked and reissued, or terminated for cause. Filing a request by the operator for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. **Property Rights:** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(g)]

   This permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, nor any infringement of federal, state, Indian tribe, or local laws or regulations.

8. **Duty to Provide Information:** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(h)]

   The operator shall furnish to ADEQ, within a reasonable time, any information, which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The operator shall also furnish to ADEQ upon request, copies of records required to be kept by this permit.

9. **Signatory Requirements:** [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(k) and (l); A.A.C. R18-9-A905(A)(1)(c), which incorporates 40 CFR 122.22]

a. All Notices of Intent (NOI) and Notices of Termination (NOT) shall be signed as follows:

   i. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

   ii. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

   iii. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. 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.

b. All NOTs, reports, plans, inspection reports, monitoring reports, and other information required by this permit shall be signed by a person described in Part 9.9(a), above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   i. The authorization is made in writing by a person described in Subsection 9(a) above;

   ii. 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, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may be either a named individual or any individual occupying a named position); and

   iii. The signed and dated written authorization is included in the SWMP. A copy shall be submitted to ADEQ, upon request.

c. Certification. Any person signing documents under the terms of this permit shall make the following certification:

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.

10. Inspection and Entry: [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(i)]

The operator shall allow the Director or an authorized representative upon the presentation of credentials and such other documents as may be required by law to:

a. Enter upon the operator's premises where a regulated facility or activity is located or conducted or where records shall be kept under the conditions of this permit;

b. Have access to and copy at reasonable times, any records that shall be kept under the conditions of this general permit;

c. Inspect at reasonable times any facility or equipment (including monitoring and control equipment), practices or operations regulated or required under this permit;

d. Sample or monitor at reasonable times any substances or parameters at any location, for the purposes of assuring permit compliance or as otherwise authorized by A.R.S. Title 49, Chapter 2, Article 3.1, and 18 A.A.C. 9, Articles 9.

11. Monitoring and Records: [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(j)]

a. Representative Samples/Measurements: Samples and measurements taken for the purpose of monitoring shall be representative of the volume and nature of the monitored activity.

b. Retention of Records: The operator shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date permit coverage ends. Operators shall submit any such records to the Director upon request. The operator shall retain the SWMP developed in accordance with Part 4 of this permit, for at least three (3) years after the last modification or amendment is made to the plan. The Director may

extend this retention period upon request by notifying the operator in writing at any time prior to the end of the standard three year retention period.

c. Records Contents: Records of monitoring information shall include:

i. The date, exact location, and time of sampling or measurements;
ii. The initials or name(s) of the individual(s) who performed the sampling or measurements;
iii. The date(s) analyses were performed;
iv. The time(s) analyses were initiated;
v. The initials or name(s) of the individual(s) who performed the analyses;
vi. References and written procedures, when available, for the analytical techniques or methods used;
vii. The analytical techniques or methods used; and
viii. The results of such analyses.

d. Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained in this permit is subject to the enforcement actions established under A.R.S. Title 49, Chapter 2, Article 4, which includes the possibility of fines and/or imprisonment.

12. Reporting Requirements: [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(l)]

a. Planned changes: The operator shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

i. 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 A.A.C. R18-9-A905(A)(1)(e)); or

ii. 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)).

b. Monitoring reports: Monitoring results shall be reported at the intervals specified elsewhere in this permit.

i. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or forms (paper or electronic) provided or specified by ADEQ.

ii. If the operator monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

iii. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean and non-detected results shall be incorporated in calculations as the limit of quantitation for the analysis.

c. Anticipated noncompliance:

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

d. Twenty-four hour reporting:

For *emergency noncompliance* which may endanger the environment or human health and reach a protected surface water, the permittee shall orally report the information to the ADEQ Spill Line at 602-771-2330, within 24 hours from the time the permittee becomes aware of the event.

For *non-emergency noncompliance*, the permittee shall provide a written notification to ADEQ at stormwatercompliance@azdeq.gov within five (5) calendar days of the noncompliance event. The permittee shall include in the written notification a description of the noncompliance and its cause; the period of noncompliance, including dates and times, and, if the noncompliance has not been corrected, the anticipated timeline it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

e. Other information: When the permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in a NOI or in any other report to ADEQ, the permittee shall promptly submit the facts or information to stormwatercompliance@azdeq.gov.

13. Reopener Clause: [A.A.C. R18-9-A905(A)(3)(d), which incorporates 40 CFR 122.44(c)]

The Department may elect to modify the permit prior to its expiration (rather than waiting for the new permit cycle) to comply with any new statutory or regulatory requirements, such as for effluent limitation guidelines, which may be promulgated in the course of the current permit cycle.

14. Other Environmental Laws:

No condition of this general permit releases the operator from any responsibility or requirements under other environmental statutes or regulations. For example, this permit does not authorize the "taking" of endangered or threatened species as prohibited by Section 9 of the Endangered Species Act, 16 U.S.C. 1538. Information regarding the location of endangered and threatened species and guidance on what activities constitute a "taking" are available from the U.S. Fish and Wildlife Service. The operator shall also comply with applicable State and Federal laws, including Spill Prevention Control and Countermeasures (SPCC), where applicable.

15. State or Tribal Law: [Pursuant to A.A.C. R18-9-A904(C)]

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable State or Tribal law or regulation under authority preserved by Section 510 of the Clean Water Act.

16. Severability:

The provisions of this general permit are severable, and if any provision of this general permit, or the application of any provision of this general permit to any circumstance, is held invalid, the application of the provision to other circumstances, and the remainder of this general permit shall not be affected.

17. Requiring Coverage under an Individual Permit or an Alternative General Permit: [Pursuant to A.A.C. R18-9-C902 and R18-9-A909]

a. The Director may require a person authorized by this permit to apply for and/or obtain either an individual AZPDES permit or an alternative AZPDES general permit. Any interested person may petition the Department to take action under this section. The Department may require an operator authorized to discharge under this permit to apply for an individual permit in any of the following cases:

i. A change occurs in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;

ii. Effluent limitation guidelines are promulgated for point sources covered by the general permit;

iii. An Arizona Water Quality Management Plan containing requirements applicable to the point sources is approved;

iv. Circumstances change after the time of the request to be covered so that the discharger is no longer appropriately controlled under the general permit, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary;

v. If the Director determines that the discharge is a significant contributor of pollutants. When making this determination, the Director shall consider:

1. The location of the discharge with respect to protected surface waters;

2. The size of the discharge;

3. The quantity and nature of the pollutants discharged to protected surface waters; and

4. Any other relevant factors.

b. If an individual permit is required, the Director shall notify the discharger in writing of the decision. The notice shall include:

   i. A brief statement of the reasons for the decision;

   ii. An application form;

   iii. A statement setting a deadline to file the application;

   iv. A statement that on the effective date of issuance or denial of the individual permit, coverage under the general permit will automatically terminate;

   v. The applicant's right to appeal the individual permit requirement with the Water Quality Appeals Board under A.R.S. § 49-323, the number of days the applicant has to file a protest challenging the individual permit requirement, and the name and telephone number of the Department contact person who can answer questions regarding the appeals process; and

   vi. The applicant's right to request an informal settlement conference under A.R.S. 41-1092.03(A) and 41-1092.06.

c. The discharger shall apply for an individual permit within 90 days of receipt of the notice, unless the Director grants a later date. In no case shall the deadline be more than 180 days after the date of the notice.

d. If the discharger fails to submit the individual permit application within the time period established in Part 9.17(c) the applicability of the general permit to the discharger is automatically terminated at the end of the day specified by the Director for application submittal.

e. Coverage under the general permit shall continue until an individual permit is issued or denied unless the general permit coverage is terminated under Part 9.17(d).

18. Request for an Individual Permit: [Pursuant to A.A.C. R18-9-C902]

a. An operator may request an exclusion from coverage of a general permit by applying for an individual permit.

   i. The operator shall submit an individual permit application under R18-9-B901(B) and include the reasons supporting the request no later than 90 days after publication of the general permit.

   ii. The Director shall grant the request if the reasons cited by the operator are adequate to support the request.

b. If an individual permit is issued to a person otherwise subject to a general permit, the applicability of the general permit to the discharge is automatically terminated on the effective date of the individual permit.

19. Change of Operator: [A.A.C. R18-9-C904]

If a change of ownership or operator occurs for a facility operating under a general permit:

a. Permitted owner or operator: The operator shall provide the Department with a NOT by certified mail within 30 days after the new owner or operator assumes responsibility for the facility.

i. The NOT shall include all requirements for termination specified in the general permit for which the NOT is submitted.

ii. An operator shall comply with the permit conditions specified in the general permit for which the NOT is submitted until the NOT is received by the Department.

b. New owner or operator:

i. The new owner or operator shall complete and file a NOI with the Department within the time period specified in the general permit before taking over operational control of, or initiation of activities at, the facility.

ii. If the previous operator was required to implement a stormwater pollution prevention plan, the new owner shall develop a new stormwater pollution prevention plan, or may modify, certify, and implement the old stormwater pollution prevention plan if the old stormwater pollution prevention plan complies with the requirements of the current general permit.

iii. The operator shall provide the Department with a NOT if a permitted facility ceases operation, ceases to discharge, or changes operator status. In the case of a construction activity, the operator shall submit a NOT to the Department when:

1. The facility ceases construction operations and the discharge is no longer associated with construction or construction-related activities,
2. The construction is complete and final site stabilization is achieved, or
3. The operator's status changes.

20. Bypass: [A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(m)]

a. Definitions:

i. Bypass means the intentional diversion of waste streams from any portion of a treatment facility;

ii. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations: The operator may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions Part 9.20(c) and 20(d).

c. Notice:

i. Anticipated bypass. If the operator knows in advance of the need for a bypass, if possible prior notice shall be submitted at least ten days before the date of the bypass.

ii. Unanticipated bypass. The operator shall submit notice of an unanticipated bypass as required in Part 9.12(d).

d. Prohibition of bypass:

i. Bypass is prohibited, and ADEQ may take enforcement action against the operator for bypass, unless:

1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

3. The operator submitted notices as required under Part 9.20(c).

ii. ADEQ may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in this Part 9.20(d).

21. Upset: [A.R.S. §§ 49-255(8) and 255.01(E), A.A.C. R18-9-A905(A)(3)(a), which incorporates 40 CFR 122.41(n)]

a. Definition: Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the operator. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an upset: An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Part 9.21(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset: An operator who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i. An upset occurred and that the operator can identify the cause(s) of the upset;

ii. The permitted facility was at the time being properly operated;

iii. The operator submitted notice of the upset as required in Part 9.12(d)(iii); and

iv. The operator complied with any remedial measures required under Part 9.4.

d. Burden of proof: in any enforcement proceeding, the operator, who is seeking to establish the occurrence of an upset, has the burden of proof.

22. Penalties for Violations of Permit Conditions

Any permit noncompliance constitutes a violation and is grounds for an enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

a. Civil Penalties: A.R.S. § 49-262 provides that any person who violates any provision of A.R.S. Title 49, Chapter 2, Article 2, 3 or 3.1 or a rule, permit, discharge limitation or order issued or adopted under A.R.S. Title 49, Chapter 2, Article 3.1 is subject to a civil penalty not to exceed $25,000 per day per violation.

b. Criminal Penalties: Any person who violates a condition of this general permit, or violates a provision under A.R.S. Title 49, Chapter 2, Article 3.1, or A.A.C. Title 18, Chapter 2, Article 9 is subject to the enforcement actions established under A.R.S. Title 49, Chapter 2, Article 4, which may include the possibility of fines and/or imprisonment.

10.0 DEFINITIONS

Analytical monitoring – monitoring conducted to provide quantitative results in accordance with A.A.C. R18-9-A905(B).

Best management practices (BMPs) – schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "surface waters." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. Also called Controls or Control Measures.

Common plan of development – a contiguous area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but under one plan. A 'plan' is broadly defined to include design, permit application, advertisement or physical demarcation indicating that land-disturbing activities may occur.

Construction activity – earth-disturbing activities such as, clearing, grading, excavating, stockpiling of fill material and other similar activities. This definition encompasses both large construction activities defined in 40 CFR 122.26 (b)(14)(x) and small construction activities in 40 CFR 122.26 (b)(15)(i) and includes construction support activities.

Controls or **Control Measures** or **Measures** - See Best Management Practices.

CWA or **The Act** - Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95 217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et seq.

Department – the Arizona Department of Environmental Quality.

Director – the Director of ADEQ

Discharge –means the "discharge of a pollutant."

Discharge of a pollutant – means:

a. Any addition of any "pollutant" or combination of pollutants to protected surface waters from any "point source," or

b. Any addition of any pollutant or combination of pollutants to the protected surface waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft, which is being used as a means of transportation.

This definition includes additions of pollutants into protected surface waters from:

a. Surface runoff which is collected or channeled by man;

b. Discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and

c. Discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

This term does not include an addition of pollutants by any "indirect discharger."

Discharge point – the location where stormwater flows exit the MS4 or other regulated activities, such as construction sites and industrial sites.

Effluent limitations – any limitation or condition on quantities, discharge rates, or concentration of pollutants, which are discharged from a point source.

Effluent Limitations Guideline (ELG) – defined in 40 CFR § 122.2 as a regulation published by the Administrator under section 304(b) of CWA to adopt or revise effluent limitations.

Existing permittees - Small MS4 operators who had coverage under ADEQ's 2016 Small MS4 General Permit.

Facility - any "point source" or any other facility (including land or appurtenances thereto) that is subject to regulation under the AZPDES/NPDES program.

Field Screening Point - location(s) where municipal stormwater leaves a Small MS4 operator's permitted area and goes to a protected surface water by way of a discrete and channelized conveyance (such as another municipal storm sewer system).

Illicit connection - any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

Illicit discharge - any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to an AZPDES/NPDES permit (other than the AZPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from firefighting activities.

Impaired water – waters that have been assessed by ADEQ, under the Clean Water Act, as not attaining a water quality standard for at least one (1) designated use, and are listed in Arizona's current 303(d) List or on the 305(b) Category 4 list.

Maximum Extent Practicable (MEP) – the technology-based discharge standard for municipal separate storm sewer systems to reduce pollutants in storm water discharges. A discussion of MEP as it applies to small MS4s is found at 40 CFR 122.34. CWA section 402(p)(3)(B)(iii) requires that a municipal permit "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system design, and engineering methods, and other provisions such as the Administrator or the State determines appropriate for the control of such pollutants.

Measurable goal - a quantitative measure of progress in implementing a component of a storm water management program.

Minimize – to reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal separate storm sewer – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

a. Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the Clean Water Act (33 U.S.C. 1288) that discharges to protected surface waters;

b. Designed or used for collecting or conveying stormwater;

c. Which is not a combined sewer; and

d. Which is not part of a Publicly Owned Treatment Works.

Municipal separate storm sewer system (MS4) – all separate storm sewers defined as "large," "medium," or "small" municipal separate storm sewer systems or any municipal separate storm sewers on a system-wide or jurisdiction-wide basis as determined by the Director under A.A.C. R18-9-C902(A)(1)(g)(i) through (iv). [A.A.C. R18-9-A901(23)]. This also includes similar systems owned or operated by separate storm sewer municipal jurisdictions not required to obtain stormwater discharge authorization.

New permittees - Small MS4 operators who did not have permit coverage under ADEQ's 2016 Small MS4 General Permit.

Not-Attaining Water - a protected surface water is assessed as impaired, but is not placed on the 303(d) List or equivalent for non-WOTUS protected state waters because:

a. A TMDL is prepared and implemented for the surface water;

b. An action, which meets the requirements of R18-11-604(D)(2)(h), is occurring and is expected to bring the surface water to attaining before the next 303(d) List submission; or

c. The impairment of the surface water is due to pollution but not a pollutant, for which a TMDL load allocation cannot be developed.

Non-traditional MS4 - systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings. 40 CFR 122.26(a)(16)(iii).

Notice of Intent (NOI) – the application to operate under this general permit.

Notice of Termination (NOT) – the application to terminate coverage under this general permit.

Outfall – a *point source* as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to protected surface waters. An outfall does not include open conveyances connecting two (2) municipal separate storm sewers, or pipes, tunnels or other conveyances, which connect segments of the same stream or other protected surface waters and are used to convey protected surface waters.

Outstanding Arizona Water (OAW) – a protected surface water that has been designated by ADEQ as an outstanding state resource under A.A.C. R18-11-112.

Owner or operator - the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

Permittee – refers to any person (defined below) authorized by this NPDES permit to discharge to protected surface waters.

Person – an individual, employee, officer, managing body, trust, firm, joint stock company, consortium, public or private corporation, including a government corporation, partnership, association or state, a political subdivision of this state, a commission, the U.S. government or any federal facility, interstate body, or other entity.

Point source – any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

Pollutant – sediment, fluids, contaminants, toxic wastes, toxic pollutants, dredged spoil, solid waste, substances and chemicals, pesticides, herbicides, fertilizers and other agricultural chemicals, incinerator residue, sewage, garbage, sewage sludge, munitions, petroleum products, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt (e.g., overburden material), and mining, industrial, municipal and agricultural wastes or any other liquid, solid, gaseous or hazardous substances. [A.R.S. § 49-201(29)]

Protected Surface Water - waters of the State listed on the protected surface water list under Section 49-221, Subsection G and all WOTUS.

Receiving water - as used in this permit means a Protected Surface Water that receives discharges from the MS4.

Stormwater – stormwater runoff, snow melt runoff, and surface runoff and drainage. See 40 CFR 122.26(b)(13) as incorporated by AAC R18-9-A905.

Stormwater discharge associated with construction activity – a discharge of pollutants in stormwater runoff from areas where soil disturbing activities (e.g., clearing, grading, or excavating), construction materials, or equipment storage or

maintenance (e.g., fill piles, borrow areas, concrete truck washout, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located. See 40 CFR 122.26(b)(14)(x) and 40 CFR 122.26(b)(15).

Stormwater discharge associated with industrial activity - a discharge from any conveyance which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant (See 40 CFR §122.26(b)(14) for specifics of this definition).

Stormwater Management Program (SWMP) - a comprehensive program to manage the quality of stormwater discharged from the municipal separate storm sewer system. For the purposes of this permit, the Stormwater Management Program is considered a single document, but may actually consist of separate programs (e.g. "chapters") for each permittee.

Stormwater Pollution Prevention Plan (SWPPP) – a site-specific, written document that, among other things: identifies potential sources of stormwater pollution at the location of the disturbance; describes control measures to reduce or eliminate pollutants in stormwater discharges from the facility/activity; and identifies procedures the operator will implement to comply with the terms and conditions of the general permit (typically CGP or MSGP).

Surface Water Quality Standards - means a standard adopted for a protected surface water pursuant to Section 49-221 and, in the case of WOTUS, pursuant to Section 49-222.

Total Maximum Daily Load (TMDL) – an estimation of the total amount of a pollutant from all sources that may be added to a water while still allowing the water to achieve and maintain applicable SWQS. Each total maximum daily load shall include allocations for sources that contribute the pollutant to the water. Total Maximum Daily Loads for Waters of the U.S. shall meet the requirements of section 303(d) of the Clean Water Act (33 USC 1313(d) and regulations implementing that statute to achieve applicable surface water quality standards."

Turbidity – a condition of water quality characterized by the presence of suspended solids and/or organic material; expressed as Nephelometric turbidity units (NTU).

Waste load allocation (WLA) – The maximum load of pollutants each discharger of waste is allowed to release into a particular waterway. Discharge limits are usually required for each specific water quality criterion being, or expected to be, violated. WLAs constitute a type of water quality-based effluent limitation. (See 40 C.F.R. § 130.2(h))

Waters of the U.S. means waters of the State that are also navigable waters as defined by Section 502(7) of the Clean Water Act.

Wetland – an area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil

conditions. A wetland includes a swamp, marsh, bog, Cienega, tinaja, and similar areas. [A.A.C. R18-11-101(49)]

Appendix A: Annual Report Requirements

4.0 Stormwater Management Program:

1. Did the permittee assess and evaluate the SWMP as part of preparing the annual report, per Permit Section 4.0?

6.0 Minimum Control Measures:

2. Did the permittee have another entity implement control measures on behalf of the MS4 per Permit Section 6.0(2)? If yes, identify the entity and give a brief explanation of their involvement.

6.1 MCM1 Public Education and Outreach:

3. Did the permittee provide outreach and education to the public on the stormwater program issues and requirements, per Permit Section 6.1(1)?
    a. Identify the target group and topic used for outreach and education.
    b. Identify the message used for each target group and topic.
    c. Identify how the message was conveyed to each target group.
    d. Identify measures/methods used to assess the effectiveness of the message used for each target group.
4. Did the permittee provide outreach and education to the public on the stormwater program issues and requirements, per Permit Section 6.1(2)?
    a. Identify the target group and topic used for outreach and education.
    b. Identify the message used for each target group and topic.
    c. Identify how the message was conveyed to each target group.
    d. Identify measures/methods used to assess the effectiveness of the message used for each target group.

6.2 MCM2: Public Participation and Involvement:

5. Did the permittee post the SWMP and Annual Report on their website, per Permit Section 6.2(1)?

6. Did the permittee provide and publicize a reporting system to facilitate and track public reporting of spills, discharges and/or dumping to the MS4 on a continuous basis, per Permit Section 6.2(4)?

6.3 MCM3: IDDE:

7. Provide a narrative description of the status of the storm sewer mapping, per Permit Section 6.3(1). What is the date of the most recent storm sewer system map showing the location of all outfalls?

8. Did the permittee establish an ordinance or other regulatory mechanism for enforcement procedures of the IDDE Program per Permit Section 6.3(2)? What is the citation of the ordinance or other regulatory mechanism to prohibit non-stormwater discharges into the permittee's MS4?

9. Did the permittee establish or update the "Statement of IDDE Program Responsibilities," per Permit Section 6.3(3)?

10. The permittee shall submit one (1) copy of their 6.3(4) summary of IDDE activities in a tabular format.

11. Did the permittee visually monitor at least 20% of all outfalls this permit year, per Permit Section 6.3(7)?

12. Did the permittee identify indicators of IDDE Program progress or success per Permit Section 6.3(8)?

13. Did the permittee provide annual staff training, per Permit Section 6.3(9)?

    a. Approximately how many staff attended?

    b. What was the topic?

6.4 MCM4: Construction Activity Stormwater Runoff Control:

14. Did the permittee establish an ordinance or other regulatory mechanism for enforcement procedures of the Construction Activity Stormwater Runoff Control Program per Permit Section 6.4(2)(a)? What is the citation of the ordinance or other regulatory mechanism to require erosion and sediment controls, including sanctions to ensure compliance?

15. Did the permittee implement a construction site inventory, per Permit Section 6.4(2)(b)?

16. Did the permittee develop written procedures for site plan review, per Permit Section 6.4(2)(c)?

17. Did the permittee implement written procedures for site inspections and enforcement control measures, per Permit Section 6.4(2)(f)?

a. How many construction site inspections were done in the permit year?

b. How many follow-up actions were necessary (re-inspection, enforcement actions)?

18. Did the permittee develop and implement an educational program focused on erosion and sediment control for Construction Operators, per Permit Section 6.4(2)(h)?

19. Did the permittee develop and implement a program requiring construction operators to control wastes from their sites, per Permit Section 6.4(2)(i)?

20. Did the permittee implement procedures to receive and act on information submitted by the public (complaints), per Permit Section 6.4(4)?

6.5 MCM5: Post Construction:

21. Did the permittee implement a program that includes a combination of structural and non-structural BMPs, per Permit Section 6.5(1)?

22. Did the permittee establish an ordinance or other regulatory mechanism for enforcement procedures of the Post-Construction Stormwater Management per Permit Section 6.5(2)? What is the citation for the ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects?

23. Did the permittee implement a program to prevent or minimize impacts to water quality from stormwater runoff of new development and redevelopment sites, per Permit Section 6.5(2)?

24. Did the permittee implement procedures for site plan review, per Permit Section 6.5(3)?

25. Did the permittee implement an inventory of post construction site structural stormwater control measures installed within the MS4, per Permit Section 6.5(4)?

26. Did the permittee implement a program to ensure the long-term operation and maintenance of post construction BMPs, per Permit Section 6.5(5)?

6.6 MCM6: Pollution Prevention and Good Housekeeping:

27. Did the permittee implement a program to reduce or eliminate discharges of pollutants from municipal streets, facilities, yards, etc., per Permit Section 6.6(1)?

28. Did the permittee implement a program to ensure the long-term operation and maintenance of stormwater BMPs, per Permit Section 6.6(2)?

29. Did the permittee develop an inventory of facilities, prioritized based on their risk of discharging non-stormwater, per Permit Section 6.6(2)(a)?

30. Did the permittee implement an inspection schedule for prioritized facilities, per Permit Section 6.6(2)(c)?

31. Did the permittee implement an annual training program for staff that incorporates pollution prevention and good housekeeping techniques, per Permit Section 6.6(2)(f)?

    a. Approximately how many staff attended?

    b. What was the topic?

32. Did the permittee develop maintenance activities, schedules and long-term inspections to reduce floatables, trash and other pollutants from the MS4, per Permit Section 6.6(2)(g)?

33. Does the permittee discharge to a non-attaining or impaired water, or an Outstanding Arizona Water (OAW)?

Appendix B: Stormwater Characterization Monitoring Requirements

All permittees shall conduct stormwater characterization monitoring for the parameters listed in Table 7.0 below, as required by Parts 7.1, 7.2, and 7.3 of this permit.

Table B: Analytical Wet Weather Characterization Monitoring

Parameter	Units	Monitoring Frequency	Monitoring Type
Metals			
Antimony	µg/L	1x during first 42 months of permit term	Discrete
Barium	µg/L	1x during first 42 months of permit term	Discrete
Beryllium	µg/L	1x during first 42 months of permit term	Discrete
Cadmium	µg/L	1x during first 42 months of permit term	Discrete
Nickel	µg/L	1x during first 42 months of permit term	Discrete
Mercury	µg/L	1x during first 42 months of permit term	Discrete
Silver	µg/L	1x during first 42 months of permit term	Discrete
Thallium	µg/L	1x during first 42 months of permit term	Discrete
Inorganics			
Cyanide	µg/L	1x during first 42 months of permit term	Discrete
Volatile Organic Compounds (VOCs)			
Acrolein	µg/L	1x during first 42 months of permit term	Discrete
Acrylonitrile	µg/L	1x during first 42 months of permit term	Discrete
Benzene	µg/L	1x during first 42 months of permit term	Discrete
Carbon tetrachloride	µg/L	1x during first 42 months of permit term	Discrete
Chlorobenzene	µg/L	1x during first 42 months of permit term	Discrete

Parameter	Units	Monitoring Frequency	Monitoring Type
Dibromochloromethane	µg/L	1x during first 42 months of permit term	Discrete
Chloroethane	µg/L	1x during first 42 months of permit term	Discrete
2-chloroethylvinyl ether	µg/L	1x during first 42 months of permit term	Discrete
Chloroform	µg/L	1x during first 42 months of permit term	Discrete
Bromodichloromethane	µg/L	1x during first 42 months of permit term	Discrete
1,2-dichlorobenzene	µg/L	1x during first 42 months of permit term	Discrete
1,3-dichlorobenzene	µg/L	1x during first 42 months of permit term	Discrete
1,4-dichlorobenzene	µg/L	1x during first 42 months of permit term	Discrete
1,1-dichloroethane	µg/L	1x during first 42 months of permit term	Discrete
1,2-dichloroethane	µg/L	1x during first 42 months of permit term	Discrete
1,3-dichloropropylene	µg/L	1x during first 42 months of permit term	Discrete
Ethylbenzene	µg/L	1x during first 42 months of permit term	Discrete
Bromomethane	µg/L	1x during first 42 months of permit term	Discrete
Chloromethane	µg/L	1x during first 42 months of permit term	Discrete
Methylene chloride	µg/L	1x during first 42 months of permit term	Discrete
1,1,2,2-tetrachloroethane	µg/L	1x during first 42 months of permit term	Discrete
Tetrachloroethylene	µg/L	1x during first 42 months of permit term	Discrete
Toluene	µg/L	1x during first 42 months of permit term	Discrete
1,2-trans-dichloroethylene	µg/L	1x during first 42 months of permit term	Discrete
1,1,1-trichloroethane	µg/L	1x during first 42 months of permit term	Discrete

Parameter	Units	Monitoring Frequency	Monitoring Type
1,1,2-trichloroethane	µg/L	1x during first 42 months of permit term	Discrete
Trichloroethylene	µg/L	1x during first 42 months of permit term	Discrete
Vinyl chloride	µg/L	1x during first 42 months of permit term	Discrete
Xylene	µg/L	1x during first 42 months of permit term	Discrete
Semi-VOCs - Acid Extractable			
2-chlorophenol	µg/L	1x during first 42 months of permit term	Discrete
2,4-dichlorophenol	µg/L	1x during first 42 months of permit term	Discrete
2,4-dimethylphenol	µg/L	1x during first 42 months of permit term	Discrete
4,6-dinitro-o-cresol	µg/L	1x during first 42 months of permit term	Discrete
2,4-dinitrophenol	µg/L	1x during first 42 months of permit term	Discrete
2-nitrophenol	µg/L	1x during first 42 months of permit term	Discrete
4-nitrophenol	µg/L	1x during first 42 months of permit term	Discrete
p-chloro-m-cresol	µg/L	1x during first 42 months of permit term	Discrete
Pentachlorophenol	µg/L	1x during first 42 months of permit term	Discrete
Phenol	µg/L	1x during first 42 months of permit term	Discrete
2,4,6-trichlorophenol	µg/L	1x during first 42 months of permit term	Discrete
Semi-VOCs – Base/Neutrals			
Acenaphthene	µg/L	1x during first 42 months of permit term	Discrete
Acenaphthylene	µg/L	1x during first 42 months of permit term	Discrete
Anthracene	µg/L	1x during first 42 months of permit term	Discrete
Benz(a)anthracene	µg/L	1x during first 42 months of permit term	Discrete

Parameter	Units	Monitoring Frequency	Monitoring Type
Benzo(a)pyrene	µg/L	1x during first 42 months of permit term	Discrete
Benzo(b)fluoranthene	µg/L	1x during first 42 months of permit term	Discrete
Benzo(g,h,i)perylene	µg/L	1x during first 42 months of permit term	Discrete
Benzo(k)fluoranthene	µg/L	1x during first 42 months of permit term	Discrete
Chrysene	µg/L	1x during first 42 months of permit term	Discrete
Dibenzo(a,h)anthracene	µg/L	1x during first 42 months of permit term	Discrete
3,3'-dichlorobenzidine	µg/L	1x during first 42 months of permit term	Discrete
Diethyl phthalate	µg/L	1x during first 42 months of permit term	Discrete
Dimethyl phthalate	µg/L	1x during first 42 months of permit term	Discrete
Di-n-butyl phthalate	µg/L	1x during first 42 months of permit term	Discrete
2,4-dinitrotoluene	µg/L	1x during first 42 months of permit term	Discrete
2,6-dinitrotoluene	µg/L	1x during first 42 months of permit term	Discrete
Di-n-octyl phthalate	µg/L	1x during first 42 months of permit term	Discrete
1,2-diphenylhydrazine (as azobenzene)	µg/L	1x during first 42 months of permit term	Discrete
Fluoranthene	µg/L	1x during first 42 months of permit term	Discrete
Fluorene	µg/L	1x during first 42 months of permit term	Discrete
Hexachlorobenzene	µg/L	1x during first 42 months of permit term	Discrete
Hexachlorobutadiene	µg/L	1x during first 42 months of permit term	Discrete
Hexachlorocyclopentadiene	µg/L	1x during first 42 months of permit term	Discrete
Hexachloroethane	µg/L	1x during first 42 months of permit term	Discrete

Parameter	Units	Monitoring Frequency	Monitoring Type
Indeno(1,2,3-cd)pyrene	µg/L	1x during first 42 months of permit term	Discrete
Isophorone	µg/L	1x during first 42 months of permit term	Discrete
Naphthalene	µg/L	1x during first 42 months of permit term	Discrete
Nitrobenzene	µg/L	1x during first 42 months of permit term	Discrete
N-nitrosodimethylamine	µg/L	1x during first 42 months of permit term	Discrete
N-nitrosodi-n-propylamine	µg/L	1x during first 42 months of permit term	Discrete
N-nitrosodiphenylamine	µg/L	1x during first 42 months of permit term	Discrete
Phenanthrene	µg/L	1x during first 42 months of permit term	Discrete
Pyrene	µg/L	1x during first 42 months of permit term	Discrete
1,2,4-trichlorobenzene	µg/L	1x during first 42 months of permit term	Discrete
PCB / Pesticides			
Aldrin	µg/L	1x during first 42 months of permit term	Discrete
Alpha-BHC	µg/L	1x during first 42 months of permit term	Discrete
Beta-BHC	µg/L	1x during first 42 months of permit term	Discrete
Gamma-BHC	µg/L	1x during first 42 months of permit term	Discrete
Delta-BHC	µg/L	1x during first 42 months of permit term	Discrete
Chlordane	µg/L	1x during first 42 months of permit term	Discrete
4,4'-DDT	µg/L	1x during first 42 months of permit term	Discrete
4,4'-DDE	µg/L	1x during first 42 months of permit term	Discrete
4,4'-DDD	µg/L	1x during first 42 months of permit term	Discrete

Parameter	Units	Monitoring Frequency	Monitoring Type
Dieldrin	µg/L	1x during first 42 months of permit term	Discrete
Alpha-endosulfan	µg/L	1x during first 42 months of permit term	Discrete
Beta-endosulfan	µg/L	1x during first 42 months of permit term	Discrete
Endosulfan sulfate	µg/L	1x during first 42 months of permit term	Discrete
Endrin	µg/L	1x during first 42 months of permit term	Discrete
Endrin aldehyde	µg/L	1x during first 42 months of permit term	Discrete
Heptachlor	µg/L	1x during first 42 months of permit term	Discrete
Heptachlor epoxide	µg/L	1x during first 42 months of permit term	Discrete
PCB-1242	µg/L	1x during first 42 months of permit term	Discrete
PCB-1254	µg/L	1x during first 42 months of permit term	Discrete
PCB-1221	µg/L	1x during first 42 months of permit term	Discrete
PCB-1232	µg/L	1x during first 42 months of permit term	Discrete
PCB-1248	µg/L	1x during first 42 months of permit term	Discrete
PCB-1260	µg/L	1x during first 42 months of permit term	Discrete
PCB-1016	µg/L	1x during first 42 months of permit term	Discrete
Toxaphene	µg/L	1x during first 42 months of permit term	Discrete

Notes:

1. The permittee shall include any additional parameters in stormwater sampling as specified by Part 5.0 Water Quality Standards of this permit.
2. The permittee shall collect discrete samples and shall attempt to include the "first flush" (first 30 minutes of stormwater discharge) of a qualifying storm event whenever possible to do so. Auto Sampling equipment may be used, if available.
3. When analyzing for metals, the permittee shall assume a 1:1 total dissolved ratio

Attachment 4 - Mohave County Notice of Intent

Attachment 5 - Mohave County Review Checklists

MOHAVE COUNTY PUBLIC WORKS DEPARTMENT

DESIGN TECHNICAL REVIEW CHECKLIST

SPECIAL CONDITIONS

BOS Resolution Conditions

- Site plans
  - Rezone
  - Developers agreement
- Subdivisions
  - General/area plan amendment
  - Developers agreement
  - Rezone
  - Preliminary plat and petition of exceptions
  - Abandonment
  - Reversion to acreage

TRAFFIC OPERATIONS AND SAFETY ANALYSIS AND DESIGN

Traffic Impact Analysis

- Site development characteristics (i.e., land use and size) may require a traffic impact statement or traffic impact analysis prepared in accordance with the Mohave County Traffic Impact Analysis Standards.

Traffic Control Devices

- Traffic Signing and Marking Plan included with road improvement plans.
  - Plan(s) shows layout of improved roads and streets with location of all proposed traffic control devices (e.g., STOP signs, street name signs, speed limit signs, markings, etc.).
  - Plan presents or references standard detail for all types of traffic control devices (signs and markings) proposed for review of materials, design/configuration, and placement.
  - Reference MCPW Traffic Signing and Striping Requirements for policies, guidelines, and detail drawings on sign/post/marking materials, STOP signs, speed limit signs, street name signs, permanent roadway termination barricades, longitudinal pavement markings, and transverse pavement markings.
  - Other traffic control device types must comply with standards set forth in the Manual on Uniform Traffic Control Devices, latest edition.

This checklist is a tool for quality assurance review and may not identify all necessary design elements and requirements.

ROAD DESIGN

Exterior / Access Road Improvements	• Right-of-way in accordance with County standards for designated functional class for all interior and exterior roads and access roads providing site ingress and egress from nearest County or other publicly maintained right-of-way. ➢ Right-of-way requirements per County standards for road functional class. ➢ Reference Mohave County Standard Detail No. 60 (rural/non-curb), No. 61 (urban/curb), and No. 62 (inverted crown curb). • Proposed exterior road improvements. ➢ Widening, paving, etc. in accordance with County standard section and site-generated traffic loading on unimproved versus improved road surface. ➢ Incorporation of traffic impact analysis recommendations. ➢ Contemplated half-street improvements provide 12 feet of pavement minimum on undeveloped side of centerline for all road functional classes. • Stakeholder written concurrence necessary on improvement requirements, design, and construction if State or other local jurisdiction facility proposed for site access.
Cross Section	• Reference County standard section for road functional class (curb or non-curb). • Border area (distance between edge of travel way and right-of-way boundary) width meets or exceeds 8 feet for local roads and 12 feet for collector and arterial roads. • Physical obstructions (e.g., headwalls, poles, etc.) or steep cut/fill slopes (steeper than 3H:1V) in right-of-way have shielding or adequate clear zone provided. • Proposed sidewalks provide minimum 5-foot width.
Geometric Alignment	• Specification of design speed for all improved roadways. ➢ Reference County standards for road functional class. ➢ For any range of design speeds provided in County standards, consider highest value for level terrain, midpoint value for rolling terrain, and lowest value for mountainous terrain as minimum allowable for design. • Horizontal curves where normal section maintained. ➢ Reference AASHTO standards for minimum horizontal curve radius (Section 3.3 of the *2018 Policy on Geometric Design of Highways and Streets* aka Green Book. • Vertical curves. ➢ Reference AASHTO standards for crest curve k-value (Table 3-36, Page 3-172 of the 2018 Green Book) and sag curve k-value (Table 3-37, Page 3-176 of the 2018 Green Book). • Grade breaks (intersection of two grades without curve) no greater than 0.5%. • Landing grade of road approach to and within 75 feet of intersecting crossroad. ➢ Maximum 3% (local road), 2% (collector), and 1% (arterial) grade. • Curbed streets retain minimum grade of +/- 0.3% for drainage. • Normal crown on road sections except low-water crossings and (superelevated) horizontal curve sections.

This checklist is a tool for quality assurance review and may not identify all necessary design elements and requirements.

Intersection Design	• Intersection skew and radius return.
	  ➢ Reference Table 5-1 in Mohave County Land Division Regulations.
	• Adjacent intersections offset minimum of 200 feet centerline to centerline.
	• L-intersections include knuckle design as per Figure 5-1 of the Mohave County Land Division Regulations.
	• Dead-end street termini treatment.
	  ➢ Permanent barricade on stub streets with no driveways per Mohave County Uniform Standard Detail 130-1.
	  ➢ Temporary turnaround or permanent cul-de-sac on streets with driveways in accordance with Section 5.2.H of the Mohave County Land Division Regulations.
	• Minor street or driveway approach design provides adequate departure sight distance per AASHTO (reference MCPW Intersection Sight Distance Diagram).
	  ➢ Horizontal and/or vertical curves in the vicinity of any minor street or driveway approach may limit available sight distance for motorists to safely enter a major, uncontrolled roadway.
	• Reference traffic impact analysis recommendations for turn lane requirements.
	• Lane taper (e.g., lane merge or lane shift) lengths meet MUTCD requirements.
	• Urban street sections include sidewalk ramps and detectable warning plate per MAG standard detail, latest edition.

New Utility Design and Installation in County ROW	• Where public utility easements do not exist, utilities are placed in the public right-of-way in the following order unless otherwise approved:
	  ➢ Water on one side of the right-of-way.
	  ➢ Sewer in the center.
	  ➢ Gas, then electric and communications on other side of the right-of-way.
	• Communication, power and other utility poles are placed one (1) foot from the right-of-way boundary unless otherwise approved.
	• Minimum depth of cover for all utilities including solid, liquid, dry or slurry transporting or collection utilities and electric utilities of all voltages and sizes whether single or in a bank, shall be forty-two (42) inches unless required to be deeper by code authority.
	• All utilities within right-of-way crossing washes have protection against flood scour.
	• Avoid conflict between utility accessories (e.g., valves and covers) and concrete sidewalks and structures.

Specifications and Details	• Plans present or reference (e.g., MAG standard detail, latest edition) detail drawing. • Plans specify pavement structural section for all improved roads and streets. • Plans specify or reference (e.g., MAG standard specifications, latest edition) specifications for all construction materials and methods. • Plans cite all engineering technical reports (e.g., drainage, traffic, pavement, geotechnical, etc.) supporting design.

PAVEMENT EVALUATION AND DESIGN

Geotechnical Report

- Pavement structural design method and input data meets Mohave County Pavement Structural Design Standards.
  - Traffic load (ESALs) forecast in accordance with County standard procedure.
  - Published data or field tests on existing native material support subgrade (roadbed) strength/stiffness input into pavement design (expressed as resilient modulus, M_R).

Road Surface Evaluation

- Site-generated traffic loading determines need for mitigating road surface improvement and surface treatment type.
  - Road surface improvement considered, on basis of engineering calculations, for any land use generating truck, bus, or significant recreational vehicle traffic as well as any site development requiring a traffic impact analysis.
- Road surface treatment types include:
  - Non-structural asphalt surface (chip seal) over stabilized roadbed.
  - Asphalt concrete pavement structural section.
  - Asphalt concrete overlay to mitigate long-term effects of site-generated traffic loading on existing paved road.

Minimum Pavement Structural Section

- Reference recommended structural section specified in geotechnical report.
- Practical minimum pavement structural sections when applying design standards:
  - 2” AC over 6” ABC for local or residential collector roadways on average (sandy – SC to SW classification) to good (gravelly – GC to GW classification) subgrade soils.
  - 2” AC over 8” ABC for local or residential collector roadways on poor (silty/clayey – CL/ML classification) subgrade soils.
  - 2” AC over 6” ABC for collector roadways on good subgrade soils.
  - 2” AC over 8” ABC for collector roadways on average subgrade soils.
  - 3” AC over 8” ABC for collector roadways on poor subgrade soils.
  - 3” AC over 6” ABC for arterial roadways on good subgrade soils.
  - 3” AC over 8” ABC for arterial roadways on average subgrade soils.
  - 4” AC over 8” ABC for arterial roadways on poor subgrade soils.

Site Access Points

- Site plan or improvement plan references Mohave County Standard Detail 250A (asphalt) or 250C (concrete) for any driveway construction.
- Portland cement concrete aprons considered in context of requirements set forth in Mohave County Pavement Structural Design Standards.

DRAINAGE ANALYSIS AND DESIGN

Apply Requirements and Guidelines of the Mohave County Drainage Design Manual (DDM)

Hydrology

- Drainage report presents clear summary of flows and within existing and proposed rights of way both adjacent and within the project.

Roadway Drainage

- Reference Chapter 9 of the DDM.
- DDM Section 9.4.2 – engineering calculations demonstrate road/street section capacity to convey design flows (longitudinal drainage).
  - Manning's n-value of 0.015 for paved roadways.
  - Normal crown only for County Highway, arterial, and all-weather roads.
  - Arterial and all-weather (curbed) streets – one 12-foot dry lane maintained in each direction during 10-year peak discharge.
  - Local and collector (curbed) streets – 10-year peak discharge depth does not exceed curb height.
  - All streets – 100-year flow depth between curbs no greater than 8 inches.
  - All streets – velocity of flow no greater than 8 fps.
  - Non-curbed roadways – 100-year peak discharge contained in channel with maximum depth not to exceed outside shoulder hinge point.
- DDM Chapter 12 – engineering calculations demonstrate adequate capacity and stability (lining) of roadside ditches for flow conveyance.

Culverts and Low Water Crossings	• Reference Chapter 11 of the DDM.
	• Select minimum culvert design parameters:
	  ➢ 24-inch pipe diameter for all roadway cross drains; 18-inch pipe diameter for driveway culverts in County right-of-way.
	  ➢ Material consisting of corrugated steel pipe, rubber gasket reinforced concrete pipe, or reinforced concrete box.
	  ➢ Cover of fill at least 18 inches.
	• Engineering calculations demonstrate culvert capacity under design flow conditions:
	  ➢ Outlet velocity (maximum 15 fps).
	  ➢ Reference citation and calculations for structures and materials (e.g., riprap) providing outlet protection.
	• Design plans specify inlet/outlet elevations, direction of flow, pipe slope, pipe material/gauge and all dimensions labeled, cover depth, materials and structures providing erosion protection and installation details, and headwall/wingwall type, dimensions, and detail reference as applicable
	  ➢ Inlet and outlet elevation consistent with natural wash/stream bottom.
	  ➢ Multiple pipes to disperse flow across wide channels but single pipe preferred for concentrated areas of flow.
	  ➢ Concrete headwalls provided for culverts 48 inches in diameter or greater.
	  ➢ Flared end sections or headwalls provided for pipe sizes less than 48 inches
	• Drainage system elements (e.g., pipe, headwalls, riprap, etc.) and backwater effects contained wholly within existing right-of-way or existing drainage easement.
	• DDM Section 11.4.3 – design storm for roadway cross drainage.
	  ➢ 25-year peak discharge for two-lane County Highway and arterial roads.
	  ➢ 10-year peak discharge for local and collector roads.
	  ➢ Maximum 12-inch roadway overtopping depth for 100-year peak discharge.
	• DDM Section 11.4.7 – low water crossings
	  ➢ Hardened surface at crossing and extending to flow boundaries for unpaved roadways or engineering calculations supporting unpaved crossing.
	  ➢ Erosion protection (e.g., concrete cutoff walls, asphalt turndowns, etc.) at upstream and downstream ends of crossing.
	  ➢ Geometric design of low water crossing approaches in accordance with AASHTO standards for sag vertical curves and grade breaks.
	• Design detail or reference (e.g., MAG standard detail) for elements of low water crossing system.

E.2 CHECKLIST 1: DRAINAGE DESIGN REPORT CHECKLIST

Checklist 1: Drainage Design Report Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*****
SECTION 1: GENERAL					
1	PROJECT NAME: REVISION NO: DATE:				
2	SELECT PROJECT TYPE: Preliminary Plat [ ] Final Plat [ ] Street Imp. [ ] Drainage Design [ ] Grading and Drainage Plan [ ] Other [ ]				
3	REVIEWED BY:				
4	Is this a complete drainage report, sealed by a professional Civil Engineer currently licensed to practice in Arizona?				
5	Is the *Hydrology Specific Checklist* included and completed, if appropriate?				
6	Is the *HECRAS Hydraulics Specific Checklist* included and completed, if appropriate?				
7	Is this report for floodplain delineation purposes, requiring use of the TDN format and checklist?				
8	Does the report discuss whether the site is in a subsidence area or if there are fissures present?				
9	If in a subsidence area or fissures are present, are facilities appropriately sited and designed?				
10	If a construction project, has an SWPPP been developed and an NOI submitted per ADEQ requirements?				
11	If a construction project, has a copy of the SWPPP and NOI been included in the report?				
12	Have all permit requirements been met (ie. Floodplain, Drainage Clearance, Right-of-Way, Zoning, Stormwater Quality, 401/404, etc)?				
13	Is there a section on Conclusions and Recommendations, and is it adequate?				
SECTION 2: FIELD SURVEY AND MAPPING					
1	Are company name, project number, and dates of surveying specified?				
2	Is the report sealed and signed by a professional Land Surveyor currently registered in the State of Arizona?				
3	Are the mapping and map control used in the study fully described?				
4	Are both horizontal and vertical mapping datums specified?				
5	Are the date of aerial photography, mapping scale, and contour interval specified?				
6	Other.				
SECTION 3: DRAINAGE AREA MAP					
1	Is there a drainage area map at an appropriate scale?				
2	Is each sub-basin area delineated and uniquely labeled with alpha-numeric characters in a consistent manner on the Drainage Area Map?				

Checklist 1: Drainage Design Report Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*****
3	Are directional drainage arrows shown on all streets, parking lots, paved areas, and vacant land?				
4	Is the existing zoning shown on each parcel?				
5	Are existing and proposed catch basins shown and clearly identified?				
6	Does each catch basin number correspond to the number of the sub-basin area which contributes to it?				
7	Are catch basins numbered, beginning with number 1 as the first catch basin contributing to the storm drain at the upstream end? The following catch basins contributing should be numbered consecutively.				
8	Is the same catch basin number used throughout the project – on the drainage area map, in the design report, on the Storm Drain Design Summary Sheet, and on the plans?				
SECTION 4: STORMWATER COLLECTION SYSTEMS					
1	Is the hydrologic design criteria described and does it match the jurisdiction's requirements?				
2	Is the street drainage network described (i.e. longitudinal and cross slopes, curb height, gutter width)?				
3	Is the storm drain network described (i.e. inlet and catch basin design)?				
4	Is a Storm Drain Design Summary Sheet included?				
5	Is conformance with previous drainage studies checked and differences discussed?				
6	Has a Hydraulic & Energy Grade Line Profile been submitted?				
7	Is the pipe velocity for $0.5*Q_{design} \geq 3$ fps, $Q_{design} \geq 5$ fps, and ≤ 15 fps?				
8	Are dry lane requirements met?				
9	Are appropriate drainage runoff volumes and discharges used?				
10	Are the diameter, length, slope, and construction material of storm drainpipe (RCP, CMP, or other) specified?				
11	Are appropriate clogging factors applied for inlets, in conformance with the jurisdiction's requirements?				
12	Is the maximum hydraulic grade line ≥ 1 ft below the grate elevation of all catch basins and inlets?				
13	Is the maximum energy grade line at or below the adjacent gutter flow line elevation?				
14	Other.				
SECTION 5: CULVERTS					
1	Is the application described (ie, roadway classification, design setting, erosion/deposition concerns)				
2	Is the hydrologic design criteria used described and does it meet or exceed the minimum standards?				
3	Is the number, diameter, length, and construction material specified appropriately? (ie, CMP, RCP, or other)				
4	For existing condition studies, are appropriate n-values assigned for pipe condition?				

Checklist 1: Drainage Design Report Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*****
5	Are appropriate clogging factors applied for inlets, in conformance with the jurisdiction's requirements?				
6	Does the culvert design for Q_{design} meet the requirements of Table 6.7?				
7	Does the inlet headwater elevation for Q_{100} meet the requirements of Table 6.7?				
8	Does the flow depth over the road for Q_{100} meet the requirements of Table 6.7?				
9	Does backwater at the inlet overtop adjacent land features and drain elsewhere, other than through the culvert?				
10	Does backwater at the inlet affect adjacent parcels of land, requiring ponding easements or establishment of minimum finish floor elevations?				
11	Is the outlet velocity ≤ 15 fps?				
12	Is outlet protection necessary?				
13	If a low water crossing is specified, are cut-off walls provided along the upstream and downstream edges of pavement to limits of flow?				
14	Is a profile provided for each culvert depicting length, slope, cover, road side slopes, design headwater elevation, and any utility conflicts?				
15	Other.				
SECTION 6: RETENTION BASINS					
1	Is the hydrologic design criteria used described and does it match the jurisdiction's requirements?				
2	Have stormwater storage and first flush requirements been met?				
3	Are stormwater storage and first flush calculations included and documented in the report?				
4	Does the maximum basin depth meet the jurisdiction's criteria?				
5	Is an emergency spillway/overflow identified in an appropriate location, and adequately protected from scour?				
6	Are side slopes 4:1 or flatter?				
7	Are appropriate clogging factors applied for inlets, in conformance with the jurisdiction's requirements?				
8	Are debris barriers specified for inlets?				
9	Are access barriers specified for outlets 18 inches in diameter and greater?				
10	Is an upstream siltation basin included if necessary?				
11	Other.				
SECTION 7: FCD FLOOD RETARDING STRUCTURES					
1	Name of structure(s):				
2	Identify phase of FCD Structures Assessment Program and any hydrologic investigations performed as part of the program.				
3	Specify hydrologic design criteria for reservoir, i.e. SPF, 100-yr.				

Checklist 1: Drainage Design Report Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*****
4	Specify inflow design flood for spillway, i.e. 100-yr, or % PMF (dependent on hazard classification).				
5	Other.				
SECTION 8: CANALS					
1	Are any canals located within the project boundaries?				
2	Is a discussion of backwater and overtopping issues provided, and are they adequately addressed?				
3	Other.				
SECTION 9: CONSTRUCTION PLANS					
1	Are all underground utilities identified in plan & profile?				
2	Is a utility “potholes requested” letter (as needed) for capital improvement projects provided?				
3	Are water, and sewer, and natural gas service taps shown in plan & profile?				
4	Are all sanitary sewer manhole rim and invert elevations shown on plans?				
5	Is any existing Portland Cement concrete pavement underlay shown?				
6	Are storm drain conflicts with other utilities identified and addressed?				
7	Have SRP, RID, and private irrigation facilities been checked for conflicts?				
8	Are waterline thrust block conflicts identified and addressed?				
9	Are pipe support locations for sanitary sewer lines above main storm drains identified?				
10	Are existing topography and buildings shown at least 30 feet beyond street R.O.W.?				
11	Are intersecting side street elevations at least 100 feet beyond curb returns noted on plans?				
12	Are potential ponding locations behind sidewalks checked and resolved?				
13	Are driveway/catch basin conflicts checked and resolved?				
14	Are finished floors appropriately elevated relative to the peak 100-year water surface elevations?				
15	Is one typical full-street cross-section with storm drain and applicable other underground utilities shown to scale on each storm drain profile sheet?				
16	Does the mainline storm drain have a minimum of 4-foot of cover (unless otherwise approved)?				
17	Is the farthest upstream catch basin located to meet the flow depth criteria in Table 6.7?				
18	Do all catch basins have a maximum spacing meeting the criteria in Table 6.9?				
19	Have soil boring(s) extending at least 2 feet below the proposed storm drain been taken and shown on the plans or provided in a report?				
20	Are soil boring logs and information including pH and resistivity shown on plans or provided in a report?				

Checklist 1: Drainage Design Report Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*****
21	Are pipe materials designed to accommodate soil conditions? Do existing soil conditions meet requirements for cast-in-place concrete pipe or concrete lined corrugated metal pipe?				
22	Are existing and proposed ground elevations shown for all mainline and connector pipe profiles?				
23	Is a *Storm Drain Key Map* included?				
24	Is a complete alternate pipe chart included?				
25	Does the alternate pipe chart show storm drain pipe diameters 6-inches larger than designed pre-cast concrete pipe diameters? The calculated pipe wall thickness for cast-in-place pipe is based on the required larger size.				
26	Does the alternate pipe chart show cast-in-place concrete pipe to be no smaller than 30 inches in diameter?				
27	Check for permanent pipe supports.				
28	Are there any ACP waterline crossings?				
29	Is there a completed *Storm Drain Design Summary* sheet included with plans?				
30	Are temporary construction easement lines for drainage work shown, if required? Are easement and right-of-way lines shown?				
31	Is the type of work on existing facilities indicated?				
32	Is the direction of flow indicated for ditches, channels, natural waterways, etc.?				
33	Are inlet and outlet elevations shown for all drainage facilities?				
34	Are existing ground line (dashed line) and finished grade line (solid line) profiles shown and labeled?				
35	Is the design slope of profile lines for drainage facilities (ditch, channel, etc.) shown as decimal in ft/ft?				
36	Are pipe culvert material and dimensions labeled?				
37	Are inlet and outlet facilities, if any, such as headwalls, wingwalls, cutoff walls and erosion protection shown and dimensioned?				
38	Are reinforced concrete box culvert dimensions and number of cells shown coupled with wingwall type/dimensions?				
39	Are the type and thickness of drainage facility linings shown?				
SECTION 10: *ADDITIONAL COMMENTS					

Checklist 1: Drainage Design Report Checklist

Item	Description	YES	NO	N/A	*

Checklist 1: Drainage Design Report Checklist					
Item	Description	YES	NO	N/A	*

E.3 CKECKLIST 2: HYDROLOGY SPECIFIC CHECKLIST

Checklist 2: Hydrology Specific Checklist					
Item	Description	YES	NO	N/A	*
SECTION 1: PROJECT DETAILS					
1	PROJECT NAME: REVISION NO: DATE:				
2	SELECT PROJECT TYPE: ADMS[ ] ADMP [ ] WCMP [ ] FDS [ ] Development Review [ ] Regulatory Review [ ] Hydrology Study [ ] Other [ ]				
3	REVIEWED BY:				
4	Are both hard and electronic copies of HEC-1 input and output files included with submittal?				
5	Is the report sealed and signed by a professional Civil Engineer currently licensed to practice in Arizona?				
6	REPORT TITLE:				
7	CONSULTANT:				
8	LIST SOFTWARE, VERSION, and FILE NAMES:				
9	Is this a CIP PROJECT?				
10	Is the development located in a flood hazard area? Check Category: Floodway[ ] Floodplain: A [ ] AH [ ] AE [ ] AO [ ] X [ ] EHZ [ ]				
11	Is there a section on Conclusions and Recommendations, and is it adequate?				
SECTION 2: HYDROLOGY MAPS					
1	Is a map provided that shows study area boundary, sub-basin boundaries, and concentration points?				
2	Check the sub-basin delineation. Are areas, soil and land use types, and topography homogenous for each sub-basin?				
3	Check sub-basin areas. Are areas measured correctly?				
4	Is the naming convention for sub-basins, concentration points, routing reaches, reservoir routes, and flow diversions identified?				
5	Is a map provided that shows time of concentration and hydrograph routing paths?				
6	Is a map provided that shows soils boundaries?				
7	Is a map provided that shows land use boundaries for both existing and developed conditions?				
8	Is the basis and method for estimating vegetation cover (existing and developed) described? Is the method appropriate?				

Checklist 2: Hydrology Specific Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*****
9	Was "no contributing runoff" assumed for properties with existing 100-year on-site retention, or properties with plans for 100-year on-site retention, which have been reviewed and approved by Maricopa County Planning & Development Services?				
10	Is there a description of watershed condition and watershed resistance? Is selection of K_b and/or K_n values discussed appropriately in that context?				
11	Other.				
SECTION 3: RATIONAL METHOD					
1	Is the maximum individual basin area less than or equal to 160 acres?				
2	If not, then the unit hydrograph method must be used.				
3	Are Runoff C Coefficients and K_b values selected appropriately for each land use type per Tables 6.3 and 6.4?				
4	Have existing land-use runoff coefficients been used where contributory land is vacant or developed prior to storm water storage requirements?				
5	If the Runoff C Coefficients or K_b values do not match the values for the appropriate land use categories in Tables 6.3 and 6.4, is there appropriate written justification and computations?				
6	Are there multiple land use types within individual basins?				
7	If so, are Runoff C Coefficients and K_b values area-averaged appropriately?				
8	Are site specific Depth-Duration-Frequency (D-D-F) values computed properly using PREFRE, and a printout and digital input/output files provided?				
9	Is the T_c path of appropriate location and length on the map?				
10	Is the T_c computed using the District's Rational Method computer program?				
11	If so, is a printout provided and do the input parameters match the report values?				
12	If not, check the iterative computations closely for each basin. Are they correct?				
13	Is each T_c value at least 10-minutes?				
14	Is the peak discharge for each basin computed properly and are the values reasonable?				
15	Is the Rational Method being used to compute peak discharges at intermediate locations within a drainage area less than 160 acres in size?				
16	If so, is the procedure outlined in Section 3.6.2 of the Hydrology Manual followed?				
17	Other.				
SECTION 4: UNIT HYDROGRAPH METHOD					
1	HEC-1 JOB CONTROL RECORDS				
a.	ID record. Are dates, project name, and modeler's name specified? Are they consistent with reports?				
b.	ID record. Are model revisions clearly identified on subsequent ID records?				

Checklist 2: Hydrology Specific Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*****
c.	IT record (NMIN). If NMIN has been revised, or changed for different models, were dependent parameters (UI, RM, NSTPS) adjusted appropriately?				
d.	IT record (NMIN). Is 0.1 T_c ≤ NMIN ≤ 0.25 T_c for the average value of T_c for the watershed, and the maximum and minimum values? Double check sub-basin delineation if extreme values of T_c make NMIN significantly outside the range.				
e.	IT record (NMIN). Is NMIN < 0.25*T_c for the sub-basin with the shortest T_c?				
f.	IT record (NMIN). Can NMIN be adjusted so that NMIN is approximately equal to 0.15 T_c for the average value of T_c?				
g.	IT record (NMIN). Is 60/NMIN an integer?				
h.	IT record (NMIN). Is NMIN equal to or evenly divisible by JXMIN on the IN record?				
I.	IT record (NMIN, NQ). Is NMIN*NQ at least as long as the storm duration?				
j.	IN record (JXMIN). Is the IN record used correctly?				
k.	Is *DIAGRAM specified for at least one HEC-1 model in the study? One for each model with differences other than storm frequency.				
l.	IO record (IPRT). Is Level 3 or lower output used for at least one HEC-1 model in the study? One for each model with differences other than storm frequency? Level 3 should be used for the model of the largest storm.				
m.	JP record. Is (NPLAN*NRATIO) < 45?				
n.	JP record. Is (NPLAN*NRATIO*NQ) < 4800?				
o.	JD record. Are JD records used and applied appropriately?				
p.	JD record. When using JD records for FRS volume computation, were the interpolated volumes from each sub-basin used?				
q.	Other.				
2	PRECIPITATION AND RAINFALL DISTRIBUTION				
a.	Check rainfall frequency and duration in the report and HEC-1 files. Identify the source of rainfall data, i.e. NOAA Atlas 2, HMR-49. Is the source appropriate for the study area and type?				
b.	PB record. Specify rainfall depth. Is areal reduction applied correctly and discussed in the text?				
c.	PI and PC records. Were PC or PI records checked against the IN record?				
d.	PI and PC records. Were PC or PI records checked against distribution patterns?				
e.	Are design storm distributions applied correctly?				
f.	Other.				
3	RAINFALL LOSSES				
a.	Are Green-Ampt loss rate parameters specified and are the selected values for IA, DTHETA, XKSAT, PSIF, and RTIMP reasonable?				
b.	Is the watershed moisture condition assumption described for the selection of DTHETA?				
c.	Are there different moisture condition land uses present within individual sub-basins (agricultural and natural, for instance)?				
d.	If so, are the values area averaged appropriately?				

Checklist 2: Hydrology Specific Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*
e.	Is area averaging of Green & Ampt parameters performed using the current version of DDMSW, or by external means or old versions of DDMSW/MCUHP? Check those that use older versions of DDMSW/MCUHP more closely. Check those using external means very closely.				
f.	Is bare ground XKSAT adjusted for vegetation cover? Is the adjustment appropriate?				
g.	Does the watershed span multiple NRCS (SCS) Soil Surveys? Are differences in soil texture between adjacent soil surveys discussed in the text and addressed if necessary in the models?				
h.	Is there a discussion of natural RTIMP present in the watershed?				
I.	Is natural RTIMP assumed to be hydraulically connected, have any adjustments been made to the percentages listed for the soil types, and are the revisions reasonable and adequately documented?				
j.	Other.				
4	HYDROGRAPHS				
a.	Specify method of hydrograph generation, i.e. Clark, S-graph. Is the method appropriate?				
b.	UC record (T_c). Are T_c parameters L, S, and K_b reasonable?				
c.	Is T_c < 90 minutes for each sub-basin?				
d.	Does T_c exceed the duration of rainfall excess for any sub-basin? This should be documented in the text.				
e.	UC record (R). Is R ≥ 0.5xNMIN?				
f.	UC record (T_c). Check against similar sub-basins. Are T_c values reasonable?				
g.	UC record (T_c). Were Tc values checked to ensure that average velocities throughout the watershed are reasonable?				
h.	HC record. Are hydrographs combined properly?				
i.	HC record. Is HC ≤ 5?				
j.	HC record (TAREA). Is total area correct? Was area above the concentration point manually recalculated for diverted hydrographs?				
k.	Other.				
5	CHANNEL/PIPE ROUTING METHODS				
a.	Are specific channel/pipe routing method(s) specified, i.e. modified Puls, normal depth, Muskingum, Muskingum-Cunge, kinematic wave, and are the methods appropriate?				
b.	RC record (RLNTH). Check reach lengths. Were lengths measured correctly?				
c.	RC record (ANL, ANCH, ANR). Were Manning's "n" values developed using methodology in *Estimated Manning's Roughness Coefficients for Stream Channels and Flood Plains in Maricopa County, Arizona* (April 1991)?				
d.	RC record (ANL, ANCH, ANR). Are Manning's "n" values reasonable?				
e.	RX and RY records. Are cross sections typical for the routing reach? If not, does the reach need to be broken into multiple reaches?				
f.	Are NSTPS generally equal to L/(V_{avg} * NMIN)?				
g.	Is NSTEP for each reach within +/- 1 of TT/NMIN, where TT is the travel time for the reach computed by HEC-1?				

Checklist 2: Hydrology Specific Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*
h.	Are transmission losses modeled? If so, is there an acceptable discussion of the reasons for modeling losses, and the source of the parameters?				
i.	Are there questionable routing operations identified above that warrant plotting and visual examination of the hydrograph?				
j.	Other.				
6	RESERVOIR (STORAGE) ROUTING METHODS				
a.	Are USGS, FCD, NWS, or other rain or stream gages used in hydrologic analysis or model calibration identified and discussed?				
b.	Are stage-storage relationships modeled correctly?				
c.	Are stage-discharge relationships modeled correctly?				
d.	RS record. Are NSTPS = 1? If NSTPS is changed, travel time and attenuation will be affected.				
e.	RS record (ITYP, RSVRIC). Are starting conditions modeled appropriately?				
f.	Are rating curves for storage and outflow hydraulics included? Are the rating curves reasonable?				
g.	Is there an acceptable discussion of the basis for estimation of storage and outflow parameters in the text, and a discussion of reservoir routing results?				
h.	Other.				
7	DIVERSION DATA				
a.	DI/DQ records. Are diversions/split flows modeled correctly?				
b.	Are hydraulic computations for diversions done appropriately and included in the report?				
c.	Are rating curves for each diversion plotted and included in the report?				
d.	Are watershed areas corrected using the HC record where diverted hydrographs are recalled into the model?				
e.	Other.				
SECTION 5: HEC-1 OUTPUT					
1	ERROR AND WARNING MESSAGES				
a.	Are there error or warning messages related to hydrograph generation or combination that are not adequately addressed in the test, or are critical?				
b.	Are there error or warning messages related to routing that are not adequately addressed in the text? Specifically check for peak discharge outside of specified range warnings and lack of hydraulic capacity for the reach cross-section.				
c.	Have error and warning messages been checked and corrected? Are error and warning messages explained adequately?				
d.	Other.				
2	SCHEMATIC DIAGRAM				
a.	Compare the schematic to the watershed map. Is the structure logical? Are all points labeled clearly? Specify any problems.				
b.	Are there < 9 hanging hydrographs?				
c.	Have all of the diverted hydrographs been accounted for?				
d.	Are all sub-areas attached and combined in the proper sequence?				
e.	Other.				
3	DRAINAGE AREA				

Checklist 2: Hydrology Specific Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*
a.	Has the area associated with all returned diverted hydrographs been returned?				
b.	Check total drainage area. Is it accurate?				
c.	Other.				
4	RAINFALL LOSSES				
a.	Check the total rainfall, total losses, and total runoff for each sub-basin. Are there zeros or very small numbers? Explain.				
b.	Other.				
5	HYDROGRAPH ROUTING				
a.	Is outflow peak discharge < inflow peak discharge?				
b.	Is flow contained within x-sections?				
c.	Check travel time. Does travel time appear to be too short or too long? If so, check input parameters for routing. Check routing steps in the input against the output velocity.				
d.	Is attenuation of peak flows reasonable?				
e.	For kinematic wave routing, is the peak flow attenuated? If so, check model and revise.				
f.	Other.				
6	PEAK RUNOFF				
a.	Is specific yield (cfs/sq mi) for each sub-basin included in the report?				
b.	Other.				
7	TIME TO PEAK				
a.	Check the time to peak column in the HEC-1 summary table. Do times to peak increase with increasing drainage area?				
b.	Are all times to peak very close or identical to one another? If so, NMIN and routing operations may need to be revised.				
c.	Do all times to peak occur after the most intense period of rainfall (about half the rainfall duration)?				
d.	Other.				
8	RUNOFF VOLUMES				
a.	Are runoff volumes reasonable?				
b.	Other.				
SECTION 6: MODEL CALIBRATION AND INDIRECT METHODS VERIFICATION					
1	INSTRUMENTATION				
a.	Identify USGS, FCD, NWS, or other rain or stream gages used in hydrologic analysis or model calibration.				
b.	Have any gages been relocated during the period of record? Discuss.				
c.	Other.				
2	INDIRECT METHODS/STATISTICAL ANALYSES				
a.	Have statistical analyses been performed and are the results discussed?				
b.	Are USGS regression equations used, the sources identified, and are they appropriate and implemented correctly?				
c.	Is the period of record adequate for use with *Water Resources Council Bulletin 17B* (March 1982)?				
d.	Are any other Indirect Methods used, the sources identified, and are they appropriate and implemented correctly?				
e.	Are the model results reasonable based on comparisons with the results of the application of Indirect Methods?				

Checklist 2: Hydrology Specific Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*****
f.	Other.				
SECTION 7: ADDITIONAL COMMENTS					

Checklist 2: Hydrology Specific Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*****

E.4 CHECKLIST 3: HEC-RAS HYDRAULICS SPECIFIC CHECKLIST

Checklist 3: HEC-RAS Hydraulics Specific Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*****
SECTION 1: PROJECT DESCRIPTION					
1	PROJECT NAME: REVISION NO: DATE:				
2	SELECT PROJECT TYPE: ADMS[ ] ADMP [ ] WCMP [ ] FDS [ ] Development Review [ ] Regulatory Review [ ] Hydrology Study [ ] Other [ ]				
3	REVIEWED BY:				
4	Is there a project description?				
5	Does the description include the study name, District contract number, consultant name and address?				
6	Does the description include the purpose of the model (floodplain delineation study, channel project, …)?				
7	Are the data sources identified?				
8	Are general assumptions listed?				
9	Are the events being modeled identified (100-year, SPF, multiple year, …)?				
10	Is the project file name appropriate for the project? Names like a, b, job 1, and FIS are not acceptable.				
11	Is there an adequate map that shows the topography, cross sections, thalwegs, labels, floodplain and floodway limits, and left and right bank locations?				
12	Is the version of the hydraulic model used to do the study listed?				
13	Is there a section on Conclusions and Recommendations, and is it adequate?				
SECTION 2: FILES					
1	Note the number of geometry, flow data, and plan files. Should multiple models be created?				
2	Are the file names appropriate?				
3	Do the file names reflect the project name, and what each file includes?				
SECTION 3: FLOW DATA					
1	Are the changes in discharge input at the correct locations, and are the values correct?				
2	For floodplain studies are Floodplain (or FP) and Floodway (or FW) being used for the profile names?				
3	For other studies do the profile names reflect what is being modeled (25-yr, 50-yr, …)?				
4	Are the upstream and downstream boundary conditions appropriate for the model?				
5	Are any internal rating curves or fixed changes in water surface elevations being used?				
SECTION 4: GEOMETRY FILE					
1	Are rivers and reaches named correctly? Names like a, b, and Job 1 are not acceptable.				
2	Are the junction names acceptable?				
3	Are the cross sections identified in river miles for floodplain delineations (feet may be used for Non-FEMA delineations)?				

Checklist 3: HEC-RAS Hydraulics Specific Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*****
4	Do cross section start and stop locations and length on the map match the geometry file?				
5	Are cross sections oriented with stationing from left to right looking downstream?				
6	Are cross sections stationed using 10,000 at the thalweg?				
7	Are comments included where appropriate in the cross section descriptions?				
8	Are reach lengths measured correctly? They should be measured at the center of the mass of flow.				
9	Are the bank station locations appropriate? Bank stations can be different for different events.				
10	Are contraction/expansion coefficients appropriate? (note: culverts may use larger values than bridges)				
11	Are blocked flow, levees, or ineffective flow being used, and used correctly?				
12	Are the n values appropriate? (for design projects there should be a range of n values)				
13	Are bridges and culverts being modeled correctly? Is there pressure flow, weir flow, or both?				
14	Are any inline weirs or spillways being used?				
15	If yes, are weir coefficients acceptable and are they modeled appropriately?				
16	Are interpolated cross sections being used? If yes, why?				
SECTION 5: CALCULATIONS					
1	Does the plan file have an adequate description?				
2	Are the correct flow and geometry files being used?				
3	Is an appropriate starting WSEL method used and explained, and is it applied correctly?				
4	Are ineffective flow areas identified and addressed appropriately?				
5	Are there any breakouts?				
6	Are bridges and culverts modeled appropriately, including ineffective flow?				
6	Is the correct flow regime (sub, mixed, or super) being used (subcritical only for floodplain studies)?				
8	Are encroachments used?				
9	If encroachments are used, are they applied properly using the water surface or energy grade line and show < 1.0 foot increases at every cross section?				
10	Are the floodplain and floodway delineations done in accordance ADWR State Standards 2-96, 3-94 and 9-02?				
11	Is the flow distribution option turned on, if appropriate?				
12	Is the appropriate method used for conveyance calculations and the friction slope?				
SECTION 6: REPORT FILE					
1	Does the Report File printouts of all the input data including (geometry, flow, plan)?				
2	Are all the profiles included in the output results?				
3	Are appropriate summary tables included?				
SECTION 7: REVIEWING THE RESULTS					

Checklist 3: HEC-RAS Hydraulics Specific Checklist					
Item	**Description**	**YES**	**NO**	**N/A**	*****
1	Check the Froude numbers, does critical flow (or close to critical flow) occur anywhere?				
2	Does at least a portion of the flow occupy the channel?				
3	Is the percentage of flow in the main channel less than 25%? Examine model carefully if yes.				
4	Are there large changes in depth and/or velocity between cross sections?				
SECTION 8: ERRORS					
1	Are there any extended cross sections?				
2	Does divided flow occur?				
SECTION 9: *ADDITIONAL COMMENTS					

MOHAVE COUNTY
DEVELOPMENT SERVICES

P. O. Box 7000, Kingman, Arizona 86402-7000 3250 E. Kino Avenue, Kingman www.Mohave.gov Telephone (928) 757-0903 FAX (928) 757-3577

A.R.S. §11-1606 – Application Process Notice for Site Plans (Section 37.N)

Under A.R.S. §11-1606 Mohave County is required to give you the following information when you apply for a Site Plan under Section 37.N, Mohave County Zoning Ordinance.

The Following steps are required for Site Plan applications:

- Prepare a complete submittal package conforming to the appropriate submittal checklist. Checklists can be obtained from the Development Services Department offices located above or from www.Mohave.gov under the Development Services Department link. Be sure to obtain the checklist that pertains to your development or project.
- Complete an application and submit the application with all items listed in the checklist to one of the Development Services offices in Kingman, Bullhead, or Beaver Dam. The Kingman Office is open M-F from 8:00 a.m. to 5:00 p.m., excluding holidays. The Bullhead Office is open M-TH from 8:00 a.m. to 12:00 p.m. Department staff are available in the Beaver Dam Office periodically. Please call Development Services for an appointment or to confirm staff availability.

Applicable Licensing Timeframes

Specific licensing timeframes are listed at www.Mohave.gov under the Development Services Department link.

Contact Information

For questions regarding the Site Plan application process or submittal status, please contact a Planner at 928-757-0903 or email Planners@Mohave.gov

Under A.R.S. §11-1609, you may request that the County clarify its interpretation or application of a statute, ordinance, regulation, delegation agreement or authorized substantive policy statement that affects the approval of the Site Plan by providing the County with a written request that states: 1) Your name and address; 2) The statute, ordinance, regulation, delegation agreement or authorized substantive policy statement or part of the statute, ordinance, regulation, delegation agreement or authorized substantive policy statement that requires clarification; 3) Any facts relevant to the requested ruling; 4) Your proposed interpretation, in whole or in part, of the applicable statute, ordinance, regulation, delegation agreement or authorized substantive policy statement that requires clarification; 5) Whether, to the best of your knowledge, the issues or related issues are being considered by the County in connection with an existing license or application.

You may request clarification or interpretations or review criteria of the Site Plan staff member reviewing your project. If you disagree with the staff's interpretation, you may appeal to the Planning and Zoning Division Manager. The Planning and Zoning Division Manager's decisions may be appealed to the Development Services Director. Appeals of interpretations of the Mohave County Zoning Ordinance will be heard by the Board of Adjustment after the appropriate application is completed. Board of Adjustment decisions may be appealed to the Superior Court within 30 days of their decision.

MOHAVE COUNTY DEVELOPMENT SERVICES

P. O. Box 7000, Kingman, Arizona 86402-7000 3250 E. Kino Avenue, Kingman www.Mohave.gov Telephone (928) 757-0903 FAX (928) 757-3577

Timothy M. Walsh, Jr., P. E.
Department Director

Sam Elters, P.E.
County Manager / County Engineer

Site Plan Application and Checklist

Instructions: Please complete this form and include it with your Site Plan submittal. Check the boxes that apply to your Site Plan submittal. If you're unsure about what to show or submit, please contact the Mohave County Planning Division.

The site plan will be reviewed by the Development Services Department and, if found necessary, will be circulated for review and comments to the Public Works Department, Flood Control District, Division of Environmental Quality, and to the appropriate agencies, utility, and public safety providers.

The Planning Division encourages you to schedule a **site plan pre-submittal meeting** to review the proposed development. The meeting may reduce the required site plan information and help speed the approval process. Please contact a Planner II at (928) 757-0903 to schedule a site plan pre-submittal meeting.

Assessor's Parcel Number(s):	**209-32-012 and 209-32-013**
Project Name:	**Black Mountain Generation Station Expansion**
Contact's Name: **Christopher Rod**	Company: **JE Fuller Hydrology and Geomorphology Inc.** Phone No: **520-623-3112**
Contact's Mailing Address:	**40 E. Helen Street, Tucson Arizona 85705**
Contact's Email Address:	**chris@jefuller.com**
Submittal Type (check one): ☐ New ☒ Revision to Previously Approved Site Plan (Include Site Plan #): SP_____-_____	
Economic Development Info (optional)- Capital Investment:	Possible Future Jobs:

Please provide the following with your site plan submittal (unless reduced as a result of the pre-submittal meeting):

- ☐ One (1) site plan (max. 36" x 36") as described below, folded to approximately 9" x 12" sealed by licensed AZ professional engineer/architect
- ☐ Two (2) copies of drainage report – If required by Flood Control District
- ☐ Ownership verification – Title Report or Deed
- ☐ Digital copy of each of the above items
- ☐ Review fee of $640 which covers the first two reviews. If the process exceeds two reviews then an additional review fee of $150 may be required if the revisions or corrections are not determined to be minor in nature. Each site plan review period is 15 working days.

A. General Information to be included on the site plan (unless reduced as a result of the pre-submittal meeting):

1. ☐ Owner's and preparer's contact information (including mailing address and phone number)
2. ☐ Seal & Signature of licensed AZ professional engineer/architect
3. ☐ Property address, assessor parcel number, parcel size, legal description, and dimensions
4. ☐ Current, proposed, and/or conditional zoning and resolution numbers as applicable
5. ☐ Special Use Permit resolution numbers as applicable
6. ☐ Zoning and land use for the adjacent parcels
7. ☐ North arrow, drawing scale, and vicinity map
8. ☐ Location and dimensions of existing and/or proposed uses, structures, outdoor activities, and utilities
9. ☐ Building height and setbacks from property lines
10. ☐ Site access including names and right-of-way widths of abutting roadways
11. ☐ Location, size, and type of all easements
12. ☐ Utility (electric, water, wastewater, solid waste, telephone, gas) and Fire District service providers
13. ☐ Topographical 2-foot contours
14. ☐ Drainage arrows, retention pond sizing, and drainage considerations (per Mohave County Drainage Design manual)
15. ☐ FIRM Panel Number
16. ☐ Phase map or description if project will be developed in phases
17. ☐ Location, type and height of existing/proposed/required fences or screening. Note: View obscuring fencing and/or buffering a minimum of 6 feet in height may be required to screen abutting residential and/or incompatible uses.

B. Parking Information to be included on the site plan (unless reduced as a result of the pre-submittal meeting):

1. ☐ Location, dimension, and surfacing of driveway entrances
2. ☐ Surface material of parking areas and drives leading thereto
3. ☐ Parking calculations based on uses (# of spaces required & actual)
4. ☐ Parking stall setback from street
5. ☐ Dimensions for parking stalls, backing aisles, driving lanes, and off-street loading areas.
6. ☐ Handicap parking, access aisle, slope, signage, and path of travel to all ADA accessible buildings and/or uses (www.ada.gov)

C. Other Information included with your submittal:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

Mohave County Contact Information:
Public Works: 928-757-0910 Planning/Building: 928-757-0903
Flood Control: 928-757-0925 Environmental Health: 928-757-0901
Economic Development: 928-757-0960

Office Use Only:

Received By:	Date/Time:
Assigned Planner:	
Fees Paid:	Site Plan #: SP_____-_____
Notes:	

MOHAVE COUNTY
DEVELOPMENT SERVICES

P. O. Box 7000, Kingman, Arizona 86402-7000 3250 E. Kino Avenue, Kingman www.Mohave.gov Telephone (928) 757-0903 FAX (928) 757-3577

Timothy M. Walsh, Jr., P. E.
Department Director

Sam Elters, P. E.
County Manager / County Engineer

Section 37.N – Site Plan Applications – (Regulatory Bill of Rights)

Instructions:

Please read and sign that you acknowledge and understand your rights as defined by A.R.S. §11-1601 et. seq. which codifies the Regulatory Bill of Rights for citizens living in un-incorporated areas.

1. I have attended a Pre-Application meeting with County staff where the submittal requirements for the Site Plan have been determined based upon the complexity of the project (Section 37.N.5 & 6, MCZO) or have otherwise been made aware of the submittal requirements. I have received the Regulatory Bill of Rights (hard copy or by reference to web page), a processing flow chart, the review time frames for each review period and departmental contact information has been provided to me (§11-1606).

2. I understand that the Administrative Completeness Review shall consist of fifteen (15) working days to verify the completeness of a submittal. The Administrative Completeness Review shall involve review by the staff assigned to the case and will be performed before the commencement of each substantive review. If the county determines that any documents or information necessary for the submittal to be considered incomplete, or missing, the county will notify the applicant of the need for the missing material, and all processing timeframes will be suspended from the date of that notice until the receipt of all material from the applicant per §11-1605.D and §11-1605.E.

3. I understand that the Substantive Review will be based upon criteria set forth in Section 37.N and other applicable sections of the Mohave County Zoning Ordinance as well as rules and regulations adopted by other reviewing agencies in accordance with §11-1604. Each County Department connected with the review will be requested to provide their comments to Development services by the substantive review deadline. However, Development Services will not be responsible for comments received from other County Departments and/or non-County agencies after the Substantive Review deadline per §11-1605.G. All comments received after the deadline will be forwarded to the applicant. The applicant is responsible for addressing comments of other departments and agencies. Development Services is not responsible for late comments from others. Those issuing comments are responsible for administering their own time frames and enforcing their own requirements.

4. I understand that the Substantive Review timeframe will be fifteen (15) working days for each separate submittal, regardless whether it is the initial submittal or a corrected or revised submittal. If, at the conclusion of the latest review, the County finds the Site Plan does not meet the Site Plan requirements, Development Services may issue a request for additional or revised information and documents, in the form of a corrected submittal, as provided for under §11-1605.G. If subsequent Site Plan reviews result in remaining comments, corrected submittals will be required of the applicant until those concerns have been addressed. Time frames are suspended from that date of the request for additional submittal(s) until the submittal of all the requested material, according to §11-1605G. If substantive changes to the Site Plan result in a different "kind" of project rather than a refinement of the "type" of project, the timeframe shall be suspended and the applicant will submit the project as a new Site Plan.

5. I understand that once corrections have been made to the satisfaction of the County, Development Services will approve (or conditionally approve) the Site Plan.

6. I understand that if the overall project renew time (including both administrative and substantive reviews), minus periods of suspended time frames, reaches 180 working days and the Site Plan has not been approved, the applicant and county may agree to extend timeframes by up to 25% per §11-1605.H.

7. I understand that in the case of Site Plan denial, justification for the denial will include references to the statutes, ordinances, regulations, substantive policy statements or delegation agreements from outside agencies on which the denial is based (§11-1605.I.1). In addition, staff will provide an explanation of the applicant's right to appeal the denial within fifteen (15) working days and the name and telephone number of a County contact person who can answer questions regarding the appeals process (§11-1605.I.2).

8. If the administrative, substantive and overall deadlines are not met by the Planning staff, exceptions listed above notwithstanding, §11-1605.J requires the County to: 1) refund to the applicant all fees charged for reviewing and acting on the application for the license; 2) excuse payment of any fees that have not yet been paid and; 3) continue to process the application.

9. I understand that fees required for Site Plan processing shall be as prescribed in adopted fee schedules.

I have read, understand and agree to the above rights and responsibilities as defined by the Regulatory Bill of Rights.

_____ _____

Printed Name & Signature of Applicant Date

_____ _____

Printed Name & Signature of Owner (if different than applicant) Date

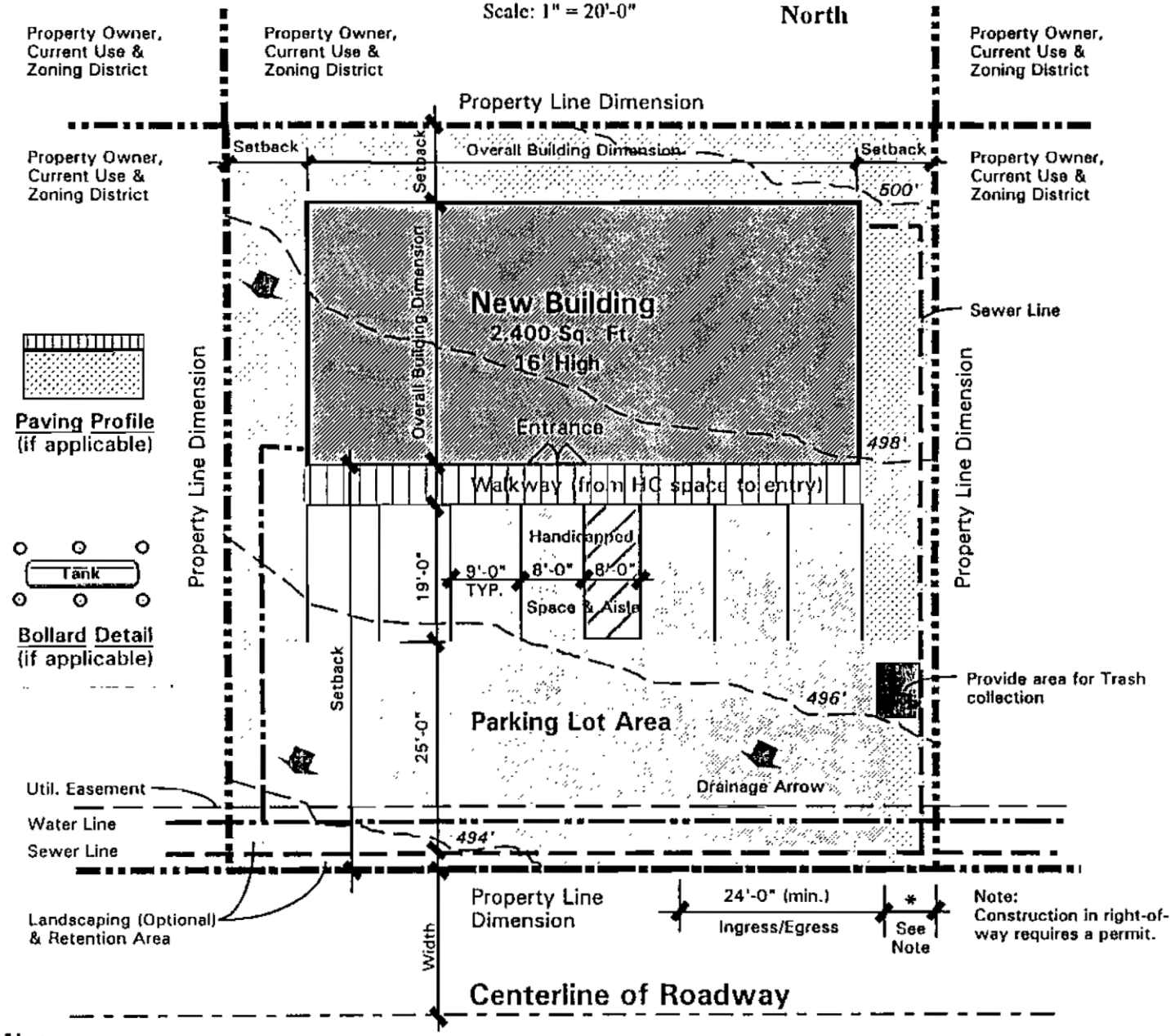
_____ _____

Printed Name & Signature of Development Services Representative Date

Site Plan

Scale: 1" = 20'-0"

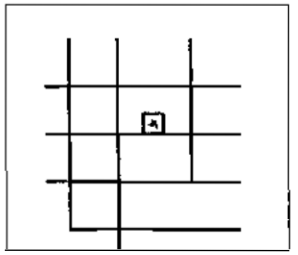
North



Note: This represents the typical Site Plan map contents. Required information may vary given site's location and features.

Vicinity Map

Scale: 1" = 2,000'



Legal Description

Township, Range, Section, Tract Name & Number, Block, and Lot.

Site Plan Notes:

Zoning District.
BOS Resolution No., if any.
No. of Parking Spaces (by Type).
Type of Construction (UBC).
Use of Building.
Flood Plain Designation w/ FIRM Panel No.
Topo. Source (if Reqd.).
ADA compliance, etc.
Cut and fill in cu. yds, if any.
Topos @ 2ft intervals ———

Utility Providers

Electric by…
Well or Water by…
Septic or Sewer by…
Solid Waste by…
Gas (if applies) by…

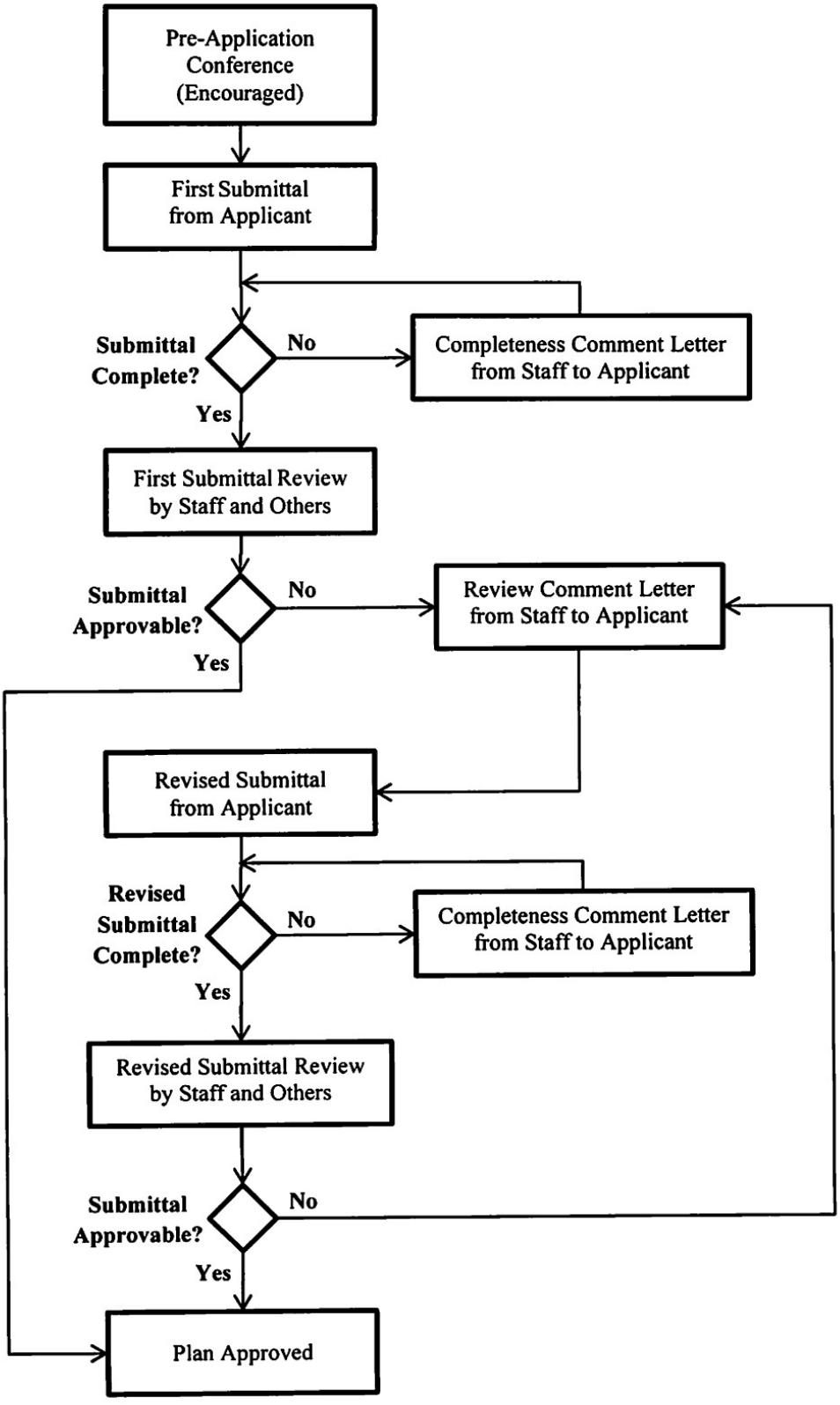
Owner's Name, Address, Email, and Phone

Preparer's Name, Address, Email, and Phone

Licensed AZ Professional Engineer/Architect's Seal & Signature

* Dimension will vary based upon distance to adjoining lot's driveway entrance.

Site Plan Review Processing Flowchart



Attachment 6 - Mohave County IDDE Program

Available at https://stormwater.mohave.gov/

Attachment 7 - Mohave County Construction and Post-Construction Site Stormwater Runoff Control Programs

Available at https://stormwater.mohave.gov/

Attachment 8 – Sampling and Analysis Plan

SAMPLING AND ANALYSIS PLAN

FOR

MOHAVE COUNTY, ARIZONA

In fulfillment of the requirements associated with
Small Municipal Separate Storm Sewer System (MS4)
General Permit (AZG2021-002)

Prepared For:

Mohave County
3250 E. Kino Ave.
Kingman, AZ 86409

Contact(s):

Randall Hanks
Alert Warning Systems Supervisor
Mohave County Flood Control District
928-757-0925
hanksr@mohave.gov

Date:

November 8, 2025

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ABBREVIATIONS / ACRONYMS

ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
AZPDES	Arizona Pollution Discharge Elimination System General Permit
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
eDMR	electronic Discharge Monitoring Report
LOQ	Limit of Quantification
MS4	Municipal Separate Storm Sewer System
NODI	No Discharge Information
NOI	Notice of Intent
OAE	Outstanding Arizona Water
PCBs	Polychlorinated Biphenyl's
SAP	Sampling and Analysis Plan
SVOCs	Semi-Volatile Organic Compounds
SWMP	Storm Water Management Plan (also referred to as a Storm Water Management Program)
SWQS	Surface Water Quality Standard
TMDL	Total Maximum Daily Load
VOCs	Volatile Organic Compounds

1.0 INTRODUCTION

This Sampling and Analysis Plan (SAP) has been prepared for Mohave County (County) to comply with the Arizona Department of Environmental Quality's (ADEQ) Arizona Pollution Discharge Elimination System General Permit (AZPDES) for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems to Protected Surface Waters AZG2021-002 (Permit) for the regulating stormwater discharges from Small Municipal Separate Storm Sewer Systems (MS4). The SAP is intended to provide the details required by the Permit and, while it is part of the County's Stormwater Management Plan (SWMP), it can be used as a stand-alone document.

The purpose of the SAP is to ensure sample collection, handling, and testing procedures are established and followed to produce quality data results.

1.1 Sampling and Analysis Plan Objectives

There are multiple objectives for this plan:

- Establish sampling protocols and methods for stormwater monitoring and sampling, as required under the 2021 AZPDES Small MS4 Permit;
    - Provides Analytical and Characterization Methods including active and passive sampling
- Identify outfalls to sample for two MS4 permit areas within Mohave County: Horizon Six and North Lake Havasu (see *Figure 1*).
    - Both MS4s discharge into the Colorado River (at Lake Havasu) which is designated by ADEQ as a lake and is impaired by Selenium.
- Provide sampling locations for five (5) analytical sampling outfalls and three (3) characterization sampling outfalls, identified as: 1UW1-01, 1UW4-01, 1UW6-01, 1UW7-01, and 2MB-02 and are intended to monitor stormwater quality for discharges into the Colorado River (see *Figures 2 and 3*).
- Document sampling and analysis methods and equipment for collecting representative samples of stormwater that maximize resources.

1.2 Sampling Personnel / Contact Information

The following table outlines the personnel responsible for overseeing the County's SWMP and who will serve as the main points of contact overseeing the sampling and analysis processes.

Table 1 – Sampling Personnel

Staff Names	Specific Responsibilities
Randall Hanks	Collection of samples, packing, and shipping/delivery of samples

Note: Other qualified personnel can be designated as members of the sampling team, as necessary.

Contact Information:

Randall Hanks, Alert Warning Systems Supervisor
Mohave County Flood Control District
928-757-0925; hanksr@mohave.gov

1.3 Sampling Requirements (Reason for Monitoring)

☒ Characterization Monitoring Required by ADEQ per permit number AZG2021-002
☐ Impaired Waters Monitoring without a Total Maximum Daily Load (TMDL)
☒ Impaired Waters Monitoring with a TMDL

☐ Outstanding Arizona Water (OAW) Monitoring

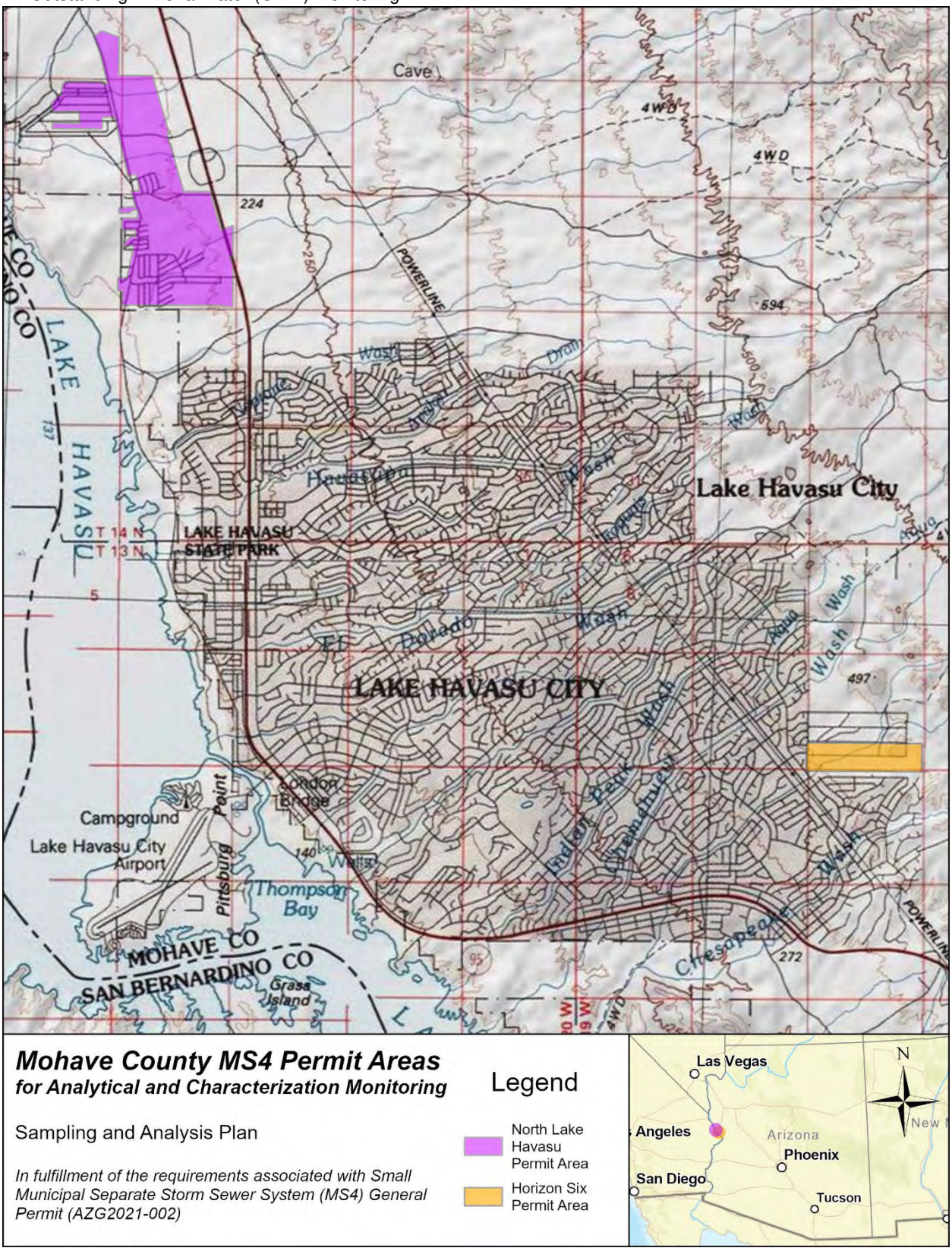

Figure 1 – Mohave County MS4 Permit Areas

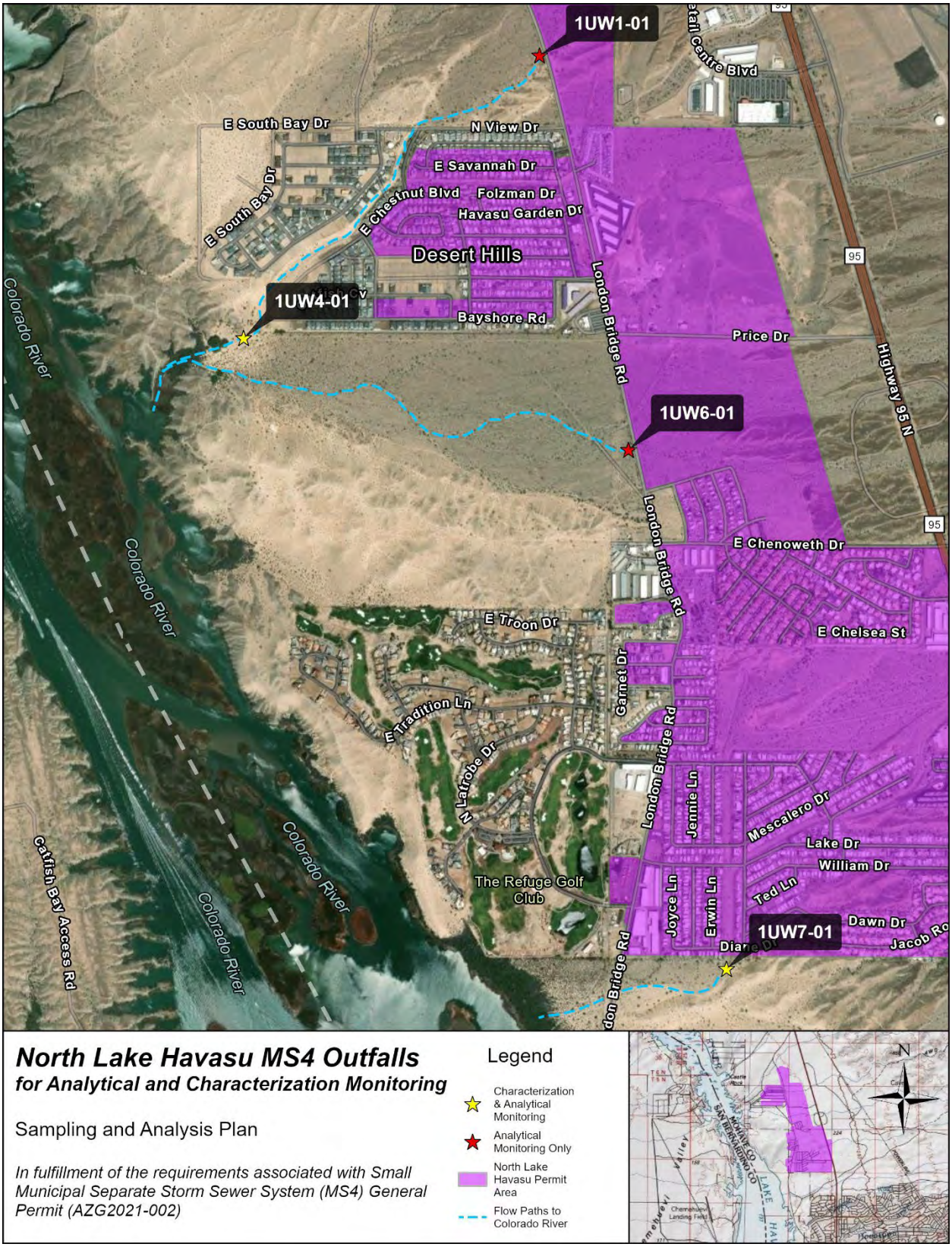

Figure 2 – North Lake Havasu MS4 Outfalls

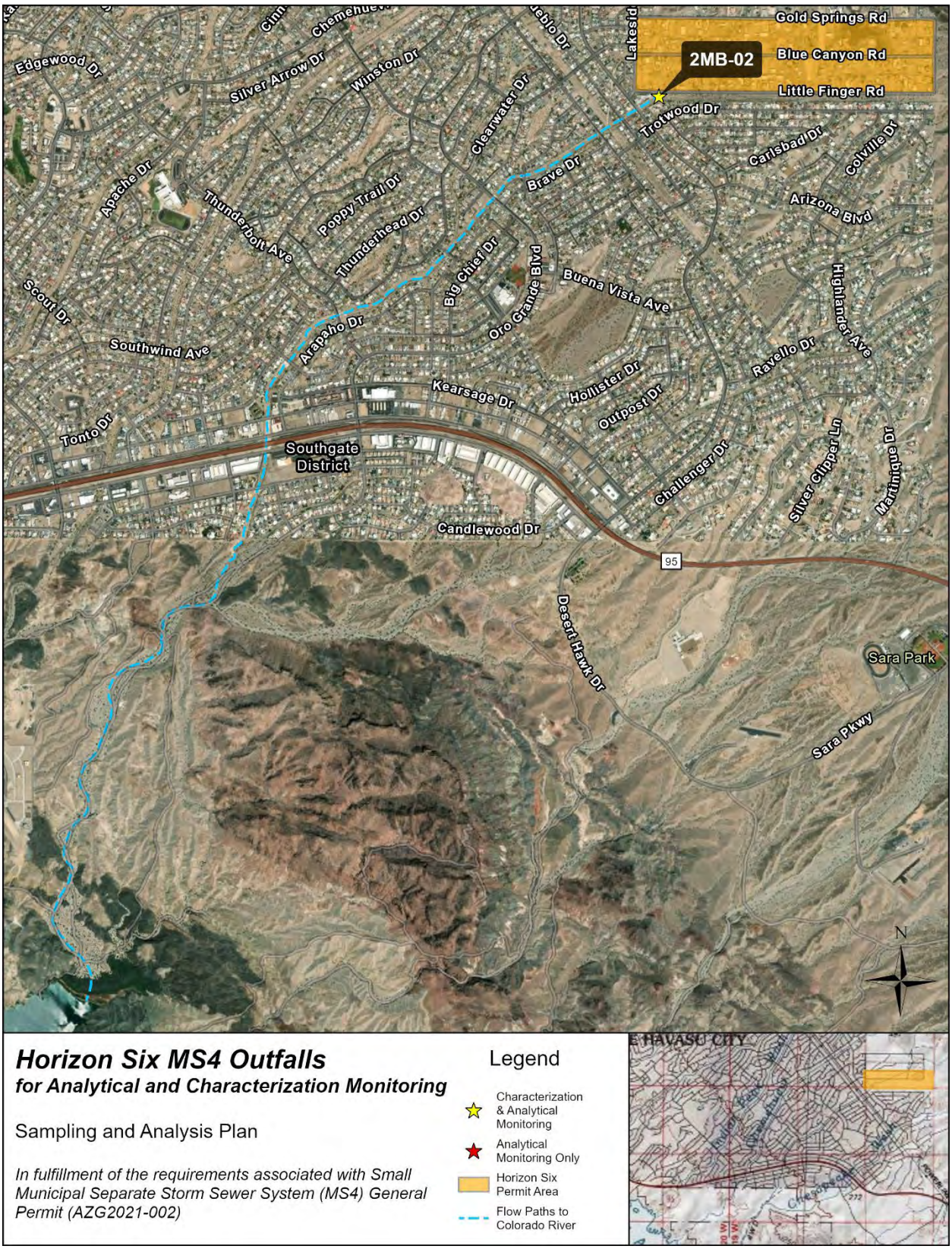

Figure 3 – Horizon Six MS4 Outfalls

1.4 Description of Outfalls

☒ A copy of the approved myDEQ Notice of Intent (NOI) Certificate is included and incorporates by reference the specific monitoring requirements determined by industrial sector activity (Routine or General Analytical), receiving water(s) (Impaired/TMDL), and additional monitoring required by ADEQ. The attached NOI certificate serves as a summary of monitoring requirements at each outfall. The list of outfalls within the two permit regions within Mohave County to be monitored for analytical and characterization monitoring are listed in *Table 2*.

Table 2 – Characterization and Analytical Monitoring Outfalls

Permit Region	Name	Map ID	Type of Monitoring Needed
Horizon Six	Mockingbird Channel	2MB-O2	Analytical AND Characterization
North Lake Havasu	Unnamed Wash 1	1UW1-O1	Analytical
North Lake Havasu	Unnamed Wash 4	1UW4-O1	Analytical AND Characterization
North Lake Havasu	Unnamed Wash 6	1UW6-O1	Analytical
North Lake Havasu	Unnamed Wash 7	1UW7-O1	Analytical AND Characterization

1.4.1 Description of Outfall Locations and Access

OUTFALL 1UW1-01		
Latitude: 34.5633	Longitude: -114.3722	
Section: 8	Township: 14N	Range: 20W
Closest Cross-Streets:	London Bridge Rd.	
Upstream Land Use	☒ Industrial ☒ Commercial ☐ Residential ☐ Other:	

Outfall 1UW1-01 discharges occur in a sandy braided channel that originates upstream and east of the Lake Havasu City Airport and Highway 95N (see *Figure 2*). After passing through the airport property, under the highway, and around commercial properties, the drainage passes over a low water crossing of London Bridge Road before reaching the outfall location on the west side of the road. Only analytical monitoring for Selenium will take place at this outfall.

> *<u>Potential Pollutants</u>: Potential stormwater pollutants associated with Outfall 1UW1-01 might include oil/greases/lubricants; windshield washer fluid; fuels; glycol compounds (antifreeze); lead/battery acids; and suspended solids.*

OUTFALL 1UW4-01		
Latitude: 34.5534	Longitude: -114.3846	
Section: 17	Township: 14N	Range: 20W
Closest Cross-Streets:	Sunshine Dr. and Bayshore Rd.	
Upstream Land Use	☒ Industrial ☒ Commercial ☒ Residential ☐ Other:	

Outfall 1UW4-01 discharges occur in a sandy braided channel that originates upstream and east of the Lake Havasu City Airport and Highway 95N (see *Figure 2*). After passing through the airport property, under the highway, and over a low water crossing of London Bridge Road, it is channelized between two residential neighborhoods before reaching the outfall location. It is downstream of Outfall 1UW1-01. Characterization and analytical monitoring will take place at this outfall.

<u>Potential Pollutants</u>: Similar to outfall 1UW1-01, Potential stormwater pollutants associated with Outfall 1UW4-01 might include oil/greases/lubricants; windshield washer fluid; fuels; glycol compounds (antifreeze); lead/battery acids; and suspended solids.

OUTFALL 1UW6-01		
Latitude: 34.54.96	Longitude: -114.3683	
Section: 16	Township: 14N	Range: 20W
Closest Cross-Streets:	London Bridge Rd.	
Upstream Land Use	☒ Industrial ☐ Commercial ☒ Residential ☐ Other:	

Outfall 1UW6-01 discharges occur in a sandy braided channel that originates upstream and east of Highway 95N. After passing through several industrial properties (potentially excavation and mining) and a residential area, it crosses through culverts under Highway 95N (see *Figure 2*). After winding through the desert, the drainage passes over a low water crossing of London Bridge Road before reaching the outfall location on the west side of the road. Only analytical monitoring for Selenium will take place at this outfall.

<u>Potential Pollutants</u>: Potential stormwater pollutants associated with Outfall 1UW6-01 might include oil/greases/lubricants; windshield washer fluid; fuels; glycol compounds (antifreeze); lead/battery acids; dissolved minerals, and suspended solids.

OUTFALL 1UW7-01		
Latitude: 34.5316	Longitude: -114.3641	
Section: 21	Township: 14N	Range: 20W
Closest Cross-Streets:	Diane Dr.	
Upstream Land Use	☒ Industrial ☒ Commercial ☒ Residential ☐ Other:	

Outfall 1UW7-01 discharges occur in a channelized drainage that originates upstream and east of Highway 95N. After passing around the landfill and several industrial and commercial properties, the drainage crosses through culverts under Highway 95N and becomes channelized through several residential neighborhoods (see *Figure 2*). This outfall is accessed from Diane Drive and is less than 0.5 mile upstream of the Colorado River (Lake Havasu). Characterization and analytical monitoring will take place at this outfall.

Potential Pollutants: Potential stormwater pollutants associated with Outfall 1UW7-01 might include oil/greases/lubricants; windshield washer fluid; fuels; glycol compounds (antifreeze); lead/battery acids; dissolved minerals, and suspended solids.

OUTFALL 2MB-02		
Latitude: 34.4736	Longitude: -114.2625	
Section: 16	Township: 13N	Range: 19W
Closest Cross-Streets:	Little Finger Rd	
Upstream Land Use	☐ Industrial ☐ Commercial ☒ Residential ☐ Other:	

Outfall 2MB-02 discharges occur in a channelized drainage (Mockingbird Wash) that originates upstream and east of Lake Havasu City. After draining to the west out of the mountains, Mockingbird Wash becomes channelized as it passes between two residential neighborhoods. This outfall is accessed from Little Finger Road and is immediately downstream of where a minor tributary joins Mockingbird Wash (see *Figure 3*). Characterization and analytical monitoring will take place at this outfall.

Potential Pollutants: Potential stormwater pollutants associated with Outfall 2MB-02 might include oil/greases/lubricants; windshield washer fluid; fuels; glycol compounds (antifreeze); lead/battery acids; and suspended solids.

2.0 ANALYTICAL MONITORING

MS4s that have stormwater discharges to impaired or not-attaining waters, OAWs, or waters with TMDLs shall monitor for the impairments, as outlined in this section of this SAP.

The general approach for Mohave County's analytical sampling is to collect a grab sample of stormwater at the five (5) different outfalls discussed in Section 1.4 of this SAP. These samples should be taken during the first 30 minutes of a "qualifying storm event" to try to capture the "first flush". For the purpose of this document, a grab sample is defined as a single sample manually collected at one location during a short time period. This section outlines the procedures that should be followed for safely accessing the outfalls and collecting a representative "first flush" stormwater sample.

As defined in Section 7.2.2 of AZG2021-002, a qualifying storm event is an event that results in an amount of rainfall equal to or greater than 0.1 inches and results in a discharge within the first 24-hours of the event.

2.1 Sampling Schedule

Analytical sampling will occur within the 90 days of receiving the authorization to discharge. Unless otherwise specified by ADEQ, sampling will occur one time per wet season. Wet seasons are as follows.

Winter Wet Season: November 1 – May 31

Summer Wet Season: June 1 – October 31

2.2 Sampling Locations and Parameters

Table 2 contains the parameters, values, and frequency for the outfalls.

Table 2 – Summary of Outfalls and Parameters to Test

Outfall Name	Parameter	Permit Value, Action Limit, SWQS, TMDL/WLA	Frequency
1UW1-01	Selenium	2.1 µg/l Max Daily Discharge Concentration	2x / year (1x / wet season)
1UW4-01	Selenium	2.1 µg/l Max Daily Discharge Concentration	2x / year (1x / wet season)
1UW6-01	Selenium	2.1 µg/l Max Daily Discharge Concentration	2x / year (1x / wet season)
1UW7-01	Selenium	2.1 µg/l Max Daily Discharge Concentration	2x / year (1x / wet season)
2MB-02	Selenium	2.1 µg/l Max Daily Discharge Concentration	2x / year (1x / wet season)

2.3 Recordkeeping Requirements

Records of analytical monitoring information must include the results of each stormwater monitoring event (Stormwater Analytical Monitoring Collection Forms [*Appendix C*]) and laboratory analyses, including all field calibration and maintenance records. All records will be documented and maintained with the SWMP.

Monitoring data must be submitted on an electronic Discharge Monitoring Report (eDMR) via a myDEQ account within 30 days of receiving the laboratory analytical data. Copies of the analytical test results will be maintained with the facility records.

If there is no data for a specific wet season, the reporting through myDEQ is as follows:

Winter Wet due June 30th

Summer Wet due November 30th

2.4 Event Planning and Preparation

1. Review weather forecasts in anticipation of a “qualifying storm event”.
2. Review how to safely access each outfall. Descriptions of access to the stormwater sampling locations (outfalls) are provided in Section 1.4.1 of this document.
3. Collect the materials listed in the following section prior to arriving at the collection sites.

2.5 Monitoring Equipment and Instrumentation

The following equipment shall be collected prior to arriving at each sampling outfall:

☐ Thermo Scientific Nalgene Storm Water Sampler (or similar ADEQ-compliance equivalent) *for passive sampling collection*

☐ Sample collection containers for each outfall (such as 40 ml sterile glass vials (no preservatives with silicone topper lids) *for active sampling collection*

☐ Stormwater Analytical Monitoring Collection Forms (see Appendix C)

☐ Personal Protective Equipment (PPE)

☐ Chain-of-Custody (COC) forms (may be provided by laboratory) and seals

☐ Field preservation supplies (ice, lab-supplied chemicals).

☐ Sample Preservation compounds (if needed)

☐ Cooler for ice and sample transport

☐ A temperature blank for each cooler

☐ Traffic Control Equipment (cones, signs, barricades, light bar, etc.)

☐ Camera (or Cell Phone with Camera)

☐ pH paper (may be supplied by laboratory)

☐ Hand sanitizer

☐ Box of powder-free nitrile gloves

☐ Box of resealable plastic bags

☐ Ladle used for sample collection

☐ Blank sample labels

☐ Field notebook

☐ Clipboard

☐ Flashlight

☐ Other (e.g., monitoring instruments; describe): _____

Monitoring instruments and equipment (including the field instruments for measuring pH, total dissolved solids, and temperature) will be calibrated prior to sampling and maintained in accordance with the manufacturer's recommendations which generally consist of the following:

- Turn on the power to the meter.
- Rinse electrode with distilled water.
- Submerge the rinsed electrode into buffer solution.
- Press the calibrate button and/or follow instructions.
- Ensure the instrument has been calibrated before use.

2.3 Sampling Procedures & Methods

Analytical monitoring shall be conducted using approved test methods in accordance with A.A.C. R18-9-A905(B).

All analysis will be completed by the testing laboratory. The testing laboratory may provide sample containers and labels and may also provide information about required sample preservation and sample delivery methods. The testing laboratory should also be consulted to determine the appropriate sample volume required for each analyte. All laboratory analysis must be conducted according to test procedures specified in 40 CFR 136.

As mentioned earlier, all required monitoring will be performed on a storm event that results in a discharge from the outfall ("qualifying storm event") and collected within the first 30 minutes of the first flush runoff flow. This storm event must follow the preceding measurable storm event by at least 72 hours (3 calendar days). The 72-hour (3 day) storm

interval does not apply if Mohave County is able to document that less than a 72-hour interval is representative for local storm events during the sampling period.

Any missed monitoring events will be documented in the SWMP by including a Stormwater Sample Collection Form with applicable details/description of the event.

While Active Monitoring may be better for active rain events, but Mohave County may choose to use Passive Monitoring as necessary if it is more convenient. Both Active and Passive Sampling techniques are outlined below.

2.3.1 Active Sampling Method

The following procedures will be used to collect a manual grab sample (sample) at each of the outfall locations identified in Section 1.4 of this SAP:

1. Review weather forecasts in anticipation of a “qualifying storm event”.
2. Photograph flow discharging the site at the time of collection with time/date stamp.
3. Collect a sample of stormwater at the downstream side of the outfall location directly from the outfall structure within 30 minutes of a “qualifying storm event”.
    a. Rinse collecting equipment with site water.
    b. Collect sample from the center of flowing water directly from the outfall, if possible, avoiding uncharacteristic debris.
    c. Bring sample to a clean location for transference to the collection container.
    d. Remove sample container lid, ensuring that you do not contaminate the neck, lid or inside of the container with fingers, particles or dripping water.
    e. Fill container to the proper volume as determined by the testing laboratory and secure the lid. If necessary, repeat step “i" and “ii” until the required volume is obtained. The required volume will be predetermined by the laboratory.
    f. If a preservative is to be used, once the appropriate volume has been achieved, mix the preservative through the sample by rotating the container top to bottom.
    g. Secure the sample lid and remove any dirt or debris from the outside of the container.
4. Complete the sample label provided by the testing laboratory with waterproof ink and adhere to sample container. Ensure that the following information is included on the label.
    a. Sample identifier (e.g.: 1UW1-01_YYMMDD)
    b. Sampler initials
    c. Sample collection date/time
    d. Type of preservation used, if any.
5. Photograph the collected sample with the sample label visible.
6. Complete field documentation using the Stormwater Analytical Monitoring Collection Form (*Appendix C*).
7. Complete the example chain of custody (COC) form found in *Appendix D*. If preservation of the samples is needed, follow all instructions given by the laboratory for sample preservation.
8. Deliver sample promptly (typically within 5-hours) to the laboratory that will be performing the analysis, along with a list of analytes being tested for.
9. Relinquish the samples to the laboratory personnel. Sign and date COC forms.
10. Review local rain gage information to verify that the storm event is a “qualifying storm event”.

2.3.2 Passive Sampling Method

The Nalgene® Storm Water Sampler (for ADEQ-compliant equivalent) is a convenient and affordable device for collecting storm water grab samples in compliance with ADEQ sampling requirements (visit www.thermoscientific.com/stormwater and view details and demonstrations). It provides a sampling method where the sampler is no longer required to standing in the rain waiting for water to flow or missed sampling events.

The sampling kit can be re-used many times after it is initially positioned in an outfall where it will collect stormwater runoff. Samplers are disposable, and a floating ball valve automatically seals off the sample collection port when full. The sampler is designed to collect a full liter of sample within the first 30 minutes of a qualifying rain event, and it prevents co-mingling with later run-off or volatile analyte loss. No decontamination is required.

As part of the monitoring process, Mohave County may install passive samplers within culverts at the listed outfall locations. These samplers may be used to collect storm water under the following conditions.

1. The rainfall event is considered to be a “qualifying storm event”.
2. The sampler will provide a sufficient volume of water to satisfy the testing requirements predetermined by the testing laboratory.
3. The sample can be retrieved such that the sample can be delivered to the laboratory within the required timeframe dictated by the testing laboratory (typically within 5 hours of collection).

In the event that the above conditions are satisfied, the passive sampling procedures are as follows.

1. Review weather forecasts in anticipation of a “qualifying storm event”.
2. If actively flowing, photograph flow discharging the site at the time of collection with time/date stamp.
3. When it is safe to do so,
    a. Retrieve the passive stormwater sampler
    b. Bring sampler to a clean location for transference to the collection container.
    c. Remove sampler container lid, ensuring that you do not contaminate the neck, lid or inside of the container with fingers, particles or dripping water.
    d. Fill collection container to the proper volume as determined by the testing laboratory and secure the lid. The required volume will be predetermined by the laboratory.
    e. If a preservative is to be used, once the appropriate volume has been achieved, mix the preservative through the sample by rotating the container top to bottom.
    f. Secure the sample lid and remove any dirt or debris from the outside of the container.

a. Complete the sample label provided by the testing laboratory with waterproof ink and adhere to sample container. Ensure that the following information is included on the label.
    a. Sample identifier (e.g.: 1UW1-01_YYMMDD)
    b. Sampler initials
    c. Sample collection date/time
    d. Type of preservation used, if any.
4. Photograph the collected sample with the sample label visible.
5. Complete field documentation using the Stormwater Analytical Monitoring Collection Forms (*Appendix C*).
6. Complete the COC form found in *Appendix D*.
7. If preservation of the samples is needed, follow all instructions given by the laboratory for sample preservation.
8. Deliver sample promptly (typically within 5-hours) to the laboratory that will be performing the analysis, along with a list of analytes being tested for.
9. Relinquish the samples to the laboratory personnel. Sign and date COC forms.
10. Review local rain gage information to verify that the storm event is a “qualifying storm event”.

2.3.6 Field Documentation

The following information at a minimum will be recorded on the Stormwater Analytical Monitoring Collection Forms which can be found in *Appendix C*.

- Names of personnel participating in event
- Description of weather conditions
- Estimated duration (in hours) of the rainfall event
- Estimated rainfall total (in inches) for that rainfall event and source
- Date of the previous measurable storm event
- Field instrument calibration information
- Field parameter measurements (see partial list below)
- Estimated rainfall/storm duration
- (optional) Stream flow
- Field filtration methods used
- Sample location and description (outfall or other)
- Date and time of sample collection
- Type of sample (grab, discrete, manual, auto sampler)
- Observations of sampling procedures and conditions at the time of sampling
- Field observations and description of problems encountered or changes made from the plan
- Sample identification name
- Field observations relevant to sample integrity
- Rainfall measurement in inches
- QC samples and sample names if taken for the event
- Other (describe):

The following field parameters will be measured and recorded at the time of sample collection:

☐ Sample Temperature ☐ Electrical Conductivity ☐ pH
☐ Turbidity ☐ Flow Rate

2.3.5 Safety Procedures

- Sampling personnel shall wear appropriate personal protective equipment (PPE) when collecting samples. This includes, but is not limited to, close toed shoes, safety vest, and gloves at the time of collection. If there is the potential for coming into contact with hazardous materials, then chemical resistant gloves shall be worn.
- Personnel should not collect a sample if there is lightning in the area and should remain at a safe distance from rapidly moving water, keeping in mind that water levels in washes and canals can rise quickly during a storm event.
- If personnel are working close to or in a roadway to collect a sample, traffic cones should be placed in the roadway to ensure an adequate distance is kept between personnel and oncoming traffic. Vehicle hazard lights will be activated and, if equipped, the vehicle lightbar will be turned on.
- If, at any time, the sampling personnel feel that the sample cannot be collected safely, activities should immediately be stopped, and personnel should move to a safe location.

2.3.6 Adverse Climate Conditions

Sampling of a qualifying storm event is not required during adverse climatic conditions. Adverse climatic conditions which prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, electrical storms, etc.).

Information on the conditions that prevented sampling shall be reported to ADEQ. Where additional stormwater sampling is required, Mohave County shall continue to monitor subsequent storm events during the monitoring season and perform storm water sampling of a qualifying storm event if another occurs during the same wet season.

2.3.7 Sample Container Labeling and Preservation

As discussed in Section 2.3.5, each sample should be assigned a unique identifier by the sampling team. The unique identifier may consist of the sample location name (e.g., Outfall 1UW1-01) followed by a date suffix such as YYMMDD. The unique identifier will be recorded on the COC form and the sample container.

Each container in the sample must be labeled with the unique identifier as well as the following minimum information:

- Sampler initials
- Sample collection date
- Sample collection time

The laboratory will provide labels to be placed on each of the sample containers. The laboratory *may* affix the labels in advance. Self-adhesive labels will be secured to each sample container. *Samples should be immediately placed on ice for transport to the designated lab.*

Procedures necessary to properly preserve samples will be provided by the laboratory that performs the analysis.

2.3.9 Sample Preparation and Transport

Specific procedures and instruction for proper sample cooler packing and transport are critical in maintaining sample integrity. The following section contains guidelines for sample packaging and transport.

The following procedures will be used when preparing the sample cooler(s) for shipment or delivery to the laboratory:

- All labels remaining on the exterior of the cooler will be removed
- A temperature blank will be placed in the cooler (if provided or available)
- Sample bottles will be packaged per manufacturer and lab instructions to prevent breakage during shipment;
- All ice will be bagged in zip-locked plastic bags (confirm with specific lab)

When placing the samples in the cooler, ensure that the COC form is in a sealed watertight bag taped to the inside of the lid. Sample coolers will be transported to the certified laboratory by the sampler.

2.3.10 Relinquishment

The assigned Stormwater Team Member will sign over the COC form to the receiving entity (e.g., laboratory personnel or courier), and the COC form will be signed and dated with the time of relinquishment.

Once the cooler(s) is/are delivered to the laboratory, the cooler's contents will be checked against information on the COC form. The condition, temperature, and appropriate preservation of samples will be checked and documented on the COC form by the lab. Any discrepancies between the COC and the sample conditions at the time of delivery to the laboratory will be communicated to the Stormwater Manager for proper resolution and documented in lab records.

2.3.11 Receipt and Review of Lab Results

The lab's results report will generally be delivered to the Facility's assigned POC who will either disseminate or evaluate the results report. Following evaluation of the results report, refer to the SWMP for the appropriate response or follow-up action. Lab results will be attached to this document in *Appendix F*.

2.3.12 Analytical Monitoring Record Keeping

Records of monitoring information must include the results of each stormwater monitoring event using the Stormwater Analytical Monitoring Collection Forms found in *Appendix C*, and laboratory analyses.

All results, including the sample collection form, will be incorporated into this document or Storm Water Management Plan. Records will be retained for a period of 3 years following the expiration of the current Permit. Should the results indicate that the site is noncompliant, the Arizona Department of Environmental Quality will be notified in writing at the following address within 5 business days.

Arizona Department of Environmental Quality
1110 W. Washington Street
Mail Code 5515 B-1
Phoenix, AZ 85007
FAX 602.771.4505

If there is a danger to human health, notification can be made via phone to ADEQ's Phone Number: 602.771.2330.

3.0 CHARACTERIZATION MONITORING

All MS4s are required to perform Stormwater Characterization Monitoring as described in this section. ADEQ may notify the MS4 in writing of any additional monitoring requirements to ensure protection of receiving water quality or to ensure permit compliance. Additional monitoring will be required if there is evidence that a pollutant is being discharged by the permittee that may be causing or contributing to exceedances of a water quality standard. Any such notice will provide an explanation of the reasons for the monitoring, locations, and parameters to be monitored, frequency and period of monitoring, sample types, and reporting requirements.

The water quality parameters, analytical methods and related method detection limits required for the one-time stormwater characterization monitoring are provided in *Attachment A.*

In general, these parameters consist of the following:

- Metals
- Inorganics
- Volatile Organic Compounds (VOCs)
- Semi-Volatile Organic Compounds (SVOCs)
- SVOCs – Base/Neutrals
- Polychlorinated Biphenyl's (PCBs)
- Pesticides

The County will assume a 1:1 total dissolved ratio when analyzing metals for purposes of reporting and comparison with any Surface Water Quality Standard (SWQS), if applicable. It should be noted that the constituents presented are particular to those required for Characterization Monitoring. Any additional analytical monitoring constituents as required by ADEQ will be tested for as part of this process. These additional constituents will be added to those compiled in *Appendix A*.

3.1 CHARACTERIZATION STORMWATER SAMPLING PROCEDURES AND SCHEDULE

Mohave County shall conduct stormwater characterization monitoring of discharges from the MS4 at the outfalls identified in Section 1.4 of this document using the Stormwater Characterization Monitoring Collection Forms in *Appendix B*. This form requires collection of the same data that is listed in Section 2.3.6 of this document. *Mohave County shall follow the active or passive sampling procedures as laid out in Section 2.3 of this document.*

Characterization Monitoring will occur one (1) time within the first three and one-half (3.5) years of the effective date of the permit; new permittees shall sample stormwater discharges from the MS4 within the first three and one-half (3.5) years after obtaining permit coverage.

Mohave County shall conduct the required stormwater characterization monitoring for qualifying storm events. A qualifying storm event is rainfall in the amount of 0.1 inches or more and a resulting discharge, within the first 24 hours of the event.

Mohave County shall design stormwater sampling procedures to include the "first flush" (first 30 minutes of storm event discharge) of a qualifying storm event, to the maximum extent practicable.

Note: *The characterization monitoring effort may also include visual monitoring. If performed, the visual monitoring will be documented on the Visual Monitoring Form Provided in Appendix E.*

3.2 CHARACTERIZATION MONITORING SAMPLING LOCATIONS

Mohave County will conduct characterization monitoring at the three (3) outfalls identified in Section 1.4 of this document, which are representative of stormwater pollution from the MS4 for stormwater characterization monitoring. The identified outfalls for this one-time characterization monitoring must be reported in a discharge monitoring report (DMR), including the identification of the land use for the area served by the outfall from the following three uses:

residential, commercial, industrial. Mohave County's selected outfalls are representative of each MS4 and all discharge to the Colorado River (Lake Mohave). *Figures 2* and *3* provided in this document show the recommended outfalls where characterization monitoring should take place.

3.3 Characterization Monitoring Record Keeping

Records of monitoring information must include the results of each stormwater monitoring event using the Stormwater Characterization Monitoring Collection Forms provided in *Appendix B*, and laboratory analyses.

All results must be submitted within 30 days of receipt from the testing laboratory on an electronic Discharge Monitoring Report (eDMR) via a myDEQ account as prescribed in the 2020 CGP, Part 7.5(3)(d). All results, including the sample collection form, will be incorporated into this document or Storm Water Management Plan. Records will be retained for a period of 3 years following the expiration of the current Permit.

Should the results indicate that the site is noncompliant, ADEQ will be notified in writing at the following address within 5 business days.

Arizona Department of Environmental Quality
1110 W. Washington Street
Mail Code 5515 B-1
Phoenix, AZ 85007
FAX 602.771.4505

If there is a danger to human health, notification can be made via phone to ADEQ's Phone Number: 602.771.2330.

3.4 Stormwater Characterization DMR

All parameters listed in *Appendix A* of this document shall be monitored and tested by the laboratory described in Section 4.0 of this SAP. ADEQ will provide an electronic DMR in myDEQ for each permittee to record their stormwater characterization monitoring. All parameters monitored must be reported to ADEQ via the DMR provided in myDEQ.

1. The permittee shall include the sampled qualifying storm event data in the DMR, including the following:
   a. Date of the qualifying storm event; and
   b. Amount of rainfall (in inches) in the drainage area for each stormwater monitoring location (outfall) identified in Section 1.4 of this document.
2. The DMR shall be submitted within 30 days after receiving laboratory results from characterization monitoring.
3. The DMR will be made available for the first three and one-half (3.5) years after obtaining permit coverage. The permittee shall retain records of all stormwater monitoring information with the SWMP.
4. In the event no samples are collected during a wet season, the DMR indicating "no data" using the appropriate No Discharge Information (NODI) code(s) will be submitted.

4.0 ANALYTICAL METHODS

Other than parameters required to be sampled at the time of sample collection (e.g., field parameters), all samples shall be analyzed by a laboratory that is licensed by the Arizona Department of Health Service (ADHS) Office of Laboratory Licensure and Certification. Identification of the analytical methods and related limits of detection (if applicable) for each parameter is required. Samples shall be analyzed using analytical methods with a limit of quantitation (LOQ) that is at or below the routine analytical concentrations, ELGs or other criteria specified in this permit. If all methods have LOQs higher than the specific criteria, samples shall be analyzed using the analytical method with the lowest LOQ.

All laboratory analyses shall be conducted according to test procedures specified in 40 CFR 136, unless other test procedures have been specified in this general permit. This requirement does not apply to parameters that require analysis at the time of sample collection as long as the testing methods used are approved by ADHS. The permittee may conduct field analysis of turbidity if the permittee has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to properly perform the field analysis.

NOTE: *Reporting limits and sample results should be reported to the number of significant figures available or required on the e-DMR generated by myDEQ.*

4.1 Analytical Methods (General)

The values (action level and SWQS) of some metals are dependent on water hardness. For these parameters, permittees must determine the hardness of the receiving water or have the laboratory analyze the hardness of the stormwater sample in accordance with Part 6.2.1. The harness value would then be inserted into a formula provided for the specific metal and designated use in A.A.C. R18-11, Appendix A, Tables 2 through Table 9.

Surface water data collected by a third party for hardness (provided the data is credible, scientifically defensible and is representative of current site conditions) is acceptable to use, and should be thoroughly documented.

A hardness calculator (Microsoft Excel Spreadsheet) is available to calculate the value (action level or SWQS) to use depending on the specific metal and designated use of the receiving water: http://www.azdeq.gov/node/525. To use the spreadsheet, input the hardness value into the field named "Enter Hardness Value (mg/L)." The values (action level or SWQS) will automatically calculate based on the entered hardness value. The e-DMR entered through myDEQ will also calculate the action level or SWQS when the hardness is entered into the e-DMR for a specific metals.

To determine the Designated Use of the receiving water(s):

1. Access eMaps here: http://gisweb.azdeq.gov/arcgis/emaps/?topic=assessed
2. Under Water Quality, Select Streams – Designated Use layer to make it visible
3. Click on the layer to select it (turns bold)
4. Click on Identify tool along the top, and
5. Click on the water body line feature to see its attributes
6. Values will either be 'Null' (No) or 'Y' for Yes. This is the Designated Use of that specific receiving water.

Reported results must be suitable for comparison to Arizona SWQS established in Arizona Administrative Code (A.A.C.) R18-11 Article 1.

4.2 Analytical Methods (Selenium Specific)

4.2.1 Receiving Water and TMDL Status

The Colorado River (Lake Havasu reach) is the receiving water for stormwater discharges from the Mohave County Urbanized Area MS4. This segment is listed as impaired for selenium on the State of Arizona's §303(d) list and the corresponding EPA Integrated Report.

As of November 2025, no EPA-approved Total Maximum Daily Load (TMDL) has been developed for selenium for the Colorado River at or near Lake Havasu City. ADEQ identifies selenium impairment for several lower-Colorado River assessment units but notes that TMDL development for selenium has not yet been completed. Similarly, the California Regional Water Quality Control Board (Region 7) lists the same mainstem reach (Lake Havasu Dam to Imperial Dam) as Category 5A – TMDL Needed, confirming that no selenium TMDL or waste-load allocations (WLAs) currently apply to the MS4.

Accordingly, the MS4 SAP and SWMP will track ADEQ and EPA Region 9 updates and incorporate any future TMDL requirements once established. Until then, the County will continue to monitor selenium under its pollutant load assessment framework to support potential future TMDL or delisting actions.

4.2.2 Analytical Methods and Detection Limits for Selenium

Analyte: Selenium (Se) – total recoverable and dissolved fractions
Matrix: Stormwater discharge and receiving surface water

Method	Technique	Typical MDL (µg/L)	Reference/Notes
EPA 200.8	ICP–MS	≤ 0.5	Preferred method for total recoverable/dissolved Se; low-µg/L detection.
EPA 1638	Clean ICP–MS	≤ 0.5	Ultra-clean method for ambient waters; suitable when very low MDLs are required.
SM 3113B	Graphite Furnace AAS	1–2	Acceptable alternative if ICP–MS unavailable.
EPA 7742	AAS, borohydride reduction	~3	Used only if meets project detection limit goals.

Note: Actual laboratory method detection limits (MDLs) are lab-specific and must be demonstrated per 40 CFR Part 136, Appendix B (Rev. 2). The laboratory must provide evidence that its MDL and Minimum Level (reporting limit) meet or exceed the target values above.

4.2.3 Sample Collection and Preservation

- Collect samples for total recoverable and/or dissolved selenium (filter <0.45 µm for dissolved).
- Preserve with nitric acid to pH < 2 and hold at ≤ 6 °C.
- Follow EPA clean-hands/dirty-hands protocols when using EPA 1638.

4.2.4 Quality Control

- Include field blanks, matrix spikes, and duplicates as per the selected method.
- Maintain laboratory documentation of MDL and calibration verification data.

4.2.5 Performance Objective and Reporting

Analytical methods must achieve a target MDL ≤ 0.5 µg/L and a reporting limit ≤ 2 µg/L to ensure results are meaningful relative to Arizona surface-water quality standards and selenium assessment thresholds. If a TMDL for selenium is established in the future, laboratory methods and reporting limits will be updated to meet any more stringent requirements.

4.3 Additional Characterization Monitoring Requirements

As discussed in Section 3.0 of this SAP, characterization samples will be analyzed by the testing laboratory for all parameters required by ADEQ's Stormwater Characterization Monitoring Requirements. Each sample will be tested for constituents in the following classes: metals, inorganics, VOC's, semi-VOC's- acid extractable, semi-VOC's-bases/neutrals, and PCB's/pesticides. A complete list of constituents being tested can be found in *Appendix A*.

Note: The constituents presented are particular to those required for Characterization Monitoring. Any additional analytical monitoring constituents as required by ADEQ will be tested for as part of this process. These additional constituents will be added to those compiled in Appendix A.

4.3 LABORATORY INFORMATION

Table 3 - Laboratory Information

Legend
602-324-6100
17631 N 25th Avenue
Phoenix Arizona 85023

APPENDIX A – STORMWATER CHARACTERIZATION MONITORING PARAMETERS

Stormwater Characterization Monitoring Parameters

All permittees shall conduct stormwater characterization monitoring for the parameters listed below:

Parameter	Units	Monitoring Frequency	Monitoring Type
Metals			
Antimony	µg/L	1x during first 3.5 years of permit term	Discrete
Barium	µg/L	1x during first 3.5 years of permit term	Discrete
Beryllium	µg/L	1x during first 3.5 years of permit term	Discrete
Cadmium	µg/L	1x during first 3.5 years of permit term	Discrete
Nickel	µg/L	1x during first 3.5 years of permit term	Discrete
Mercury	µg/L	1x during first 3.5 years of permit term	Discrete
Silver	µg/L	1x during first 3.5 years of permit term	Discrete
Thallium	µg/L	1x during first 3.5 years of permit term	Discrete
Inorganics			
Cyanide	µg/L	1x during first 3.5 years of permit term	Discrete
Volatile Organic Compounds (VOCs)			
Acrolein	µg/L	1x during first 3.5 years of permit term	Discrete
Acrylonitrile	µg/L	1x during first 3.5 years of permit term	Discrete
Benzene	µg/L	1x during first 3.5 years of permit term	Discrete
Carbon tetrachloride	µg/L	1x during first 3.5 years of permit term	Discrete
Chlorobenzene	µg/L	1x during first 3.5 years of permit term	Discrete
Dibromochloromethane	µg/L	1x during first 3.5 years of permit term	Discrete
Chloroethane	µg/L	1x during first 3.5 years of permit term	Discrete
2-chloroethylvinyl ether	µg/L	1x during first 3.5 years of permit term	Discrete
Chloroform	µg/L	1x during first 3.5 years of permit term	Discrete
Bromodichloromethane	µg/L	1x during first 3.5 years of permit term	Discrete
1,2-dichlorobenzene	µg/L	1x during first 3.5 years of permit term	Discrete
1,3-dichlorobenzene	µg/L	1x during first 3.5 years of permit term	Discrete
1,4-dichlorobenzene	µg/L	1x during first 3.5 years of permit term	Discrete
1,1-dichloroethane	µg/L	1x during first 3.5 years of permit term	Discrete
1,2-dichloroethane	µg/L	1x during first 3.5 years of permit term	Discrete
1,3-dichloropropylene	µg/L	1x during first 3.5 years of permit term	Discrete
Ethylbenzene	µg/L	1x during first 3.5 years of permit term	Discrete
Bromomethane	µg/L	1x during first 3.5 years of permit term	Discrete
Chloromethane	µg/L	1x during first 3.5 years of permit term	Discrete
Methylene chloride	µg/L	1x during first 3.5 years of permit term	Discrete
1,1,2,2-tetrachloroethane	µg/L	1x during first 3.5 years of permit term	Discrete
Tetrachloroethylene	µg/L	1x during first 3.5 years of permit term	Discrete
Toluene	µg/L	1x during first 3.5 years of permit term	Discrete
1,2-transdichloroethylene	µg/L	1x during first 3.5 years of permit term	Discrete
1,1,1-trichloroethane	µg/L	1x during first 3.5 years of permit term	Discrete
1,1,2-trichloroethane	µg/L	1x during first 3.5 years of permit term	Discrete
Trichloroethylene	µg/L	1x during first 3.5 years of permit term	Discrete
Vinyl chloride	µg/L	1x during first 3.5 years of permit term	Discrete
Xylene	µg/L	1x during first 3.5 years of permit term	Discrete

Parameter	Units	Monitoring Frequency	Monitoring Type
Semi-VOCs – Acid Extractable			
2-chlorophenol	µg/L	1x during first 3.5 years of permit term	Discrete
2,4-dichlorophenol	µg/L	1x during first 3.5 years of permit term	Discrete
2,4-dimethylphenol	µg/L	1x during first 3.5 years of permit term	Discrete
4,6-dinitro-o-cresol	µg/L	1x during first 3.5 years of permit term	Discrete
2,4-dinitrophenol	µg/L	1x during first 3.5 years of permit term	Discrete
2-nitrophenol	µg/L	1x during first 3.5 years of permit term	Discrete
4-nitrophenol	µg/L	1x during first 3.5 years of permit term	Discrete
p-chloro-m-cresol	µg/L	1x during first 3.5 years of permit term	Discrete
Pentachlorophenol	µg/L	1x during first 3.5 years of permit term	Discrete
Phenol	µg/L	1x during first 3.5 years of permit term	Discrete
2,4,6-trichlorophenol	µg/L	1x during first 3.5 years of permit term	Discrete
Semi-VOCs – Base/Neutrals			
Acenaphthene	µg/L	1x during first 3.5 years of permit term	Discrete
Acenaphthylene	µg/L	1x during first 3.5 years of permit term	Discrete
Anthracene	µg/L	1x during first 3.5 years of permit term	Discrete
Benz(a)anthracene	µg/L	1x during first 3.5 years of permit term	Discrete
Benzo(a)pyrene	µg/L	1x during first 3.5 years of permit term	Discrete
Benzo(b)fluoranthene	µg/L	1x during first 3.5 years of permit term	Discrete
Benzo(g,h,i)perylene	µg/L	1x during first 3.5 years of permit term	Discrete
Benzo(k)fluoranthene	µg/L	1x during first 3.5 years of permit term	Discrete
Chrysene	µg/L	1x during first 3.5 years of permit term	Discrete
Dibenzo(a,h)anthracene	µg/L	1x during first 3.5 years of permit term	Discrete
3,3'-dichlorobenzidine	µg/L	1x during first 3.5 years of permit term	Discrete
Diethyl phthalate	µg/L	1x during first 3.5 years of permit term	Discrete
Dimethyl phthalate	µg/L	1x during first 3.5 years of permit term	Discrete
Di-n-butyl phthalate	µg/L	1x during first 3.5 years of permit term	Discrete
2,4-dinitrotoluene	µg/L	1x during first 3.5 years of permit term	Discrete
2,6-dinitrotoluene	µg/L	1x during first 3.5 years of permit term	Discrete
Di-n-octyl phthalate	µg/L	1x during first 3.5 years of permit term	Discrete
1,2-diphenylhydrazine (as azobenzene)	µg/L	1x during first 3.5 years of permit term	Discrete
Fluoranthene	µg/L	1x during first 3.5 years of permit term	Discrete
Fluorene	µg/L	1x during first 3.5 years of permit term	Discrete
Hexachlorobenzene	µg/L	1x during first 3.5 years of permit term	Discrete
Hexachlorobutadiene	µg/L	1x during first 3.5 years of permit term	Discrete
Hexachlorocyclopenta di ene	µg/L	1x during first 3.5 years of permit term	Discrete
Hexachloroethane	µg/L	1x during first 3.5 years of permit term	Discrete
Indeno(1,2,3-cd)pyrene	µg/L	1x during first 3.5 years of permit term	Discrete
Isophorone	µg/L	1x during first 3.5 years of permit term	Discrete
Naphthalene	µg/L	1x during first 3.5 years of permit term	Discrete
Nitrobenzene	µg/L	1x during first 3.5 years of permit term	Discrete
N-nitrosodimethylamine	µg/L	1x during first 3.5 years of permit term	Discrete
N-nitrosodi-npropylamine	µg/L	1x during first 3.5 years of permit term	Discrete

Parameter	Units	Monitoring Frequency	Monitoring Type
N-nitrosodiphenylamine	µg/L	1x during first 3.5 years of permit term	Discrete
Phenanthrene	µg/L	1x during first 3.5 years of permit term	Discrete
Pyrene	µg/L	1x during first 3.5 years of permit term	Discrete
1,2,4-trichlorobenzene	µg/L	1x during first 3.5 years of permit term	Discrete
PCB / Pesticides			
Aldrin	µg/L	1x during first 3.5 years of permit term	Discrete
Alpha-BHC	µg/L	1x during first 3.5 years of permit term	Discrete
Beta-BHC	µg/L	1x during first 3.5 years of permit term	Discrete
Gamma-BHC	µg/L	1x during first 3.5 years of permit term	Discrete
Delta-BHC	µg/L	1x during first 3.5 years of permit term	Discrete
Chlordane	µg/L	1x during first 3.5 years of permit term	Discrete
4,4'-DDT	µg/L	1x during first 3.5 years of permit term	Discrete
4,4'-DDE	µg/L	1x during first 3.5 years of permit term	Discrete
4,4'-DDD	µg/L	1x during first 3.5 years of permit term	Discrete
Dieldrin	µg/L	1x during first 3.5 years of permit term	Discrete
Alpha-endosulfan	µg/L	1x during first 3.5 years of permit term	Discrete
Beta-endosulfan	µg/L	1x during first 3.5 years of permit term	Discrete
Endosulfan sulfate	µg/L	1x during first 3.5 years of permit term	Discrete
Endrin	µg/L	1x during first 3.5 years of permit term	Discrete
Endrin aldehyde	µg/L	1x during first 3.5 years of permit term	Discrete
Heptachlor	µg/L	1x during first 3.5 years of permit term	Discrete
Heptachlor epoxide	µg/L	1x during first 3.5 years of permit term	Discrete
PCB-1242	µg/L	1x during first 3.5 years of permit term	Discrete
PCB-1254	µg/L	1x during first 3.5 years of permit term	Discrete
PCB-1221	µg/L	1x during first 3.5 years of permit term	Discrete
PCB-1232	µg/L	1x during first 3.5 years of permit term	Discrete
PCB-1248	µg/L	1x during first 3.5 years of permit term	Discrete
PCB-1260	µg/L	1x during first 3.5 years of permit term	Discrete
PCB-1016	µg/L	1x during first 3.5 years of permit term	Discrete
Toxaphene	µg/L	1x during first 3.5 years of permit term	Discrete

Notes:

1. The permittee shall include any additional parameters in stormwater sampling as specified by Part 5.0 Water Quality Standards of this permit.
2. The permittee shall collect discrete samples and shall attempt to include the "first flush" (first 30 minutes of stormwater discharge) of a qualifying storm event whenever possible to do so. Auto Sampling equipment may be used, if available.
3. When analyzing for metals, the permittee shall assume a 1:1 total dissolved ratio for purposes of reporting and comparison with SWQS. Alternatively, the permittee may test for dissolved metals if appropriate field filtering is completed. Hardness data must also be collected and used to calculate the corresponding SWQS for certain metals as indicated by SWQS rules.

APPENDIX B – STORMWATER CHARACTERIZATION MONITORING COLLECTION FORMS FOR THREE OUTFALLS

Permit Region	Name	Map ID	Type of Monitoring Needed
Horizon Six	Mockingbird Channel	2MB-02	Analytical AND Characterization
North Lake Havasu	Unnamed Wash 4	1UW4-01	Analytical AND Characterization
North Lake Havasu	Unnamed Wash 7	1UM7-01	Analytical AND Characterization

Stormwater Characterization Monitoring Collection Form

(Complete a separate form for each outfall sampled – need three [3] total)

Facility Sample Information			
Facility Name:	Mohave County	AZPMS4 Auth. No.	
Outfall Name: 1UW4-O1	"Substantially Similar Discharge Point"?	☐ Yes ☐ No (identify substantially identical outfalls):	
General Location: _____ _____ _____ _____ _____ _____		Photo of Site:	

Sampling Personnel Information			
Person(s)/Title(s) collecting sample:			
Email:		Phone:	
Person(s)/Title(s) assisting with sample:			
Email:		Phone:	

Field Sampling Data			
Nature of Discharge: ☐ Rainfall ☐ Snowmelt ☐ Other (explain):			
Date & Time Discharge Began:	Date & Time Sample Collected:	Was the sample taken in the first 30 minutes of the storm? ☐ Yes ☐ No*	* If sample not taken within first 30 minutes, explain why:
Rainfall Amount (inches):	Previous Storm Ended > 72 hours Before Start of This Storm? ☐ Yes ☐ No*	* If previous storm ended less than 72 hours before this storm, explain why sample collected:	

* The 72-hour interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour interval is representative of local storm events during the sampling period.

Field Sampling Data					
Purpose for Sampling	☐ Characterization ☐ Analytical ☐ TMDL Based ☐ ADEQ Request ☐ Other: _____				
Type of Sample	☐ Grab ☐ Discrete ☐ Manual ☐ Passive Sampler ☐ Auto Sampler ☐ Other: _____ ☐ Flow-weighted continuous ☐ Flow-weighted combination For flow-weighted, answer questions below Duration of Storm: Number of Sub-Samples: Time between samples:				
Field Parameter Measurements	pH:	Temperature:	Conductivity:	Turbidity:	Flow Rate:
Field Filtration Methods					
Field Instrument Calibration Data (Auto Sampler)	Date of Last Calibration: _____ Method of Calibration: _____ _____				

Stormwater Characterization Monitoring Collection Form

(Complete a separate form for each outfall sampled – need three [3] total)

Substitute Sample?	☐ No ☐ Yes (identify quarter/year when sample was originally scheduled to be collected):
QC Samples	
Quantity of Sample	Number of Lab Containers_____ or Number of ml _____ (ml)
Unique Sample Identifier (Match Identifier on COC)	
Laboratory Testing Parameters (May be provided by testing lab)	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____
Preservatives Added to Samples	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____

Field Observation Data	
Indicators of Stormwater Pollution Observed? (May be based on Visual Assessment)	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate an Illicit Discharge?	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate a need for Further Investigation?	☐ No ☐ Yes (Describe): _____ _____
Additional Observations of sampling procedures and conditions at the time of sampling:	
Description of problems encountered, or deviations made from the Sampling and Analysis Plan (SAP):	

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."

A. Name:	Randall Hanks	B. Title:	Alert Flood Warning Systems Supervisor
C. Signature:		D. Date Signed:	
Email:		Phone:	

Chain of Custody

Laboratory Name:			
Laboratory Address:		Phone:	
Custodian Name:		Title:	
Custodian Signature:		Date Signed:	
COC Identifier:		(Used as Validation of Information)	
Email:		Phone:	

Stormwater Characterization Monitoring Collection Form

(Complete a separate form for each outfall sampled – need three [3] total)

Facility Sample Information			
Facility Name:	Mohave County	AZPMS4 Auth. No.	
Outfall Name: 1UW7-O1	"Substantially Similar Discharge Point"?	☐ Yes ☐ No (identify substantially identical outfalls):	
General Location: _____ _____ _____ _____ _____ _____		Photo of Site:	

Sampling Personnel Information			
Person(s)/Title(s) collecting sample:			
Email:		Phone:	
Person(s)/Title(s) assisting with sample:			
Email:		Phone:	

Field Sampling Data			
Nature of Discharge: ☐ Rainfall ☐ Snowmelt ☐ Other (explain):			
Date & Time Discharge Began:	Date & Time Sample Collected:	Was the sample taken in the first 30 minutes of the storm? ☐ Yes ☐ No*	* If sample not taken within first 30 minutes, explain why:
Rainfall Amount (inches):	Previous Storm Ended > 72 hours Before Start of This Storm? ☐ Yes ☐ No*	* If previous storm ended less than 72 hours before this storm, explain why sample collected:	

* The 72-hour interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour interval is representative of local storm events during the sampling period.

Field Sampling Data					
Purpose for Sampling	☐ Characterization ☐ Analytical ☐ TMDL Based ☐ ADEQ Request ☐ Other: _____				
Type of Sample	☐ Grab ☐ Discrete ☐ Manual ☐ Passive Sampler ☐ Auto Sampler ☐ Other: _____ ☐ Flow-weighted continuous ☐ Flow-weighted combination For flow-weighted, answer questions below Duration of Storm: Number of Sub-Samples: Time between samples:				
Field Parameter Measurements	pH:	Temperature:	Conductivity:	Turbidity:	Flow Rate:
Field Filtration Methods					
Field Instrument Calibration Data (Auto Sampler)	Date of Last Calibration: _____ Method of Calibration: _____ _____				

Stormwater Characterization Monitoring Collection Form

(Complete a separate form for each outfall sampled – need three [3] total)

Substitute Sample?	☐ No ☐ Yes (identify quarter/year when sample was originally scheduled to be collected):
QC Samples	
Quantity of Sample	Number of Lab Containers_____ or Number of ml _____ (ml)
Unique Sample Identifier (Match Identifier on COC)	
Laboratory Testing Parameters (May be provided by testing lab)	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____
Preservatives Added to Samples	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____

Field Observation Data	
Indicators of Stormwater Pollution Observed? (May be based on Visual Assessment)	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate an Illicit Discharge?	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate a need for Further Investigation?	☐ No ☐ Yes (Describe): _____ _____

Additional Observations of sampling procedures and conditions at the time of sampling:

Description of problems encountered, or deviations made from the Sampling and Analysis Plan (SAP):

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."

A. Name:	Randall Hanks	B. Title:	Alert Flood Warning Systems Supervisor
C. Signature:		D. Date Signed:	
Email:		Phone:	

Chain of Custody

Laboratory Name:			
Laboratory Address:		Phone:	
Custodian Name:		Title:	
Custodian Signature:		Date Signed:	
COC Identifier:		(Used as Validation of Information)	
Email:		Phone:	

Stormwater Characterization Monitoring Collection Form

(Complete a separate form for each outfall sampled – need three [3] total)

Facility Sample Information			
Facility Name:	Mohave County	AZPMS4 Auth. No.	
Outfall Name: 2MB-O2	"Substantially Similar Discharge Point"?	☐ Yes ☐ No (identify substantially identical outfalls):	
General Location: _____ _____ _____ _____ _____ _____		Photo of Site:	

Sampling Personnel Information			
Person(s)/Title(s) collecting sample:			
Email:		Phone:	
Person(s)/Title(s) assisting with sample:			
Email:		Phone:	

Field Sampling Data			
Nature of Discharge: ☐ Rainfall ☐ Snowmelt ☐ Other (explain):			
Date & Time Discharge Began:	Date & Time Sample Collected:	Was the sample taken in the first 30 minutes of the storm? ☐ Yes ☐ No*	* If sample not taken within first 30 minutes, explain why:
Rainfall Amount (inches):	Previous Storm Ended > 72 hours Before Start of This Storm? ☐ Yes ☐ No*	* If previous storm ended less than 72 hours before this storm, explain why sample collected:	

* The 72-hour interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour interval is representative of local storm events during the sampling period.

Field Sampling Data					
Purpose for Sampling	☐ Characterization ☐ Analytical ☐ TMDL Based ☐ ADEQ Request ☐ Other: _____				
Type of Sample	☐ Grab ☐ Discrete ☐ Manual ☐ Passive Sampler ☐ Auto Sampler ☐ Other: _____ ☐ Flow-weighted continuous ☐ Flow-weighted combination For flow-weighted, answer questions below Duration of Storm: Number of Sub-Samples: Time between samples:				
Field Parameter Measurements	pH:	Temperature:	Conductivity:	Turbidity:	Flow Rate:
Field Filtration Methods					
Field Instrument Calibration Data (Auto Sampler)	Date of Last Calibration: _____ Method of Calibration: _____ _____				

Stormwater Characterization Monitoring Collection Form

(Complete a separate form for each outfall sampled – need three [3] total)

Substitute Sample?	☐ No ☐ Yes (identify quarter/year when sample was originally scheduled to be collected):
QC Samples	
Quantity of Sample	Number of Lab Containers_____ or Number of ml _____ (ml)
Unique Sample Identifier (Match Identifier on COC)	
Laboratory Testing Parameters (May be provided by testing lab)	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____
Preservatives Added to Samples	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____

Field Observation Data	
Indicators of Stormwater Pollution Observed? (May be based on Visual Assessment)	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate an Illicit Discharge?	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate a need for Further Investigation?	☐ No ☐ Yes (Describe): _____ _____

Additional Observations of sampling procedures and conditions at the time of sampling:

Description of problems encountered, or deviations made from the Sampling and Analysis Plan (SAP):

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."

A. Name:	Randall Hanks	B. Title:	Alert Flood Warning Systems Supervisor
C. Signature:		D. Date Signed:	
Email:		Phone:	

Chain of Custody

Laboratory Name:			
Laboratory Address:		Phone:	
Custodian Name:		Title:	
Custodian Signature:		Date Signed:	
COC Identifier:		(Used as Validation of Information)	
Email:		Phone:	

APPENDIX C – STORMWATER ANALYTICAL MONITORING COLLECTION FORMS FOR FIVE OUTFALLS

Stormwater Analytical Monitoring Collection Form

(Complete a separate form for each outfall sampled – need five [5] total)

Facility Sample Information			
Facility Name:	Mohave County	AZPMS4 Auth. No.	
Outfall Name: 1UW1-O1	"Substantially Similar Discharge Point"?	☐ Yes ☐ No (identify substantially identical outfalls):	
General Location: _____ _____ _____ _____ _____ _____		Photo of Site:	

Sampling Personnel Information			
Person(s)/Title(s) collecting sample:			
Email:		Phone:	
Person(s)/Title(s) assisting with sample:			
Email:		Phone:	

Field Sampling Data			
Nature of Discharge: ☐ Rainfall ☐ Snowmelt ☐ Other (explain):			
Date & Time Discharge Began:	Date & Time Sample Collected:	Was the sample taken in the first 30 minutes of the storm? ☐ Yes ☐ No*	* If sample not taken within first 30 minutes, explain why:
Rainfall Amount (inches):	Previous Storm Ended > 72 hours Before Start of This Storm? ☐ Yes ☐ No*	* If previous storm ended less than 72 hours before this storm, explain why sample collected:	

* The 72-hour interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour interval is representative of local storm events during the sampling period.

Field Sampling Data					
Purpose for Sampling	☐ Characterization ☐ Analytical ☐ TMDL Based ☐ ADEQ Request ☐ Other: _____				
Type of Sample	☐ Grab ☐ Discrete ☐ Manual ☐ Passive Sampler ☐ Auto Sampler ☐ Other: _____ ☐ Flow-weighted continuous ☐ Flow-weighted combination For flow-weighted, answer questions below Duration of Storm: Number of Sub-Samples: Time between samples:				
Field Parameter Measurements	pH:	Temperature:	Conductivity:	Turbidity:	Flow Rate:
Field Filtration Methods					
Field Instrument Calibration Data (Auto Sampler)	Date of Last Calibration: _____ Method of Calibration: _____ _____				

Stormwater Analytical Monitoring Collection Form

(Complete a separate form for each outfall sampled – need five [5] total)

Substitute Sample?	☐ No ☐ Yes (identify quarter/year when sample was originally scheduled to be collected):
QC Samples	
Quantity of Sample	Number of Lab Containers_____ or Number of ml _____ (ml)
Unique Sample Identifier (Match Identifier on COC)	
Laboratory Testing Parameters (May be provided by testing lab)	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____
Preservatives Added to Samples	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____

Field Observation Data	
Indicators of Stormwater Pollution Observed? (May be based on Visual Assessment)	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate an Illicit Discharge?	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate a need for Further Investigation?	☐ No ☐ Yes (Describe): _____ _____
Additional Observations of sampling procedures and conditions at the time of sampling:	
Description of problems encountered, or deviations made from the Sampling and Analysis Plan (SAP):	

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."

A. Name:	Randall Hanks	B. Title:	Alert Flood Warning Systems Supervisor
C. Signature:		D. Date Signed:	
Email:		Phone:	

Chain of Custody

Laboratory Name:			
Laboratory Address:		Phone:	
Custodian Name:		Title:	
Custodian Signature:		Date Signed:	
COC Identifier:		(Used as Validation of Information)	
Email:		Phone:	

Stormwater Analytical Monitoring Collection Form

(Complete a separate form for each outfall sampled – need five [5] total)

Facility Sample Information			
Facility Name:	Mohave County	AZPMS4 Auth. No.	
Outfall Name: 1UW4-O1	"Substantially Similar Discharge Point"?	☐ Yes ☐ No (identify substantially identical outfalls):	
General Location: _____ _____ _____ _____ _____ _____		Photo of Site:	

Sampling Personnel Information			
Person(s)/Title(s) collecting sample:			
Email:		Phone:	
Person(s)/Title(s) assisting with sample:			
Email:		Phone:	

Field Sampling Data			
Nature of Discharge: ☐ Rainfall ☐ Snowmelt ☐ Other (explain):			
Date & Time Discharge Began:	Date & Time Sample Collected:	Was the sample taken in the first 30 minutes of the storm? ☐ Yes ☐ No*	* If sample not taken within first 30 minutes, explain why:
Rainfall Amount (inches):	Previous Storm Ended > 72 hours Before Start of This Storm? ☐ Yes ☐ No*	* If previous storm ended less than 72 hours before this storm, explain why sample collected:	

* The 72-hour interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour interval is representative of local storm events during the sampling period.

Field Sampling Data					
Purpose for Sampling	☐ Characterization ☐ Analytical ☐ TMDL Based ☐ ADEQ Request ☐ Other: _____				
Type of Sample	☐ Grab ☐ Discrete ☐ Manual ☐ Passive Sampler ☐ Auto Sampler ☐ Other: _____ ☐ Flow-weighted continuous ☐ Flow-weighted combination For flow-weighted, answer questions below Duration of Storm: Number of Sub-Samples: Time between samples:				
Field Parameter Measurements	pH:	Temperature:	Conductivity:	Turbidity:	Flow Rate:
Field Filtration Methods					
Field Instrument Calibration Data (Auto Sampler)	Date of Last Calibration: _____ Method of Calibration: _____ _____				

Stormwater Analytical Monitoring Collection Form

(Complete a separate form for each outfall sampled – need five [5] total)

Substitute Sample?	☐ No ☐ Yes (identify quarter/year when sample was originally scheduled to be collected):
QC Samples	
Quantity of Sample	Number of Lab Containers_____ or Number of ml _____ (ml)
Unique Sample Identifier (Match Identifier on COC)	
Laboratory Testing Parameters (May be provided by testing lab)	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____
Preservatives Added to Samples	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____

Field Observation Data	
Indicators of Stormwater Pollution Observed? (May be based on Visual Assessment)	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate an Illicit Discharge?	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate a need for Further Investigation?	☐ No ☐ Yes (Describe): _____ _____
Additional Observations of sampling procedures and conditions at the time of sampling:	
Description of problems encountered, or deviations made from the Sampling and Analysis Plan (SAP):	

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."

A. Name:	Randall Hanks	B. Title:	Alert Flood Warning Systems Supervisor
C. Signature:		D. Date Signed:	
Email:		Phone:	

Chain of Custody

Laboratory Name:			
Laboratory Address:		Phone:	
Custodian Name:		Title:	
Custodian Signature:		Date Signed:	
COC Identifier:		(Used as Validation of Information)	
Email:		Phone:	

Stormwater Analytical Monitoring Collection Form

(Complete a separate form for each outfall sampled – need five [5] total)

Facility Sample Information			
Facility Name:	Mohave County	AZPMS4 Auth. No.	
Outfall Name: 1UW6-O1	"Substantially Similar Discharge Point"?	☐ Yes ☐ No (identify substantially identical outfalls):	
General Location: _____ _____ _____ _____ _____ _____		Photo of Site:	

Sampling Personnel Information			
Person(s)/Title(s) collecting sample:			
Email:		Phone:	
Person(s)/Title(s) assisting with sample:			
Email:		Phone:	

Field Sampling Data			
Nature of Discharge: ☐ Rainfall ☐ Snowmelt ☐ Other (explain):			
Date & Time Discharge Began:	Date & Time Sample Collected:	Was the sample taken in the first 30 minutes of the storm? ☐ Yes ☐ No*	* If sample not taken within first 30 minutes, explain why:
Rainfall Amount (inches):	Previous Storm Ended > 72 hours Before Start of This Storm? ☐ Yes ☐ No*	* If previous storm ended less than 72 hours before this storm, explain why sample collected:	

* The 72-hour interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour interval is representative of local storm events during the sampling period.

Field Sampling Data					
Purpose for Sampling	☐ Characterization ☐ Analytical ☐ TMDL Based ☐ ADEQ Request ☐ Other: _____				
Type of Sample	☐ Grab ☐ Discrete ☐ Manual ☐ Passive Sampler ☐ Auto Sampler ☐ Other: _____ ☐ Flow-weighted continuous ☐ Flow-weighted combination For flow-weighted, answer questions below Duration of Storm: Number of Sub-Samples: Time between samples:				
Field Parameter Measurements	pH:	Temperature:	Conductivity:	Turbidity:	Flow Rate:
Field Filtration Methods					
Field Instrument Calibration Data (Auto Sampler)	Date of Last Calibration: _____ Method of Calibration: _____ _____				

Stormwater Analytical Monitoring Collection Form

(Complete a separate form for each outfall sampled – need five [5] total)

Substitute Sample?	☐ No ☐ Yes (identify quarter/year when sample was originally scheduled to be collected):
QC Samples	
Quantity of Sample	Number of Lab Containers_____ or Number of ml _____ (ml)
Unique Sample Identifier (Match Identifier on COC)	
Laboratory Testing Parameters (May be provided by testing lab)	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____
Preservatives Added to Samples	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____

Field Observation Data	
Indicators of Stormwater Pollution Observed? (May be based on Visual Assessment)	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate an Illicit Discharge?	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate a need for Further Investigation?	☐ No ☐ Yes (Describe): _____ _____
Additional Observations of sampling procedures and conditions at the time of sampling:	
Description of problems encountered, or deviations made from the Sampling and Analysis Plan (SAP):	

Certification Statement

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A. Name:	Randall Hanks	B. Title:	Alert Flood Warning Systems Supervisor
C. Signature:		D. Date Signed:	
Email:		Phone:	

Chain of Custody

Laboratory Name:			
Laboratory Address:		Phone:	
Custodian Name:		Title:	
Custodian Signature:		Date Signed:	
COC Identifier:		(Used as Validation of Information)	
Email:		Phone:	

Stormwater Analytical Monitoring Collection Form

(Complete a separate form for each outfall sampled – need five [5] total)

Facility Sample Information			
Facility Name:	Mohave County	AZPMS4 Auth. No.	
Outfall Name: 1UW7-O1	"Substantially Similar Discharge Point"?	☐ Yes ☐ No (identify substantially identical outfalls):	
General Location: _____ _____ _____ _____ _____ _____		Photo of Site:	

Sampling Personnel Information			
Person(s)/Title(s) collecting sample:			
Email:		Phone:	
Person(s)/Title(s) assisting with sample:			
Email:		Phone:	

Field Sampling Data			
Nature of Discharge: ☐ Rainfall ☐ Snowmelt ☐ Other (explain):			
Date & Time Discharge Began:	Date & Time Sample Collected:	Was the sample taken in the first 30 minutes of the storm? ☐ Yes ☐ No*	* If sample not taken within first 30 minutes, explain why:
Rainfall Amount (inches):	Previous Storm Ended > 72 hours Before Start of This Storm? ☐ Yes ☐ No*	* If previous storm ended less than 72 hours before this storm, explain why sample collected:	

* The 72-hour interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour interval is representative of local storm events during the sampling period.

Field Sampling Data					
Purpose for Sampling	☐ Characterization ☐ Analytical ☐ TMDL Based ☐ ADEQ Request ☐ Other: _____				
Type of Sample	☐ Grab ☐ Discrete ☐ Manual ☐ Passive Sampler ☐ Auto Sampler ☐ Other: _____ ☐ Flow-weighted continuous ☐ Flow-weighted combination For flow-weighted, answer questions below Duration of Storm: Number of Sub-Samples: Time between samples:				
Field Parameter Measurements	pH:	Temperature:	Conductivity:	Turbidity:	Flow Rate:
Field Filtration Methods					
Field Instrument Calibration Data (Auto Sampler)	Date of Last Calibration: _____ Method of Calibration: _____ _____				

Stormwater Analytical Monitoring Collection Form

(Complete a separate form for each outfall sampled – need five [5] total)

Substitute Sample?	☐ No ☐ Yes (identify quarter/year when sample was originally scheduled to be collected):
QC Samples	
Quantity of Sample	Number of Lab Containers_____ or Number of ml _____ (ml)
Unique Sample Identifier (Match Identifier on COC)	
Laboratory Testing Parameters (May be provided by testing lab)	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____
Preservatives Added to Samples	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____

Field Observation Data	
Indicators of Stormwater Pollution Observed? (May be based on Visual Assessment)	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate an Illicit Discharge?	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate a need for Further Investigation?	☐ No ☐ Yes (Describe): _____ _____
Additional Observations of sampling procedures and conditions at the time of sampling:	
Description of problems encountered, or deviations made from the Sampling and Analysis Plan (SAP):	

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."

A. Name:	Randall Hanks	B. Title:	Alert Flood Warning Systems Supervisor
C. Signature:		D. Date Signed:	
Email:		Phone:	

Chain of Custody

Laboratory Name:			
Laboratory Address:		Phone:	
Custodian Name:		Title:	
Custodian Signature:		Date Signed:	
COC Identifier:		(Used as Validation of Information)	
Email:		Phone:	

Stormwater Analytical Monitoring Collection Form

(Complete a separate form for each outfall sampled – need five [5] total)

Facility Sample Information			
Facility Name:	Mohave County	AZPMS4 Auth. No.	
Outfall Name: 2MB-O1	"Substantially Similar Discharge Point"?	☐ Yes ☐ No (identify substantially identical outfalls):	
General Location: _____ _____ _____ _____ _____ _____		Photo of Site:	

Sampling Personnel Information			
Person(s)/Title(s) collecting sample:			
Email:		Phone:	
Person(s)/Title(s) assisting with sample:			
Email:		Phone:	

Field Sampling Data			
Nature of Discharge: ☐ Rainfall ☐ Snowmelt ☐ Other (explain):			
Date & Time Discharge Began:	Date & Time Sample Collected:	Was the sample taken in the first 30 minutes of the storm? ☐ Yes ☐ No*	* If sample not taken within first 30 minutes, explain why:
Rainfall Amount (inches):	Previous Storm Ended > 72 hours Before Start of This Storm? ☐ Yes ☐ No*	* If previous storm ended less than 72 hours before this storm, explain why sample collected:	

* The 72-hour interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour interval is representative of local storm events during the sampling period.

Field Sampling Data					
Purpose for Sampling	☐ Characterization ☐ Analytical ☐ TMDL Based ☐ ADEQ Request ☐ Other: _____				
Type of Sample	☐ Grab ☐ Discrete ☐ Manual ☐ Passive Sampler ☐ Auto Sampler ☐ Other: _____ ☐ Flow-weighted continuous ☐ Flow-weighted combination For flow-weighted, answer questions below Duration of Storm: Number of Sub-Samples: Time between samples:				
Field Parameter Measurements	pH:	Temperature:	Conductivity:	Turbidity:	Flow Rate:
Field Filtration Methods					
Field Instrument Calibration Data (Auto Sampler)	Date of Last Calibration: _____ Method of Calibration: _____ _____				

Stormwater Analytical Monitoring Collection Form

(Complete a separate form for each outfall sampled – need five [5] total)

Substitute Sample?	☐ No ☐ Yes (identify quarter/year when sample was originally scheduled to be collected):
QC Samples	
Quantity of Sample	Number of Lab Containers_____ or Number of ml _____ (ml)
Unique Sample Identifier (Match Identifier on COC)	
Laboratory Testing Parameters (May be provided by testing lab)	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____
Preservatives Added to Samples	☐ No ☐ Yes (if Yes, Type and Amount) _____ _____

Field Observation Data	
Indicators of Stormwater Pollution Observed? (May be based on Visual Assessment)	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate an Illicit Discharge?	☐ No ☐ Yes (Describe): _____ _____
Do Observations Indicate a need for Further Investigation?	☐ No ☐ Yes (Describe): _____ _____
Additional Observations of sampling procedures and conditions at the time of sampling:	
Description of problems encountered, or deviations made from the Sampling and Analysis Plan (SAP):	

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."

A. Name:	Randall Hanks	B. Title:	Alert Flood Warning Systems Supervisor
C. Signature:		D. Date Signed:	
Email:		Phone:	

Chain of Custody

Laboratory Name:			
Laboratory Address:		Phone:	
Custodian Name:		Title:	
Custodian Signature:		Date Signed:	
COC Identifier:		(Used as Validation of Information)	
Email:		Phone:	

APPENDIX D – CHAIN OF CUSTODY FORM

Chain of Custody

Laboratory ID: **Sample ID:**

Client Name/Address		**Project Name:**		**Outfall ID:**
		Project Number:		
		Report to: **Name:**		**Phone No.**
		Email:		
Sampler:	**Preservative:**	**Seals:**	**Total Containers:**	**Temperature:**

Lab #	Client ID	Date	Time	Matrix	# of Cont.	Tested Constituents	Comments/Appearance

Relinquished by:	Received by:			

APPENDIX E – STORMWATER VISUAL MONITORING COLLECTION FORM

Stormwater Visual Monitoring Collection Form

Section A – General Information

Facility Sample Information

Facility Name:	Mohave County	Inspection Date:		Inspection Time:	

Outfall Location:

Permit Region – Horizon Six

	NAME	MAP ID
☐ Outfall	Mockingbird Channel	2MB-O1
☐ Outfall	Mockingbird Channel	2MB-O2
☐ Outfall	Unnamed Tributary to Mockingbird Channel	2MBT-O1

Permit Region – North Lake Havasu

	NAME	MAP ID
☐ Outfall	Unnamed Wash 1	1UW1-O1
☐ Outfall	Unnamed Wash 2	1UW2-O1
☐ Outfall	Unnamed Wash 3	1UW3-O1
☐ Outfall	Unnamed Wash 4	1UW4-O1
☐ Outfall	Unnamed Wash 5	1UW5-O1
☐ Outfall	Unnamed Wash 6	1UW6-O1
☐ Outfall	Unnamed Wash 7	1UW7-O1

Sampling Personnel Information

Person(s)/Title(s) collecting sample:			
Email:		Phone:	
Department:			
Person(s)/Title(s) assisting with sample:			
Email:		Phone:	
Department			

Field Sampling Data

Type of Monitoring: ☐ Dry Weather ☐ Wet Weather ☐ Characterization ☐ Other (explain):

Was Flow Observed?	☐ Yes ☐ No Notify the Stormwater Program Manager immediately if any visual observations may be an active upstream discharge that could not be identified or determined at the time of inspection.
Structure Type:	☐ Channel ☐ Manhole ☐ Catch Basin ☐ Other (describe): _____
Dominant Watershed Land	☐ Industrial ☐ Commercial ☐ Residential ☐ Other (describe): _____

Stormwater Visual Monitoring Collection Form

Section B – Weather Conditions					
Rainfall Intensity:	☐ No rain	☐ Heavy	☐ Moderate	☐ Light	
Rain Gage Data:	Total Inches: _____ Storm Duration: _____ Peak Intensity: _____				
Flow Intensity: *(If no flow meter present)*	☐ Substantial *(above curb)*	☐ Moderate *(below curb)*	☐ Light *(gutter only)*		
Flow Rate: *(Flow Meter Rating)*	_____ ☐ gpm	☐ cfs			

Section C – Visual Observations (Discharge Sample)						
Odor:	☐ None	☐ Musty	☐ Sewage	☐ Rotten Eggs	☐ Sour Milk	☐ Other (describe): _____
Color:	☐ None	☐ Red	☐ Yellow	☐ Brown	☐ Green	☐ Grey ☐ White ☐ Other (describe): _____
Clarity:	☐ Clean	☐ Cloudy	☐ Opaque			
Solids:	☐ None	☐ Floating	☐ Suspended	☐ Settled		
Floatables:	☐ None	☐ Musty	☐ Sewage	☐ Rotten Eggs	☐ Sour Milk	☐ Other (describe): _____

Section D – Visual Observations (Other)					
Deposits/Staining:	☐ None	☐ Sediment	☐ Oily	☐ Rusty	
Vegetation Growth:	☐ None	☐ Normal	☐ Excessive	☐ Inhibitive	☐ Other (describe): _____
Structural Conditions:	☐ Normal	☐ Cracking	☐ Corrosion	☐ Repairs Needed	
Biological:	☐ None	☐ Mosquito Larvae/Pupa	☐ Algae	☐ Other (describe): _____	

Section E – Work Order Notes	
Work Order created for Maintenance or Repairs?	☐ No ☐ Yes If Yes, provide Work Order #: _____

Description of Work Order:_____

_____

_____

_____

_____

Section F – Signatures			
Inspector Name:		Email:	
Inspector Title/Department:		Phone:	
Inspector Signature:		Date Signed:	

APPENDIX F – LABORATORY RESULTS

{INSERT TEST RESULTS HERE}

Attachment 9 – Pollution Prevention and Good Housekeeping Program for Municipal Operations

Available at https://stormwater.mohave.gov/

Attachment 10- Annual Report and Revision Log

Available at https://stormwater.mohave.gov/